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OCCUPATIONAL STRESS AND COPING RESOURCES
OF K-12 PROBATIONARY TEACHERS

A Dissertation
Presented to
the College of Education
University of Denver

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by
Lori A. Wagner
June 2009
Advisor: Dr. Kent Seidel

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K-12 PROBATIONARY TEACHERS
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ABSTRACT

The purpose of the study was to measure what factors impact the stress levels of probationary teachers who may or may not be new to the field of education, to determine what demographic characteristics are related to higher levels of stress, to determine what coping resources were successful in reducing stress, and to compare the stress levels and coping resources of probationary teachers to other professionals.

The study used the OSI-R to determine the stress levels of k-12 probationary teachers as related to role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical environment as measured by the Occupational Roles Questionnaire (ORQ) sub scale of the OSI-R. The study determined the coping resources used by these teachers as measured by the Personal Resources Questionnaire (PRQ) of the OSI-R which measures recreation, self-care, social support, and rational/ cognitive coping.

Of the 140 people who were sent the survey, 91 responded which was a return rate of 65%. Majority of the respondents were female primarily between the ages of 20 and 49. The average years of experience in education was 7.67 years with most being of the “veteran” category having been in the field of education more than five years.

The results indicated that there was a significant difference between probationary teachers and other professionals for the Role Overload, Role Insufficiency, and Role Ambiguity, Self-Care, and Social Support scales. Beginners,

within 0-1 years of educational experience, reported statistically significant scores as compared to their more experience counterparts on the Role Ambiguity scale.

Probationary teachers are more stressed than other professionals and feel that their training, education, skills, and experience are either inadequate or inappropriate for the requirements of their jobs. They also reported higher levels of stress in relation to which their priorities, expectations, and evaluation criteria were clear when compared to other professionals. They have a greater ability to coping with stress by completing personal activities to alleviate stress and feel more significantly supported and helped by those around them when compared to other professionals.

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I dedicate this to my step-father, Bill, and wish he could have seen its completion.

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CHAPTER I: BACKGROUND OF THE STUDY

Introduction

“The nation is experiencing a teacher shortage. Many beginning teachers leave the profession within three years, and 9.3% leave before completing their first year” (Hudson, 2004, p. 2). Burnout. Increased absences. Decreased teacher retention. Stress related illness. These are related to the negative effects of teacher stress. Stress is defined by Webster’s (1996, p. 668) as a “force that tends to strain or deform; mental, emotional, or physical tension, strain, or distress”.

Stress is a recognized fact in our contemporary lives causing disequilibrium and tension, and the phenomenon impacts teachers in school systems around the world including America, China, and India (Abel & Sewell, 1999; Chan, 2002; Payne & Furnham, 1987). “Some studies have claimed that at least one-third of the teachers surveyed indicated that they regard teaching as highly stressful” (Chan, 2002, p. 557).

Neither geographic location of the educational system nor grade level taught seem to differentiate levels of stress. Teachers at all levels experience tremendous amounts of stressors. Several studies indicate various levels are affected by stress in teaching including preschool, elementary, and secondary environments (Abel & Sewell, 1999; Borg & Riding, 1991b; Greene, Beszterczey, Katzenstein, Park, & Goring, 2002; Kelley & Berthelsen, 1995). Specialist teachers who teach gifted students and students with various disabilities also

experience high levels of occupational stress. These specialist teachers, whether certified or not, reported high levels of stress especially when the state or system provided little structure or support for the programs specialist teachers oversaw (French, 1987; Harvey, 1987; Hudson, 2004).

Stress can come from any situation or thought that makes you feel frustrated, angry, or anxious. What is stressful to one person is not necessarily stressful to another. Stress is a normal part of life. In small quantities, stress is good — it can motivate you and help you be more productive. However, too much stress, or a strong response to stress, is harmful. It can set you up for general poor health as well as specific physical or psychological illnesses like infection, heart disease, or depression. Persistent and unrelenting stress often leads to anxiety and unhealthy behaviors like overeating and abuse of alcohol or drugs. (Van Voorhees, 2007, p. 1)

A teacher's health takes much of the brunt of stress; researchers found ill effects on health due to stress including headaches, insomnia, fatigue, nervous tension, hypertension, rashes, ulcers, and generally overall poor health (Gaziel, 1993; Guglielmi & Tatrow, 1998; Harden, 1999).

Not only does stress affect the health of teachers, stress negatively impacts the learning environment and educational goals of the classroom. Burnout is one of the biggest effects of teacher stress which Harden (1999) characterizes as increased fatigue and exhaustion, negative attitudes toward students, and seeing oneself negatively or having a feeling of lacking accomplishment. The effects of stress trickle into the classroom and directly impact the students, damaging productivity of both students and teachers (Harden, 1999).

Poor teacher health and decreased effectiveness in the classroom leads to teacher absenteeism. According to Gaziel (1993), there is a growing yearly average of the number of days of teacher absences. The level of job satisfaction

decreases, and teachers become more likely to leave teaching and not return (Borg & Riding, 1991b). According to the Texas Center for Education Research (2000), the cost of replacing a teacher is determined to be between 20 and 200% of the leaving teacher's salary depending on the teacher's teaching assignment.

Teachers stress is the result of a variety of factors. Research studies focus on causes such as role ambiguity, lack of administrative support, lack of district support, student misbehavior, parent conflict, conflict with fellow teachers, public misperception about teacher roles, low salary, family issues, and workload (Geving, 2007; Lazuras, 2006; Montgomery & Rupp, 2005). Teachers with certain personality traits such as the Type A personality and achievement-striving behaviors tend to exhibit greater levels of stress (Jepson & Forrest, 2006). Teachers do not feel they have the time necessary to manage their workload, feel as though they must manage a large degree of change throughout the year, and may have difficulty managing the classroom environment. Teachers are overloaded with large class sizes, expected to prepare students for state and federal mandated testing, and work long hours past their contractual obligations (Montgomery & Rupp, 2005). Research notes that teachers who have fewer years of teaching experience are more likely to be stressed and are stressed at higher levels. Teachers who have been in the profession fewer than fifteen years and are over the age of thirty are even more likely to be stressed as compared to those who are younger than thirty (Miller, Brown-Anderson, Fleming, Peele, & Chen, 1999).

Harden (1999) believes that teacher stress needs to be recognized and strategies need to be developed to help teachers deal with the stress. Rewarding commitment and excellence in teaching as well as improving teacher job

satisfaction are keys to helping teachers deal with stress. Nagel and Brown (2003) describe the “ABCs of Managing Teacher Stress” by first helping teachers manage what aggravates their level of stress. They go on to identify the next step as teaching teachers strategies on how to modify their behavior and allowing teachers to communicate, with or without words, to decrease stress or minimize the effects of stress (Nagel & Brown, 2003).

McCann and Johannessen (2004) conducted qualitative research by interviewing 11 novice teachers to determine why so many new-to-the-profession teachers were leaving after the first few years of service. According to McCann and Johannessen, novice teachers believe that the stress associated with teaching eventually gets better. They believe that learning to manage the tasks and students associated with teaching will reduce their stress. McCann and Johannessen also point out that, “novice teachers have to have a sense of hope as well as a tenacious attitude,” (p. 141). Otherwise, they will not endure the fatigue and frustration that accompanies the first few years of teaching. Other coping resources these teachers expressed as helping reduce stress were teaching fun lessons, developing strong personal relationships, and getting to see students grow academically (McCann & Johannessen, 2004).

Research has even focused on the layout of the physical environment to determine if particular furniture or meeting space design could reduce teacher stress (Gulwadi, 2006). Gulwadi’s research outlines several stress-reducing layouts of meeting space, work space, and restorative space. This represents recognition by those outside of education that schools can be stressful, and that even the layout and function of a space can help reduce the level of stress experienced by teachers. One main finding of Gulwadi’s is that most teachers

find ways to relieve stress off of the school site regardless of how well-designed the school space. The attempt by architects to incorporate urban planning and environmental design allows schools to be more appealing to teachers, reduces teacher stress, and is worth the effort and cost (Gulwadi, 2006).

Other researchers have focused their efforts on linking specific types of coping resources to reducing teacher stress and retain teachers in the profession. Litt and Turk (1985) found that those teachers who viewed their coping resources as less effective were more likely to think of leaving the teaching profession. One particular coping strategy, “positive comparisons”, where the positive aspects of work are made the focus of conversations and thinking and negative aspects are minimized, significantly reduced the impact of stress on the health of teachers (Litt & Turk, 1985).

Studies of how teachers cope with stress (Carmona, Buunk, Peiro, Rodriguez & Bravo, 2006; Kyriacou, 2001; Pearlin & Schooler, 1978) all provide the following coping resources used by teachers to reduce stress: avoid conflict, relax once work is completed, deal with problems or keep them in perspective, discuss feelings with trusted people, be organized with tasks and time, realize limitations, and keep feelings controlled. These researchers conclude that perception is very important in terms of keeping a teacher’s stress level in check. Kyriacou elaborates upon this premise.

Their data indicate that both the presence of social support and the use of effective coping behavior can affect the teacher’s perception of stress. Their findings highlight the importance of recognizing that a teacher’s perception of the demands made upon him or her is itself influenced by the degree of stress being experienced and that social support and successful coping can create a virtuous circle whereby the same “objective” situation can begin to appear to be less demanding to the teacher (p. 29).

Teacher perceptions of occupational stress are their reality. District and building level administration, state legislators, governors, policy makers, and tax payers need to pay attention to the effects of stress on teachers. Probationary teachers, teachers within their first three years of teaching within a school district in Colorado, are leaving the profession at alarming rates which causes districts and states to put more money into recruiting and training new teachers. Students are directly impacted when the increased stress placed on teachers causes inadequate or mediocre teaching to occur in the classroom. By assessing teacher perceptions of job-related stress and their ability to cope with stress, school districts can determine if the support provided to new teachers is adequate at reducing stress and ultimately retaining teachers.

Studies of the stress of educators abound, but many use survey instruments designed for educators only. This study uses an inventory that is applicable to most professions, the Occupational Stress Inventory-Revised (OSI-R). The use of the OSI-R provides a broader perspective and allows for comparison of the sample to the occupationally diverse normative population. The occupational groups represented in the OSI-R include Executive, Professional, Technical, Marketing, Administrative Support, Public Service/Safety, and Agricultural/ Production/ Laborer occupational groups.

The Purpose of the Study

The purpose of this study is to measure what factors impact the stress levels of probationary teachers who may or may not be new to teaching, to examine whether demographic characteristics are related to higher levels of stress,

and to examine coping resources that may be successful in reducing stress. An additional focus of this study is to compare the stress levels and coping resources of probationary teachers to those of other professionals.

The study uses the Occupational Roles Questionnaire (ORQ) sub scale of the Occupational Stress Inventory-Revised (OSI-R) to determine the stress levels of K-12 probationary teachers as related to role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical environment. To determine the coping resources used by probationary teachers, the Personal Resources Questionnaire (PRQ) of the OSI-R which measures recreation, self-care, social support, and rational/ cognitive coping is used. The sample of the study is approximately 140 probationary teachers in a public school district that serves a population of approximately 5,500 students in a suburban setting. Teachers who participate in support programs such as induction, mentoring, or coaching in the school district will also rate their perceived effectiveness of these district programs at reducing their overall occupational stress.

Research Questions

1. To what extent do probationary teachers report role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical environment and how do their reports compare to the normative population?

2. To what extent do probationary teachers report the use of recreation, self-care, social support, and rational/ cognitive coping to alleviate stress and how do their reports compare to the normative population?
3. Is there a relationship between reports of occupational stress and certain characteristics such as elementary or secondary teaching level, gender, years of experience in teaching, and years of experience in the school district?
4. Do probationary teachers report that participating in induction, mentoring, or coaching reduces their stress?

Importance of the Study

With the research indicating that teacher stress causes negative physical symptoms in teachers, increased burnout, increased absenteeism, attrition, decreased job satisfaction, and negative impact in the classroom, researchers are attempting to find ways to help teachers cope with stress. An area of study underrepresented in the literature is the relationship of stress and coping strategies for probationary or non-tenured teachers. There is also a lack of research comparing the stress of veteran teachers new to a school district who are considered probationary status, and their novice counterparts who are in their first three years of the teaching profession. Research is also lacking on the use of coping resources by probationary teachers to alleviate stress. This study may also provide guidance to the school districts about probationary teachers’

perceptions of the effectiveness of support programs at reducing occupational stress. The survey data may lead to greater understanding of role-related stress of probationary teachers and help school and district leaders provide the necessary supports to decrease role-related stress when and where possible. Comparing the probationary teachers reported levels of stress to the normative sample of other professionals will provide greater insight into the levels of stress experienced by probationary teachers. The survey data may also provide leadership with helpful information to determine if probationary teachers have the necessary coping resources and necessary level of district support to reduce role-related stress.

Definitions of Terms

For the purpose of clarification, definitions of terms that appear throughout the study are included as follows:

Probationary teacher

A certified teacher in year one, two, or three of service to a Colorado school district. This includes teachers who may or may not be new to teaching but who are new to the district being studied.

Elementary level teacher

A certified teacher assigned to teach in one or more of grades kindergarten through five.

Secondary level teacher

A certified teacher assigned to teach in one or more of grades sixth through twelve.

Stress

“A state resulting from a stress of bodily or mental tension resulting from factors that tend to alter an existent equilibrium” (Webster, 1996, p. 668).

Occupational Stress

Bodily or mental tension resulting from “role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical environment,” (Osipow, 1998, p. 1).

Role Overload

Survey scale that “measures the extent to which job demands exceed personal and workplace resources” (Osipow, 1998, p. 2).

Role Insufficiency

Survey scale that “measures the extent to which the individual’s training, education, skills, and experiences are appropriate to the job requirements” (Osipow, 1998, p. 2).

Role Ambiguity

Survey scale that “measures the extent to which priorities, expectations, and evaluation criteria are clear to the individual” (Osipow, 1998, p. 2).

Role Boundary

Survey scale that “measures the extent to which the individual experiences conflicting role demands and loyalties in the work setting” (Osipow, 1998, p. 2).

Responsibility

Survey scale that “measures the extent to which the individual has, or feels, a great deal of responsibility for the performance and welfare of others on the job” (Osipow, 1998, p. 2).

Physical Environment

Survey scale that “measures the extent to which the individual is exposed to high levels of environmental toxins or extreme physical conditions” (Osipow, 1998, p. 2).

Coping Resources

The accumulation of the individual’s ability to relieve or reduce the level of occupational stress and “includes recreation, self-care, social support, and rational/ cognitive coping” (Osipow, 1998, p. 1).

Recreation

Survey scale that “measures the extent to which the individual makes use of and derives pleasure from regular recreational activities” (Osipow, 1998, p. 2).

Self-Care

Survey scale that “measures the extent to which the individual regularly engages in personal activities which reduce or alleviate chronic stress” (Osipow, 1998, p. 2).

Social Support

Survey scale that “measures the extent to which the individual feels support and help from those around the individual” (Osipow, 1998, p. 2).

Rational/Cognitive Coping

Survey scale that “measures the extent to which the individual possesses and uses cognitive skills in the face of work-related stresses” (Osipow, 1998, p. 2).

Induction

Program for provisional probationary teachers new to the profession of teaching usually within the first three years of service. The program is designed by the school district to meet state guidelines and consists of monthly meetings covering topics including classroom management, parent communication, school law, parent teacher conferences, classroom observations, grading, lesson design, student engagement, instructional strategies, and other topics. The program also provides support through the Director of Professional Learning, the building level instructional coach, and the mentor who is a certified teacher assigned to provide guidance with the above mentioned topics and building culture. Each district in the state has autonomy over the design and implementation of the state's requirements causing each district's induction programs to be different.

Mentoring

Program for probationary teachers provided during the first year of service to the school district. The mentor provides assistance and guidance as mentioned in the definition of Induction. Mentoring programs must meet state requirements but are different from district to district.

Coaching

Program for probationary teachers in the second or third year of service that may or may not have previous experience in other districts or states, which has completed an induction program.

Traditional Teacher Preparation Program

Program where teachers become certified through a college or university and receive a state endorsement for teaching by meeting state and federal requirement including highly qualified status. Teachers pursue student teaching or supervised internships as part of the program requirements.

Alternative Teacher Program

Program where teachers become certified through a college, university, or community program and who have not completed student teaching or a supervised internship prior to becoming licensed. The program is completed during the teacher's first two years of service to the district.

CHAPTER II: REVIEW OF LITERATURE

General Overview

Stress is a component of modern life and causes disequilibrium and tension, and the phenomenon impacts teachers in school systems around the world including America, India, and China (Abel & Sewell, 1999; Chan, 2002 ; Payne & Furnham, 1987). Research on the predictors and sources of teacher stress are primarily compiled from self-report questionnaires. Multiple researchers determined that teachers report high levels of stress (Chen & Miller, 1997; Feitler & Tokar, 1982; Miller et al., 1999). The most stress-causing stressors were determined to be age, student misbehavior, class size, inadequate time to perform as desired, and the evaluation process (Bacharach, Bauer, & Conley, 1986; Chen & Miller, 1997; Feitler & Tokar, 1982; Miller et al., 1999; Shaw, Keiper, & Flaherty, 1985). Unfortunately, none of these factors is the sole source or predictor of teacher stress.

“Some studies have claimed that at least one-third of the teachers surveyed indicated that they regard teaching as highly stressful,” (Chan, 2002, p. 557). Feitler and Tokar (1982) also determined that teachers feel that the teaching profession is a stressful occupation. Data collected from 3,300 K-12 teachers resulted in 76% stating that their jobs were moderately or mildly stressful while an additional 16% stated the job to be very or extremely stressful (Feitler & Tokar, 1982). Fifty-eight percent of the responding teachers felt that student misbehavior

was the largest cause of teacher stress; a greater number of high school teachers felt that the job of teaching was very or extremely stressful as compared to middle or elementary teachers (Feitler & Tokar, 1982). They also determined that younger teachers, between the ages of 31 and 44, who teach in an urban-setting are more likely to exhibit symptoms of teacher stress including an overall uneasiness and depression (Feitler & Tokar, 1982).

Case studies, both qualitative and quantitative, self-report questionnaires, and interviews researching teacher stress report a variety of findings related to both organizational and individual characteristics that contribute to teacher stress (Chen & Miller, 1997). Chen and Miller completed a review of international literature relevant to teacher stress. They categorized the literature on teacher stress into either literature focusing on organizational or individual characteristics that contribute to an increased level of occupational stress (Chen & Miller, 1997). Organizational characteristics that may contribute to teacher stress include time constraints, workload, job demands, role conflict, role ambiguity, income or compensation, resources, class size, administrative bureaucracy, autonomy, participation in decision making, collegiality, student discipline and interaction, reward and recognition, and career advancement (Chen & Miller, 1997).

Individual characteristics that may contribute to occupational stress in teachers include age, marital status, and gender, but the overall results of the literature review found that there were inconsistencies in the findings of the various researchers and no overall generalizations could be made regarding the above mentioned independent variables (Chen & Miller, 1997). Chen and Miller took their research a step farther in partnership with Brown-Anderson, Fleming, and Peele in 1999 to identify which sources of teacher stress actually increase job-

related stress so that interventions could be implemented to reduce or eliminate occupational stress.

Fimian's Teacher Stress Inventory (1988) was administered to teachers in a moderately sized school district in order to identify events that cause teacher stress and manifestations of teacher stress. The researchers found that teachers felt the largest contributor to stress was the lack of adequate time (Miller et al., 1999). They felt they needed additional planning time due to the number of extra-curricular duties and classroom teaching time required to do their jobs well (Miller et al., 1999). Teachers, who taught fewer than 15 years and who were over 30 years of age, reported feeling less support from administration and resultantly higher levels of stress (Miller et al., 1999).

Shaw, Keiper, and Flaherty (1985) examined stress causing events for teachers using the Teaching Events Stress Inventory, an instrument that measures stress due to common events in the teaching profession. The focus of the research was to ask veteran teachers to rank 33 stress causing events and write in a 34th item that was not listed in the original 33 items (Shaw et al., 1985). The events were ranked by 399 teachers of all grade levels (Shaw et al., 1985). Although the overall results of what caused the stress were consistent with the previously mentioned research, there were inconsistencies with what teachers reported as causing the most stress (Shaw et al., 1985). The most stress-causing event for this group of teachers was notification that the teacher's performance was unsatisfactory and "being transferred involuntarily" was a close second (Shaw et al., 1985). The research of Shaw et al. demonstrates that although there are some similarities between the various research collected, there are still many

contradictions as to what causes teacher stress, how it can be reduced, and what support programs prevent teacher stress.

The research of Shaw et al. (1985) research is more than twenty years old causing Montgomery and Rupp (2005) to update research data on teacher stress. The benefit of their research is the view into the coping process once teachers report stress. Their research included a model that would allow researchers to be aware of the relationships between teacher stress and coping, causes of teacher stress, personality traits, burnout, environmental structures, and personal supports. They completed an international meta-analysis from research completed from 1998 through 2003 looking at the diverse causes and effects of teacher stress (Montgomery & Rupp, 2005).

Creating a causal model that is more theory-based allowed the researchers to determine which empirical construct relationships need closer investigation (Montgomery & Rupp, 2005). They concluded that support for their overall hypothesis was relatively weak and decided to focus, instead, on the active coping that can mitigate stress (Montgomery & Rupp, 2005).

Other researchers also focus on the active coping resources of teachers and determined that active coping is much more effective at mitigating teacher reported stress (Carmona et al., 2006; Dewe & Guest, 1990; Gaziel, 1993; Kyriacou, 2001; Pearlin & Schooler, 1978). Montgomery and Rupp (2005) determined that “understanding and uncovering negative emotions related to external stressors is the first step towards a better performance, a higher degree of professional satisfaction, and consequently, a higher level of teacher retention” (p. 483).

Predictors of Stress

Although the goal of Montgomery and Rupp (2005) was to solidify a causal relationship between teacher stress and stress causing factors, they were unable to derive consistent relationships that were causal. Other researchers have attempted to determine organizational and individual predictors of teachers stress. Research concludes that teachers feel more stress when they perceive to have more responsibility and limited time to complete their responsibilities; teachers also feel higher levels of stress when they perceive the role of supervision as negative or view administrative or organizational support as insufficient (Bacharach, Bauer, & Conley, 1986; Bhagat & Allie, 1989; Minnunen & Leskinen, 1989; Stoeber & Renner, 2008).

Bacharach et al. (1986) looked at organizational factors that contribute to teacher stress. The goal of the study was to predict which organizational structures increase teacher stress (Bacharach et al., 1986). Bacharach et al. surveyed 3,200 teachers in 42 elementary school organizations and 45 secondary schools throughout the state of New York. They determined the presence of role ambiguity leads to stress regardless of grade level (Bacharach et al., 1986).

Bacharach et al. (1986) also concluded that teacher perception of large class size and high student learning ability were predictors of stress for elementary teachers; student behavior was the most significant predictor of stress for secondary teachers. The researchers identify that stress is a function of the organization whether elementary or secondary and provide insight into the ways in which management can redesign the organization to help reduce the likelihood of teacher stress (Bacharach et al., 1986).

Another organizational factor of schools is the length of the school day and the school year. The teaching calendar usually does not follow the traditional year-long calendar and instead follows an agrarian calendar. Kinnunen and Leskinen (1989) examined teacher reported stress for 142 teachers over an entire school year. This longitudinal study looked at the level of teacher stress and the recoverability from stress over weekends and holiday breaks throughout the fall and spring terms (Kinnunen & Leskinen, 1989). Data were collected a total of twelve times during the two terms (Kinnunen & Leskinen, 1989). Kinnunen and Leskinen established that stress increased during the fall term and became more difficult to recover from towards the end of the fall term as winter break approached. Towards the end of the fall term, teachers were not able to recover from stress during the weekends but had been able to recover over the weekends during the beginning of the fall term (Kinnunen & Leskinen, 1989). The spring term found that teachers were able to consistently recover from stress over holiday breaks and weekends (Kinnunen & Leskinen, 1989). The researchers did not find a discrepancy between stress levels of the two terms even though there were fluctuations between the stress levels during the terms (Kinnunen & Leskinen, 1989).

Personality Characteristics

Characteristics such as perfectionism or things beyond teacher control were the most exacerbating at increasing teacher stress (Bhagat & Allie, 1989; Stoeber & Renner, 2008). Self-competence and perfectionism are additional

internal characteristics that can contribute to teacher stress and can vary based on the personality traits of the individual (Bachkirova, 2005; Bhagat & Allie, 1989).

Researchers found that teachers' feelings of competence can affect stress, "self-competence is often regarded as an important determinant of how an individual copes with various stressful experiences" (Bhagat & Allie, 1989, p. 231). Two-hundred seventy-six teachers completed survey information that detailed their feelings of competence with their perceived effectiveness at managing the interactions of themselves with their environment (Bhagat & Allie, 1989). The researchers concluded that a teacher's sense of competence can reduce the effects of personal stress on work-related strains such as level of job satisfaction (Bhagat & Allie, 1989). People who view themselves as very competent were able to report greater satisfaction with the job, coworkers, and supervisors (Bhagat & Allie, 1989). They also had lower feelings of emotional exhaustion and depersonalization (Bhagat & Allie, 1989). When compared to those with low perceived self-competence, those with higher levels of competence were able to cope with stress more effectively and handle life strain, whether personal or occupational (Bhagat & Allie, 1989).

Particular values and personality characteristics are likely to predict stress levels in teachers regardless of the grade level taught or level of experience (Bachkirova, 2005; Bhagat & Allie, 1989; Stoeber & Rennert, 2008). In an exploratory study, Bachkirova determined that there are three factors that increase a teacher's propensity of occupational stress: congruence between personal values and the corresponding values of administration, aspirations to succeed professionally, and the level of sensitivity when the values of self conflict with the values of the organization or administration. Through survey research,

Bachkirova concluded that ambition seeking is a difficult characteristic to have as a teacher because there is little room for advancement in the teaching profession. Teachers who are more sensitive to the difference between the values of the organization or administration and self are also more likely to exhibit higher levels of stress (Bachkirova, 2005).

In a study by Stoeber and Rennert (2008), 118 secondary teachers were surveyed using multiple measures including measures to analyze perfectionism, stress, coping, and burnout. These researchers found that perfectionism was positively correlated to those who view stress as a challenge instead of a threat. Stoeber and Rennert also found that those who reacted negatively to imperfection were more likely to experience stress and burnout than those who reacted positively to imperfection. Stress from the parents of students was seen as the most reported predictor of stress for those who reacted both positively and negatively to imperfection (Stoeber & Rennert, 2008). The researchers noted that those who are highly perfectionist may not become as stressed when faced with problems because they actively try to change the situation for the better and are more likely to have higher self-confidence (Stoeber & Rennert, 2008).

Another predictor of teacher stress is an authoritarian approach to students and student behavior (Harris, Haplin, & Haplin, 1985). An authoritarian approach to classroom management and relationships with students can be connected to a personality seeking control over the surrounding environment. Teachers who believe that their behaviors have little to no impact on the environment are more likely to express feelings of stress (Kyriacou & Sutcliffe, 1979; Harris et al., 1985).

According to Harris, Haplin, and Haplin (1985), teachers who exhibit an authoritarian approach to students are punitive, only communicate one-way, exhibit a general distrust of students, and maintain strict control over students are more likely to report higher levels of stress than teachers who are more humanistic in their approaches with students. The researchers polled 130 teachers from three states with a teacher stress survey and a pupil control orientation survey (Harris et al., 1985). According to Harris et al., teachers with an authoritarian pupil orientation reported more stress than their humanistic counterparts in regards to group instruction, professional inadequacy, principal/teacher relationships, and job overload. The only area where there was not a significant difference between the two orientations was collegial relationships (Harris et al., 1985).

Kyriacou and Sutcliffe (1979) stated that teachers who “believe reinforcement is the result of luck, chance, fate, the action of powerful others or is essentially unpredictable, are said to have a belief in external control” (p. 227). Teachers who were categorized as having external control reinforcement were more likely to perceive a lack of control over stressful situations and thus experienced greater stress (Kyriacou & Sutcliffe, 1979). Teachers who believed that reinforcement is dependent on their own behavior have internal control and experience less stress overall (Kyriacou & Sutcliffe, 1979).

Sources of Stress

Teacher stress materializes from a variety of sources. The majority of research focuses on organizational, student, administrative, and teacher related

causes of stress. The research identifies that certain situations cause more stress than others regardless of the grade level taught, gender of the teacher, or experience of the teacher with the largest sources being any situation that impacts time and/ or autonomy (Ballet, Kelchtermans, & Loughran, 2006; Blase, 1986; McCormick & Solman, 1992; Punch & Tuettemann, 1990; Raschke, Dedrick, Strathe, & Hawkes, 1985).

Blase (1986) completed a qualitative investigation to answer, “What do teachers mean when they identify work-related factors as sources of stress?” (p. 14). The analysis of 981 teacher descriptions of stress resulted in the following conclusions; teachers feel stressed by interference with their time, someone or something requiring a change in teacher attitude or behavior, having too many demands placed on them, having too few demands placed on them, the demands being too difficult or not meaningful, people or things incongruent with their values and needs, instruction being undermined, people or things detracting from the effectiveness of performance, and precipitating strong negative feelings (Blase, 1986). Approximately 83% of the responses from teachers were the result of organizational, student, administrative, and teacher-related factors (Blase, 1986). The most important finding of Blase was that teachers experience anger toward others as a response to work stress.

Punch and Tuettemann (1990) studied the correlates of psychological distress among teachers. They surveyed 574 secondary teachers who reported that their level psychological distress was twice that of the general population (Punch & Tuettemann, 1990). Punch and Tuettemann confirmed that organizational factors such as the perceived lack of achievement, lack of adequate access to facilities, deficiency of collegial support, unrealistic expectations of society, lack

of autonomy, student misbehavior, and inadequate praise and recognition caused stress in both male and female teachers. The researchers also found that females were significantly more likely to report stress as related to the above factors as compared to male teachers (Punch & Tuettemann, 1990).

McCormick and Solman (1992) report that teachers attribute the responsibility for their occupational stress to distant, yet identifiable domains and not themselves. Three hundred and eighty-seven teachers were surveyed in Australia, and the researchers found that teachers attribute other entities such as the Department of Education, the government, and society for some of their occupational stress (McCormick & Solman, 1992). Teachers were more likely to blame these organizations than themselves, peers, or local administration (McCormick & Solman, 1992).

In reality, the degradation of the teaching role has led many to reinterpret their work in terms of a 'misrecognized professionalism', by assuming that the technical and effective execution of prescriptions by others is the ultimate proof of their expertise and competence (Ballet et al., 2006, p. 210).

Basically, teachers have lost their autonomy. Ballet et al. (2006) argue for an alternate form of professionalism by acknowledging teachers' knowledge base and the need to help them develop it instead of adding mandates and extending their role to include things that are mandated by the government or administration. Ballet et al. call this intensification and feel that the work teachers are being asked to do causes them to be distracted from the real aim of the profession: helping students learn. They call for teachers to develop new knowledge by challenging common practice and reconceptualizing when possible, seeking

greater understanding of student learning and student change, and developing new practices (Ballet et al., 2006).

Student-Teacher Sources of Stress

Student-teachers experience work related stress that Kaunitz, Spokane, Lissitz, & Strein (1986) view as greater than what the regular classroom teacher experiences because student-teachers are concerned with students liking them, being accepted, knowing the content material, making mistakes, relating to faculty, administration, cooperating teachers, and parents both professionally and personally, maintaining classroom control, motivating and disciplining students, and meeting the goals of the lesson. The researchers attempted to identify the underlying dimensions of stress-causing situations, categorizing the situations, and determining which situations were the most stress causing (Kaunitz et. al., 1986).

Grade Level Taught

Another finding of the researchers was that teacher stress can be reduced by positive supervisory behavior at both levels, but only secondary teachers associate negative behavior on the part of the supervisor as contributing to increased stress levels (Bacharach et al., 1986). The researchers also found that both levels of teachers recognize that teaching is a profession with little advancement and did not see this as a contributor to stress unlike in other professions (Bacharach et al., 1986).

Elementary teachers report occupational stress related to teaching, job stress, and job satisfaction in a study by Raschke et al. (1985). Raschke et al. mailed surveys to 300 K-6 public school teachers with 230 teachers responding. The survey addressed issues relating to stress at the elementary level and job dissatisfaction (Raschke et al., 1985). Elementary teachers reported that the greatest source of job stress was a perceived lack of time to do their best (Raschke et al., 1985). Teachers also reported student misbehavior as a source of stress; excessive paperwork and non-teaching responsibilities were reported as also causing job dissatisfaction (Raschke et al., 1985). Other items elementary teachers listed were lack of administrative support in terms of student misbehavior, lack of parental support, low pay, parents, and apathetic students as additional sources of stress (Raschke et al., 1985). Elementary teachers reported that the overall quantity of work was excessive and therefore, stressful; they also reported role ambiguity, role responsibility, and being unable to obtain the information necessary to do their jobs as low sources of stress (Milstein, Golaszewski, & Duquette, 1984).

Another study looked into the stress reported by elementary teachers who teach in an urban setting (Milstein et al., 1984). Tokar and Feitler (1986) report that middle school teachers in America and England teaching in urban schools report the highest level of occupational stress (Tokar & Feitler, 1986). Milstein et al. found that organizationally based stressors were not as stressful as the core responsibility of working with students in the classroom. The researchers collected survey data from 130 teachers during the last week of the school year (Milstein et al., 1984). Results indicate the teachers were not as stressed as Milstein et al. had hypothesized and attributed the results to the notion that

teachers become used to the level of stress in high-stress environments and may become numb when exposed to stressors over extended periods of time (Milstein et al., 1984). The reality of these findings indicates that depending on the study, the research method, and the subjects, different results from the stress of various grade levels are inconsistent.

The secondary teacher reports similar yet different findings depending on the research. Suburban teachers report inadequate discipline policies, role overload, and student misbehavior as additional sources of stress (Hui & Chan, 1996; Litt & Turk, 1985). Hui and Chan surveyed 415 secondary teachers in Hong Kong who reported workload and time pressures as the most stressful parts of the job. They found that young, female teachers reported greater amounts of stress than their counterparts (Hui & Chan, 1996). Although Raschke et al. (1985) reported that elementary teachers were stressed by student misbehavior, Litt and Turk reported that student misbehavior was not a significant source of teacher stress. Litt and Turk found that work problems such as inadequate salary and low status were stress causing in high school teachers. Organizational factors such as school climate, relationships with administration, and the role teachers perceive for themselves were sources of stress (Litt & Turk, 1985).

Special Education Students

Student behavior, difficulty in dealing with or inadequate training regarding student disabilities, level of responsibility are all documented stressors for special educators as compared to general educators (Forlin, 2001; Fimian, Pierson, & McHardy, 1986). Forlin (2001) researched the stressors of teachers

during the instruction of inclusion students. The study included 571 elementary teachers involved in teaching moderate to severe needs students in the regular classroom (Forlin, 2001). The most stressful issues, according to teacher report, were related to the teacher's perceived sense of competence and the students' with disabilities behavior (Forlin, 2001). According to Forlin, the number of years a teacher had taught under the inclusion model impacted their level of stress: the more experience the teacher had with inclusion and students with disabilities, the less stress they reported.

When comparing the stress of special education teachers and general education teachers, Fimian, Pierson, and McHardy (1986) reported that two-thirds of the special education teachers reported that their attitudes towards teaching had become more negative while only one-fourth of the general education teachers reported that their attitudes had become more negative towards teaching. Special education teachers reported greater stress than general education teachers as related to personal/ professional stressors, professional dissatisfaction, discipline and motivation issues, and emotional and psychological manifestations of stress (Fimian et al., 1986). Encouragingly, the researchers report that the differences between general education teachers and special education teachers in this study were not significant in terms of job satisfaction, support and overall stress issues (Fimian et al., 1986).

Teacher and Student Behaviors

Student misbehavior and teacher reactions to the behavior also cause or increase teacher stress, especially at the secondary level (Geving, 2007).

According to Geving (2007), teachers who reported higher incidences of student misbehavior also reported greater work-related stress. Ten categories of student behaviors that increased teacher stress included, “mistreating school property, hostility toward other students, coming to class unprepared, hostility toward the teacher, not being attentive in class, lack of effort in class, hyperactivity, showing lack of interest in learning, noisiness, and breaking school rules” (Geving, 2007, p. 12). The most significant stressor of veteran teachers was showing a lack of effort in class (Geving, 2007). The only stressful student behavior that correlated significantly with teacher behavior was coming to class unprepared, meaning that teachers can impact whether or not students do their work and bring the necessary materials to class (Geving, 2007). Geving suggests that teachers can reduce their own stress by not allowing students to borrow materials, reward students who complete assignments, and work with parents to involve students in their work.

Effects of Stress

Teacher stress can cause a reduction in the overall health and well-being of the individual (DeFrank & Stroup, 1989; Lazarus, 2006; Zurlo, Pes, & Cooper, 2007). Occupational stress is also responsible for a decrease in job satisfaction and an increase in the rates of depression among teachers (Borg & Riding, 1991a; Schonfeld, 1990; Smith & Bourke, 1992). More teachers are moving to other fields due to the increase in work related stress (Bee, Cook, Bobbit, & Weber, 1996), and many more teachers are experiencing burnout (Maslach, 2001; Maslach, 2003; Schwab, 1983).

Health

DeFrank and Stroup (1989) studied the physical and mental health concerns associated with stress in teaching. They surveyed 245 elementary teachers seeking data to link personal factors, job stress, job satisfaction, and symptomatology (DeFrank & Stroup, 1989). DeFrank and Stroup reported that much of the stress teachers reported were beyond their immediate control.

Lazarus (2006) set out to study the levels of occupational stress and health outcomes in special education and general education teachers. He determined that “higher scores in interpersonal conflict at work and quantitative workload significantly predicted the presence of illness symptoms” (Lazarus, 2006, p. 208). Lazarus found that in this sample of teachers, special education teachers were more likely to have physical illness due to the amount of work they are given.

Schonfeld (1990) studied links between job-related stressors and depressive and psychophysiologic symptoms and morale in 67 teachers. His findings indicate that the sample of teachers had more depressive symptoms than the normative sample (Schonfeld, 1990). He also determined that job strain was more closely related to symptoms and low morale than other types of stressors (Schonfeld, 1990).

Job Satisfaction, Retention, and Attrition

A study of 320 British and Italian teachers who completed the Teacher Stress Questionnaire, attempted to connect the intensity and quality of mental ill-health with the sources of job pressure and job satisfaction (Zurlo, Pes, & Cooper, 2007). Zurlo et al. found that Italian teachers were more likely to experience

feelings of depression while British teachers were more likely to feel anxiety. These same teachers reported a level of job satisfaction that was high for intrinsic satisfaction but low for extrinsic satisfaction (Zurlo et al., 2007). Zurlo et al. determined that Italian teachers were more likely to experience job satisfaction through autonomy in how they perform their jobs while British teachers reported being satisfied the most by collegiality.

Borg and Riding (1991a) collected data from 545 secondary teachers regarding their perspectives of teacher stress, job satisfaction, and career commitment. The results indicate that teachers who reported greater job-related stress were also more likely to report lower job satisfaction (Borg & Riding, 1991a). The unfortunate result was that teachers who reported lower job satisfaction were absent more frequently than those reporting greater job satisfaction (Borg & Riding, 1991a).

Smith and Bourke (1992) examined the relationship between work-related stress, workload, and job satisfaction of 204 secondary teachers. The researchers found that workload had the most powerful effect on stress from conflict while satisfaction with administration and senior staff has a mitigating effect on the level of stress from conflict (Smith & Bourke, 1992). Another finding of Smith and Bourke is that satisfaction with students causes a decrease in teacher stress. If one equates job satisfaction with satisfaction with students, a component of the teaching profession, job satisfaction can reduce or alleviate teacher stress.

Jepson and Forrest (2006) determined that achievement striving and type A personality traits were moderately correlated with an increase in teacher stress. The researchers also determined that the more a teacher was committed to teaching, what the researchers called occupational commitment, the more

their level of stress decreased (Jepson & Forrest, 2006). Those that stay in the profession are more likely to be less stressed if they have a commitment to the teaching profession as defined by Jepson and Forrest.

Bee et al. (1996) used existing data to determine the turnover rate of special education teachers for two separate school years. The researchers found that special education teachers were significantly less likely to be retained than general education teachers due to a higher incidence of district transfer of special educators to general education positions (Bee et al., 1996). District attrition was higher for special education teachers as compared to general education teachers and teachers who had more experience were less likely to move districts or professions regardless of teaching special populations or general education (Bee et al., 1996).

Burnout

According to Schwab (1983), burnout in teachers results from feelings of emotional exhaustion, depersonalization causing the development of cynical attitudes, and the overall loss of a feeling of accomplishment on the job. Burnout is more prevalent in younger, more inexperienced teachers (Schwab, 1983). Male teachers were more likely to have negative attitudes than females, and secondary teachers were more likely to exhibit negative attitudes than elementary teachers (Schwab, 1983). Maslach's research (2003) defines burnout as a "prolonged response to chronic emotional and interpersonal stressors on the job" (p. 189) and is defined by exhaustion, cynicism, and sense of inefficacy. Strain results from an

incongruence or lack of fit between the worker and the job causing the worker to feel negative, callous, and ineffective (Maslach, 2003).

In a study completed by Farber (1984), of the 365 teachers surveyed, 20-25% were vulnerable to burnout and 10-15% already presented symptoms of burnout. Middle age (34-44 years of age) teachers teaching at the junior high level were the most at risk for burnout (Farber, 1984). According to Skaalvik and Skaalvik (2007), teachers who have higher self-efficacy have higher collective teacher efficacy and are less likely to experience symptoms of burnout. Maslach (2001) discusses the impact of burnout on health and relates that few studies have been done that indicate a causal relationship between burnout and physical illness. The researcher does emphasize that the exhaustion dimension of burnout is the main individual predictor of potential ill health (Maslach, 2001).

Teachers' perceptions of burnout are significant because of the value they attach to how they do their jobs. According to Friedman and Farber (1992), a survey of 641 elementary teachers completed a modified version of the Maslach Burnout Inventory and a survey about self-concept. The researchers found a strong correlation between burnout and how teachers perceive themselves both professionally competent and professionally satisfied (Friedman & Farber, 1992). The less satisfied professionally or feelings of reduced levels of competency were highly correlated with burnout (Friedman & Farber, 1992). The research indicates that teachers feel a great deal of pressure from parents and students and their perceptions of the job the teachers are doing (Friedman & Farber, 1992). Friedman and Faber suggest that in order to help prevent burnout in teachers, teachers must give themselves credit for the success they do experience professionally and with their students.

Student behaviors also contribute to increased levels of burnout in teachers (Friedman, 1995). Friedman describes the results of two studies that examine how behavior patterns of students impact teacher burnout and how different pupil control ideologies impact teacher burnout. The first study involved 391 teachers and 356 students who both completed questionnaires; the students completed a behavioral questionnaire while the teachers completed a version of the Maslach Burnout Inventory and a questionnaire that reported the frequency of student misbehavior patterns (Friedman, 1995). Results point toward teacher burnout is most exacerbated by student behaviors that demonstrated a lack of respect towards teachers or students (Friedman, 1995). Friedman's second study determined through 391 teacher survey responses that teachers report the same types of student behavior patterns including attentiveness, disrespect, and sociability regardless of their pupil control ideologies; and that students repeated behaviors that they knew caused a negative response from teachers which caused an increase in teacher stress and propensity toward burnout (Friedman, 1995).

Another study attempted to determine the relationship between student and teacher perceptions of teacher burnout as related to the frequency of student misbehavior and the teacher's ability to competently handle the behavior (Evers, Tomic, & Brouwers, 2004). Evers et al. used the Maslach Burnout Inventory for teachers and a modified version of the Maslach Burnout Inventory for students. Two other questionnaires were used to determine the teacher's ability to cope with misbehavior and to determine the frequency and type of misbehavior (Evers et al., 2004). The students, mid-teens to early twenties, reported their teachers closer to burnout than the teachers themselves reported (Evers et al., 2004). Evers et al. also reported that the students' perceptions on misbehavior were

significantly correlated to emotional exhaustion and depersonalization on the part of the teachers. The research also shows that the teachers' ability to deal with misbehavior was highly related to the level of burnout meaning that if a teacher is competent at classroom management, they are less likely to experience symptoms of burnout (Evers et al., 2004).

The Probationary or Novice Teacher and Stress

According to McCann and Johannessen (2004), the first five years of teaching are the most vulnerable time for educators. The first years are full of stressful situations that require coping methods, support, and professional training to aid in the retention of teachers (McCann & Johannessen, 2004). Relationships with students, parents, colleagues, and supervisors; workload and time management; knowledge about the subject taught and curriculum; evaluation of learning and grading of students; and autonomy and control over what and how to teach were the most identified concerns of the novice teachers interviewed by the researchers (McCann & Johannessen, 2004). McCann and Johannessen's analyses revealed "frustration results from the discrepancy between the teacher's expectations of the teaching experience and the realization of the actual experience" (p. 140). The researchers noted that novice teachers cope by having a sense that things will get easier or better as well as having hope and a tenacious attitude (McCann & Johannessen, 2004).

Freidman (2000) identified three stages of teacher development that aid in the understanding of the first-year process of new teachers. Stage A involves the realization that teaching is difficult and full of pressure; words like "shock",

“nightmare”, and “crisis” are used by teachers to describe their first year of teaching (Friedman, 2000). The second stage, Stage B, involves fatigue and exhaustion (Friedman, 2000). Fatigue and exhaustion can be exacerbated by difficulties with students, role overload, criticism, lack of recognition or reward, isolation, and feeling inadequately trained (Friedman, 2000). Friedman’s last stage, Stage C, involves adjustment where teachers are able to adapt in order to survive (2000). New teachers learn to find compromise between the quality of teaching they envision and the quality of teaching expected in reality (Friedman, 2000).

Schonfeld (2001) studied the effects of stress in 184 first-year female teachers. Schonfeld also looked at the difference between elementary and secondary teachers, special educators and general educators, and public versus private educators. Stress at work was measured with a self-report noting the frequency and duration of episodic and ongoing stressors (Schonfeld, 2001). He also measured the teacher’s negative affectivity, or the disposition to experience psychological distress, with a self-report (Schonfeld, 2001). A final survey included a measure of general, colleague, and supervisor support scales with several subscales (Schonfeld, 2001). Schonfeld determined that social support and adversity in the fall affected depression, self-esteem, job satisfaction and the motivation to teach in the spring. Other significant findings included supervisor and colleague support being directly related to job satisfaction (Schonfeld, 2001). Schonfeld also determined that there were no significant differences between elementary and secondary teachers, special educators and general educators, and public versus private educators on the instruments used.

Veenman (1984) identified eight problems of new teachers including “classroom discipline, motivating students, dealing with individual differences, assessing students’ work, relationships with parents, organization of class work, insufficient and/ or inadequate teaching materials and supplies, and dealing with problems of individual students” (p. 143). Veenman (1984) sought to understand the problems new teachers perceived as causing the most difficulty for them so that improvements could be made on teacher training and inservice programs. Veenman looked at 91 international studies of new teachers to determine which problems caused the most difficulty. He identifies three stages of concerns for teachers: survival, teaching, and learning (Veenman, 1984). New teachers are first concerned with survival, then focus on matters related to teaching the content, and are then able to focus on what students actually learn (Veenman, 1984). The teachers move from self-oriented to pupil-oriented as they mature in the profession (Veenman, 1984). Veenman calls for a study of the variations in forms of training and assistance for pre-service and inservice teachers to determine how much help, support, and training teachers need to be successful.

The first year of teaching is crucial to the retention of new teachers (Brember, Brown, & Ralph, 2002; Friedman, 2000; McCann & Johannessen, 2004). Brember et al. researched teacher trainees in a graduate program who were also in their first year of teaching. The survey research of 104 participants also sought to determine if there is a connection between gender and reported levels of stress (Brember et al., 2002). Brember et al. found that females reported significantly higher rates of stress than males, and males reported less support from friends, family, and partners. Although the sample was too small to generalize to a larger population, the research indicates that there are stress

differences between novice teachers based on gender. A recommendation of the researchers is to look into the role support classes have on the effects of helping to prevent stress (Brember et al., 2002). They also suggest that time management and stress management education be included in teacher preparation programs and teacher support programs (Brember et al., 2002).

“Addressing the learning needs of new teachers can improve both the rate of teacher retention and the quality of the teaching profession” (Feiman-Nemser, 2003, p. 25). Policy makers and educators agree that in order to retain teachers, new teachers need effective mentoring and induction programs regardless of grade level, content area, socioeconomic status of the population taught, and gender of the teacher (Feiman-Nemser, 2003). New teachers need to not only learn how to manage a classroom; embrace issues of curriculum, assessment, and instruction; and learn school culture; they must learn how to present the material to students in a situationally relevant approach (Feiman-Nemser, 2003). In other words, teachers must learn how to help students learn the material, not simply instruct and hope that the students learn. New teachers need to learn to think on their feet, be decisive, and reflect on their teaching (Feiman-Nemser, 2003). “New teachers need three to four years to achieve competence and several more to reach proficiency” (Feiman-Nemser, 2003, p. 27). New teachers need to discuss curriculum implementation, student issues, and feel as though they are a part of a supportive community (Feiman-Nemser, 2003). Teachers need to be enculturated into the profession by high quality teacher induction and mentoring programs (Feiman-Nemser, 2003). Otherwise, work conditions and school culture can influence the character, quality, and outcome of a teacher’s first years of teaching

in a negative way leading to disillusionment, depression, and attrition (Feiman-Nemser, 2003).

Schonfeld and Ruan (1991) studied the relationship between job conditions and depressive symptoms of new teachers. The researchers note that most of the literature related to teacher stress focuses on veteran teachers and determined it important to research new teachers (Schonfeld & Ruan, 1991). The research focused on the nature of job conditions with symptoms of depression. Adverse job conditions were measured by the frequency of stressors identified by the Episodic Stressor Scale and the Strain Scale (Schonfeld & Ruan, 1991). The researchers determined that there was a significant impact on depressive symptoms of new teachers in November, their third month of teaching, when job conditions were perceived to be adverse (Schonfeld & Ruan, 1991). More importantly, the researchers were able to determine that the relationship was more likely to be causal meaning that the symptoms were caused by the environment and not that the teacher came into the environment with depressive symptoms (Schonfeld & Ruan, 1991).

Coping with Stress

Pearlin and Schooler (1978) defined coping as “behavior that protects people from being psychologically harmed by problematic social experience” (p. 2). The researchers define three ways coping is employed: removing or altering the circumstances causing the problems, discerning the significance of the experience in a way that defuses the nature of the problem, and maintaining the emotional effects of problems within controllable limits (Pearlin & Schooler,

1978). The researchers found that men, the educated, and wealthy are more likely to use effective coping strategies and that people are more likely to use coping mechanisms effectively within marriage and parenting roles rather than at work (Pearlin & Schooler, 1978). Coping efficacy involves how well a person deals with the stress in their lives (Pearlin & Schooler, 1978). Those who are efficacious can balance the extent to which they cope with the life-strain they experience and the resultant stress (Pearlin & Schooler, 1978).

Kyriacou (2001), an authority on teacher stress, designates the most frequent coping actions used by teachers as the following: trying to keep problems in perspective, avoiding confrontations, trying to relax after work, taking action to deal with problems, keeping feelings under control, devoting more time to particular tasks, discussing problems and expressing feelings to others, having a healthy home life, planning ahead and prioritizing, and recognizing ones own limitations. He categorizes coping strategies into direct action and palliative techniques (Kyriacou, 2001). Other researchers have adopted his phrasing and approach to looking at coping (Carmona et al., 2006). Direct action techniques involve teachers doing something to eliminate the source of stress, while palliative techniques do not deal with the source of stress but are intended to lessen the feeling of stress (Kyriacou, 2001). Kyriacou notes that social support and effective coping directly impact a teacher's perception of stress; if the teacher views the situation in a different light, stress can be reduced even without removing the teacher from the situation. Teachers who used a direct coping style were less likely to experience burnout than those who used palliative coping (Carmona et al., 2006).

Methods, Strategies, and Activities of Coping

Passivity, problem-solving, mediation, counseling, active strategies, inactive strategies, Dewe and Guest (1990) conducted four studies of supervisors, nurses, teachers, and ministers to determine the measurement of coping strategies as related to work stressors. The researchers identified five forms of coping including rational task-oriented behavior, emotional release, distraction, passive rationalization, and social support (Dewe & Guest, 1990). They attempted to develop a more empirical method of determining coping strategies used by the various professions instead of a more canned-type questionnaire (Dewe & Guest, 1990). They were able to develop the five categories listed above and recommended a sixth palliative category specific to each profession (Dewe & Guest, 1990).

Gaziel (1993) attempted to specifically determine the coping strategies employed by teachers and the personal factors that contributed to how teachers cope with stress. He integrated several taxonomies into four categories of coping with occupational stress: active behavior strategies, active cognitive strategies, inactive behavioral strategies, and inactive cognitive strategies (Gaziel, 1993). Gaziel addressed the belief that coping is influenced by individual and situational differences. Those that have an internal-oriented approach to coping are more likely to use active strategies, while those who believe that they have no control over a stressful situation, or external-oriented teachers, are more likely to use inactive strategies to cope (Gaziel, 1993). Gaziel denotes that women are more likely to use inactive coping strategies than men, and achievement seeking personalities are more likely to use active coping strategies.

Innes and Kitto (1989) explored three different dimensions of personality in high school teachers to determine if the personality characteristics were indicative of their perceived levels of stress and their coping strategies. The 84 teachers completed two surveys measuring stress, health, and coping strategies and personality characteristics (Innes & Kitto, 1989). The three personality characteristics addressed were neuroticism, extroversion/ introversion, and self-consciousness (Innes & Kitto, 1989). Innes and Kitto were able to determine that neuroticism and the use of coping strategies predict how people react to stress. They determined that self-consciousness was important but not significant (Innes & Kitto, 1989). The researchers contend that those who are more private tend to be more in tune with their feelings and thoughts and resultantly report more health related symptoms indicating elevated stress levels (Innes & Kitto, 1989).

Chan (1994) identified four main coping activities utilized by secondary teachers through a survey of 657 teachers in Hong Kong. Factor analysis concluded that rational problem-solving, resigned distancing, seeking support and ventilation, and passive wishful thinking were the four main activities these teachers used to cope with occupational stress (Chan, 1994). Chan found that men are more likely to use a self-reliant approach to coping where women are more likely to rely on others to help them cope. He also found that the most utilized coping activity was problem-solving while the least used was passivity (Chan, 1994). Chan recommends helping those who are more anxious or likely to be depressed be taught how to use more active and problem-solving coping strategies to help minimize their use of avoidant strategies such as passive wishful thinking.

Another coping activity done to reduce stress is standardized mediation. Anderson et al. (1999) reported the results of 91 K-12 teachers who completed a pretest-posttest control group designed study using mediation to reduce stress. The study consisted of two surveys measuring stress and burnout both before and after a five-week standardized meditation course (Anderson et al., 1999). The participants were taught how to meditate and encouraged to meditate anytime they desired outside of the class (Anderson et al., 1999). The researchers found that utilizing standardized mediation significantly reduced the teachers' levels of perceived occupational stress and anxiety (Anderson et al., 1999).

Efficacy, Principal and Social Support

Another study indicates that the level of perceived occupational stress reported by teachers can be reduced by increasing teachers' perceptions of autonomy and efficacy (Tuettemann & Punch, 1992). By surveying 789 secondary teachers, the researchers were able to conclude that teachers' perceived levels of influence and autonomy and levels of efficacy and achievement were shown to decrease their perceived levels of occupational stress (Tuettemann & Punch, 1992). The researchers were also able to determine that females were more significantly affected by an increased perception of influence and efficacy than their male counterparts (Tuettemann & Punch, 1992). The researchers noted that efficacy has a greater ameliorating effect on teacher stress than influence; "this suggests that for teachers, a sense that they are achieving valued outcomes is more important than their perception of being able to influence things" (Tuettemann & Punch, 1992, p. 189).

Self-efficacy, social support, and principal support were reported as most significant in reducing occupational stress by 356 teachers in Germany (van Dick & Wagner, 2001). Teachers who reported little social support were more likely to report higher levels of stress and strain while teachers who reported higher feelings of self-efficacy were less likely to report feelings of stress and strain (van Dick & Wagner, 2001). Another finding from their study indicates that coping is positively correlated with principal support; teachers who felt support of the administration were more likely to use active or direct coping strategies when faced with stress as compared to teachers who reported little support from their principals (van Dick & Wagner, 2001).

Russell, Altmaier, and Van Velzen (1987) reported that teachers who felt support from supervisors were less likely to report symptoms of burnout. The study of 316 elementary teachers revealed that social support also provided a moderating effect on occupational stress (Russell et al., 1987). Teachers also conveyed that receiving positive responses regarding their skills and abilities from others including supervisors were less susceptible to burnout (Russell et al., 1987). On the other hand, Burke and Greenglass (1993) reported the results of a study of 833 teachers that found no significant relationship between social support and burnout.

Pajak and Blase (1984) completed a qualitative study of several teachers who used social support to cope with stress. The study explored the interaction among public teachers in a barroom over a three-year time frame (Pajak & Blase, 1984). Through interviews, observations, and unstructured conversations, the researchers were able to determine that the teachers were able to unwind and transition from professional to personal self by using the social support provided

by the barroom interactions (Pajak & Blase, 1984). The teachers were from a variety of school districts and met weekly to decompress from the stress of their positions (Pajak & Blase, 1984). The grounded-theory approach provided rich detail and data about the teachers' perceptions of stress and how they cope with the stress (Pajak & Blase, 1984).

Teachers described the classroom as a demanding, yet fragile, reality that is continuously imperiled not only by student misbehavior but also by internal conflicts involving identification with students' behaviors, empathy with students' problems, and conflict between the teachers' conception of their professional role and their personal identities (Pajak & Blase, 1984, p. 168).

Pajak and Blase (1984) noted that more than half of the teachers revealed friendship and camaraderie as ways of coping with the stress of teaching.

Summary

“Over the past ten years educational research has established that high teacher stress is associated with psychological distress, which may be mitigated through different coping mechanisms and personality traits” (Montgomery & Rupp, 2005, p. 459). With the research indicating that teacher stress causes negative physical symptoms in teachers, increased burnout, increased absenteeism, attrition, decreased job satisfaction, and negative impact in the classroom, researchers are attempting to find ways to help teachers cope with stress.

An area of study underrepresented in the literature is the relationship of stress and coping strategies for probationary or non-tenured teachers. The research is lacking in comparing teachers to other professional groups using the

same instrument. The research is also lacking in comparing the stress of veteran teachers new to a school district who are considered probationary status by the state of Colorado, and their novice counterparts who are in their first three years of the teaching profession. Research is also lacking in the use of coping resources by probationary teachers to alleviate stress. The primary assumption of this study is that in order for probationary teachers to remain in the teaching profession, they must utilize appropriate coping resources to reduce their perceived levels of occupational stress.

The accumulation of the data collected in this study leads to a greater understanding of role-related stress of probationary teachers to help provide the necessary supports to decrease role-related stress when and where possible. The survey data also provides the necessary information to determine if probationary teachers have adequate coping resources and the necessary level of district support to reduce role-related stress.

CHAPTER III: METHODS

Research Questions

1. To what extent do probationary teachers report role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical environment and how do their reports compare to the normative population?
2. To what extent do probationary teachers report the use of recreation, self-care, social support, and rational/ cognitive coping to alleviate stress and how do their reports compare to the normative population?
3. Is there a relationship between reports of occupational stress and certain characteristics such as elementary or secondary teaching level, gender, years of experience in teaching, and years of experience in the school district?
4. Do probationary teachers report that participating in induction, mentoring, or coaching reduces their stress?

Setting and Participants

Data were retrieved through the school district Department of Professional Learning. The district sent the OSI-R surveys and demographic sheets to 140 teachers in their first through third years of teaching experience with the school district as of October 2008. Thirty-eight (28.3%) are within their first year of teaching, 62 (46.3%) are within their second year of teaching, and 34 (25.4%) are within their third year of teaching with the school district.

The school district is a suburban school district that serves approximately 5, 500 students and employs approximately 390 teachers. The district has experienced a rate of growth averaging between five and nine percent over the past decade. Although the growth has stalled with the economic slowdown of the past year, a large number of teachers are considered probationary or within their first three years of experience with the school district. Thirty-five point one percent of all teachers employed through the district are within their first three years of teaching for the district.

The district encompasses three communities. One community is considered artistic with several art studios and theatrical venues while another is considered more rural with five to forty acre plots and livestock. The third community adjoins a major highway and is located between two large cities causing it to be considered more of a bedroom community. In 2004, the median income was \$87,889 with approximately 2% of the students qualified for the state free or reduced lunch meal program.

All of the schools in the district are ranked either “High” or “Excellent” by the state department of education for accountability purposes. The average

amount of scholarship money offered to the approximately 450 students in the graduating class by colleges and universities averages between 2 and 4 million dollars annually.

Literature on the Occupational Stress Inventory – Revised

Researchers believe the OSI and OSI-R to be valid instruments that measure occupational stress related to stress, strain, and coping and can provide valuable information to employers to help intervene with and counsel employees. Research using the OSI and OSI-R that focuses on the educational system includes studies at the university and middle school levels, compares gender differences, looks into experimental designs with interventions for stressed teachers, and addresses personality and teaching styles as related to stress and coping (Bertoch, Nielsen, Curley, & Borg, 1989; Decker & Borgen, 1993; Osipow, Doty, & Spokane, 1985; Wu, Wang, Wang, & Li, 2006; Zhang, 2007). The use of the OSI-R in this study hopes to add to the research by determining the levels of stress and coping by K-12 probationary status teachers.

In a study by Decker and Borgen (1993), the researchers utilized the OSI to predict job satisfaction as well as determine if negative affectivity was a predictor of occupational stress. Osipow, Doty, and Spokane (1985) used the instrument to determine the relationship between the life span of the respondent's career and stress and coping resources. The researchers determined that workers who are more experienced report more stress but also tend to report greater use of coping resources (Osipow, Doty, & Spokane, 1985). In both studies, gender did

not seem to have a significant impact on either level of reported stress or use of coping resources.

The instruments have been used for a variety of career fields including clergy, doctors, business executives, and law enforcement (Osipow, 1998). Alkhadher and Al-Naser (2006) used the OSI-R to assess the stress and strain levels of North American teachers working in Kuwait. They compared stress and strain to gender, marital status, and years of service in education. The results were consistent with the other studies and reported no gender differences for their sample. Unlike the Osipow, Doty, and Spokane (1985) study, Alkhadher and Al-Naser (2006) did not find a significant relationship between stress and years of service or experience. They did, however, verify a significant relationship between coping resources and years of experience (Alkhadher & Al-Naser, 2006).

Procedures

Data for the survey were collected beginning October of 2008 through the school district's Department of Professional Learning. The district asked the researcher for assistance with the dissemination of the survey as part of the researcher's employment as a school administrator. The data collection was anonymous. All participants were provided with a cover page explaining the survey and the intended use of the data, demographic information sheet, the survey response sheet, and a copy of the survey. The district requested that the teachers fill out the demographic information sheet and survey response sheet and return both to the Director of Professional Learning. If teachers wished to have an interpretation of their results, they were asked to write their first and last names on

the cover page so that the data remained anonymous to the district. Demographic information sheets and survey response sheets were numbered to be able to keep the demographic information connected to the survey response data.

Teachers who participated in the induction program through the district were given the survey during an induction meeting while the teachers not involved in the induction program or were absent on the day the survey was administered were sent the survey to be self-administered.

Instrumentation

Demographic Information Sheet

The Demographic Information Sheet used by the district collected a variety of information about each participant. Only the variables in relation to this study are described below. An example with district information excluded is provided in the Appendix.

The Demographic Information Sheet provided information about the grade level taught by each participant. The grade levels were listed as Preschool (PK), kindergarten through fifth grade (K-5), sixth grade through eighth grade (6-8), ninth grade through twelfth grade (9-12), and multiple levels. The groupings consist of elementary (PK and K-5) and secondary (6-8 and 9-12) for data comparisons.

The participants were asked to provide their job title to be able to differentiate any certified district position that does not have direct teaching responsibility.

The participants' age range was also identified. The age ranges were 20-29, 30-39, 40-49, 50-59, and 60+. Gender was also identified by the participants. The age range and gender are considered categorical data for use in this study.

Years of teaching for the school district and years of experience were also listed by the participants. The respondents were asked to rank the support program(s) they have participated in and the level of effectiveness of the program(s) in reducing occupational stress with a number from one to six with one being ineffective and six being extremely effective.

Description of the Occupational Stress Inventory – Revised (OSI-R)

The OSI-R is a revised survey instrument that measures three aspects of occupational adjustment: occupational stress, psychological strain, and coping resources. For the purpose of this study, participants took the occupational stress and coping resources measures. The OSI-R was purchased and disseminated by the school district, and the researcher was granted permission to access and analyze the collected data.

The OSI-R occupational stress dimension is measured by six scales and is called the Occupational Roles Questionnaire (ORQ). The scales are Role Overload (RO), Role Insufficiency (RI), Role Ambiguity (RA), Role Boundary (RB), Responsibility (R), and Physical Environment (PE). There are ten items for each of the six scales. Definitions are listed in Table 1.

Table 1.

Definitions of Scales for ORQ

Role Overload (RO)	Measures the extent to which job demands exceed resources (personal and workplace) and the extent to which the individual is able to accomplish workloads
Role Insufficiency (RI)	Measures the extent to which the individual's training, education, skills, and experience are appropriate to the job requirements
Role Ambiguity (RA)	Measures the extent to which priorities, expectations, and evaluation criteria are clear to the individual
Role Boundary (RB)	Measures the extent to which the individual is experiencing conflicting role demands and loyalties in the work setting
Responsibility (R)	Measures the extent to which the individual has, or feels, a great deal of responsibility for the performance and welfare of others on the job
Physical Environment (PE)	Measures the extent to which the individual is exposed to high levels of environmental or extreme physical conditions

The OSI-R coping resources dimension is measured by a set of four scales and is called the Personal Resources Questionnaire (PRQ). The scales are Recreation (RE), Self-Care (SC), Social Support (SS), and Rational/ Cognitive Coping (RC). There are ten items for each of the four scales. Definitions are listed in Table 2.

The OSI-R test materials included an item booklet, rating response sheet, and profile form. Instructions were listed in the booklet on the front cover and third page to explain to participants how to fill out the survey. The data were transferred to gender-specific profile forms based on the gender identified by the respondents on the Demographic Information Sheet.

Table 2.

Definitions of Scales for PRQ

Recreation (RE)	Measures the extent to which the individual makes use of and derives pleasure and relaxation from regular recreational activities
Self-Care (SC)	Measures the extent to which the individual regularly engages in personal activities which reduce or alleviate chronic stress
Social Support (SS)	Measures the extent to which the individual feels support and help from those around him/her
Rational/Cognitive Coping (RC)	Measure the extent to which the individual possesses and uses cognitive skills in the face of work-related stresses

The participant rated the items or statements by providing a rating of the truth of the statement. The items were scored on a 1 to 5 scale where 1 represents the statement as rarely or never true, 2 represents the statement as occasionally true, 3 represents the statement as often true, 4 represents the statement as usually true, and 5 represents the statement as true most of the time. The items for each scale were totaled to provide the raw score and transferred to the gender-specific profile form to determine the participant's T score for each scale. T scores between 40 and 59 are within one standard deviation of the mean and are interpreted as within the normal range for both the ORQ and PRQ. For the ORQ, T scores in the 60 to 69 range are considered to denote mild levels of maladaptive stress. T scores of 70 or higher are considered in the mal-adaptive stress range. T scores below 40 are indicative of an absence of occupational stress. For the PRQ, scores above 59, indicate highly developed coping resources while scores below 40 indicate deficient coping resources.

Studies of the stress of educators abound, but many use survey instruments designed for educators only. This study uses an inventory that is applicable to most professions. The use of the OSI-R provides a broader perspective and allows for comparison of the sample to the occupationally diverse normative population. The occupational groups represented in the OSI-R include Executive, Professional, Technical, Marketing, Administrative Support, Public Service/ Safety, and Agricultural/ Production/ Laborer occupational groups. The Professional group is used as a basis of comparison for this study.

The primary intent of the study is to determine the relationship between probationary teachers and their levels of stress and coping resources as compared to the normative data. The data collected determine if teachers in this school district report greater levels of stress and/ or lower levels of coping resources than the normative population. The intent of the ORQ is to determine the level of stress as defined by the six scales as related to gender, age range, support program(s), and years of experience both in the district and in education. The OSI-R normative data is based on a sample size of 983 participants with representative samples for gender, ethnicity, and occupation. As an assessment, the OSI-R has internal consistency reliability with alpha coefficients for the ORQ as 0.88 and 0.89 for the PRQ. According to Osipow (1998) the convergent validity studies, factor analyses, and correlation studies done using both the OSI and OSI-R provide support for the validity of the instrument.

Scoring of Instruments

The data from the demographic information sheets and survey response sheets were entered into the Statistical Package for the Social Sciences (SPSS). The following statistical methods were pursued through SPSS.

Data Analysis Techniques

Frequency Distribution

To address the first and second research questions, the statistical analysis was a descriptive analysis. Frequency distributions, measures of central tendency, and measures of variability, for the sample were calculated.

The Chi-square test is a statistical test used to determine if a relationship between categorical variables is statistically significant (Johnson & Christensen, 2004). The Chi-square test was used for purposes of this study because the study sample and normative population were disaggregated into categories of gender, grade level taught, years of experience in education by category, and years of experience in the district for each of the six scales of the ORQ and the four scales of the PRQ. The T-score value categories were used for this statistical comparison. The statistics for each ORQ scale were calculated based on the number and percentage of respondents reporting less than average stress, average stress, above average stress, and mal-adaptive stress. The statistics for each PRQ scale were calculated based on less than average coping, average coping, and greater than average coping.

Rankings provided by teachers who participated in support programs determined if teachers associate these programs with reducing their level of occupational stress. Frequency distributions, measures of central tendency, and measures of variability, for the mean ratings of the sample, were used to determine the teacher-perceived effectiveness of the programs at reducing occupational stress.

Comparative Analysis

To explore the relationship between characteristics (grade-level taught, gender, years of experience in education, and years of experience in the district) to reported stress, a comparative analysis was completed for each categorical variable and the six scales of the ORQ. An ANOVA or F-test, a statistical test used to compare group means (Johnson & Christensen, 2004), was performed to determine the statistical significance of the sample for the six scales of the ORQ. The ANOVA or F-test is used to compare one quantitative dependent variable, the raw score mean of each scale, to one independent categorical variable such as grade-level taught, gender, years of experience in education, and years of experience in the district.

A One-Sample t-test was also performed for the comparison of the sample mean to the normative population mean using the raw score means to determine if there was statistical significance between the sample and the normative population. A One-Sample t-test is a statistical test used to determine if the difference between the mean of sample compared to the test value, or mean of normative population, is statistically significant (Johnson & Christensen, 2004).

According to Mayer, Mullens, Moore, and Ralph (2000), students learn at greater rates with more experienced teachers or teachers with more than five years of experience. Mayer et al. (2000) also recommend support for the beginning teacher in the first year of experience. As previously stated, teachers with greater experience report lower levels of stress while teachers within their first years of teaching report greater stress (Miller, 1999). Because of this research, years of experience in education was grouped into categories of 0-1 year (Beginner), 2-5 years (Novice), more than 5 years (Veteran) for statistical comparison.

Ethical Considerations

The data was collected by the school district's Department of Professional Learning. The district granted permission for the use of the data for the study by the researcher.

CHAPTER IV: RESULTS OF THE STUDY

Introduction

The data for this study is organized in both narrative and tabular form when possible. The layout of the narrative and tables is according to the research questions used to structure the study. Demographic information about the respondents is provided first, followed by the results of the survey for each research question.

The survey, the OSI-R, is an instrument that measures three aspects of occupational adjustment: occupational stress, psychological strain, and coping resources. For the purpose of this study, participants took the occupational stress and coping resources measures. The OSI-R was purchased and disseminated by the school district, and the researcher was granted permission to access and analyze the collected data. A Demographic Information Sheet was used by the district to collect information about each participant such as grade-level taught by each participant, job title, age range, gender, years of teaching for the school district, years of overall educational experience, rankings of the district support program(s), and type of preparation program. The data were compiled and analyzed using SPSS statistical analysis software.

Demographic Information

The survey response rate was 65% (91 educators responded from a pool of 140 educators). One of the respondents only completed part of the survey and did not provide any demographic information and was not used for data analysis. Of the 91 educators who responded to the survey, 18 were male (19.8%) and 73 were female (80.2%) and is listed in Table 3. Any data not completed by the respondents was coded as missing data in the SPSS program.

Table 3.
Gender

	Frequency	Percentage
Male	18	19.8
Female	73	80.2
Total	91	100

Of the 91 educators that responded, the majority of them work in the K-5 elementary setting (35.2%). The least represented group was the preschool with only 4.4%. Grade level data are listed in Table 4.

Table 4.
Grade Level

	Frequency	Percentage
Preschool	4	4.4
K-5	32	35.2
Grades 6-8	21	23.1
Grades 9-12	23	25.3
Multiple Levels	11	12.1
Total	91	100

Eighty-eight responded to the job title portion of the Demographic Information Sheet. Respondents were asked to fill in their job title, and responses were categorized into three categories: teacher, special services provider, and other. Special services providers include counselors, psychologists, and special educators. Other includes librarians, instructional coaches, and other personnel who do not work directly with students. Sixty (68.2%) of the respondents were classified as teachers while 19 (21.6%) and 9 (10.2%) were classified as special services providers and other. Job title data are listed in Table 5.

Table 5.

Job Title

	Frequency	Percentage
Teacher	60	68.2
Special Services Provider	19	21.6
Other	9	10.2
Total	88	100

The majority of the respondents were between the ages of 30 and 39 (30.8%). The least representative group was the above 60 category (2.2%). There was a fairly equal distribution of respondents in the 20-29 (25.3%), 30-39 (30.8), and 40-49 (28.6%) categories. Age range data are listed in Table 6.

Table 6.

Age Range

	Frequency	Percentage
20-29	23	25.3
30-39	28	30.8
40-49	26	28.6
50-59	12	13.2
60+	2	2.2
Total	91	100

Ninety-one of the respondents reported the number of years of experience in the district and the number of years in education overall. Although the survey was sent to educators who were in their first three years of contracted employment with the district, some responded with more than three years in the district. This may be the result of teachers who leave the district and return resulting in a total of years in the district equaling more than three. Respondents in their first year were considered to have “0” years of experience in the district, those in their second year in the district were categorized as “1”, and the progression continued for the 91 who responded. The majority of the respondents were within their first three years of teaching in the district: 24 (26.4%) reported themselves as first years or “0” years in the district, 32 (25.2%) reported themselves as second years or “1” year in the district, and 28 (30.8%) reported themselves as third years or “2” years in the district. Years of experience in the school district are listed in Table 7.

Table 7.

Years of Experience in District

	Frequency	Percentage
0	24	26.4
1	32	35.2
2	28	30.8
3	3	3.3
4	3	3.3
5	1	1.1
Total	91	100

The average number of years of experience in education was 7.67 years with a standard deviation of 7.531 years. The standard deviation is high compared to the mean due to the sample reporting a large range of years of experience. The range was zero to 37 years of experience. To further analyze the data, the years of experience were categorized into three categories: “beginner” with zero to one year of experience, “novice” with two to five years of experience, and “veteran” with six or more years of experience. Although the survey was sent to probationary teachers who were within their first three years of employment in the district, the majority of the sample reported being in education six or more years (48.4%). Only 15 (16.5%) respondents were within their first two years of experience in education. The novice group, those with between two and five years of experience, included 32 (35.2%) of the respondents. Years of experience in education data are listed in Table 8. Years of experience in education category data are listed in Table 9.

Table 8.

Years in Education

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Years in Education	91	0	37	7.67	7.531	56.712
Years of Exp in District	91	0	5	1.25	1.060	1.124
Valid N (listwise)	91					

Table 9.

Years in Education by Category

	Frequency	Percentage
Beginner	15	16.5
Novice	32	35.2
Veteran	44	48.4
Total	91	100

Ninety-one of the 140 surveyed responded to the questions regarding whether education was their first, second, or third-or-more career. All respondents were asked whether education was their first career. Fifty-three (58.2%) responded that education was their first career. The 38 (41.8%) who responded that education was not their first career were asked if education was their second career. Of those 38, 30 (33.0%) responded that education was their second career and eight (8.8%) responded that education was neither their first nor second career. Career data are listed in Table 10.

Table 10.

First and Second Career

	Frequency	Percentage
First Career	53	58.2
Second Career	30	33
Neither	8	8.8
Total	91	100

Ninety responded to the question about preparation programs. The majority of the respondents reported that they had been certified through a traditional preparation program (85.6%). The 13 (14.4%) others reported being certified through an alternative licensure program. Teacher preparation program data are listed in Table 11.

Table 11.

Type of Preparation Program

	Frequency	Percentage
Traditional	77	85.6
Alternative	13	14.4
Total	90	100

Research Question #1

“To what extent do probationary teachers report role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical environment and how do their reports compare to the normative population?”

The intent of this research question was to determine the amount of occupational stress reported by probationary teachers. This was measured by the six scales of the OSI-R occupational stress dimension called the Occupational Roles Questionnaire (ORQ). The scales are Role Overload (RO), Role Insufficiency (RI), Role Ambiguity (RA), Role Boundary (RB), Responsibility (R), and Physical Environment (PE). There were ten items for each of the six scales. The items for each scale were totaled to provide the raw score and transferred to the gender-specific profile form to determine the participant's T score for each scale. T scores were used to interpret the raw scores. The raw scores were used to compare the sample to the normative population provided by the OSI-R Professional Manual (Osipow, 1998). Raw scores for the ORQ are listed in Table 12.

T scores between 40 and 59 are within one standard deviation of the mean and are within the normal range of stress for the ORQ. T scores in the 60 to 69 range denote mild levels of maladaptive stress. T scores of 70 or higher are considered in the mal-adaptive stress range. T scores below 40 are indicative of an absence of occupational stress or less than average stress. T scores for the ORQ are listed in Table 13.

The raw scores for the respondent sample indicate that the highest areas of reported stress are in the Role Overload and Responsibility scales with means of 30.77 and 26.54 respectively. Role Insufficiency (19.81), Role Ambiguity (19.21), and Physical Environment (17.13) were the lowest scale means. T score results for the six scales were similar to the raw score results.

Table 12.

Raw Scores of the ORQ Respondent Sample

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Role Overload Raw Score	91	15	46	30.77	6.904	47.668
Role Insufficiency Raw Score	91	10	37	19.81	5.762	33.198
Role Ambiguity Raw Score	91	10	34	19.21	5.820	33.878
Role Boundary Raw Score	90	10	41	20.94	6.346	40.278
Responsibility Raw Score	91	14	40	26.54	6.136	37.651
Physical Environment Raw Score	90	10	34	17.13	5.521	30.476
Valid N (listwise)	89					

Table 13.

T scores for ORQ Respondent Sample

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Role Overload	91	37	79	58.52	9.622	92.586
Role Insufficiency	91	32	63	43.67	6.717	45.112
Role Ambiguity	91	31	71	48.49	9.244	85.453
Role Boundary	90	31	78	47.82	10.044	100.889
Responsibility	91	30	71	52.36	8.634	74.545
Physical Environment	90	12	73	48.31	8.228	67.700
Valid N (listwise)	89					

Table 14 provides an interpretation of the T scores for the six scales by category. The T score categories are “less than average stress” (below 40), “average stress” (40-59), “above average stress” (60-69), and “mal-adaptive stress” (70 or above). The majority of respondents reported average stress for all six scales. Role Overload had the highest percentage of above average and mal-adaptive levels of stress with Responsibility second in respondents’ ratings of above average and mal-adaptive stress. Based on the interpretation from the OSI-R manual, above average stress and mal-adaptive stress on the Role Overload scale indicate that respondents feel their job demands exceed both personal and workplace resources and being able to accomplish their workload is compromised. Above average and mal-adaptive stress on the Responsibility scale indicates the respondents feel a great deal of responsibility for the performance and welfare of others on the job.

Table 15 shows the results of the one-sample t-test completed for each of the six scales. The raw score means for each of the six scales were compared to the means for the normative population listed in the OSI-R manual and are listed as the test value in Table 15. The results indicate that there is a significant difference ($p=0.01$) between the reported levels of stress of the respondents of this survey as compared to the survey’s normative population to include the following scales: Role Overload, Role Insufficiency, and Role Ambiguity. There is not a significant difference between the respondents and the normative population for the Role Boundary, Responsibility, and Physical Environment scales.

Table 14.

Levels of Stress for the ORQ by Category

Levels of Stress	Role Overload		Role Insufficiency		Role Ambiguity		Role Boundary		Responsibility		Physical Environment	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
less than average stress	2	2.2	28	30.8	16	17.6	23	25.8	7	7.7	23	25.8
average stress	47	51.6	59	64.8	64	70.3	55	61.8	65	71.4	55	61.8
above average stress	30	33	4	4.4	10	11	10	11.2	16	17.6	10	11.2
mal-adaptive stress	12	13.2	0	0	1	1.1	1	1.1	3	3.3	1	1.1
Total N/ Percent	91	100	91	100	91	100	89	100	91	100	89	100

Table 15.

One-Sample t-test for the Six Scales of the ORQ

ORQ Scale	N	Sample Mean	Std. Deviation	Norm Group Mean	t	df	Sig. (2-tailed)	Mean Difference	99% Confidence Interval of the Difference	
									Lower	Upper
Role Overload	91	30.77	6.904	26.14	6.396	90	0 [‡]	4.629	2.72	6.53
Role Insufficiency	91	19.81	5.762	23.77	-6.551	90	0 [‡]	-3.957	-5.55	-2.37
Role Ambiguity	91	19.21	5.82	20.98	-2.903	90	0 [‡]	-1.771	-3.38	-0.17
Role Boundary	90	20.94	6.346	22.33	-2.071	89	0.041	-1.386	-3.15	0.38
Responsibility	91	26.54	6.136	26.14	0.619	90	0.537	0.398	-1.29	2.09
Physical Environment	90	17.13	5.521	17.66	-0.905	89	0.368	-0.527	-2.06	1.01

[‡] Denotes Statistical Significance

Based on the definitions of the scales, the respondents reported greater than average levels of stress related to job demands exceeding both personal and workplace resources and greater difficulty in accomplishing workloads than the normative population. Respondents also reported higher levels of stress in relation to the extent to which their training, education, skills, and experience were either inadequate or inappropriate to the job requirements. Respondents also reported higher levels of stress in relation to the extent to which priorities, expectations, and evaluation criteria were clear.

Research Question #2

“To what extent do probationary teachers report the use of recreation, self-care, social support, and rational/ cognitive coping to alleviate stress and how do their reports compare to the normative population?”

The intent of this research question was to determine the extent to which coping resources are utilized by probationary teachers. The OSI-R coping resources dimension is measured by a set of four scales and is called the Personal Resources Questionnaire (PRQ). The scales are Recreation (RE), Self-Care (SC), Social Support (SS), and Rational/ Cognitive Coping (RC). There were ten items for each of the four scales. The items for each scale were totaled to provide the raw score and transferred to the gender-specific profile form to determine the participant’s T score for each scale. T scores were used to interpret the raw scores. The raw scores were used to compare the sample to the normative population. Raw scores for the PRQ are listed in Table 16.

Table 16.

Raw Scores of PQR Respondent Sample

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Recreation Raw Score	89	12	43	25.57	6.676	44.566
Self Care Raw Score	89	15	41	28.58	6.208	38.541
Social Support Raw Score	89	23	50	42.93	6.580	43.291
Rational Cognitive Raw Score	89	25	50	37.08	5.216	27.210
Valid N (listwise)	89					

T scores between 40 and 59 are within one standard deviation of the mean and are interpreted as within the normal range of coping for the PRQ. T scores of 60 or higher designate highly developed coping resources. T scores below 40 are indicative of an absence of coping resources or deficient coping. T scores between 40 and 59 are considered average coping resources. T scores for the PRQ are listed in Table 17.

The majority of the respondents reported average or above average coping for the four scales. More respondents reported highly developed coping in the area of Self-Care (24.7%). Respondents reported the lowest level of coping in the area of Recreation. T score category data for the PRQ are listed in Table 18.

Table 17.

T Scores of the PQR Respondent Sample

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Recreation	89	29	74	49.18	9.811	96.263
Self Care	89	33	75	53.33	9.250	85.563
Social Support	89	26	62	52.27	8.260	68.222
Rational Cognitive	89	33	73	51.62	8.109	65.761
Valid N (listwise)	89					

Table 18.

Levels of Coping by Category

Levels of coping resources	Recreation		Self-Care		Social Support		Rational/ Cognitive	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Deficient coping resources	11	12.4	5	5.6	8	9	8	9
Average coping resources	62	69.7	62	69.7	61	68.5	67	75.3
Highly developed coping resources	16	18	22	24.7	20	22.5	14	15.7
Total N/ Percent	89	100	89	100	89	100	89	100

Eighty-nine of the 91 survey respondents completed the PRQ portion of the survey. Table 19 shows the results of the one-sample t-test completed for each of the four scales comparing the raw score means to the mean of the normative population. The results indicate that there is a significant difference ($p=0.01$) between the reported utilization of coping resources of the respondents of this survey as compared to the survey's normative population to include the following scales: Self-Care and Social Support. There is not a significant difference between the respondents and the normative population for the Recreation and Rational/ Cognitive scales.

The respondents reported higher levels of coping in relation to the extent to which they regularly engaged in personal activities which reduce or alleviate chronic stress. The respondents also reported higher levels of coping in relation to the extent to which they felt support and help from those around them.

Research Question #3

“Is there a relationship between reports of occupational stress and certain characteristics such as elementary or secondary teaching level, gender, years of experience in teaching, and years of experience in the school district?”

The intent of question 3 was to determine what relationship exists between reported levels of occupational stress for the six scales and demographic characteristics including grade level, gender, years of experience in education, and years of experience in the school district. Chi-Square analysis and One-way analysis of variance (ANOVA) were run based on the comparisons of the different types of data.

Table 19.

One-Sample t-test for the Four Scales of the PRQ

Scale	N	Sample Mean	Std. Deviation	Norm Group Mean	t	df	Sig. (2-tailed)	Mean Difference	99% Confidence Interval of the Difference	
									Lower	Upper
Recreation	89	25.57	6.676	26.06	-0.688	88	0.493	-0.487	-2.35	1.38
Self-Care	89	28.58	6.208	26.78	2.742	88	0.007‡	1.804	0.07	3.54
Social Support	89	42.93	6.58	40.71	3.187	88	0.002‡	2.223	0.39	4.06
Rational/Cognitive	89	37.08	5.216	36.92	0.287	88	0.775	0.159	-1.3	1.61

‡ Denotes Statistical Significance

All demographic data were placed into categories to complete the Chi-Square analysis. Grade level was categorized into elementary (PreK and K-5) and secondary (6-8 and 9-12). Gender was categorized as male or female. Years of experience in education were categorized into beginner (0-1 years), novice (2-5 years), and veteran (6 or more years). Years of experience in the district were listed as years 0, 1, 2, 3, 4, and 5. Pearson Chi-Square values, degrees of freedom, and Asymptotic Significance are provided for each of the T score categories (less than average stress, average stress, above average stress, and mal-adaptive stress) for each of the six scales and each demographic analyzed. The extended crosstabs tables are located in Appendix B.

A One-way ANOVA was completed for each of the six scales to analyze the relationship between the demographic data and the raw scores reported by the respondents. All demographic data were lumped into the same categories as the Chi-Square analysis (grade level, gender, years of experience in education, and years of experience in the district). The descriptive statistics and ANOVA tables are included for each demographic category.

Grade-Level

According to the Chi-Square analysis, there was no significant difference at the 95% confidence interval of the reported T Score categories of below average stress, average stress, above average stress, and mal-adaptive stress for elementary and secondary categories for each of the six scales of the ORQ. Table 20 provides the Pearson Chi-Square statistics. The crosstabs tables are listed in Appendix B for each of the six scales.

Table 20.

Chi-Square Analysis Comparing Grade Level and ORQ T Score Categories

Elementary or Secondary	Pearson Chi-Square		
Occupation Stress Scale	Value	df	Asymp Sig (2-sided)
Role Overload	5.008	3	0.171
Role Insufficiency	1.138	2	0.566
Role Ambiguity	2.079	3	0.556
Role Boundary	2.605	3	0.457
Responsibility	5.304	3	0.151
Physical Environment	0.895	3	0.827

Table 21 provides descriptive statistics for the One-Way ANOVA for the raw scores of each of the six scales and grade level. Table 22 provides the results of the One-Way ANOVA with significance. There is no significant difference between elementary and secondary raw scores for each of the six scales.

Table 21.
Descriptive Statistics for Grade Level and ORQ Raw Scores

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Role Overload Raw Score	Elementary	32.09	6.900	1.166	29.72	34.46
	Secondary	30.60	7.014	1.046	28.49	32.71
	Total	31.25	6.960	.778	29.70	32.80
Role Insufficiency Raw Score	Elementary	19.97	5.426	.917	18.11	21.84
	Secondary	19.11	5.894	.879	17.34	20.88
	Total	19.49	5.675	.634	18.22	20.75
Role Ambiguity Raw Score	Elementary	18.91	5.792	.979	16.92	20.90
	Secondary	19.04	6.310	.941	17.15	20.94
	Total	18.99	6.051	.677	17.64	20.33
Role Boundary Raw Score	Elementary	21.38	6.620	1.135	19.07	23.69
	Secondary	20.20	6.771	1.009	18.17	22.23
	Total	20.71	6.689	.753	19.21	22.21
Responsibility Raw Score	Elementary	27.49	5.700	.964	25.53	29.44
	Secondary	26.42	6.676	.995	24.42	28.43
	Total	26.89	6.252	.699	25.50	28.28
Physical Environment Raw Score	Elementary	17.06	5.027	.862	15.30	18.81
	Secondary	17.91	6.145	.916	16.06	19.76
	Total	17.54	5.672	.638	16.27	18.81

Table 22.

One-Way ANOVA for Grade Level and ORQ Raw Scores

		Sum of Squares	df	Mean Square	F	Sig.
Role Overload Raw Score	Between Groups	43.457	1	43.457	.896	.347
	Within Groups	3783.543	78	48.507		
	Total	3827.000	79			
Role Insufficiency Raw Score	Between Groups	14.572	1	14.572	.449	.505
	Within Groups	2529.416	78	32.428		
	Total	2543.988	79			
Role Ambiguity Raw Score	Between Groups	.334	1	.334	.009	.925
	Within Groups	2892.654	78	37.085		
	Total	2892.988	79			
Role Boundary Raw Score	Between Groups	27.074	1	27.074	.602	.440
	Within Groups	3463.229	77	44.977		
	Total	3490.304	78			
Responsibility Raw Score	Between Groups	22.267	1	22.267	.567	.454
	Within Groups	3065.721	78	39.304		
	Total	3087.988	79			
Physical Environment Raw Score	Between Groups	14.068	1	14.068	.434	.512
	Within Groups	2495.527	77	32.409		
	Total	2509.595	78			

Gender

According to the Chi-Square analysis, there was no significant difference of the reported T Score categories of below average stress, average stress, above average stress, and mal-adaptive stress for male and female categories for Role Overload, Role Insufficiency, Role Ambiguity, Role Boundary, and Responsibility. There is a significant difference for the Physical Environment

scale ($p=0.05$). Males reported higher levels of stress than females in the area of Physical Environment. The Physical Environment scale measures the extent to which the respondents were exposed to high level of environmental or extreme physical conditions. Table 23 provides the Pearson Chi-Square statistics. The crosstabs tables are listed in the appendix for each of the six scales.

Table 23.

Chi-Square Analysis Comparing Gender and ORQ T Score Categories

Gender	Pearson Chi-Square		
	Value	df	Asymp Sig (2-sided)
Occupation Stress Scale			
Role Overload	3.264	3	0.353
Role Insufficiency	0.79	2	0.674
Role Ambiguity	0.564	3	0.905
Role Boundary	4.943	3	0.176
Responsibility	7.243	3	0.065
Physical Environment	13.205	3	0.004‡

‡ Denotes Statistical Significance

Table 24 provides descriptive statistics for the One-Way ANOVA for the raw scores of each of the six scales and grade level. Table 25 provides the results of the One-Way ANOVA with significance. There is no significant difference between male and female raw scores for Role Overload, Role Insufficiency, Role Ambiguity, Role Boundary, and Responsibility. There is a significant difference for the Physical Environment scale. Males reported higher levels of stress related to exposure to environmental or extreme physical conditions as compared to females.

Table 24.

Descriptive Statistics for Gender and ORQ Raw Scores

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Role Overload Raw Score	Male	18	29.78	6.274	1.479	26.66	32.90
	Female	73	31.01	7.070	.827	29.36	32.66
	Total	91	30.77	6.904	.724	29.33	32.21
Role Insufficiency Raw Score	Male	18	20.67	6.010	1.417	17.68	23.66
	Female	73	19.60	5.722	.670	18.27	20.94
	Total	91	19.81	5.762	.604	18.61	21.01
Role Ambiguity Raw Score	Male	18	19.44	6.644	1.566	16.14	22.75
	Female	73	19.15	5.649	.661	17.83	20.47
	Total	91	19.21	5.820	.610	18.00	20.42
Role Boundary Raw Score	Male	18	21.17	7.556	1.781	17.41	24.92
	Female	72	20.89	6.067	.715	19.46	22.31
	Total	90	20.94	6.346	.669	19.62	22.27
Responsibility Raw Score	Male	18	25.83	6.600	1.556	22.55	29.12
	Female	73	26.71	6.052	.708	25.30	28.12
	Total	91	26.54	6.136	.643	25.26	27.82
Physical Environment Raw Score	Male	18	19.50	6.750	1.591	16.14	22.86
	Female	72	16.54	5.052	.595	15.35	17.73
	Total	90	17.13	5.521	.582	15.98	18.29

Table 25.

One-Way ANOVA for Gender and ORQ Raw Scores

		Sum of Squares	df	Mean Square	F	Sig.
Role Overload Raw Score	Between Groups	22.056	1	22.056	.460	.499
	Within Groups	4268.097	89	47.956		
	Total	4290.154	90			
Role Insufficiency Raw Score	Between Groups	16.345	1	16.345	.490	.486
	Within Groups	2971.479	89	33.387		
	Total	2987.824	90			
Role Ambiguity Raw Score	Between Groups	1.246	1	1.246	.036	.849
	Within Groups	3047.787	89	34.245		
	Total	3049.033	90			
Role Boundary Raw Score	Between Groups	1.111	1	1.111	.027	.869
	Within Groups	3583.611	88	40.723		
	Total	3584.722	89			
Responsibility Raw Score	Between Groups	11.156	1	11.156	.294	.589
	Within Groups	3377.459	89	37.949		
	Total	3388.615	90			
Physical Environment Raw Score	Between Groups	126.025	1	126.025	4.288	.041 ‡
	Within Groups	2586.375	88	29.391		
	Total	2712.400	89			

‡ Denotes Statistical Significance

Years of Experience in Education by Category

According to the Chi-Square analysis, there was no significant difference of the reported T Score categories of below average stress, average stress, above average stress, and mal-adaptive stress for years of experience in education by category for Role Overload, Role Insufficiency, Role Boundary, and Physical

Environment. There is a significant difference for the Role Ambiguity and Responsibility scales. Respondents within their first 2 years of experience in education (Beginner) reported higher levels of stress as related to the extent to which priorities, expectations, and evaluation criteria were clear as compared to those with more than two years of experience (Novice and Veteran). Veteran teachers reported statistically significant higher levels of stress as compared to Beginner and Novice teachers in the area of Responsibility or the extent to which they felt responsibility for the performance and welfare of others on the job. Table 26 provides the Pearson Chi-Square statistics. The crosstabs tables are listed in the appendix for each of the six scales.

Table 26.

Chi-Square Analysis Comparing Years in Education by Category and ORQ T Score Categories

Years in Education	Pearson Chi-Square		
Occupation Stress Scale	Value	df	Asymp Sig (2-sided)
Role Overload	11.375	6	0.077
Role Insufficiency	6.107	4	0.191
Role Ambiguity	19.202	6	0.004‡
Role Boundary	11.572	6	0.072
Responsibility	14.866	6	0.021‡
Physical Environment	5.285	6	0.508

‡ Denotes Statistical Significance

Table 27 provides descriptive statistics for the One-Way ANOVA for the raw scores of each of the six scales and years of experience in education by category. Table 28 provides the results of the One-Way ANOVA with significance. There is no significant difference between beginner, novice, and veteran respondents' raw scores for Role Overload, Role Insufficiency, Role Boundary, Responsibility, and Physical Environment. There is a significant difference for the Role Ambiguity scale. Beginners report higher levels of stress related to priorities, expectations, and evaluation criteria as compared to their more experienced counterparts.

Years of Experience in the District

According to the Chi-Square analysis, there was no significant difference of the reported T Score categories of below average stress, average stress, above average stress, and mal-adaptive stress for years of experience in the district by category for Role Overload, Role Boundary, Responsibility, and Physical Environment. There is a significant difference ($p=0.05$) for the Role Insufficiency and Role Ambiguity scales. Respondents with greater years of experience in the district (years 4 and 5) report higher levels of stress than those with fewer than 4 years of experience in the district in the areas of Role Insufficiency and Role Ambiguity. Due to the low number of respondents in the 4 and 5 years of experience in the district categories, no statistical significance should be drawn from this sample. Table 29 provides the Pearson Chi-Square statistics. The crosstabs tables are listed in the appendix for each of the six scales.

Table 27.
Descriptive Statistics for Years of Experience in Education by Category and ORQ Raw Scores

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Role Overload Raw Score	Beginner	33.60	4.968	1.283	30.85	36.35
	Novice	30.31	6.765	1.196	27.87	32.75
	Veteran	30.14	7.442	1.122	27.87	32.40
	Total	30.77	6.904	.724	29.33	32.21
Role Insufficiency Raw Score	Beginner	20.60	4.579	1.182	18.06	23.14
	Novice	20.38	6.189	1.094	18.14	22.61
	Veteran	19.14	5.841	.881	17.36	20.91
	Total	19.81	5.762	.604	18.61	21.01
Role Ambiguity Raw Score	Beginner	24.80	5.519	1.425	21.74	27.86
	Novice	18.94	5.781	1.022	16.85	21.02
	Veteran	17.50	4.791	.722	16.04	18.96
	Total	19.21	5.820	.610	18.00	20.42
Role Boundary Raw Score	Beginner	23.20	7.073	1.826	19.28	27.12
	Novice	21.19	6.161	1.089	18.97	23.41
	Veteran	19.98	6.151	.938	18.08	21.87
	Total	20.94	6.346	.669	19.62	22.27
Responsibility Raw Score	Beginner	29.33	6.694	1.728	25.63	33.04
	Novice	25.41	5.417	.958	23.45	27.36
	Veteran	26.41	6.274	.946	24.50	28.32
	Total	26.54	6.136	.643	25.26	27.82
Physical Environment Raw Score	Beginner	18.87	5.705	1.473	15.71	22.03
	Novice	16.75	4.586	.811	15.10	18.40
	Veteran	16.81	6.076	.927	14.94	18.68
	Total	17.13	5.521	.582	15.98	18.29

Table 28.

One-Way ANOVA for Years of Experience in Education by Category and ORQ

Raw Scores

		Sum of Squares	df	Mean Square	F	Sig.
Role Overload Raw Score	Between Groups	144.497	2	72.249	1.534	.221
	Within Groups	4145.657	88	47.110		
	Total	4290.154	90			
Role Insufficiency Raw Score	Between Groups	39.542	2	19.771	.590	.556
	Within Groups	2948.282	88	33.503		
	Total	2987.824	90			
Role Ambiguity Raw Score	Between Groups	599.758	2	299.879	10.774	.000‡
	Within Groups	2449.275	88	27.833		
	Total	3049.033	90			
Role Boundary Raw Score	Between Groups	118.470	2	59.235	1.487	.232
	Within Groups	3466.252	87	39.842		
	Total	3584.722	89			
Responsibility Raw Score	Between Groups	158.927	2	79.463	2.165	.121
	Within Groups	3229.688	88	36.701		
	Total	3388.615	90			
Physical Environment Raw Score	Between Groups	54.155	2	27.078	.886	.416
	Within Groups	2658.245	87	30.555		
	Total	2712.400	89			

‡ Denotes Statistical Significance

Table 29.

Chi-Square Analysis Comparing Years in District and ORQ T Score Categories

Years in District	Pearson Chi-Square		
Occupation Stress Scale	Value	df	Asymp Sig (2-sided)
Role Overload	23.939	15	0.066
Role Insufficiency	28.853	10	0.006‡
Role Ambiguity	41.025	15	0‡
Role Boundary	17.754	15	0.276
Responsibility	22.646	15	0.092
Physical Environment	24.85	15	0.052

‡ Denotes Statistical Significance

Tables 30 and 31 provides descriptive statistics for the One-Way ANOVA for the raw scores of each of the six scales and years of experience in the district. Table 32 provides the results of the One-Way ANOVA with significance. There is no significant difference between years 0, 1, 2, 3, 4, and 5 respondents' raw scores for Role Insufficiency, Role Boundary, Responsibility, and Physical Environment. There is a significant difference for the Role Overload and Role Ambiguity scales. Respondents with 4 and 5 years of experience in the district report high levels of stress in terms of Role Overload and Role Ambiguity than those with 0, 1, 2, and 3 years of experience. Again, the sample sizes of these groups are not large enough to equate correct statistical significance.

Table 30.

Descriptive Statistics for Years in District and ORQ Raw Scores for the RO, RI, RA, and RB Scales

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Role Overload Raw Score	0	24	32.13	6.854	1.399	29.23	35.02
	1	32	27.94	5.967	1.055	25.79	30.09
	2	28	31.43	6.477	1.224	28.92	33.94
	3	3	31.67	5.033	2.906	19.16	44.17
	4	3	39.00	11.269	6.506	11.01	66.99
	5	1	43.00	.	.	.	.
	Total	91	30.77	6.904	.724	29.33	32.21
Role Insufficiency Raw Score	0	24	20.08	6.021	1.229	17.54	22.63
	1	32	19.25	4.925	.871	17.47	21.03
	2	28	19.50	5.960	1.126	17.19	21.81
	3	3	19.67	7.234	4.177	1.70	37.64
	4	3	21.00	3.464	2.000	12.39	29.61
	5	1	37.00	.	.	.	.
	Total	91	19.81	5.762	.604	18.61	21.01
Role Ambiguity Raw Score	0	24	20.96	6.557	1.339	18.19	23.73
	1	32	17.97	5.427	.959	16.01	19.93
	2	28	18.04	4.811	.909	16.17	19.90
	3	3	18.67	4.041	2.333	8.63	28.71
	4	3	28.00	5.568	3.215	14.17	41.83
	5	1	25.00	.	.	.	.
	Total	91	19.21	5.820	.610	18.00	20.42
Role Boundary Raw Score	0	24	20.25	4.848	.990	18.20	22.30
	1	32	19.69	6.587	1.164	17.31	22.06
	2	28	21.75	6.564	1.240	19.20	24.30
	3	2	21.50	2.121	1.500	2.44	40.56
	4	3	27.67	8.505	4.910	6.54	48.79
	5	1	34.00	.	.	.	.
	Total	90	20.94	6.346	.669	19.62	22.27

Table 31.

Descriptive Statistics for Years in District and ORQ Raw Scores for the R and PE Scales

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Responsibility Raw Score	0	24	28.63	6.056	1.236	26.07	31.18
	1	32	24.75	5.512	.974	22.76	26.74
	2	28	26.25	5.917	1.118	23.96	28.54
	3	3	28.33	9.074	5.239	5.79	50.87
	4	3	27.67	10.693	6.173	1.10	54.23
	5	1	33.00	.	.	.	.
	Total	91	26.54	6.136	.643	25.26	27.82
Physical Environment Raw Score	0	24	18.17	6.638	1.355	15.36	20.97
	1	31	17.00	4.633	.832	15.30	18.70
	2	28	15.57	5.308	1.003	13.51	17.63
	3	3	19.33	3.055	1.764	11.74	26.92
	4	3	19.00	4.359	2.517	8.17	29.83
	5	1	28.00	.	.	.	.
	Total	90	17.13	5.521	.582	15.98	18.29

Table 32.

One-Way ANOVA for Years in District and ORQ Raw Scores

Sum of Squares			df	Mean Square	F	Sig.
Role Overload Raw Score	Between Groups	668.130	5	133.626	3.136	.012‡
	Within Groups	3622.024	85	42.612		
	Total	4290.154	90			
Role Insufficiency Raw Score	Between Groups	314.324	5	62.865	1.999	.087
	Within Groups	2673.500	85	31.453		
	Total	2987.824	90			
Role Ambiguity Raw Score	Between Groups	427.475	5	85.495	2.772	.023‡
	Within Groups	2621.558	85	30.842		
	Total	3049.033	90			
Role Boundary Raw Score	Between Groups	386.931	5	77.386	2.033	.082
	Within Groups	3197.792	84	38.069		
	Total	3584.722	89			
Responsibility Raw Score	Between Groups	264.407	5	52.881	1.439	.219
	Within Groups	3124.208	85	36.755		
	Total	3388.615	90			
Physical Environment Raw Score	Between Groups	237.543	5	47.509	1.613	.166
	Within Groups	2474.857	84	29.463		
	Total	2712.400	89			

‡ Denotes Statistical Significance

Research Question #4

“Do probationary teachers report that participating in induction, mentoring, or coaching reduces their stress?”

The intent of question 4 was to determine the respondents' impressions of the effectiveness of the support programs in the district at alleviating stress. Respondents were asked to respond only to the support programs of which they were a part. They were asked to rank the program on a scale of 1 to 6 with 6 being the highest rank of perceived effectiveness. Of the 91 respondents, 44 (48.4%) ranked the coaching or sponsoring program, 65 ranked the mentoring program (71.4%), and 61 (67.0%) ranked the induction program. Data for the support programs are listed in Tables 33 and 34.

Table 33.

Descriptive Statistics for Coaching, Mentoring, and Induction

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Coaching sponsoring	44	1	6	3.91	1.507	2.271
Mentoring	65	1	6	4.38	1.433	2.053
Induction	61	1	6	3.08	1.406	1.977

The respondents identified the district mentoring program as the most effective at alleviating stress and the district induction program as the least effective of the three programs at alleviating stress. Overall, the results for mentoring and coaching were above 3.0 and were characterized as positive. The

result for the district induction program indicates that the respondents felt that the program was neutral at alleviating stress with a mean of 3.08

Table 34.

Frequencies and Percentages for Induction, Mentoring, and Coaching

	Induction		Mentoring		Coaching	
Rank	Frequency	Percent	Frequency	Percent	Frequency	Percent
1	9	14.8	3	4.6	3	6.8
2	13	21.3	5	7.7	6	13.6
3	17	27.9	8	12.3	8	18.2
4	11	18	14	21.5	9	20.5
5	8	13.1	18	27.7	11	25
6	3	4.9	17	26.2	7	15.9
Total	61	100	65	100	44	100

Summary

The purpose of the study was to measure what factors impact the stress levels of probationary teachers who may or may not be new to the field of education, to determine what demographic characteristics are related to higher levels of stress, and to determine what coping resources were successful in reducing stress. The purpose of the study was also to compare the stress levels and coping resources of probationary teachers to other professionals.

The study used the OSI-R to determine the stress levels of K-12 probationary teachers as related to role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical environment as measured by the Occupational Roles Questionnaire (ORQ) sub scale of the OSI-R.

A secondary purpose of the study was to determine the coping resources used by these teachers as measured by the Personal Resources Questionnaire (PRQ) of the OSI-R which measures recreation, self-care, social support, and rational/ cognitive coping. The sample of the study was 140 probationary teachers in a public school district. Teachers who participated in support programs such as induction, mentoring, or coaching in the school district rated their perceived effectiveness of these district programs at reducing their overall occupational stress.

The OSI-R was purchased and disseminated by the school district, and the researcher was granted permission to access and analyze the collected data. A Demographic Information Sheet was used by the district to collect information about each participant such as grade-level taught by each participant, job title, age range, gender, years of teaching for the school district, years of overall educational experience, rankings of the district support program(s), and type of preparation program. The data were compiled and analyzed using SPSS statistical analysis software.

Of the 140 people who were sent the survey, 91 responded which was a return rate of 65%. Majority of the respondents were female. The respondents were mainly teachers and taught at all levels. The ages of the respondents were primarily between the ages of 20 and 49. The average years of experience in education was 7.67 years with most being of the “veteran” category having been in the field of education more than six years and were in their first career. Majority of the respondents were in years 0, 1, and 2 in the district. A large majority of the respondents were trained in a traditional educational licensure program.

By analyzing the results of the frequency distributions of both the raw and T scores for each of the six scales of the ORQ to the normative population mean, the results indicated that the Role Overload scale had the highest mean of overall occupational stress. The Responsibility scale had a high mean, too.

By completing a One-sample t-test comparing the raw score means of the sample for each of the six scales of the ORQ to the normative population mean, the results indicated that there was a significant difference at the 99% confidence level for the Role Overload, Role Insufficiency, and Role Ambiguity scales.

By analyzing the results of the frequency distributions of both the raw and T scores for each of the four scales of the PRQ to the normative population mean, the results indicated that the Self-Care and Social Support scales had the highest mean indicating more advanced coping resources for those scales.

By completing a One-sample t-test comparing the raw score means of the sample for each of the four scales of the PRQ to the normative population mean, the results indicated that there was a significant difference at the 99% confidence level for the Self-Care and Social Support scales.

To analyze the relationship between occupation stress and demographic characteristics, Chi-Square and One-way ANOVA were completed. There was statistical significance at the 95% confidence interval for the Physical Environment scale where males reported higher scores than females. Beginners, within 0-1 years of educational experience, reported statistically significant scores as compared to their more experience counterparts on the Role Ambiguity scale. There was no statistically significant difference for years of experience in the district or grade-level taught.

CHAPTER V: DISCUSSION

Introduction

This chapter presents a summary of the study and conclusions drawn from the data presented in the Results chapter. This chapter also provides major findings relevant to the literature and recommendations for future research.

Summary of the Study

Overview of the Problem

Teacher perceptions of occupational stress are their reality. District and building level administration, state legislators, governors, policy makers, and tax payers need to pay attention to the effects of stress on teachers. Probationary teachers, teachers within their first three years of teaching within a school district in Colorado, leave the profession at alarming rates causing districts and states to put more money into recruiting and training new teachers. Students are directly impacted when the increased stress placed on teachers causes inadequate or mediocre teaching to occur in the classroom. By assessing teacher perceptions of job-related stress and their ability to cope with stress, school districts can determine if the support provided to new teachers is adequate at reducing stress and ultimately retaining teachers.

Studies of the stress of educators abound, but many use survey instruments designed for educators only. This study used an inventory that is applicable to most professions, the Occupational Stress Inventory-Revised (OSI-R). The use of the OSI-R provided a broader perspective and allowed for comparison of the sample to the occupationally diverse normative population. The occupational groups represented in the OSI-R include Executive, Professional, Technical, Marketing, Administrative Support, Public Service/ Safety, and Agricultural/ Production/ Laborer. The “Professional” group was used for comparison in this study.

Purpose Statement

The purpose of the study was to measure what factors impact the stress levels of probationary teachers who may or may not be new to teaching, to examine what demographic characteristics might be related to higher levels of stress, and to examine what coping resources might be successful in reducing stress. A secondary purpose was to compare the stress levels and coping resources of probationary teachers to other professionals. Additionally, teachers who participated in support programs such as induction, mentoring, or coaching in the school district rated their perceived effectiveness of these district programs at reducing their overall occupational stress.

Research Questions

1. To what extent do probationary teachers report role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical

environment and how do their reports compare to the normative population?

2. To what extent do probationary teachers report the use of recreation, self-care, social support, and rational/ cognitive coping to alleviate stress and how do their reports compare to the normative population?
3. Is there a relationship between reports of occupational stress and certain characteristics such as elementary or secondary teaching level, gender, years of experience in teaching, and years of experience in the school district?
4. Do probationary teachers report that participating in induction, mentoring, or coaching reduces their stress?

Conclusions by Question Related to the Literature

The demographic information of the respondents indicated that there were four times more females than males who were in the probationary phase of employment in this district at the time the survey was taken. The majority of the respondents worked at the secondary level and were teachers. The most represented age category was the 30 to 39 group with a fairly even distribution of reported ages for the twenties, thirties, and forties age categories. The majority of teachers was within their second year of employment for the school district and reported more than 5 years of experience in education.

The sample is not a typical sample of probationary teachers because most of them have been in the field of education more than five years and are considered veteran in status for the purpose of this study. Forty-four percent

of the respondents reported being older than 40 which coincides with 48.4 % reporting more than five years of experience in education. Another surprising demographic of this sample was the approximately 42% of respondents that reported that education was not their first career. This sample is an older, more experienced work force even though they are within their first three years of employment in the district.

Question #1

“To what extent do probationary teachers report role overload, role insufficiency, role ambiguity, role boundary, responsibility, and physical environment and how do their reports compare to the normative population?”

By analyzing the results of the frequency distributions of both the raw and T scores for each of the six scales of the ORQ, the results indicated that the Role Overload scale had the highest mean of overall occupational stress. The Responsibility scale had a high mean, too, when compared to other scale means. The majority of respondents reported average stress for all six scales, but Role Overload had the highest reported percentage of above average and mal-adaptive stress levels with the Responsibility scale a close second.

The above average and mal-adaptive stress reported on the Role Overload scale indicates that these respondents feel their job demands exceed their personal and workplace resources causing their ability to complete their work to be compromised. Chen and Miller (1997) identified organizational characteristics such as time constraints, workload, job demands, role conflict, and role ambiguity as contributors to increased levels of stress which are all indicative of increased

levels of stress as pertaining to Role Overload. Other researchers found that teachers felt the largest contributor to stress was the lack of adequate time (Miller, et al, 1999). They felt they needed additional planning time due to the number of extra-curricular duties and classroom teaching time required to do their jobs well (Miller et al., 1999). These teachers are essentially reporting that they are overworked.

Respondents also indicated by the above average and mal-adaptive ranges of the Responsibility scale that they felt a great deal of responsibility for the performance and welfare of others in the job. Research concludes that teachers feel more stress when they perceive to have more responsibility and limited time to complete their responsibilities; (Bacharach, Bauer, & Conley, 1986; Bhagat & Allie, 1989; Minnunen & Leskinen, 1989; Stoeber & Renner, 2008). Teachers feel stressed by interference with their time, having too many demands placed on them, the demands being too difficult or not meaningful, and people or things detracting from the effectiveness of performance (Blase, 1986). The bottom line is that teachers are accountable to their students and what their students learn. Teachers feel a tremendous amount of responsibility for the performance and welfare of their students.

By completing a One-Sample t-test comparing the raw score means of the sample for each of the six scales of the ORQ to the normative population mean, the results indicate that there was a significant difference ($p=0.01$) for the Role Overload, Role Insufficiency, and Role Ambiguity scales. Although the respondents reported high levels of stress in the Responsibility scale, there was not a significant difference between the normative population and the respondent sample. Basically, professionals as a whole report higher levels of stress due

to the performance and welfare of others on the job. The sample, as compared to other professionals, did report significantly higher levels of stress for Role Overload, Role Insufficiency, and Role Ambiguity. Punch and Tuettemann (1990) determined that secondary teachers reported their level of psychological distress was twice that of the general population reinforcing the results from this study.

Probationary teachers are more stressed than other professionals and feel that their training, education, skills, and experience are either inadequate or inappropriate for the requirements of their jobs. They also reported higher levels of stress in relation to which their priorities, expectations, and evaluation criteria were clear when compared to other professionals.

According to the results of this study, probationary teachers, regardless of age or years in the field of education, feel overworked, insufficient in their roles, and lack clear guidance as related to their roles. Other researchers determined that the presence of role ambiguity leads to stress regardless of grade level (Bacharach et al., 1986). According to Shaw, Keiper, and Flaherty (1985), the most stress-causing event for teachers was notification that the teacher's performance was unsatisfactory. Harris, Haplin, and Haplin (1985) found teachers reported more stress in regards to professional inadequacy and job overload.

Researchers found that teachers' feelings of competence can affect stress: "self-competence is often regarded as an important determinant of how an individual copes with various stressful experiences" (Bhagat & Allie, 1989, p. 231).

Probationary teachers reporting above average and mal-adaptive levels of stress in the Role Overload, Role Ambiguity, and Role Insufficiency scales could

face burnout. Freidman and Farber (1992) found a strong correlation between burnout and how teachers perceive themselves both professionally competent and professionally satisfied. The less satisfied professionally or feelings of reduced levels of competency were highly correlated with burnout (Friedman & Farber, 1992).

Question #2

“To what extent do probationary teachers report the use of recreation, self-care, social support, and rational/ cognitive coping to alleviate stress and how do their reports compare to the normative population?”

By analyzing the results of the frequency distributions of both the raw and T scores for each of the for scales of the PRQ, the results indicate that the Self-Care and Social Support scales had the highest means indicating more advanced coping resources for those scales. This group of educators reported regularly engaging in personal activities which reduce or alleviate chronic levels of stress and felt supported and helped by those around them which also help alleviate chronic stress.

Self-Care and Social Support are both forms of active coping and reportedly used to cope with stress by this sample more than Recreation and Rational/Cognitive Coping. Researchers have focused on the active coping resources of teachers and determined that active coping is much more effective at mitigating teacher reported stress (Carmona, et.al., 2006; Dewe & Guest, 1990; Gaziel, 1993; Kyriacou, 2001; Pearlin & Schooler, 1978). Chan (1994)

determined that teachers cope by seeking support and relying on others to help them cope with stress.

Kyriacou's (2001) and van Dick and Wagner's (2001) research also supports the study's findings. Kyriacou (2001) determined the most frequent coping actions used by teachers to include trying to relax after work, devoting more time to particular tasks, discussing problems and expressing feelings to others, and having a healthy home life. Kyriacou (2001) notes that social support and effective coping directly impact a teacher's perception of stress; if the teacher views the situation in a different light, stress can be reduced even without removing the teacher from the situation. van Dick & Wagner (2001) determined that teachers who reported little social support were more likely to report higher levels of stress and strain while teachers who reported higher feelings of self-efficacy were less likely to report feelings of stress and strain.

Pajak and Blase (1984) completed a qualitative study of several teachers who used social support to cope with stress.

Teachers described the classroom as a demanding, yet fragile, reality that is continuously imperiled not only by student misbehavior but also by internal conflicts involving identification with students' behaviors, empathy with students' problems, and conflict between the teachers' conception of their professional role and their personal identities (Pajak & Blase, 1984, p. 168).

Pajak and Blase (1984) noted that more than half of the teachers revealed friendship and camaraderie as ways of coping with the stress of teaching.

This sample of educators was statistically more effective at coping in the areas of Self-Care and Social Support than most professionals and are considered to have coping efficacy. Coping efficacy involves how well a person deals with

the stress in their lives (Pearlin & Schooler, 1978). Those who are efficacious can balance the extent to which they cope with the life-strain they experience and the resultant stress (Pearlin & Schooler, 1978).

By completing a One-Sample t-test comparing the raw score means of the sample for each of the four scales of the PRQ to the normative population mean, the results indicate that there was a significant difference ($p=0.01$) for the Self-Care and Social Support scales. The sample reported significantly greater abilities of coping with stress by completing personal activities to alleviate stress and feel more significantly supported and helped by those around them.

Question #3

“ Is there a relationship between reports of occupational stress and certain characteristics such as elementary or secondary teaching level, gender, years of experience in teaching, and years of experience in the school district?”

To analyze the relationship between occupational stress and demographic characteristics, Chi-Square and One-Way ANOVA were completed. There was statistical significance ($p=0.05$) for the Physical Environment scale where males reported higher scores than females. The Physical Environment scale measures the extent to which the individual is exposed to high levels of environmental or extreme physical conditions. Males report more stress related to this area than females, but the sample of males is most likely too low to put weight into the finding.

Teachers with greater experience reported lower levels of stress while teachers within their first years of teaching reported greater stress (Miller, et. al., 1999). Beginners, within 0-1 years of educational experience, reported statistically significant scores as compared to their more experienced counterparts on the Role Ambiguity scale. They reported higher levels of stress in relation to which their priorities, expectations, and evaluation criteria were clearly understood. Newer teachers are confused about how performance is measured, their specific job expectations, and how to prioritize their responsibilities.

According to McCann and Johannessen (2004), the first five years of teaching are the most vulnerable time for educators. The first years are full of stressful situations that require coping methods, support, and professional training to aid in the retention of teachers. Relationships with students, parents, colleagues, and supervisors; workload and time management; knowledge about the subject taught and curriculum; evaluation of learning and grading of students; and autonomy and control over what and how to teach were the most identified concerns of the novice teachers interviewed by the researchers. McCann and Johannessen's (2004) analysis revealed "frustration results from the discrepancy between the teacher's expectations of the teaching experience and the realization of the actual experience" (p. 140).

Veteran teachers reported statistically significant higher levels ($p=0.05$) of stress as compared to Beginner and Novice teachers in the area of Responsibility. They felt more stress caused by having or feeling greater responsibility for the performance and welfare of others on the job which most likely translates to feeling responsible for the performance of their students and possibly their younger, more inexperienced peers.

Because this sample is an older, more experienced work force, these teachers may actually discern the tasks of their job better and not feel as overloaded as those reporting education as their first career. The data shows that almost 42% of the respondents listed teaching as a second or more career. This unravels the long held assumption that probationary teachers are young and inexperienced. This sample was neither young nor inexperienced and possibly points to why this sample reported feeling greater responsibility instead of greater role overload

The research identifies that certain situations cause more stress than others regardless of the grade level taught, gender of the teacher, or experience of the teacher with the largest source being any situation that impacts time and/ or autonomy (Ballet, Kelchtermans, & Loughran, 2006; Blase, 1986; McCormick & Solman, 1992; Punch & Tuettmann, 1990; Raschke, et.al., 1985) and what this researcher would deem as role overload.

Educators who report above average and mal-adaptive levels of stress in any of these scales are headed toward burnout. According to Schwab (1983), burnout in teachers results from feelings of emotional exhaustion, depersonalization causing the development of cynical attitudes, and the overall loss of a feeling of accomplishment on the job. Burnout is more prevalent in younger, more inexperienced teachers (Schwab, 1983). Male teachers were more likely to have negative attitudes than females, and secondary teachers were more likely to exhibit negative attitudes than elementary teachers (Schwab, 1983), but these findings were not congruent with this sample.

Question #4

“Do probationary teachers report that participating in induction, mentoring, or coaching reduces their stress?”

The respondents identified the district mentoring program as the most effective at alleviating stress and the district induction program as the least effective of the three programs at alleviating stress. Overall, the results for mentoring and coaching were above 3.0 and are characterized as positive. The result for the district induction program indicates that the respondents felt that the program was neutral at alleviating stress with a mean of 3.08. When asked what made the mentoring and coaching programs more effective, teachers informally responded that the relationships that are built through these programs are the primary reason stress is reduced. This coincides with the finding that this group of educators uses Social Support to cope with stress.

According to Feiman-Nemser (2003) teachers need to be enculturated into the profession by high quality teacher induction and mentoring programs. Otherwise, work conditions and school culture influence the character, quality, and outcome of a teacher’s first years of teaching in a negative way leading to disillusionment, depression, and attrition (Feiman-Nemser, 2003).

Implications

General Implications

Teachers are overworked. They lack the time they need to complete the many responsibilities assigned to them. They lack the autonomy and efficacy

to do their jobs with integrity. Because of this, teachers in this sample report significantly higher levels of stress. Elevated levels of stress over extended periods of time can cause teachers to leave the profession.

Boe, Cook, and Sunderland (2008) report the average rate of leaving teaching was 25.5% within the first 3 years, 32% within the first 4 years, and 38.5% within the first 5 years. According to the Texas Center for Education Research, the average cost of replacing a teacher is between 20 and 200 percent of the leaving teacher's salary (2000). The cost includes recruitment and training of new teachers and the money lost in training the teachers who left and loss of student-learning (Darling-Hammond & Berry, 2005).

Many teachers see the increased mandates and demands on their time as adding to their roles as educators. They feel as though their profession has been reduced to systems of accountability and testing. "In reality, the degradation of the teaching role has led many to reinterpret their work in terms of a 'misrecognized professionalism', by assuming that the technical and effective execution of prescriptions by others is the ultimate proof of their expertise and competence" (Ballet, Kelchtermans, & Loughran, 2006). Basically, teachers have lost their autonomy.

Ballet, Kelchtermans, and Loughran (2006) argue for an alternate form of professionalism by acknowledging teachers' knowledge base and the need to help them develop it instead of adding mandates and extending their role to include things that are mandated by the government or administration. Ballet, Kelchtermans, & Loughran (2006) feel that the work teachers are being asked to do causes them to be distracted from the real aim of the profession: helping students learn. They call for teachers to develop new knowledge by challenging

common practice and reconceptualizing when possible, seeking greater understanding of student learning and student change, and developing new practices (Ballet, Kelchtermans, & Loughran, 2006).

The role of the teacher or educator must be revamped. The cost districts are putting into teacher recruitment and training due to attrition could be spent realigning the existing staffing to provide more time for teachers to collaborate, team, innovate, and create. Beginning teachers in this study reported increased stress in the areas of Role Insufficiency and Role Ambiguity. The reality is that many things compete for teachers' time and energy, and teachers often work in isolation.

Teachers within their first year or two of employment in education do not feel adequately prepared for the expectations of the job and most likely do not know how or what to prioritize in their jobs. Veterans feel prepared, but they feel greater stress due to the increased levels of Responsibility. By giving teachers more time throughout the day to create high quality lessons, meet in collaborative teams, or attend targeted professional development of their choice, teachers might be less stressed and more effective in the classroom.

Implications for School District Practice

The school district in this study has over one-third of its teachers classified as probationary. The cost to keep these teachers is less than the cost to replace them. The average probationary teacher in this district is middle aged, female, and a veteran. The reality is that many of these probationary teachers came from other districts. This implies that the districts left behind bare the burden

of replacing these teachers, and this district bears the burden of training new teachers. Teachers who leave one district and move to another also face increased stress due to the change in working environment and learning the processes and politics of the new organization. This may be why this sample of probationary teachers reported significantly higher levels of Role Overload as compared to the professional population.

Professional Development

Teachers need purposeful, differentiated professional development to target their specific stages of teaching. A one-size-fits-all approach does not work with students or teachers. The study sample ranged from 0 to 37 years of experience in the field of education, yet many of these teachers are expected to attend the same trainings. Teachers change as they grow and evolve in the profession. Researchers lump teachers into stages including the Novice who is simply trying to survive during the first years of teaching and eventually moves to mastering his content. These teachers then shift to learning the needs of their students and progress toward the Veterans who integrate paradigms and demonstrate new skills (Day, Stobart, Sammons, & Kington, 2006).

It is the responsibility of the district to help teachers reach veteran status not simply in name but in practice, to help them reach mastery. This process of attaining proficiency takes time, money, and a shift in the role of a teacher. Teachers need greater support from their principals and each other, assistance sorting through dissonant directives and help solving problems, and more relevant professional development (Westling, Duffy, Prohn, Ray, & Herzog, 2005).

Teaming and Teacher Leadership

Teachers assess the needs of their students and implement lessons to meet the needs of their students on a daily basis. They are usually not much different in their approach to their own issues. Teachers communicate and explain all day long; teachers are social beings. This sample reported higher levels of coping with stress by using Social Support and Self-Care. By restructuring teachers into teams and providing common meeting time for teachers, role-related stress can be reduced (Westling et al., 2005). Teachers need to be provided the time to meet, taught the best structures to help communicate their stressors, and work with new teachers to help them focus their efforts toward solutions.

Teachers need to meet to work through issues that face them including increasing student achievement. Teachers can do this through structured meeting and planning time to include professional learning communities or professional learning and cross-curricular teams. Teachers need to build professional learning communities that can enhance collegial interaction and help to support teacher learning (Drago-Severson & Pinto, 2006).

Teachers can also reduce occupational stress by becoming part of the leadership team to help resolve building and district-wide concerns. Collaborative leadership can provide transparency in decision-making, provide for correct and relevant information sharing, allow for discussion, and foster a collaborative culture of mutual support (Drago-Severson & Pinto, 2006).

Teacher Support Programs

Educational leaders and policy makers agree that in order to retain teachers, new teachers need effective mentoring and induction programs regardless of grade level, content area, socioeconomic status of the population taught, and gender of the teacher (Feiman-Nemser, 2003). Even though this sample averaged more than seven years of teaching experience, they are still reporting more stress related to their roles. There were few significant differences related to grade level or gender in this sample, but one commonality of the sample was the ranking of the two relational support programs as more effective at reducing job related stress than the more class type structure of the district's induction program.

Montgomery and Rupp (2005) determined that “understanding and uncovering negative emotions related to external stressors is the first step towards a better performance, a higher degree of professional satisfaction, and consequently, a higher level of teacher retention” (p. 483). Teachers, by nature, are relational creatures. Programs like mentoring and coaching are structured to provide more time for dialogue and conversation instead of coursework and assignments. A recommendation of researchers is to look into the role support classes have on the effects of helping to prevent stress (Brember, Brown, & Ralph, 2002). Informally, this sample expressed frustration with the time requirements, out of class assignments that felt more like busy work, and overall lack of applicable practices during the district induction classes. The sample did report positive feedback about the relationships built and sustained through the mentoring and coaching programs.

Research suggests that time management and stress management education be included teacher support programs (Brember, Brown, & Ralph, 2002). Effective induction programs also include teacher observations, co-teaching, collaborative time to debrief what is observed by the teacher, and dialogue about the teacher's progress on a frequent basis both by the building leadership and the mentor teacher (Smethem & Adey, 2005). Effective induction programs provide meaningful, differentiated, and manageable assignments that are used to evaluate teacher effectiveness and determine areas of improvement and progress (Darling-Hammond & Berry, 2006).

Building Teacher Efficacy

Regardless of whether a district can alter the intense workload and provide more time for teachers to work collaboratively and train differently, they must look at building efficacy and increasing autonomy. One study indicates that the level of perceived occupational stress reported by teachers can be reduced by increasing teachers' perceptions of autonomy and efficacy (Tuettemann & Punch, 1992). The researchers were able to conclude that teachers' perceived levels of influence and autonomy and levels of efficacy and achievement were shown to decrease their perceived levels of occupational stress (Tuettemann & Punch, 1992).

Teachers need to build their self-efficacy in order to reduce occupational stress and stay in education. They must also build collective efficacy to be able to help move their organization forward. Taken from an article by Manthey, Hoy defines collective efficacy as "the perceptions of teachers in a specific school that

the faculty as a whole can execute courses of actions required to positively affect student achievement” and believes that “the consequences of high collective efficacy will be the acceptance of challenging goals, strong effort by teachers, and persistence in effort to overcome difficulties and succeed (2006, p. 23). Collective efficacy leads teachers to build mastery and reach proficiency despite challenges such as lack of time and resources and increased levels of role-related stress. Collectively efficacious organizations ultimately impact students and benefit from less turnover, more energized teachers, more innovative and creative lessons, and higher rates of achievement.

Recommendations for Further Research

This study was not able to address several questions about probationary teacher stress and coping resources. The following is a list of suggestions for future research as an expansion of this study.

- Complete a longitudinal study to assess probationary teacher stress and coping at various points during the school year to compare stress and coping during potentially stressful peak times.
- Assess other probationary teachers in other districts using the same instruments to determine if the data are similar.
- Assess veteran teachers in stress and coping in this district to compare the data to determine if the reported levels of stress and coping are greater for veteran teachers.

- Complete a qualitative analysis including interviews of staff based on the data reported for stress and coping to provide additional insight about the reported levels of Role Overload, Social Support, and Self-Care.
- Differentiate the data by teacher preparation type to determine if the type of preparation program is linked to the reported levels of stress and coping.
- Delve deeper into those who reported education as a second or greater career to determine if their levels of stress and coping are greater or lower than those reporting education as a first career.

Limitations

The researcher is aware of the following limitations of the study:

1. Generalizations made from the results are limited to populations similar to the sample. The sample is a heterogeneous group of teachers who teach kindergarten through twelfth grade in the same school district. The district is a suburban district of average size. So although the sample size is approximately 140 teachers, the findings may not generalize to all probationary teachers.
2. Information gathered through the survey process is self-reported making conclusions subject to potential error.
3. The survey was given over the span of three months based on the availability of survey materials allowing for some survey respondents to receive the survey after vacation time.

4. Ratings for the support programs and role-related stress scales could be affected by the difference in building leadership, mentors, and years of experience.
5. The survey is not meant to be exhaustive of all types of stress, such as personal or emotional, but focuses on stress related to functions of the job of teaching.

Concluding Remarks

The primary assumption of this study is that in order for probationary teachers to remain in the teaching profession, they must utilize appropriate coping resources to reduce their perceived levels of occupational stress. The accumulation of the data collected in this study leads to a greater understanding of role-related stress of probationary teachers and helps to provide the necessary supports to decrease role-related stress when and where possible. Another perspective of this study is to reduce the amount of role-related stress by altering the role of the teacher. Teaming, mentoring, differentiated professional development, collaborative leadership, and efficacy are all seen as possible ways to mitigate stress and keep teachers thriving in the profession.

REFERENCES

- Abel, M., & Sewell, J. (1999). Stress and burnout in rural and urban secondary teachers. *Journal of Educational Research*, 92(5), 287-293.
- Alkhandar, O. & Al-Nasser, H. (2006). Assessing occupational stress, strain, and coping for North American teachers in Kuwait. *Psychological Reports*, 99, 681-690.
- Anderson, V.L., Levinson, E.M., Barker, W., & Kiewra, K.R. (1999). The effects of meditation on teacher perceived occupational stress, state and trait anxiety, and burnout. *School Psychology Quarterly*, 14(1), 3-25.
- Bacharach, S.B., Bauer, S.C., & Conley, S. (1986). Organizational analysis of stress, the case of elementary and secondary schools. *Work and Occupations*, 13(1), 7-32.
- Bachkirova, T. (2005). Teacher stress and personal values, an exploratory study. *School Psychology International*, 26(3), 340-352.
- Ballet, K., Kelchtermans, G., & Loughran, J. (2006). Beyond intensification towards a scholarship of practice: analyzing changes in teachers' work lives. *Teachers and Teaching: theory and practice*, 12(2), 209-229.
- Bee, E.E., Cook, L.H., Bobbitt, S.A., Weber, A.L. (1996). Retention and attrition of teachers at the district level: national trends in special and general education. ERIC document 410 742, retrieved February 29, 2008.
- Bertoch, M., Nielsen, E., Curley, J., & Borg, W. (1989). Reducing teacher stress. *Journal of Experimental Education*, 57(2), 117 -128.

- Bhagat, R.S. & Allie, S.M. (1989). Organizational stress, personal life stress, and symptoms of life strain: an examination of the moderating role of sense of competence. *Journal of Vocational Behavior*, 35, 231-253.
- Blase, J.J. (1986). A qualitative analysis of sources of teacher stress: consequences for performance. *American Educational Research Journal*, 23(1), 13-40.
- Borg, M.G. & Riding, R.J. (1991a). Occupational stress and satisfaction in teaching. *British Educational Research Journal*, 17(3), 263-282.
- Borg, M.G. & Riding, R.J. (1991b). Stress in teaching: A study of occupational stress and its determinants, job satisfaction and career commitment among primary school teachers. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 11(1), 59-75.
- Brember, I., Brown, M., & Ralph, S. (2002). Gender-related causes of stress in trainee teachers on teaching practice in the school of education, University of Manchester, UK. *Westminster Studies in Education*, 25(2), 175-186.
- Burke, R.J. & Greenglass, E. (1993). Work stress, role conflict, social support, and psychological burnout among teachers. *Psychological Reports*, 73, 371-380.
- Carmona, C., Buunk, A.P., Peiro, J.M., Rodriguez, I., & Bravo, M.J. (2006). Do social comparison and coping styles play a role in the development of burnout? Cross-sectional and longitudinal findings. *Journal of Occupational and Organizational Psychology*, 79, 85-99.
- Chan, D.W. (1994). The Chinese ways of coping questionnaire: assessing coping in secondary school teachers and students in Hong Kong. *Psychological Assessment*, 6(2), 108-116.

- Chan, D.W. (2002). Stress, self-efficacy, social support, and psychological distress among perspective Chinese teachers in Hong Kong. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 22(5), 557-569.
- Chen, M., & Miller, G. (1997). Teacher stress: a review of international literature. ERIC document 410 187, retrieved April 18, 2008.
- Decker, P.J. & Borgen, F.H. (1993). Dimensions of work appraisal: stress, strain, coping, job satisfaction, and negative affectivity. *Journal of Counseling Psychology*, 40(4), 470-478.
- DeFrank, R.S. & Stourp, C.A. (1989). Teacher stress and health; an examination of a model. *Journal of Psychosomatic Research*, 33(1), 99-109.
- Dewe, P.J. & Guest, D.E. (1990). Methods of coping with stress at work: a conceptual analysis and empirical study of measurement issues. *Journal of Organizational Behavior*, 11(2), 135-150.
- Evers, W.J.G., Tomic, W., & Brouwers, A. (2004). Burnout among teachers, students' and teachers' perceptions compared. *School Psychology International*, 25(2), 131-148.
- Farber, B.A. (1984). Stress and burnout in suburban teachers. *Journal of Educational Research*, 77(6), 325-331.
- Feiman-Nemser, S. (2003). What new teachers need to learn. *Educational Leadership*, 60(8), 25-30.
- Feitler, F.C., & Tokar, E. (1982). Getting a handle on teacher stress: how bad is the problem? *Educational Leadership*, 39(6), 456-458.
- Fimian, M.J. (1988). Teacher Stress Inventory.

- Fimian, M. J., Pierson, D., & McHardy, R. (1986). Occupational stress reported by teachers of learning disabled and nonlearning disabled handicapped students. *Journal of Learning Disabilities*, 19(3), 154-158.
- Forlin, C. (2001). Inclusion: identifying potential stressors for regular class teachers. *Educational Research*, 43(3), 235-245.
- French, N. (1987). A study of teacher stress and stress reactions. Ph.D. dissertation, University of Denver, United States - Colorado.
- Friedman, I.A. (1995). Student behavior patterns contributing to teacher burnout. *Journal of Educational Research*, 88(5), 281-290.
- Friedman, I.A. (2000). Burnout in teachers: shattered dreams if impeccable professional performance. *Psychotherapy in Practice*, 56(5), 595-606.
- Friedman, I.A. & Farber, B.A. (1992). Professional self-concept as a predictor of teacher burnout. *Journal of Educational Research*, 86(1), 28-35.
- Gaziel, H.J. (1993). Coping with occupational stress among teachers: A cross-cultural study. *Comparative Education*, 29(1), 67-79.
- Geving, A.M. (2007). Identifying the types of student and teacher behaviours associated with teacher stress. *Teaching and Teacher Education*, 23(5), 624-640.
- Greene, R.W., Beszterczey, S.K., Katzenstein, T., Park, K., & Goring, J. (2002). Are students with ADHD more stressful to teach? Patterns of teacher stress in an elementary school sample. *Journal of Emotional and Behavioral Disorders*, 10(2), 79-89.
- Guglielmi, R.S., & Tatrow, K. (1998). Occupational stress, burnout, and health in teachers: A methodological and theoretical analysis. *Review of Educational Research*, 68(1), 61-69.

- Gulwadi, G. (2006). Seeking restorative experiences: Elementary school teachers' choices for places that enable coping with stress. *Environment and Behavior*, 38(4), 503-520.
- Harden, R.M. (1999). Stress, pressure, and burnout in teachers: Is the swan exhausted? *Medical teacher*, 21(3), 245-247.
- Harris, K., Haplin, G., & Haplin, G. (1985). Teacher characteristics and stress. *Journal of Educational Research*, 78(6), 346-350.
- Harvey, K. (1987). Occupational stress: A comparative study of elementary teachers of the gifted in Colorado and Kansas. Ph.D. dissertation, University of Denver, United States – Colorado.
- Hudson, B. (2004). A comparative investigation of stress and coping among a sample of k-8 educators. Ph.D. dissertation, Loyola University Chicago, United States – Illinois.
- Hui, E.K.P. & Chan, D.W. (1996). Teacher stress and guidance work in Hong Kong secondary school teachers. *British Journal of Guidance and Counseling*, 24(2), 199-211.
- Innes, J.M. & Kitto, S. (1989). Neuroticism, self-consciousness and coping strategies, and occupational stress in high school teachers. *Persons with Individual Differences*, 10(3), 303-312.
- Jepson, E., & Forrest, S. (2006). Individual contributing factors in teacher stress: The role of achievement striving and occupational commitment. *The British Journal of Educational Psychology*, 76, 183-197.
- Johnson, B. & Christensen, L. (2004). Educational research: quantitative, qualitative, and mixed approaches. Pearson: Boston.

- Kaunitz, N., Spokane, A.R., Lissitz, R.W., & Strein, W.O. (1986). Stress in student teachers: a multidimensional scaling analysis of elicited stressful situations. *Teaching & Teacher Education*, 2(2), 169-180.
- Kelly, A.L., & Berthelsen, D.C. (1995). Preschool teachers' experiences of stress. *Teaching and Teacher Education*, 11(4), 345-357.
- Kinnunen, U. & Leskinen, E. (1989). Teacher stress during a school year: covariance and mean structure analyses. *Journal of Occupational Psychology*, 62, 111-122.
- Kyriacou, C. (2001). Teacher stress: directions for future research. *Educational Review*, 53(1), 27-35.
- Kyriacou, C. & Sutcliffe, J. (1979). A note on teacher stress and locus of control. *Journal of Occupational Psychology*, 52, 227-228.
- Lazarus, L. (2006). Occupational stress, negative affectivity and physical health in special and general education teachers in Greece. *British Journal of Special Education*, 33(4), 204-209.
- Litt, M.D., & Turk, D.C. (1985). Sources of stress and dissatisfaction in experienced high school teachers. *Journal of Educational Research*, 78(3), 178-185.
- Maslach, C. (2001). What have we learned about burnout and health? *Psychology and Health*, 16, 607-611.
- Maslach, C. (2003). Job burnout: new directions in research and intervention. *Current Directions in Psychological Science*, 12(5), 189-192.
- Mayer, D.P., Mullens, J.E., Moore, M.T., & Ralph, J. (2000). Monitoring school quality: An indicators report. National Center for Educational Statistics.

- McCann, T.M., & Johannessen, L.R. (2004). Why do new teachers cry? *The Clearing House*, 77(4), 138-145.
- McCormick, J.U. & Solman, R (1992). Teachers' attributions of responsibility for occupational stress and satisfaction: an organizational perspective. *Educational Studies*, 18(2), 201-222.
- Merriam-Webster Online Dictionary. www.merriam-webster.com/dictionary. Retrieved February 29, 2008.
- Miller, G., Brown-Anderson, F., Fleming, W., Peele, T., & Chen, M. (1999). Teacher stress: A case study. ERIC document 467 833, retrieved January 23, 2008.
- Milstein, M.M., Golaszewski, T.J., & Duquette, R.D. (1984). Organizationally based stress: what bothers teachers. *Journal of Educational Research*, 77(5), 293-297.
- Montgomery, C., & Rupp, A.R. (2005). A meta-analysis for exploring the diverse causes and effects of stress in teachers. *Canadian Journal of Education*, 28(3), 458-486. Retrieved January 23, 2008, from ERIC database.
- Nagel, L. & Brown, S. (2003). The ABCs of managing teacher stress. *Clearing House*, 76(5), 255-258.
- Osipow, S.H. (1998). Occupational stress inventory revised edition, professional manual. Psychological Assessment Resources, Inc., Florida.
- Osipow, S. H., Doty, R.E., & Spokane, A.R. (1985). Occupational stress, strain, and coping across the life span. *Journal of Vocational Behavior*, 27, 98-108).
- Pajak, E.F. & Blase, J.J. (1984). Teachers in bars: from professional to personal self. *Sociology of Education*, 57, 164-173.

- Payne, M.A., & Furnham, A. (1987). Dimensions of occupational stress in West Indian secondary school teachers. *British Journal of Educational Psychology*, 57, 141-150.
- Pearlin, L.I. & Schooler, C. (1978). The structure of coping. *Journal of Health and Behavior*, 19, 2-21.
- Punch, K.F. & Tuettemann, E. (1990). Correlates of psychological distress among secondary school teachers. *British Educational Research Journal*, 16(4), 369-383.
- Raschke, D.B., Dedrick, C.V., Strathe, M.I., & Hawkes, R.R. (1985). Teacher stress: the elementary teacher's perspective. *The Elementary School Journal*, 85(4), 558-564.
- Russell, D.W., Altmaier, E., & Van Velzen, D. (1987). Job-related stress, social support, and burnout among classroom teachers. *Journal of Applied Psychology*, 72(2), 269-274.
- Schwab, R.L. (1983). Teacher burnout: moving beyond "psychobabble". *Theory into Practice*, 22(1), 21-26.
- Schonfeld, I.S. (1990). Psychological distress in a sample of teachers. *The Journal of Psychology*, 124(3), 321-338.
- Schonfeld, I.S. (2001). Stress in 1st-year women teachers: the context of social support and coping. *Genetic, Social, & General Psychology Monographs*, 127 (2), 133-169.
- Schonfeld, I.S. & Ruan, D. (1991). Occupational stress and preemployment measures of depressive symptoms: the case of teachers. *Journal of Social Behavior and Personality*, 6(7), 95-114.

- Shaw, D.G., Keiper, R.W., & Flaherty, C.E. (1985). Stress causing events for teachers. *Education*, 106(1), 72-77.
- Skaalvik, E.M. & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology*, 99(7), 661-625.
- Smith, M. & Bourke, S. (1992). Teacher stress: examining a model based in context, workload, and satisfaction. *Teaching & Teacher Education*, 8(1), 31-46.
- Stoeber, J. & Rennert, D. (2008). Perfectionism in school teachers: relations with stress appraisals, coping styles, and burnout. *Anxiety, Stress, and Coping*, 21(1), 37-53.
- Texas Center for Educational Research. (2000). *The cost of teacher turnover*. Austin, TX: Texas State Board of Educator Certification.
- Tokar, E. & Feitler, F.C. (1986). A comparative study of teacher stress in American and British middle schools. *Journal of Early Adolescence*, 6(1), 77-82.
- Tuettemann, E. & Punch, K.F. (1992). Teachers' psychological distress: the ameliorating affects of control over the work environment. *Educational Review*, 44(2), 181-195.
- van Dick, R. & Wagner, U. (2001). Stress and strain in teaching: a structural equation approach. *British Journal of Educational Psychology*, 71, 243-259.
- Van Voorhees, B. (2007). Stress and anxiety health article. Healthline Online. www.healthline.com. 1-2. Retrieved February 29, 2008.

- Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, 54(2), 143-178.
- Webster's II new riverside dictionary (1996) Boston, Houghton Mifflin Company.
- Wu, S., Li, J., Wang, M., Wang, Z., & Li, H. (2006). Short communication: intervention on occupational stress among teachers in the middle schools in China. *Stress and Health*, 22, 329-336.
- Zhang, L. (2007). Teaching styles and occupational stress among Chinese university faculty members. *Educational Psychology*, 27(6), 823-841.
- Zurlo, M.C., Pes, D., & Cooper, C.L. (2007). Stress in teaching: a study of occupational stress and its determinants among Italian schoolteachers. *Stress and Health*, 23, 231-241.

APPENDIX A

Demographic Information Sheet

1. What grade level do you primarily work with? (Circle one)

PK K-5 6-8 9-12 Multiple Levels

2. What is your job title? _____

3. What is your age range? (Circle one)

20-29 30-39 40-49 50-59 60+

4. What is your gender? (Circle one) Male Female

5. Not including this year, how many years have you worked for

District? _____

6. Not including this year, how many years of experience do you have in education overall? _____

7. Is this your first career? (Circle one) Yes No

If this is not your first career, is this your second?

(Circle one) Yes No

8. Which of the following support program(s) have you participated in? (Circle all that apply)

Rate the effectiveness of the following program(s) in reducing occupational stress:

Coaching/ sponsoring 1 2 3 4 5 6 N/A

Mentoring 1 2 3 4 5 6 N/A

Induction 1 2 3 4 5 6 N/A

9. What type of teacher preparation program did you receive your certificate from? (Circle one)

Traditional Alternative Other _____

APPENDIX B

Chi-Square Crosstabs for Question #3

Grade Level

Table 35.

Relationship between T Score Category and Grade Level for the Role Overload Scale of the ORQ

			T score Category Role Overload				Total
			less than average stress	average stress	above average stress	mal-adaptive stress	
Elementary or Secondary	Elementary	Count	0	20	8	7	35
		% of Total	.0%	25.0%	10.0%	8.8%	43.8%
	Secondary	Count	2	20	18	5	45
		% of Total	2.5%	25.0%	22.5%	6.3%	56.3%
Total		Count	2	40	26	12	80
		% of Total	2.5%	50.0%	32.5%	15.0%	100.0%

Table 36.

Relationship between T Score Category and Grade Level for the Role Insufficiency Scale of the ORQ

			T score Category Role Insufficiency			Total
			less than average stress	average stress	above average stress	
Elementary or Secondary	Elementary	Count	9	25	1	35
		% of Total	11.3%	31.3%	1.3%	43.8%
	Secondary	Count	16	27	2	45
		% of Total	20.0%	33.8%	2.5%	56.3%
Total		Count	25	52	3	80
		% of Total	31.3%	65.0%	3.8%	100.0%

Table 37.

Relationship between T Score Category and Grade Level for the Role Ambiguity Scale of the ORQ

			T score Category Role Ambiguity				Total
			less than average stress	average stress	above average stress	mal-adaptive stress	
Elementary or Secondary	Elementary	Count	6	25	3	1	35
		% of Total	7.5%	31.3%	3.8%	1.3%	43.8%
	Secondary	Count	10	29	6	0	45
		% of Total	12.5%	36.3%	7.5%	.0%	56.3%
Total		Count	16	54	9	1	80
		% of Total	20.0%	67.5%	11.3%	1.3%	100.0%

Table 38.

Relationship between T Score Category and Grade Level for the Role Boundary Scale of the ORQ

			T score Category Role Boundary				Total
			less than average stress	average stress	above average stress	mal-adaptive stress	
Elementary or Secondary	Elementary	Count	8	20	6	0	34
		% of Total	10.1%	25.3%	7.6%	.0%	43.0%
	Secondary	Count	15	25	4	1	45
		% of Total	19.0%	31.6%	5.1%	1.3%	57.0%
Total		Count	23	45	10	1	79
		% of Total	29.1%	57.0%	12.7%	1.3%	100.0%

Table 39.

Relationship between T Score Category and Grade Level for the Responsibility Scale of the ORQ

			T score Category Responsibility				Total
			less than average stress	average stress	above average stress	mal-adaptive stress	
Elementary or Secondary	Elementary	Count	0	27	7	1	35
		% of Total	.0%	33.8%	8.8%	1.3%	43.8%
	Secondary	Count	6	29	8	2	45
		% of Total	7.5%	36.3%	10.0%	2.5%	56.3%
Total		Count	6	56	15	3	80
		% of Total	7.5%	70.0%	18.8%	3.8%	100.0%

Table 40.

Relationship between T Score Category and Grade Level for the Physical Environment Scale of the ORQ

			T score Category Physical Environment				Total
			less than average stress	average stress	above average stress	mal-adaptive stress	
Elementary or Secondary	Elementary	Count	2	29	3	0	34
		% of Total	2.5%	36.7%	3.8%	.0%	43.0%
	Secondary	Count	3	38	3	1	45
		% of Total	3.8%	48.1%	3.8%	1.3%	57.0%
Total		Count	5	67	6	1	79
		% of Total	6.3%	84.8%	7.6%	1.3%	100.0%

Gender

Table 41.

Relationship between T Score Category and Gender for the Role Overload Scale of the ORQ

			T score Category Role Overload				Total
			less than average stress	average stress	above average stress	mal-adaptive stress	
Gender	Male	Count	1	8	8	1	18
		% within Gender	5.6%	44.4%	44.4%	5.6%	100.0%
		% within T score Category Role Overload	50.0%	17.0%	26.7%	8.3%	19.8%
		% of Total	1.1%	8.8%	8.8%	1.1%	19.8%
	Female	Count	1	39	22	11	73
		% within Gender	1.4%	53.4%	30.1%	15.1%	100.0%
		% within T score Category Role Overload	50.0%	83.0%	73.3%	91.7%	80.2%
		% of Total	1.1%	42.9%	24.2%	12.1%	80.2%
Total	Count	2	47	30	12	91	
	% within Gender	2.2%	51.6%	33.0%	13.2%	100.0%	
	% within T score Category Role Overload	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	2.2%	51.6%	33.0%	13.2%	100.0%	

Table 42.

Relationship between T Score Category and Gender for the Role Insufficiency Scale of the ORQ

			T score Category Role Insufficiency			Total
			less than average stress	average stress	above average stress	
Gender	Male	Count	4	13	1	18
		% within Gender	22.2%	72.2%	5.6%	100.0%
		% within T score Category Role Insufficiency	14.3%	22.0%	25.0%	19.8%
		% of Total	4.4%	14.3%	1.1%	19.8%
	Female	Count	24	46	3	73
		% within Gender	32.9%	63.0%	4.1%	100.0%
		% within T score Category Role Insufficiency	85.7%	78.0%	75.0%	80.2%
		% of Total	26.4%	50.5%	3.3%	80.2%
Total	Count	28	59	4	91	
	% within Gender	30.8%	64.8%	4.4%	100.0%	
	% within T score Category Role Insufficiency	100.0%	100.0%	100.0%	100.0%	
	% of Total	30.8%	64.8%	4.4%	100.0%	

Table 43.

Relationship between T Score Category and Gender for the Role Ambiguity Scale of the ORQ

			T score Category Role Ambiguity				Total
			less than average stress	average stress	above average stress	mal-adaptive stress	
Gender	Male	Count	4	12	2	0	18
		% within Gender	22.2%	66.7%	11.1%	.0%	100.0%
		% within T score Category Role Ambiguity	25.0%	18.8%	20.0%	.0%	19.8%
		% of Total	4.4%	13.2%	2.2%	.0%	19.8%
	Female	Count	12	52	8	1	73
		% within Gender	16.4%	71.2%	11.0%	1.4%	100.0%
		% within T score Category Role Ambiguity	75.0%	81.3%	80.0%	100.0%	80.2%
		% of Total	13.2%	57.1%	8.8%	1.1%	80.2%
Total	Count	16	64	10	1	91	
	% within Gender	17.6%	70.3%	11.0%	1.1%	100.0%	
	% within T score Category Role Ambiguity	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	17.6%	70.3%	11.0%	1.1%	100.0%	

Table 44.

Relationship between T Score Category and Gender for the Role Boundary Scale of the ORQ

			T score Category Role Boundary				Total
			less than average stress	average stress	above average stress	mal-adaptive stress	
Gender	Male	Count	6	9	2	1	18
		% within Gender	33.3%	50.0%	11.1%	5.6%	100.0%
		% within T score Category Role Boundary	26.1%	16.4%	20.0%	100.0%	20.2%
		% of Total	6.7%	10.1%	2.2%	1.1%	20.2%
	Female	Count	17	46	8	0	71
		% within Gender	23.9%	64.8%	11.3%	.0%	100.0%
		% within T score Category Role Boundary	73.9%	83.6%	80.0%	.0%	79.8%
		% of Total	19.1%	51.7%	9.0%	.0%	79.8%
	Total	Count	23	55	10	1	89
		% within Gender	25.8%	61.8%	11.2%	1.1%	100.0%
% within T score Category Role Boundary		100.0%	100.0%	100.0%	100.0%	100.0%	
% of Total		25.8%	61.8%	11.2%	1.1%	100.0%	

Table 45.

Relationship between T Score Category and Gender for the Responsibility Scale of the ORQ

		T score Category Responsibility				Total	
		less than average stress	average stress	above average stress	mal-adaptive stress		
Gender	Male	Count	4	11	3	0	18
		% within Gender	22.2%	61.1%	16.7%	.0%	100.0%
		% within T score Category Responsibility	57.1%	16.9%	18.8%	.0%	19.8%
		% of Total	4.4%	12.1%	3.3%	.0%	19.8%
	Female	Count	3	54	13	3	73
		% within Gender	4.1%	74.0%	17.8%	4.1%	100.0%
		% within T score Category Responsibility	42.9%	83.1%	81.3%	100.0%	80.2%
		% of Total	3.3%	59.3%	14.3%	3.3%	80.2%
Total	Count	7	65	16	3	91	
	% within Gender	7.7%	71.4%	17.6%	3.3%	100.0%	
	% within T score Category Responsibility	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	7.7%	71.4%	17.6%	3.3%	100.0%	

Table 46.

Relationship between T Score Category and Gender for the Physical Environment Scale of the ORQ

			T score Category Physical Environment				Total
			less than average stress	average stress	above average stress	mal-adaptive stress	
Gender	Male	Count	4	14	0	0	18
		% within Gender	22.2%	77.8%	.0%	.0%	100.0%
		% within T score Category Physical Environment	80.0%	17.9%	.0%	.0%	20.0%
		% of Total	4.4%	15.6%	.0%	.0%	20.0%
	Female	Count	1	64	6	1	72
		% within Gender	1.4%	88.9%	8.3%	1.4%	100.0%
		% within T score Category Physical Environment	20.0%	82.1%	100.0%	100.0%	80.0%
		% of Total	1.1%	71.1%	6.7%	1.1%	80.0%
Total	Count	5	78	6	1	90	
	% within Gender	5.6%	86.7%	6.7%	1.1%	100.0%	
	% within T score Category Physical Environment	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	5.6%	86.7%	6.7%	1.1%	100.0%	

Years of Experience in Education by Category

Table 47.

Relationship between T Score Category and Years of Experience in Education for the Role Overload Scale of the ORQ

		T score Category Role Overload				Total	
		less than average stress	average stress	above average stress	mal-adaptive stress		
Categorical Years in Education	Beginner	Count	0	4	10	1	15
		% within Categorical Years in Education	.0%	26.7%	66.7%	6.7%	100.0%
		% within T score Category Role Overload	.0%	8.5%	33.3%	8.3%	16.5%
		% of Total	.0%	4.4%	11.0%	1.1%	16.5%
	Novice	Count	0	19	9	4	32
		% within Categorical Years in Education	.0%	59.4%	28.1%	12.5%	100.0%
		% within T score Category Role Overload	.0%	40.4%	30.0%	33.3%	35.2%
		% of Total	.0%	20.9%	9.9%	4.4%	35.2%
	Veteran	Count	2	24	11	7	44
% within Categorical Years in Education		4.5%	54.5%	25.0%	15.9%	100.0%	
% within T score Category Role Overload		100.0%	51.1%	36.7%	58.3%	48.4%	
	% of Total	2.2%	26.4%	12.1%	7.7%	48.4%	
Total	Count	2	47	30	12	91	
	% within Categorical Years in Education	2.2%	51.6%	33.0%	13.2%	100.0%	
	% within T score Category Role Overload	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	2.2%	51.6%	33.0%	13.2%	100.0%	

Table 48.

Relationship between T Score Category and Years of Experience in Education for the Role Insufficiency Scale of the ORQ

		T score Category Role Insufficiency			Total
		less than average stress	average stress	above average stress	
Beginner	Count	2	13	0	15
	% within Categorical Years in Education	13.3%	86.7%	.0%	100.0%
	% within T score Category Role Insufficiency	7.1%	22.0%	.0%	16.5%
	% of Total	2.2%	14.3%	.0%	16.5%
Novice	Count	8	22	2	32
	% within Categorical Years in Education	25.0%	68.8%	6.3%	100.0%
	% within T score Category Role Insufficiency	28.6%	37.3%	50.0%	35.2%
	% of Total	8.8%	24.2%	2.2%	35.2%
Veteran	Count	18	24	2	44
	% within Categorical Years in Education	40.9%	54.5%	4.5%	100.0%
	% within T score Category Role Insufficiency	64.3%	40.7%	50.0%	48.4%
	% of Total	19.8%	26.4%	2.2%	48.4%
Total	Count	28	59	4	91
	% within Categorical Years in Education	30.8%	64.8%	4.4%	100.0%
	% within T score Category Role Insufficiency	100.0%	100.0%	100.0%	100.0%
	% of Total	30.8%	64.8%	4.4%	100.0%

Table 49.

Relationship between T Score Category and Years of Experience in Education for the Role Ambiguity Scale of the ORQ

		T score Category Role Ambiguity				Total
		less than average stress	average stress	above average stress	mal-adaptive stress	
Beginner	Count	0	9	6	0	15
	% within Categorical Years in Education	.0%	60.0%	40.0%	.0%	100.0%
	% within T score Category Role Ambiguity	.0%	14.1%	60.0%	.0%	16.5%
	% of Total	.0%	9.9%	6.6%	.0%	16.5%
Novice	Count	7	22	2	1	32
	% within Categorical Years in Education	21.9%	68.8%	6.3%	3.1%	100.0%
	% within T score Category Role Ambiguity	43.8%	34.4%	20.0%	100.0%	35.2%
	% of Total	7.7%	24.2%	2.2%	1.1%	35.2%
Veteran	Count	9	33	2	0	44
	% within Categorical Years in Education	20.5%	75.0%	4.5%	.0%	100.0%
	% within T score Category Role Ambiguity	56.3%	51.6%	20.0%	.0%	48.4%
	% of Total	9.9%	36.3%	2.2%	.0%	48.4%
Total	Count	16	64	10	1	91
	% within Categorical Years in Education	17.6%	70.3%	11.0%	1.1%	100.0%
	% within T score Category Role Ambiguity	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	17.6%	70.3%	11.0%	1.1%	100.0%

Table 50.

Relationship between T Score Category and Years of Experience in Education for the Role Boundary Scale of the ORQ

		T score Category Role Boundary				Total
		less than average stress	average stress	above average stress	mal-adaptive stress	
Beginner	Count	1	12	1	1	15
	% within Categorical Years in Education	6.7%	80.0%	6.7%	6.7%	100.0%
	% within T score Category Role Boundary	4.3%	21.8%	10.0%	100.0%	16.9%
	% of Total	1.1%	13.5%	1.1%	1.1%	16.9%
Novice	Count	7	22	3	0	32
	% within Categorical Years in Education	21.9%	68.8%	9.4%	.0%	100.0%
	% within T score Category Role Boundary	30.4%	40.0%	30.0%	.0%	36.0%
	% of Total	7.9%	24.7%	3.4%	.0%	36.0%
Veteran	Count	15	21	6	0	42
	% within Categorical Years in Education	35.7%	50.0%	14.3%	.0%	100.0%
	% within T score Category Role Boundary	65.2%	38.2%	60.0%	.0%	47.2%
	% of Total	16.9%	23.6%	6.7%	.0%	47.2%
Total	Count	23	55	10	1	89
	% within Categorical Years in Education	25.8%	61.8%	11.2%	1.1%	100.0%
	% within T score Category Role Boundary	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	25.8%	61.8%	11.2%	1.1%	100.0%

Table 51.

Relationship between T Score Category and Years of Experience in Education for the Responsibility Scale of the

ORQ

		T score Category Responsibility					Total
		less than average stress	average stress	above average stress	mal-adaptive stress		
Beginner	Count	1	7	5	2	15	
	% within Categorical Years in Education	6.7%	46.7%	33.3%	13.3%	100.0%	
	% within T score Category Responsibility	14.3%	10.8%	31.3%	66.7%	16.5%	
	% of Total	1.1%	7.7%	5.5%	2.2%	16.5%	
Categorical Years in Education	Count	1	28	2	1	32	
	% within Categorical Years in Education	3.1%	87.5%	6.3%	3.1%	100.0%	
	% within T score Category Responsibility	14.3%	43.1%	12.5%	33.3%	35.2%	
	% of Total	1.1%	30.8%	2.2%	1.1%	35.2%	
Veteran	Count	5	30	9	0	44	
	% within Categorical Years in Education	11.4%	68.2%	20.5%	.0%	100.0%	
	% within T score Category Responsibility	71.4%	46.2%	56.3%	.0%	48.4%	
	% of Total	5.5%	33.0%	9.9%	.0%	48.4%	
Total	Count	7	65	16	3	91	
	% within Categorical Years in Education	7.7%	71.4%	17.6%	3.3%	100.0%	
	% within T score Category Responsibility	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	7.7%	71.4%	17.6%	3.3%	100.0%	

Table 52.

Relationship between T Score Category and Years of Experience in Education for the Physical Environment Scale of the

ORQ

		T score Category Physical Environment				Total
		less than average stress	average stress	above average stress	mal-adaptive stress	
Categorical Years in Education	Beginner	Count	0	13	2	15
		% within Categorical Years in Education	.0%	86.7%	13.3%	100.0%
		% within T score Category Physical Environment	.0%	16.7%	33.3%	.0%
		% of Total	.0%	14.4%	2.2%	.0%
	Novice	Count	1	30	1	0
		% within Categorical Years in Education	3.1%	93.8%	3.1%	.0%
		% within T score Category Physical Environment	20.0%	38.5%	16.7%	.0%
		% of Total	1.1%	33.3%	1.1%	.0%
	Veteran	Count	4	35	3	1
		% within Categorical Years in Education	9.3%	81.4%	7.0%	2.3%
		% within T score Category Physical Environment	80.0%	44.9%	50.0%	100.0%
		% of Total	4.4%	38.9%	3.3%	1.1%
Total	Count	5	78	6	1	
	% within Categorical Years in Education	5.6%	86.7%	6.7%	1.1%	
	% within T score Category Physical Environment	100.0%	100.0%	100.0%	100.0%	
	% of Total	5.6%	86.7%	6.7%	1.1%	

Years of Experience in the District

Table 53.

Relationship between T Score Category and Years of Experience in the District for the Role Overload Scale of the ORQ

		T score Category Role Overload					Total
		less than average stress	average stress	above average stress	mal-adaptive stress		
Years of Exp in District	0	Count	1	9	9	5	24
		% within Years of Exp in District	4.2%	37.5%	37.5%	20.8%	100.0%
		% within T score Category Role Overload	50.0%	19.1%	30.0%	41.7%	26.4%
		% of Total	1.1%	9.9%	9.9%	5.5%	26.4%
	1	Count	0	21	11	0	32
		% within Years of Exp in District	.0%	65.6%	34.4%	.0%	100.0%
		% within T score Category Role Overload	.0%	44.7%	36.7%	.0%	35.2%
		% of Total	.0%	23.1%	12.1%	.0%	35.2%
	2	Count	1	14	9	4	28
		% within Years of Exp in District	3.6%	50.0%	32.1%	14.3%	100.0%
		% within T score Category Role Overload	50.0%	29.8%	30.0%	33.3%	30.8%
		% of Total	1.1%	15.4%	9.9%	4.4%	30.8%
3	Count	0	2	1	0	3	
	% within Years of Exp in District	.0%	66.7%	33.3%	.0%	100.0%	
	% within T score Category Role Overload	.0%	4.3%	3.3%	.0%	3.3%	
	% of Total	.0%	2.2%	1.1%	.0%	3.3%	

Table 53.

Relationship between T Score Category and Years of Experience in the District for the Role Overload Scale of the ORQ
(continued)

		T score Category Role Overload					Total
		less than average stress	average stress	above average stress	mal-adaptive stress		
4	Count	0	1	0	2	3	
	% within Years of Exp in District	.0%	33.3%	.0%	66.7%	100.0%	
	% within T score Category Role Overload	.0%	2.1%	.0%	16.7%	3.3%	
	% of Total	.0%	1.1%	.0%	2.2%	3.3%	
5	Count	0	0	0	1	1	
	% within Years of Exp in District	.0%	.0%	.0%	100.0%	100.0%	
	% within T score Category Role Overload	.0%	.0%	.0%	8.3%	1.1%	
	% of Total	.0%	.0%	.0%	1.1%	1.1%	
Total	Count	2	47	30	12	91	
	% within Years of Exp in District	2.2%	51.6%	33.0%	13.2%	100.0%	
	% within T score Category Role Overload	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	2.2%	51.6%	33.0%	13.2%	100.0%	

Table 54.

Relationship between T Score Category and Years of Experience in the District for the Role Insufficiency Scale of the ORQ

		T score Category Role Insufficiency			Total	
		less than average stress	average stress	above average stress		
Years of Exp in District	0	Count	5	17	2	24
		% within Years of Exp in District	20.8%	70.8%	8.3%	100.0%
		% within T score Category Role Insufficiency	17.9%	28.8%	50.0%	26.4%
		% of Total	5.5%	18.7%	2.2%	26.4%
	1	Count	11	21	0	32
		% within Years of Exp in District	34.4%	65.6%	.0%	100.0%
		% within T score Category Role Insufficiency	39.3%	35.6%	.0%	35.2%
		% of Total	12.1%	23.1%	.0%	35.2%
	2	Count	10	17	1	28
		% within Years of Exp in District	35.7%	60.7%	3.6%	100.0%
		% within T score Category Role Insufficiency	35.7%	28.8%	25.0%	30.8%
		% of Total	11.0%	18.7%	1.1%	30.8%
	3	Count	2	1	0	3
		% within Years of Exp in District	66.7%	33.3%	.0%	100.0%
		% within T score Category Role Insufficiency	7.1%	1.7%	.0%	3.3%
		% of Total	2.2%	1.1%	.0%	3.3%
	4	Count	0	3	0	3
		% within Years of Exp in District	.0%	100.0%	.0%	100.0%
		% within T score Category Role Insufficiency	.0%	5.1%	.0%	3.3%
		% of Total	.0%	3.3%	.0%	3.3%
5	Count	0	0	1	1	
	% within Years of Exp in District	.0%	.0%	100.0%	100.0%	
	% within T score Category Role Insufficiency	.0%	.0%	25.0%	1.1%	
	% of Total	.0%	.0%	1.1%	1.1%	
Total	Count	28	59	4	91	
	% within Years of Exp in District	30.8%	64.8%	4.4%	100.0%	
	% within T score Category Role Insufficiency	100.0%	100.0%	100.0%	100.0%	
	% of Total	30.8%	64.8%	4.4%	100.0%	

Table 55.

Relationship between T Score Category and Years of Experience in the District for the Role Ambiguity Scale of the ORQ

		T score Category Role Ambiguity				Total	
		less than average stress	average stress	above average stress	mal-adaptive stress		
Years of Exp in District	0	Count	3	15	6	0	24
		% within Years of Exp in District	12.5%	62.5%	25.0%	.0%	100.0%
		% within T score Category Role Ambiguity	18.8%	23.4%	60.0%	.0%	26.4%
		% of Total	3.3%	16.5%	6.6%	.0%	26.4%
	1	Count	7	23	2	0	32
		% within Years of Exp in District	21.9%	71.9%	6.3%	.0%	100.0%
		% within T score Category Role Ambiguity	43.8%	35.9%	20.0%	.0%	35.2%
		% of Total	7.7%	25.3%	2.2%	.0%	35.2%
	2	Count	6	21	1	0	28
		% within Years of Exp in District	21.4%	75.0%	3.6%	.0%	100.0%
		% within T score Category Role Ambiguity	37.5%	32.8%	10.0%	.0%	30.8%
		% of Total	6.6%	23.1%	1.1%	.0%	30.8%
	3	Count	0	3	0	0	3
		% within Years of Exp in District	.0%	100.0%	.0%	.0%	100.0%
		% within T score Category Role Ambiguity	.0%	4.7%	.0%	.0%	3.3%
		% of Total	.0%	3.3%	.0%	.0%	3.3%
	4	Count	0	1	1	1	3
		% within Years of Exp in District	.0%	33.3%	33.3%	33.3%	100.0%
		% within T score Category Role Ambiguity	.0%	1.6%	10.0%	100.0%	3.3%
		% of Total	.0%	1.1%	1.1%	1.1%	3.3%
5	Count	0	1	0	0	1	
	% within Years of Exp in District	.0%	100.0%	.0%	.0%	100.0%	
	% within T score Category Role Ambiguity	.0%	1.6%	.0%	.0%	1.1%	
	% of Total	.0%	1.1%	.0%	.0%	1.1%	
Total	Count	16	64	10	1	91	
	% within Years of Exp in District	17.6%	70.3%	11.0%	1.1%	100.0%	
	% within T score Category Role Ambiguity	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	17.6%	70.3%	11.0%	1.1%	100.0%	

Table 56.

Relationship between T Score Category and Years of Experience in the District for the Role Boundary Scale of the ORQ

		T score Category Role Boundary				Total	
		less than average stress	average stress	above average stress	mal-adaptive stress		
Years of Exp in District	0	Count	6	17	1	0	24
		% within Years of Exp in District	25.0%	70.8%	4.2%	.0%	100.0%
		% within T score Category Role Boundary	26.1%	30.9%	10.0%	.0%	27.0%
		% of Total	6.7%	19.1%	1.1%	.0%	27.0%
	1	Count	11	17	2	1	31
		% within Years of Exp in District	35.5%	54.8%	6.5%	3.2%	100.0%
		% within T score Category Role Boundary	47.8%	30.9%	20.0%	100.0%	34.8%
		% of Total	12.4%	19.1%	2.2%	1.1%	34.8%
	2	Count	6	17	5	0	28
		% within Years of Exp in District	21.4%	60.7%	17.9%	.0%	100.0%
		% within T score Category Role Boundary	26.1%	30.9%	50.0%	.0%	31.5%
		% of Total	6.7%	19.1%	5.6%	.0%	31.5%
	3	Count	0	2	0	0	2
		% within Years of Exp in District	.0%	100.0%	.0%	.0%	100.0%
		% within T score Category Role Boundary	.0%	3.6%	.0%	.0%	2.2%
		% of Total	.0%	2.2%	.0%	.0%	2.2%
	4	Count	0	2	1	0	3
		% within Years of Exp in District	.0%	66.7%	33.3%	.0%	100.0%
		% within T score Category Role Boundary	.0%	3.6%	10.0%	.0%	3.4%
		% of Total	.0%	2.2%	1.1%	.0%	3.4%
5	Count	0	0	1	0	1	
	% within Years of Exp in District	.0%	.0%	100.0%	.0%	100.0%	
	% within T score Category Role Boundary	.0%	.0%	10.0%	.0%	1.1%	
	% of Total	.0%	.0%	1.1%	.0%	1.1%	
Total	Count	23	55	10	1	89	
	% within Years of Exp in District	25.8%	61.8%	11.2%	1.1%	100.0%	
	% within T score Category Role Boundary	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	25.8%	61.8%	11.2%	1.1%	100.0%	

Table 57.

Relationship between T Score Category and Years of Experience in the District for the Responsibility Scale of the ORQ

		T score Category Responsibility				Total	
		less than average stress	average stress	above average stress	mal-adaptive stress		
Years of Exp in District	0	Count	1	17	4	2	24
		% within Years of Exp in District	4.2%	70.8%	16.7%	8.3%	100.0%
		% within T score Category Responsibility	14.3%	26.2%	25.0%	66.7%	26.4%
		% of Total	1.1%	18.7%	4.4%	2.2%	26.4%
	1	Count	5	23	4	0	32
		% within Years of Exp in District	15.6%	71.9%	12.5%	.0%	100.0%
		% within T score Category Responsibility	71.4%	35.4%	25.0%	.0%	35.2%
		% of Total	5.5%	25.3%	4.4%	.0%	35.2%
	2	Count	1	21	6	0	28
		% within Years of Exp in District	3.6%	75.0%	21.4%	.0%	100.0%
		% within T score Category Responsibility	14.3%	32.3%	37.5%	.0%	30.8%
		% of Total	1.1%	23.1%	6.6%	.0%	30.8%
	3	Count	0	2	1	0	3
		% within Years of Exp in District	.0%	66.7%	33.3%	.0%	100.0%
		% within T score Category Responsibility	.0%	3.1%	6.3%	.0%	3.3%
		% of Total	.0%	2.2%	1.1%	.0%	3.3%
	4	Count	0	2	0	1	3
		% within Years of Exp in District	.0%	66.7%	.0%	33.3%	100.0%
		% within T score Category Responsibility	.0%	3.1%	.0%	33.3%	3.3%
		% of Total	.0%	2.2%	.0%	1.1%	3.3%
5	Count	0	0	1	0	1	
	% within Years of Exp in District	.0%	.0%	100.0%	.0%	100.0%	
	% within T score Category Responsibility	.0%	.0%	6.3%	.0%	1.1%	
	% of Total	.0%	.0%	1.1%	.0%	1.1%	
Total	Count	7	65	16	3	91	
	% within Years of Exp in District	7.7%	71.4%	17.6%	3.3%	100.0%	
	% within T score Category Responsibility	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	7.7%	71.4%	17.6%	3.3%	100.0%	

Table 58.

Relationship between T Score Category and Years of Experience in the District for the Physical Environment Scale of the ORQ

		T score Category Physical Environment				Total	
		less than average stress	average stress	above average stress	mal-adaptive stress		
Years of Exp in District	0	Count	2	19	2	1	24
		% within Years of Exp in District	8.3%	79.2%	8.3%	4.2%	100.0%
		% within T score Category Physical Environment	40.0%	24.4%	33.3%	100.0%	26.7%
		% of Total	2.2%	21.1%	2.2%	1.1%	26.7%
	1	Count	0	31	0	0	31
		% within Years of Exp in District	.0%	100.0%	.0%	.0%	100.0%
		% within T score Category Physical Environment	.0%	39.7%	.0%	.0%	34.4%
		% of Total	.0%	34.4%	.0%	.0%	34.4%
	2	Count	3	22	3	0	28
		% within Years of Exp in District	10.7%	78.6%	10.7%	.0%	100.0%
		% within T score Category Physical Environment	60.0%	28.2%	50.0%	.0%	31.1%
		% of Total	3.3%	24.4%	3.3%	.0%	31.1%
	3	Count	0	3	0	0	3
		% within Years of Exp in District	.0%	100.0%	.0%	.0%	100.0%
		% within T score Category Physical Environment	.0%	3.8%	.0%	.0%	3.3%
		% of Total	.0%	3.3%	.0%	.0%	3.3%
	4	Count	0	3	0	0	3
		% within Years of Exp in District	.0%	100.0%	.0%	.0%	100.0%
		% within T score Category Physical Environment	.0%	3.8%	.0%	.0%	3.3%
		% of Total	.0%	3.3%	.0%	.0%	3.3%
5	Count	0	0	1	0	1	
	% within Years of Exp in District	.0%	.0%	100.0%	.0%	100.0%	
	% within T score Category Physical Environment	.0%	.0%	16.7%	.0%	1.1%	
	% of Total	.0%	.0%	1.1%	.0%	1.1%	
Total	Count	5	78	6	1	90	
	% within Years of Exp in District	5.6%	86.7%	6.7%	1.1%	100.0%	
	% within T score Category Physical Environment	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	5.6%	86.7%	6.7%	1.1%	100.0%	