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The Relationship of Principal Resiliency to Job Satisfaction and Work Commitment: An Exploratory Study of K-12 Public School Principals in Florida

Jason Pepe
University of South Florida, jpepe3937@yahoo.com

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The Relationship of Principal Resiliency to Job Satisfaction and Work Commitment:

An Exploratory Study of K-12 Public School Principals in Florida

by

Jason Pepe

Dissertation submitted in partial fulfillment
of the requirements for the degree of
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Major Professor: Darlene Y. Bruner, Ed.D.
Bobbie J. Greenlee, Ed.D.
Zorka Karanxha, Ed.D.
Jennifer Morley, Ph.D.

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Dedication

In 1988, my mother, Donna S. Pepe, was diagnosed with chronic progressive multiple sclerosis. For the next 18 years, my mom battled this insidious disease that slowly stripped away most aspects of her life. At first, these changes seemed minor; a stumble while walking, numbness, or unusual fatigue. But over time, her symptoms became much more debilitating. These losses were relentless and quite devastating. Eventually, multiple sclerosis transformed a once vibrant, active, and dedicated sixth grade teacher into a bedridden woman trapped in a powerless body. Finally, in 2006, multiple sclerosis took my mom's life.

I miss my mom. Without knowing it at the time, I learned a tremendous amount about resiliency and strength from her. In fact, she embodied many of the protective factors described in this dissertation. My mom made a choice to fight rather than feel sorry for herself and she spent years searching for the elusive path to wellness. The life lessons I learned during this journey will stay with me forever.

I dedicate this dissertation to my mom; a beautiful lady who taught me to be better not bitter. I love you.

Table of Contents

List of Tables

List of Figures

Abstract

The purpose of this study was to investigate characteristics associated with resilient school leaders. Principals juggle multiple responsibilities and work under increasingly stressful conditions. Despite recent role changes, added job responsibilities, and increased accountability, some principals remain remarkably resilient while working in a tumultuous environment. Using Henderson and Milstein's (2003) definition, principal resiliency was described as "the capacity to spring back, rebound, successfully adapt in the face of adversity, and develop social, academic, and vocational competence despite exposure to severe stress or simply to the stress that is inherent in today's world" (p. 7). This empirical study tested the theory that principals with higher levels of job satisfaction and work commitment would also likely have higher levels of resilience. This study also investigated whether years of experience, school location, school poverty rate, school level, principal salary, and student enrollment shared a significant relationship with principal resilience.

This study used a questionnaire to measure participants' levels of resiliency, job satisfaction, and work commitment. The survey consisted of three research-based, established psychometric tools: 1) the abbreviated Connor-Davidson Resilience Scale (CD-RISC 10) (Connor & Davidson, 2003); 2) Brayfield-Rothe Job Satisfaction Index (JSI) (Brayfield & Rothe, 1951); and 3) Three-Component Model (TCM) of commitment (Meyer & Allen, 1991).

An analysis of 627 surveys completed by public school principals from the state of Florida revealed that years of experience, school location, school poverty rate, school level, principal salary, and student enrollment shared no significant relationship with principal resilience. However, results from this empirical study indicated that there was a significant relationship between job satisfaction and resiliency for principals as well as a significant relationship between affective work commitment and resiliency.

Chapter 1:

Introduction to the Study

Statement of the Problem

Principals work in extremely tumultuous environments (Friedman, 2002; Pounder & Merrill, 2001; Whitaker, 1996, 2003). From instructional leader to facility manager to community leader, the scope of a principal's duties seem limitless. Routine or typical never describes a principal's day, since no two days ever look the same. Undoubtedly, the principal's pace may seem frantic at times as he or she moves about the campus meeting the demands of students, teachers, parents and superiors. The fallacy of an administrator sitting behind a desk, sipping coffee, and waiting for the next disciplinary referral is a fanciful caricature at best. In reality, principals work under an increasing amount of stress that takes its toll both physically and emotionally (Jazzar & Algozzine, 2006).

In addition to the daily obstacles encountered by principals, state and national reform efforts contribute to this formidable work environment. In the spring of 2010, President Obama unveiled his plan to amend the NCLB law to improve student education. The new plan emphasized rewarding performance while providing more local control. President Obama's proposal also acknowledged measuring other variables such as school climate and working conditions with surveys (Klein & McNeil, 2010). Although short on details, the President's plan required states to develop their own

definition of teacher effectiveness and establish procedures to correlate student

achievement with the performance of teachers and principals.

As efforts to reform the Elementary and Secondary Education Act continue one

axiom remains: teachers and educational leaders are accountable for student achievement.

Annual standardized testing along with a myriad of other assessments brings a deluge of

data for educators and legislators to dissect, analyze, and chart. These data reports

become the basis for local, state, and federal authorities to reward the performance of

educators. Similarly, students' test results are used to sanction those schools where

performance stagnates. As a result, school boards pay closer attention to achievement

gaps as well as the performance of schools with urban, impoverished, and marginalized

populations. It also means that principals face even more scrutiny as they search for

ways to increase student achievement.

Given this turbulent environment, a principal's capacity for resiliency becomes

critical. How can principals mitigate these stressors so as not to fold under this mounting

pressure? Why can some principals navigate these twists and turns more successfully

than others? Why do some principals seem to bounce back from adversity more rapidly

than their peers? Many answers to these questions stem from the growing body of

literature related to resiliency. Using the lessons learned from positive psychology and

focusing on people's strengths, this dissertation investigated various protective factors

that act as pathways toward resilience.

Conceptual Underpinnings

Henderson and Milstein (2003) defined resiliency as "the capacity to spring back,

rebound, successfully adapt in the face of adversity, and develop social, academic, and

vocational competence despite exposure to severe stress or simply to the stress that is inherent in today's world" (p. 7). Resiliency theory is affiliated with the positive psychology movement. According to Martin Seligman and Mihaly Csikszentmihalyi (2000):

> Psychology should be able to help document what kinds of families result in children who flourish, what work settings support the greatest satisfaction among workers, what policies result in the strongest civic engagement, and how people's lives can be most worth living. (p. 5)

A strong belief in recognizing the good life resulted in a new field called positive psychology. Positive psychology recognizes individual traits such as subjective well-being, optimism, happiness, and self-determination. This field of psychology also promotes positive experiences and attempts to expand communities and organizations around these positive qualities.

Positive psychology stands as the antithesis of the deficit theory. Commonly used in schools and sometimes referred to as deficit thinking, this model posits "the student who fails in school does so because of internal deficits or deficiencies. Such deficits manifest, it is alleged, in limited intellectual abilities, linguistic shortcomings, lack of motivation to learn, and immoral behavior" (Valencia, 1997, p. 2). Subscribers to this model believe that marginalized populations such as low income or minority groups perform poorly, compared to their white middle-class counterparts, due to their own shortcomings. In other words, proponents of deficit thinking view poor, disabled, or other "at-risk" groups, responsible for their own failures while ignoring cultural, political, economic and social constructs.

Descriptions of the deficit theory changed over time. For example, a review of the literature pertaining to desegregation in 1975 summarized the cultural deficit model in the following manner:

> The cultural deficit literature is concerned with explaining why it seems that low-income minority groups have not acquired American middle-class attitudes, values, and behaviors. The problem, according to that literature, arises from the lack of contact low-income minority group children have with the American middle-class, especially within the schools during the children's formative years. It is assumed that this contact will alleviate the problem. (Kirk & Goon, 1975, p. 600)

However, thirty-two years later, researchers described the deficit model in a less favorable manner.

> The deficit model is based on the normative development of students whose homes and communities have prepared them for schooling long before they enter school. Children who come to school without that preparation, and without the continuing home support of family members who can reinforce the goals of schooling, face expectations that they have not had the opportunity to fulfill. All too quickly the students become candidates for suspected "disability." (Harry & Klingner, 2007, p. 18)

Both descriptions of the deficit model address normative behavior, school goals and the dominant culture. Critics of the deficit model argue that cultural differences are devalued as underserved students are forced to adapt to hegemonic ideologies. Valencia (1997) went a step further and depicted deficit thinking as a model "rooted in ignorance,

classism, racism, sexism, pseudoscience and methodologically flawed research" (p. xiii).

Clearly, the constructs associated with resiliency stem from a wellness approach like

positive psychology rather than a pathological or "pharmacological model" (Commission

on Children at Risk, 2003) like deficit theory.

Authentic leadership.

Focusing on what worked rather than agonizing over what went wrong aligns with

an authentic leadership style (Walumbwa, Avolio, Gardner, Wernsing, & Peterson,

2008). Scholars defined authentic leadership as:

> a pattern of leader behavior that draws upon and promotes both positive
>
> psychological capacities and a positive ethical climate, to foster greater self-
>
> awareness, an internalized moral perspective, balanced processing of information,
>
> and relational transparency on the part of leaders working with followers,
>
> fostering positive self-development. (Walumbwa, Avolio, Gardner, Wernsing, &
>
> Peterson, 2008)

Once again, this emphasis on positive psychological capacities encompassed several

constructs associated with resiliency. The theoretical perspective on authentic leadership

advanced by Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008) provided the

philosophical framework to build a developmental model of principal resiliency. In other

words, principals described as resilient may also be characterized as exhibiting an

authentic leadership style.

Protective factors.

In consideration of the characteristics mentioned above, this study selected seven

protective factors that fall on the resiliency trait-state continuum (Luthans, Vogelgesang,

& Lester, 2006): 1) relationships; 2) self-efficacy and self-esteem; 3) problem-solving and professional development; 4) autonomy; 5) meaning; 6) positive affect; and 7) hope and optimism. Using physics, the metaphor of a bouncing ball provides a conceptual visualization of resiliency theory. Physics explains why a bouncing ball temporarily loses its shape when it hits a hard surface.

> When you drop a ball, gravity pulls it toward the floor. The ball gains energy of motion, known as *kinetic energy*. When the ball hits the floor and stops, that energy has to go somewhere. The energy goes into deforming the ball--from its original round shape to a squashed shape. When the ball deforms, its molecules are stretched apart in some places and squeezed together in others. (Doherty, 1991)

Due to its resilient nature, a rubber ball loses its shape only momentarily, and quickly springs back to its original round shape. Similar to a bouncing ball, when a resilient person encounters adversity, he or she employs protective factors to overcome the hardship. Figure 1 illustrates these seven characteristics of resiliency.

Purpose of the Study

The purpose of this study was to investigate characteristics associated with resilient school leaders. This empirical study tested the theory that principals with higher levels of job satisfaction and work commitment will have higher levels of resilience. This study also investigated whether years of experience, school location, school poverty rate, school level, principal salary, and student enrollment were related to principal resilience.

Another objective of this dissertation was to advance a developmental and multidisciplinary model of resiliency within the context of educational leadership. Namely, how is resiliency defined and operationalized when considering the role of a school principal? Thus, this dissertation studied the feelings and thoughts that principals experience, and how they relate to the ways they perform in their jobs. This empirical study analyzed the relationship between job satisfaction, work commitment, and a principal's resiliency.

Another goal of this dissertation was to enhance the generalizability and utility of the resiliency construct. So far, a majority of the resiliency research focused on children or corporate management. The few studies linked to schools mostly investigated either student or teacher resiliency. Hence, the findings from this study contribute to the literature and expand notions of resiliency through its application to school leadership. Fourth, this study analyzed the resiliency levels of principals across the state of Florida. The survey collected data such as school level, size, student demographics, poverty rate, job experience, and more. These data offered a deeper contextual understanding of resiliency by comparing and contrasting principals in different school settings.

Examining the resiliency levels of principals also provided greater insight into self-righting mechanisms that promote the most effective leadership. Everyone in the school (students, teachers, parents, and community members) benefit when an effective principal remains committed to his duties and satisfied with his profession.

Research Questions

This study attempted to examine the following relationships:

- Is there a relationship between job satisfaction and resiliency for principals?

- Is there a relationship between work commitment and resiliency for principals?

- Are there significant differences in resiliency levels among principals in various school settings? By isolating independent variables such as school level, size, principal demographics, and student demographics, this study investigates the relationship of these variables with principals' resiliency levels.

Null hypotheses.

Table 1 summarizes the null hypotheses tested in this study:

Table 1

Null Hypotheses

H_0	Null Hypothesis
H_0 1a	No relationship between job satisfaction and resiliency for principals
H_0 2a	No relationship between work commitment and resiliency for principals
H_0 3a	No relationship between work commitment (affective, continuance, and normative), job satisfaction and resiliency for principals
H_0 4a	No relationship between years of experience and resiliency for principals
H_0 5a	No relationship between school location and resiliency for principals
H_0 6a	No relationship between school poverty rate and resiliency for principals
H_0 7a	No relationship between school level and resiliency for principals
H_0 8a	No relationship between salary and resiliency for principals
H_0 9a	No relationship between student enrollment and resiliency for principals

Note. H_0 = Null hypothesis

Significance of the Study

Post NCLB, accountability and expected job tasks for principals grow exponentially, yet, at the same time, increased standardization and 'McDonaldization' of school systems (Broome, 2008) diminish professional autonomy and input into educational policy creation. Given these conflicting ideas, it seems logical that job stress for principals would also greatly increase. Although the resiliency literature would

indicate that resiliency for principals could assist in navigating more difficult work environments, the literature thus far does not address resiliency and school leadership.

Bruner and Greenlee (2000) describe culture as a prominent characteristic of a quality organization. Principals can influence school culture and expectations for all instructional staff, students, and even communities (August& Waltman, 2004; Bruner & Greenlee, 2000; Hanchey & Brown, 1989; Hughes, 1995; Sparks, 2007; Patrick, 1995; Taylor & Tashakkori, 1994; Weiss, 1999; Youngs, 2007). Theoretically, an effective principal who remains committed to their duties and is satisfied with their profession can impact outcomes for all parties connected to the school. While no scholarship links work commitment and job satisfaction to a principal's resiliency, doing so may provide better insight into both choosing effective public school leaders, and providing professional growth opportunities to assist principals during these challenging times.

District leaders stand to benefit once they determine what principals do well, identify their strengths, and develop their skills to help them overcome adversity. This involves a positive approach to unraveling different facets of human behavior. Indeed, this positive outlook is quite different from the traditional methodology, especially in fields such as education and psychology in which the practitioner attempts to diagnose a problem, a disorder, or a disability.

This shift toward a positive orientation continues to gain momentum in the fields of psychology, organizational management, and education (Boyle & Woods, 1996; Coutu, 2002; Gu & Day, 2007; Henderson & Milstein, 2003; Howard & Johnson, 2004; Luthans, Norman, Avolio, & Avey, 2008; Patterson, Collins, & Abbott, 2004; Rockwell, 2006; Seligman, & Csikszentmihalyi, 2000; Youssef, & Luthans, 2007). Considered a

highly valued and developable commodity, the ability to bounce back after facing adversity distinguishes the survivors from the defeatists. Resilient students, resilient teachers, and resilient school leaders serve as the building blocks for resilient school organizations.

Methodology

This nonexperimental exploratory study utilized a questionnaire to measure a purposive sampling of principals' self-reported levels of resiliency, job satisfaction, and work commitment. The questionnaire also included items to collect demographic information about the participant and the school where the participant worked. Principals completed the online survey anonymously on a website that utilized secure socket layer technology (SSL) encryption to secure data.

The survey consisted of three research-based, established psychometric tools: 1) the abbreviated Connor-Davidson Resilience Scale (CD-RISC 10) (Connor & Davidson, 2003); 2) Brayfield-Rothe Job Satisfaction Index (JSI) (Brayfield & Rothe, 1951); and 3) Three-Component Model (TCM) of commitment (Meyer & Allen, 1991). Previous reliability and validity testing confirmed the consistency, dependability, and relevance of these instruments.

A combination of descriptive, bivariate, and multivariate statistics were used to analyze the principals' scores on the CD-RISC, TCM, and JSI. Linear regression was utilized to determine the relationship between the dependent variable (resiliency) and the multiple independent predictor variables (various demographic variables). Overall, these analyses provided a means to make inferences about the relationships between these multiple variables.

Limitations, Assumptions, and Design Controls

The results on this research include certain delimitations, limitations, and assumptions. Certain inquiries fall outside the scope of this research. Although the survey collects demographic information about the participants, such as gender, ethnicity, and age, the study will not employ correlational analysis to examine the relationship between these variables and job satisfaction or work commitment. Furthermore, this research will not attempt to identify relationships between work commitment and job satisfaction among principals. The exploration of these relationships is beyond the scope of this research.

Alternatively, this study includes limitations that place constraints on the generalizability and utility of the findings. First, the sample for this study included only public school principals from the state of Florida. Participation in the study was strictly voluntary. This non-randomized sample limits the generalization to a national or international population of public and private school principals. Similarly, generalizations about corporate management must also be excluded since all of this research originates in a public school setting.

Secondly, limitations to the collection of data through anonymous online surveys included the inability to verify the job description of the individual who completed the survey. To increase the likelihood that principals are the only respondents to the survey, a state level database of principal's names and email addresses was obtained from the Florida Department of Education. This database was assumed the most accurate and reliable source of names and email addresses.

Thirdly, without knowing what influences a person's behavior, self-reported data may be skewed. The answers provided by the participants in this survey were assumed to be genuine and accurate. However, this study never addressed the characteristics or traits of the person who elected to respond to a survey. For example, did principals with primarily positive responses participate at a higher or lower rate than those with more negative thoughts and feelings? Although these questions fell outside the parameters of this study, their impact imposed limitations on the study. With this in mind, the survey used existing instruments with established reliability and validity measures.

This restrictive methodology did not allow personal insight or suggestions within its design. Finally, this study surveyed roughly 2,900 K-12 public school principals in Florida. Hence, the sample size required to be representative of this population was 338 (Krejcie & Morgan, 1970). A smaller sample size places limitations on the utility and generalizability of the results.

Definition of Key Terms

Authentic Leadership: "a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development" (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008).

Job Satisfaction: ". . . a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1304) and measured using six items from the Brayfield-Rothe Job Satisfaction Index (JSI) (Brayfield & Rothe, 1951).

Positive psychology: a field of psychology that recognizes individual positive traits, promotes positive experiences and attempts to expand communities and organizations around these positive qualities.

Protective Factors: "Protective Factors modify (ameliorate, buffer) a person's reaction to a situation that in ordinary circumstances leads to maladaptive outcomes" (Werner & Smith, 1992, p. 5).

Resiliency: "the capacity to spring back, rebound, successfully adapt in the face of adversity, and develop social, academic, and vocational competence despite exposure to severe stress or simply to the stress that is inherent in today's world" (Henderson & Milstein, 2003, p. 7).

Trait-State Continuum: the continuous extent to which resiliency is described as dispositional and trait-like versus state-like and open to development (Luthans, Vogelgesang, & Lester, 2006).

Work Commitment: "a psychological link between the employee and his or her organization that makes it less likely that the employee will voluntarily leave the organization" (Allen & Meyer, 1996, p. 252). Meyer and Allen (1991) described this multidimensional construct as an employee's mindset or feelings about his relationship with an organization and further subdivided this psychological state into three distinct categories: a desire (affective commitment), a need (continuance commitment), and an obligation (normative commitment).

Organization of the Dissertation

This dissertation is organized into five chapters. Chapter One introduced the study, presented the statement of the problem, outlined the conceptual underpinnings and explained the historical relevance of resiliency theory. Chapter One also summarized the methodology, listed the limitations of the study and the definitions of key terms. Chapter Two presents a literature review of the protective factors a person (or organization) uses to mitigate risk factors in the environment. Chapter Two covers seven sections: 1) relationships; 2) self-efficacy and self-esteem; 3) problem-solving and professional development; 4) autonomy; 5) meaning; 6) positive affect; and 7) hope and optimism. Chapter Three presents the design, measures, and methodology of the study. Chapter Four presents a statistical analysis of the data collected during the study. Chapter 5 provides the summary of the findings, conclusions, implications, suggested practical applications, limitations, and future research recommendations.
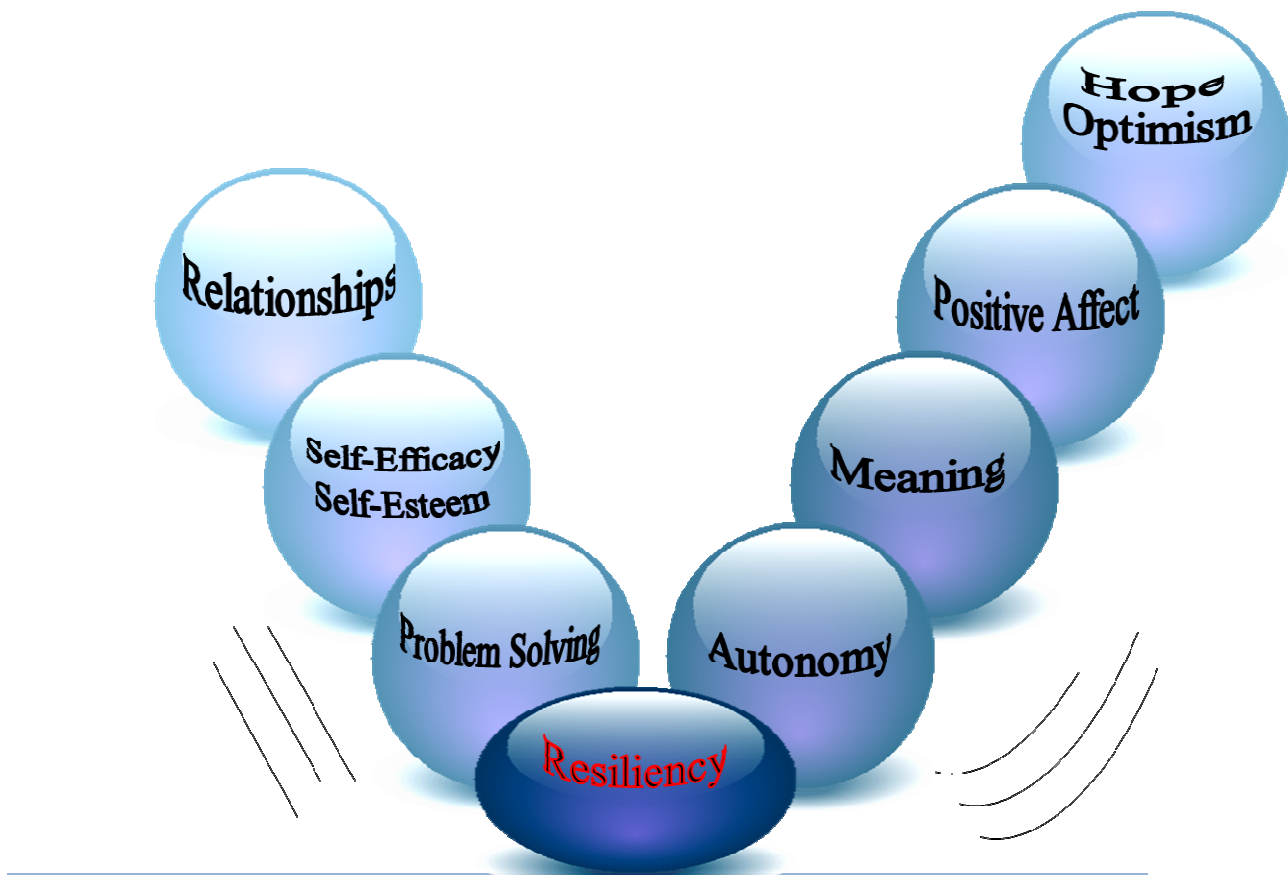
Figure 1. Resiliency Bouncing Ball Protective Factors. Bouncing back from adversity involves these seven components of resiliency along a trait-state continuum.

Chapter 2:

Literature Review

In general, the purpose of this research is to study the feelings and thoughts that principals experience, and how they relate to the ways they perform in their jobs. Specifically, this study examines:

- Is there a relationship between job satisfaction and resiliency for principals?

- Is there a relationship between work commitment and resiliency for principals?

- Are there significant differences in resiliency levels among principals in various school settings?

Theoretical Perspective

In this study, positivism informs the methodology used in my study and objectivism is the epistemology foundation of my research. Crotty (2003) described the philosophical stance that lies behind a methodology as the theoretical perspective. As a set of assumptions, the theoretical perspective "provides a context for the process and grounds its logic and criteria" (Crotty, 2003, p. 7).

The theoretical perspective for this study draws from the emerging resiliency framework as well as the theories embedded in positive psychology and authentic leadership. Major responsibilities of a principal include identifying, hiring, and retaining the most effective classroom teachers. Although the qualities of a great teacher are too many to list (and often debated in the research) one component of an effective teacher is

resiliency or "the capacity to bounce back from adversity, adapt to pressures and problems encountered, and develop the competencies – social, academic, and vocational – necessary to do well in life" (Henderson & Milstein, 1996, p. 11). Resiliency is an important trait since teachers continuously face setbacks and multiple challenges as they meet students' individual needs, conference with parents, and meet the demands of administrators and the public at large during an era of heightened accountability. Principals, in turn, face similar setbacks in terms of the emotional and physical drain the position places on a person. Therefore, both principal and teacher must remain resilient during these most challenging times.

In a growing body of research, resilience literature analyzes the various protective factors of people who possess this ability to get up, brush themselves off, and bounce back from a difficult situation. Researchers still debate the notion of whether an adaptive construct is more trait-like (fixed) or state-like (malleable). Part of the answer involves the concept of a trait – state continuum, in which some constructs behave more fixed than others. This continuum also allows researchers to view resiliency as developable (Luthans, Vogelgesang, & Lester, 2006). In fact, in an attempt to operationalize resiliency, researchers measured certain pathways to resiliency with the hopes of increasing employee performance (Youssef & Luthans, 2007). Henderson & Milstein (1996), stated, "The process of resiliency development is, in fact, the process of life, given that all people must overcome stress and trauma and disruption in the process of living" (p. 4). For the purpose of my study, I acknowledge the trait – state continuum when describing the various protective factors that relate to resiliency.

Other theoretical frameworks related to resiliency already exist in the literature. For example Henderson and Milstein (2003) proposed a Resiliency Wheel. The Resiliency Wheel divides this concept into six themes: 1) increase bonding; 2) set clear and consistent boundaries; 3) teach life skills; 4) provide caring and support; 5) set and communicate high expectations; 6) provide opportunities for meaningful participation. The first half of the wheel (or themes one, two, and three) involve three strategies for mitigating risk factors a person encounters during life. The second half of the wheel (or themes four, five and six) involve the steps necessary for fostering resiliency.

A large portion of this review is devoted to the teaching profession. Since most educational leaders began their careers in the classroom, many lessons regarding resiliency directly or indirectly involve these experiences. Although clearly implied, researchers acknowledge the lack of resiliency research afforded to educational institutions and in particular school leadership (Giles, 2008; Gu & Day, 2007). Likewise, the previous resiliency studies focused on the benefits that certain protective factors had on children. Youssef and Luthans (2005) drew a connection between resiliency assets in the child psychotherapy context and positive psychology and resiliency traits in the leadership context. Henderson and Milstein (2003) argued, "the process of resiliency building is similar for children and for adults" (p. 5). This connection becomes the starting point of this literature review.

Historical Relevance

The story of resilience theory began with children. While some researchers relied on a reductionist, pathological, problem-oriented, or a deficit approach when describing failure, others decided to follow a wellness model that focused on the protective factors that ultimately contributed to success. This began the first wave of resiliency inquiry: research focused on health promotion and wellbeing and shifted emphasis away from pathology and problem-orientation way of thinking (Richardson, 2002). By the 1970s, research focused on the individual differences in children's responses to tribulation. Considered a pioneer in resilience research, Norman Garmezy studied children of parents who suffered from schizophrenia. His novel investigation resulted in groundbreaking research during the 1970s. Garmezy wanted to know why some children coped successfully despite their exposure to the same psychopathological risks (parents with schizophrenia) as other children who coped poorly. Eventually, Garmezy and other investigators, including Michael Rutter and Emmy Werner, began studying children who succeeded in the face of adversity.

Rutter (1985) dismissed genetics as a universal explanation for individual differences since environmental factors also influence a person's response to stress. This prompted the search for protective factors. During this time, researchers used the term invulnerable to describe "children so constitutionally tough that they could not give way under the pressures of stress and adversity" (Rutter, 1985, p. 599). Eventually, the term resilient replaced the absolute notion of invulnerable.

Emmy Werner and Ruth Smith developed a longitudinal study of the children living on one of the Hawaiian islands, named Kauai. A cohort of 505 people born in

1955 was followed from birth to adulthood. Many individuals in this cohort faced daunting challenges such as perinatal stress, chronic poverty, troubled home life, and exposure to parental alcoholism or mental illness. Despite these hazardous environmental conditions, the researchers noticed that some of the children seemed stress resistant to various biological and psychosocial risk factors. Scholars consider the Kauai Longitudinal Study a landmark investigation into the long-term effects of childhood adversity as well as the protective factors that led to successful adaptation in adulthood (Werner & Smith, 1992).

Research began on a similar concept, hardiness, in 1975 when Salvatore Maddi launched a twelve-year longitudinal study to analyze the stress levels of managers working at Illinois Bell Telephone (IBT). Maddi (2002) and other researchers discovered that certain managers possessed attitudes that served as protective forces against stress-related illnesses. Eventually, these stress buffers were labeled as commitment, control, and challenge. Maddi (2002) referred to these attitudes as the 3Cs of hardiness.

Protective factors can be positive or negative and "refer to influences that modify, ameliorate, or alter a person's response to some environmental hazard that predisposes to a maladaptive outcome" (Rutter, 1985, p. 600). Although, Rutter (1985) was careful when generalizing the influence protective factors have on resilience, he offered several characteristics. For example, Rutter (1985) suggested that quality emotional support, as in a secure relationship with another individual, positive self-concept, positive self-esteem, belief in one's own self-efficacy, a repertoire of social problem solving strategies, and humor fostered resiliency during challenging times.

Garmezy (1991) also suggested that certain characteristics operated as protective factors in an adverse environment. He grouped these characteristics into three broad categories called variables. The first variable involved an individual's temperament and addressed activity levels, cognitive skills, and social skills. The second variable involved family support, cohesion, and support from family members as substitutes for absent parents. Finally, Garmezy (1991) cited external support such as a teacher, community member, or institution (school, church, or agency) as the third variable used to modify stressful situations.

During this first wave of resiliency research, researchers continued to focus on phenomenological descriptions of protective factors and resilient qualities of individuals. For example, Benson (1997) identified 40 developmental assets (external and internal). External assets included feeling a sense of empowerment (valuing). Internal assets included positive values, positive identify (self-esteem, sense of purpose).

Coutu (2002) cited three qualities she deemed as essential to reach true resiliency: 1) realistic optimism; 2) the search for meaning; and 3) ritualized ingenuity. When a resilient individual encounters adversity, the person remains optimistic without pretending everything will just work out. Maintaining a sense of realism is just as important as maintaining a sense of optimism. Facing reality from a positive standpoint allows a person to search for solutions whenever a difficult situation arises. Closely related, Coutu's (2002) second resilient quality is making meaning out of misfortune. This quality is the opposite of seeing yourself as a victim. According to Coutu (2002), meaning making is "the way resilient people build bridges from present-day hardships to a fuller, better constructed future. Those bridges make the present manageable, for lack

of a better word, removing the sense that the present is overwhelming" (p. 50).

Typically, a resilient person relies on his or her core value system to find meaning. Thus, Coutu (2002) underscored the importance of an individual or organization's strong value system because they "offer ways to interpret and shape events" (p. 52). Finally, resilient people (and organizations) invent creative ways to solve problems. They imagine possibilities and get the job done. Coutu (2002) used the word "bricolage" coined by French anthropologist Claude Levi-Strauss to describe improvisation and ingenuity when solving a problem without access to common tools. Creativity alone, however, does not fully describe the third quality of resilience. In fact, creativity rests on the shoulders of rules and routines, which anchor ideas and provide a common direction and purpose. When used in harmony, these three qualities promote resilience during the most challenging times.

Resiliency acquisition.

How are resilient characteristics acquired? The second wave of resiliency theory attempted to answer this question. Richardson (2002) created a model to describe the resiliency process. When a person is in biopsychospiritual homeostasis, he or she has adapted to life's events or situations. Biopsychospiritual homeostasis is altered or disrupted by life changes, stressors, challenges, adversity and other forms of disruption. Once this occurs, a resilient individual draws upon previous experiences and utilizes strategies to cope with the current hardship. After the disruption, the reintegrative process begins. "A person can reintegrate resiliently, attempt to return to biopsychospiritual homeostasis, reintegrate with loss, or dysfunctionally reintegrate"

(Richardson, 2002, p. 312). Successful or unsuccessful adaptation to life's disruptions determines a person's resiliency or his/her ability to cope with stress.

The third wave of resiliency theory involved physics, biology, psychology, theology, and mysticism. This interdisciplinary approach allowed the merging of ideas from multiple academic fields. Richardson (2002) referred to resiliency as "a force within everyone that drives them to seek self-actualization, altruism, wisdom, and harmony with spiritual source and strength" (p. 313). The third wave sought to understand the source of energy for this force. Various hypotheses included ideas from quantum physics, Eastern medicine, spiritualization, psychology, and philosophy. Richardson (2002) suggested the use of meditation, Tai Chi, prayer, yoga, Aikido and other therapies to strengthen an individual's resilience. This multidisciplinary view marks the current stage of resilience research.

Protective Factors.

Recognizing the state – trait continuum mentioned earlier, the protective factors a person (or organization) uses to mitigate risk factors in the environment fall into seven broad categories: 1) relationships; 2) self-efficacy and self-esteem; 3) problem-solving and professional development; 4) autonomy; 5) meaning; 6) positive affect; and 7) hope and optimism.

In order to conceptualize resiliency, the ensuing sections seek answers to the following questions:

- What is the operational definition of resiliency?

- What protective factors or constructs are associated with resiliency?

- How does the research colligate these adaptive constructs with leadership resiliency?

Relationships.

"Do not wait for leaders; do it alone, person to person."

~ Mother Teresa (Kleiser, 2005, p.42)

A common theme throughout the resiliency literature emphasizes the central role that relationships play in overcoming adversity (Rutter, 1985; Boyle & Woods, 1996; Coutu, 2002; Wayman, 2002; Howard & Johnson, 2004; Patterson, Collins, & Abbott, 2004; Rockwell, 2006). Resilient individuals possess a keen awareness of their social surroundings and adeptly bond to others for support. Generally speaking, researchers subdivide this protective factor into three broad sections: social skill development, mentoring, and emotional support. This section of the literature review summarizes the information regarding this protective factor and examines how the research colligates relationship building with leadership resiliency.

Neuropsychologists study the relationship between the brain and human behavior. These scientists revealed that close, positive, and meaningful connections to others affect human behavior from a very young age. In other words, people's brains are hardwired to connect to other people (Commission on Children at Risk, 2003). Scientists interested in emotional development, regulation, attachment theory, and brain function recognized the connection between relationships and resilience. Schore (2001) described resilience factors for coping with psychobiological stressors and the importance of building relationships with others.

The orbital cortex matures in the middle of the second year, a time when the

average child has a productive vocabulary of less than 70 words. The core of the

self is thus nonverbal and unconscious, and it lies in patterns of affect regulation.

This structural development allows for an internal sense of security and resilience

that comes from the intuitive knowledge that one can regulate the flows and shifts

of one's bodily-based emotional states either by one's own coping capacities or

within a relationship with caring others. (Schore, 2001, p. 42)

Hence, the ability to form relationships with others serves as a protective factor from as

early as infancy. Social competence and the capacity to form attachments to others

remain important throughout adulthood. It is no surprise, then, that the literature reveals

that resilient leaders know how to connect with coworkers and use their social skills to

advance through turbulent times.

Authentic leaders spend a great deal of time building relationships with others. In

fact, one of the tenants of authentic leadership is transparency, the ability to maintain

openness and self-disclosure. "Authentic leaders act according to their values, build

relationships that enable followers to offer diverse viewpoints and build social networks

with followers" (Hughes, 2005, p. 86). Leaders who place a premium on relationships

identify with their followers on a personal level, recognize and nurture talent, build

strong social networks, and foster trust with stakeholders (Hughes, 2005). This relational

transparency displayed among authentic leaders supports the resiliency of the leader as

well as the entire organization.

Successful principals spend a great amount of time building relationships

throughout the school. The effective principal places a premium on the bonds and

partnerships fostered with students, parents, faculty, staff, superiors, business partners,

and community members. Furthermore, a principal's leadership style impacts school

culture and climate (August& Waltman, 2004; Hanchey & Brown, 1989; Hughes, 1995;

Sparks, 2007; Patrick, 1995; Taylor & Tashakkori, 1994; Weiss, 1999; Youngs, 2007).

In other words, a principal's influence is far-reaching and global in nature. Through their

actions, effective principals use trust building, support, communication, praise, shared

leadership and other human relation skills to build relationships and a healthy culture

within the school (Blase & Kirby, 2000; Sparks, 2007). Staff development, collaboration

and participatory leadership foster greater teacher loyalty and effectively influence

teachers at high performing schools (Blase & Kirby, 2000; Sparks, 2007). Relationship

building acts as a protective factor and promotes resiliency.

Hughes (1995) studied this phenomenon by analyzing three pairs of schools with

similar demographics but with different student achievement results. Data collection

included site visits to seven schools and 50 interviews with administrators, teachers and

parents. Hughes (1995) also surveyed 632 parents, 670 students, 82 teachers, and seven

administrators. Differences in staff morale, staff commitment and job satisfaction were

observed between high poverty and low poverty schools. "The greatest difference in staff

morale between the two schools appeared to relate to the working relationship between

the faculty and the administration" (Hughes, 1995, p. 34). The study concluded that

effective schools shared the following characteristics: low teacher turnover, high faculty

morale, high job satisfaction, strong teacher accountability, strong student pride, an

effective student services program, an instructional leader, and principal support.

According to this research, a principal yields a great deal of influence on the inner-

workings of the school. Hughes (1995) study suggested that a positive relationship between the principal and teachers improved morale and fostered increases in other areas such as job satisfaction. Thus, a principal's style and ability to foster relationships sets the tone for the school's culture and acts as a protective factor to bolster individual and organizational resiliency.

Later empirical research concurred with Hughes (1995) findings. Albrecht et al (2009) surveyed 776 teachers and related faculty to determine risk factors associated with teacher burnout and resiliency factors related to teacher retention. Focused on the working conditions of Emotional Behavioral Disorders (EBD) teachers, researchers asked participants to rate the climate of the school, administrative support, collegial support, and access to professional development, consultants, and technology. Albrecht et al (2009) cited administrative support and accessing that support daily as "significant factors" in a teacher's retention and job satisfaction (p. 1017). Teachers valued frequent administrative consultation and distinguished this type of communication apart from sparse contact.   The latter included only communicating with an administrator during a crisis or at someone's request. The use of a nonrandomized design may have contributed to a sampling bias and therefore limited the generalization of the results. However, Albrecht et al (2009) replicated Hughes' (1995) results, which used a randomized sample.

Since relationships matter, researchers study how resilient individuals rely on mentors as a protective factor. For example, a study involving 95 college-bound students who struggled academically revealed that these students pursued a relationship with a counselor for support and academic assistance. Social support from supervisors and peers increased for the same sample of participants (Clauss-Ehlers & Wibrowski, 2007).

Overall, Clauss-Ehlers and Wibrowski's (2007) study purported significant effects on resiliency using the Connor-Davidson Resilience Scale (CDRISC). However, the use of a nonrandomized design and the omission of a control group limited the utility of this research. Nonetheless, the results align with a substantial body of literature maintaining the correlation between resiliency and positive relationships.

One such study surveyed 44 young adults who were in foster care as children (Hass & Graydon (2009). The researchers characterized the participants of the study as resilient and hoped to learn what protective factors promoted their wellbeing. Eighty-four percent declared other people "who provided various forms of social support" important to their success (p. 459). These other people included family members, counselors, and mentors. In return, most of the participants expressed a proclivity to volunteer and mentor others. The relatively small and nonrandomized sample size limited the interpretation of these results. Furthermore, Hass and Graydon (2009) acknowledged the limitations of self-reported data as well as their narrow definition of success. Nevertheless, mentoring plays a crucial role in supporting resiliency.

In most cases, principals rely on mentoring to help them in their current position (Farkas, Johnson, & Duffett, 2003), and they serve as mentors to others; especially those who just started their career. In a study similar to Howard and Johnson's (2004) research, Patterson, Collins, and Abbott (2004) analyzed interview transcripts of teachers and teacher leaders. Their analysis reported that participants used mentoring strategies to build their personal resilience (Patterson, Collins, & Abbott, 2004). Instead of leaving struggling teachers behind, resilient leaders felt responsible for mentoring those in need and provided professional and emotional support to their coworkers.

In addition to mentoring, resilient individuals seek emotional support from individuals and the community at large. For example, an individual's perception of support from the community affects overall psychological well-being (Rohall & Martin, 2008). Scientists refer to the behavior patterns of groups, whether from an organization, a community, or an entire society, as social structure. According to Rohall and Martin (2008), scientists "apply this understanding of social structure to the study of resilience by examining the various ways in which social structure may affect relationships between life events or conditions and a broad spectrum of behavior and associated life outcomes" (p. 302). Social structure influences relationships with family and friends. These social conditions also influence the way a person perceives and manages stressful situations (Rohall & Martin, 2008). Resilient individuals use social resources, such as relationships with loved ones, friends, and community members, as a buffer against stressful or traumatic events.

For instance, the results of a survey involving more than 17,500 respondents, demonstrated lower depression rates among individuals who expressed a stronger sense of community. Rohall and Martin (2008) concluded that "positive perceptions of social structural and community conditions may help to reduce the risk of depression" (p. 314). Since respondents were limited to married, active duty service members, the universality of these results comes into question. Furthermore, the researchers used only seven questions based on the CES-D to measure the respondents' depression levels. Even with these limitations in mind, the results of Rohall and Martin's (2008) empirical study draws attention to social structural conditions and their impact on resilience. Their findings also

parallel other studies related to family and community resilience (Benzies & Mychasiuk, 2009).

In fact, a qualitative study reported similar results. Howard and Johnson (2004) interviewed ten resilient teachers who worked in highly challenged neighborhoods. These challenges included poverty, violence, drugs, and family instability. Faced with these immense stressors, Howard and Johnson (2004) reported that every teacher in their study relied on support networks inside and outside the school as a safeguard against burnout. Most importantly, the researchers identified "strong caring leadership" as central to the resilient teachers' support network (p. 412). Even though the small sample size limits the generalization of these conclusions, the rich details from the interview transcripts offered insight into how these adaptive behaviors acted as a buffer against stressors. Howard and Johnson's (2004) findings also paralleled other conclusions found in the literature (Rutter, 1985; Waymen, 2002; Bogar & Hulse-Killacky, 2006). Clearly, the ability to foster relationships and build support networks serve as a protective factor.

In order to foster a worthwhile relationship, a resilient person instinctively knows how to bond with another person. Authentic leaders adeptly utilize their social skills to promote relationships and transparency within the organization. A review of the literature underscored the importance of relationships, connectedness, and mentoring within the school setting. Principals who harbor these strategies stand a better chance at overcoming adversity.

Self-efficacy and self-esteem.

"Psychological freedom, a firm sense of self-esteem, is the most powerful weapon against the long night of physical slavery."

~ Martin Luther King, Jr. (King, 1968, p. 44)

This section addresses the significant role self-esteem and self-efficacy play in the resiliency literature. Both self-related constructs share a strong relationship with autonomy and offer greater insight into the resiliency theoretical framework. How do scholars define self-esteem and self-efficacy? How do these constructs relate to human agency, autonomy and resiliency? This section of the literature review seeks answers to these questions and discusses implications regarding educational leadership and resiliency theory.

Conventional wisdom used a "more is better" approach when describing the attributes of self-esteem. Recent research, however, took exception to this notion, suggesting that too much self-esteem led to egotistical illusions, aggressive behavior, and even low performance (Deci & Ryan, 1995). In fact, scholars redefined self-esteem by differentiating between contingent self-esteem and true self-esteem (Deci & Ryan, 1995).

Deci and Ryan (1995) defined contingent self-esteem as "feelings about oneself that result from – indeed , are dependent on – matching some standard of excellence or living up to some interpersonal or intrapsychic expectations" (p. 32). A principal who feels successful and worthy only when raising test scores exemplifies contingent self-esteem. This type of self-esteem involves social comparison because the basis for self-worth is an external measuring stick outwardly imposed by society. An element of narcissism exists within contingent self-esteem since these people focus on their own

goals and measure success by comparing themselves to others (Deci & Ryan, 1995).

Therefore, Deci and Ryan (1995) link negative mental processes such as self-deception

and rationalization to contingent self-esteem.

On the other hand, true self-esteem measures a person's own self worth, which in

turn, correlates to positive psychological outcomes such as higher self-regard, a more

secure sense of self, and greater internalized behavior. For example, a principal with true

self-esteem acts autonomously within the school system to build a team of

philosophically aligned professionals. Even as a principal strives towards his or her

aspirations, the principal's own self-worth is not tied to accomplishing these goals or

even worse, living to someone else's standards. Instead, this principal works agentically

and remains true to himself while leading the school.

Deci and Ryan (1995) associated true self-esteem with the three fundamental

psychological needs outlined in the Self-Determination Theory: autonomy, competence,

and relatedness. Individuals experience true self-esteem whenever they satisfy these

three psychological needs. Hence, a clear distinction exists between contingent self-

esteem and true self-esteem.

> The point, then, is that people develop more of a true self and have truer self-
>
> esteem when they are supported and loved as they behave agentically from their
>
> own perspective, whereas they develop more of a false self and have more
>
> contingent self-esteem when they are pressured to meet others' standards and are
>
> loved only for matching those standards. In turn, true self-esteem is the basis for
>
> further agentic activity, whereas contingent self-esteem is the basis for being

controlled by the demands placed on people by the social world (or by

internalized versions of those demands). (Deci & Ryan, 1995, p. 34)

A construct closely related to self-esteem, self-efficacy, describes the belief in

one's ability to successfully complete a task in order to produce the intended outcome

(Bandura, 1977). Although used interchangeably in much of the literature, self-efficacy

differs from self-esteem. Where self-esteem measures the degree to which an individual

likes himself; self-efficacy measures personal competence or judgments about one's

ability to complete a task. This lack of distinction between these constructs within much

of the literature slightly muddles this area of the resiliency research. However, most

scholars include one or both constructs when describing protective factors associated

with resilient individuals (Rutter, 1979; Werner & Smith, 1982; Rutter, 1985; Bandura,

1990; Benson, 1997; Bobek, 2002; Wayman, 2002; Richardson, 2002; Howard &

Johnson, 2004; Gu & Day, 2007).

In 1977, Albert Bandara described self-efficacy's affect on an individual's ability

to cope when faced with adversity.

Not only can perceived self-efficacy have directive influence on choice of

activities and settings, but, through expectations of eventual success, it can affect

coping efforts once they are initiated. Efficacy expectations determine how much

effort people will expend and how long they will persist in the face of obstacles

and aversive experiences. (Bandura, 1977, p. 194)

Although Bandura (1977) never specifically refers to resiliency in his article, scholars

who study resiliency depict self-efficacy as an antecedent construct within the resiliency

theoretical framework (Rutter, 1985; Bandura, 1990; Benson, 1997; Bobek, 2002;

Richardson, 2002; Howard & Johnson, 2004; Gu & Day, 2007).

During a time when forty percent of teachers in America appear disheartened and

disappointed with their careers, notions of self-esteem and self-efficacy become

especially poignant (Yarrow, 2009). These frustrated teachers reported a lack of support

from administration, multiple disciplinary issues, and testing as the major reasons for

their discontent (Yarrow, 2009). Do high levels of self-efficacy support teachers who

face adversity? For example, does teachers' self-belief in their own ability to manage

stressful events in classrooms increase their resiliency? Part of the answer resides in

research studies completed outside the education field.

Researchers wondered what allows some people to overcome distressing

conditions while others suffer lingering negative reactions to the same disastrous events.

Recent research indicated the beneficial function of individuals' affirmative beliefs in

controlling certain events that affect their lives (Bandura, 1997; Benight & Bandura,

2004).

> People's beliefs in their coping efficacy influence vigilance toward potential
>
> threats and how they are perceived and cognitively processed. People who
>
> believe they can exercise control over threats do not conjure up calamities and
>
> distress themselves. But those who believe that potential threats are
>
> unmanageable view many aspects of their environment as fraught with danger.
>
> They dwell on their coping deficiencies, magnify the severity of possible threats,
>
> and worry about perils that rarely if ever happen. (Benight & Bandura, 2004, p.
>
> 1132)

Research revealed this type of self-enhancing cognition acts as a protective function against various types of trauma including posttraumatic recovery, military trauma, aftermaths of natural disasters, terminal illness, terrorism, sexual assault, and spousal bereavement (Benight & Bandura, 2004). Hence, perceived self-efficacy acts as a protective factor and plays a significant role in overcoming hardship and trauma.

Research revealed similar results within the education profession. Building on Bandura's (1977) theory of self-efficacy, educational researchers studied the relationship between teacher efficacy and student achievement. For instance, studies revealed that teachers with high levels of self-efficacy devoted more instructional time, provided more support to struggling learners, and offered more academic praise (Bandura, 1993). Teacher perceived self-efficacy also influenced their educational approach. Those teachers with higher perceived self-efficacy discovered ways to build students' intrinsic motivation and agency. In contrast, teachers with low perceived self-efficacy tended to rely on extrinsic incentives and negative consequences to motivate their students (Bandura, 1993). Described as a dynamic process, "the development of teachers' self-efficacy consistently interacts with the growth of their resilient qualities" (Gu & Day, 2007, p. 1312).

In addition to the positive outcomes mentioned above, a review of the literature linked teacher and student perceived self-efficacy to resiliency. The presence of this powerful construct relates to students persisting during challenging or frustrating learning episodes (McTigue, Washburn, & Liew, 2009), better job satisfaction among teachers (Caprara, Barbaranelli, Borgogni, & Steca, 2003), lower levels of deviant behavior among vulnerable African American urban youth living in poverty (Nebitt, 2009), and

higher levels of resiliency among teachers who encountered setbacks or difficult circumstances (Wahlstrom & Louis, 2008).

Is there a link between perceived self-efficacy and principal leadership effectiveness? General consensus among scholars acknowledges a strong correlation between teacher effectiveness and student achievement (Nye, Konstantopoulous, & Hedges, 2004). Researchers also acknowledge the importance of principal leadership. Hence, as the instructional leader of the school, a successful principal recognizes effective teaching strategies using frequent classroom visits, timely constructive feedback, worthwhile professional development, and support networks to promote collaboration. In fact, the deeper the principal's pedagogical knowledge, the better he or she builds the school's instructional capacity. In addition to these direct strategies, researchers studied the indirect methods principals employed to promote student achievement and overall school success. This research included the influence of school climate, leadership style, and teacher efficacy.

Despite the extensive amount of research examining student and teacher efficacy (Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998; Pinquart, Juang, & Silbereisen, 2003; Pajares, 2005), few studies evaluated the impact of principals' perceived self-efficacy and its influence on schools, teachers, and student achievement. This gap in the literature is rather surprising given the recent attention paid to data driven decision making, collaboration, and a renewed interest in leadership styles (Nir, 2006). Interestingly, a literature search revealed no studies associated with principal leadership, self-efficacy, and resiliency.

The small number of studies that investigated the relationship between principal leadership and efficacy used a broader construct of efficacy. In addition to a single teacher's perception of his or her own self-efficacy, researchers studied a phenomenon known as collective school efficacy. "Perceived school efficacy is the belief of individual school staff members in their school's capacity as a context for efficacisous task performance" (Imants & DeBrabander, 1996, p. 181). Various investigations referred to this construct as collective efficacy, school efficacy, and general efficacy.

In an early study, Hipp (1996) investigated the relationship between principal leadership and teacher efficacy. This study attempted to answer three questions. 1) Are certain principal leadership behaviors related to teacher efficacy? 2) Do principals influence general and personal teacher efficacy? 3) What obstacles interfere with principals' leadership behaviors on teacher efficacy?

Hipp (1996) used Hoy and Woolfolk's (1993) two-dimensional self-efficacy construct to measure general teacher efficacy and personal teaching efficacy. General teaching efficacy examined "a general belief about the power of teaching to reach difficult children" (Hoy and Woolfolk, 1993, p. 357). This particular conceptualization conveyed resiliency schema (bouncing back from adversity) due to the emphasis placed on difficult children. Personal teaching efficacy, on the other hand, considers the belief in one's own competence to improve student achievement.

This study surveyed ten principals and 280 teachers. Teachers responded to a 16-item scale related to efficacy, a 34-item survey related to principal leadership, and participated in one interview. Principals completed the 34-item leadership survey and participated in one interview. Statistical analysis indicated differences between the two

efficacy dimensions, yet found no significant relationships between principals' influence on general or personal teaching efficacy. However, Hipp (1996) further analyzed the interview transcripts and reported that the transformational style of leadership related to teacher efficacy. Finally, constraints such as "unfocused priorities, negative environmental indicators, and decreasing public support for education" interfered with principals' leadership behaviors on teacher efficacy (Hipp, 1996, p. 23).

Ten years later, Nir (2006) questioned Hipp's (1996) results based on the low sample size, and the fact that the study only looked at one leadership style, transformational leadership. Furthermore, Nir (2006) criticized the study's absence of control variables and the use of a teacher-based analysis rather than a school-based analysis. Hence, Nir (2006) devised his own study to reanalyze the relationship between principal leadership and teaching efficacy using a larger sample size, controlled variables, and a school-based analysis.

Nir's (2006) study revealed no relationship between general teacher efficacy and principal leadership style and a "complex" relationship between personal teacher efficacy and principal leadership style (p. 212). However, further analysis verified Hipp's (1996) postulation linking transformational leadership to personal teacher efficacy. Nir (2006) asserted that these results emphasized "the significance of the positive job experiences that promote individuals' satisfaction on the job and the potential contribution of the transformational leadership style for the shaping of these experiences" (p. 213). Even without a causal relationship, the presence of self-efficacy along with a principal's transformational leadership helps promote a more positive school climate, and ultimately may enhance job satisfaction. This relatively new area of research requires further inquiry

in order to connect the dots between leadership style, self-efficacy, and ultimately resiliency.

Leithwood and Jantzi (2008) examined various aspects of principals' leadership efficacy and their effects on the entire school organization as well as student outcomes. While Nir (2006) analyzed principals' influence on teacher efficacy, Leithwood and Jantzi (2008) investigated the relationship between principals' efficacy and school and classroom conditions. They measured a moderate effect of leader efficacy on school conditions and a weak but significant effect of principal efficacy on the percent of students meeting or surpassing state proficiency levels. Although Leithwood and Jantzi (2008) referred to a leader's resiliency in their Framework and Literature section, their investigation excluded this matter. Once again, this absence of resiliency discourse points to a knowledge gap in the literature.

Although self-esteem and self-efficacy constructs act as important cognitive mechanisms used to ward off stressors and adversity (Rutter, 1985), less is known about the relationship between principals' leadership behaviors, self-efficacy, and their ability to bounce back after adversity. Subsequent research involving these constructs may shed light on protective factors associated with principals' resiliency.

Professional development and problem solving.

"Imagination is more important than knowledge."

~Albert Einstein (Isaacson, 2007, p. 387)

Professional development.

By definition, self-efficacious principals believe in their ability to successfully complete a task in order to produce the intended outcome (Bandura, 1977). Accessing

education, training, and problem solving skills reveals yet another stratum from the resiliency theory's multiple constructs. How important is subject-matter-knowledge for principals and district administrators? Does this type of knowledge support a leader's resiliency? A review of the literature demonstrates that this type of research is in its infancy. This section brings together the research analyzing relationships between resiliency, professional development, and problem solving skills.

Common sense tells us that educators must possess a wealth of knowledge of the subjects they teach. However, researchers devoted little time to this phenomenon (Stein & Nelson, 2003). Shulman (1986) recognized this research gap and labeled it the "missing paradigm" (p. 6).

> Policymakers read the research on teaching literature and find it replete with references to direct instruction, time on task, wait time, ordered turns, lower-order questions, and the like. They find little or no references to subject matter, so the resulting standards or mandates lack any reference to content dimensions of teaching. Similarly, even in the research community, the importance of content has been forgotten. Research programs that arose in response to the dominance of process-product work accepted its definition of the problem and continued to treat teaching more or less generically, or at least as if the content of instruction were relatively unimportant. (Shulman, 1986, p. 6)

One reason for this missing paradigm may result from the principal's preference for pedagogy over content knowledge. Farkas, Johnson, and Duffett (2003) reported that most principals and superintendents were comfortable with the level of new teachers' content knowledge. Interestingly enough, in the same survey, only 16% of

superintendents rated their principals as excellent at matching professional development to the needs of their teachers.

Shulman's (1986) spotlight on this obvious omission led researchers to study teachers' knowledge of subjects. Stein and Nelson (2003) advanced this research trend by studying a relatively new construct called leadership content knowledge. Still in its infancy, a review of the literature demonstrated a vague construal of this construct. For example, when examining school leaders, researchers struggled with recognizing the differences between subject matter content and knowledge about leadership.

> Knowledge about subject matter content is related in complex ways to knowledge about how to lead. In some cases, subject matter knowledge appears to be transformed for the purposes of providing leadership for instructional reform. In other cases, administrators' knowledge of how to lead, how to build the culture of a school community, how to use professional development programs and other resources well, how to conduct a curriculum selection process so that it is perceived as legitimate and politically viable, how to plan for the systemic array of interventions that will be needed in order to successfully reform a system's academic program, and so on – appears to be transformed by newly learned subject matter. And, in still other cases, the two appear to be so tightly fused that they need to be actively disentangled. (Stein & Nelson, 2003, p. 424)

What is further unclear is the relationship between principal resiliency and leadership content knowledge. Stein and Nelson (2003) argued that principals with content knowledge profit over others without this subject knowledge depth. However, they questioned the practicality of expecting administrators to know content knowledge in all

subject areas, especially at the secondary level. Deep knowledge in one core subject

along with a reliance on distributive leadership may resolve this dilemma. Stein and

Nelson's (2003) qualitative study analyzed three interview transcripts from previous

research projects. Clearly, this new construct requires more research to examine the

significance of leadership content knowledge along with correlations to principal

resiliency. In the meantime, topics aligned with professional development, such as

mentoring and induction, appear in the literature and warrant review.

Not surprisingly, several studies have determined that teachers' job satisfaction

increases when principals effectively mentor, train and support teachers (August &

Waltman, 2004; Sparks, 2004; Tillman, 2005; Weiss, 1999). Many times a brand new

teacher doesn't know what he or she doesn't know. This early stage of development for

new teachers can be an extremely frustrating time for the administrator who is trying to

implement a support plan and equally as frustrating for the teacher who is struggling but

unsure where to begin. In other words, a teacher must be taught how to reflect on his/her

practice in order to internalize strengths and limitations as well as overcome adversity.

Sparks (2004) differentiated between staff development leaders and staff development

providers. "The principal as professional development leader must understand deeply

how changes take place in the structure and culture of the school organization and create

a culture that understands and values high-quality professional development" (Sparks,

2004, p. 4). In terms of resiliency, professional development acts as a protective factor

for both the principal and faculty. When a principal relinquishes professional

development responsibility or simply encourages teachers to attend training without

follow through, a clear message is sent to faculty: "Professional development is your

responsibility." It becomes even more troublesome when the message is interpreted as, "Professional development is not important at this school." A new teacher in this type of school culture may not get the proper support and ultimately become frustrated and burnout. However, principals promote resiliency in themselves and others by endorsing training and remaining directly involved in the professional development process.

Research confirms that a principal can influence the induction of a brand new teacher. According to Youngs (2007), a principal's background, philosophy and interactions with new faculty can directly influence new teachers. In one study, Tillman (2005) followed the practices and experiences of a new teacher, mentor and a principal during the teacher's first year. The study tried to determine what practices lead to better teacher competence, teacher retention and increased student achievement. Although severely limited by a small sample size, Tillman (2005) still generalized the results of her study and offered several recommendations. First, principals should be directly involved with the mentoring process at the school, especially with African American teachers in the urban school setting. Backgrounds and experiences must be considered when developing mentoring plans for a new teacher. Tillman (2005) also argued that principals must consider opportunities for new teachers to work with a team in order to avoid teaching in isolation. Obviously, mentor selection is also critical during the mentoring process. Finally, principals must be sure to make teachers feel welcome "by conveying the message that they are valued members of the school community, and that as instructional leaders, principals will take the time to support every new teacher" (Tillman, 2005, p. 627). Although the limitations of Tillman's (2005) study call into question the generality of her results, her commonsense recommendations remain useful.

Youngs (2007) reported that principals can positively promote professional growth when they meet regularly with new teachers, directly facilitate mentor programs, demonstrate a keen understanding of district and state induction policies and have backgrounds in curriculum and instruction. The school's professional culture also had a direct impact on new teachers' induction. Effective principals "promoted integrated professional cultures in which experienced teachers were aware of new teachers' needs for assistance and were actively involved in induction" (Youngs, 2007, p. 127). Professional development as a protective factor acts as a layer of support and bolsters teacher and principal resiliency.

Principals' professional training assists their performance and indirectly supports student achievement (Knoeppel & Rinehart, 2008). Curiously, principals show little regard for their educational leadership training. A quantitative study involving more than 1000 public school superintendants and more than 900 public school principals analyzed these educational leaders' perspective regarding their professional role in schools. Limitations of this study included the reliance on self-reported data. In terms of their own professional development, principals viewed graduate school programs poorly. Only two percent of principals surveyed described their educational leadership program as "most valuable" in preparing them for their profession. Instead, principals relied on mentoring and previous on-the-job experiences to help them prepare for their current position (Farkas, Johnson, & Duffett, 2003). Nonetheless, training and professional development remains important. Principals exposed to the latest approaches related to curriculum and accountability reform outperform principals who lack this training (Knoeppel & Rinehart, 2008). Unfortunately, principal evaluation tools rarely assess the

attributes most commonly associated with improving student achievement (Goldring, Cravens, Murphy, Porter, Elliot, & Carson, 2009). Clearly, these concepts require more research to tease out the relationship between principal resiliency and professional training.

   Problem solving.

   In addition to a principal's formal education and professional development, a successful leader relies on practical knowledge and real-world experience in order to problem solve (Germain & Quinn, 2005). Although the most experienced and effective principal places a premium on the proactive approach, the best plans derail without a moment's notice. A principal fills a majority of the day maneuvering around obstacles and resolving various problems. Student discipline, paperwork, presentations, classroom visits, deciphering NCLB, scheduling, attending parent conferences, and evaluating employees represent just the tip of the iceberg when describing a typical day as a principal. In fact, the words "typical" or "routine" fall short whenever describing the role of principal. Nearly 75% of principals surveyed believed that daily emergencies prevented them from spending time on matters related to classroom teaching (Farkas, Johnson, & Duffett, 2003). In addition to responding to these daily school demands, a principal must consider the overall school climate, pedagogy, content knowledge, and reform efforts. The overlap of these demands creates a uniquely intense dynamic, ripe with quandaries and puzzles for the principal to untangle. How does the resilient principal persevere?

   The resilient leader relies on ingenuity and creativity to bounce back from the toughest situations. In his book, *The Savage Mind,* Lévi-Strauss (1966) coined the word

bricolage to describe the process of creating something from the tools within reach. A bricoleur gathers all available resources and uses them to create new opportunities or solve problems (Lévi-Strauss, 1966; Coutu, 2002; Freeman, 2007; Aagard, 2009; Reilly, 2009). They imagine possibilities and get the job done. For example, facing declining student achievement, the bricoleur principal garners human resources, empowers teacher leaders to action plan, involves parents and the community to align resources, and utilizes every available tool to meet students' needs. Imagination, ingenuity, and creativeness befit the resilient principal who pursues solutions rather than excuses.

Perhaps the most inspiring illustration of bricolage comes from Viktor Frankl's (1992) classic, *Man's Search for Meaning.* A Holocaust concentration camp survivor, Frankl (1992) recalled how he exchanged cigarettes for soup to avoid starvation. And although Frankl (1992) provided other examples of how he physically and shrewdly defied the odds and survived, it was his mental bricolage that constituted the difference between life and death. After admonishing himself for preoccupying his mind with daily and hourly living conditions, he wrote:

> I forced my thoughts to turn to another subject. Suddenly I saw myself standing on the platform of a well-lit, warm and pleasant lecture room. In front of me sat an attentive audience on comfortable upholstered seats. I was giving a lecture on the psychology of the concentration camp! All that oppressed me at that moment became objective, seen and described from the remote viewpoint of science. By this method I succeeded somehow in rising above the situation, above the sufferings of the moment, and I observed them as if they were already of the past. (p.82)

Clearly, these mental exercises kept Frankl (1992) looking toward the future and ultimately contributed to his remarkable resiliency.

Problem solving skills among educational leaders received little attention in the literature. However, two studies analyzed tacit knowledge as a means to study problem solving skills of principals (Nestor-Baker and Hoy 2001; Germain & Quinn, 2005). Tacit knowledge refers to intuition or implicit knowledge grounded in experience (Germain & Quinn, 2005). Tacit knowledge differed between successful and typical superintendents (Nestor-Baker and Hoy 2001), and between expert and novice principals (Germain & Quinn, 2005). Although Germain and Quinn (2005) never directly addressed a principal's resiliency, they described differences in reactions to adversity. Experienced principals relied on their past experiences and handled "unanticipated obstacles" more effectively than their novice counterparts.

> They had an internal sense of the organization's mission and used it as a guide when confronting obstacles. Expert principals were less likely to feel stressed during potentially hostile situations. They engaged in more if-then thinking than did novice principals, and were not stymied by perceived roadblocks to their intended course of action. (Germain & Quinn, 2005, p. 85)

While novice principals tend to avoid conflict, expert principals embrace challenge. Besides utilizing the if-then problem solving approach, Germain and Quinn (2005) asserted that expert principals rely on extensive initial problem analysis. In other words, as bricoleur, the effective principal continuously searches for options, relies on a repertoire of accumulated experiences, and utilizes tacit knowledge to overcome adversity.

The adage, "knowledge is power" comes to mind when describing professional development and problem solving as a protective factor. Although very few studies connect professional development with a leader's resiliency, the literature clearly depicts the benefits of subject-matter knowledge as well as creative thinking. Obstacles and challenges epitomize a principal's passage through each school day. Hence, the resilient principal must rely on his or her experience, tacit knowledge, and problem solving skills to bounce back from hardship. More inquiries studying this protective factor from a principal's perspective will advance resiliency research in the future.

Autonomy.

"No person is free who is not master of himself."

Epictetus, Greek philosopher

As a political entity, the purpose of public education changes as our nation's agenda changes. Consequently, public schools act as "an agency for the expression of the public philosophy" (Johannigmeier & Richardson, 2008, p. 4). Currently, public education is consumed with the notion of accountability. Federal mandates such as No Child Left Behind (NCLB) Act of 2001, (U.S. Department of Education, 2002), focus attention on student achievement via standardized assessments, merit pay for teachers, and appraisal ratings for schools (Adequate Yearly Progress). Described as rule-bound, uniform and bureaucratic, the accountability era ushered in an educational system tied to data collection, benchmarks, and high-stakes testing. Obviously, these standard-driven policies altered the landscape of classrooms, as schools responded by reducing curriculum variation, teaching the standardized test content, and implementing a system

of rewards and sanctions based on students' high stakes test performance (Broome, 2008).

Many argue that these state and federal mandates undermine the autonomy of teachers and school leaders. To this end, Broome (2008) used the formal rationalization theory and the McDonaldization phenomenon to demonstrate how institutionalized bureaucracies limit options and dictate people's choices.

Ritzer suggested that the goals of fast food restaurants, such as McDonald's, might serve as a better metaphor for explaining current trends in rationalization. Specifically, Ritzer illustrated how the ideals of fast food restaurants (efficiency, calculability, predictability, and the use of technology to control situations) have become pervasive standards for many professions and in other areas of modern life. Ritzer labeled this phenomenon, McDonaldization, and offered evidence that the health care industry, sports, higher education, recreation, and news media outlets are becoming increasingly McDonaldized. (Broome, 2008, p. 21)

Clearly, McDonaldized instructional leaders function with less autonomy than their predecessors. From a resiliency perspective, what is autonomy and why is this construct important? How does autonomy connect to the Self Determination Theory, Cognitive Evaluation Theory, and Empowerment theory? This next section reviews the literature related to autonomy and its bearing on resiliency.

Gagné and Deci (2005) defined autonomy as "acting with a sense of volition and having the experience of choice" (p. 333). The antonym of autonomy, heteronomy, "refers to regulation from outside the phenomenal self, by forces experienced as alien or pressuring, be they inner impulses or demands, or external contingencies of reward and

punishment" (Ryan & Deci, 2006, p. 1562). Autonomy differs from independence or

individualism since an autonomous individual need not feel detached, selfish, or

independent from the community (see Figure 2). On the contrary, autonomous behavior

is positively related to collectivistic experiences (Ryan & Deci, 2000). In fact, an

individual operates autonomously within a domain of rules and mandates if and when

that person concurs with and endorses those external influences and pressures (Ryan &

Deci, 2006). Therefore, endorsement and ownership, not independence, are requisite

behaviors for an act to be deemed autonomous.

Philosophers and psychologists also consider a person's motives when analyzing

autonomy. Intrinsic motivation is an inherent construct in which an individual pursues

challenges, creativity, and continues to learn and explore (Ryan & Deci, 2000). Intrinsic

motivation exemplifies autonomy since intrinsically motivated individuals find

satisfaction from the task itself and chooses to continue by their own volition (Gagné &

Deci, 2005). Autonomous motivation differs from controlled motivation. Controlled

motivation involves extrinsic rewards to pressure or cajole an individual into completing

an activity. The Self-Determination Theory distinguishes between these two types of

motivation and measures extrinsic motivation on a continuum between autonomous and

controlled behavior. Hence, many types of extrinsic motivation exist along this

continuum. For example, Gagné and Deci (2005) referred to external, introjected,

identified, and integrated regulation to differentiate among these various forms of

extrinsic motivation. Although describing these terms is beyond the scope of this review,

this key distinction demonstrates the important connection between intrinsic motivation

and autonomy.

Gagné and Deci (2005) defined internalization as the transformation of values, attitudes, or regulatory external structures into internal regulation, thus eliminating the need for external contingencies. In other words, an internalized behavior comes from within a person's own sense of self (Ryan & Deci, 2000). Researchers discovered three elements associated with the highest levels of internalization: a meaningful reason for completing the activity, the recognition of uninteresting tasks, and an emphasis on choice rather than control. This significance of choice frames one of the conditions (autonomy) associated with resiliency. Furthermore, Self-Determination Theory postulates that people must feel autonomous, competent, and connected to others (relatedness) in order to maintain the highest levels of intrinsic motivation (Ryan & Deci, 2000; Gagné & Deci, 2005). Of these needs, "autonomy support is the most important social-contextual factor for predicting identification and integration, and thus autonomous behavior" (Gagné & Deci, 2005, p. 338). Studies reported that autonomous motivation yielded greater performance outcomes that included interesting, complex tasks as well as less complex, controlled activities (Gagné & Deci, 2005). These three needs defined by the Self-Determination Theory also emerge as key components of resiliency theory.

Much of the early research surrounding autonomy used a mini-theory within the Self-Determination Theory known as Cognitive Evaluation Theory (CET). CET studies proposed that self-efficacy did not augment intrinsic motivation unless it was coupled with a feeling of autonomy. Later research determined that tangible rewards, deadlines and mandates decreased intrinsic motivation whereas choice, self-direction, and autonomy increased intrinsic motivation (Ryan & Deci, 2000). For example, Flink, Boggiano, and Barrett (1990) analyzed autonomy supportive behaviors among teachers

and its relationship to intrinsic motivation and achievement. In this empirical study, the researchers distinguished between teachers' behaviors used to pressure, control and regulate students versus teachers' behaviors used to guide and support students. The results of this study revealed that children performed significantly better with non-controlling teachers. In sum, "performance impairment was evidenced when children were taught by pressured teachers who used controlling strategies and the absence of choice options" (Flink, Boggiano, &Barrett, 1990, p. 922). A dearth of autonomy negatively impacts intrinsic motivation as well as student achievement.

Another motivational construct, psychological empowerment, utilizes four other cognitions as the basis of its broad definition: meaning, competence, self-determination, and impact. Meaning refers to the value an individual places on a task and suggests a relationship between a person's beliefs and the requirements of the task. Competence or self efficacy refers to a person's belief in his or her ability to perform a task. Self-determination refers to people's autonomy and control over their own work. Finally, impact measures a person's influence on organizational outcomes (Spreitzer, 1995). Spreitzer (1995) defined psychological empowerment as a set of cognitions molded by the work environment. Researchers measured psychological empowerment on a continuum specific to the work domain rather than as an ostensible, globalized trait (Spreitzer, 1995).

The significance of psychological empowerment resides in this specificity to the work environment. In particular, Spreitzer (1995) established a positive relationship between locus of control and psychological empowerment. Locus of control "explains the degree to which people believe that they, rather than external forces, determine what

happens in their lives" (Spreitzer, 1995, p. 1446). Additionally, empowerment's focus on

the work environment allowed researchers to turn their attention to organizational

behavior, job level strain, and leadership effectiveness. For example, as part of their

psychological empowerment research, Spreitzer, Kizilos, and Nason (1997) revealed

empirical evidence linking self-determination with increased job effectiveness, increased

job satisfaction, and decreased job-related strain.

> Managerial effectiveness is generally defined as the degree to which a manager
>
> fulfills or exceeds work role expectations. Because, by definition, empowered
>
> managers see themselves as competent and able to influence their jobs and work
>
> environments in meaningful ways, they are likely to proactively execute their job
>
> responsibilities by, for instance, anticipating problems and acting independently,
>
> and hence are likely to be seen as effective. More specifically, Thomas and
>
> Velthouse (1990) argued that empowerment will increase concentration, initiative,
>
> and resiliency and thus heighten managerial effectiveness. (Spreitzer, 1995, p.
>
> 1448)

Although Spreitzer's (1996) research on psychological empowerment provided

organizational leaders with valuable insight in terms of its four cognitions (meaning,

competence, self-determination, and impact), she advised leaders to use a comprehensive

approach rather than a piece meal implementation.

> The findings reported in our research indicate that organizations must create more
>
> complex empowerment interventions; in addition to providing decision-making
>
> autonomy to facilitate self-determination, organizations must create a supportive
>
> organizational culture, design jobs that are meaningful to employees, provide

training and development to enhance feelings of competence, and allow

employees to have impact in their work unit through involvement in strategic goal

setting and shared governance. (Spreitzer, Kizilos, & Nason, 1997, p. 701)

Not everyone endorses autonomy, choice and free will. Some question its

existence while others suggest an individual could possess too much autonomy. For

example, many behavioralists discounted the notion of autonomy and instead emphasized

the use of external influences and reinforcement contingencies to control choice and

behavior. To this end, Eisenberger and Cameron (1996) challenged the conventional

wisdom purporting that the use of external pressures, such as rewards, reduced intrinsic

motivation, creativity, and productivity. Do pizza parties, ice cream cones, and "points"

for correct answers on reading quizzes really squash a student's desire to read

recreationally? Eisenberger and Cameron (1996) claimed no and described these popular

ideas as myth. To prove their point, they reviewed several empirical studies that

demonstrated the benefits of rewards. However, Ryan and Deci (2006) criticized

Eisenberger and Cameron's (1996) meta-analysis for its numerous errors related to

control groups, calculations, and classifications.

Schwartz (2000) argued that too much autonomy creates negative circumstances.

In his argument, Schwartz (2000) used the words autonomy and freedom as synonyms to

define self-determination. A person who seeks full self-determination makes a mistake

because when self-determination is carried too far, "it leads not to freedom of choice but

to tyranny of choice" (Schwartz, 2000, p. 81). Schwartz (2000) warned without

constraints or rules, unchecked freedom leads to "self-defeating tyranny" (2000, p. 81).

Rules allow us to function within parameters and socially accepted guidelines in order to maximize our potential.

For example, a principal with total autonomy creates a problematic scenario when he refuses to honor standardized testing procedures established by the state's Department of Education. A principal's philosophical alignment must not guide the implementation of the state's mandated assessment program. Like them or not, the principal must operate within the established boundaries developed within the education system. To disregard the rulebook altogether eventually leads to the tyranny described by Schwartz (2000). Conversely, Ryan and Deci (2006) stated that autonomy is not defined by the absence of rules or mandates and instead underscored the importance of ownership and endorsement. Therefore, principals can still act autonomously within the educational system if they concur with or endorse these external demands.

In view of this research, one could hypothesize that "conveying the importance of tasks and providing autonomy-supportive work climates would promote internalization of extrinsic motivation and benefit all employees" (Gagné & Deci, 2005, p. 355). From a principal leadership perspective, this premise remains crucial. Unfortunately, this underscores a major limitation of this research since no evidence supports this hypothesis. Conversely, Gagné & Deci (2005) cited evidence demonstrating that managers enhance intrinsic motivation and autonomous extrinsic motivation when they provide employees with more choices, respect their point of view, and promote self-initiation. Whether theorists can extrapolate these trends to construct a working theory to promote autonomy-supportive work climates for principals remains a question. However, from a wellness model perspective, promoting autonomy as a protective factor

to promote resiliency promises to yield positive psychological and performance enhancing outcomes.

Meaning.

"What does not destroy me, makes me stronger."

~ Friedrich Nietzsche (Shapiro, 2006, p. 553)

A great majority of principals started their careers as teachers. Thus, one must consider the teaching profession when studying educational leaders. For many of these individuals, the idea of teaching is much more than a job or work. Instead, they describe their motives as a calling or a vocation. In the literature, Hansen (1994) connected another protective factor from the previous section, autonomy, with the significance of finding meaning in the world.

> To describe the inclination to teach as a budding vocation also calls attention to the person's sense of agency. It implies that he or she knows something about himself or herself, something important, valuable, worth acting upon. One may have been drawn to teaching because of one's own teachers or as a result of other outside influences. Still, the fact remains that now one has taken on that interest oneself. The idea of teaching "occupies" the person's thoughts and imagination. Again, this suggests that one conceives teaching as more than a job, as more than a way to earn an income, although this consideration is obviously relevant. Rather, one believes teaching to be potentially meaningful, as the way to instantiate one's desire to contribute to and engage with the world. (Hansen, 1994, p. 267)

Howard and Johnson (2004) studied resilient teachers and found that a majority of them possessed a "moral purpose" because they chose to work in disadvantaged schools.

> The chance of 'being able to make a difference' in children's lives and the confidence they could do this was a strong feature of the teachers' talk. Far from being naïve, zealous crusaders, our participants seemed to have a realistic understanding of what and how much they could do. (Howard & Johnson, 2004, p. 411)

Other studies reported similar results. Teachers and teacher leaders identified as resilient referred to their endeavors as a "calling" (Gu & Day, 2007; Patterson, Collins, and Abbott, 2004). The participants frequently used the terms commitment, compassion, and responsibility during the interviews. The common thread woven throughout the teachers' stories was "strength and determination to fulfil their original call to teach and to manage and thrive professionally" (Gu & Day, 2007, p. 1314). As discussed earlier, limitations existed in both qualitative studies. Small sample sizes and generalizations about successful teaching practices place limitations on this research. However, the cogent analyses of the transcripts delivered elaborate descriptions of scenarios related to protective factors within the resiliency domain.

A portion of the resiliency literature intertwines spirituality with belief systems as a person searches for meaning during difficult times. As discussed earlier, Richardson (2002) described his third phase of resiliency as "a force within everyone that drives them to seek self-actualization, altruism, wisdom, and harmony with spiritual source and strength" (p. 313). Patterson (2007) advised principals to strengthen their resiliency by clearly communicating their belief systems and acting "decisively, despite the risks, when

your deepest values are at stake" (p. 22). Along the same vein, Coutu (2002) argued that the values of the organization were more worthwhile than an organization comprised of resilient employees. However, very little empirical data supports either claim. Even so, recent articles discussed spirituality and its bearing on leadership.

For example, Dent, Higgins, and Wharff (2005), analyzed 20 randomly selected articles about spirituality and leadership and developed eight categories. Researchers used open coding "to immerse themselves in the data, discuss and debate among themselves, and be open for patterns and themes to come in to view" (p. 629). The researchers used Cohen's Kappa to calculate the agreement between raters. Their analysis revealed multiple definitions of spirituality in the workplace. Most articles linked workplace spirituality to religion without the auspices of scholarship to advance the theory. Dent, Higgins, and Wharff (2005) encouraged readers to exercise caution when studying spiritual leadership and warned, "researchers may want to step back from their passion about their work and evaluate whether they are promoting a cause or proselytizing their own values and beliefs, rather than advancing scientific knowledge" (p. 643).

Dent, Higgins, and Wharff's (2005) category, entitled "epiphany," discussed the transforming experience that immediately follows trauma or great suffering. Peering through a resiliency lens, some researchers described organizational spirituality as discontinuous resulting from a defining moment or a calling. Connections to transformational leadership, relational leadership, and even positive psychology were evident. Overall, however, this category received negligible attention in the literature (Dent, Higgins, & Wharff, 2005).

One such spiritual study reported a relationship between equanimity and leadership. Researchers defined equanimity as "an ability to find meaning in hardships, feeling at peace or centered, and experiencing a strong bond to humanity" (Gehrke, 2008, p. 352). Gehrke (2008) claimed that these results indicated a similarity between spiritual development and leadership development but provided little detail. Although implied, resiliency and more specifically, making meaning, was not addressed. Furthermore, the use of a nonrandomized sample along with a narrow focus on social leadership placed limitations on Gehrke's (2008) findings.

Attaching meaning to an unfortunate event and learning from that experience occurs at both the individual and organizational level. The resilient principal turns inward in a reflective posture after suffering through a major hardship at the school. A certain amount of internalization results in which the principal learns from the experience in order to avoid a similar pitfall. On the contrary, the vulnerable principal feels helpless, acts like a victim, and seeks to blame others for the misery. The resilient principal moves forward while the other stagnates and loses ground.

Like a person, the resilient organization operates in similar fashion. According to Coutu (2002), organizations that are built on a platform of strong values are better prepared to weather the storm of adversity. Since no company is immune to disaster, it relies on its core set of beliefs to bounce back from catastrophe. "Strong values infuse an environment with meaning because they offer ways to interpret and shape events" (Coutu, 2002, p. 52). The public school system exemplifies this point. School visions, missions and curriculums vary from town to town, however the core value of educating every child remains at the heart of every school in America. Effective school leaders

reinforce the core beliefs that unite teachers and they promote a positive culture that supports learning for all children (Deal & Peterson, 2009). This set of values provides meaning and unites educators in schools, especially during the darkest hours.

The connection between meaning and resiliency is demonstrated by the harrowing stories of Holocaust survivors. Once the unimaginable suffering ended, newly liberated Holocaust concentration camp survivors faced even more challenges as they battled bitterness and disillusionment. But, as Viktor Frankl (1992) so eloquently stated, even the most horrific life experiences provide meaning and purpose to push forward and look for opportunities in the future.

> Varying this, we could say that most men in a concentration camp believed that the real opportunities of life had passed. Yet, in reality, there was an opportunity and a challenge. One could make a victory of those experiences, turning life into an inner triumph, or one could ignore the challenge and simply vegetate, as did a majority of the prisoners. (p. 81).

Trauma, hardships, and adversity come in all shapes and sizes. Without a doubt, these horrific experiences leave an indelible mark. However, the resilient individual avoids becoming a prisoner of these unfortunate events, trapped by bitterness, fear, or passivity. Instead, the resilient person searches for meaning and remains hopeful.

Positive Affect.

"Against the assault of Laughter nothing can stand."

~Mark Twain (Shapiro, 2006, p. 781)

I enjoyed a once-in-a-lifetime experience when I attended the promotion ceremony for a Lieutenant General in the United States Army. The ceremony included

the usual pomp and circumstance expected during such a historic and formal event involving Army rituals and traditions. However, the promotion service also embraced something that I did not expect – humor. Throughout the ceremony, the audience was treated to gentle teasing and humorous anecdotes as the new Lieutenant General thanked his colleagues, family and friends. This 3 Star General achieved remarkable success throughout his career and reached the pinnacle reserved for only a special few. The significance of this occasion never escaped him throughout his speech, however he injected humor from beginning to end. At one point, he remarked, "I don't take myself too seriously, but I do take the Army seriously." This pithy statement provides a unique window into the personality of this individual. As an extremely successful person, the Lieutenant General relies on the positive emotion, humor, as one of his many personality traits to advance his career. Clearly, this cannot be his primary (or only) personality trait, as he is able to separate serious matters from the humorous ones.

Accordingly, research supports the notion that a positive affect, including humor and happiness, is associated with successful outcomes in various aspects of life. Researchers also investigated the impact of positive emotions on organizational behavior. Can organizational leaders benefit from the lessons of positive psychology? This section reviews this body of research and discusses the relationship between positive emotions and resiliency.

The field of psychology experienced massive transformation after World War II as attention was directed to veterans returning from war in need of psychological support. Clinicians made remarkable advancements by studying and treating mental illness during this time. Undoubtedly, a disease-based or pathological approach became the driving

force behind the mission of psychology. A preponderance of research involved repairing the damage or scars left over from divorce, drug abuse, physical and sexual abuse, death of loved ones, brain disorders and more. According to Seligman and Csikszentmihalyi (2000), this was not always the case. In fact, Seligman and Csikszentmihalyi (2000) cited the work of several psychologists interested in improving people's lives and nurturing genius prior to World War II.

Seligman and Csikszentmihalyi (2000) reminded us that psychology "is not just the study of pathology, weakness, and damage; it is also the study of strength and virtue. Treatment is not just fixing what is broken; it is nurturing what is best" (p. 7). During the last sixty years following World War II, psychology continues to slowly migrate towards a wellness model. Positive psychology seeks to understand positive emotions and foster strength and resilience. According to Seligman (2002), positive psychology is built upon three tenants. First is the study of positive emotions. Second is the study of positive traits, characteristics, and abilities. Third, is the study of positive institutions such as strong communities, strong families, democracy, and free press (Seligman, 2002). Interestingly, researchers used similar categories to breakdown the study of resiliency, including individual traits, family characteristics, and community and societal structures (Benzies & Mychasiuk, 2009). Utilizing a preventative mindset, positive psychology aims to build individuals' strengths and virtues to help them flourish throughout life.

Measuring positive emotions is difficult. With only a few exceptions, most psychological measures relate to pathological psychology rather than positive psychology. An intelligence test is the most obvious exception of a positive metric. Another method used to measure positive emotions examined the differences in yearbook

smiles and whether the smiles correlated to positive outcomes thirty years later in life. Remarkably, picture analysis revealed that positive emotional expression in the yearbook pictures predicted future marital status, higher marriage satisfaction, and increased personal well-being (Harker & Keltner, 2001). However, some researchers note the difficulty of measuring other positive mental processes, such as adaptive defense mechanisms and coping strategies (Vaillant, 2000).

In response to this need, Vaillant (2000) reviewed three longitudinal studies related to five defense mechanisms: humor, altruism, sublimation, anticipation, and suppression. These mechanisms are organized in a hierarchical Defensive Function Scale as part of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Vaillant (2000) described these mechanisms as adaptive defenses or healthy denial because they are transformative and make the best of a bad situation. Accordingly, he selected these five adaptive behaviors as a way to study similarities between the three samples. Vaillant (2000) discovered that these adaptive behaviors listed on the DSM-IV are indeed a good metric for positive psychology. Interestingly, adaptiveness of defenses was independent of education level, IQ, and socio-economic status (Vaillant, 2000).

The advancement of positive psychology requires more quantitative means of measuring various adaptive behaviors beyond intelligent quotients. Vaillant's (2000) work demonstrated a means to quantify positive mental health with a scale already in use. Reliable and valid scales assist researchers with more accurate data gathering and analysis. These metrics proved vital as researchers study protective factors related to resiliency.

Positive emotions includes several attributes including "confidence, optimism, and self-efficacy; likability and positive construals of others; sociability, activity, and energy; prosocial behavior; immunity and physical well-being; effective coping with challenge and stress; and originality and flexibility" (Lyubomirsky, King & Diener, 2005, p. 804). Many of these attributes, such as optimism and self-efficacy, overlap with resiliency theory and were discussed in greater detail in other sections of this review.

When things are going well and a person is experiencing success, he or she is more likely to pursue other goals to replicate those positive feelings. Furthermore, happy people access a bank of past experiences, resources, and skills they built over time during previous happy encounters (Lyubomirsky, King & Diener, 2005). In fact, researchers used cross-sectional studies, longitudinal studies, and experimental studies to assert the causation between happiness and successful outcomes (Lyubomirsky, King & Diener, 2005).

Lyubomirsky, King and Diener (2005) analyzed 225 published papers and dissertations to study the relationship between people who experience positive emotions and their success across various aspects of their lives. Their goal was to determine if positive affect produced success by focusing on five questions: 1) Are happy people successful people? 2) Are long-term happiness and short-term positive affect associated with behaviors paralleling success (adaptive characteristics and skills)? 3) Does happiness precede success? 4) Do happiness and positive affect precede behaviors paralleling success? 5) Does positive affect lead to behaviors paralleling success? The answers to these questions merit attention from both a personal and an organizational leadership standpoint.

Cross-sectional evidence suggested several benefits for happy people in work life, social relationships, and health. These benefits included better productivity, less burnout, more opportunities for professional advancement, as well as an increase in autonomy. Interestingly, research supported the conclusion that happy people also benefit from higher salaries. A review of the research also determined a strong link between happy people and their ability to form social relationships, more fulfilling marriages (Lyubomirsky, King & Diener, 2005). Combined, these factors seem to suggest that happy people are successful people in terms of work, relationships, and health. Although not specifically referred to in this study, these benefits may convey great significance within the school culture. In other words, a happy principal may be more productive, more resilient, and less likely to burn out. Accordingly, the literature reviewed by Lyubomirsky, King and Diener (2005), affirmed the notion that happy people are successful people.

Lyubomirsky, King and Diener's (2005) meta-analysis studied long-term happiness and short-term positive affect in order to determine if they are associated with behaviors paralleling success. In essence, question two asked, do "successes bolster happiness, or the reverse" (p. 825)? In other words, are positive moods associated with desirable characteristics? To answer the question, Lyubomirsky, King and Diener (2005) reviewed studies correlating long-term happiness with short-term positive affect. The characteristics associated with happiness and positive affect are grouped into six categories: 1) positive perception of self and others; 2) sociability and activity; 3) likability and cooperation; 4) prosocial behavior; 5) physical well-being and coping; 6) problem solving and creativity. Lyubomirsky, King and Diener (2005) examined each

category in their meta-analysis. Researchers purported happy people are characterized by high self-esteem and feel more positive about other people. Empirical data suggested happy people are more sociable, outgoing, active, and more often described as extroverts. Happy people were deemed more likeable. Prosocial behaviors such as generosity, altruism, and philanthropy are often associated with people who exhibit positive moods. Traits such as high self-esteem, social competence, and problem solving skills are often discussed in the resiliency literature.

Not surprisingly, studies linked healthier behavior and overall well-being to positive affect. Lyubomirsky, King and Diener (2005) also cited studies in which people with greater positive feelings benefit from enhanced immune function. Better coping strategies often associated with emotional and physical well-being, were also positively correlated with positive emotionality. Finally, cross-sectional research pertaining to problem solving and creativity "suggest that chronically happy people score higher on measures of creativity" (Lyubomirsky, King & Diener, 2005, p. 830). In fact, resilient individuals use their creativity and problem solving skills to overcome adversity (Coutu, 2002). Several studies in Lyubomirsky, King and Diener's (2005) meta-analysis revealed a connection between happiness and flexibility as well as creativity. According to Lyubomirsky, King and Diener (2005), the attributes listed above "appear to promote active goal involvement, which is adaptive in many circumstances and likely facilitates success in a broad range of life domains" (p. 831). Based on this empirical evidence, the researchers concluded that happiness promotes success.

Question three in Lyubomirsky, King and Diener's (2005) meta-analysis asked what comes first, happiness or success? Researchers used longitudinal studies about

work life, income, and social relationships such as marriage and friendships to answer this question. Those who show high positive affect benefit from higher evaluations ratings from supervisors, higher incomes, and stronger relationships. Lyubomirsky, King, and Diener's (2005) data suggested that happiness proceeds success.

The fourth question in Lyubomirsky, King and Diener's (2005), meta-analysis asked if happiness and positive affect precede behaviors paralleling success? Once again, longitudinal investigations related to 1) positive self-perceptions; 2) sociability and activity; 3) physical well-being and coping and; 4) creativity and problem solving suggested "both long-term happiness and short-term pleasant moods tend to precede the desirable characteristics, resources, and behaviors with which they are correlated" (Lyubomirsky, King & Diener, 2005, p. 835). The authors recognized the small number of studies related to this question and suggested further research to substantiate their findings.

Finally, question five in Lyubomirsky, King and Diener's (2005) meta-analysis addressed the question of whether positive affect lead to behaviors paralleling success. In other words, will stimulating a person's positive emotions cause adaptive characteristics to help that person flourish? According to Lyubomirsky, King and Diener (2005), "the evidence indicates that positive affect makes people feel good about themselves" (p. 836). Experimental studies reported people induced to feel happy benefit from their positive mood. These benefits included an increase in self-efficacy, better interpersonal interactions, and higher levels of energy. Encouraging happy thoughts also leads a person to enjoy a task. In summary, the experimental literature supported the notion that

inducing positive affects leads to behaviors paralleling success (Lyubomirsky, King & Diener, 2005).

Lyubomirsky, King and Diener's (2005) meta-analysis suggested that positive outcomes and success proceeds and predicts happiness. "Success builds on success" is a common proverb found throughout leadership literature. Can the same be said for positive affect? Do positive emotions build on positive emotions? A growing body of research supports this simple yet powerful claim that people use positive emotions such as joy, interest, contentment, pride, and love to "broaden and build" personal resources leading to future cycles of success (Fredrickson, 2001). According to Fredrickson (2001), certain thought-action tendencies "represent ways that positive emotions broaden habitual modes of thinking or acting" (p. 220). This rounded response benefits the individual by broadening personal resources that will be drawn on again in the future especially when that individual faces adversity. Fredrickson's (2001) broaden-and-build theory of positive emotions explained how or why happiness leads to a myriad of favorable outcomes.

To test this broaden-and-build theory, Cohn, Fredrickson, Brown, Mikels, and Conway (2009) developed a study to examine the relationship between ego resilience and happiness. Researchers defined ego resilience as a personality trait linked to a person's capacity to adapt to undesirable changes in the environment and bounce back from adversity. Cohn, Fredrickson, Brown, Mikels, and Conway (2009) researched whether positive emotions cultivated ego resilience and ultimately predicted future positive emotions. Eighty-six participants reported daily emotions on a website for one month. Researchers used four scales to measure the participants' emotions: Positive Emotions

subscale, Negative Emotions subscale, Ego Resiliency 89, and the Satisfaction with Life scale.

Results supported Fredrickson's (2001) broaden-and-build theory. Specifically, Cohn, Fredrickson, Brown, Mikels, and Conway (2009) reported the following:

- Positive emotions scores were positively correlated with ego resilience and life satisfaction scores.

- Negative emotions scores were not correlated with life satisfaction scores.

- Life satisfaction scores were not correlated with ego resilience scores.

- Positive changes in ego resilience scores increased the correlation between positive emotions scores and increased life satisfaction scores.

Notably, positive emotion scores were a better predictor of growth than life satisfaction scores. According to the researchers, this finding revealed the importance of momentary positive life events as opposed to the generality of overall life satisfaction. Long term growth (resilience) results from specific short-term effects of positive emotions. A person's positive emotions broaden and build personal resources leading to future cycles of success (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009).

One positive emotion particularly associated with resilience is humor. Psychologists described humor as multi-faceted and classified the construct into various dimensions (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003). Some types of humor are classified as adaptive while other types are considered detrimental. For example, psychologists reported healthy psychological functioning is associated with affiliative, self-deprecating, or perspective taking humor. In fact, humor is shown to buffer the negative effects of stressful events such as depression and anxiety (Nezu, Nezu, &

Bissett, 1988). Conversely, sarcastic, disparaging, or avoidant humor are considered less

conducive to psychological well-being (Martin, Puhlik-Doris, Larsen, Gray, & Weir,

2003).

In order to measure the use of humor, Martin, Puhlik-Doris, Larsen, Gray, and

Weir, (2003) developed the Humor Styles Questionnaire (HSQ). The HSQ divides

humor into four dimensions: affiliative, self-enhancing, aggressive, and self-defeating

humor. Researchers described affiliative and self-enhancing humor as promoting

psychosocial well-being, whereas aggressive and self-defeating humor involves

avoidance, negative or hostile feelings. The HSQ aligns with Vaillant's (2000)

description of humor as an adaptive defense. Additionally, self-enhancing humor items

from the HSQ positively correlated with "cheerfulness, self-esteem, optimism,

psychological well-being, and satisfaction with social support, and negatively related to

depression, anxiety, and bad mood" (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003,

p. 71). Researchers were encouraged by their initial validity measures, however they

acknowledged the necessity for further testing. Combined with temperament measures or

other psychological rating scales, the HSQ shows promise when examining adaptive

behaviors related to resilience.

This review of literature related to positive psychology and humor clearly

identifies a burgeoning field with multiple prospects for future research. Facing

adversity, resilient individuals rely on positive adaptive behaviors, such as humor, to

overcome negative events. These positive experiences build on one another and broaden

the resources available to the resilient individual for use in the future. Researchers

continue to develop valid and reliable metrics to measure these adaptive behaviors related

to resiliency theory and positive psychology. Since resiliency theory is a relatively new field, researchers urged more empirical and longitudinal studies. This research would be especially pertinent within the school setting. In the meantime, positive psychology reminds all of us about the importance of acknowledging what is going right in our lives without taking ourselves too seriously.

Hope and optimism.

I wrote this literature review during one of the most challenging economic periods in history, so it seems rather poignant to finish with this section, realistic hope and optimism – another road leading to the resiliency highway. Every organization suffers during these harsh economic times. Public or private, large or small; nothing and no one is immune from the effects of rising unemployment, decreased consumer spending, a sluggish market, and low confidence in the overall direction of the economy. Everyone is tightening his or her belt; and school systems are no exception. Doing more with less used to sound cliché. However, the consequences of these turbulent times turned cliché into reality. Hence, as the school leader, resilient principals meet these challenges objectively and realistically, as they search for light at the end of the tunnel (Boyle & Woods, 1996).

How does a person or an entire organization bounce back during these challenging times? According to the literature, part of the answer involves the notion of hope. This section reviews the research concerning how the pathways of hope and optimism share a relationship with resiliency theory. The following summarizes a body of research that examined these relationships between hope, performance, and resilience.

Concentration camp survivor, Viktor Frankl (1992) warned against losing hope. In his book, *Man's Search for Meaning,* he wrote,

> The prisoner who had lost faith in the future – his future – was doomed. With his loss of belief in the future, he also lost his spiritual hold; he let himself decline and became subject to mental and physical decay. (p. 82)

Luthans, Vogelgesang, & Lester, (2006) defined hope as a multidimensional construct that involves 1) setting goals and having positive expectations to meet them; 2) coping when plans go awry; 3) persevering towards goals; and 4) redirecting or changing strategies in order to succeed. Building on this goal-oriented perspective, Youssef & Luthans, (2005) described two factors associated with hope: agency (willpower) and pathways (waypower). Their description of these factors bear a striking resemblance to the theoretical perspectives linked to problem solving and bricolage discussed previously.

> The term pathways refers to the capability to generate ways to achieve goals and to create alternative routes if the original ones are blocked. Pathways thinking develops through the systematic observation and refinement of "lessons of correlation/causality" (Snder et al., 2002, p. 259). When one can predict and explain events that are related in time and logical sequence, pathway thoughts are developed. (Youssef & Luthans, 2005, p. 321)

Notice that in this definition, hope is not a random or fleeting thought, such as "I hope our students learn something today." Rather, hope requires a personal investment (agency) and a plan of action to accomplish the task (waypower). An individual who hopes takes ownership, reflects, and thinks creatively in order to accomplish a goal.

Similar to other constructs within the resiliency framework, hope and optimism are positive, self-directed, and motivating capacities (Youssef & Luthans, 2007).

Luthans, Vogelgesang, & Lester, (2006) operationalized these concepts by describing positive organizational behavior (POB) and outlining guidelines for human resource development (HRD) of resiliency. Later research examined these guidelines to determine if they supported resiliency and employee performance.

Luthans, Avolio, Walumbwa & Li (2005) distinguished between a trait and a psychological state. Traits remain fixed and tied to personality whereas states fluctuate based on context and situation. Luthans, Avolio, Walumbwa & Li (2005) studied the states of hope, optimism, and resiliency and their relationship to performance. When combined, the researchers called these three states positive psychological capital. In this study, 422 Chinese workers from three factories completed questionnaires. Supervisory ratings and merit pay information generated the performance data. All three states (hope, optimism, and resiliency) along with their combination (positive psychological capital) related positively to supervisory performance ratings. Interestingly, the relationship between resiliency and performance was stronger than hope or optimism alone, and was similar to the results to that of merging all three states (positive psychological capital). Although the researchers used retranslation guidelines, the cross-cultural research posed limitations. Furthermore, supervisory ratings open the door to subjectivity and do not always identify the highest or lowest performers. However, later research addressed some of these limitations.

For example, Youssef & Luthans (2007) used a multiple measures approach to strengthen the objectivity and accuracy of performance ratings. They selected three

work-related attitudes for this study: job satisfaction, work happiness, and organizational commitment. Furthermore, Youssef & Luthans (2007) conducted their study in the United States, thereby eliminating cross-cultural limitations. Data collection included surveys from more than one thousand employees from 167 different organizations. Researchers used reliable and valid scales to measure hope, optimism and resiliency. For data analysis, they utilized correlational and stepwise regression analyses. The mixed results demonstrated that employees' hope, optimism, and resilience were positively related to the work-related outcomes of job performance, job satisfaction and work happiness. Hope and resilience showed a positive relationship to organizational commitment. These findings underscored the importance of employees' hope and optimism. Results from another study showed a similar relationship (Luthans, Norman, Avolio, & Avey, 2008). Collectively, these findings demonstrated that hope and optimism, along with resilience influenced work-related outcomes.

The literature acknowledged certain risks, especially pertaining to optimism. Luthans, Vogelgesang, & Lester, (2006) defined optimism as "generalized expectancy that one will experience good outcomes in life, which will lead to persistence in goal-striving" (p. 30). According to Westphal, Bonanno, & Bartone (2008), optimists view negative events as temporary or attribute them to external factors. An optimist becomes vulnerable when stress builds to the point that surpasses positive expectations. This is especially plausible once an optimist perceives the outcome as uncontrollable or outside her locus of control. Another risk factor involves an optimist's tendency to "underestimate the seriousness of a potentially threatening situation and thus to invest too little effort in coping with it" (Westphal, Bonanno, & Bartone, 2008, p. 227). Hence,

realistic optimism offers a balanced approach to expectations while maintaining a positive outlook. Coutu (2002) referred to this viewpoint as "sober and down-to-earth" (p. 48) and described Morgan Stanley's preparedness years before the tragic bombing of the World Trade Center as an example of "hard-nosed realism" (p.48).

Ultimately, positive capacities such as hope and optimism share a relationship with resiliency. Empirically speaking, evidence demonstrated the positive influence of expecting things to go right. Authentic leaders are hopeful and optimistic (Avolio & Gardner, 2005). Therefore, the resilient principal remains hopeful and realistically optimistic during these incredibly formidable times.

Conclusion

The resiliency constructs described in this literature review appear on the state-trait continuum (Luthans, Vogelgesang & Lester, 2006). Many of them seem flexible, malleable, and adaptable to the current set of conditions. Other constructs seem more fixed and stable over time. For example, a person's attachment with others develops at a very young age and plays a significant role in social skill development and the ability to form meaningful relationships (Schore, 2001). Although social skills are indeed a learned and refined characteristic, a person who struggles socially may grapple with relationships throughout life. Ultimately, a person's resiliency remains dependent on the contextual factors along with the appearance of other risk and protective factors in his or her life. Successful or unsuccessful adaptation to life's disruptions determines people's resiliency or their ability to cope with stress. Hence, while early attempts at defining resiliency simply identified traits associated with this notion, later research attempted to

discover its origin and relied on other academic fields such as physics, biology, neuropsychology, and theology to learn even more.

Since resiliency theory stems from positive psychology, my research follows a wellness model which focuses on the protective factors that ultimately contribute to a principal's effectiveness. In the midst of the accountability era, principals face increasing scrutiny as they strive to meet students' needs. The ability to bounce back from adversity becomes increasingly crucial as state legislators and local school boards place considerably more emphasis on student performance in the form of school grades, performance pay, and career ladders. As an instructional leader, the principal sets the tone for the entire organization. Thus, cognitive elements of a principal's engagement such as job satisfaction and work commitment drive this study's analysis of resiliency. In particular, this study proposes the following hypotheses:

- A relationship exists between job satisfaction and resiliency for principals.

- A relationship exists between work commitment and resiliency for principals.

- Significant differences are evident in resiliency levels among principals in various school settings.

The data collection for this study included a survey distributed to principals who worked in public elementary, middle and high schools located in the state of Florida. The questionnaire measured the respondent's level of job satisfaction, work commitment, and overall resiliency using scales with established reliability and validity measures. Analysis of this data identified any relationships between principals' cognitive elements of engagement and resiliency. School demographics such years of experience, school

location, school poverty rate, school level, principal salary, and student enrollment was collected for further analysis.

Principals face an uphill battle as they continue to navigate the jagged terrain of educational reform. Now more than ever, schools need leaders who seek these challenges, learn from their mistakes, and move forward on behalf of their students. A greater understanding of principal resiliency may encourage future researchers to study this construct in terms of principal effectiveness. Remaining focused on what works contributes to this reform effort.
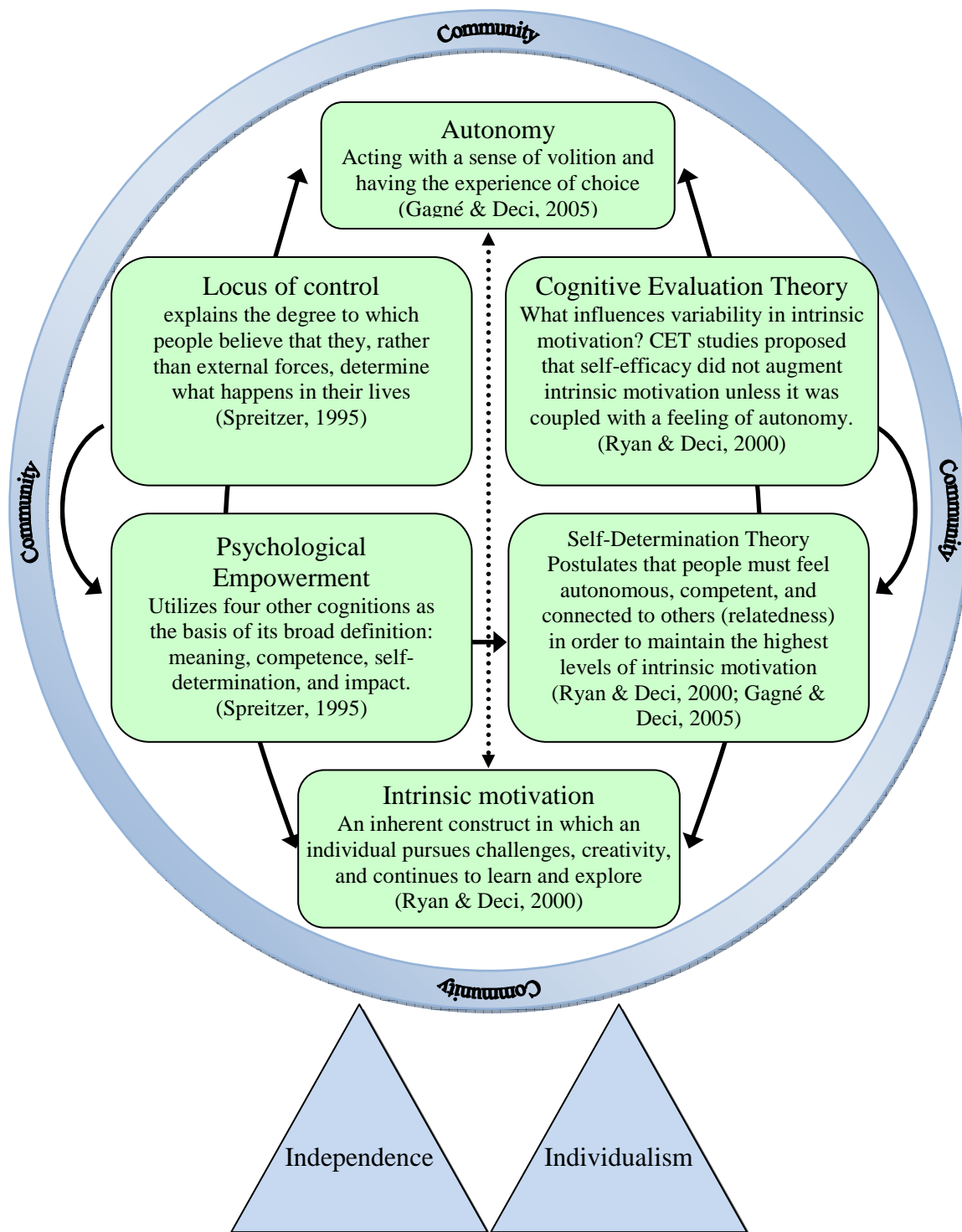
Figure 2. Autonomy vs. Independence

Chapter 3:

Methodology

Overview

The previous chapters discussed how heightened accountability, an emphasis on instructional leadership, and ongoing educational reforms such as performance pay altered the role of the school principal during the last decade. These role changes resulted in greater stress and a shortage of principals (Friedman, 2002; Pounder & Merrill, 2001; Whitaker, 1996, 2003). Stressors related to principal burnout included conflict (poor relations with coworkers, superiors, and parents), work overload, role ambiguity (reduced autonomy), negative perceptions related to organizational structure and climate (principals transferred without consent), and increased accountability (Friedman, 2002; Whitaker, 1996, 2003). These role changes and added job responsibilities also contributed to a disconnect between what principals perceived as a return toward management, and what reformers emphasized as a shift toward instructional leadership (Whitaker, 2003).

Principals work in an extremely tumultuous environment (Friedman, 2002; Pounder & Merrill, 2001; Whitaker, 1996, 2003). Consequently, the study of principal resilience becomes especially relevant to these current trends in educational leadership. Specifically, this study examines:

- Is there a relationship between job satisfaction and resiliency for principals?

- Is there a relationship between work commitment and resiliency for principals?

- Are there significant differences in resiliency levels among principals in various school settings?

This chapter discusses the design of the research including sampling, missing data, instrumentation, data collection, and data analysis.

Research Design

Researchers defined survey studies or correlation studies as nonexperimental (Marczyk, DeMatteo, & Festinger, 2005). Nonexperimental research designs "cannot rule out extraneous variables as the cause of what is being observed because they do not have control over the variables and the environments that they study" (Marczyk, DeMatteo, & Festinger, 2005, p. 147). This exploratory study intended to gain a deeper understanding of principals' thinking and feeling about their work. Accordingly, this study used a questionnaire to measure participants' self-reported levels of resiliency, job satisfaction, and work commitment. The questionnaire also included items to collect demographic information (Appendix A) about the participant and the school where the participant worked. Figure 2 provided an overview of the research design used in this study.

The design of this research relied on an online tool, called SurveyMonkey, to contact participants and collect the data. Participants received an email that included a short cover letter and an embedded link to the survey. The researcher promised anonymity and confidentiality to minimize sampling bias and increase the sincerity level of the participants answering the questions.

The use of an online tool presented several advantages. The point and click process guaranteed a manageable, straightforward, and simple survey to complete. This aspect was crucial since a principal's day is unpredictable and certainly filled with multiple responsibilities. If principals interpreted the questionnaire as time consuming or complicated, their chances of completing the survey diminished. Other advantages included reduction in cost and increased efficiency. Collecting data electronically facilitated prompt and accurate sorting methods (Hewson, Yule, Laurent, & Vogel, 2003). These conveniences allowed more time spent on data analysis rather than on data sorting. Additionally, as the name suggests, "snail mail" takes days to reach its final destination; whereas email arrives instantaneously without the prohibitive costs. Consequently, this study delivered two follow-up notices to increase the return rate.

In addition to the online advantages detailed above, survey research in general offers several benefits. For instance, surveys provide the ability to gather information about a large group of people in a relatively short amount of time as compared to observations or interviews. For purposes of this study, a copy of the survey was sent to every public school principal in the state of Florida for whom the researcher was able to acquire an email address. Interviewing or observing over 2,500 people seems rather infeasible. Secondly, the standardization of questions and methods offered a precise tool to gather large amounts of data, thus reducing the risk of subjectivity and variance found in observer research. Finally, Schuman (2008) concluded that surveys and polls serve a positive social function because they offer members of society a broader point of view that may differ from their own.

Nevertheless, self-reported data can be a source of invalid or unreliable data (Ellis, 1994). For instance, participants may not understand the question or may forget the answers to the questions. Poorly designed questions may produce bias in the questionnaire and thus alter the results. Moreover, unpiloted or ill-conceptualized surveys lead to inaccurate results. In other cases, participants may change their minds and change their answers during the course of the survey. Ellis (1994) reports this is common during long, in-depth surveys. Finally, some participants answer questions dishonestly, especially when the questions are more sensitive or personal in nature (Ellis, 1994).

Schuman (2008) warned against "survey fundamentalism" and "survey cynicism" (p. 21). Survey fundamentalism refers to a person's blind acceptance of the results and the tendency to apply these results to the general population. From the opposite end of the spectrum, survey cynicism refers to the skeptic who believes the manipulation of a question's wording allows the researcher to alter the results (Schuman, 2008). Additional criticism comes from phenomenologists, ethnomethodologists, and symbolic interactionists who take exception to the positivist methods of data collection (Marsh, 1982).

A conscious effort was made to address these disadvantages of survey research in order to minimize any sample bias. For instance, the questionnaire included items written in a simple, straightforward and easy to understand manner. The promise of anonymity along with limiting the number of sensitive or intimate questions addressed participants' honesty. Finally, in order to address participants' failure to recall answers,

the directions for the three psychometric tools asked participants to answer based their

recent experiences within the last month.

Sampling

Surveys provide "statistical estimates of the characteristics of a target population,

some set of people" (Fowler, 2009, p. 11). This study used purposive sampling in order

to select members of a specialized population (Neuman, 1994). Some researchers

referred to this type of sampling as convenience sampling (Ellis, 1994) because all of the

survey participants belonged to one group. The sample frame in this study included a

purposive sample of all public school principals (elementary, middle, high school) in the

state of Florida who agreed to complete and return an online survey. The purposive

sample also included magnet and special purpose programs if the public school design fit

into one of these three categories: Elementary (PK – 5), Middle (6 – 8), and High School

(9 – 12). The sample frame omitted all private school administrators and public school

principals in those schools with a modified or non-traditional design (i.e. K – 8,

Alternative, Adult, Technical, Vocational, etc.). Finding a manageable way to amass the

emails of private school principals in Florida proved too difficult, thus they were

eliminated from the sample frame. Similarly, utilizing only traditional school settings

and eliminating nontraditional schools designs from the sample frame provided a more

precise definition of the population. In all, roughly 2,800 principals belong to this sample

frame. Hence, the sample size required to be representative of this population was 338

(Krejcie & Morgan, 1970).

According to Fowler (2009), researchers should consider three characteristics of a

sample frame: comprehensiveness, the probability of selection, and efficiency.

Comprehensiveness and probability of selection remained high since this target population included every K – 12 public school principal in the state of Florida. This study contacted all participants via email and used an online survey. All Florida public school principals have email addresses and The Florida Department of Education publishes these email addresses. Thus, this data collection process yielded a highly comprehensive sample frame. Furthermore, as a purposive sampling, the high probability of selection remained identical for each participant in the survey.

The efficiency of a sample frame measures "the rate at which members of the target population can be found among those in the frame" (Fowler, 2009, p. 21). This study excluded a very small percentage of public school principals from the target population. Specifically, this study excluded principals from non-traditional or modified schools such as K – 8, Adult, Technical, or Alternative public schools. Thus, this rather small exclusion yielded a highly efficient sample frame. In summary, this study met all of Fowler's (2009) criteria for an optimal sample frame.

This researcher attempted to minimize sample attrition and reduce sampling bias by following research based methods to increase return rates as reported by Lee Ellis (1994). These methods included: 1) pre-notifying prospective participants; 2) writing a clear and concise cover letter; 3) identifying the university sponsoring the research; 4) sending follow-up emails; 5) developing a well-organized and brief survey; and 6) identifying the relevance of the survey to the participants. Ellis (1994) stated that combining these suggestions yielded the highest return rates in survey research. The SurveyMonkey tool assisted the researcher with the facilitation of these suggested methods.

Missing Data

Missing data in a study threatens the validity of the results, leads to misanalysis, incorrect conclusions, underestimated standard errors, and compromises the overall research (Tannenbaum, 2009). Common causes of missing data includes skipping questions or entire pages by accident, choosing not to answer a question if it's too personal, or becoming bored and skipping questions to finish the survey faster (van Ginkel, van der Ark, & Sijtsma, 2007). The researcher considered utilizing the multiple imputation (MI) method to address missing data. According to Tannenbaum (2009), MI is adaptable, easy to implement, produces small statistical discrepancies, and is preferred over the use of traditional methods such as listwise deletion and pairwise deletion. Since there was very little missing data, the researcher decided to use listwise deletion rather than MI.

Instrumentation

The instruments used in this study were research-based, established psychometric tools, with extensive empirical support found throughout the literature. Previous reliability and validity testing confirmed the consistency, dependability, and relevance of these instruments.

Resiliency: Connor-Davidson Resilience Scale (CD-RISC).

Connor and Davidson (2003) noted the clinical relevance of resilience along with its implications for individuals and organizations. With this in mind, the authors developed a well-validated, reliable, and simple to use measure of resilience known as the Connor-Davidson Resilience Scale (CD-RISC).

Connor and Davidson (2003) derived the content of their scale from researchers such as Rutter (1985) and Kobasa (1979) who studied resiliency and hardiness. The researcher selected the CD-RISC because the resiliency characteristics listed by Connor and Davidson (2003) entwined with the protective factors described in the previous chapter: 1) relationships; 2) self-efficacy and self-esteem; 3) problem-solving and professional development; 4) autonomy; 5) meaning; 6) positive affect; and 7) hope and optimism. Table 2 lists the content of the CD-RISC.

The 25 item scale measures each item on a five point range: not true at all (0), rarely true (1), sometimes true (2), often true (3), and true nearly all of the time (4). A participant's resiliency score ranges from 0-100. The highest score possible, 100, indicates the highest level of resilience (Connor & Davidson, 2003).

Tests of the CD-RISC revealed, "sound psychometric properties, with good internal consistency and test–retest reliability" (Connor & Davidson, 2003, p. 81). The scale showed both convergent validity and divergent validity. The authors noted several limitations, including the survey's inability to assess the resiliency process or theory and the lack of validation against biological measures of resilience. Although worth noting, these limitations carried little relevance to this research since biological measures or the assessment of the resiliency process were never components of this study.

Table 2

Content of the Connor-Davidson Resilience Scale (CD-RISC)

Item #	Description
1*	Able to adapt to change
2	Close and secure relationships
3	Sometimes fate or God can help
4*	Can deal with whatever comes
5	Past success gives confidence for new challenge
6*	See the humorous side of things
7*	Coping with stress strengthens
8*	Tend to bounce back after illness or hardship
9	Things happen for a reason
10	Best effort no matter what
11*	You can achieve your goals
12	When things look hopeless, I don't give up
13	Know where to turn for help
14*	Under pressure, focus and think clearly
15	Prefer to take the lead in problem solving
16*	Not easily discouraged by failure
17*	Think of self as strong person
18	Make unpopular or difficult decisions
19*	Can handle unpleasant feelings
20	Have to act on a hunch
21	Strong sense of purpose
22	In control of your life
23	I like challenges
24	You work to attain your goals
25	Pride in your achievements

Note. Adapted from "Development of a New Resilience Scale: The Connor-Davidson Resilience Scale (CD-RISC)," by K. M. Conner and J. R. T. Davidson, 2003, *Depression and Anxiety, 18,* 77. *Items 1, 4, 6, 7, 8, 11, 14, 16, 17, and 19 comprise the CD-RISC10. This table represents an abridged form of the scale, and should not be used in place of the CD-RISC. The CD-RISC is copyrighted and can only be obtained from the authors.

Campbell-Sills and Stein (2007) questioned the exploratory factor analysis (EFA)

of the CD-RISC conducted by Connor and Davidson (2003). The methodological issues

they cited included vague factor selection criteria, the prevention of correlating factors

with one another, inconsistent or unclear themes, and the use of only two items to define

a factor. Consequently, Campbell-Sills and Stein (2007) reanalyzed the CD-RISC to

determine "whether the CD-RISC measures resilience as a unitary dimension or multiple latent dimensions" (p. 1020) and to further validate this psychometric tool. The new analysis reported inconsistent or non-salient loadings across two EFAs. They also reported disparate themes on two items, which caused difficulties in interpretation.

Campbell-Sills and Stein (2007) addressed these problems by developing an abridged 10-item version of the CD-RISC. Originally, a two-factor version used items with salient loadings for hardiness and persistence. However, further analysis led Campbell-Sills and Stein (2007) to retest a single factor version of the CD-RISC. Two EFAs and a confirmatory factor analysis (CFA) of the shorter version revealed good internal consistency and construct validity. In fact, scores on the abridged version of the CD-RISC correlated strongly to the scores on the original version (r = .92). Hence, this study used the abridged version of the CD-RISC (CD-RISC 10) to measure the resiliency levels of principals.

Campbell-Sills and Stein (2007) reported a Cronbach Alpha reliability coefficient of .85 on the CD-RISC 10. Correlations with other measures supported the CD-RISC 10's construct validity (Campbell-Sills, Forde, & Stein, 2009) as well as its convergent and discriminant validity (Campbell-Sills, Forde, & Stein, 2009; Campbell-Sills & Stein, 2007). In a recent study, Campbell-Sills, Forde, and Stein (2009) calculated the mean score of 31.8 (SD = 5.4) for the CD-RISC 10.

Brayfield-Rothe Job Satisfaction Index (JSI).

Locke (1976), defined job satisfaction as ". . . a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1304). In 1951, Arthur Brayfield and Harold Rothe published an attitude scale that provided an index of

job satisfaction (JSI). The researchers used a combination of Thurstone and Likert scaling methods to construct this index. The JSI includes both affective and cognitive components and is widely used in business management research (Agho, Price, & Mueller, 1992; Brooke, Russell, and Price, 1988; Curry, Wakefield, Price, & Mueller, 1986; Leong, 2001; Moorman, 1991; Mount, Ilies & Johnson, 2006) and educational research (Ho & Au , 2006; Stempien & Loeb, 2002; Wu & Short, 1996). Brayfield and Rothe (1951) developed the original instrument with 18 items measured on a 5-point Likert scale ranging from 1 to 5. On the 18-item scale, scores ranged from 18 to 90 with a neutral point at 54. Brayfield and Rothe (1951) reported strong validity and reliability with a Cronbach Alpha reliability coefficient of 0.87. In general, a correlation coefficient equal or greater than .80 indicates adequate reliability (Marczyk, DeMatteo, & Festinger, 2005).

Subsequent studies substantiated these results. Moorman (1991) analyzed the JSI with confirmatory factor analysis to determine the fit of a single dimension measuring job satisfaction. The comparative fit index (CFI) and the Tucker-Lewis index (TLI) were .93 and .91, respectively. Moorman (1991) reported a chi-square score of 222.51 *(df = 123, N= 225, p < .001)* of the JSI. Similarly, Petty, Brewer, and Brown (2005) reported a Cronbach Alpha reliability coefficient of .98 on the 18-item JSI. Wu and Short (1996) used the JSI to measure the relationship of empowerment to teacher job commitment and job satisfaction and reported acceptable reliability and validity.

Some researchers described the global nature of the JSI as inadequate. Ho and Au (2006) criticized the JSI for only measuring the affective state of an employee and ignoring the cognitive, judgmental process. While some argued the JSI contains

cognitive components (Mount, Ilies & Johnson, 2006), the disagreements in the literature about the specific factors in the JSI are not related to this study. Furthermore, while arguing the inadequacies of the measure the researchers acknowledged the affective nature of the measure. Since this study examined the affective levels of job satisfaction and work commitment, the possible limitations in the JSI instrument are in areas that did not directly affect this study.

Revisions to the JSI included abridged five-item (Table 3) and six-item (Table 4) versions with similar reliability and validity as the original 18-item instrument. For instance, Curry, Wakefield, Price, & Mueller (1986) used an abridged six-item version of the JSI (Price & Mueller, 1981) to investigate the relationships in either direction between satisfaction and commitment over time. The six-item JSI achieved a good reliability level during two separate trials with a Cronbach's alpha of .868 and .863, respectively. Another study surveyed 550 employees using the six-item JSI and achieved a Cronbach's alpha of .90 (Agho, Price, & Mueller, 1992). Brooke, Russell, and Price (1988) also demonstrated the validity and reliability of this six-item satisfaction index.

The five-item JSI met similar reliability and validity standards. For instance, Judge, Locke, Durham, and Kluger (1998) used a five-item JSI. After surveying 222 employees, this satisfaction scale achieved a good reliability level with a Cronbach's alpha of .88. Other studies reported good reliability and validity results for the five-item scale (Ho & Au, 2006; Bono & Judge, 2003; Mount, Ilies & Johnson, 2006; Saari & Judge, 2004; Ilies & Judge, 2004).

The five-item JSI (Judge, Locke, Durham, & Kluger, 1998) shared three questions in common with the six-item JSI (Price & Mueller, 1981; Curry, Wakefield, Price, &

Mueller, 1986; Agho, Price, & Mueller, 1992). However, the five-item JSI included two

reverse scored items and used a different response scale range (0 – 10). This study

utilized the six-item JSI because the five point response scaled aligned with CD-RISC

and the Three-Component Model (TCM) Employee Commitment Survey (Meyer &

Allen, 1991; 1997). This allowed for a consistent response scale throughout the entire

questionnaire and reduced the chance of scale confusion on behalf of the participants.

Table 3

Five-Item JSI

Item #	Question
1	I feel fairly well satisfied with my present job
2	Most days I am enthusiastic about my work
3	Each day of work seems like it will never end (reverse scored)
4	I find real enjoyment in my work
5	I consider my job rather unpleasant (reverse scored)

Note. The response scale ranged from 0 *(strongly disagree)* to 10 *(strongly agree)*
Adapted from "Dispositional Effects on Job and Life Satisfaction: The Role of Core Evaluations," by T. A. Judge, E. A. Locke, C. C. Durham, and A. N. Kluger, 1998, *Journal of Applied Psychology, 83*, 17-34. Adapted from "Self-Concordance at Work: Toward Understanding the Motivational Effects of Transformational Leaders," by J. E. Bono and T. A. Judge, 2003, *Academy of Management Journal, 46,* 554-571. Adapted from "Teaching Satisfaction Scale: Measuring Job Satisfaction of Teachers," by C. L. Ho and W. T. Au, 2006, *Educational and Psychological Measurements, 66,* 172-185.

Table 4

Six-Item JSI

Item #	Question
1	I find real enjoyment in my job
2	I like my job better than the average person
3	I am seldom bored with my job
4	I would not consider taking another kind of job
5	Most days I am enthusiastic about my job
6	I feel fairly well satisfied with my job

Note. The researcher used this six-item JSI in this study. The response scale ranged from 1 *(strongly disagree)* to 5 *(strongly agree)*. Adapted from "Professional Turnover: The Case of Nurses," by J. L. Price and C. W. Mueller, 1981, p. 99. Adapted from "On the Causal Ordering of Job satisfaction and Organizational Commitment," by J. P. Curry, D. S. Wakefield, J. L. Price, and C. W. Mueller, 1986, *Academy of Management Journal, 29,* 847-858. Adapted from "Discriminant Validity of Measures of Job Satisfaction, Positive Affectivity and Negative Affectivity," by A. O. Agho, J. L. Price, and C. W. Mueller, 1992, *Journal of Organizational Psychology, 65,* 185-196.

Three-Component Model (TCM) of Commitment.

Researchers defined organizational commitment as "a psychological link between the employee and his or her organization that makes it less likely that the employee will voluntarily leave the organization" (Allen & Meyer, 1996). Meyer and Allen (1991) described this multidimensional construct as an employee's mindset or feelings about his relationship with an organization and further subdivided this psychological state into three distinct categories: a desire (affective commitment), a need (continuance commitment), and an obligation (normative commitment). When an employee feels aligned with the mission and vision of the organization, or personally identifies with the organization's values and goals, that employee displays affective commitment (desire). The employee who remains out of need (health benefits, retirement plan, seniority) displays continuance commitment. In other words, this employee associates a cost with leaving or staying with the company. Finally, when an employee feels morally obligated to continue working for an organization, he demonstrates normative commitment. Normative commitment involves the measure of personal sacrifice and the level of loyalty associated with an employee on behalf of the organization (Meyer & Allen, 1991).

This multidimensional view of the work commitment construct led to development of the Three-Component Model (TCM) of commitment (Meyer & Allen, 1991). The authors of this instrument divided the TCM into three sections (Affective, Continuance, and Normative). The original scale is comprised of eight questions per section and the revised scale includes six questions in each section. This study used the revised version (18 total items) for the purposes of this study. Although the original

TCM utilized a seven-point response scale from 1 (strongly disagree) to 7 (strongly

agree), Meyer and Allen (2004) reported that a five point scale works well. Therefore,

this study utilized a five-point response scale from 1 (strongly disagree) to 5 (strongly

agree). This decision ensured that the survey remained consistent with CD-RISC and the

JSI. Based on Meyer and Allen's (2004) recommendation, the items from the three

scales were mixed on the questionnaire. The participants' responses within each scale

were averaged to calculate an overall score for Affective, Continuance, and Normative

commitment. See Table 5 for sample items for work commitment scales (Meyer &

Herscovitch, 2001).

Table 5

Sample items for work commitment scales

TCM Subscale	Sample items
Affective	I would be very happy to spend the rest of my career with this organization.
Continuance	Right now, staying with my organization is a matter of necessity.
Normative	I would feel guilty if I left this organization right now.

Note. The response scale ranged from 1 *(strongly disagree)* to 5 *(strongly agree)*
Adapted from "Commitment in the Workplace: Toward a General Model," by J. P.
Meyer and L. Herscovitch, 2001, *Human Resource Management Review*, *11*, 299-326.

While some researchers questioned whether the TCM really measures attachment

rather than an employee's emotion or affect, others argued that references to constructs

such as happiness on the TCM do indeed relate to positive affect (Jaros, 2009). Other

criticism of the TCM described problems related to the wording or refining of items to

better align with newer conceptualizations of commitment. Overall, the reliability and

validity of the TCM remained strong in several studies (Meyer, Allen, & Smith, 1993;

Allen & Meyer, 1996; Meyer & Herscovitch, 2001; Jaros, 2009). Allen and Meyer

(1996) reported alpha coefficients for the Affective, Continuance, and Normative commitment as .85, .79, and .73, respectively. Furthermore, test-retest reliabilities fell within the acceptable range (Allen & Meyer, 1996). In summary, the 18-item TCM portion of this study's questionnaire provided the means to measure work commitment as an independent variable in order to investigate whether any relationship existed between this variable and resiliency.

Data Collection

Variables.

The independent variables are manipulated, controlled, or classifying variables (explanatory). Dependent variables measure the effect of the independent variables (response). The purpose of this study was to measure the relationship between principals' work commitment and job satisfaction (independent variables) and resiliency (dependent variables). A secondary purpose of this study was to measure the relationship between the participants' demographics (independent variables) and resiliency (dependent variable).

Questionnaire.

The participant questionnaire divided the survey items into four sections. Section One, Demographics, collected information about the principals (gender, ethnicity, experience, age, and education), community (urban, suburban, or rural), school (K-12 level, size, school grade, AYP status, Title I status, and Differentiated Accountability status) and students (poverty, disabilities, and English Language Learners rate). Sections Two, Three and Four measured the principals' work commitment, job satisfaction and

resilience using the psychometric instruments described above. Table 6 summarizes the

sections within the questionnaire. Figure 3 represents an overview of the research design.

Table 6

Survey Summary

Survey Section	Demographics	TCM	JSI	CD-RISC 10
Number of Items	20 items	18 items	6 items	10 items
Score Range	N/A	18 – 90	6 – 30	0 – 40
Neutral Point	N/A	54	18	20

Note. The survey included a total of 54 items.

Developed in 1999, SurveyMonkey is the self-described world leader in web-

based survey tools. According to their website, their customers "include 100% of the

Fortune 100, as well as other businesses, academic institutions, and organizations of all

shapes and sizes" (SurveyMonkey, n.d., About Us section). The website utilizes secure

socket layer technology (SSL) encryption to secure data, a requisite when using

copyrighted psychometric instruments described above. The researcher entered the

instruments along with the demographic questions into SurveyMonkey. The items from

each instrument were added to the questionnaire according to the directions found in each

User's Guide. No items were altered or amended for purposes of this study. The

aggregated instruments including demographics resulted in a 54-item questionnaire.

Principals within the sampled frame received an email outlining the purpose of

the study and encouraging their participation (see Appendix B). An embedded link

within the cover letter email gave the participants access to the survey. Participation was

voluntary and selecting to complete the survey acknowledged participants' consent to be

part of the study. Appendix C includes a copy of the informed consent letter.

Data Analysis

Null hypotheses.

Table 7 summarizes the null hypotheses for these tests:

Table 7

Null Hypotheses

H_0	Null Hypothesis
H_0 1a	No relationship between job satisfaction and resiliency for principals
H_0 2a	No relationship between work commitment and resiliency for principals
H_0 3a	No relationship between work commitment (affective, continuance, and normative), job satisfaction and resiliency for principals
H_0 4a	No relationship between years of experience and resiliency for principals
H_0 5a	No relationship between school location and resiliency for principals
H_0 6a	No relationship between school poverty rate and resiliency for principals
H_0 7a	No relationship between school level and resiliency for principals
H_0 8a	No relationship between salary and resiliency for principals
H_0 9a	No relationship between student enrollment and resiliency for principals

Note. H_0 = Null hypothesis

Statistical analyses.

This study analyzed data by means of descriptive statistics and linear regression. This study used descriptive statistics to analyze the principals' scores on the CD-RISC 10, TCM, and JSI. Measures of the independent and dependent variables were obtained by calculating the scores from the surveys according to the instruments' directions. The alpha coefficient was calculated for each variable to determine internal reliability. Bivariate statistics use correlations and simple linear regression to depict how variables relate (Ellis, 1994). These statistical analyses were divided into three steps.

First, the relationship was examined between principals' resilience and the six demographic variables (years of experience, school location, school poverty rate, school

level, principal salary, and student enrollment). Using regression, an Analysis of

Variance (ANOVA) was calculated to determine the significance of the regression model.

Next, the same procedures were utilized to analyze the relationship between principal

resiliency and job satisfaction as well as principal resiliency and the three sub scales of

work commitment (Affective, Continuance, and Normative). Finally, a multiple

regression analysis was conducted to examine the total amount of variance of principals'

resiliency that was accounted for by the demographics, job satisfaction, and work

commitment. A Bonferroni correction was applied to correct for the possibility of a

Family-wise Error from the multiple comparisons that were conducted throughout the

analysis. Table 8 summarizes the statistical analyses utilized to test each null hypothesis.

Table 8

Summary of Analyses Methods used to Test Null Hypotheses

H_0	Instrument	Analysis Method
H_0 1a	JSI and CD-RISC 10	Linear regression
H_0 2a	TCM and CD-RISC 10	Linear regression
H_0 3a	JSI, TCM, and CD-RISC 10	Linear regression.
H_0 4a	Questionnaire and CD-RISC 10	Linear regression
H_0 5a	Questionnaire and CD-RISC 10	Linear regression
H_0 6a	Questionnaire and CD-RISC 10	Linear regression
H_0 7a	Questionnaire and CD-RISC 10	Linear regression
H_0 8a	Questionnaire and CD-RISC 10	Linear regression
H_0 9a	Questionnaire and CD-RISC 10	Linear regression

Note. Questionnaire refers to 20-item researcher developed demographic section. Listwise deletion used for those surveys with missing data.

Summary

The purpose of this study was to investigate the relationship between principals' resiliency, job satisfaction and work commitment. This chapter described each psychometric tool used to measure a participant's resiliency, job satisfaction, and work commitment (CD-RISC 10, JSI, and TCM). This overview included the validity and reliability measures of each instrument as well as a description of the demographic questionnaire used in this study. Chapter 3 described the sample frame, detailed which participants were omitted, and the use of SurveyMonkey to survey K-12 public school principals in the state of Florida. The researcher utilized listwise deletion to address missing data since very little data were missing. Finally, this chapter summarized the study's nine null hypotheses and provided a general overview of the statistical analysis.

The next chapter will present an overview of this study's results. Chapter 4 will review the methodology, summarize the findings, and present a descriptive analysis of all three psychometric instruments. The next chapter will also detail the three step approach used in the regression analysis.
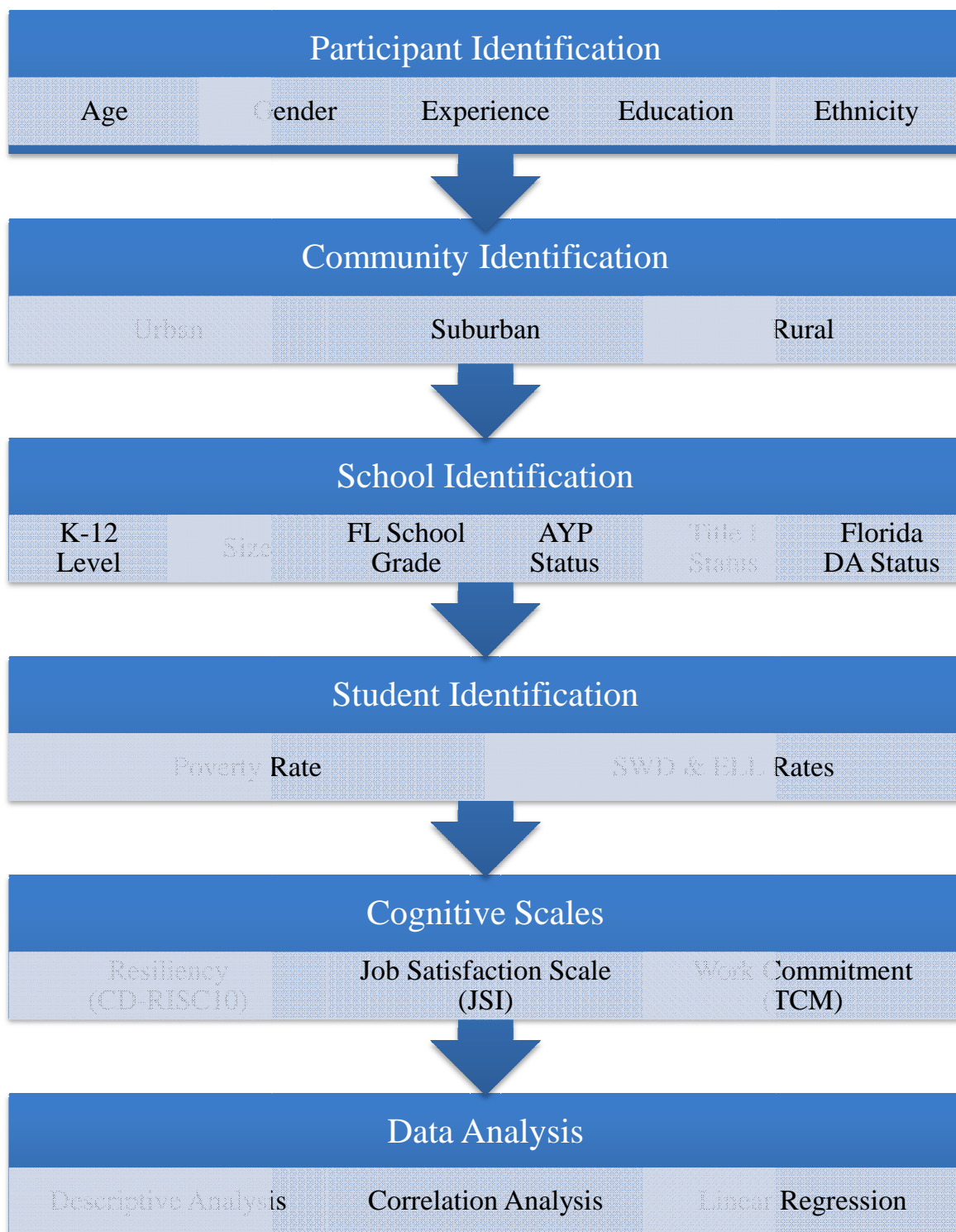
Figure 3. Overview of the Research Design

Chapter 4:

Results

Overview

This chapter reviewed the results of the survey and described the findings of the

statistical analyses used to analyze the data. As reported earlier, the role of principal

continues to change (Catano & Stronge, 2007), and many school based administrators

find themselves juggling multiple responsibilities that range from managerial to

instructional leadership. Moreover, principals serve a broad constituency base including

students, superintendents, parents, legislators, and community leaders. Many times, the

needs of these various populations conflict with one another. For example, the

community may demand that the principal develop social programs to support student

safety, violence prevention, and social competence. At the same time, the state

department of education demands academic accountability, publishes schools' tests

results, and sanctions low performing schools. Furthermore, principals remain

responsible for daily managerial duties such as facility maintenance, budgets, district

reports, and payroll. These role changes add to the principal's plate without removing

any other responsibilities (Catano & Stronge, 2007; Whitaker, 2003).

Ultimately, the increase in these demands takes its toll and leads to greater stress

and burnout (Friedman, 2002; Pounder & Merrill, 2001; Whitaker, 1996, 2003). Indeed,

principals react differently to these stressors and some seem better equipped to weather the storm than others. Using Henderson and Milstein's (2003) definition, principal resiliency is described as "the capacity to spring back, rebound, successfully adapt in the face of adversity, and develop social, academic, and vocational competence despite exposure to severe stress or simply to the stress that is inherent in today's world" (p. 7). As previously stated in Chapter 3, this study tested nine hypotheses, the nulls of which are:

H_0 1a: No relationship between job satisfaction and resiliency for principals.

H_0 2a: No relationship between work commitment and resiliency for principals.

H_0 3a: No relationship between work commitment (affective, continuance, and normative), job satisfaction and resiliency for principals.

H_0 4a: No relationship between years of experience and resiliency for principals.

H_0 5a: No relationship between school location and resiliency for principals.

H_0 6a: No relationship between school poverty rate and resiliency for principals.

H_0 7a: No relationship between school level and resiliency for principals.

H_0 8a: No relationship between salary and resiliency for principals.

H_0 9a: No relationship between student enrollment and resiliency for principals.

The following sections review the results of the descriptive analysis and regression analysis for this study.

Review of Methodology

As reported in Chapter 3, the survey consisted of three research-based, established psychometric tools: 1) Connor-Davidson Resilience Scale (CD-RISC10) (Connor & Davidson, 2003); 2) Brayfield-Rothe Job Satisfaction Index (JSI) (Brayfield & Rothe,

1951); and 3) Three-Component Model (TCM) of commitment (Meyer & Allen, 1991).

The fourth section of the survey asked the participant to answer several demographic

questions. The survey was emailed to 2,966 public school principals across the state of

Florida. As detailed in Appendix D, email servers bounced back (rejected) 70 surveys.

A total of 753 principals completed the survey for a response rate of 26%. Like most

surveys, some participants skipped various questions. The researcher utilized listwise

exclusion to address missing data (Tannenbaum, 2009). Furthermore, the sample frame

omitted public school principals in those schools with a modified or non-traditional

design (i.e. K – 8, Alternative, Adult, Technical, Vocational, etc.). Ultimately, this study

analyzed 627 principal surveys. This sample size nearly doubled the sample size required

to be representative of this population as described in Chapter 3 (Krejcie & Morgan,

1970).

Summary of the Findings

  Descriptive analysis.

   Of the 753 surveys collected, 627 surveys met the criteria delineated in the sample

frame. This data from 627 principals were analyzed and represented four regional areas

across the state of Florida: Florida Panhandle (7.8%), North Florida (11.3%), Central

Florida (51.2%), and South Florida (29.3%). Surveys were sent to principals located in

all but two districts. Franklin county and Putnum county were omitted since they did not

comply with the Florida Department of Education's request to submit personnel e-mail

addresses. Appendix D lists the number of surveys sent to each district and the number

of electronic bounce backs (rejected).

Nearly 65% of principals in this sample were female and 34% were male. At the elementary level, 76% of principals who responded were female. At the secondary level, 44% of principal respondents were female. For a national comparison, the National Center for Education Statistics (NCES) (Aud et al., 2010) reported that during the 2007-2008 school year, 59% of principals were female at public elementary schools nationwide, while 29% of the principals at the secondary level were female.

The age of participants was reported in five year increments with responses ranging from "30 to 34" to "75 to 79" (mode = "55 to 59") with a majority (84.7%) identifying themselves as white. In a national survey, 79.5% of elementary principals and 84.1% of secondary principals identified themselves as white (Aud et al., 2010). As expected, most principals in this sample earned a Master's degree (74.2%) while 25.0% earned a doctorate or professional degree. The national average for doctorate or professional degree for elementary and secondary principals was 33% and 37.7% respectively (Aud et al., 2010). The average overall tenure as a principal for this sample was 9.29 years. However, the average years of service at their current school was only 4.54 years. 13.1% of surveyed elementary principals and 11.8% of surveyed secondary principals served 20 or more years as a principal. Aud et al. (2010) reported that 7.6% of elementary principals and 5.4% of secondary principals served 20 or more years as a principal during the 2007-2008 school year.

Most principals surveyed (75.5%) reported their salary ranged from $70,000 to $100,000. Nationally, the average salary in 2007–2008 of elementary and secondary public school principals was $91,500 and $86,400 respectively (Aud et al., 2010).

Over half of the principals who completed this survey worked at an elementary school (63.8%), but all school levels were well represented in this sample. When asked to describe their school, 45.6% of principals indicated that their school was located in a suburban community, 31.4% in an urban community, and 21.1% in a rural community. Thirty percent of respondents worked in schools where more than 70% of the students qualified for a free or reduced lunch. For comparison, in 2011, 38% of Florida principals (including charter and alternative schools) worked in schools where more than 70% of the students qualified for a free or reduced lunch (Florida Department of Education, 2011).

Psychometric tool analysis.

This study used three psychometric tools: the CD-RISC 10, the JSI, and the TCM. The CD-RISC 10 item scale measured each item on a five point range: not true at all (0), rarely true (1), sometimes true (2), often true (3), and true nearly all of the time (4). A participant's resiliency score ranged from 0-40. The highest score possible, 40, indicated the highest level of resilience. The six-item version of the JSI utilized a five point response scale that ranged from 1 (strongly disagree) to 5 (strongly agree). This study also used the revised version of the TCM with six questions in each section (18 total items). The revised TCM utilized a five-point response scale from 1 (strongly disagree) to 5 (strongly agree). The participants' responses within each scale were summed to calculate an overall score for Affective, Continuance, and Normative commitment.

As shown in Table 9, the reliability alphas calculated for each tool in this study remain consistent with previous research (Agho, Price, & Mueller, 1992; Brooke,

Russell, & Price, 1988; Meyer, Allen, & Smith, 1993; Allen & Meyer, 1996; Meyer &

Herscovitch, 2001; Jaros, 2009; Campbell-Sills, Forde, & Stein, 2009).

Table 9 summarizes the principals' scores on all three psychometric tools. The

mean CD-RISC 10 score was 35.23 with a standard deviation of 4.08. As a comparison,

Campbell-Sills, Forde, and Stein (2009) administered the CD-RISC 10 to 764

respondents from a general community and reported a mean score of 31.78 (SD = 5.41).

The shape of a distribution depends on the way scores are distributed on a scale of

measurement. Kurtosis measures a distribution's degree of peakedness. A leptokurtic

distribution indicates a grouping of scores at the center of the distribution creating a tall

peak. A platykurtic distribution indicates a more uniform distribution with scores still

grouped at the center but creating a smaller peak (Hinkle, Wiersma, & Jurs, 1994).

The distribution of the CD-RISC 10 was classified as slightly negatively skewed

with more scores at the upper end of the distribution (sk = -1.583). The distribution was

also leptokurtic (ku = 8.364) since there were few outlying values which created a more

acute peak around the mean.

The mean JSI score was 26.22 with a standard deviation of 3.71. The distribution

was classified as negatively skewed with more scores at the upper end of the distribution

(sk = -1.970). JSI's distribution was leptokurtic (ku = 6.828), which indicated a tall peak.

For comparison, Agho, Price, and Mueller (1992) administered the six-item JSI to 550

employees and reported a mean score of 20.89 with a standard deviation of 4.90. An

earlier study conducted a test – retest of the six-item JSI to 508 nurses and reported

separate means of 21.87 (4.16) and 21.19 (4.20) (Curry, Wakefield, Price, & Mueller,

1986).

Finally, the mean TCM scores for the Affective, Continuance, and Normative subscales were 24.75, 18.01, and 22.10 respectively. All three subscales were negatively skewed with more scores toward the upper end of the distribution. However, only the Continuance subscale was platykurtic (ku = -.333). Both the Affective and Normative subscale scores of the TCM showed a slightly leptokurtic distribution. Previous studies used the revised six-item TCM (Meyer, Allen, & Smith, 1993). However, the researchers used a seven-point scale instead of the five-point scale used in this study. Thus, this researcher did not include a comparison to mean scores from previous research.

Table 9

Summary of Descriptive Statistics and Cronbach's alpha for CD-RISC 10, JSI and TCM

Measure	N	*M*	*Mdn*	Mode	*SD*	α	sk	ku
CD-RISC 10	608	35.23	36.00	40.00	4.08	.849	-1.583	8.364
JSI	608	26.22	27.00	30.00	3.71	.854	-1.970	6.828
TCM Affective	612	24.75	25.00	29.00	3.98	.802	-1.047	1.241
TCM Continuance	613	18.01	18.00	18.00	4.28	.662	-.035	-.333
TCM Normative	606	22.10	22.00	22.00	4.32	.756	-.540	.289

Note. sk = skewness; ku = kurtosis

Results of Research Questions

The analysis for this research followed a three-step approach using an ANOVA with a Bonferroni correction. This three step approach was utilized in order to provide information that allowed statistical corrections for Family-wise error due to multiple comparisons using a Bonferronni correction approach. Step 1 utilized a linear regression analysis with a Bonferroni correction to determine if there was a significant relationship between each of the six demographic variables (years of experience, school location, school poverty rate, school level, principal salary, and student enrollment) and principal resiliency. Step 2 analyzed the relationship between the JSI, TCM and the CD-RISC 10.

Results from Step 1 and Step 2 were used to identify which variables would be included

in Step 3. Step 3 regressed only the variables showing a significant relationship in the

previous two steps onto the CD-RISC 10.

Regression analysis.

Step 1.

Due to the potential overlap between demographic variables, the researcher used

an analysis of variance (ANOVA) to determine which demographic variables were

significantly related to principal resilience. Demographic variables were dummy coded.

After running the regression analysis, the Pearson product moment correlation coefficient

(r) was determined by calculating the square root of the coefficient of determination (R^2).

A Bonferroni correction was applied to the significance test to correct for family-wise

error. As shown in Table 10, none of the variables showed a significant relationship with

the CD-RISC 10, resulting in a failure to reject null hypotheses H_0 4a, H_0 5a, H_0 6a, H_0 7a,

H_0 8a, and H_0 9a.

Table 10

Linear regression with Demographic Variables and CD-RISC 10

CD-RISC 10	Total experience	Experience in current school	School location	School poverty rate	School level	Principal salary	Student enrollment
Pearson Correlation	.027	.028	.028	.027	.033	.064	.001
Sig.	.507	.509	.493	.516	.421	.117	.975
N	591	555	596	603	608	599	606
R Square	.001	.001	.001	.001	.001	.004	.000

Note. ** Correlation is significant at the 0.05 level (2-tailed) after Bonferroni correction.

Step 2.

To test the null hypothesis H_0 1a of no relationship between resiliency and job satisfaction, linear regression with ANOVA was performed with a Bonferroni correction. As in Step 1, the Pearson product moment correlation coefficient (r) was determined by calculating the square root of the coefficient of determination (R^2). The results of the statistical test revealed a positive relationship between resiliency and job satisfaction. Thus, the null hypothesis was rejected. Table 11 displays these results.

Table 11

Linear regression with JSI and CD-RISC 10

	JSI
Pearson Correlation	.404**
Sig. (2-tailed)	<.001
R Square	.163
N	592

Note. ** Correlation is significant at the 0.05 level (2-tailed) after Bonferroni correction.

Following the same procedure as described above, linear regression with an ANOVA was used to test the null hypothesis H_0 2a of no relationship between resiliency and the three sub scales of work commitment (affective, continuance, and normative). The results of the statistical test demonstrated a relationship between resiliency and all three sub scales of work commitment (affective, continuance, and normative). These results are summarized in Table 12.

Table 12

Linear regression with TCM and CD-RISC 10

	Affective	Continuance	Normative
Pearson Correlation	.294[**]	-.139[**]	.167[**]
Sig. (2-tailed)	<.001	.001	<.001
R Square	.086	.019	.028
N	594	596	588

Note. ** Correlation is significant at the 0.05 level (2-tailed) after Bonferroni correction.

Multiple regression analysis.

Step 3.

Since the demographic regression analyses performed in Step 1demonstrated no

significant relationship to principals' resiliency, these variables were not included in Step

3. A multiple regression analysis was conducted to examine the total amount of variance

that job satisfaction and work commitment accounted for principals' resiliency. The JSI

and each subscale of the TCM (affective, continuance, and normative) were regressed

onto the CD-RISC 10. The overall regression model was significant as measured by

ANOVA, R=.435, $F (4, 554) = 32.085$, $p < .001$, and explained approximately 18.9% of

the variance in principal resilience ($R^2 = .189$). The independent variable of job

satisfaction was found to have a significant influence in the overall regression model on

principals' resiliency, $t = 7.951$, $p < .001$. Only one subscale of the TCM, affective

commitment, explained unique variance in principal resilience, $t = 3.770$, $p < .001$.

Based on the results of the significance tests, null hypothesis H_0 3a was rejected. Checks

for multicollinearity did not reveal any serious violations. Tolerance and Variance

Inflation Factor (VIF) values did not suggest questionable multicollinearity (Tolerances =

.45-.85; VIFs = 1.17-2.23). Table 13 summarizes these results.

Table 13

Multiple regression of JSI and TCM predictors of CD-RISC 10

Variable	*B*	SE	β	Significance test	Result
JSI	.385	.048	.353	t= 7.951**	p<.001
Affective	.223	.059	.216	t= 3.770**	p<.001
Continuance	-.005	.040	-.005	t= -.119	ns
Normative	-.118	.052	-.124	t= -2.274	ns

Note. TCM instrument is subdivided into three sections: Affective, Continuance, and Normative commitment. ** Correlation is significant at the 0.05 level (2-tailed) after Bonferroni correction. $R^2 = .189$

Table 14 summarizes the results of the nine null hypotheses.

Table 14

Summary of Null Hypotheses Results

H_0	Null Hypothesis	Result
H_0 1a	No relationship between job satisfaction and resiliency for principals	Reject
H_0 2a	No relationship between work commitment and resiliency for principals	Reject
H_0 3a	No relationship between work commitment (affective, continuance, and normative), job satisfaction and resiliency for principals	Partially reject
H_0 4a	No relationship between years of experience and resiliency for principals	Failure to reject
H_0 5a	No relationship between school location and resiliency for principals	Failure to reject
H_0 6a	No relationship between school poverty rate and resiliency for principals	Failure to reject
H_0 7a	No relationship between school level and resiliency for principals	Failure to reject
H_0 8a	No relationship between salary and resiliency for principals	Failure to reject
H_0 9a	No relationship between student enrollment and resiliency for principals	Failure to reject

Note. H_0 = Null hypothesis

Summary of Findings

This study examined survey results from a sample of 627 principals from the state of Florida utilizing descriptive, correlation, and regression analysis. Results indicated that there was a significant relationship between job satisfaction and resiliency for principals as well as a significant relationship between work commitment and resiliency for principals. Furthermore, none of the six demographic variables (years of experience, school location, school poverty rate, school level, principal salary, and student enrollment) showed a significant relationship to principal resilience. However, both job satisfaction and affective work commitment explained unique variance in principal resilience.

In summary, null hypotheses H_0 1a, H_0 2a, and part of H_0 3a were rejected. This study failed to reject null hypotheses H_0 4a, H_0 5a, H_0 6a, H_0 7a, H_0 8a, and H_0 9a. These results indicated that both job satisfaction and affective work commitment were significantly related to a principal's resilience as measured by the JSI, TCM, and CD-RISC 10. Appendix E lists Table A1 – Table A7 summarizing the CD-RISC 10, JSI and TCM (Affective, Continuance, and Normative) scores according to principal and school demographic variables.

The following chapter will provide a summary of the results of the study. Chapter 5 will also summarize the conclusions of the study in terms of the statement of the problem, their significance, and discuss connections to prior research. The chapter will also detail the study's limitations, implications for practice within public school systems, and provide suggestions for future research.

Chapter 5:

Summary and Discussion

Summary of Findings

As the literature suggests, principals work under increasingly stressful conditions (Catano & Stronge, 2007, Friedman, 2002; Pounder & Merrill, 2001; Whitaker, 1996, 2003). Using Henderson and Milstein's (2003) definition, this study defined principal resiliency as "the capacity to spring back, rebound, successfully adapt in the face of adversity, and develop social, academic, and vocational competence despite exposure to severe stress or simply to the stress that is inherent in today's world" (p. 7). Given these additional stressors mentioned above, the resilience construct offers an important perspective into the thoughts and feelings of public school administrators. This study assessed predictors of resilience in a large sample of public school principals.

In order to study the resiliency of principals, this researcher conducted an analysis of 627 surveys completed by public school principals from the state of Florida. The mean CD-RISC 10 score was 35.30; 3.52 points above the mean score Campbell-Sills et al. (2009) reported after they administered the CD-RISC 10 to a large community sample (764 participants) from the United States.

Years of experience, school location, school poverty rate, school level, principal salary, and student enrollment were not related to principal resilience. However, results

from this empirical study indicated that there was a significant relationship between job satisfaction and resiliency for principals as well as a significant relationship between affective work commitment and resiliency.

Discussion of the Research Questions

This study indentified the following relationships:

1. There is a positive relationship between job satisfaction and resiliency for principals.

2. There is a positive relationship between affective work commitment and resiliency for principals.

3. There are no significant differences in resiliency levels among principals in various school settings. Specifically, none of the demographic variables (years of experience, school location, school poverty rate, school level, principal salary, and student enrollment) showed a significant effect on principal resilience.

The following sections will discuss these findings in detail.

Job satisfaction and principal resiliency.

Principals who remain satisfied with their job appear to be more resilient than their peers who are less satisfied. The JSI uses words such as like, enjoy and enthusiasm to measure a person's job satisfaction. Clearly, a principal must like his or her job in order to achieve high scores on the JSI. In reality, some principals find little pleasure in their work, which ultimately affects their resilience. This speaks to the ever-changing role of a principal who seems to be laden with more responsibility while at the same time loses more and more autonomy.

The essential functions of the principalship changed over the last 30 years. A renewed focus on instructional leadership, high-stakes testing, Differentiated

Accountability, data mining, and various reform efforts translated to more meetings, more reports, more mandated processes, and certainly more accountability.

Like managers in most professions, principals attend several meetings. In larger districts, these meetings typically provide district leaders an opportunity to update the principals about policies, mandates, procedures, facility, budgets, and other matters related to the business of managing a school. For example, NCLB rules require principals to ensure that teachers hold the proper certifications and only teach subjects for which they are deemed in-field. In the state of Florida, certification rules are complicated and change often. In fact, in many large districts an entire department is devoted to certification. Despite the amount of human resources districts devote to this one area, the principal is ultimately responsible for the accuracy of a school's personnel certification. Hence, long meetings about certification, NCLB, and Differentiated Accountability take hours to explain, followed by countless reminder emails and memos. Additionally, once they return to their schools, principals spend more time scouring over certification reports to ensure their accuracy. Unfortunately, one or two errors can cost a school (and the district) thousands of dollars.

All of this time focused on just one topic – certification. Now add in the rules and regulations for budgets, standardized testing, nutritional services, school security, facility maintenance, and classroom-size amendment reports, and now one can see why principals look more like bean counters rather than instructional leaders. The business of leading a school, its teachers, and students competes with the responsibilities of managing a school. Principals face mounting pressure to generate accurate reports, while simultaneously visit classrooms, mentor teachers, and meet with parents. Over time,

these stressful conditions can erode job satisfaction, work commitment, and eventually a principal's resilience. Ultimately, district leaders must decide what they expect from public school principals.

The dichotomous relationship between managing and leading a school overlaps with a principal's sense of autonomy. Obviously, the most effective principals strike the proper balance between managing and leading a school and know when to use certain skills to achieve the best results. Yet, what happens when a principal's wings are clipped so far back that he or she can no longer strike that balance? What happens when principals cannot make independent, site-based decisions at their schools? During this era of accountability, principals' responsibilities continually increased while their independence to make school level decisions diminished. State officials and district leaders hold principals highly accountable for far more while removing their influence to lead at their own discretion. In other words, an inverse relationship exists between a principal's autonomy and a principal's responsibility. A diminished ability to make site-based decisions impacts the manner in which a principal leads. More mandates, more regulations, and more responsibility, with less autonomy tips the balance toward management skills. On the heels of Race to the Top and to what some see as the nationalization of public education, district and state officials feel the immense pressure to produce student achievement results. This translates to more constraints and more control with less autonomy for principals. Ironically, it also means more accountability for school-based administrators. At some point, the most resilient principals may choose to fly somewhere else, even a different profession, rather than have their wings clipped to

the bone. A less resilient principal may characterize the situation as "hopeless" and choose to stay, even if he or she is unsatisfied with the job.

Empowered administrators seek decision-making autonomy and supportive organization cultures that encourage shared governance and professional development to improve self-efficacy. This, in turn, increases effectiveness, resiliency, and job satisfaction. (Spreitzer, Kizilos, & Nason, 1997). Results from this study supported the literature by demonstrating a positive relationship between a principal's job satisfaction and a principal's resiliency. In the end, district leaders must consider the duties, functions, and level of autonomy of their school level administrators. Keeping them satisfied with their profession ultimately strengthens their resiliency.

Affective work commitment and principal resiliency.

Authentic leadership.

The theoretical perspective on authentic leadership advanced by Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008) served as the philosophical framework to build a developmental model of principal resiliency. Empirical research found that the capacity for self-reliance was a common trait among authentic leaders (Macik-Frey, Quick, & Cooper, 2009). A self-reliant individual relies on one's own abilities to accomplish tasks. Not surprisingly, traits such as autonomy, self-efficacy, and independence closely align with self-reliance.

This study demonstrated that principals with higher levels of work commitment also had higher levels of resilience. As discussed in the literature review, authentic leaders promote a positive and ethical climate inside the organization (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). In a school setting, the principal sets the

tone for the entire school (Hughes, 1995). As an authentic leader, the effective principal shares and models a vision. A clear vision communicates the direction of the school for its students, teachers, and parents. A clear mission also advances the belief that collectively the school will flourish, even during times of challenge.

The results of this study reported that principals who align themselves with the mission and vision of the district or school were more likely to display higher levels of resilience. Considered a protective factor (Maddi, 2002), researchers described commitment as an employee's mindset or feelings about his or her relationship with an organization and further subdivided this psychological state into three distinct categories: a desire (affective commitment), a need (continuance commitment), and an obligation (normative commitment) (Meyer and Allen, 1991). Of the three categories, affective work commitment explained unique variance in principal resilience in this study. When an employee feels aligned with the mission and vision of the organization, or personally identifies with the organization's values and goals, that employee displays affective commitment (desire).

As a highly committed employee, the authentic leader models resilience and promotes a positive climate for students and teachers. The results of this study added to a growing body of literature by identifying a positive relationship between work commitment and principal resiliency. In a school setting, principals with high levels of affective commitment internalize school and district goals, view themselves and others as family members, and derive personal meaning from their work. All of these traits seem to influence the climate of the school. In turn, the climate of the school would foster positive attitudes among students, teachers, parents, and even the community at large. As

reported in the literature, a positive school climate means that principals placed a premium on relationships, identified with their followers on a personal level, recognized and nurtured talent, built strong social networks, and fostered trust with stakeholders (Hughes, 2005). If a positive organizational climate leads to greater job satisfaction and commitment (Luthans, Norman, Avolio, & Avey, 2008), this implies that increasing job satisfaction would augment a principal's resiliency, a relationship that was empirically supported in this study.

Demographic variables and principal resiliency.

According to this study, there are no significant differences in resiliency levels among principals in various school settings. None of the demographic variables (years of experience, school location, school poverty rate, school level, principal salary, and student enrollment) were related to principal resilience. Consequently, the researcher failed to reject the null hypotheses related to these demographic variables (H_0 4a - H_0 9a).

These results ostensibly refute the general consensus among practitioners that the demographic variables listed above influence a principal's resiliency. However, these results warrant more consideration. First, this study did not measure differences in the levels of stress or hardship among the listed variables. Thus, for the purpose of this study, the researcher assumed that principals faced similar challenges across all of these demographic variables. For example, a high school principal encounters the same stressful conditions as the elementary and middle school principals. In other words, the purpose of this study was to measure the principals' resiliency levels in response to the adversity they face in their positions. Additional research may investigate stress level differences between demographic variables. For example, do principals with less

experience encounter greater adversity than principals with more experience? Instead, this study investigated the reaction to this constant adversity (resiliency level) without measuring the adversity itself.

Second, to the best of this researcher's knowledge, district leaders do not utilize psychometric tools to measure principals' resiliency levels to assist with placement. If the Superintendent's staff believes that certain sites produce more stressful conditions than others, then they might place a principal who quickly bounces back from adversity in those high pressure schools. However, districts do not use this type of resiliency screening, and therefore principals with varying resiliency levels are scattered among different types of schools. Therefore, the lack of difference in resiliency levels among principals in various school settings may be a result of not using resiliency measures for placement rather than a true lack of difference. Put simply, if districts do not consider this trait during placement, then measureable differences may not exist.

Third, as merit pay continues to garnish attention at both the national and state level, the results of this study require consideration. Paying a principal more money showed no significant relationship with a principal's resiliency level. These results seem to parallel other research regarding educator bonus pay and its relationship with student achievement (Springer et al., 2010). It seems that the profession of educating children goes beyond a bonus or the promise of financial gain. Instead, the feelings of job satisfaction and the desire to remain with the district drive the resiliency of a principal. In the end, principals and their educator peers desire the satisfaction that comes with inspiring children to reach their fullest potential.

Finally, it must be emphasized that high resiliency scores do not necessarily equate to principal effectiveness. Just because a principal bounces back each time he or she faces adversity, does not mean that this principal leads the school effectively. A highly resilient principal may also be a poor administrator. Authentic leadership involves many traits, including resiliency as an important characteristic. In their pursuit for the most effective principal, district leaders must consider the traits associated with authentic leadership as well as the resiliency of the individual applying for the job. If and when this occurs, it may be possible to measure significant differences in resiliency levels among principals in various school settings.

Principal Protective Factors

Autonomy

The results of this study emphasize the importance of the alignment between the principal and the school district, especially in terms of mission and vision. When principals' wings are clipped too far back, they may choose to find another means to lead with autonomy. The principal may attempt to recapture the autonomy by moving to a different school, a different district, or even choose a different profession. Part of the autonomy and self-esteem skill set is the ability to say no and seek an alternative avenue to lead authentically. In other words, too much of a shift toward management, with less emphasis on leadership, could result in a migration of resilient principals to positions where they feel better aligned to the mission and vision of the organization. Principals who embrace the authentic leadership style may migrate to a place where they are encouraged to fly.

To extend this point, the CD-RISC 10, the instrument used in this study to measure resilience, asked principals to evaluate their own ability to achieve goals and adapt to change. Since the literature connected concepts of independence, self-determination, and autonomy to resiliency, one could argue that empowered principals scored themselves higher in these areas. This underscored the importance of autonomy since a high rating on these questions increased a respondent's overall resiliency score. What happens when the ability to set individualized goals or adapt to change decreases for principals? Considering the example of certification meetings and rules discussed above, if the trend toward management coupled with a reduction in autonomy continues, then both job satisfaction and resiliency may decrease. Since this study demonstrated a significant relationship between job satisfaction and resiliency, districts may want to consider the fragile balance between management and instructional leadership when defining the responsibilities of building level administrators.

Problem solving.

Principals spend a great amount of time solving problems. In fact, most principals stated that daily emergencies prevented them from spending time on matters related to classroom teaching (Farkas, Johnson, & Duffett, 2003). Akin to a fireman, a tasked principal moves about the school putting out little fires as they arise. When ignored or dealt with ineffectively, these little fires quickly rage into infernos. Thus, effective principals rely on their problem solving skills to tackle the multiple issues brought on by students, teachers, and parents. These problem-solving skills include creativity, adaptability, flexibility, and focus. Three of the ten questions on the CD-RISC

10 pertain to problem solving capabilities. Hence, higher resiliency scores reflect an increased ability to problem solve.

The literature points to experience as a determining factor in the use of tacit knowledge between expert and novice principals. Tacit knowledge refers to intuition or implicit knowledge grounded in experience (Germain & Quinn, 2005). Although the literature purported that experience affected the manner in which a leader approached a problem, in this study, years of experience showed no significant relationship with the CD-RISC 10. Thus, instead of experience, imagination, ingenuity, and creativeness befit the resilient principal who pursues solutions rather than excuses (Lévi-Strauss, 1966; Coutu, 2002; Freeman, 2007; Aagard, 2009; Reilly, 2009).

A word of caution must be issued to those who may interpret these results to mean that years of experience do not matter. Indeed, a person's prior experiences allow him or her to survey a situation and develop a plan based on those past occurrences. Over time, a seasoned principal may detect patterns or trends based on similar situations from the past. The key, however, rests on the skill set that the principal honed over time to solve problems. Creativity and ingenuity help principals bounce back from tough situations. Pedestrian problem solving skills interfere with a principal's resiliency especially when faced with complicated issues. Thus, years of experience may only contribute when there is an abundant resource of effective problem solving skills to tap. In other words, years of experience may only support a person's resiliency when that person already has the capacity to effectively solve problems.

Self-esteem and self-efficacy.

True self-esteem measures a person's own self worth which, in turn, correlates to positive psychological outcomes such as higher self-regard, a more secure sense of self, and greater internalized behavior (Deci & Ryan, 1995). Self-efficacy, describes the belief in one's ability to successfully complete a task in order to produce the intended outcome (Bandura, 1977). Several scholars linked self-esteem and self-efficacy to the resiliency construct (Rutter, 1979; Werner & Smith, 1982; Rutter, 1985; Bandura, 1990; Benson, 1997; Bobek, 2002; Wayman, 2002; Richardson, 2002; Howard & Johnson, 2004; Gu & Day, 2007). At least three questions on the CD-RISC 10 measured personal competence or judgments about one's ability to complete a task.

Principals who believe in themselves, especially during the most challenging times, utilize protective mechanisms, such as self-efficacy, to ward off the negative effects of hardship. In addition to believing in him or herself, a principal must believe in the school's mission. Affective commitment measures an employee's alignment with the mission and vision of the organization, or how the employee personally identifies with the organization's values and goals. In this study, affective commitment, explained unique variance in principal resilience. Principals who aligned themselves with the mission of the organization scored higher on the CD-RISC 10. Therefore, these self-enhancing cognition acts may pertain to one's belief in self as well as the organization's mission.

The literature described authentic leaders as self-aware individuals who foster positive self-development (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). In this context, a self-aware principal can be described as one who exhibits the protective

factors embodied in the resiliency construct. More specifically, a self-aware leader understands and adapts to the current environment. For example, the skill set used by a principal in an urban setting may look different from the skill set used by a principal in a suburban setting. A principal who remains committed to the school and the district continuously seeks opportunities to sharpen these skills. Moreover, after assessing a situation, self-efficacious principals amass resources aligned with their strengths. The belief in one's ability to successfully complete a task sets the stage for a positive approach to overcoming hardship. In other words, resilient principals rarely give up. Instead, they search for solutions because they believe in their own ability as well as the abilities of others.

Limitations of the Study

Chapter 1 indentified several limitations to this study. The collection and analysis of the data brought additional limitations to the surface. As previously mentioned, a non-randomized sample included only public school principals (elementary, middle, and high school) from the state of Florida. This restrictive sample limits the generalizability to other populations such as private school principals, district-level administrators, or corporate management personnel.

Secondly, since the study was administered anonymously and relied on self-reported data, there was no way to verify the accuracy of the respondent's answers. The answers provided by the participants in this survey were assumed to be genuine and accurate. Additionally, the principals who devoted the time to complete the survey may possess certain characteristics that resulted in higher CD-RISC 10 scores. Conversely, an overwhelmed principal who is behind on important deadlines while dealing with multiple

disruptions may not volunteer to complete a survey. Will a discouraged or overwhelmed principal take the time to complete a voluntary survey?   It is impossible to know if principals with primarily positive responses participated at a higher or lower rate than those with more negative thoughts and feelings.

Thirdly, the timing of the survey may have biased the results. Most principals completed the survey in late July and early August, prior to the beginning of the 2010 – 2011 school year. Traditionally, this is a time of year when principals' spirits are high as they personify the anticipation and excitement of the coming school year. Conversely, this time of year brings last minute planning, facility preparations, interviewing, and student placement. Hence, many principals report higher stress levels than other points throughout the year. Conducting a test – retest may have addressed this timing limitation in the research.

Finally, the word "organization" used in the TCM instrument may have affected the results of this study. The word "organization" is used in the directions and is found in 17 out of 18 questions. Some principals asked if "organization" referred to the district or the school site. The intent for this particular research was to measure a principal's work commitment to the district. Therefore, the word "organization" referred to the district. In an effort not to alter the instrument in any way, the researcher elected not to replace the word "organization" with the word "district." However, the ambiguity surrounding this issue placed limitations on the analysis of these data. Principals may feel more aligned to their own school than they do to their district.

Implications for Practice

Human Resource (HR) management practices are defined collectively as "the means for acquiring, developing, and retaining a high-quality workforce, one that can carry out the instructional programs thought to lead to improved student achievement" (Heneman & Milanowski, 2004, p. 109). Quality HR practices ultimately enhance organizational performance by changing the effectiveness of the workforce. The Superintendent and the Superintendent's staff make countless decisions every day. Yet, of all of those decisions, one of the most important is the recruitment and retention of quality personnel via their HR management practices. This is especially true when it comes to the selection of a principal. The consequences are too costly whenever a district fails to bring together the best team of professionals with a strong instructional leader at the helm. A poor hire means deeper levels of support, more time monitoring, and possibly more time documenting to undo a hiring error. All of this time equates to injudicious expenditures especially when district staff are pulled away from other matters that involve the mission of the school system.

During this time of educational reform, the pundits place great emphasis on the retention of instructional personnel, albeit mostly teachers. In fact, recent research conducted by Duckworth, Quinn, and Seligman (2009) used the term teacher grit to describe the resilient nature of a teacher who remains effective even during the most difficult times. Since effective HR management practices enhance the organization as a whole, districts stand to benefit from retaining the highest quality principals. This study implies that the elusive path to principal retention involves job satisfaction, affective work commitment, and the resiliency construct.

The empirical results of this study revealed the significant relationship between a principal's affective work commitment and his or her resiliency. As previously stated affective commitment occurs when an employee feels aligned with the mission and vision of the organization, or personally identifies with the organization's values and goals. Moreover, principal job satisfaction was a statistically significant predictor of a principal's resilience. Aside from anecdotal signs, how do district leaders measure the affective work commitment and job satisfaction of their site-based administrators? This study suggests that there may be benefits to adopting more formal measures to identify these feelings and attitudes among principals. In fact, this study put forth three research-based, established psychometric tools with extensive empirical support found throughout the literature.

In the past, the term "Company Man" usually described the employee who sacrificed for the district and who outwardly supported district goals. This rather pejorative term besmirched those individuals who aligned themselves with the vision and mission of the district. However, this study suggests certain benefits, namely increased resiliency, when principals demonstrate higher levels of affective work commitment in the form of alignment to district mission and vision. In other words, the empirical data from this research suggest that a "Company Man" who is highly satisfied with his job may possess the capacity to rebound and successfully adapt in the face of adversity. In light of these findings, districts policies related to the hiring and retention of site-based administrators require further review.

The fact that none of the demographic variables (years of experience, school location, school poverty rate, school level, principal salary, and student enrollment) were

related to principal resilience underscores the implications discussed above. To the best of this researcher's knowledge, district leaders give little to no consideration to the resiliency construct when placing principals. If district leaders considered the resiliency construct when placing principals at schools, one could argue that demographic variables would predict principal resiliency in the future. Traditionally, the most challenging school environments involve high poverty rates in rural or urban settings. When Superintendents consciously place the most resilient principals at the most challenging schools, a relationship will begin to emerge between the school location (urban, rural, and suburban), the poverty rate, and the resiliency levels of principals.

Simply paying principals more money to work at the most challenging schools may not be enough to retain resilient principals. However, current reform efforts encourage the use of merit pay, salary bonuses, and other financial incentives to reward the most effective educators. While many argue that professional educators deserve to make more money, the results from this research showed no relationship between salary and principal resilience. Perhaps affective work commitment and job satisfaction act more as intrinsic motivators as compared to the extrinsic motivation derived from an increase in salary. Paying a principal more money hardly matters if he or she shows little commitment to the mission of the district and remains unsatisfied.

Along the same lines, this research suggests certain benefits to implementing methods to develop school leaders by enhancing principal resiliency. Principals could directly benefit from professional development related to the protective factors associated with the resiliency construct. Topics include personnel relationships, self-efficacy, self-esteem, problem solving, autonomy, finding meaning, positive affect, hope, and

optimism. Building awareness about this relatively new resiliency construct offers advantages. Specifically, it emphasizes the importance of human management as well as the importance of retaining the most effective school leaders.

Implications for Future Research

Given the current dearth of research related to principal resiliency, this study opens the door for an effusion of research connecting the thoughts and feelings of principals to the resiliency construct. For example, raising student achievement remains a top priority for the current White House administration along with school districts around the nation. Subsequently, many studies measured different variables and their relationship with student achievement. For instance, after tracking teachers who worked in demanding school settings for one year, a recent study reported that teacher grit and life satisfaction remained significant predictors of student performance (Duckworth, Quinn, & Seligman, 2009). Teachers with grit remained resilient during the most challenging times. Life-satisfaction referred to a teacher's level of contentment with his or her life.

As a follow-up to Duckworth, Quinn, and Seligman's (2009) research, future studies could determine if a relationship exists between highly resilient principals and their students' achievement. For example, could a principal's high score on the CD-RISC 10 predict higher student scores on a standardized assessment? In addition to student achievement, later research must analyze the relationship between resiliency and principal performance. Do the most resilient principals perform at the highest levels?

Further research should analyze the balance between management and instructional leadership as it relates to the construct of principal resiliency. Since this

study empirically supports the notion that job satisfaction is related to a principal's resiliency, one may ask: are principals more satisfied leading or managing? An iteration of this research design could analyze the duties associated with managing and instructional leadership and its relationship to resiliency. The analysis of these relationships will shed light on this delicate balance principals must strike among these often-opposing duties.

This study measured the CD-RISC 10 scores of principals in elementary, middle, and high schools. This sample frame did not include other district level administrators such as supervisors, generalists, specialists, directors, or superintendents. Future studies could compare the resiliency levels of district-based administrators to the resiliency levels of the site-based administrators measured in this study. Moreover, the CD-RISC 10 scores reported in this study could be compared to middle level managers in business organizations. How resilient is the school principal as compared to the business manager? Are their differences in resiliency levels between other groups such as teachers or the general population?

This study discussed seven protective factors a resilient person (or organization) uses to mitigate risk factors in the environment: 1) relationships; 2) self-efficacy and self-esteem; 3) problem-solving and professional development; 4) autonomy; 5) meaning; 6) positive affect; and 7) hope and optimism. Further research might also consider which factors significantly predict a principal resiliency within a school setting. Given the abundance of school culture research, the protective factors listed above could serve as a conceptual bridge between the resiliency construct and implications related to school culture. Does a principal's resiliency transfer to other members of the school?

Researchers established the contagion effect of resiliency within organizations (Youssef, 2004). In the future, researchers could measure whether similar effects occur in the school setting.

Finally, as discussed above, the timing of this survey may have skewed the results. Future studies could implement a CD-RISC 10 pre-test and a post-test in order to measure principal resiliency levels at different points during the school year. Do resiliency levels change at the beginning of the year, just before standardized testing, or at the end of the school year? A test, re-test model should be conducted to analyze the CD-RISC 10 for its stability over time.

Conclusion

On November 4, 2009, President Barack Obama gave a speech at Wright Middle School in Madison, WI, and said the following:

> There are some schools that are starting in a tough position – a lot of kids coming from impoverished backgrounds, a lot of kids coming in that may have not gotten the kind of head start that they needed; they start school already behind. And even though there are heroic teachers and principals in many of these schools, the fact is that they need some extra help. And that's why the fourth measure we'll use in awarding Race to the Top grants is whether a state is focused on transforming not just its high-performing schools, not just the middle-of-the-pack schools, but the lowest-performing schools. We'll look at whether they're willing to remake a school from top to bottom with new leaders and a new way of teaching, replacing a school's principal if it's not working, and at least half its staff; close a school for a time and then reopen it under new management, even

shut down the school entirely and send its schools – send its students to a better

school nearby.

(http://www.boston.com/news/politics/politicalintelligence/2009/11/a_year_after_

el_1.html)

During an era of accountability and school reform, the message from the President on

down remains clear: public school leaders and teachers must raise student achievement

and must remain accountable for their students' performance. Clearly, during the last

decade, both school and district leaders witnessed mounting pressure to overcome the

hurdles that interfere with school success and implement strategies to improve public

schools. The President, and others that advocate for school reform, view impoverished

neighborhoods, language barriers, and insufficient budgets as excuses rather than

contributors to failing schools. Instead, as the President points out in his remarks above,

principals are expected to overcome these challenges and be replaced if they do not

succeed.

Is principal resiliency fundamental to developing effective schools? Research

affirms the importance of effective school leadership, positive attitudes, lower turnover,

increased satisfaction, and high levels of commitment. By definition, resilient principals

quickly find ways to overcome feelings of discouragement, frustration, and exasperation.

They look for the meaning for why something just happened, learn from the experience,

and move on. Resilient principals avoid victimization thinking and focus on solving the

problem.

Clearly, our students and teachers deserve the most effective principals leading

their schools. Although a significant relationship exists between job satisfaction and

resiliency as well as affective work commitment and resiliency, the researcher offers a word of caution. Namely, resiliency and effectiveness may overlap in some areas, but may differ in others. Depending on one's definition of effectiveness, the possibility exists that an ineffectual principal may also show strong resiliency traits. For this reason, this study used an authentic leadership model (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008) as the philosophical framework to build a developmental model of principal resiliency. The concurrence of resiliency and authentic leadership sets the stage for a positive school climate built upon tenets of trust, transparent relationships, self-development, and self-awareness. The resilient authentic leader finds ways to overcome the many challenges that manifest in schools every day in order to foster the most positive school climate.

Principals work in extremely tumultuous environments. Moreover, the daily challenges and adversity public school principals face intensifies each year. During this time of great reform, principals must cling to their sense of agency and lead with a sense purpose and authenticity. Now more than ever, districts are searching for a means to retain its best and brightest school leaders. Although not a panacea, part of the answer revolves around the resiliency construct. Consequently, the study of principal resilience becomes especially relevant to these current trends in educational leadership. In the end, the resiliency construct may transcend the limits of the accountability era.

"Everything can be taken from a man but one thing; the last of the human freedoms—to choose one's attitude in any given set of circumstances, to choose one's own way" (Frankl, 1992, p. 104).

References

Aagard, M. (2009). Bricolage: Making do with what is at hand. *Creative Nursing, 15,* 82-84.

Agho, A. O., Price, J. L., & Mueller, C. W. (1992). Discriminant validity of measures of job satisfaction, positive affectivity and negative affectivity. *Journal of Organizational Psychology, 65,* 185-196.

Albrecht, S. F., Johns, B. H., Mounsteven, J., & Olorunda, O. (2009). Working conditions as risk or resiliency factors for teachers of students with emotional and behavioral disabilities. *Psychology in the Schools, 46,* 1006-1022.

Allen, N. J., & Meyer, J. P. (1996). Affective, continuance, and normative commitment to the organization: An examination of construct validity. *Journal of Vocational Behavior*, *49*, 252-276.

Aud, S., Hussar, W., Planty, M., Snyder, T., Bianco, K., Fox, M., Frohlich, L., Kemp, J., & Drake, L. (2010). *The condition of education 2010* (NCES 2010-028). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

August, L., & Waltman, J. (2004). Culture, climate, and contribution: Career satisfaction among female faculty. *Research in Higher Education, 45(2),* 177-192.

Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16,* 315-338.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,*191-215.

Bandura, A. (1990). Reflections on nonability determinants of competence. In R. J.

    Sternberg & J. Kolligian, Jr. (Eds.), *Competence considered* (pp. 315-362). New

    Haven, CT: Yale University Press.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning.

    Educational Psychologist, *28*, 117-148.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman.

Benight, C. C. & Bandura, A. (2004). Social cognitive theory of posttraumatic recovery:

    The role of perceived self-efficacy. *Behaviour Research and Therapy, 42,* 1129–

    1148.

Benson, P. L. (1997). *All kids are our kids.* Minneapolis: Search Institute.

Benzies, K. & Mychasiuk, R. (2009). Fostering family resiliency: A review of the key

    protective factors. *Child and Family Social Work, 14,* 103–114.

Blase, J. & Kirby, P. C. (2000). *Bringing out the best in teachers: What effective*

    principals do. Thousand Oaks, CA: Corwin Press, Inc.

Bobek, B. L. (2002). Teacher resiliency: A key to career longevity. *The Clearing House,*

    75(4), 202-205.

Bogar, C. B., & Hulse-Killacky, D. (2006). Resiliency determinants and resiliency

    processes among female adult survivors of childhood sexual abuse. *Journal of*

    Counseling and Development, 84, 318-327.

Bono, J. E., & Judge, T. A. (2003). Self-concordance at work: Toward understanding the

    motivational effects of transformational leaders. *Academy of Management*

    Journal, 46, 554-571.

Boyle, M., & Woods, P. (1996). The composite head: Coping with changes in the primary headteacher's role. *British Educational Research Journal, 22*(5), 549-568.

Brayfield, A., & Rothe, H. (1951). An index of job satisfaction. *Journal of Applied Psychology, 35,* 307–311.

Brooke, P. P., Jr, Russell, D., & Price, J. L. (1988). Discriminant validation of measures of job satisfaction, job involvement, and organizational commitment. *Journal of Applied Psychology, 73(2),* 139—145.

Broome, J. L. (2008). Multiage education as an alternative to the McDonaldization of schools: Applying Ritzer's sociological framework to modern education. *Journal of Multiage Education, 3*(1), 20-23.

Bruner, D. Y., & Greenlee, B. J. (2000). Measures of work culture in high and low performance schools. *Research in the Schools, 7*(2), 71–76.

Campbell-Sills, L., & Stein M. B. (2007). Psychometric analysis and refinement of the Connor–Davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. *Journal of Traumatic Stress, 20,* 1019–1028.

Campbell-Sills, L., Forde, D. R., & Stein, M. B. (2009). Demographic and childhood environmental predicators of resilience in a community sample. *Journal of Psychiatric Research, 43,* 1007-1012.

Caprara, G., Barbaranelli, C., Borgogni, L., & Steca, P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. *Journal of Educational Psychology*, *95*(4), 821-832.

Catano, N. & Stronge, J. H. (2007). What do we expect of school principals? Congruence between principal evaluation and performance standards. *International Journal of Leadership in Education, 10,* 379-399.

Clauss-Ehlers, C.S., & Wibrowski, C.R. (2007). Building educational resilience and social support: The effects of the educational opportunity fund program among first- and second-generation college students. *Journal of College Student Development, 48,* 574-594.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, N.J.: L. Erlbaum Associates.

Cohn, M. A., Fredrickson, B. L., Brown, S. L., Mikels, J. A., & Conway, A. M. (2009). Happiness unpacked: Positive emotions increase life satisfaction by building resilience. *Emotion, 9(3),* 361-368.

Commission on Children at Risk. (2003). *Hardwired to connect: The new scientific case for authoritative communities*. New York, NY: Institute for American Values.

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety, 18,* 76-82.

Crotty, M. (2003). *The foundations of social research: Meaning and perspective in the research process.* Thousand Oaks, CA: Sage.

Coutu, D. (2002). How resilience works. *Harvard Business Review, 80*, 46-55.

Curry, J. P., Wakefield, D. S., Price, J. L., & Mueller, C. W. (1986). On the causal ordering of job satisfaction and organizational commitment. *Academy of Management Journal, 29,* 847-858.

Deal, T. E. & Peterson, K. D. (2009). *Shaping school culture: Pitfalls, paradoxes, and promises* (2nd ed.). San Francisco, CA: John Wiley & Sons.

Deci, E. L., & Ryan, R. M. (1995). Human autonomy: The basis for true self-esteem. In M. H. Kernis (Ed.), *Efficacy, agency, and self-esteem,* (pp. 31-49). New York: Plenum.

Dent, E. B., Higgins, M. E., & Wharff, D. M. (2005). Spirituality and leadership: An empirical review of definitions, distinctions, and embedded assumptions. *The Leadership Quarterly, 16,* 625-653.

Doherty, P., (1991). The exploratorium museum web site: That's the way the ball bounces. Retrieved from http://www.exploratorium.edu/sports/ball_bounces/index.html

Duckworth, A. L., Quinn, P. D., & Seligman, M. E. P. (2009). Positive predictors of teacher effectiveness. *The Journal of Positive Psychology, 4,* 540-547.

Eisenberger, R., & Cameron, J. (1996). Detrimental effects of reward: Reality of myth? *American Psychologist, 51,* 1153–1166.

Ellis, L. (1994). *Research methods in the social sciences*. Madison, WI: Brown & Benchmark.

Epictetus. (2009). The internet classics archive: The golden sayings. Retrieved from http://classics.mit.edu/Epictetus/goldsay.3.3.html

Farkas, S., Johnson, J., & Duffett, A. (2003). *Rolling up their sleeves: Superintendents and principals talk about what's needed to fix public schools*. New York: Public Agenda.

Flink, C., Boggiano, A. K., & Barrett, M. (1990). Controlling teaching strategies: Undermining children's self-determination and performance. *Journal of Personality and Social Psychology, 59,* 916-924.

Fowler, F. J. (2009). *Survey research methods. Applied social research methods series, v. 1.* Thousand Oaks: Sage Publications.

Frankl, V. E. (1992). *Man's search for meaning.* Boston, MA: Beacon Press.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56,* 218–226.

Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crises?: A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11, 2001. *Journal of Personality and Social Psychology, 84,* 365–376.

Freeman, R. (2007). Epistemological bricolage: How practitioners make sense of learning. *Administration and Society, 39,* 476-496.

Friedman, I. A. (2002). Burnout in school principals: Role related antecedents. *Social Psychology of Education, 5,* 229–251.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26,* 331-362.

Garmezy, N. (1987). Stress, competence, and development: Continuities in the study of schizophrenic adults, children vulnerable to psychopathology, and the search for stress-resistant children. *American Journal of Orthopsychiatry, 57,* 159-174.

Garmezy, N. (1991). Resiliency and vulnerability to adverse developmental outcomes associated with poverty. *American Behavioral Scientist, 34*(4), 416-430.

Gehrke, S. J. (2008). Leadership through meaning-making: An empirical exploration of spirituality and leadership in college students. *Journal of College Student Development, 49,* 351-359.

Germain, L. S., & Quinn, D. M. (2005). Investigation of tacit knowledge in principal leadership. *The Educational Forum, 70,* 75-90.

Giles, C. (2008). Capacity building: Sustaining urban secondary schools as resilient self-renewing organizations in the face of standardized educational reform. *The Urban Review, 40,* 137-163.

Goldring, E., Cravens, X. C., Murphy, J., Porter, A. C., Elliot, S. N., & Carson, B. (2009). The evaluation of principals: What and how do states and urban districts assess leadership? *Elementary School Journal, 110,* 19-39.

Gu, G., & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education, 23,* 1302-1316.

Hanchey, S. G., & Brown, R. (1989, March). *The relationship of teacher burnout to primary and secondary appraisal, coping systems, role strain and Teacher/Principal behavior*. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Hansen, D. T. (1994). Teaching and the sense of vocation. *Educational Theory, 44*, 259-275.

Harker, L., & Keltner, D. (2001). Expressions of positive emotion in women's college yearbook pictures and their relationship to personality and life outcomes across adulthood. *Journal of Personality and Social Psychology, 80,* 112–124.

Harry, B., & Klingner, J. (2007). Improving instruction for students with learning needs: Discarding the deficit model. *Educational Leadership, 64*(5), 16-21.

Hass, M. & Graydon, K. (2009). Sources of resiliency among successful foster youth. *Children and Youth Services Review, 31,* 457–463.

Henderson, N. & Milstein, M. M. (1996). *Resiliency in schools: Making it happen for students and educators.* Thousand Oaks, CA: Corwin Press, Inc.

Henderson, N. & Milstein, M. M. (2003). *Resiliency in schools: Making it happen for students and educators* (2nd ed.). Thousand Oaks, CA: Corwin Press, Inc.

Heneman, H.G. & Milanowski, A.T. (2004). Alignment of human resource practices and teacher performance competency. *Peabody Journal of Education, 79*(4), 108-125.

Hewson, C., Yule, P., Laurent, D., & Vogel, C. (2003). *Internet research methods: A practical guide for the social and behavioural sciences*. London: Sage Publications.

Hinkle, D. E., Wiersma, W., & Jurs, S. G. (1994). *Applied statistics for the behavioral sciences*. Boston: Houghton Mifflin.

Hipp, K. A. (1996, April). *Teacher efficacy: Influence of principal leadership behavior*. Paper presented at the annual meeting of the American Educational Research Association, New York.

Ho, C. L., & Au, W. T. (2006). Teaching satisfaction scale: Measuring job satisfaction of teachers. *Educational and Psychological Measurements, 66,* 172-185.

Howard, S., & Johnson, B. (2004). Resilient teachers: Resisting stress and burnout. *Social Psychology of Education, 7*, 399-420.

Hoy, W., & Woolfolk, A. (1993). Teachers' sense of efficacy and the organizational health of schools. *Elementary School Journal, 93(4),* 355-372.

Hughes, L. W. (2005). Developing transparent relationships through humor in the authentic leader-follower relationship. In J. W. Gardner, B. J. Avolio & F. Walumbwa (Eds.), *Authentic leadership theory and practice: Origins, effects and development; monographs in leadership and management* (Vol. 3, pp. 83-106). San Diego, CA: Elsevier.

Hughes, M. F. (1995). *Achieving despite adversity: Why are some schools successful in spite of the obstacles they face? A study of the characteristics of effective and less effective elementary schools in West Virginia using qualitative and quantitative methods.* Charleston, WV: West Virginia Education Fund. (ERIC Document Reproduction Service No. ED398004)

Ilies, R., & Judge, T. A. (2004). An experience-sampling measure of job satisfaction: Its relationships with affectivity, mood at work, job beliefs, and general job satisfaction. *European Journal of Work and Organizational Psychology, 13*, 367–389.

Imants, J. G. M., & DeBrabander, C. J. (1996). Teachers' and principals' sense of efficacy in elementary schools. *Teaching and Teacher Education, 12(2),* 179-195.

Isaacson, W. (2007). *Einstein: His life and universe.* New York, NY: Simon & Schuster.

Jazzar, M., & Algozzine, B. (2006). *Critical issues in educational leadership.* Boston: Pearson.

Jaros, S. (2009). Measurement of commitment. In H. J. Klein, T. E. Becker, & J. P. Meyer (Eds.), *Commitment in organizations: Accumulated wisdom and new directions.* (pp. 347-381). New York: Routledge.

Johanningmeier, E. V., & Richardson, T. R. (2008). *Educational research, the national agenda, and educational reform.* Charlotte, NC: Information Age Publishing, Inc.

Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology, 83*, 17-34.

King, M. L. (1968). *Where do we go from here?* Boston, MA: Beacon Press.

Kirk, D. H. & Goon, S. (1975). Desegregation and the cultural deficit model: An examination of the literature. *Review of Educational Research, 45*(4), 599-611.

Klein, A., & McNeil, M. (2010). Administration unveils ESEA reauthorization blueprint. *Education Week*, *29*(25), 19. Retrieved from Academic Search Premier database.

Kleiser, G. (2005). Dictionary of proverbs. New Delhi: Chaman Enterprises.

Knoeppel, R. C., & Rinehart, J. S. (2008). Student achievement and principal quality: Explaining the relationship. *Journal of School Leadership, 18,* 501-527.

Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology, 37*, 1–11.

Krejcie, R. V. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30,* 607-610.

Leithwood, K., Strauss, T., & Anderson, S. (2007). District contributions to school leaders' sense of efficacy: A qualitative analysis. *Journal of School Leadership*, *17*(6), 735-770.

Leithwood, K., & Jantzi, D. (2008). Linking leadership to student learning: The contributions of leader efficacy. *Educational Administration Quarterly*, *44*(4), 496-528.

Leong, F. T. L. (2001). The role of acculturation in the career adjustment of Asian American workers: A test of Leong and Chou's (1994) formulations. *Cultural Diversity and Ethnic Minority Psychology, 7,* 262-273.

Lévi-Strauss, C. (1966). *The savage mind.* Chicago: University of Chicago Press.

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology (pp. 1297–1349). Chicago: Rand McNally.

Luthans, F., Avolio, B., Walumbwa, F., & Li, W. (2005). The psychological capital of Chinese workers: Exploring the relationship with performance. *Management and Organization Review, 1,* 247–269.

Luthans, F., Vogelgesang, G. R., & Lester, P. B. (2006). Developing the psychological capital of resiliency. *Human Resource Development Review, 5,* 25-44.

Luthans, F., Norman, S. M., Avolio, B. J., & Avey, J. B. (2008). The mediating role of psychological capital in the supportive organizational climate-employee performance relationship. *Journal of Organizational Behavior, 29,* 219-238.

Lyubomirsky, S. L., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 14,* 803–855.

Macik-Frey, M., Quick, J. C., & Cooper, C. L. (2009). Authentic leadership as a pathway to positive health. *Journal of Organizational Behavior, 30,* 453-458.

Maddi, S. (2002). The story of hardiness: Twenty years of theorizing, research, and practice. *Consulting Psychology Journal, 54,* 173-185.

Marczyk, G. R., DeMatteo, D., & Festinger, D. (2005). *Essentials of research design and methodology*. Essentials of behavioral science series. Hoboken, N.J.: John Wiley & Sons.

Marsh, C. (1982). *The survey method: The contribution of surveys to sociological explanation.* Winchester, MA: George Allen & Unwin.

Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal of Research in Personality, 37,* 48–75.

McTigue, E. M., Washburn, E. K., & Liew, J. (2009). Academic resilience and reading: Building successful readers. *The Reading Teacher, 62,* 422–432.

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1,* 61-89.

Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component model. *Journal of Applied Psychology*, *78*, 538-551.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application.* Newbury Park, CA: Sage.

Meyer, J. P., & Allen, N. J. (2004). *TCM employment commitment survey* (Academic Users Guide 2004). The University of Western Ontario, Department of Psychology.

Meyer, J. P., & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review*, *11*, 299-326.

Moorman, R. (1991). Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology, 76(6),* 845-855.

Mount, M., Ilies, R., & Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: The mediating effects of job satisfaction. *Personnel Psychology, 59,* 591-622.

Nebbitt, V. (2009). Self-efficacy in African American adolescent males living in urban public housing. *Journal of Black Psychology, 35,* 295-316.

Nestor-Baker, N. S., & Hoy, W. K. (2001). Tacit knowledge of school superintendents: Its nature, meaning, and content. *Educational Administration Quarterly,* 37, 86-129.

Neuman, W. L. (1994). *Social research methods: Qualitative and quantitative approaches*. Boston: Allyn and Bacon.

Nezu, A. M., Nezu, C. M., & Bissett, S. E. (1988). Sense of humor as a moderator of the relation between stressful events and psychological distress: A prospective analysis. *Journal of Personality and Social Psychology*, *54*, 520-525.

Nir, A., & Kranot, N. (2006). School principal's leadership style and teachers' self-efficacy. *Planning & Changing, 37(3/4),* 205-218.

Nye, B., Hedges, L., & Konstantopoulos, S. (2004). How large are teacher effects. *Educational Evaluation and Policy Analysis, 26*, 237-257.

Pajares, F. (2005). Self-efficacy during childhood and adolescence: Implications for teachers and parents. In F. Pajares & T. Urdan (Eds.), *Self-efficacy and adolescence* (pp. 339–367). Greenwich, CT: Information Age.

Patrick, J. E. (1995). *Correlation between administrative style and school climate.* (ERIC Document Reproduction Service No. ED387853)

Patterson, J. H., Collins, L., & Abbott, G. (2004). A study of teacher resilience in urban schools. *Journal of Instructional Psychology, 31,* 3-11.

Patterson, J. L. (2007). Strengthening resilience in tough times. *Principal, 86,* 16-22.

Petty, G., Brewer, E., & Brown, B. (2005). Job satisfaction among employees of a youth development organization. *Child & Youth Care Forum, 34(1),* 57-73.

Pinquart, M., Juang, L. P., & Silbereisen, R. K. (2003). Self-efficacy and successful school-to-work transition: A longitudinal study. *Journal of Vocational Behavior, 63,* 329-346.

Pounder, D. G., & Merrill, R. J. (2001). Job desirability of the high school principalship: A job choice theory perspective. *Educational Administration Quarterly, 37,* 27-57.

Price, J. L., & Mueller, C. W. (1981). *Professional turnover: The case of nurses.* New York: Spectrum.

Price, J. L., & Mueller, C. W. (1986). *Handbook of organizational measurement.* Marshfield, MA: Pitman Publishing.

Reilly, M.A. (2009). Opening spaces of possibility: The teacher as bricoleur. *Journal of Adolescent and Adult Literacy, 52,* 376-384.

Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58*(3), 307-321.

Rohall, D. E., & Martin, J. A. (2008). The impact of social structural conditions on psychological resilience to stress. In B. J. Lukey, & V. Tepe, (Eds), *Biobehavioral Resilience to Stress* (pp. 301-318) Boca Raton, FL: Taylor & Francis Group.

Rockwell, S. (2006). Facilitating the fourth r: Resilience. *Kappa Delta Pi Record, 43*(1), 14-19.

Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. *Annals Academy of Medicine, 8,* 324-338.

Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorders. *British Journal of Psychiatry, 147,* 598-611.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55,* 68–78.

Ryan, R. M., & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality, 74,* 1557–1586.

Saari, L. M., & Judge, T. A. (2004). Employee attitudes and job satisfaction. *Human Resource Management, 43*, 395-407.

Schore, A. N. (2001). Effects of a secure attachment relationship on right brain development, affect regulation, and infant mental health. *Infant Mental Health Journal, 22,* 7-66.

Schuman, H. (2008). *Method and meaning in polls and surveys.* Cambridge, MA: Harvard University Press.

Schwartz, B. (2000). Self-determination: The tyranny of freedom. *American Psychologist, 55*, 79-88.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55,* 5-14.

Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment.* New York: Free Press.

Shapiro, F. R. (2006). *The Yale book of quotations.* New Haven, CT: Yale University Press.

Shulman. L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*, 4-14.

Snyder, C. R., Sympson, S., Ybasco, F., Borders, T., Babyak, M., & Higgins, R. (1996). Development and validation of the state hope scale. *Journal of Personality and Social Psychology, 70,* 321-335.

Sparks, D. (2004, February). The power of organizational culture. *Transformational Professional Learning.* Retrieved from http://www.nsdc.org/library/publications/transformational/index.cfm

Sparks, D. (2007). *Leading for results: Transforming teaching, learning, and relationships in schools.* Thousand Oaks, CA: Corwin Press, Inc.

Spreitzer, G.M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal, 38*, 1442-1465.

Spreitzer, G. M. (1996). Social structural characteristics of psychological empowerment. *The Academy of Management Journal, 39,* 483-504.

Spreitzer, G. M., Kizilos, M. A., & Nason, S. W. (1997). A dimensional analysis of the relationship between psychological empowerment and effectiveness, satisfaction, and strain. *Journal of Management, 23*, 679-704.

Springer, M.G., Ballou, D., Hamilton, L., Le, V.N., Lockwood, J.R., McCaffrey, D.F., Pepper, M., Stecher, B.M. (2010). *Teacher pay for performance: Experimental evidence from the Project on Incentives in Teaching.* Nashville, TN: National Center on Performance Incentives at Vanderbilt University. Retrieved from http://www.performanceincentives.org.

Stein, M. K., & Nelson, B. S. (2003). Leadership content knowledge. *Educational Evaluation and Policy Analysis, 25,* 423-448.

Stempien, L. & Loeb, R. (2002). Differences in job satisfaction between general education and special education teachers implications for retention. *Remedial and Special Education, 23(5),* 258-267.

SurveyMonkey. (n.d.). Retrieved from http://surveymonkey.com

Tannenbaum, C. E. (2009). *The empirical nature and statistical treatment of missing data* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. AAT 3381876)

Taylor, D. L., & Tashakkori, A. (1994, January). *Predicting teachers' sense of efficacy and job satisfaction using school climate and participatory decision making.* Paper presented at the Annual Meeting of the Southwest Educational Research Association, San Antonio, TX.

Tillman, L. C. (2005). Mentoring new teachers: Implications for leadership practice in an urban school. *Educational Administration Quarterly, 41(4),* 609-629.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68,* 202–248.

U. S. Department of Education. (2002). No Child Left Behind. Retrieved December 18, 2009, from http://www.ed.gov/policy/elsec/leg/esea02/index.html

Vaillant, G. E. (2000). Adaptive mental mechanisms: Their role in a positive psychology. *American Psychologist, 55,* 89-98.

Valencia, R. R. (1997). *The evolution of deficit thinking: Educational thought and practice.* London: The Falmer Press.

van Ginkel, J. R., van der Ark, A., & Sijtsma, K. (2007). Multiple imputation of item scores in test questionnaire data, and influence on psychometric results. *Multivariate Behavioral Research, 42(2),* 387-414.

Wahlstrom, K., & Louis, K. (2008). How teachers experience principal leadership: The roles of professional community, trust, efficacy, and shared responsibility. *Educational Administration Quarterly*, *44*(4), 458-95.

Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management, 34,* 89-126.

Wayman, J. C. (2002). The utility of educational resilience for studying degree attainment in school dropouts. *The Journal of Educational Research, 95*(3), 167-178.

Weiss, E. M. (1999). Perceived workplace conditions and first-year teachers' morale, career choice commitment, and planned retention: A secondary analysis. *Teaching and Teacher Education, 15(8),* 861-879.

Werner, E. E. & Smith, R. S. (1982). *Vulnerable but invincible: A study of resilient children.* New York: McGraw-Hill.

Werner, E. E. & Smith, R. S. (1992). *Overcoming the odds: High risk children from birth to adulthood.* New York: Cornell University Press.

Westphal, M., Bonanno, G. A., & Bartone, P. T. (2008). Resilience and personality. In B. J. Lukey, & V. Tepe, (Eds), *Biobehavioral Resilience to Stress* (pp. 219-257) Boca Raton, FL: Taylor & Francis Group.

Whitaker, K. S. (1996). Exploring causes of principal burnout. *Journal of Educational Administration, 34,* 60-71.

Whitaker, K. S. (2003). Principal role changes and influence on principal recruitment and selection: An international perspective. *Journal of Educational Administration, 41,* 37-54.

Wu, V., & Short, P. (1996). The relationship of empowerment to teacher job commitment and job satisfaction. *Journal of Instructional Psychology*, *23*(1), 85-89.

Yarrow, A. L. (2009). State of mind. *Education Week, 29(8),* 21-23.

Youngs, P. (2007). How elementary principals' beliefs and actions influence new teachers' experiences. *Educational Administration Quarterly, 43(1),* 101-137.

Youssef, C. M., & Luthans, F. (2005). Resiliency development of organizations, leaders and employees: Multi-level theory building for sustained performance. In W. L. Gardner, B. J. Avolio, & F. Walumbwa (Eds.), *Monographs in Leadership and*

Management, Vol. 3: Authentic Leadership Theory and Practice (pp. 303-343)

Oxford, UK: Elsevier.

Youssef, C. M., & Luthans, F. (2007). Positive organizational behavior in the workplace:

The impact of hope, optimism, and resilience. *Journal of Management, 33,* 774-

800.

Appendices

Appendix A

Demographic Questionnaire

1. Are you Male or Female?
Male
Female

2. Are you Hispanic or Latino?
No, not Hispanic or Latino
Yes, Hispanic or Latino - a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

3. What is your race?
American Indian or Alaska Native - a person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment.
Asian - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, e.g. Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
Black or African American - a person having origins in any of the black racial groups of Africa.
Native Hawaiian or Other Pacific Islander - A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
White - A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

4. What is your age as of July 1, 2010?
25 to 29
30 to 34
35 to 39
40 to 44
45 to 49
50 to 54
55 to 59
60 to 64
65 to 69
70 to 74
75 to 79
80 or more

5. What is the highest level of education you have completed? If currently enrolled, mark the previous grade or highest degree received.
Bachelor degree (for example: BA, BS)
Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)
Professional degree (for example: MD, DDS, DVM, LLB, JD)
Doctorate degree (for example: PhD, EdD)

6. What was your own yearly income in 2009? Please include bonus pay, performance pay, merit pay, or other salary incentives.
$40,001 to $50,000
$50,001 to $60,000
$60,001 to $70,000
$70,001 to $80,000
$80,001 to $90,000
$90,001 to $100,000
$100,001 to $110,000
$110,001 to $120,000
$120,001 to $130,000
$130,001 to $140,000
$140,001 to $150,000
$150,001 or higher

7. What is your current marital status?
Married
Partner
Divorced
Widowed
Separated
Never been married

8. Have you ever served on active duty in the U.S. Armed Forces, military Reserves, or National Guard? Active duty does not include training for the Reserves or National Guard, but DOES include activation for deployment (i.e. Korea, Vietnam, Gulf War, Middle East).
Now on active duty
On active duty in the past, but not now
Training for Reserves or National Guard only
Never served in the military

9. How many years have you served as a principal as of July 1, 2010?

10. How many years have you served as a principal in your current school as of July 1, 2010?

11. Is your school an elementary, middle, high school, or non-traditional?
Elementary
Middle
High School
Non-traditional or modified schools (such as K – 8, Adult, Technical, or Alternative)

12. What region of Florida is your school located?
Florida Panhandle
North Florida
Central Florida
South Florida

13. Florida School Grade during the 2009-2010 school year:
A
B
C
D
F

14. Did your school make Adequate Yearly Progress (AYP) during the 2009-2010 school year?
Yes
No

15. Select your school's status according to Florida's Differentiated Accountability System during the 2009-2010 school year.
Prevent I
Prevent II
Correct I
Correct II
Intervene
Not in Differentiated Accountability System

16. How many students attended your school during the 2009-2010 school year?
1 to 250
251 to 500
501 to 750
751 to 1000
1001 to 1250
1251 to 1500
1501 to 1750
1751 to 2000
More than 2000

17. Is your school located in an urban, rural, or suburban community?
Urban
Rural
Suburban

18. What percentage of your students qualified for a free or reduced lunch during the 2009-2010 school year?
0% to 10%
11% to 20%
21% to 30%
31% to 40%
41% to 50%
51% to 60%
61% to 70%
71% to 80%
81% to 90%
91% to 100%

19. What percentage of your students was labeled English Language Learners (ELL) during the 2009-2010 school year?
0% to 10%
11% to 20%
21% to 30%
31% to 40%
41% to 50%
51% to 60%
61% to 70%
71% to 80%
81% to 90%
91% to 100%

20. What percentage of your students was labeled Students With Disabilities (SWD) during the 2009-2010 school year?
0% to 10%
11% to 20%
21% to 30%
31% to 40%
41% to 50%
51% to 60%
61% to 70%
71% to 80%
81% to 90%
91% to 100%

Appendix B

Email to Principal

Dear Principal,

As a former Hillsborough principal, I know your time is extremely precious. I also experienced the incredible demands placed upon administrators during an era of increasing accountability.

It is with tremendous respect that I ask you to give me 20 minutes to help me learn more about the work life of a school administrator.

As a doctoral candidate at the University of South Florida, I decided to study the thoughts, feelings, and perceptions of public school principals in the state of Florida.

All survey responses are anonymous; not even I will know your answers. Your participation will assist educators study principals' working life during a period of reform.

The attached "Informed Consent" letter provides additional information. If you agree to participate, please click on the link below to begin the anonymous survey.

Thank you.

Respectfully,

Jason Pepe
jpepe2@mail.usf.edu

Click on this link to begin the Survey: http://www.surveymonkey.com/s/RKT98BN

Appendix C

Informed Consent Letter

Informed Consent to Participate in Research eIRB #1545
Information to Consider Before Taking Part in this Research Study
Title of Study: The Relationship of Principal Resiliency to Job Satisfaction and Commitment: An Exploratory Study of K-12 Public School Principals in Florida

The following information is being presented to help you decide whether or not you want to be part of a research study. Please read carefully. If there is anything that you do not fully understand, please ask Jason Pepe. His contact information is provided below. This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study.

A researcher wants to study the thoughts, feelings, and perceptions of public school principals in the state of Florida. The questions the researcher wants to answer will help people understand how principals view their work life as a school administrator. If you take part in this study, you will be asked to complete a short questionnaire via a secure website called SurveyMonkey. The survey takes about 25 minutes to complete.

Your responses are completely anonymous. The researcher may publish what is learned from this study. If so, the researcher will not let anyone know your name. The researcher will not publish anything else that would let people know who you are. All the information will be reported by groups. For example, the researcher will write a report that tells how many principals serving elementary students made a certain score on the survey. No one will know your score. No direct benefits to you are expected from participation in this study. Information gathered from this study will help educators study principals' work life during a period of reform.

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study, to please the investigator or the research staff. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

If you have any questions, concerns or complaints about this study, contact Jason Pepe, jpepe2@mail.usf.edu. If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the Division of Research Integrity and Compliance of the University of South Florida at (813) 974-9343.

I freely give my consent to take part in this study. I understand that by clicking "**YES**" I am agreeing to take part in research. I have received an email containing the same information written above.
Yes (proceed with questionnaire)   http://www.surveymonkey.com/s/RKT98BN
No (do not proceed)

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Appendix D

Surveys Emailed and Electronically Bounced Back (Rejected)

District Name	Surveys Emailed	Surveys Bounced Back		District Name	Surveys Emailed	Surveys Bounced Back
Alachua	38	0		Lake	42	0
Baker	7	1		Lee	84	1
Bay	32	1		Leon	48	1
Bradford	5	0		Liberty	3	0
Brevard	87	1		Madison	6	0
Broward	232	11		Manatee	52	1
Calhoun	5	1		Martin	23	0
Charlotte	20	0		Monroe	10	0
Citrus	22	0		Nassau	15	0
Clay	40	1		Okaloosa	37	0
Collier	52	0		Okeechobee	10	0
Columbia	15	0		Orange	186	0
Dade	360	0		Osceola	48	3
Desoto	8	1		Palm Beach	177	4
Dixie	5	0		Pasco	76	0
Dozier/Okeec	NA	NA		Pinellas	121	0
Duval	159	0		Polk	115	2
Escambia	54	2		Santa Rosa	31	1
Flagler	17	0		Sarasota	47	2
Gadsden	14	0		Seminole	63	2
Gilchrist	4	0		St. Johns	32	0
Glades	3	0		St. Lucie	37	0
Gulf	6	0		Sumter	11	0
Hamilton	2	0		Suwannee	8	0
Hardee	8	0		Taylor	6	1
Hendry	10	0		Union	4	1
Hernando	21	2		Volusia	66	1
Highlands	17	0		Wakulla	8	0
Hillsborough	238	22		Walton	14	0
Holmes	7	1		Washington	7	0
Indian River	24	5		Franklin	0	0
Jackson	16	0		Marion	46	0
Jefferson	3	1		Putnum	0	0
Lafayette	2	0		**Total**	**2966**	**70**

Note. There are 67 counties in the State of Florida. The Florida Department of Education provided the email address for every public school principal with the exception of principals located in Franklin and Putnum counties. Only 70 email addresses out of 2966 were electronically bounced back (rejected) by email servers.

Appendix E

Tables A1 – A7

Table A1

CD-RISC 10, JSI, and TCM Scores by Gender

Are you Male or Female?		RISC10	JSI	TCMA	TCMC	TCMN
Missing	N	6	5	6	5	6
	%	1.0%	0.8%	1.0%	0.8%	1.0%
	Mean	34.167	27.400	22.500	16.800	20.500
	Std. Deviation	4.021	2.302	4.593	3.834	4.324
Female	N	392	395	396	400	389
	%	64.5%	65.0%	64.7%	65.3%	64.2%
	Mean	35.638	26.271	24.952	18.058	22.231
	Std. Deviation	3.702	3.606	3.686	4.275	4.296
Male	N	210	208	210	208	211
	%	34.5%	34.2%	34.3%	33.9%	34.8%
	Mean	34.510	26.087	24.424	17.942	21.905
	Std. Deviation	4.638	3.926	4.452	4.310	4.363

Note. N = number, TCMA = TCM Affective, TCMC = TCM Continuance, and TCMN = TCM Normative.

Table A2

CD-RISC 10, JSI, and TCM Scores by Region

What region of Florida is your school located?		RISC10	JSI	TCMA	TCMC	TCMN
Missing	N	2	2	2	2	2
	%	0.3%	0.3%	0.3%	0.3%	0.3%
	Mean	31.500	27.000	26.000	20.000	27.000
	Std. Deviation	.707	1.414	.000	2.828	.000
Central Florida	N	313	312	314	317	311
	%	51.5%	51.3%	51.3%	51.7%	51.3%
	Mean	35.217	26.179	24.599	18.114	21.910
	Std. Deviation	4.320	3.986	4.131	4.308	4.449
Florida Panhandle	N	46	48	49	47	48
	%	7.6%	7.9%	8.0%	7.7%	7.9%
	Mean	35.217	26.646	26.061	17.000	23.146
	Std. Deviation	3.602	2.740	3.024	4.530	3.724
North Florida	N	69	69	70	69	68
	%	11.3%	11.3%	11.4%	11.3%	11.2%
	Mean	35.710	26.551	25.186	17.319	22.765
	Std. Deviation	3.313	3.123	3.827	4.164	3.774
South Florida	N	178	177	177	178	177
	%	29.3%	29.1%	28.9%	29.0%	29.2%
	Mean	35.124	26.028	24.458	18.331	21.842
	Std. Deviation	4.060	3.664	3.967	4.183	4.386

Note. N = number, TCMA = TCM Affective, TCMC = TCM Continuance, and TCMN = TCM Normative.

Table A3

CD-RISC 10, JSI, and TCM Scores by Location

Is your school located in an urban, rural, or suburban community?		RISC10	JSI	TCMA	TCMC	TCMN
Missing	N	12	12	12	12	12
	%	2.0%	2.0%	2.0%	2.0%	2.0%
	Mean	35.9167	26.3333	24.3333	18.4167	21.6667
	Std. Deviation	3.28795	3.49892	4.94209	3.65459	4.65800
Rural	N	128	129	132	129	132
	%	21.1%	21.2%	21.6%	21.0%	21.8%
	Mean	35.2031	26.6434	25.7500	18.2016	23.0303
	Std. Deviation	3.80915	3.12949	3.70758	3.79840	4.09606
Suburban	N	278	279	278	280	272
	%	45.7%	45.9%	45.4%	45.7%	44.9%
	Mean	35.4137	26.3692	24.7842	17.9536	22.1360
	Std. Deviation	3.64262	3.52941	3.92945	4.21909	4.25652
Urban	N	190	188	190	192	190
	%	31.3%	30.9%	31.0%	31.3%	31.4%
	Mean	34.9474	25.6915	24.0211	17.9323	21.4316
	Std. Deviation	4.85203	4.27285	4.05120	4.70942	4.44401

Note. N = number, TCMA = TCM Affective, TCMC = TCM Continuance, and TCMN = TCM Normative.

Table A4

CD-RISC 10, JSI, and TCM Scores by Poverty Rate

Percent of free and reduced lunch		RISC10	JSI	TCMA	TCMC	TCMN
Missing	N	5	5	6	6	6
	%	0.8%	0.8%	1.0%	1.0%	1.0%
	Mean	33.000	26.400	25.000	16.833	23.000
	Std. Deviation	5.612	2.702	2.828	2.927	4.604
0% to 10%	N	10	9	10	10	10
	%	1.6%	1.5%	1.6%	1.6%	1.7%
	Mean	34.900	26.000	26.000	16.600	23.900
	Std. Deviation	2.998	2.828	4.346	4.248	4.012
11% to 20%	N	33	33	35	34	35
	%	5.4%	5.4%	5.7%	5.5%	5.8%
	Mean	35.818	25.788	24.857	18.176	20.857
	Std. Deviation	3.477	4.775	4.153	3.857	4.654
21% to 30%	N	64	62	62	64	62
	%	10.5%	10.2%	10.1%	10.4%	10.2%
	Mean	35.313	26.613	24.935	17.656	22.323
	Std. Deviation	3.976	3.138	3.908	4.005	3.797
31% to 40%	N	74	73	75	72	73
	%	12.2%	12.0%	12.3%	11.7%	12.0%
	Mean	35.662	26.575	25.427	17.667	23.137
	Std. Deviation	3.022	3.283	3.256	4.269	3.977
41% to 50%	N	71	74	73	75	72
	%	11.7%	12.2%	11.9%	12.2%	11.9%
	Mean	35.296	25.662	24.329	17.280	21.306
	Std. Deviation	5.602	4.795	4.816	4.382	4.915

Table A4 (Continued)

CD-RISC 10, JSI, and TCM Scores by Poverty Rate

51% to 60%	N	77	79	79	78	75
	%	12.7%	13.0%	12.9%	12.7%	12.4%
	Mean	35.091	26.759	24.468	18.295	22.173
	Std. Deviation	3.700	2.690	4.278	4.221	4.118
61% to 70%	N	81	80	81	79	77
	%	13.3%	13.2%	13.2%	12.9%	12.7%
	Mean	35.000	26.375	24.988	18.633	22.532
	Std. Deviation	4.016	3.293	3.459	4.365	4.031
71% to 80%	N	77	77	75	76	75
	%	12.7%	12.7%	12.3%	12.4%	12.4%
	Mean	34.792	25.805	24.773	18.263	22.027
	Std. Deviation	4.281	4.165	3.944	4.365	4.505
81% to 90%	N	51	50	50	53	53
	%	8.4%	8.2%	8.2%	8.6%	8.7%
	Mean	35.216	25.300	24.140	19.264	21.642
	Std. Deviation	3.635	4.097	3.817	4.166	4.447
91% to 100%	N	65	66	66	66	68
	%	10.7%	10.9%	10.8%	10.8%	11.2%
	Mean	35.5231	26.6364	24.4545	17.3939	21.7941
	Std. Deviation	4.334	3.436	4.207	4.570	4.386

Note. N = number, TCMA = TCM Affective, TCMC = TCM Continuance, and TCMN = TCM Normative.

Table A5

CD-RISC 10, JSI, and TCM Scores by School Level

School Level		RISC10	JSI	TCMA	TCMC	TCMN
Elementary School	N	384	392	392	393	386
	%	63.2%	64.5%	64.1%	64.1%	63.7%
	Mean	35.263	26.314	24.796	18.109	22.008
	Std. Deviation	3.932	3.310	3.829	4.239	4.220
Middle School	N	125	121	123	120	123
	%	20.6%	19.9%	20.1%	19.6%	20.3%
	Mean	35.544	25.868	24.488	17.767	21.756
	Std. Deviation	3.591	4.483	4.116	4.107	4.212
High School	N	99	95	97	100	97
	%	16.3%	15.6%	15.8%	16.3%	16.0%
	Mean	34.727	26.263	24.876	17.900	22.907
	Std. Deviation	5.111	4.167	4.419	4.653	4.763

Note. N = number, TCMA = TCM Affective, TCMC = TCM Continuance, and TCMN = TCM Normative.

Table A6

CD-RISC 10, JSI, and TCM Scores by Income

What was your own yearly income in 2009? Please include bonus pay, performance pay, merit pay, or other salary incentives.		RISC10	JSI	TCMA	TCMC	TCMN
Missing	N	4	5	5	5	5
	%	0.7%	0.8%	0.8%	0.8%	0.8%
	Mean	36.000	27.400	25.000	15.600	21.800
	Std. Deviation	2.944	2.074	3.536	5.128	2.588
$50,001 to $60,000	N	1	1	1	1	1
	%	0.2%	0.2%	0.2%	0.2%	0.2%
	Mean	30.000	24.000	18.000	24.000	22.000
	Std. Deviation					
$60,001 to $70,000	N	34	36	34	35	36
	%	5.6%	5.9%	5.6%	5.7%	5.9%
	Mean	33.7353	26.4444	24.2941	17.8571	22.1944
	Std. Deviation	3.86365	2.51219	4.23928	4.18782	4.87454
$70,001 to $80,000	N	134	134	135	133	131
	%	22.0%	22.0%	22.1%	21.7%	21.6%
	Mean	35.037	25.978	25.067	18.729	22.229
	Std. Deviation	3.778	3.292	3.558	4.070	4.416
$80,001 to $90,000	N	170	173	175	177	175
	%	28.0%	28.5%	28.6%	28.9%	28.9%
	Mean	35.124	26.127	24.657	18.175	22.194
	Std. Deviation	4.030	4.148	4.085	4.080	4.171
$90,001 to $100,000	N	153	153	154	151	149
	%	25.2%	25.2%	25.2%	24.6%	24.6%
	Mean	36.013	26.536	24.857	17.530	21.973
	Std. Deviation	3.496	3.212	4.007	4.375	4.196

Table A6 (Continued)

CD-RISC 10, JSI, and TCM Scores by Income

$100,001	N	73	70	70	73	71
to	%	12.0%	11.5%	11.4%	11.9%	11.7%
$110,000	Mean	34.589	25.829	24.571	17.890	21.845
	Std. Deviation	5.580	4.559	4.024	4.364	4.723
$110,001	N	28	25	28	28	28
to	%	4.6%	4.1%	4.6%	4.6%	4.6%
$120,000	Mean	36.714	26.600	24.714	17.679	21.786
	Std. Deviation	3.053	4.975	4.345	5.099	4.467
$120,001	N	4	4	3	3	3
to	%	0.7%	0.7%	0.5%	0.5%	0.5%
$130,000	Mean	33.500	27.000	18.333	13.000	21.333
	Std. Deviation	6.856	3.559	6.658	1.000	5.508
$130,001	N	2	2	2	2	2
to	%	0.3%	0.3%	0.3%	0.3%	0.3%
$140,000	Mean	36.000	27.000	27.000	10.000	21.500
	Std. Deviation	5.657	2.828	1.414	5.657	.707
$140,001	N	1	1	1	1	1
to	%	0.2%	0.2%	0.2%	0.2%	0.2%
$150,000	Mean	28.000	24.000	29.000	23.000	27.000
	Std. Deviation					
$150,001	N	4	4	4	4	4
or higher	%	0.7%	0.7%	0.7%	0.7%	0.7%
	Mean	34.500	26.750	24.750	18.500	24.500
	Std. Deviation	4.655	1.258	3.775	.577	3.109

Note. N = number, TCMA = TCM Affective, TCMC = TCM Continuance, and TCMN = TCM Normative.

Table A7

CD-RISC 10, JSI, and TCM Scores by Enrollment

How many students attended your school during the 2009-2010 school year?		RISC10	JSI	TCMA	TCMC	TCMN
Missing	N	2	2	2	2	2
	%	0.3%	0.3%	0.3%	0.3%	0.3%
	Mean	36.500	27.500	26.000	15.000	17.000
	Std. Deviation	4.950	2.121	1.414	2.828	5.657
1 to 250	N	9	9	9	9	9
	%	1.5%	1.5%	1.5%	1.5%	1.5%
	Mean	34.222	25.556	23.000	19.333	21.556
	Std. Deviation	4.893	3.539	3.122	3.606	3.812
251 to 500	N	64	66	65	65	64
	%	10.5%	10.9%	10.6%	10.6%	10.6%
	Mean	34.813	26.015	24.708	19.031	22.438
	Std. Deviation	4.411	3.614	4.336	4.015	4.553
501 to 750	N	211	218	216	217	215
	%	34.7%	35.9%	35.3%	35.4%	35.5%
	Mean	35.294	26.298	24.870	17.710	21.986
	Std. Deviation	3.782	3.451	3.640	4.343	4.084
751 to 1000	N	154	152	154	154	151
	%	25.3%	25.0%	25.2%	25.1%	24.9%
	Mean	35.318	26.020	24.656	18.123	21.781
	Std. Deviation	3.793	3.675	3.883	4.121	4.038
1001 to 1250	N	59	58	59	57	58
	%	9.7%	9.5%	9.6%	9.3%	9.6%
	Mean	36.102	26.172	25.017	17.684	22.431
	Std. Deviation	3.412	4.365	4.277	4.119	4.695

Table A7 (Continued)

CD-RISC 10, JSI, and TCM Scores by Enrollment

1251 to 1500	N	37	34	37	37	38
	%	6.1%	5.6%	6.0%	6.0%	6.3%
	Mean	34.108	26.735	24.865	18.324	22.605
	Std. Deviation	3.414	2.678	3.743	4.007	4.175
1501 to 1750	N	18	18	18	18	18
	%	3.0%	3.0%	2.9%	2.9%	3.0%
	Mean	35.111	26.278	23.278	17.444	21.556
	Std. Deviation	4.825	4.675	6.182	4.409	6.391
1751 to 2000	N	21	21	21	21	20
	%	3.5%	3.5%	3.4%	3.4%	3.3%
	Mean	36.476	27.810	25.333	17.905	23.600
	Std. Deviation	3.855	2.294	4.115	5.328	4.272
More than 2000	N	33	30	31	33	31
	%	5.4%	4.9%	5.1%	5.4%	5.1%
	Mean	34.455	25.533	24.645	17.818	22.355
	Std. Deviation	6.874	5.501	4.491	5.065	4.903

Note. N = number, TCMA = TCM Affective, TCMC = TCM Continuance, and TCMN = TCM Normative.