2017

Guided Imagery Relaxation Effects on South Texas Public School Teachers' Stress

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Abstract

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MA, University of Texas Pan American, 2003

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Psychology

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Abstract

Public school teachers face a great amount of stress, and that stress may lead to other adverse health outcomes. This study examined elementary public school teachers' stress levels before and after the use of guided imagery relaxation. Guided by the transactional model of stress and coping as the theoretical framework, the purpose of this research was to evaluate the use of guided imagery as an effective technique in the stress reduction of elementary public school teachers, thus enhancing the learning experience of students and creating healthier public school teachers. Eighty-one teachers (71 women, 10 men) participated in this study by completing the Classroom Appraisal of Resources and Demands Inventory Elementary Version. Several variables were examined including gender, years of experience, and adverse health as related to stress experiences. A repeated measures analysis of variance revealed that guided imagery relaxation was statistically significant in reducing stress levels of public school teachers. These results have implications for positive social change by illuminating the utility of a stress-reduction technique for public school teachers. School administrators and educators may find these results useful in their work to retain talented teachers.

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Dedication

This dissertation is dedicated to my two children, Carlos II and Emily, who encouraged me, believed in me, cheered me on, and patiently sat by my side as I persevered through this journey.

To my parents, Horacio and Leonila Perez, who instilled in me the value of hard work and who inspired me and empowered me to reach my highest potential. From the memories of struggling times to the memories of academic and professional achievement, my parents embodied and modeled the meaning of honesty, the value of self worth, and the example of modesty. To my parents whom I dearly love, I dedicate this doctoral study which began with a moment of inspiration and is completed with heartfelt gratitude.

Acknowledgments

Thank you to the three greatest sisters and dedicated educators, Olga, Sara, and Irma for their invaluable support and encouragement on so many days and nights throughout this dissertation journey. I offer you sincere gratitude for being my go to for printing paper, ink, technical troubleshooting, and a listening ear. To my nieces and nephews who gave of their time to entertain my children, drive them to and from their activities when I was submerged in my research, and for consistently being available when I needed quiet writing time. Thank you each, sisters, nieces, and nephews for selflessly having given time, energy, and support. This dissertation is a culmination of the unity and support that was unconditionally provided by each of you.

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Chapter 1: Introduction to the Study

Introduction

The purpose of this research was to evaluate the use of guided imagery as an effective technique in the stress reduction of elementary public school teachers, thus enhancing the learning experience of students and creating healthier public school teachers. In the process of evaluating the effectiveness of guided imagery, I explored five demographic components and the stress experience: guided imagery as an effective stress reduction intervention, gender, years of teaching experience, age, and disruptive student behavior.

Researchers have noted that public school teachers experience a heavy burden of work-related stress (Klassen, 2010; Lath, 2010; Stoeber & Rennert, 2010). That is, teachers perceive their occupational demands to be greater than their available resources (Varvogli & Darviri, 2011). Being a public school teacher includes being part of a professional population who experiences stress at a higher rate than other professions such as social workers, call center workers, prison workers, firefighters, and police (Kodavatiganti & Bulusu, 2011; Stress by MIND, 2005; Van der Klink & Schene, 2001). The contributing stress factors within the teaching profession have become increasingly compounded as the demands within the profession and the type of student population continue to evolve. Public school teachers are faced with the complexity of balancing their time and effort towards academically educating their students together with serving in other roles such as mentors, mediators, translators, supporters, test administrators, and parent liaisons (Kodavatiganti & Bulusu, 2011; Lambert, McCarthy, O'Donnell, & Wang,

2009). Kodavatiganti and Bulusu (2011) suggested that public school teachers will spend an average of 10 working hours per week performing duties that are not directly connected to teaching such as lunchroom supervision, open house, extracurricular events, meetings, and playground supervision. Gardner (2010) added that public school teacher stressors are continuing to grow as technological advances and curriculum innovations move forward and require training and certification time. The established literature presented a consensus that public school teachers lie at the high end of the stressful professions spectrum. The literature also indicated that as an individual experiences stress, he or she is prone to the adverse health implications that accompany the stress experience (Thoits, 2010; Van der Linde, 2001; Varvogli & Darviri, 2011). Stress has been implicated in physical and psychological disease including cardiovascular disease, hypertension, obesity, and depression. The concept of stress has long been established since the early works of Hans Selye and his original interpretation of stress as it applies to the biological system (Tache & Brunnhuber, 2008).

Conceptually, stress is described as the demands placed on an individual and the individual's perceived ability to respond to those demands within their available resources; it is the disturbance of an individual's homeostasis (Varvogli & Darviri, 2011). Varvogli and Darviri (2011) explained that within the central and peripheral nervous system, there is the stress system, which is triggered upon the imbalance of an individual's homeostasis. As the individual experiences stress, an array of physiological, behavioral, and psychological alterations are taking place resulting in adverse health implications (Kodavatiganti & Bulusu, 2011; Stress by MIND, 2005; Van der Klink &

Schene, 2001; Van der Linde, 2001). With public school teachers ranking at the top of the list for stressful occupations (Klassen, 2010; Roeser at al., 2013), there is an immediate need for providing stress management and stress reduction techniques for public school teachers.

Historical Background of Stress

The concept of stress as applied to a person's life was first reported by Hans Selye in 1936, who borrowed the term from the field of physics (Selye, 1953, 1955). Selye (1955) contended that the concept of stress includes having the body respond to a wide array of factors in a stereotypical manner. These factors, while varied, such as infections, heat, and trauma, are bonded by their ability to elicit a systematic response by the body; this is recognized as nonspecific stress (Selye, 1955). Upon the coining of the term *stress* as applied to living organisms, of the author explored how stress affects the human body internally. Selye (1955) pointed out that some of the most common manifested biological responses include and renocortical enlargement, thymicolymphatic involution, which presents a change in blood count including eosinopenia, lymphopenia, and polynucleosis, as well as gastrointestinal ulcers. While exploring stress, Selye (1953, 1955) identified three initial stages as physiological reactions to stressors. He suggested the body first goes through the alarm stage, then the resistance stage, and finally the exhaustion stage. Upon experiencing the exhaustion stage, Selye (1953, 1955) contended that the adverse health implications such as high blood pressure and heart disease are prone to appear.

In the present day, the concept of stress and its adverse effects on health have been examined and have been shown to be linked to each other (Lath, 2010;

Trakhtenberg, 2008). There also are now different terms that have been coined as related to the origin of stress and the different categories of stress. For example, Lath (2010) identified three categories of stress and described how each of these stressors is implicated in the body's internal response system. These three categories are catastrophes, major life changes, and daily hassles. Examples of catastrophes include accidents, wars, natural disasters, and other unexpected events that press individuals to their coping ability limits. Major life changes are categorized as an individual's most stressful experiences such as divorce, loss of employment, or the loss of a spouse. Daily hassles are those stressors that an individual faces on a day-to-day basis such as heavy traffic, financial debt, or job-related challenges (Lath, 2010).

These categories of stressors impact the internal body system. Lath (2010) explained that corticotropin-releasing hormone and argininevasopressin are released and the hypophyseal portal system secretes them, creating a reaction that activates the paraventricular nuclei neurons of the hypothalamus. At this point, there is a fight-or-flight response that engages other response systems leading to cardiovascular, respiratory, renal, and endocrine changes (Lath, 2010). After the stress trigger is no longer present, the body systems return to normal hormonal levels. However, with continued or repeated exposure to stressors, the body's response systems continue to become engaged, the hormonal levels remain consistently elevated, and the body reaches exhaustion (Lath, 2010). At this point, the body becomes prone to adverse health conditions from the flu to ulcers.

Historical Background of Guided Imagery

The concept of relaxation techniques has been used within the field of psychotherapy for over a century (Utay & Miller, 2006). In a review of the relaxation therapy and guided imagery history, various synonymous names and forms of relaxation techniques have come to be recognized and accepted. Utay and Miller (2006) noted that some of the names have come from Native American, Hindu, and Judeo-Christian cultures, who have long practiced these techniques as part of their approach to healing. Some of these include the work by Leuner (1969), who provided the concept of *symboldrama* psychotherapy, also recognized as *guided affective imagery*. In the late 1960s, Wolpe (1978) introduced several imagery-related techniques used within behavior-modification therapy. During the 1970s, the concept that is still today recognized as *guided imagery* was coined by Drs. David Bresler and Martin Rossman (Academy for Guided Imagery, n.d.; Mishlove & Rossman, n.d.; Rossman, 2000). In 1989, the Academy for Guided Imagery was developed, and formal training in this field has become available in response to its continued use and health benefits such as in alleviating anxiety, depression, physical symptoms, and psychological symptoms (Utay & Miller, 2006; Varvogli & Darviri, 2011).

Problem Statement

The teaching profession has been identified as a high stress occupation (Lambert et al., 2009). Its stress factors are multifaceted and have been identified and linked to low levels of job satisfaction and to adverse health implications such as asthma, diabetes, back pain, and coronary problems (Van Der Linde, 2001). Public school teachers

frequently transfer from school to school (Lambert et al., 2009) or leave the profession altogether as a result of work-related stress at a rate of about 30% within their initial 5 years (Darling-Hammond, 2001; Haberman, 2004). Within the various populations included in studies involving stress, public school teachers comprise the largest percentage population (22%) studied because of the stress they experience. This is in comparison to social workers, call center workers, prison workers, firefighters, and police (Stress by MIND, 2005; Van der Klink & Schene, 2001). There is an immediate need for providing stress management and stress reduction techniques for public school teachers.

Public school teachers face an increasing level of severity of stress as well as increasingly diversified stressors (Lambert et al., 2009). Public school teachers are educating students with problem behaviors, increasing class size, excessive paperwork requirements, constraints in workload and time, less prepared students migrating into the United States, sleep-deprived students going to school, students with less structure in the home, and limited English fluency (Lambert et al., 2009). Efforts have been made to explore techniques and strategies that public school teachers can employ in an effort to minimize public school teachers' levels of stress. One such technique is guided imagery (Kaspereen, 2012). Guided imagery, recognized as meditation, relaxation therapy, or mindfulness, facilitates an individual's ability to create a centered focus on his or her inner self, paving a pathway to control and confidence as well as a general mood of tranquility. Relaxation therapy (Kaspereen, 2012), a technique that has been in practice for over 100 years, helps individuals reduce their body tension and enhance energy. Engaging in guided imagery involves a process of thoughts, feelings, and physiological

responses working intricately together. Individuals who take advantage of relaxation techniques such as guided imagery increase their ability to lessen strain and stress through the use of internal control without using medications (Utay & Miller, 2006).

In this study, I evaluated the effects of relaxation therapy, specifically guided imagery implemented by Pinkerman and Gonzalez Psychological Associates (PGPA), in a particular population of elementary school public school teachers. This population of public school teachers works with a student body consisting primarily of two aspects that have already been identified as factors in increasing teacher stress levels (Lambert et al., 2009): low socioeconomic status students (42.1% poverty rate in the chosen school district) and limited English proficient students (29.5% of students in the district are English language learners). The focus of this study was to provide PGPA with data that would support the effectiveness of this program as a teacher resource in reducing perceived stress while increasing overall life satisfaction, mood, and job satisfaction. While previous researchers have suggested that guided imagery is a beneficial tool in reducing stress (i.e., Mañas, Justo, & Martínez, 2011; Roeser, Skinner, Beers, & Jennings, 2012), there is a gap in the literature in terms of addressing this particular population of public school teachers. The public school teachers who participated in this study are unique in terms of their student population, who are primarily of low socioeconomic status, are English language learners, and are Hispanic or Latino.

Purpose of the Research

Public school teachers have an impact on the building blocks of students including academic, emotional, psychological, and behavioral aspects. Froeschle and

Crews (2010a) reported that public school teachers share a belief that high stress levels and burnout levels of public school teachers adversely affect students. High stress levels have also been implicated in adverse health (Thoits, 2010; Van der Linde, 2001; Varvogli & Darviri, 2011). The purpose of this research was to close the gap in the literature related to public school teachers working primarily with students who are of low socioeconomic status, English language learners, and Hispanic or Latino. While there have been a multitude of studies that have reviewed the guided imagery approach to stress management and reduction, there have been no studies addressing public school teachers who work with this type of student population: primarily of low socioeconomic status, English language learners, and Hispanic or Latino. The results of this evaluation can be used to suggest districtwide implementation. This research also offers positive social change for public school teachers and their students as well as to positively impact policy change related to public school teacher stress management education. In particular, the purpose of this study was to examine the effectiveness of an implementation of a relaxation technique, specifically guided imagery, in the stress reduction of elementary public school teachers, thus enhancing the learning experience of students and creating healthier public school teachers.

Theoretical Foundation of the Study

The framework of this study was Lazarus and Folkman's (1984) transactional model of stress and coping. The transactional model of stress and coping offers a framework that is used to evaluate an individual's processes of coping with stressful events (Glanz, Rimer, & Lewis, 2002; Lazarus & Folkman, 1984). Lambert et al. (2009)

noted that teacher stress is better understood by Lazarus and Folkman's transactional model because it explains the source of stress for public school teachers as well as teacher coping styles, techniques, and mechanisms. In addition, the model provides a description of a cognitive process that becomes activated when individuals are confronted with life demands. This cognitive process involves the individuals weighing their stressors against their perception of their own capabilities for coping with the life demands they are presently facing. The transactional model of stress and coping (Lazarus & Folkman, 1984) provides a pathway for an individual to examine the psychological processes that create a connection between the individual and their environment. This process facilitates a better understanding of the balance or imbalance between the individual's appraisal of the situation demands and their appraisal of their coping resources (Brack & McCarthy, 1996; Dewe & Trenverth, 2004).

Gender Differences and Stress

Male and female public school teachers have been noted to experience and report work-related stress and work satisfaction differently (Antoniou, Polychroni, & Vlachakis, 2006; Klassen & Ming Chiu, 2010). Antoniou et al. (2006) found higher stress levels reported by female public school teachers than their male counterparts, and Klassen and Ming Chiu (2010) found male public school teachers as having a greater control of classroom discipline as compared to female public school teachers. In these two studies, the authors suggested that this factor contributes to stress levels reported by public school teachers and then noted the difference between the genders. Klassen and Ming Chiu (2010) also explored classroom stress and workload stress. They found that female public

school teachers reported 13% higher workload stress and 8% higher classroom stress than male public school teachers. Ahlgren and Gillander Gadin (2011) indicated that stress related to the work environment was reported at higher rates by women than men within the teaching field. These authors attributed the gender order in society as a major contributing factor for these findings. Gender order is based on the socialization processes of a given culture. They suggested that school systems are organized in such a manner that follows the societal gender order (Messing et al., 2011). Consequently, female public school teachers are not only charged with the task of their profession, they also tend to household and childcare duties. All of these stressors together increase their daily workload in comparison to men (Messing et al., 2011). Messing et al. (2011) further suggested that within the scope of teacher stress, married female public school teachers have a higher incidence of stress experience as compared to male married public school teachers. This suggests that when examining teacher stress, it is important to consider work stressors as well as life situations. In terms of managing stress, Wright and Ballestro (2012) reported that male public school teachers were perceived by their colleagues as being better at managing stress than female public school teachers.

Years of Experience and Stress

Teacher's confidence in their field has been established as following a pattern of growth followed by a gradual decline through their years of experience (Klassen & Ming Chiu, 2010; Wolters & Daugherty, 2007). With a higher level of confidence, there is a greater sense of classroom and workload management. This level of confidence offers the potential for effective management of stressful situations, thus a lower level of stress

would be reported (Klassen & Min Chiu, 2010). Hubberman (1989) offered a "life-cycle" breakdown of teacher's years of experience and associated levels of stress. The initial years are noted by concepts of survival and discovery, followed by stabilization at years 4 to 6 of teaching experience. Experimentation and activism occur in years 7 to 18, and years 19 to 30 of experience is serenity. Finally, years 31 to 40 are the years of disengagement. This life-cycle, as indicated by Hubberman (1989), provides an underlying construct for how workload stress and classroom stress are related. Public school teachers with emerging experience compared with those public school teachers who had 19 to 30 and 31 to 40 years of experience reported higher levels of stress. Other work by Wolters and Daugherty (2007) indicated that more experienced public school teachers have gained knowledge of their profession by observing more tenured public school teachers and they have developed greater confidence in their occupational area, leading to greater confidence and reduced classroom stress. These authors also noted that the more years of experience a teacher had, the more likely a teacher's greater sense of classroom management skills, problem solving, decision making, and sensitivity to classroom events. These factors have been established to rate public school teachers' perceived levels of stress (Kodavatiganti & Bulusu, 2011; Lambert et al., 2009).

Public School Teachers' Age and Stress

A public school teacher's age can be identified as a factor in the amount of work-related stress he or she will report. Public school teachers who are between 20 years of age and 29 years of age are usually at the inception of their teaching career. Previous studies have established that years of teaching experience play a vital role in the amount

of work-related stress that the public school teacher experiences (Hubberman, 1989; Klassen & Ming Chiu, 2010; Wolters & Daugherty, 2007); thus, a public school teacher young in age is likely to be within the beginning of their teaching career. Previous research findings indicated public school teachers 30 years of age or younger experience greater levels of stress (Dagli, 2012; Wright & Ballestero, 2012) and greater emotional exhaustion (Koruklu, Feyzioglu, Ozenoglu-Kiremit, & Aladag, 2012).

Student Classroom Behavior and Public School Teacher Stress

The disruptive behavior of public school students has a negative impact on the stress levels reported by public school teachers (Collie, Shapka, & Perry, 2012; Karaj & Rapti, 2013; Otero-Lopez et al., 2008). As teachers are needing to manage their disruptive students' behavior, time from providing academic instruction is being lost. With the ever-growing rigor of academic instruction, having teaching time lost due to behavior incidents is an added burden to the stress components of public school teachers. Students' disruptive behavior has been identified as a predictor of public school teachers' job stress (Karaj & Rapti, 2013). Public school teacher stress related to the behavior problems of their students has been associated with adverse outcomes for the teacher (Collie et al., 2012; Klassen & Ming Chiu, 2010).

Research Questions and Hypothesis

The research questions are as follows:

RQ1: Does the use of guided imagery as a stress management technique reduce the levels of stress in public school teachers?

Null Hypothesis: The use of guided imagery as a stress management technique does not reduce the levels of stress in public school teachers as measured by pre- and posttest.

Alternative Hypothesis: The use of guided imagery as a stress management technique does reduce the levels of stress in public school teachers as measure by pre- and posttest.

RQ2: Does teacher gender make a difference in reported levels of stress pre- and posttest?

Null Hypothesis: There is no gender difference in levels of stress reported pre- and posttest.

Alternative Hypothesis: There is a gender difference in levels of stress reported pre- and posttest.

RQ3: Do years of teaching experience make a difference in reported levels of stress pre- and posttest?

Null Hypothesis: Years of teaching experience do not make a difference in reported levels of stress pre- and posttest.

Alternative Hypothesis: Years of teaching experience make a difference in reported levels of stress pre- and posttest.

RQ4: Does the age of the public school teacher make a difference in the level of stress reported?

Null Hypothesis: Public school teachers' age does not make a difference in the level of stress reported.

Alternative Hypothesis: Public school teachers' age does make a difference in the level of stress reported.

RQ5: Does the level of student disruptive behavior make a difference in reported levels of stress pre- and posttest?

Null Hypothesis: Student disruptive behavior does not make a difference in reported levels of stress pre- and posttest.

Alternative Hypothesis: Student disruptive behavior does make a difference in reported levels of stress pre- and posttest.

Nature of the Study

This study is an examination of the effects of guided imagery in reducing stress. The sample was a convenience sample selected from a population of public school teachers at South Texas public elementary schools in a local district and consisted of 83 participants (though the original plan was to include 97 participants). The sample size was determined using the power analysis calculator for a multiple regression with an anticipated effect size = 0.15, desired statistical power = 0.80, number of predictors = 6, probability level =. 05. The power analysis calculator used to determine the study sample size was obtained from Free Statistics Calculator (n.d.). Informational flyers explaining the study were given to all elementary public school teachers in the school district where this research took place. The first 97 respondents would have been the study participants, but the final number of participants was 83 due to participant response compliance. The sample population completed an assessment that measured their stress level prior to the intervention, immediately after the intervention, and 2 weeks after the intervention. The

same assessment tool was used during each of the three assessments. The two stress level postassessments were used as a measure of the effectiveness of guided imagery relaxation on the public school teachers' stress levels. The five independent variables were guided imagery as a stress intervention, gender, years of teaching experience, participant's age, and student behavior. The dependent variable was the level of stress. The sample population listened to a 38-minute guided imagery script one time per week for 3 weeks.

I conducted the statistical analysis of data using a repeated measures analysis of variance (ANOVA). This statistical analysis method is designed to assess the same measure for the same person over multiple time points. In this study, teachers were assessed for current levels of stress before they began the guided imagery intervention, immediately after the third session, and 2 weeks after the third intervention.

Definitions

The following terms were operationally defined for use throughout this research study:

Adrenocortical enlargement: The glands located at the top of the kidneys, which become enlarged due to insufficient adrenal. The adrenal glands produce stress hormones (Moltedo, Hemmers, & Rudensky, 2014).

Adverse health implications: The physiological, behavioral, and psychological changes that take place within an individual resulting in illness (Lath, 2010).

Catastrophe: Unexpected events that push individuals to their maximum coping abilities (Lath, 2010).

Classroom management skills: Interventions executed by a teacher within a classroom aimed at improving disruptive classroom behavior (Mitchem & Young, 2001).

Daily hassles: Stressors individuals face on a day to day basis (Lath, 2010).

Elementary: A school servicing students from prekindergarten through fifth grade (local school district, n.d.).

English language learner: Students in a district who qualify as limited English proficient according to state law (Texas Education Agency, n.d.).

Eosinopenia: A decrease of the eosinophil count which can be caused by experiences such as stressful conditions and steroid therapy (Khurana, 2009).

Exhaustion: The overextension and depletion of an individual's emotional and physical resources, typically resulting from continued exposure to occupational demands (Sonnentag, Arbeus, Mahn, & Fritz, 2014).

Fight or flight response: The term introduced in 1929 by Walter Cannon that describes how the body responds physiologically to threats in the environment (Kunimatsu & Marsee, 2012).

Gastrointestinal ulcers: A small hole is the gastrointestinal tract (Khoshbaten, Ghaffarifar, Jabbar Imani, & Shahnazi, 2013).

Guided affective imagery: A method of intensive psychotherapy that accounts for subconscious motivation, symbols, and resistance (Leuner, 1969).

Guided imagery: The process of utilizing techniques such as simple visualization, direct suggestion involving the use of imagery, story-telling, and active imagination in which parts of the unconscious become present within the conscious mind (Academy of

Guided Imagery, n.d.). It is also recognized as relaxation therapy and mindfulness (Utay & Miller, 2006).

Job satisfaction: The perception of fulfillment resulting from day-to-day work activities (Klassen, 2010).

Life-cycle: As related to teaching, the years of teaching experience; initial years 0 to 3, stabilization years 4 to 6, experimentation and activism years 7 to 18, experience and serenity years 19 to 30, disengagement years 31 to 40 (Hubberman, 1989).

Lymphopenia: A condition of decreased lymphocytes in the blood (Moltedo, Hemmers, & Rudensky, 2014).

Meditation: Also known as *guided imagery*. The process of utilizing techniques such as simple visualization, direct suggestion involving the use of imagery, story-telling, and active imagination in which parts of the unconscious become present within the conscious mind (Academy of Guided Imagery, n.d.). It is also recognized as relaxation therapy and mindfulness (Utay & Miller, 2006).

Mindfulness: Also known as *guided imagery*. The process of utilizing techniques such as simple visualization, direct suggestion involving the use of imagery, story-telling, and active imagination in which parts of the unconscious become present within the conscious mind (Academy of Guided Imagery, n.d.). It is also recognized as guided imagery and relaxation therapy (Utay & Miller, 2006).

Minority student: Students categorized as a race or ethnicity that is not White.

Nonspecific stress: In biological equivalent to the physics concept of the interaction between a force and the resistance opposed to it (Selye, 1955).

Major life change: The most stressful changes in the life of an individual (Lath, 2010).

Polynucleosis: Having too many polynuclear cells (Moltedo et al., 2014).

Poverty rate: The number of students in a district ages 5 to 17 living beneath the Census Bureau's poverty line.

Teacher: These public school teachers work in schools funded by government taxes and schools that are required by law to admit any student (Bureau of Labor Statistics, n.d.).

Relaxation therapy: Also known as *guided imagery*. The process of utilizing techniques such as simple visualization, direct suggestion involving the use of imagery, story-telling, and active imagination in which parts of the unconscious become present within the conscious mind (Academy of Guided Imagery, n. d.). It is also recognized as guided imagery and mindfulness (Utay & Miller, 2006).

Stress: Stress is conceptually described as the demands placed on an individual and the individual's perceived ability to respond to those demands within their available resources; it is the disturbance of an individual's homeostasis (Varvogli & Darviri, 2011).

Stress management techniques: Interventions utilized by individuals as a means to cope better with stress; also recognized as *stress reduction techniques* (Roeser et al., 2013).

Stress reduction techniques: Intervention utilized by individuals as a means to cope better with stress; also recognized as *stress management techniques* (Roeser et al., 2013).

Thymicolymphatic involution: When the thymus and the lymphatic system are both affected (Khurana, 2009).

Transactional model of stress and coping: A conceptual framework involving cognitive appraisal of situational demands and of resources to cope with the demands as intermediaries of stress between an individual and their environment (Lazarus & Folkman, 1984).

Assumptions

The following assumptions have been made for this research study:

- The pre- and postsurvey instruments are valid and reliable in measuring the stress levels of public school teachers.
- The participants would comprehend the directions and items on the survey instruments.
- The participants would have a clear understanding of the study at hand and be fully committed to completing the entire process of the study.
- The participants would attend all sessions of intervention delivery.
- Results from this study will be generalizable to similar populations.
- The participants had a desire to learn stress management techniques.
- The participants would answer the survey instrument honestly.
- Positive social change would be an outcome of this study.
- The theoretical framework of this study is consistent with teacher stress and the consequences thereof.

Scope and Delimitations

The study was delimited to elementary public school teachers with the local district. This school district is located in Hidalgo County, which lies along the Texas–Mexico border. This county falls in the Rio Grande Valley, which is comprised of small towns and communities that stretch from Laredo, southern San Antonio, to Brownsville. The population in this area is 90.9% Hispanic (Texas Demographics, n.d.), and the population of the city where the school district is located is 88.2% Hispanic or Latino compared to the State of Texas at 38.2% and the rest of the nation at 16.9%. English and Spanish are spoken interchangeably. Most children in this area are bilingual, but at home, many speak Spanish exclusively. The English language is learned upon beginning formal school.

According to the local school district, the student demographic of this district is comprised of 31 elementary schools is 98.7% minority students, 29.5% English language learners, and 42.1% students living in poverty. The results of the study may not be relevant to other teacher populations for whom the student populations vary demographically. Additionally, this study was delimited to public elementary schools and will not be generalizable to other teacher populations including early childhood, middle school, or high school public school teachers.

Limitations of the Study

Several limitations are present in this study. The convenience sampling method selected for this study limited the generalizability of the results. Despite all elementary school public school teachers being invited to participate in the study, the sample was

selected from only one school district. This study was limited to a self-report preintervention and two postsurveys in which the participants' response bias cannot be ruled out. Despite confidentiality measures, public school teachers may have feared job security if they were identified as public school teachers experiencing high levels of stress and thus may have responded in a more favorable manner than was actually true for them. Furthermore, the gender characteristic also posed a threat to generalizability because according to local records, the school district selected employs 70.7% female school public school teachers and only 29.3% male school public school teachers. It was possible that the convenience sampling method could have yielded all female participants given the gender gap of the sample population. Finally, due to the geographic location of this study, the results are limited in the aspect of generalizability to other populations of public school teachers.

Significance of the Study

Public school teachers face a high level of stress, which may have a significant effect on their performance, health, job satisfaction, and life satisfaction (Klassen, 2010). Varvogli and Darviri (2011) suggested that work-related stress has been identified as the second most frequently occurring health problem linked to hypertension, obesity, depression, and cardiovascular disease. Overall job satisfaction is an important factor because it plays a direct role in instruction delivery, days absent from work, and both mental and physical health (Klassen, 2010). Public school teachers are increasingly faced with work-related stressors involving distributing their time, effort, and energy in the academic preparation of their students as well as filling roles of mentor, mediator,

translator, supporter, test administrator, and parent liaison (Kodavatiganti & Bulusu, 2011; Lambert et al., 2009). An urgent need exists in providing public school teachers with techniques to manage and reduce stress.

Summary

Being a teacher is belonging to a professional population with a higher rate of stress experience than other professional populations and, consequently, being part of a professional group with a high risk for developing adverse health conditions due to the stress experience (Kodavatiganti & Bulusu, 2011; Stress by MIND, 2005; Van der Klink & Schene, 2001). The demands placed on a teacher have evolved from simply delivering academic instruction. A teacher's workday is comprised of student academic preparation, administering tests, mentoring, serving as parent liaisons, and completing administrative paperwork (Kodavatiganti & Bulusu, 2011; Lambert et al., 2009).

Teacher stress plays a role in teacher absenteeism, commitment to their job, and professional longevity (Klassen, 2010). In order to facilitate elementary public school teachers' prevention of the mental, emotional, and physical adverse effects of stress, this study explored the effects of guided imagery relaxation as a stress management technique for elementary public school teachers. The variables were guided imagery as a stress management and reduction intervention, gender, years of teaching experience, age, and student behavior. The following chapter addresses an overview of the literature related to each of the identified independent variables, teacher stress experiences, and the benefits of guided imagery relaxation for managing occupational stress.

Chapter 2: Literature Review

Introduction

Public school teachers face a heavy burden of stress within their profession (Davidson, 2009; Froeschle & Crews, 2010a; González-Morales, Rodríguez, & Peiró, 2010; Klassen, 2010; Lambert et al., 2009; Roeser et al., 2013; Ullrich, Lambert, & McCarthy, 2012). Public school teacher stress has multiple contributing factors such as increased class size, students with problem behaviors, more migrant students with limited English fluency, and sleep-deprived students going to school (Froeschle & Crews, 2010a, 2010b; Kaspereen, 2012). Lambert et al. (2009) suggested public school teachers collectively are the largest percentage population comprising stress studies at 22% than other occupations such as social workers, call center workers, prison workers, firefighters, and police (Stress by MIND, 2005; Van der Klink & Schene, 2001). Stoeber and Rennert (2008) have found public school teachers to be within the highest job stress profession across different countries. Background information about teacher stress is presented throughout Chapter 2.

Public school teacher stress plays a role on the physical and mental health of the teacher (Kaspereen, 2012; Klassen, 2010). Baynam and Bilgel (2010) and Catano et al. (2010) suggested that stress also interferes with emotional well-being. In addition to poor health outcomes, public school teachers also reported low job satisfaction as a result of stress and burnout (Adera & Bullock, 2010; Brackett et al., 2010; Klassen & Ming Chiu, 2010; McCarthy, Lambert, Crowe, & McCarthy, 2010; Stoeber & Rennert, 2008). Stress and burnout negatively impact teacher performance, absenteeism, physical, mental, and

emotional well-being (Klassen, 2010; Thoits, 2010). This study explored the use of guided imagery relaxation as an effective resource for public school teachers to manage their stress (Froeschle & Crews, 2010b; Kaspereen, 2012; Kemeny et al., 2012; Roeser et al., 2012; Trakhtenberg, 2008; Utay & Miller 2006).

Chapter 2 includes an in-depth critical analysis of the of stress factors that increase stress for public school teachers: English language learners, and low socioeconomic status. The independent variables in this study were described as: guided imagery, gender, years of teaching experience, teacher age, and student behavior. Within Chapter 2 there is a description of the literature review research strategy, explanation of the theoretical foundation and conceptual framework, implications for positive social change, and an overall summary of the research study. The concept of stress as it was developed (Seyle 1953, 1955) and the effects of stress on public school teachers in terms of psychological, physiological, emotional, and job-related consequences are highlighted (Gold et al., 2010; Kaspereen 2012). The transactional model of stress and coping (Lazarus & Folkman, 1984) is examined as related to teacher stress. I have described the stress experience differences between female and male public school teachers in conjunction with how public school teachers of varying years of experience and classrooms with varying demographical student composition play a role in the stress experience. Guided imagery's past and present role as a stress mediator is also examined.

English Language Learner

The English language learner student population creates stress triggers for public school teachers (Lambert et al., 2009). The English language learner student population

in the United States was at 9.1% during the 2011-2012 school year, an increase from 8.7% during the 2002-2003 school year (National Center for Education Statistics, n.d.). Public school teachers are faced with the task and challenge of becoming familiar with these students' particular backgrounds, including family, cultural, and language backgrounds. The public school teacher must also acquaint themselves with each English language learner's language literacy and their academic English. Public school teachers are also faced with the challenge of the students' academic gaps, which are created when the English language learners have interrupted academic school years created either by returning to their home country and then returning to the United States or by migrating during the academic year due to their parent's employment.

An example of how public school teachers meet the educational needs of this population is by differentiating instruction (Baecher, Artigliere, Patterson, & Spatzer, 2012). This is also a challenge for the public school teacher serving English language learners. According to Baecher et al. (2012), the public school teacher is burdened with "what differentiated instruction actually looks like and how teachers can integrate it into their routines" (p. 14). This situation presents the compounding burden of the public school teacher determining whether the lesson plans are supposed to be different each day, how to maintain classroom management while everyone is working on different things, and if they should use heterogeneous groups and track each English language learner independently of the whole class. Deciphering the appropriate and adequate responses for issues presented to the public school teacher serving an English language learner plays a role in the stress level of the public school (Lambert et al., 2009).

Low Socioeconomic Status

Children living in poverty comprise 21% of school-age children in the United States (National Center for Education Statistics, n.d.). In the school district where this study took place, the student population poverty level is 42.1%. The challenges faced by the public school teacher serving this population have been noted as a stress level trigger (Lambert et al., 2009). Students living in poverty have been identified to be focused on basic survival versus education (Stewman, 2014). Stewman (2014) suggested that students living in poverty conditions endure personal stressors that often lead to minimal goal setting, low academic and extracurricular engagement, high risk of dropping out of school, chronic absenteeism, poor reading level that is often below grade level, and a general disconnect from school. Additionally, students living in poverty often lack in proper nutrition and therefore often struggle with adequate energy levels, negatively impacting their school day (Stewman, 2014). This student population has also been noted to have health concerns resulting in multiple nurses' office visits and often a lack of focus on classroom instruction (Stewman, 2014). These factors associated with students living in poverty create a challenge for the public classroom teacher. The public classroom school teacher is charged with the task and burden of creating a relationship with these students in which the student can know the public school teacher genuinely cares for them (Stewman, 2014). The public school teacher must also find methods and techniques to actively engage the student, keep their focus, and enhance their learning experience. This is essential as well as an added potential stress trigger for the public school teacher.

Literature Search Strategy

An exhaustive search on teacher stress, coping mechanisms, guided imagery, and theoretical framework as related to public school teachers, stress, and guided imagery was systematically conducted via Internet resources and the Walden University Library. The Walden University Library facilitated access to databases that contain scholarly, peer-reviewed articles. Databases such as PsycARTICLES, PsycINFO, and SocINDEX with Full Text aided in the search for behavioral studies, while databases such as MEDLINE with Full Text and CINAHL Plus with Full Text offered access to peer-reviewed scholarly health science studies. Databases within a multidisciplinary context such as Academic Search Complete were also utilized, as were educational databases such as Education Research Complete and ERIC. Google Scholar searches were also conducted with specific settings to include library links to Open WorldCat–Library Search and Walden University–Find at Walden. No year restrictions were set in order to examine the topic at hand from historical origins to present.

The literature review search terms used to locate articles included *teacher and stress, teacher and stress and coping, stress and health, teacher and guided imagery, guided imagery and health, teacher and relaxation, stress and relaxation, stress and immune and function, occupational and stress, teacher and relaxation, teacher and health, teacher and burnout, guided imagery and coping and stress, public and school and teacher and stress, teacher and stress and reduce, teacher and stress and relaxation, teacher and absenteeism, teacher and age and stress, teacher and behavior, student and behavior,* and *teacher and student and discipline*.

Public School Teacher Stress

The concept of teacher stress is not new. Delp (1963) conducted a literature review that included research articles regarding the teaching occupation from as early as 1931 through 1961. Delp (1963) shared his collective review findings in which he indicated public school teachers have been reporting being stressed and suffering work-related stress breakdowns as early as the 1930s.

Public school teachers experience an exceptionally high rate of work-related stress (Froeschle & Crews, 2010a 2010b; Gardner, 2010; Klassen & Ming Chiu, 2010; Kodavatiganti & Bulusu, 2011; Lath, 2010). Klassen and Ming Chiu (2010) described teacher stress as the negative emotions that are experienced by the teacher as a result of the teacher's work. Public school teachers have great demands on their physical, mental, and emotional health. The Health and Safety Executive (2000) showed 41.5% of public school teachers in the United Kingdom identified themselves as "highly stressed." (p. 9) Their findings also suggested public school teachers are the highest stressed professionals with stress levels 2 times higher than other occupations such as nursing, management, professionals, other education and welfare, and road transport and security. Stoeber and Rennert's (2008) findings were consistent with the Health and Safety Executive (2000) report. These authors suggested teacher stress is experienced at a higher frequency and level when compared to other professionals. Kodavatiganti and Bulusu (2011) suggested the turnover rate for public school teachers is 15.7% while for other professions the average is only 11%. Ahlgren and Gillander Gadin (2011) reported 22% of public school teachers responding to a Swedish survey reported work-related stress disorders. These

same authors noted public school teachers in Sweden were currently within the top 10 occupations that had the highest absence rate related to work stress. The high level of stress being experienced by individuals in this profession is leading to negative health consequences (Thoits, 2013; Van der Lindl, 2001; Varvogli & Darviri, 2011).

The stressors public school teachers experience within their occupation have been linked to negative health aspects such as hypertension, insomnia, gastrointestinal disorders, depression, and anxiety (Ablanedo-Rosas, Blevins, Gao, Teng, & White, 2011; Bayram, Gursakal, & Bilgel, 2010; 2008; Kaspereen, 2012; Klassen, 2010; Nagar, 2012; Varvogli & Darviri, 2011). Thoits (2010) supported these findings by describing the compounding effects of stress leading to major depressive disorder, substance abuse, and alcohol dependence. According to the National Association of Head Public school teachers (NAHT) study from the UK, 15% of public school teachers identified themselves as being alcoholics while 20% considered themselves to drink too much. In this same study, 25% of the sample population reported insomnia, hypertension, depression and gastrointestinal disorders as adverse health implications from their work-related stress. Hadi et al. (2008) included a simple random sample from 20 secondary schools with a total of 580 participating public school teachers. These authors administered a self-response questionnaire, the Depression Anxiety and Stress (21 items), which indicated 49.1% of the teacher sample population as depressed. These authors noted the major contributing factors of depression were psychological job demand and job insecurity. Unfortunately, at this time, no comprehensive study has been conducted within the United States to offer statistics from American public school teachers. There

is, however, a current study underway that began in 2011 and has been following 200 middle school public school teachers from 20 Houston Independent School District schools to assess their levels of stress and teaching effectiveness. Teresa McIntyre, PhD, funded by the Texas Institute for Evaluation, Measurement, and Statistics, will continue to follow the public school teachers for 3 years (University of Houston, n.d.).

Effect of Stress on Health

The stress experience can be described in terms of its effect on the body via the biological pathway (Lennartsson, Theorell, Rockwood, Kushnir, & Jonsdottir, 2013; Van der Linde, 2000). As an individual experiences stress, the body answers back in a multitude of physiological, behavioral, and psychological changes. Physiological changes include tense muscles, increased heart rate, peak in blood-sugar level, accelerated breathing, increase in leucocytes, and increased stomach acid production (Van der Linde, 2000). Behavioral changes include increased alcohol and drug abuse, absenteeism from work, communication difficulties, and loss of temper (Ablanedo-Rosas et al., 2011; Grffin, 2010; Klassen, 2010). Psychological adversities include depression, anxiety, aggression, and decreased self-esteem (Kaspereen, 2012; Nagar, 2012). The stress response over time varies individually; however, the universal first response to stress is biological in nature. Koenig, Walker, Romeo, and Lupien (2011) explained the hypothalamic-pituitary-adrenal axis takes a critical role when responding to stress. These authors noted that brain corticotropin-releasing hormone together with adrenal glucocorticoid hormones take a role in how an individual will adapt to stressful environments. These hormones alter the metabolic needs and the behavioral strategies of

the individual in order to meet the stress demands (Koenig et al., 2011). Likewise, Lennartsson et al. (2013) further explained that the outcome of psychosocial stress over a period of time depletes dehydroepiandrosterone (DHEA) levels as well as its sulphated metabolite dehydroepiandrosterone sulphate (DHEA-S). Cortisol, DHEA, and DHEA-S are produced within the adrenal cortex as a response system to adrenocorticotropic hormone (Lennartsson et al., 2013). The function of these anabolic androgens, DHEA and DHEA-S, is a protective and a regenerative one. Specifically, low levels of DHEA and DHEA-S have been linked to adverse health like depression, low back pain, and cardiovascular disease (Lennartsson et al., 2013). Conversely, a high level of these agents has been connected to good health. Lennartsson et al. (2013) suggested that DHEA and DHEA-S levels are decreased with exposure to long-term psychosocial stress.

Occupational Stress and Absenteeism

Individuals who experience high levels of work-related stress also have a higher rate of work absenteeism (Gold et al., 2010; Holmgren, Dahlin-Ivanoff, Bjorkelund, & Hensing, 2009; Sandmark & Renstig, 2010; Siu, Coper, & Phillips, 2013). Absenteeism is to frequently be absent from work (Lath, 2010). According to a study conducted by Cooper and Cartwright (1994), approximately 50% of work absenteeism was related to stress. This finding was substantiated over a decade later by another study conducted by Ponce, Bulnes, Aliaga, Atalaya, and Huerta (2005), in which they also reported 50% of sick leave was attributed to work-related stress. More recently, Ablanedo-Rosas et al. (2011) offered statistically significant findings from their study indicating public school teachers were increasingly absent from the workplace as their stress levels increased.

This, these authors contended, can lead to the individual being fired or the individual quitting, in turn increasing the workplace turnover and the workplace operational costs. Additionally, Ross, Romer, and Horner (2012) suggested increased teacher absenteeism leads to reduced quality and reduced effectiveness of teacher program implementation by the teacher. Furthermore, Siu et al. (2013) suggested there is a high financial burden to an organization directly related to employee absenteeism as a result of stress and burnout. Canciu and Bardac (2011) reported that work-related stress is the cause of over one fourth of sick leave and that the financial burden exceeds $20 billion annually within Europe. Chaudhry (2012) expanded on this, having stated the financial costs are even greater, having estimated them to be over $150 billion per year, due in part to occupational stress absenteeism. In Sweden, stress has been identified and reported as the core of work absenteeism (Ahlgren & Gadin, 2011). Particularly, within the teaching field, stress has contributed to teaching having become one of the top 10 occupations in Sweden to have the highest rates of sick related absences (Ahlgren & Gadin, 2011).

Studies have pointed toward the direction of occupational stress affecting rates of absenteeism. For instance, Mañas et al. (2011) included 31 public school teachers in their sample population with 23 females and 8 males. These authors explored the relationship between stress levels and days absent from work. They controlled the for the sex variable in their control and experimental groups so that there was the same number of females and males in both groups. Their findings indicated that as teacher stress level decreased, so did work absenteeism regardless of gender. These authors reported statistically significant differences between the control group and the experimental group regarding

days of sick leave and teacher stress. Klassen (2010) suggested high levels of occupational stress experiences for public school teachers have a negative effect on absenteeism and quality of a teacher's job performance. Another study by Crawford (2014) indicated 20% of individuals have taken days off from work due to high stress levels. A recent study by El-Amin (2013) included a sample of 306 full-time female university employees in which the author examined the correlation between occupational stress and absenteeism. This author found a significant positive correlation between stress and absenteeism and health symptoms.

A general congruency has been noted within the literature review which suggests a positive relationship between high occupational stress experience and the rate of absenteeism (i.e. Gold et al., 2010; Holmgren et al., 2009; Sandmark & Renstig, 2010; Siu et al., 2013).

Guided Imagery Relaxation Technique as a Coping Strategy for Teacher Stress

Recent studies have been conducted to explore the effects of guided imagery relaxation on teacher stress. Guided imagery relaxation techniques offer an avenue for coping with stress consequences via mental relaxation (Froeschle & Crews, 2010b; Kaspereen, 2012; Kemeny et al., 2012; Roeser et al., 2012). It offers the ability for individuals to create habits of the mind which arm them to better manage the demands of their occupation (Roeser et al., 2012). Additionally, relaxation therapy can have a positive effect on reducing body tension and in restoring energy levels (Kaspereen, 2012).

Froeschle and Crews (2010b) conducted a study with 15 public school teachers who met twice. These researchers provided guided imagery relaxation which included three phases in which phase 1 offered whole body state of relaxation, phase 2 was the guided imagery which lasted about 25 minutes, and phase 3 involved returning the subjects back to reality. Study participants were interviewed after the session, responses were recorded and encoded and given back to the participants for corrections or additions. The participants then returned the transcripts back to the researchers. The data collected were analyzed and the researcher's findings indicated a collective description by the participants of sense of control, relaxation, restfulness, and decreased tension.

Froeschle and Crews (2010a) conducted another similar study which included 85 participants. Participants were divided into the treatment group consisting of 44 public school teachers and the control group with 41 public school teachers. The treatment group completed a pre- and a postinventory as the assessment tool. Participants were provided three weekly sessions of relaxation, imagery, and solution-focused therapy during their regular planning time. These authors used a MANCOVA analysis, and reported findings of emotional exhaustion and depersonalization scores significantly lower for the treatment group compared to the control group. Similarly, Kaspereen (2012) conducted a four-week relaxation therapy study which included 54 participants comprised of public school teachers, administrative assistants, front office receptionists, teacher assistants and coaches. Participants were divided into experimental or control groups. The experimental group consisted of 27 participants who met once weekly for 30 to 45 minutes. During this time, relaxation therapy was provided by the researcher in the

form of scripted guided imagery. Using an ANOVA analysis, this researcher offered findings of significantly decreased levels of stress in the experimental group.

Roeser et al. (2013) examined the outcomes of guided mindfulness over an 8-week period delivering 36 hours of guided mindfulness to study participants over the course of 11 sessions. Participants included a total of 113 public school teachers from the United States and Canada divided between an experimental group and a control group. The guided mindfulness relaxation was delivered by the same instructor to all the participants. The data collected included a take-home survey of self-reported occupational stress, burnout, health, and well-being at all-time points, blood pressure and pulse rates collected by a trained research assistant or a nurse practitioner, and the evaluation of the guided mindfulness relaxation program. Roeser et al. (2013) reported results obtained through a simple ANOVA which indicated public school teachers in the experimental group reported significantly less occupational stress compared to the control group.

Kemeny et al. (2012) conducted their study with 76 female school public school teachers. These authors noted they exclusively selected female public school teachers due to females being more highly represented within the teaching occupation. Participants received 42 hours of training over an 8-week period and were asked to continue utilizing the relaxation techniques taught to them daily for at least 20 minutes. These authors offered their findings obtained by analyzing self-reports completed at home by the participants prior to the training, immediately following the training, and 5 months after the training. Participants also took part in a 3-hour laboratory session which examined

behavioral and social interaction and psychophysiological assessments. Kemeny et al. (2012) reported findings which indicated self-reported large decreases in anxiety and depression.

Guided imagery relaxation has been examined and findings are indicative of its benefits in reducing adverse psychological, emotional, and physical outcomes of teacher occupational stress (Froeschle & Crews, 2010a, 2010b; Kemeny et al., 2012; Mañas et al., 2011; Roeser et al., 2013; Van der Klink et al., 2001). Despite length of treatment ranging from as few as two sessions (Froeschle & Crews, 2010a) to one hour per week once a week for three weeks (Froeschle & Crews, 2010b) to more intensive trainings of 36 or 42 hours over a course of 8 weeks (Roeser et al., 2013; Kemeny et al., 2012), the use of relaxation techniques has been noted as an effective technique to reduce teacher stress.

Stress and Gender Differences

Examining the differences between females and males within the realm of occupational stress is an important factor (González-Morales et al., 2010). Historically, gender differences related to stress levels within the teaching field have long been reported. For instance, in 1936, Peck (1936) investigated gender differences with a study involving 100 female public school teachers, 52 female non-public school teachers, and 26 male public school teachers. These study subjects completed a self-report test and having used a 5-point scale, appraised their own adjustment to stressful events. The findings indicated female public school teachers were less well-adjusted than the female non-public school teachers and less well-adjusted than the male public school teachers.

Within current times, González-Morales et al. (2010) bring forth the differences that exist between females and males within the work place. These authors suggested that the socialization processes of a given culture will influence occupational stress perceptions between females and males. As such, they offered that teaching is traditionally a female dominated occupation (determined by demographic information) where role congruity theory (Eagly & Karau, 2002) may impact the perceived stress due to the social expectations within the occupation. Role congruity theory (Eagly & Karau, 2002) proposes that there will be a prejudice against a group whose leadership role is incongruent or inconsistent with their traditional social role.

Otero Lopez, Bolano, Santiago Marino, and Pol (2010) indicate female public school teachers are more greatly affected by teacher stress as compared to their male counterparts. In their study, the sample included 823 female public school teachers and 563 male public school teachers. In contrast, a study conducted by Akpochafo et al. (2012) examined occupational stress of primary school public school teachers; the authors reported no significant difference between female and male public school teachers in their report of occupational stress. This particular study included 110 public school teachers: 69 females and 41 males. Similarly, Ablanedo-Rosas et al. (2011) found stress levels to be similar regardless of gender. These authors included 47% males and 53% females in their study for a total of 272 participants employed within an academic setting.

However, in a 2011 literature review of qualitative research studies about occupational stress (Mazzola, Schonfeld, & Spector, 2011), it is reported that within the

concept of gender differences and occupational stress within the teaching field, female professors reported a higher level of occupational stress as compared to their male colleagues. Furthermore, Nagar (2012) conducted a study including 46 female public school teachers and 64 male public school teachers. The results of this study indicated a higher degree of reported stress by female public school teachers versus male public school teachers. Klassen and Ming Chiu (2010) included 1,430 public school teachers in their study with 69% women and 31% men. Their findings indicated a link between gender and stress levels with female public school teachers having reported 13% higher classroom stress and 8% workload stress than the male public school teachers included in their study. Thoits (2010) suggested a comparable rate of occupational stress between females and males with a difference in the type of adversities that are reported; there was a higher rate of psychological distress, mood disorders, and anxiety disorders reported by females in contrast to males who reported higher rates of alcohol problems, drug problems, and antisocial personality disorders. A study conducted by Antoniou et al. (2006) which included 493 primary and secondary school public school teachers with the gender breakdown as 56.2% females and 43.8% males substantiates the findings that female public school teachers experience higher degree of stress than male public school teachers. Kovac, Leskosek, Hadzic, and Jurak (2013) examined stress levels of female and male public school teachers with a sample population of 468 public school teachers with a gender breakdown of 184 females and 282 males. Within their findings, these authors identified females having reported higher rates of psychosomatic problems compared to the males in this study. Females reported dysphonia, aphonia, headache, and

urinary tract infection with increased frequency versus male counterparts within this study. In a study conducted by Sliskovic and Sersic (2011) an anonymous online survey was used for a six-week window during which university public school teachers were invited to participate. These authors gathered data regarding various demographic identifiers including gender and the participant's stress level. A total of 1,168 public school teachers participated in this study with 57% being female and 43% being male. Sliskovic and Sersic (2011) reported females within all the teaching positions reported significantly greater work-related stress then males. There is a divide between gender and the stress experience within the literature review. One of the aims of this study was to explore if the stress experience varies according to gender.

Stress and Teacher's Years of Teaching Experience

The literature review indicates mixed findings related to stress perception and a teacher's teaching experience. For instance, Akpochafo (2012) conducted a study which included 110 primary school public school teachers and explored if years of teaching experience made a significant difference in the public school teachers' occupational stress levels. The findings of this study indicated that based on teaching experience, there is no significant difference in public school teachers' occupational stress levels. Similarly, Klassen and Ming Chiu (2010) described a process in which as public school teachers' years of experience increase, so does their level of confidence and this level of confidence aids them in coping with stress. These authors note that during the early years, years 0-3, public school teachers experience survival and discovery accompanied by self-doubt; years 4-6 is the stabilization period at which time public school teachers make the

choice of commitment to the job, or the choice to leave the profession altogether. During years 7-18 public school teachers are considered to be in their mid-career and at a point in which they question their career path; this assessment is influenced by workload and classroom stress. The following period is years 19-30, a period identified as serenity in which public school teachers experience a general loss of energy. During this time, there may be a perception of greater stress from the heavy workload and expected student achievement. Finally, years 31-40 are the years of disengagement and this time can be identified by serenity or by disappointment and bitterness over the chosen career path. Contrary to Akpochafo (2012) and Klassen and Ming Chiu (2010), are the findings of Antoniou et al. (2006) which indicated that at the initial point of their career, public school teachers are directing their energy into achieving primary objectives while also dealing with environmental demands thus experiencing high levels of stress. In accord with Akpochafo (2012) is El-Amin (2013). El-Amin (2013) examined occupational stress against work experience with 306 female public school teachers. This author reported no significant correlation between work experience and occupational stress. However, this author noted less experienced public school teachers reported little or no stress at work while more experienced public school teachers complained about work-related stress.

Related to public school teachers leaving their occupation, Darling-Hammond (2001) indicated that almost 30% of public school teachers leave teaching during the first five years. Haberman (2004) reported at least one fourth of all public school teachers initiating their career within the profession will leave within the first four years. More recently, Sass, Flores, Claeys, and Perez (2012) reported nearly 33% of public school

teachers leave within their first years in the field. These three articles clearly indicated a trend within the early years of teaching and the turnover rate that has held for over ten years. As a partial explanation for the departure of public school teachers from their jobs within the early years, Bradley (2007) suggested workers, including public school teachers, will experience greater occupational stress at the early years of their career and consequently will either leave the job, be let go by the employer, or adapt to the work conditions and demands over the course of their tenure.

Public School Teachers' Age and Stress

A public school teacher's level of stress can be negatively impacted by how old they are (Dagli, 2012; Koruklu, Feyzioglu, Ozenoglu-Kiremit, & Aladag, 2012; Wright & Ballestero, 2011; Wright & Ballestero, 2012). Wright and Ballestero (2012) conducted a study in which the age of the public school teacher sample population was considered as a determinant factor of public school teacher stress. These authors surveyed public school teachers in 22 counties. Within their survey, these authors asked their study participants if they considered the age of a teacher to make a difference in the level of stress. These authors found 84% of the respondents indicated that the age of a teacher does make a difference in stress levels experienced by the public school teacher. For the purpose of their study, these authors clustered their sample population into age groups as follows: 21 to 30 years of age, 31 to 40 years of age, 41 to 50 years of age, and 51 to 65 years of age. Based on age cluster, teachers within the 21 to 30 years of age range were identified by study participants at a rate of 68% to suffer the highest level of stress. Similarly, Dagli (2012) conducted a study with kindergarten public school teachers as the study

participants. In Dagli's (2012) study, participants' age was also clustered using the variable AGE_T in which the category of younger than 30 years old was used as a reference group. The cluster groups in this study are as follows: younger than 30 years old, 30 to 39 years old, 40 to 49 years old, 50 to 59 years old, and 60 years or older. This author explored factors affecting teacher attrition rates. Within this study, the author explored age as a predicting factor affecting public school teachers' levels of stress and turnover rate. Dagli (2012) employed a survey method in which a total of approximately 210 kindergarten teachers total comprised the study sample. Of this sample, 46% were public kindergarten school teachers who stayed at their position from the year the study was incepted to the following year, 31.2% had moved, and 22.8 % left the profession all together. The results of Dagli's (2012) correlation study suggested public kindergarten school teachers between the ages of 40 to 49 years of age are more likely to move to another school while those teachers 30 years or younger indicated a higher likelihood of leaving the profession all together. The factors implied by this author as affecting the teacher's decision to remain or not to remain within their current position included perceived school climate and students' characteristic such as school minority and school poverty composition. Korkuklu et al. (2012) also explored public school teachers' age and their stress experience. These authors utilized the public school teacher's demographic information, including age, to examine public school teacher burnout levels. A descriptive survey model was utilized and data was collected from 532 secondary education teachers during the 2009-2010 academic year. The age clusters for this study were between 20 and 40 years old at a participation rate of 44.92% and 40 years and

older at a participation rate of 51.3% with a total of 3.76% not providing their age. These authors noted a MANOVA analysis indicated teacher burnout levels were significantly different when having considered age as a determinant factor of public school teacher burnout. Participants within the 20 to 40 years of age cluster indicated a higher level of emotional exhaustion and depersonalization as compared to the 41 and over participants. However, participants who are within the 41 and over cluster indicated a lower average score in personal accomplishment versus the participants in the 20 to 40 years of age cluster. These authors contended that accounting for developmental periods such as the productivity period which is during a teacher's age range of 30 and 40 there will be a difference in job satisfaction self-report. They suggested that during this age/stage exhaustion may be caused by a personal perception of not having achieved professional goals; therefore, a higher rate of exhaustion and burnout may be reported. Accounting for the age of public school teachers may offer insight into their stress level experience.

Student Behavior and Public School Teacher Stress

Student behavior has a direct impact on the stress levels of public school teachers (Collie et al., 2012; Karaj & Rapti, 2013; Otero et al., 2008). According to Collie et al. (2012) a public school teacher's sense of stress has negative outcomes for themselves and the student population they serve. However, it is the same student population's behavior which has a direct impact on the public school teacher's sense of stress. Collie et al. conducted a study which included 664 participants from 17 school districts. The participants serviced students from suburban, rural, and remote areas. Participants completed an online questionnaire within a three-week window and received an

electronic reminder to complete the online questionnaire after two weeks. In part, participants responded to items from the Teacher Stress Inventory used to measure stress related to students' behavior and discipline. They also responded to questions regarding their perception of their students' behavior and motivation. Data analysis for this study was conducted using robust standard errors and robust chi-square test with single-level models. These authors reported findings that indicated teachers who perceived greater behavior and discipline issues reported higher stress levels due to student behavior issues. A similar finding is reported by Karaj and Rapti (2013). Karaj and Rapti (2013) conducted a study with 540 teachers utilizing a structured questionnaire in which the authors directly explored students' disruptive behavior and its impact on teacher stress levels. The data collection for this study was conducted during the 2012 – 2013 school year and Pearson product-moment correlation coefficient was used to analyze the data. These authors reported a significant predictor of teachers' job stress is students' disruptive behavior in which the correlation between students' disruptive behavior and teachers' stress is substantial, positive, and significant. They also reported regression analysis results having indicated the best predictor of teacher stress is students' disruptive behavior. Other studies such as Otero-Lopez et al. (2008) offered supporting results in which students' behavior directly affects the public school teachers' level of stress. Otero-Lopez et al. (2008) included 1386 participants in their study. The participating teachers completed a battery of self-reports which examined several variables, including student disruptive behavior and/or attitudes and how those factors affect the public school teacher. These authors reported findings suggesting student disruptive attitude/behavior is

positively correlated with teacher exhaustion and depersonalization. They further contended student disruptive attitudes and/or behavior is found to be one of the main predictors of teacher burnout. An efficient and readily available resource for teachers to reduce their level of stress is needed in cohort with student discipline management in order to facilitate an enhanced and productive academic setting for both teacher and student.

Occupational Stress

Occupational stress is described in terms of its physical, mental, and emotional tug on the body which is created by the incongruence of the demands of the job in relation to the capabilities, resources, and needs of the individual to cope with the demands of their job (Akpochafo, 2012). Babatunde (2013) extended this by having described occupational stress as being present when a workplace places physiological demands on an individual, but the individual is not able to either manage or cope with the demands of the job. Ablanedo-Rosas et al. (2011) and Babatunde (2013) identified four main sources of stress present in all occupations. Babatunde (2013) listed these as role ambiguity, role conflict, lack of job security, and work relationships within the organization. Role ambiguity occurs when there is a perception by the employee of insufficient clarity of their role and insufficient significant information needed in order to perform the role sufficiently adequate. This source of stress depends on the type, amount, and level of information that is communicated to an individual. It is the information which is needed for the individual to perform his/her job function. Role conflict is present when there is an incompatibility between the demands of the job and the expectations

from the employee's organization, superior, or colleague (Ackfeldt, Malhotra, & Fay, 2009). Job security stress becomes present from situations that bring about an individual's impediment of career development and career progression. This perception of lack of job security may contribute to lessened commitment to work and a lessened general sense of wellbeing for the individual. Work relationships within the organization noted as contributing to occupational stress are problematic relationships such as harassment, office bullying, violence threats, dark leadership, or workplace isolation. These work relationships can be with office managers, subordinates, co-workers, and other individuals within the work environment.

In a 2009 study including 184 front-line employees with an aim to explore role stress and occupational commitment, role ambiguity and role conflict were identified as distinct components of occupational stress (Ackfeld, Malhotra, & Fay, 2009). Participants completed multiple-item 7 point Likert scales questionnaires targeted at discriminating relationships between job role stress and individual effort towards the organization's success.

Transactional Model and Teacher Stress

The transactional model of stress and coping (Lazarus & Folkman, 1984) is an avenue for individuals to explore the psychological processes that link them to their environment; when there is perceived imbalance between demands and coping resources, the burden of stress is experienced (Lazarus and Folkman, 1984). The literature on stress and coping at an individual level provides support for the use of the transactional model of stress and coping as a theoretical framework for this study. For instance, Siu et al.

(2013) conducted a study including 50 primary and secondary public school teachers who completed a pretest and posttest survey. These authors aimed at examining the "individualistic process which depends on the individual's cognitive appraisal" (p. 73) which is aligned with Lazarus and Folkman's (1984) transactional model of stress and coping. Within their results, these authors reported participants indicated the stress interventions used, which focused on the individual, were significantly effective in reducing their stress levels. The participants reported higher scores on positive emotions and lower scores on emotional exhaustion. These authors noted this can be explained by the transactional model by teaching the individual to appraise the stress demand and allowing them to then engage in secondary appraisal. At this point, options from the stress management training can be assessed by the individual allowing the individual to cope with the stress demand and therefore experience and report decreased stress levels. Other studies utilizing the transactional model of stress and coping (Lazarus & Folkman, 1984) have suggested this theory provides an avenue to explore demands and resources at an individual level. Individuals differ on what they perceive to be a stressful event (Lazarus & Folkman, 1984). McCarthy, Lambert, O'Donnell, & Melendres (2009) suggested different individual stress experiences may arise due to differing perceptions of the nature of the demand in addition to the coping resources available to the individual. These authors conducted a study specifically aimed at testing the transactional model of stress and coping (Lazarus & Folkman, 1984). Their study included 451 public school teachers from 13 elementary schools. Within their findings, they reported individual teacher level, classroom demand perceptions, resources, and preventive coping resources

were tied into burnout symptom direction. The authors suggested the pattern of these findings supported the transactional model of stress and coping (Lazarus & Folkman, 1984) since perceptions of individual public school teachers were associated with burnout symptoms. Similarly, Ullrich et al. (2012) conducted a study in which they also examined the transactional model of stress and coping (1984) as a theory for exploring teacher stress. These authors included 469 public school teachers from 62 elementary schools. Utilizing multilevel modeling analysis, findings reported by these authors supported those of McCarthy et al. (2009) which indicated public school teachers experiencing higher demands within their classroom or occupation will also experience higher levels of stress leading to burnout. Effective coping strategies may offer increased individual control perceptions and create an avenue for public school teachers to re-appraise the stress that is developed from perceived lack of control thus resulting in an overall decrease of perceived stress and overall increase of physiological, behavioral, and psychological well-being.

Positive Social Change

The positive social change anticipated from this study was three tiered: teacher focused, student centered, and policy affected. The teacher focused positive social change entails facilitating each teacher a greater awareness, understanding, and recognition of their own stress levels in conjunction with a self-exploration leading to the identification of personal stress triggers for acute and chronic stress levels as well as the adverse health and adverse well-being impact of stress. Teacher focused positive social change could also be a generated self-interest regarding the stress component and stress reduction

techniques leading to an increase in attention to their overall health and health behaviors. As teachers develop reduced levels of stress through the use of guided imagery, they may experience a growing desire to attend work, an increase in satisfaction with their work, and a greater commitment to their career as public school teachers. Additionally, as one group of teachers becomes skilled in managing and reducing their stress levels through the use of guided imagery, other teachers, administrative staff, and support staff may develop an interest in the employment of this technique. Teacher and staff-driven support groups could become a standard in the public school setting as a means to achieve a general positive school climate.

Student centered positive social change was anticipated since it has been shown that students' educational experiences can be enhanced as the adverse stress experience of their public school teachers is decreased (Froeschle & Crews, 2010a; 2010b). The positive effect on students occurs through vicarious stress reduction. It can be anticipated that when teachers' stress levels are reduced, students' stress levels are reduced, thus improving academic performance, student behavior, and student attendance. As awareness of the effectiveness of guided imagery as a technique for stress reduction for teachers increases and the vicarious effectiveness on students' levels of stress is noted, public school teachers may elect to incorporate guided imagery within their daily curriculum prior to the start of their classroom instruction. Furthermore, this anticipated positive social change can be a step towards the Centers for Disease Control and Prevention (2015) Standard 7, which states "Students will demonstrate the ability to

practice health-enhancing behaviors and avoid or reduce health risks" (CDC, Healthy Schools, National Health Education Standards, n.d.).

Positive social change anticipated from this study included affecting public school policy. A gradual progression of implementation of guided imagery as an effective technique for managing stress levels of public school teachers could start within each teacher's respective public school campus, their school district, followed by other school districts through the region and state. To achieve the anticipated positive public school policy changes, several factors are necessary. It would be necessary to offer awareness and understanding of the current stress levels of public school teachers, the adverse impact of stress on teachers' mental and physical health and how these negatively affect workplace absenteeism, work productivity, and career longevity. An increased awareness of the effectiveness of guided imagery in stress reduction, the inexpensive cost factor of guided imagery intervention, and the vicarious positive effect on students will also be necessary in order to positively affect public school policy. It as anticipated that widespread support for the use of guided imagery as a stress reduction technique could eventually move toward changing public school policy resulting in greater teacher productivity, enhanced student learning, and a more positive public school climate.

Summary

Individuals within the teaching occupation are at a high risk of experiencing stress (Davidson, 2009; Froeschle & Crews, 2010a, 2010b; González-Morales et al., 2010; Klassen, 2010; Lambert et al., 2009; Roeser et al., 2013; Ullrich et al., 2012). Continued experiences of stress may lead to adverse physical, behavioral, and psychological

problems (Lennartsson et al., 2013; Van der Linde, 2001). As stress levels increase, physiological, behavioral, and psychological changes occur. These changes can lead to increased heart rate, accelerated breathing, tension, alcohol and drug abuse, depression, anxiety, and aggression. In turn, occupational absenteeism rates increase and in due course lead to high financial burdens to the organization and to the individual (Ablanedo-Rosas et al., 2011; Canciu & Bardac, 2011; Chaudhry, 2012; Siu et al., 2013) and decreased work productivity (Ahghar, 2008; Babatunde, 2013). There is an immediate need to explore stress management and stress reduction techniques for public school teachers.

Guided imagery relaxation may be a stress management technique option for public school teachers. This technique provides a mental relaxation avenue for stress management (Froeschle & Crews, 2010a, 2010b; Kaspereen, 2012; Kemeny et al., 2012; Roeser et al., 2012). Guided imagery has already been used successfully as a stress coping technique (Froeschle & Crews, 2010a, 2010b; Kemeny et al., 2012; Mañas et al., 2011; Roeser et al., 2013; van der Klink et al., 2001). Its effects have been examined with public school teaching populations within and outside of the United States and indicated statistically significant improvement in stress reduction (i.e. Akpochafo, 2012; Kaspereen, 2012).

The area of gender and stress perception has been studied for decades (Peck, 1936; Eagly & Karau, 2002; Otero Lopez et al., 2010; Kovac et al., 2013). Studies have yielded minimally mixed results, leaning greatly towards females experiencing greater levels of stress in the teaching occupation (Klassen & Ming Chiu, 2010; Nagar, 2012;

Sliskovic & Sersic, 2011; Thoits, 2010). Gender is an important demographic component to consider when exploring stress and stress reduction techniques because health disorders reported by females and males in response to their stress experience differ. Females indicated psychological distress, mood disorders, and anxiety disorders (Thoits, 2010) as well as dysphonia, headaches, and urinary tract infection (Kovac et al., 2013). Males reporte more incidents of alcohol problems, drug problems, and antisocial behaviors (Thoits, 2010). Understanding the gender difference as related to the stress experience may offer greater insight to the health field in terms of treatment.

Teaching experience is a challenging component to consider when selecting a population to include in ongoing stress reduction techniques from the occupational field of teaching due to the mixed findings of the correlation between teaching experience and stress levels. Mixed findings have been consistently reported in terms of the stress experience and years of teaching experience. Several studies have found public school teachers will experience higher rates of occupational stress during the beginning of their careers (Antoniou et al., 2006; Bradley, 2007) while other studies report no significant correlation between work experience and teacher occupational stress (Akpochafo, 2012; Klassen & Ming Chiu, 2010). However, the turnover rates for public school teachers are higher during the first years of teaching with a ten-year historical period indicating approximately 30% of public school teachers leave teaching at some point during their first 5 years of teaching (Darling-Hammond, 2001; Haberman, 2004; Sass et al., 2012). This demographic component needs further investigation to examine plausible explanations of contradictory findings.

A public school teacher's years of age is a factor which has been identified as a possible determinant of the respective teacher's stress experience (Dagli, 2012; Korkuklu et al., 2012; Wright & Ballestero, 2012). It has been associated with the public school teacher's probability of moving to another school and leaving the profession all together (Dagli, 2012). Studies which have clustered public school teachers based on their age groups (younger than 30 years of age, 31 to 39 years of age, 40-49 years of age, 50 to 59 years of age, and 60 years of age or older) have been consistent in suggesting public school teachers within the years of age cluster 30 years of age or younger present a higher likelihood of leaving their school (Dagli, 2012) and of presenting a higher level of emotional exhaustion (Korkuklu et al., 2012) in addition to being the age cluster to have been identified by Wright and Ballestero (2012) as the age group who suffered the highest level of stress. These findings are valuable in the direction of the use of guided imagery relaxation as a stress management technique. The findings present in the literature review can serve as a guiding tool in terms of identifying groups of teachers who may present a greater need for the utilization of a stress reduction technique such as guided imagery relaxation.

Students' disruptive behavior adversely impacts the public school teachers' level of stress and has been identified as a predictor of teachers' work related stress (Collie et al., 2012; Karaj & Rapti, 2013; Otero-Lopez et al., 2008). Within the community of public school teachers, the teachers themselves have identified disruptive student behavior as a significant stress trigger. The students' disruptive behavior compounded by the increase in the teachers' level of stress interferes with a productive learning

environment and creates a negative teacher perception of personal accomplishment (Otero et al., 2008). In facilitating public school teachers with a stress reduction technique, such as guided imagery relaxation, a lower perception of stress by the teacher can enhance the students' learning process and allow teachers to encourage greater achievement (Collie et al., 2012).

The adversities of the teacher stress experience are congruent with the transactional process. The transactional model of stress and coping indicates that stress can lead to negative emotional responses which in turn can develop into physiological, behavioral, and psychological illnesses (Lazarus & Folkman, 1984). Public school teachers who have not been trained in using effective stress management techniques often experience more of the health adversities associated with the stress experience (Siu et al., 2013). The transactional model of stress and coping (Lazarus & Folkman, 1984) provides an avenue through which public school teachers can learn to appraise their stress demands at an individual level (McCarthy et al., 2009; Siu et al., 2013; Ulrich et al., 2012). Once this initial appraisal has been completed, public school teachers can move towards the secondary appraisal at which time they can evaluate control over the stressor and evaluate their coping resources. Benefits of coping will facilitate emotional well-being, health behaviors, and functional status.

The next chapter describes the methodology of this study. It identifies the teacher population that was used and the stress reduction intervention, guided imagery. The current literature review has established a positive outcome of the use of guided imagery as a tool for stress reduction within the teaching field. However, there is a gap in

literature related to the focus of this study. Previous research has suggested that guided imagery is a beneficial tool in reducing stress (i.e., Mañas et al., 2011; Roeser et al., 2012), but there is a gap in the literature in terms of addressing this particular population of public school teachers. This study focused particularly at a teacher population that was not been sampled before. This teacher population is unique in terms of the student demographic data. According to district records, these public school teachers serve a student population that is comprised of 98.7% minority students, 29.5% English Language Learners, and 42.1% students living in poverty.

Chapter 3: Research Method

Introduction

The purpose of this study was to evaluate the effectiveness of the use of guided imagery as a relaxation technique on the stress levels of elementary public school teachers in South Texas taking into account the public school teachers' gender, years of teaching experience, age, and students' behavior problems. The literature review conducted established that public school teachers face a large burden of stress associated with their profession (i.e., Klassen 2010; Lath 2010; Stoeber & Renner, 2010). Within the scope of stress and related health adversities, the literature review also established that individuals who experience stress at high levels are at an increased risk for hypertension, obesity, depression, and ulcers (i.e., Tache & Brunnhuber, 2008; Varvogli & Darviri, 2011). The variables explored within this study—guided imagery as a stress reduction intervention, public school teachers' gender, years of teaching experience, age, and students' behavior—have been linked to the stress levels of public school teachers (Collie et al., 2012; Dagli, 2012; Karaj & Rapti, 2013; Korkuklu et al., 2012; Otero Lopez et al., 2008; Wright & Ballestero, 2012). This study was conducted with IRB approval number 01-22-16-0077441.

This chapter addressed the methodology of the study including the research design and rationale for the study, population and sampling strategy, instrumentation, data collection, data analysis, and research questions and hypotheses.

Research Design and Rationale

A quantitative study was conducted to evaluate the effectiveness of guided imagery relaxation as a technique to manage the stress levels of public school teachers in South Texas. The study considered five independent variables: guided imagery, gender, years of experience teaching, participants' ages, and students' behavior. The dependent variable was the teacher's stress level. A quantitative research design was selected because the research addresses quantities as well as relationships between various factors (Heddle, 2002). Heddle (2002) further asserted quantitative studies focus on addressing a specific question, "Does the intervention work under circumstances that mimic clinical practice?" (p. 247). Quantitative studies include the use of a heterogeneous population, a control group, and analyses by patients who actually have received the intervention (Heddle, 2002). Bansal and Corley (2012) further extended the quantitative research method as including the development of hypotheses that are tested by the researcher. As such, this study included the testing of five hypotheses in which there was a heterogeneous population of elementary public school teachers, all of whom received the guided imagery relaxation intervention, offered by PGPA, and all of whom completed a preassessment and two postassessments. This was a matched sample with the pre- and postassessment scores. Therefore, each teacher completed the same assessment three times. The initial assessment was completed prior to the first intervention to establish baseline level of stress. The second assessment was completed immediately following the third intervention and the third assessment was completed 2 weeks after the third intervention. To collect the third assessment, I provided each teacher their coded

assessment with a stamped self-return envelope. To keep each assessment anonymous while matched to the same teacher, I informed all individuals about the study, and asked them to complete the consent form and survey if they were willing to take part in the research study. Each consent form and survey was assigned matching identification numbers prior to the guided imagery session. Once the guided imagery session was over and participants were leaving the site, they were asked to hand deliver their consent form and survey instrument to me. As participants handed in their survey instrument to me, I gave them the second survey instrument with the same identification number they had already been assigned. Study participants were asked to bring their survey to the third guided imagery session. Participants were also informed that if they did not bring it with them, another could be provided to them at the third guided imagery session. After the initial guided imagery session, I kept a master list of the study participants and their individual codes. This was obtained from their consent form. At each point in the research, if the study participant asked for a survey instrument, I verified each study participant's identity and cross-referenced the master list to ensure the study participant identification code matched the study participant identity. The list was kept in electronic format. Only I had access to the master list to protect participant identity and confidentiality.

Several factors were taken into consideration in the determination of selecting a quantitative research method. By utilizing a quantitative research method, study participants were able to complete a confidential preassessment and two postassessments and their identity remained anonymous for data gathering purposes. I hoped this

anonymity would have facilitated lessened response bias in the assessment responses. Public school teachers are already burdened with high levels of stress with many roles in addition to their primary function (Lambert, McCarthy, & O'Donnell, 2007; Kodavatiganti & Bulusu, 2011). The time needed to complete the data gathering assessment tools should not have added to the stress factors the study participants were already facing.

An evaluation of guided imagery relaxation was conducted. Guided imagery relaxation is a technique that has been present for over a century (Utay & Miller, 2006), and despite its recognition by various names throughout its historical background, it continues to remain a useful technique in the area of stress management. Studies in the area of guided imagery relaxation have been able to show that this type of intervention can be successful in reducing occupational stress including public school teacher stress (Froeschle & Crews, 2010a, 2010b; Roeser et al., 2012; Van der Klink & Schene, 2001).

Population and Sampling

The target population was elementary public school teachers within the chosen school district. According to their website, this public school district is comprised of 31 elementary schools and 930 elementary public school teachers. The target sample size was 97 public school teachers, though the study ultimately included 81. The sample size was determined using the power analysis calculator for a multiple regression with an anticipated effect size = 0.15, desired statistical power = 0.80, number of predictors = 6, probability level =. 05. The power analysis calculator used to determine the study sample size was obtained from Free Statistics Calculator (n.d.).

Convenience sampling methodology were used to select the study population. This type of sampling facilitated access to the study's specific population type, elementary public school teachers. Study participants were selected from a group of teachers who voluntarily participated in a trilogy of guided imagery relaxation sessions being offered pro bono by PGPA to teachers of the school district under study. To qualify as a study participant, a respondent must have been a full-time elementary school teacher within the identified school district. Demographic information that was collected was gender, years of public school teaching experience, student behavior, and previous experience with guided imagery.

Notice of informed consent was provided at the guided imagery sessions. The informed consent described my position as the researcher, the purpose of the research, an explanation of the participant's role in the study, information regarding the participant's volunteer basis and ability to withdraw from the study at any time, any foreseen risks, and anonymity of data collected.

The guided imagery relaxation intervention was administered pro bono to the participants for 38 minutes one time per week for 3 weeks. The 38-minute guided imagery relaxation script was administered by the PGPA. The same script was used during the three intervention administrations. Similar studies have been previously conducted where participants were exposed to the guided imagery for a short period of time (1 to 4 weeks). For instance, Froeschle and Crews (2010a) conducted their study in which the guided imagery intervention was offered only once weekly for 2 weeks. In another study Froeschle and Crews (2010b), offered the guided imagery intervention

once weekly for 3 weeks. Kaspereen (2012) offered her guided imagery intervention once weekly for 4 weeks. In each of these studies, the respective authors reported significant decreased levels of reported stress.

Data were collected during a preassessment and two post assessments. The preassessment data were collected at the first of the three intervention meetings prior to the participants listening to the guided imagery script, and the postassessment data were collected immediately after the last session and also 2 weeks after the last intervention meeting. Each participant was given a stamped return envelope so that they could submit their second postassessment. They were asked to complete it 2 weeks after their last guided imagery session and mail it to me, the researcher. Participants were assigned a participant identification number that was indicated on their pre- and postassessment response sheets. I kept a master list, and only I had access to the master list. All the data collected were accessible only to me. This contributed to the anonymity of the data being collected and served to protect the identity of the participants.

Instrumentation

The Classroom Appraisal of Resources and Demand, Elementary Version (CARD) Inventory (McCarty, Abbott-Shim, & Lambert, 2001) was used as the pre- and postassessment instrument. The CARD is a self-assessment survey consisting of 84 items and two scales, Resources and Demands. A stress score is derived by evaluating the differences between each scale score. Within the section addressing the Classroom Demands, 35 items are included in which study participants rate the severity of demands utilizing a 5-point Likert scale with 1 indicating *not demanding* and 5 indicating

extremely demanding. The helpfulness of resources within the school are scored within the Classroom Resources scale consisting of 30 items indicated on a 5-point Likert scale with 1 being *very unhelpful* and 5 indicating *very helpful* (McCarthy et al., 2009).

The range of scores for the Demands scale is a minimum of 35 points and a maximum of 175 points. The score is determined by allowing the minimum point response value of each item in the Demands scale, which is 1, and multiplying it times the number of items in the Demands scale, which is 35 (1 x 35= 35). The maximum points are determined by allowing the maximum point response value of each item in the Demands scale, which is 5, and multiplying it times the number of items in the Demands scale, which is 35 (5 x 35=175).

Utilizing the same concept, the range of scores within the Resources scale can be determined. The range of scores within the Resources scale is a minimum of 30 points and a maximum of 150 points. This is determined by allowing the minimum point response value of each item in the Resources scale, which is 1, and multiplying it times the number of items in the Resources scale, which is 30 (1 x 30= 30). The maximum points are determined by allowing the maximum point response value of each item in the Resources scale, which is 5, and multiplying it times the number of items in the Resources scale, which is 30 (5 x 30=150).

The stress score for each study participant is derived by Demands scale score minus the Resources scale score (Demands score – Resources score = Stress score), therefore the Stress score can be negative.

This assessment instrument has its basis on the transactional model of stress and coping, which was proposed by Lazarus and Folkman (1984). The transactional model of stress and coping focuses on cognitive appraisals of events where perceived demands are compared to perceived ability to cope with the demands (Lazarus & Folkman, 1984). Written permission to use the CARD was granted by the authors, Dr. Lambert and Dr. McCarthy on November 10, 2013 and is documented in Appendix A.

The CARD Inventory, Elementary Version, has been used in studies assessing teacher stress (i.e. Lambert et al., 2009; McCarthy et al., 2009) and has indicated a sample-specific reliability of Cronbach's alpha = .916 for the Demands scale and Cronbach's alpha = .954 for the Resources scale (Lambert et al., 2009; McCarthy et al., 2009). Validity has been established through the application of factor analysis indicating the Demands scale and Resources scale are dimensionally distinct and by having identified similarity between a subscale structure to the factors and other samples (Lambert et al., 2009).

Intervention

Guided imagery relaxation was administered pro bono to the study subjects by PGPA one time per week for 3 weeks for 38 minutes as the intervention to reduce teacher stress. Relaxation techniques have been in use for over a century within the field of psychotherapy, and have come to be recognized by various names through the course of its use (Utay & Miller, 2006). Guided imagery relaxation has also been recognized as a tool in alleviating psychological and physiological indicators of teacher stress (Gold et al., 2010; Kemeny et al., 2012; Roeser, 2013). A Relaxation and Wellness Guided

Imagery CD from Healthy Journeys was played for the study participants. This 38-minute guided imagery is narrated by Belleruth Naparstek. Prior to starting the CD, participants were prompted by me as the researcher using the following researcher scripted statement:

> Begin by setting up your posture. Find a posture for your body that is comfortable, and that will allow you to relax. Allow yourself to have your chest open and your breathing relaxed and natural. Settle into your body and let your eyelids gently close. Listen to the CD and allow yourself to follow the guided imagery presented to open a pathway for relaxation.

An example of what the participants were directed to do by the Relaxation and Wellness script during the 38 minutes includes the following:

> Becoming aware of the rise of your body as you breathe in, and the way it settles back down as you breathe out, so you can become more and more at tuned to the feel of your breathe moving in and out of your body, and now taking a nice deep full cleansing breathe and breathing out fully incompletely an d with the next breathe in imagining that your sending the warm energy of your breathe to any part of your body that sore or tense or tight, and releasing the tension with the exhale, so you can feel your breathe going to all the tight tense places. (Naperstek, 2001)

The complete script can be found in Appendix B.

Data Collection

This study identified the effectiveness of the use of guided imagery relaxation as a technique to reduce the stress levels of public school teachers in South Texas. The

dependent variable was stress. A stress response is triggered when an individual's perception of a demand is greater than his or her perceived ability to cope with those demands.

The independent variables were the use of guided imagery, gender, years of experience teaching in a public elementary school, teacher's age, and student behavior. Stress levels were assessed at preintervention, immediately after the third intervention, and 2 weeks after the third intervention with the CARD Inventory, Elementary Version. The 2-week post assessment was returned by the participant in a stamped return envelope which was given to each participant at the end of their third intervention. The demographic information was also collected with the CARD because the CARD already allows for the teachers to provide the demographic information that was used for this study. This self-information portion of the CARD asked for the participant's age, years of experience teaching in a public elementary school, and gender. I coded the student behavior based on the name of the elementary school where the participant worked. I obtained a comprehensive list indicating the elementary school name and the student behavior level was obtained by each teacher rating their students' behavior on a Likert scale.

Baseline stress levels for each study participant were obtained during the first meeting prior to participants listening to the guided imagery relaxation. The first post intervention data collection occurred at the end of the last guided imagery session, and the second post intervention data collection occurred 2 weeks after the last guided imagery session. The study participants were given a coded CARD Elementary Version,

a stamped return envelope, and oral and written instructions to complete and return the last post CARD Elementary Version 2 weeks after the last guided imagery session. The exact date was provided to the study participants at their last guided imagery session.

In order to match the CARD Elementary Version at each assessment to the corresponding study participant, I gave each study participant a precoded survey instrument at the initial session, at the end of the initial session, and at the final session. A master list of the study participant's name and the code assigned to them was created by and kept by me. At any point in which the study participant asked for a survey instrument I cross-referenced the master list to ensure the study participant received the same code on each assessment. This list was kept confidential, and only I had access to it.

Data Analysis

To analyze the quantitative data of this proposed research, SPSS software was used. Descriptive and inferential statistics were obtained. Frequencies and percentages were obtained for gender, years of experience teaching in elementary public schools, age, and student behavior. Descriptive statistics were the measures of central tendency, and measures of dispersion were the range and the standard deviation. A repeated measures ANOVA analysis was used to analyze the data. I looked for change from preassessment to postassessment to second postassessment. Each assessment was matched to the corresponding participant. Each research question was answered by identifying the variable in the CARD Elementary Version and the response provided by the study participant. An ANOVA with a matched sample was the statistical test used.

By using a matched sample or repeated measure ANOVA, I was able to examine each participant to see what changes, if any, occurred after the guided imagery intervention offered by PGPA. In using repeated measures ANOVA, there five assumptions which were considered to ensure that the analysis result was valid. These five assumptions included the following:

- The dependent variable should be measured at the continuous level. In this study the continuous level was the teacher's stress level.
- The independent variable should consist of at least two categorical matched pairs. In this study, the teachers' assessment responses were matched at three time points.
- There should be no significant outliers in the related groups. In this study, SPSS software was used to detect possible outliers.
- The distribution of the dependent variable in the two or more related groups should be approximately normally distributed. In this study, using SPSS software, the Shapiro-Wilk test of normality was used to test for normality.
- The variances of the differences between all combinations of related groups must be equal. In this study, using SPSS software, Mauchly's test of sphericity was used to determine if this assumption has been violated.

Research Questions and Hypothesis

RQ1: Does the use of guided imagery as a stress management technique reduce the levels of stress in public school teachers?

Null Hypothesis: The use of guided imagery as a stress management technique does not reduce the levels of stress in public school teachers as measured by pre- and posttest.

Alternative Hypothesis: The use of guided imagery as a stress management technique does reduce the levels of stress in public school teachers as measure by pre- and posttest.

RQ2: Does teacher gender make a difference in reported levels of stress pre- and posttest?

Null Hypothesis: There is no gender difference in levels of stress reported pre- and posttest.

Alternative Hypothesis: There is a gender difference in levels of stress reported pre- and posttest.

RQ3: Do years of teaching experience make a difference in reported levels of stress pre- and posttest?

Null Hypothesis: Years of teaching experience do not make a difference in reported levels of stress pre- and posttest.

Alternative Hypothesis: Years of teaching experience make a difference in reported levels of stress pre- and posttest.

RQ4: Does the age of the public school teacher make a difference in the level of stress reported?

Null Hypothesis: Public school teachers' age does not make a difference in the level of stress reported.

Alternative Hypothesis: Public school teachers' age does make a difference in the level of stress reported.

RQ5: Does the level of student disruptive behavior make a difference in reported levels of stress pre- and posttest?

Null Hypothesis: Student disruptive behavior does not make a difference in reported levels of stress pre- and posttest.

Alternative Hypothesis: Student disruptive behavior does make a difference in reported levels of stress pre- and posttest.

Summary

The purpose of this study was to evaluate the effectiveness of guided imagery relaxation offered pro bono by PGPA on the stress levels of public school teachers in South Texas. A quantitative research design was utilized to explore the effectiveness of the intervention on the public school teachers' stress levels. Variables that were explored in terms of the public school teachers' stress level included the effectiveness of guided imagery as a stress intervention, gender, years of teaching experience, age, and students' behavior. Convenience sampling was used to select the study population who was exposed to the intervention being offered by PGPA, guided imagery, one time per week, for 3 weeks, for 38 minutes each intervention session. The CARD Elementary Version was used as the preassessment and as both postassessments instrument.

This chapter explored research design and rationale, population and sampling, instrumentation, intervention, data collection, data analysis, and research questions and hypothesis. Results of the study will be discussed in Chapter 4.

Chapter 4: Results

Introduction

The purpose of this study was to examine the effectiveness of a relaxation program using guided imagery as a technique to reduce stress that elementary public school teachers experience. Reducing teacher stress could enhance the learning experience of students and create healthier public school teachers. This chapter begins with a description of how the data were cleaned including the removal of any outliers. Then a description of the participant sample is given. This is followed by a brief summary of the findings and a detailed description of the data analysis and results. Finally, this chapter ends with a brief chapter summary and transition to the discussion in Chapter 5.

Data Collection and Preanalysis Data Cleaning

Participant recruitment was conducted by PGPA. Participants took part in this research study over the course of a 5-week consecutive time period beginning on February 17, 2016 as described in Chapter 3. The initial number of participants for this study was 83. Prior to the analyses, the data were checked for missing cases and outliers. First the data were examined for outliers. Standardized values were calculated for each of the variables used in the study. Tabachnick and Fidell (2012) suggested that scores with standardized values greater than 3.29 or less than -3.29 should be considered outliers. Based on this standard, a total of 2 cases contained data with outliers and were removed from the dataset. Data were also checked for significant amounts of missing data. It was found that no participant had a significant amount of missing data, so no further

participants were removed from the dataset. Therefore, final analyses were carried out on a sample of 81 participants.

Descriptive Statistics

A total of 81 participants completed the study survey and were used in the analyses. The majority of participants were female (*n* = 71, 87.7%). A large portion of participants rated their students' disruptive behavior as either *not demanding* (*n* = 18, 33.3%) or *very demanding* (*n* = 10, 29.6%). Table 1 displays the frequencies and percentages for the sample characteristics. The average age of the participants was 40.59 (*SD* = 9.58, *Range* = 40), while the average number of years as a teacher was 11 (*SD* = 6.82, *Range* = 39). Means, standard deviations, and ranges are shown in Table 2.

Table 1

Frequencies and Percentages for Sample Characteristics

Variable	*n*	%
Gender		
Male	10	12.3
Female	71	87.7
Disruption Level		
None	1	1.2
Not Demanding	27	33.3
Occasionally Demanding	15	18.5
Moderately Demanding	8	9.9
Very Demanding	24	29.6
Extremely Demanding	6	7.4

Table 2

Descriptive Statistics of Continuous Variables (N = 81)

			Range	
Continuous Variables	*M*	*SD*	Min.	Max.
Age	40.59	9.58	23	63
Years as a Teacher	11.00	6.82	1	40

Summary of the Results

Research Question 1. Does the use of guided imagery as a stress management technique reduce the levels of stress in public school teachers?

To examine Research Question 1, a repeated measure ANOVA was conducted to determine if there was a significant difference in levels of stress with the use of guided imagery as a stress management technique. Prior to assessing the ANOVA, the assumption of normality was tested using a Shapiro-Wilks test. The Shapiro-Wilks results were statistically significant for the stress levels at pretest ($p = .001$), posttest 1 ($p = .023$), and posttest 2 ($p = .030$), which indicated that the data did not follow a normal trend. However, the *F* test is considered robust enough to stand up to violations of this assumption when the sample size is greater than 30 (Stevens, 2009). The assumption of sphericity was also assessed and was found to be significant, $\chi^2(2) = 373.52$, $p < .001$; due to the violation, the Greenhouse-Geisser statistic was reported (Tabachnick & Fidell, 2012). The result of the within subjects effects on stress level was significant, $F(1.00, 80.36) = 207.85$, $p < .001$, $\eta^2_p = .72$, indicating there were significant differences in stress

levels across the different time points. An effect size of (η^2_p) = .72 indicated larger than typical differences between the scales (Morgan, Leech, Gloeckner, & Barrett, 2004).

Turkey post hoc pairwise comparisons were conducted to determine where those differences lie; as this analysis is conservative by nature, this allows the researcher to err on the side of Type II error, which is appropriate when conducting post hoc analysis (Stevens, 2009). Pretest stress levels (*M* = 5.79, *SD* = 1.20) were significantly higher than posttest 1 stress levels (*M* = 1.89, *SD* = 1.06) and posttest 2 stress levels (*M* = 1.84, *SD* = 1.06); posttest 1 stress levels (*M* = 1.89, *SD* = 1.06) were significantly higher than posttest 2 stress levels (*M* = 1.84, *SD* = 1.06). The null hypothesis—the use of guided imagery as a stress management technique does not reduce the levels of stress in public school teachers as measured by pre- and posttest—was rejected. The result of the within-subject effects is presented in Table 3. Means and standard deviations are presented in Table 4.

Table 3

Within Subjects Effects for Differences of Stress Levels from Pre- to Posttest

Source	*df*	*SS*	*MS*	*F*	*p*	η^2_p
Within subjects	1.00, 86.36	834.37	830.69	207.85	< .001**	.72
Error		321.15	4.00			

Note. *p <.05, **p < .01, *F* values reported are Greenhouse-Geisser.

Table 4

Means and Standard Deviations of stress scores for Pretest, Posttest 1, and Posttest 2

Time Points	*M*	*SD*
Pretest	5.79	1.20
Posttest 1	1.89	1.06
Posttest 2	1.84	1.06

Research Question 2. Does teacher gender make a difference in reported levels of stress pre- and posttest?

In order to examine Research Question 2, a mixed model ANOVA was conducted to see if there were significant differences in teacher stress levels based on time (pre, post 1 & post 2) accounting for the between-subjects differences by gender. Prior to analysis, the assumptions of ANOVA were assessed. The normality assumption was examined using the Shapiro-Wilks test. As with the last ANOVA, this test revealed that pretest (p = .001), posttest 1 (p = .023), and posttest 2 (p = .030) deviated from the normal distribution. However, the F statistic is considered robust toward violations of the normality assumption (Stevens, 2009). The homogeneity of variance assumption was tested utilizing Box's M test (Leech, Barrett, & Morgan, 2005). The results of this test revealed that this assumption was met (p = .571). The assumption of sphericity was also assessed and was found to be significant, $\chi^2(2) = 368.78$, $p < .001$; due to the violation, the Greenhouse-Geisser adjustment was applied (Tabachnick & Fidell, 2012).

The results of the within-subjects effects on stress levels were statistically significant, $F(1.00, 79.35) = 90.04$, $p < .001$, $\eta^2_p = .53$. The results indicated that there was a significant difference in teacher stress levels across the different time points. An effect size of $(\eta^2_p) = .53$ indicates a moderate difference between the time points (Morgan et al., 2007). The results of the between-subjects effects were not statistically significant; $F(1, 79) = 0.65$, $p = .424$, $\eta^2_p = .01$. This indicated there was no difference in stress levels between genders. Additionally, the interaction between time and gender on stress levels was not statistically significant ($F(1.00, 79.35) = 0.01$, $p = .935$, $\eta^2_p = .00$). The null hypothesis—there is no gender difference in levels of stress reported pre- and posttest—cannot be rejected. Results of the ANOVA can be found in Table 5. Means and standard deviations are presented in Table 6.

Table 5

Test of Within-Subjects and Between-Subjects Effects for Teacher Stress Levels

Source	*df*	*MS*	*F*	*p*	η^2_p
Time	1.00, 79.35	364.36	90.04	< .001	.53
Gender	1.00, 79.00	191.72	0.65	.424	.01
Time*Gender	1.00, 79.35	0.03	0.01	.935	.00

Note. *p <.05, **p < .01, *F* values reported are Greenhouse-Geisser.

Table 6

Means and Standard Error of stress scores for Pretest, Posttest 1, Posttest 2, and Gender

Variables	*M*	*SE*
Time		
Pretest	4.79	1.84
Posttest 1	0.86	1.61
Posttest 2	0.81	1.61
Gender		
Male	0.81	3.14
Female	3.51	1.18

Research Question 3. Do years of teaching experience make a difference in reported levels of stress pre- and posttest?

In order to examine Research Question 3, a mixed model ANOVA was used to see if there were significant differences in teacher stress levels based on time and accounting for the between-subjects effect of years of teaching. In order to assess the between-subjects effect of years of teaching, this variable needed to be converted into a categorical variable. The categories for this variable were created as follows: 1 to 5 years = Group 1, 6 to 10 years = Group 2, 11 to 15 years = Group 3, 16 to 20 years = Group 4, and 20+ years = Group 5. Assumptions of normality and homogeneity of variance were analyzed. The assumption of normality was examined for pretest (p = .001), posttest 1 (p = .023), and posttest 2 (p = .030) and the assumption was not met. Using Box's M test, it

was found that the homogeneity of variance assumption was not met ($p = .004$). However, the F statistic is considered robust toward violations of these assumptions (Stevens, 2009). The assumption of sphericity was also assessed and was found to be significant, $\chi^2(2) = 356.49$, $p < .001$; due to the violation, the Greenhouse-Geisser statistic was reported (Tabachnick & Fidell, 2012).

The results of the within-subjects effects on stress levels were statistically significant, $F(1.00, 76.33) = 170.10$, $p < .001$, $\eta^2_p = .69$. This indicated that there was a significant difference in teacher stress levels across the different time points. An effect size of $(\eta^2_p) = .69$ indicated a moderate difference between the time points (Morgan et al., 2007). The results of the between-subjects effects were not statistically significant, $F(4, 76) = 0.09$, $p = .986$, $\eta^2_p = .01$. This indicated there is no difference in stress levels between years of teaching. Additionally, the interaction between time and years of teaching on stress levels was not statistically significant ($F(4.02, 76.33) = 0.37$, $p = .831$, $\eta^2_p = .02$). The null hypothesis—years of teaching experience do not make a difference in reported levels of stress pre- and posttest—cannot be rejected. Results of the ANOVA can be found in Table 7. Means and standard deviations are presented in Table 8.

Table 7

Test of Within-Subjects and Between-Subjects Effects for Teacher Stress by Years of Teaching

Source	*df*	*MS*	*F*	*p*	η^2_p
Time	1.00, 76.33	702.06	170.10	< .001**	.69
Years of Teaching	4.00, 76.00	27.62	0.09	.986	.01
Time*Years of Teaching	4.02, 76.33	1.52	0.37	.831	.02

Note. *p <.05, **p < .01, *F* values reported are Greenhouse-Geisser.

Table 8

Means and Standard Error of stress scores for Pretest, Posttest 1, Posttest 2, and Years of Teaching

Variables	*M*	*SE*
Time		
Pretest	6.09	1.36
Posttest 1	2.11	1.20
Posttest 2	2.06	1.20
Years of Teaching		
1-5 years	2.67	2.33
6-10 years	3.45	2.22
11-15 years	2.66	2.07
16-20 years	4.88	3.59
20+ years	3.45	3.39

Research Question 4. Does the age of the public school teacher make a difference in the level of stress reported?

In order to examine Research Question 4, a mixed model ANOVA was used to see if there were significant differences in teacher stress levels based on time and accounting for the between-subjects effect of age. In order to assess the between-subjects effect of age, this variable needed to be converted into a categorical variable. The

categories for this variable were created as follows: 23 to 29 = group 1, 30 to 39 = group 2, 40 to 49 = group 3, and 50+ = group 4. Assumptions of normality and homogeneity of variance were analyzed. The assumption of normality was examined for pretest (p = .001), posttest 1 (p = .023), and posttest 2 (p = .030) and the assumption was not met. However, the F statistic is considered robust toward violations of this assumptions (Stevens, 2009). Using Box's M test, it was found that the homogeneity of variance assumption was met (p = .069). The assumption of sphericity was also assessed and was found to be significant, $\chi^2(2) = 361.49$, $p < .001$; due to the violation, the Greenhouse-Geisser statistic was reported (Tabachnick & Fidell, 2012).

The results of the within-subjects effects on stress levels were statistically significant, $F(1.00, 77.33) = 183.94$, $p < .001$, $\eta^2_p = .71$. This result indicates that there was a significant difference in teacher stress levels across the different time points. An effect size of (η^2_p) = .71 indicates a large difference between the time points (Morgan et al., 2007). The results of the between-subjects effects were not statistically significant, $F(3, 77) = 0.89$, p = .448, $\eta^2_p = .03$. This indicates there is no difference in stress levels between age groups. Additionally, the interaction between time and age on stress levels was not statistically significant ($F(3.01, 77.33) = 0.12$, p = .947, $\eta^2_p = .01$). The null hypothesis—years of teaching experience do not make a difference in reported levels of stress pre- and posttest—cannot be rejected. Results of the ANOVA can be found in Table 9. Means and standard deviations are presented in Table 10.

Table 9

Test of Within-Subjects and Between-Subjects Effects for Teacher Stress by Age

Source	*df*	*MS*	*F*	*p*	η^2_p
Time	1.00, 77.33	760.19	183.94	< .001	.71
Age	3.00, 77.00	265.09	0.89	.448	.03
Time*Age	3.01, 77.33	0.51	0.12	.947	.01

Note. *p <.05, **p < .01, *F* values reported are Greenhouse-Geisser.

Table 10

Means and Standard Error of stress scores for Pretest, Posttest 1, Posttest 2, and Age

Variables	*M*	*SE*
Time		
Pretest	5.71	1.25
Posttest 1	1.82	1.10
Posttest 2	1.78	1.10
Age		
23-29 years	0.80	2.68
30-39 years	1.71	2.07
40-49 years	4.01	1.88
50+ years	5.88	2.49

Research Question 5. Does the level of student disruptive behavior make a difference in reported levels of stress pre- and posttest?

In order to examine Research Question 5, a mixed model ANOVA was used to see if there were significant differences in teacher stress levels based on time and accounting for the between-subjects effect of student disruption behavior. Assumptions of normality and homogeneity of variance were analyzed. The assumption of normality was examined for pretest (p = .001), posttest 1 (p = .023), and posttest 2 (p = .030) and the assumption was not met. Using Box's M test, it was found that the homogeneity of

variance assumption was not met (p = .026). However, the F statistic is considered robust toward violations of these assumptions (Stevens, 2009). The assumption of sphericity was also assessed and was found to be significant, $\chi^2(2) = 340.59$, $p < .001$; due to the violation, the Greenhouse-Geisser statistic was reported (Tabachnick & Fidell, 2012).

The results of the within-subjects effects on stress levels were statistically significant, $F(1.01, 76.41) = 237.53$, $p < .001$, $\eta^2_p = .76$. This result indicates that there was a significant difference in teacher stress levels across the different time points. An effect size of (η^2_p) = .76 indicates a large difference between the time points (Morgan et al., 2007). The results of the between-subjects effects were also statistically significant, $F(4, 76) = 6.34$, $p < .001$, $\eta^2_p = .25$. This indicates there is a significant difference in stress levels between student disruption behavior. Additionally, the interaction between time and student disruption behavior on stress levels was statistically significant ($F(4.02, 76.41) = 5.17$, $p = .001$, $\eta^2_p = .21$). The null hypothesis—student disruptive behavior does not make a difference in reported levels of stress pre- and posttest—can be rejected. Results of the ANOVA can be found in Table 11.

Turkey's post hoc pairwise comparisons were conducted to determine where those differences lie: pretest stress levels (M = 8.87, SE = 1.23) were significantly higher than posttest 1 stress levels (M = 4.35, SE = 1.12) and posttest 2 stress levels (M = 4.30, SE = 1.12); and posttest 1 stress levels (M = 4.35, SE = 1.12) were significantly higher than posttest 2 stress levels (M = 4.30, SE = 1.12). Additionally, extremely demanding (M = 19.27, SE = 3.60) behaviors were significantly higher than very demanding (M = 3.39, SE = 1.80), moderately demanding (M = 4.24, SE = 3.12), occasionally demanding (M =

2.91, *SE* = 2.28), and not demanding (*M* = -0.63, *SE* = 1.67) behaviors. Finally, stress levels decreased significantly for occasionally demanding, moderately demanding, very demanding, and extremely demanding behaviors from pretest, posttest 1, and posttest 2. Means and standard deviations are presented in Table 12. Table 13 shows the interaction of student disruption level across time.

Table 11

Test of Within-Subjects and Between-Subjects Effects for Teacher Stress by Student Disruption

Source	*df*	*MS*	*F*	*p*	η^2_p
Time	1.01, 76.41	784.93	237.53	< .001**	.76
Student Disruption	4.00, 76.00	1477.31	6.34	< .001**	.25
Time*Student Disruption	4.02, 76.41	17.07	5.17	.001**	.21

Note. *p <.05, **p < .01, F values reported are Greenhouse-Geisser.

Table 12

Means and Standard Error of stress scores for Pretest, Posttest 1, Posttest 2, and Student Disruption Behavior

Variables	*M*	*SE*
Time		
Pretest	8.87	1.37
Posttest 1	4.35	1.12
Posttest 2	4.30	1.12
Student Disruption Behavior		
Not Demanding	-0.63	1.67
Occasionally Demanding	2.91	2.28
Moderately Demanding	4.24	3.12
Very Demanding	3.39	1.80
Extremely Demanding	19.28	3.60

Table 13

Means and Stand Error of stress scores for Interaction of Time and Student Disruption Behavior

Disruptive Behavior	Pretest	Posttest 1	Posttest 2
Not Demanding			
M	1.79	-1.82	-1.85
SE	1.81	1.61	1.61
Occasionally Demanding			
M	6.15	1.32	1.25
SE	2.47	2.20	2.19
Moderately Demanding			
M	7.44	2.65	2.65
SE	3.39	3.01	3.00
Very Demanding			
M	5.21	2.52	2.46
SE	1.96	1.74	1.73
Extremely Demanding			
M	22.74	17.07	16.99
SE	3.91	3.47	3.47

Chapter 4 Summary

This chapter began with a description of how the data were cleaned and checked for outliers. It was determined that two outliers existed in the data, which left a total sample size of 81. A description of the demographic variables was then given, followed by a summary of the results, and the detailed analysis of the results. The results for Research Question 1 allowed for the rejection of the null hypothesis and showed that there was a significant difference in teacher stress levels across time points. Specifically, teacher stress decreased from pre- to posttest. For Research Question 2, the results showed that the null hypothesis could not be rejected for the between-subjects effect, suggesting that gender did not affect teacher stress across time. For Research Question 3, the results showed that the null hypothesis could not be rejected for the between-subjects

effect, suggesting that years of teaching did not affect teacher stress across time. For Research Question 4, the results showed that again the null hypothesis could not be rejected, suggesting that age did not affect teacher stress across time. For Research Question 5, the results showed that the null hypothesis could be rejected. This means that there was a significant effect of student disruption behavior across time on teacher stress. Specifically, teacher stress decreased for four of the five levels of student disruption from pre- to posttest. A summary of the results for each research question is presented in Table 14. In Chapter 5, these results will be related back to previous literature and aligned with the theoretical framework of this study. Suggestions for future research and a synthesis of the findings will also be provided in this chapter.

Table 14

Summary of Results

Research Question	Results	Interpretation
1. Does the use of guided imagery as a stress management technique reduce the levels of stress in public school teachers?	WS Effect: $p < .001$	There were significant differences in stress levels before and after the intervention.
2. Does teacher gender make a difference in reported levels of stress pre- and posttest?	WS Effect: $p < .001$ BS Effect: $p = .424$	There were significant differences in stress levels before and after the intervention, but not between gender.
3. Does years of teaching experience make a difference in reported levels of stress pre- and posttest?	WS Effect: $p < .001$ BS Effect: $p = .986$ Interaction: $p = .831$	There were significant differences in stress levels before and after the intervention, but not between years of teaching experience.
4. Does the age of the public school teacher make a difference in the level of stress reported?	WS Effect: $p < .001$ BS Effect: $p = .448$ Interaction: $p = .987$	There were significant differences in stress levels before and after the intervention, but not between the age of the public school teacher.
5. Does the level of student disruptive behavior make a difference in reported levels of stress pre- and posttest?	WS Effect: $p < .001$ BS Effect: $p < .001$ Interaction: $p = .001$	There were significant differences in stress levels before and after the intervention. There was also a difference in student disruptive behavior. Where student disruptive behavior significantly decreased before and after the intervention.

Note. WS = Within-Subjects, BS = Between-Subjects.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

Public school teachers experience work-related stress at higher levels than individuals in other professions (Klassen, 2010; Lath, 2010; Stoeber & Rennart, 2010) including individuals who work as social workers, call center staff, prison personnel, firefighters, and police (Kodavariganti & Bulusu, 2011; Stress by MIND, 2005; Van der Klink & Schene, 2001). Due to an increase in demands being placed on public school teachers, their stress levels are at the high end of the stress spectrum (Klassen, 2010; Kodavariganti & Bulusu, 2011; Lath, 2010; Stoeber & Rennart, 2010; Stress by MIND, 2005; Van der Klink & Schene, 2001). Public school teachers' demands are evolving to encompass roles as mentors, mediators, translators, supporters, test administrators, and parent liaisons (Kodavatiganti & Bulusu, 2011; Lambert et al., 2009), thus compounding their already stressful profession. Public school teachers' stress levels, in general, are adversely affected by several factors that exacerbate issues within their profession. Additionally, public school teachers also dedicate an average of 10 working hours weekly, completing tasks that are outside of teaching (Kodavatiganti & Bulusu, 2011), serving in roles such as lunchroom supervision, open house, extracurricular events, meetings, and playground supervision (Kodavatiganti & Bulusu, 2011). Garder (2010) also suggested factors adding to the high level of work-related stress to the public school teacher are the evolving technological advances and curriculum innovations that require training and certification time. The established literature presented a consensus indicative of public school teachers falling at the high end of the stressful professions spectrum.

The literature also suggested that adverse health implications that accompany the stress experience become present as an individual experiences stress (Thoits, 2010; Van der Linde, 2001; Varvogli & Darviri, 2011). Adverse health implications, which individuals experiencing high levels of stress are subject to, can be physical and psychological, including cardiovascular disease, hypertension, obesity, and depression. Stress, as a concept, has been established since Hans Selye introduced his original interpretation of stress as it applies to the biological system (Tache & Brunnhuber, 2008).

The public school teacher study participants from a Texas city located on the U.S./Mexican border are, in general, no different from other public school teachers elsewhere in the United States. However, one distinguishing feature that separates teachers in this community from others is the home language of most of the children who attend school here. This adds another level of stress on top of the stressors public school teachers already face. Despite the overwhelming stress experienced by teachers in this region of the United States, there were no prior studies that presented or examined stress-reduction program for teachers. This research was conducted with the purpose of closing the gap in the literature related to public school teachers who work primarily with low socioeconomic status students, English language learners, and identify as Hispanic or Latino. The guided imagery approach, as a stress management and reduction technique, was utilized in this study. The literature presented many studies in which guided imagery was used as a stress management and stress reduction technique; however, a gap existed when addressing public school teachers who work with a student population primarily

comprised of low socioeconomic status, English language learners, and Hispanics or Latinos.

A series of free community intervention workshops about various health-related topics were facilitated by psychologists from PGPA. One workshop focused on educating and training teachers to self-regulate their levels of work-related stress. The intervention was a 38-minute guided imagery recording that participants listened to one time per week during the workshop. The effect of this workshop, which is unlike any other in the United States, was the focus of this study.

Individual teachers' level of stress was the dependent variable, and the independent variables were guided imagery as a stress intervention, gender, years of teaching experience, participant's age, and student behavior. A sample size of 97 teachers from 31 elementary schools pertaining to the local school district was required to determine statistical significance as indicated by a power analysis for multiple regression with an anticipated effect size = 0.15, desired statistical power = 0.80, number of predictors = 6, and a probability level = .05; however this study included 83 participants.

Study participants completed a survey instrument, the CARD, Elementary Version, at three different time points: preintervention, immediately after the third intervention, and 2 weeks after the third intervention. The intervention was a 38-minute guided imagery script that participants listened to one time per week for 3 consecutive weeks. Using a statistical analysis repeated measures ANOVA, I analyzed data for the same study participant over the three time points: prior to listening to the guided imagery, immediately after the third session, and 2 weeks after the third session. Findings

indicated teacher stress levels significantly decreased from pretest to posttest 1 and from posttest 1 to posttest 2; however, no difference was found between gender and teacher stress, between years of teaching and teacher stress, as well as between age and teacher stress. Teacher stress also significantly decreased across the assessed time points for student disruption identified as occasionally demanding, moderately demanding, and extremely demanding.

Interpretation of the Findings

Guided Imagery Relaxation

The established literature suggested guided imagery relaxation techniques are an effective method for stress relaxation and management (Froeschle & Crews, 2010a, 2010b; Kaspereen, 2012; Kemeny et al., 2012; Roeser et al., 2012). The established literature also offered findings indicating reduced body tension and restored energy levels can be achieved through relaxation therapy (Kaspereen, 2012). The present study aligns with the established literature having identified guided imagery relaxation as statistically significant as a technique used by public school teachers to manage stress levels. Studies noted within the literature review indicated guided imagery relaxation to have a positive outcome as a stress management technique even when used a few times or when used longer term. In this study, participants indicated decreased stress level with three sessions over a 5-week time period.

The current study findings confirmed and extended what had already been established in the review of literature. Findings in this study suggested guided imagery has a positive effect on stress management and stress reduction for elementary public

school teachers over an extended period of time. Two recent studies conducted by Froeschle and Crews (2010a; 2010b) and others conducted by Roeser et al. (2013) and Kemeny et al. (2012) suggested the benefits of guided imagery relaxation as an effective technique for management and reduction of public school teacher stress.

Froeschle and Crews (2010a) included 15 participants with only two guided imagery relaxation sessions. These authors found a collective description offered by the participants of a sense of control, relaxation, restfulness, and decreased tension. Similarly, these same authors conducted a larger study including 85 participants divided into an experimental group and a control group with three weekly sessions of relaxation, imagery, and solution-focused therapy (Froeschle & Crews, 2010b). This study yielded findings indicating significantly decreased levels of stress in the experimental group. In a study over a longer period of time, 8 weeks, with 11 guided mindfulness sessions including 113 public school teachers and an experimental and control group, Roeser et al. (2013) found public school teachers in the experimental group reported significantly less occupational stress compared to the control group. Similarly, in a different 8-week study, Kemeny et al. (2012) included 76 female public school teachers and provided them with 42 hours of relaxation techniques training and asked them to utilize those techniques for at least 20 minutes daily. These findings showed self-reported large decreases in anxiety and depression.

Findings in the current literature have established guided imagery relaxation is beneficial in reducing adverse psychological, emotional, and physical adversities as a result of teacher occupational stress (Froeschle & Crews, 2010a, 2010b; Kemeny et al.,

2012; Mañas et al., 2011; Roeser et al., 2013; van der Klink et al., 2001). Without regard to the length of time or the number of relaxation sessions attended by the study participants in the various studies ranging from only two sessions (Froeschle & Crews, 2010a), three 1-hour weekly sessions (Froeschle & Crews, 2010b), up to 8 weeks of more intensive trainings of 36 or 42 hours over the course of the study (Kemeny et al., 2012; Roeser et al., 2013), relaxation has been established as one effective teacher stress reduction technique.

Gender

In this study, no gender differences were found. It is possible that factors such as role congruity theory, as explained by Eagly and Karau (2002), or the number of female and male study participants (female $N = 71$; male $N = 10$), impacted the findings. Within the public school teaching occupation, existing literature provided mixed findings related to gender differences related to stress levels. Findings offered by Peck (1936) and more recently González-Morales et al. (2010) suggested that female nonpublic school teachers and public school teachers experience, report, or perceive greater levels of occupational stress than their male counterparts. In direct contrast to these findings are the findings of Akpochafo (2012) and Ablanedo-Rosas et al. (2011), who asserted that there was no significant difference between female and male public school teachers. Thoits (2010) also suggested a comparable rate of occupational stress between women and men. Teaching, as determined by demographic information, is a traditionally female-dominated occupation (González-Morales et al., 2010). As such, role congruity theory has been identified as a factor impacting perceived stress due to the social expectations within the

occupation (Eagly & Karau, 2002). Eagly and Karau proposed, in their role congruity theory, that a prejudice may exist against a group whose leadership role in incongruent or inconsistent with their traditional social role.

Years of Teaching

The current study reported no significant findings related to years of teaching experience and reported stress levels by the public school teacher subjects. This is consistent with the mixed findings that are present in the current literature review. Akpochafo (2012) reported no significant findings in considering years of teaching experience and stress levels. Similarly, El-Amin (2013) reported no significant correlation between work experience and occupational stress within a study comprised of 306 female public school teachers. Klassen and Ming Chiu's (2010) findings aligned with Akpochafo (2012), in which they identified and reported various stages of the public school teaching profession and how those stages play a role in the perception and reporting of teacher occupational stress.

Antoniou et al. (2006) suggested that high levels of stress are experienced at the initial point of a public school teacher's career. As such, Darling-Hammond (2001) reported approximately 30% of teachers leave the profession during their first 5 years of teaching, and Habberman (2004) reported public school teachers leave the profession within the first 4 years of teaching. According to Bradley (2007), this can be partially explained by findings that have suggested there is a greater level of occupational stress at the early years of an individual's career, including public school teachers, which will

yield a departure from the occupation either voluntarily, being let go by their employer, or an adaptation to the work conditions and demands over the course of their tenure.

Age

The average age of the public school teacher in this study was 40.59 years, and the findings of this study suggested that there was no significant difference in stress levels between age groups. The findings of the present study aligned with the findings reported by Korkuklu et al. (2012). Korkuklu et al. (2012) reported public school teachers within an age range of 20 to 40 years old age cluster reported higher level of emotional exhaustion, while lower levels were reported by public school teachers within age cluster of 41 and over. The study participants in the present study averaged in age at the bordering of the age range clusters in which levels of exhaustion differ. Studies by other researchers (Dagli, 2012; Wright & Ballestero, 2011, 2012) suggested that rates of stress are reported at higher levels by public school teachers younger in age, particularly within age clusters ranging 21 to 30 years of age. It is possible that the present study found no significant difference in stress levels between age groups because the average age of the participating school teacher was beyond the age cluster in which the established literature indicated the age point of greater levels of stress being reported by public school teachers.

Student Behavior

The current literature has established student behavior has a direct impact on public school teacher's stress levels (Collie et al., 2012; Karaj & Rapti, 2013, Otero et al., 2008). As such, the present study found that student disruptive behavior does make a

significant difference in the reported levels of stress pre- and posttest. In accordance with the current literature, which as noted that researchers who perceived greater behavior issues (Colie et al., 2012), the present study findings indicated significant differences in stress levels before and after the guided imagery intervention. Additionally, there was a difference in student disruptive behavior where student disruptive behavior significantly decreased before and after the intervention. It cannot be ruled that the teacher's perception of their students' behavior was impacted by the decreased stress level or that the stress levels were reported as decreasing because student behavior was being perceived as less disruptive. Other findings within the established literature (Karaj & Rapti, 2013; Otero-Lopez et al., 2008) suggest that student disruptive attitude/behavior is positively correlated with teacher exhaustion and depersonalization. Furthermore, Otero-Lopez et al. (2008) contend that one of the main predictors of teacher burnout is student disruptive behavior.

It is difficult to know the contributing factors to the findings of this study which indicate no significance in the realm of the study participants' years of teaching experience and their reported levels of stress. In this study, the average years teaching experience was 11. With the years of teaching experience exceeding the four and five-year marker in which studies (Antoniou et al., 2006; Darling-Hammond, 2001; Habberman, 2004) suggested is the time when public school teachers leave the profession. It is possible that, as suggested by Klassen and Ming Chiu (2010), Akpochafo (2012), and Antoniou et al. (2006), being in the midpoint stage of career, the public school teachers participating in this study were beyond the initial point in their career at

which point they would have been experiencing high levels of stress and plausibly departing the profession.

The current study, which was conducted over a total of 5 weeks with participants having listened to guided imagery relaxation a total of three times, confirms the already established findings: public school teacher stress can be reduced through the use of guided imagery relaxation. The current study also extends the current established knowledge by demonstrating the effectiveness of guided imagery relaxation in managing the stress of public school teachers working primarily with students who are of low socioeconomic status, English Language Learners, and Hispanic or Latino. Five research questions were examined within this study with each supporting the effectiveness of guided imagery relaxation in managing or reducing public school teacher stress. Stress levels of study participants were found to be significantly different before and after the intervention within each research question with the difference identified as positive effects of the guided imagery relaxation sessions. The results of this study can introduce a stress management and stress reduction technique that can lead to district wide implementation, and influence positive social change for public school teachers who serve this particular student population: low socioeconomic status, English language Learners, and Hispanic or Latino. As results are shared with the school district, the school district will become informed about the effectiveness of guided imagery relaxation not only as a general intervention for public school teachers, but as an effective technique for the population of teachers and students employed and served within their district, it is possible the district will adopt this technique as part of their teacher curriculum.

The findings of this study show a significant reduction of public school teacher stress over time as measured by the CARD, Elementary Version aligned with the transactional model of stress and coping (Lazarus & Folkman, 1984). The transactional model of stress and coping facilitates a pathway that allows an individual to examine the perception of their psychological processes and the link of those processed to their environment. Lazarus and Folkman (1984) suggested that stress is experienced when an individual perceives an imbalance between demands and coping resources.

In this study, public school teachers' perception of demands and coping resources were established at three time points following the transactional model of stress and coping framework by means of the CARD, Elementary Version. This aligned with and was important with the identified theoretical framework because individuals differ on what they perceive to be a stressful event (Lazarus & Folkman, 1984). This model is at the individualistic level in terms of allowing for individual perception of occupational demands and coping resources, and the coping technique that was taught, guided imagery relaxation, is also at an individualistic level. Participants reported stress levels based on individual perceptions at each of the three time points. The transactional model of stress and coping supports the process involved throughout the study because each assessment, as well as the intervention, is solely based on individualistic perceptions of demands and resources and utilization of the intervention, guided imagery relaxation. This theory offers participants an opportunity to explore demands and resources at an individual level, and this is important because the perception of what is stressful differs at an individual level (Lazarus & Folkman, 1984). Each of the five research questions in this

study examined individual perspectives of stress levels, classroom resources, and classroom demands.

Limitations of the Study

Several limitations are present in this study. This study was conducted utilizing a convenience sampling method in which participants were selected from only one school district. This method of sampling limits the generalizability of the results. Study participants were asked to self-report preintervention and again at two time points post intervention. With participants self-reporting their responses during pre- and postintervention, this study cannot rule out participant response bias. Study participants may have responded in a more favorable manner than was actually true for them. Study participants responding inaccurately may have occurred despite confidentiality measures having been explained to the participants. It is possible that due to fear of job security, and despite confidentiality measures, study participants may have feared job security if they were to be identified as public school teachers experiencing high levels of stress. This study is also limited on gender generalizability due to the number of female versus male participants. With a total of 81 participants being included in the results of this study, 71 were female and only 10 male. This gender difference is not aligned with the gender composition of the school district which was selected for the study. The study results are comprised of 87.7% female, 12.3% male while the school district is represented by 70.7% females, 29.3% males. Geographical location is another limitation present in this study. This study was conducted with study participants who teach in a public school district located in Hidalgo County which lies along the Texas – Mexico

border. The region in which Hidalgo County falls is the Rio Grande Valley which encompasses small towns and communities that stretch from Laredo, southern San Antonio, to Brownsville, Texas. The population of the area in which this study was conducted is 90.9% Hispanic, the State of Texas is at 38.2%, while the rest of the nation is identified at 16.9%. The student demographic of the school district included in this study is identified as 98.7% Minority Students, 29.5% English Language Learners, and 42.1% students living in poverty. Results of this study are limited to public school teachers serving a similar type of student demographic and to public school teachers working in an elementary school. Finally, this study is limited to short term effects of guided imagery since long term effect was not assessed and is not known.

Recommendations

For future studies, in order to establish long term effect of guided imagery relaxation, additional time points for post survey are recommended. This would demonstrate whether guided imagery relaxation remains effective for managing the stress levels of public school teachers for an extended period of time, or whether it ceases to be effective at a certain point in time, thereby necessitating the need for an additional method of stress management. Using a different type of sampling method is also recommended to minimize limitations to the study. By using a sampling method other than convenience sampling, which was used in this study, future researchers have the ability to determine generalizability of the results, ensuring that this method may be effective outside of just one setting in one state. Establishing a control group and an

experimental group may also provide additional information regarding the effectiveness of the relaxation intervention.

Implications

This study offers three potential implications for positive social change: teacher focused, student centered, and policy affected. By self-reflecting and evaluating their own occupational stress experience, teachers are offered the opportunity to increase awareness, understanding, and recognition of their levels of stress. This self-awareness opens a pathway for public school teachers to identify and list their own triggers of acute and chronic stress. This knowledge empowers each individual to have a greater awareness of potential adverse health implications and a potential for creating a psychological, emotional, and physical wellness plan. As teachers manage and reduce levels of stress through guided imagery relaxation, it is possible they may reach a desire to attend work, reach a higher level of occupational satisfaction, and create a greater commitment to a long-term career as public school teachers. As this individual positive change takes place, teachers' colleagues, administrative staff, and support personnel may potentially develop an interest in utilizing guided imagery relaxation as a stress management technique. It is possible that support groups initiated by school campus staff become part of a routine within the public school environment as a means to create and sustain a general positive school climate.

Student centered positive social change can take place as it has been shown that the educational experiences of students can be enhanced as their public school teacher's stress levels are decreased (Froeschle & Crews, 2010a). There is a vicarious positive

effect that takes place for the student when their teacher's stress levels are reduced. As the teacher's stress levels are reduced there is a reduced level of stress for the student as well. With decreased levels of stress, the student has potential for greater academic achievement, improved student behavior, and consistent student attendance. There may be a classroom implementation of the use of guided imagery relaxation into daily curriculum prior to the start of classroom instruction once the effectiveness of guided imagery is acknowledged as a means for teacher stress reduction and the vicarious positive effect on the levels of stress of students. In alignment with the CDC (2015) Standard 7 which states "Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks" (CDC, Healthy Schools, National Health Education Standards, n.d.), the use of guided imagery relaxation can be a movement towards achieving this goal.

Public school policy can also be positively affected with this study. As teachers implement the use of guided imagery relaxation as a technique for stress management and vicarious stress reduction begins to take place for their students, a domino effect of using this technique has the potential to take place. The implementation of the use of guided imagery relaxation for stress management can begin with a teacher's classroom, their respective campus, their school district, followed by other school districts within the region and the state. This can happen if several factors are met. It is necessary to offer awareness and understanding of public school teachers' current levels of stress and the adverse impact of stress on the mental and physical health of teachers as well as how these adversities have a direct negative impact on the teachers' work productivity and

career longevity. Bringing forth increased awareness of how guided imagery relaxation positively affects stress reduction, how cost effective this technique is, and the vicarious positive effects it has on students are also key factors in creating a positive movement towards public school policy.

Conclusion

The findings of this study indicated that guided imagery is an effective stress management technique for public school teachers. Public school teachers, as has been established in the literature, are frequently identified as experiencing high levels of work-related stress. With an effective, low cost, and readily available stress management technique, public school teachers have the potential to maximize the effectiveness of their teaching and to greater influence their students in a productive manner. Stress management is essential in emotional, psychological, and physical well-being of individuals of which without, adverse health implications can become present. In the absence of a technique, such as guided imagery, that can be easily utilized and has been shown to have positive effects on the overall well-being of teachers, the quality of the teachers' work, the learning of their students, and the climate of a school campus become compromised. The demands of public school teachers continue to increase thus adding to the already complex stress triggers these professionals encounter in their day to day work environment. It is critical to provide public school teachers with an effective stress management technique in order to potentially positively affect and maximize the learning potential of young minds. There is an immediate need to provide public school teachers with a technique which has historically and presently been shown as effective in aiding

and alleviating the gross burden placed on the emotional, psychological, and physical homeostasis of the public school teacher.

References

Ablanedo-Rosas, J., Blevins, R. C., Gao, H., Teng, W., & White, J. (2011). The impact of occupational stress on academic and administrative staff, and on students: an empirical case analysis. *Journal of Higher Education Policy & Management, 33*(5), 553-564. doi:10.1080/1360080X.2011.605255

Academy for Guided Imagery. (n.d.). What is guided imagery? Retrieved from http://acadgi.com/imageryandagi/whatisigi/index.html

Ackfeldt, A., Malhotra, N., & Fay, D. (2009). Investigating the moderating effects of managerial interventions on the role of stress: commitment relationship. *American Marketing Association Winter Educators' Conference Proceedings, 20*, 77-78.

Adera, B., & Bullock, L.M. (2010). Job stressors and teacher job satisfaction in programs serving students with emotional and behavioral disorders. *Emotional and Behavioral Difficulties, 15*(1), 5-14.

Ahghar, G. (2008). The role of school organizational climate in occupational stress among secondary school teachers in Tehran. *International Journal of Occupational Medicine & Environmental Health, 21*(4), 319-329.

Ahlgren, C., & Gillander Gådin, K. (2011). Struggle for time to teach: Teachers' experiences of their work situation. *Work, 40*(Supplement 1), 111-118. doi:10.3233/WOR-2011-1272

Akpochafo, G. O. (2012). Perceived sources of occupational stress among primary school teachers in Delta State of Nigeria. *Education, 132*(4), 826-833.

Antoniou, A. S., Polychroni, F., & Vlachakis, A. N. (2006). Gender and age differences

in occupational stress and professional burnout between primary and high-school teachers in Greece. *Journal of Managerial Psychology, 21*(7), 682-690.

Babatunde, A. (2013). Occupational stress: A review on conceptualizations, causes and cure. *Economic Insights - Trends & Challenges, 65*(3), 73-80. Retrieved from http://www.upg-bulletin-se.ro/archive/2013-3/8.Babatunde.pdf

Bansal, P., & Corley, K. (2012, June). Publishing in AMJ -Part 7: What's different about qualitative research? *Academy of Management Journal, (55)*3, 509-513. Retrieved from http://amj.aom.org/content/55/3/509.extract

Baecher, L., Artigliere, M., Patterson, D. K., & Spatzer, A. (2012). Differentiated instruction for English language learners as "variations on a theme." *Middle School Journal, 43*(3), 14-21.

Bayram, N., Gursakal, S., & Bilgel, N. (2010). Burnout, vigor, and job satisfaction among academic staff. *European Journal of Social Sciences, 17*(1), 41-53. Retrieved from http://www.investigacion-psicopedagogica.com/revista/articulos/19/english/Art_19_404.pdf

Brack, G., & McCarthy, C. J. (1996). *Transactional model of coping, appraisals, and emotional reactions to stress.* Retrieved from ERIC database. (ED408500)

Bradley, G. (2007). Job tenure as a moderator of stressor-strain relations: A comparison of experienced and new-start teachers. *Work and Stress: An International Journal of Work, Health, & Organizations, 21*(1), 48-64.

Bureau of Labor Statistics. (n.d.). *Kindergarten and elementary school teachers: Work environment.* Retrieved from http://www.bls.gov/ooh/Education-Training-and-

Library/Kindergarten-and-elementary-school-teachers.htm#tab-3

Canciu, M. M., & Bardac, D. D. (2011). Current issues concerning the relationship between mental health. *Acta Medica Transilvanica, 2*(4), 175-177.

Catano, V., Francis, L., Haines T., Kirpalani, H., Shannon, H., Stringer, B., & Lozanzki, L. (2010). Occupational stress in Canadian Universities: A national survey. *International Journal of Stress Management, 17*(3) 232-258.

Centers for Disease Control and Prevention. (2015) *Healthy Schools National Health Education Standards, Standard 7.* Retrieved from https://www.cdc.gov/healthyschools/sher/standards/7.htm

Chaudhry, A. (2012). An analysis of relationship between occupational stress and demographics in universities: The case of Pakistan. *Bulletin of Education & Research, 34*(2), 1-17.

Cooper, C. L., & Cartwright, S. (1994). Stress-management interventions in the workplace: Stress counselling and stress audits. *British Journal of Guidance & Counselling, 22*(1), 65.

Crawford, R. (2014). 20% take time off work due to stress. *Employee Benefits*, *Business Source Complete*, 3. ISSN:1366-8722.

Dagli, Ü. Y. (2012). America's public school kindergarten teachers' job turnover and associated factors. *Educational Sciences: Theory & Practice*, *12*(3), 121-134.

Darling-Hammond, L. (2001). The challenge of staffing our schools. *Educational Leadership, 58*(8), 12.

Delp, H. A. (1963). Mental health of teachers – still a problem. Retrieved from ERIC

database. (ED013133)

Dewe, P., & Trenberth, L. (2004). Work stress and coping: drawing together research and practice. *British Journal of Guidance & Counselling, 32*(2), 143-156.

Eagly, A. H., Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review, 109*, 573-598

El-Amin, M. (2013). Occupational stress among female academic staff at universities in Khartoum State. *Ahfad Journal, 30*(1), 29-45.

Froeschle, J. G., & Crews, C. R. (2010a). Examining teacher perspectives of creative relaxation. *Journal of Creativity in Mental Health, 5*(3), 290-304. doi:10.1080/15401383.2010.507581

Froeschle, J. G. & Crews, C. R. (2010b). The efficacy of collaborative stress management program for teachers. Retrieved from http://counselingoutfitters.com/vistas/vistas10/Article_71.pdf

Free Statistics Calculator (n.d.). Retrieved from http://www.danielsoper.com/statcalc/default.aspx

Gardner, S. (2010). Stress among prospective teachers: A review of the literature. Australian *Journal of Teacher Education, 35*(8), 18-28

Glanz, K., Rimer, B.K., & Lewis, F.M. (2002). *Health behavior and health education. Theory, research and practice*. San Francisco, CA: Wiley & Sons.

Gold, E., Smith, A., Hopper, I., Herne, D., Tansey, G., & Hulland, C. (2010). Mindfulness-based stress reduction (MBSR) for primary school teachers. *Journal of Child and Family Studies, 19*(2), 184-189.

González-Morales, M., Rodríguez, I., & Peiró, J. M. (2010). A longitudinal study of coping and gender in a female-dominated occupation: Predicting teachers' burnout. *Journal of Occupational Health Psychology, 15*(1), 29-44. doi:10.1037/a0018232

Haberman, M. (2004). Teacher Burnout in Black and White. *The New Educator, 1*(3), 153-175.

Hadi, A., Naing, N., Daud, A., & Nordin, R. (2008). Work-related depression among secondary school teachers in Kota Bharu, Kelantan, Malaysia. *International Medical Journal, 15*(2), 145-152.

Health and Safety Executive. (2000). *The scale of occupational stress: A further analysis of the impact of demographic factors and type of job*. Retrieved from http://www.hse.gov.uk/research/crr_pdf/2000/crr00311.pdf

Heddle, N. M. (2002). Clinical research designs: quantitative studies. *Vox Sanguinis, 83 Suppl 1*247-250.

Holmgren, K., Dahlin-Ivanoff, S., Bjorkelund, C., & Hensing, G. (2009). The prevalence of work-related stress and its association with self-perceived health and sick-leave in a population of employed Swedish women. *BioMed Central Public Health, 9*(73), 1-10. doi:10.1186/1471-2458-9-73

Kaspereen, D. (2012). Relaxation intervention for stress reduction among teachers and staff. *International Journal of Stress Management, 19*(3), 238-250. doi:10.1037/a0029195

Kemeny, M., Foltz, C., Cavanagh, J., Cullen, M., Giese-Davis, J., Jennings, P., & ...

Ekman, P. (2012). Contemplative/emotion training reduces negative emotional behavior and promotes prosocial responses. *Emotion (15283542), 12*(2), 338-350

Khoshbaten, M., Ghaffarifar, S., Jabbar Imani, A., & Shahnazi, T. (2013). Effects of early oral feeding on relapse and symptoms of upper gastrointestinal bleeding in peptic ulcer disease. *Digestive Endoscopy*, *25*(2), 125-129. doi:10.1111/j.1443-1661.2012.01347.x

Klassen, R. M. (2010). Teacher stress: The mediating role of collective efficacy beliefs. The *Journal of Educational Research, 103*(5), 342-350. Retrieved from http://search.proquest.com/docview/759964530?accountid=14872

Klassen, R. M., & Ming Chiu, M. (2010). Effects on teacher's self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology 102*(3) 741-756. doi:10.1037/a0019237

Kodavatiganti, K., & Bulusu, V. (2011). Stress indicators and its impact on educators. SIES *Journal of Management, 7*(2), 88-96.

Koenig, J. I., Walker, C., Romeo, R. D., & Lupien, S. J. (2011). Effects of stress across the lifespan. *Stress: The International Journal on the Biology of Stress*, *14*(5), 475-480. doi:10.3109/10253890.2011.604879

Kovac, M., Leskošek, B., Hadžič, V., & Jurak, G. (2013). Occupational health problems among Slovenian physical education teachers. *Kinesiology, 45*(1), 92-100.

Koruklu, N., Feyzioglu, B., Ozenoglu-Kiremit, H., & Aladag, E. (2012). Teachers' burnout levels in terms of some variables. *Educational Sciences: Theory and Practice*, *12*(3), 1823-1830.

Kunimatsu, M., & Marsee, M. (2012). Examining the presence of anxiety in aggressive individuals: The illuminating role of fight-or-flight mechanisms. *Child & Youth Care Forum, 41*(3), 247-258. doi:10.1007/s10566-012-9178-

Lambert, R. G., McCarthy, C. J., & O'Donnell, M. A. (2007). Understanding sources of teacher stress in elementary settings. *Understanding Sources of Teacher Stress in Elementary Settings*, 3. doi:10.1037/e702102007-001

Lambert, R. G., McCarthy, C., O'Donnell, M., & Wang, C. (2009). Measuring elementary teacher stress and coping in the classroom: Validity evidence for the Classroom Appraisal of Resources and Demands. *Psychology in the Schools, 46*(10), 973-988.

Lath, S. (2010). An assortment aspect of the stress among school teachers. *International Journal of Educational Administration, 2*(2), 433-441.

Lazarus R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.

Leech, N. L., Barrett, K. C., & Morgan, G. A. (2005). *SPSS for intermediate statistics: Use and interpretation*. Psychology Press.

Lennartsson, A., Theorell, T., Rockwood, A. L., Kushnir, M. M., & Jonsdottir, I. H. (2013). Perceived stress at work is associated with lower levels of DHEA-S. *Plos ONE, 8*(8), 1-8. doi:10.1371/journal.pone

Leuner, H.C. (1969). Guided affective imagery (GAI). A method of intensive psychotherapy. Abbreviation of a lecture given at the New Jersey Neuropsychiatric Institute, Princeton, N.J., May 16, 1966. *American Journal of*

Psychotherapy, 23(1), 4-22.

Mañas, I., Justo, C., & Martínez, E. (2011). Reducción de los niveles de estrés docente y los días de baja laboral por enfermedad en profesores de educación secundaria obligatoria a través de un programa de entrenamiento en mindfulness. *Clínica Y Salud, 22*(2), 121-137. doi:10.5093/cl2011v22n2a3

Mazzola, J. J., Schonfeld, I., & Spector, P. E. (2011). What qualitative research has taught us about occupational stress. *Stress & Health: Journal of the International Society for the Investigation of Stress, 27*(2), 93-110. doi:10.1002/smi.1386

McCarthy, C. J., Lambert, R. C., O'Donnell, M., & Melendres, L. T. (2009). The relation of elementary teachers' experience, stress, and coping resources to burnout symptoms. *Elementary School Journal, 109*(3), 282-300.

McCarthy, C.J., Lambert, R.G., Crowe, E.W., & McCarthy, C.J. (2010). Coping, stress, and job satisfaction as predictors of advanced placement statistics teachers' intention to leave the field. *NASSP Bulletin, 94*(4), 306-326

McCarty, F., Abbott-Shim, M., & Lambert, R. (2001). The relationship between teacher beliefs and practices, and Head Start classroom quality. *Early Education & Development, 12*(2), 225-238. doi:10.1207/s15566935eed1202_4

Mishlove, J. & Rossman, M. (n.d.) "Healing yourself with mental imagery" The Intuition Network, A Thinking Allowed Television Underwriter, transcript from the series Thinking Allowed, Conversations on the Leading Edge of Knowledge and Discovery, with Dr. Jeffrey Mishlove Retrieved April 22, 2013 from http://www.intuition.org/txt/rossman.htm

Mitchem, K. J., & Young, K. (2001). Adapting self-management programs for classwide use: Acceptability, feasibility, and effectiveness. *Remedial and Special Education, 22*(2), 75-88. doi:10.1177/074193250102200202

Moltedo, B., Hemmers, S., & Rudensky, A. Y. (2014). Regulatory T cell ablation causes acute T cell lymphopenia. *Plos ONE, 9*(1), 1-9. doi:10.1371/journal.pone.0086762

Morgan, G. A., Leech, N. L., Gloeckner, G. W., & Barrett, K. C. (2004). *SPSS for introductory statistics: Use and interpretation*. Psychology Press.

Nagar, K. (2012). Organizational commitment and job satisfaction among teachers during times of burnout. *The Journal for Decision Makers, 37*(2), 43-60.

National Center for Education Statistics. (n.d.). The condition of education. Retrieved from http://nces.ed.gov/programs/coe/indicator_cgf.asp

Otero López, J., Bolaño, C., Santiago Mariño, M., & Pol, E. (2010). Exploring stress, burnout, and job dissatisfaction in secondary school teachers. *International Journal of Psychology & Psychological Therapy, 10*(1), 107-123.

Peck, L. (1936). A study of the adjustment difficulties of a group of women teachers. *Journal of Educational Psychology, 27*(6), 401.

Phillips, C. C., Tiano, J. D., Vahlsing, J. B., Cook, K. J., Uncapher, C. N., & Fugett, A. D. (2013). Do age, training, and years of experience predict stress in Head Start teachers?. *APA Convention Presentation* doi:10.1037/e626152013-001

Ponce, C. R., Bulnes, M. S., Aliaga, J. M., Atalaya, M. C., & Huertas, R. E. (2005). El síndrome del quemado por estres laboral asistencial en grupos de adolescentes

universitarios. *Revista de Investigacion en Psicologia, 8*, 87-112.

Roeser, R. W., Schonert-Reichl, K. A., Jha, A., Cullen, M., Wallace, L., Wilensky, R., & ... Harrison, J. (2013). Mindfulness training and reductions in teacher stress and burnout: Results from two randomized, waitlist-control field trials. *Journal of Educational Psychology*, *105*(3), 787-804. doi:10.1037/a0032093

Roeser, R. W., Skinner, E., Beers, J., & Jennings, P. A. (2012). Mindfulness training and teachers' professional development: An emerging area of research and practice. *Child Development Perspectives, 6*(2), 167-173. doi:10.1111/j.1750-8606.2012.00238.x

Ross, S. W., Romer, N., & Horner, R. H. (2012) Teacher well-being and the implantation of school-wide positive behavior interventions and supports. *Journal of Positive Behavior Interventions 14*(2) 118-128. doi:10.1177/1098300711413820

Rossman, M. (2000). *Guided imagery for self-healing: An essential resource for anyone seeking wellness* (2nd ed.). Novato, CA: New World Library.

Sandmark, H., & Renstig, M. (2010). Understanding long-term sick leave in female white-collar workers with burnout and stress-related diagnoses: A qualitative study. *BioMed Central Public Health, 10*(210), 210-221. doi:10.1186/1471-2458-10-210

Sass, D. A., Flores, B., Claeys, L., & Pérez, B. (2012). Identifying personal and contextual factors that contribute to attrition rates for Texas public school teachers. *Education Policy Analysis Archives, 20*(15), 1-25.

Selye, H. (1953). The general-adaptation-syndrome in its relationships to neurology,

psychology, and psychopathology. In A. Weider, A. Weider (Eds.). *Contributions toward medical psychology: Theory and psychodiagnostic methods Vol 1*, 234-274. New York, NY, US: Ronald Press Company. doi:10.1037/11419-011

Selye, H. (1955). Stress and disease. *Geriatrics*, 10, 253-261. doi: 10.1288/00005537-195507000-00002

Siu, O., Cooper, C. L., & Phillips, D. R. (2013). Intervention studies on enhancing work well-being, reducing burnout, and improving recovery experiences among Hong Kong health care workers and teachers. *International Journal of Stress Management, 21*(1), doi:10.1037/a0033291

Sliskovic, A., & Seršić, D. (2011). Work stress among university teachers: gender and position differences. *Archives of Industrial Hygiene & Toxicology / Arhiv Za Higijenu Rada I Toksikologiju, 62*(4), 299-307. doi:10.2478/10004-1254-62-2011-2135

Sonnentag, S., Arbeus, H., Mahn, C., & Fritz, C. (2014). Exhaustion and lack of psychological detachment from work during off-job time: Moderator effects of time pressure and leisure experiences. *Journal of Occupational Health Psychology, 19*(2), 206-216. doi:10.1037/a0035760.

Stoeber, J., & Rennert, D. (2008). Perfectionism in school teachers: relations with stress appraisals, coping styles, and burnout. *Anxiety, Stress & Coping, 21*(1), 37-53.

Stress by MIND. (2005). *CPJ: Counselling & Psychotherapy Journal, 16*(6), 14.

Stewman, R. (2014). Open doors for students in poverty. *Principal, 93*(4), 18-21.

Tabachnick, B.G., & Fidell, L.S. (2007). *Using Multivariate Statistics* (5th ed.). Boston:

Allyn and Bacon.

Tache, Y., & Brunnhuber, S. (2008). From Hans Selye's discovery of biological stress to the identification of corticotropin- releasing factor signaling pathways. *Annals of the New York Academy of Sciences*, 114829-41. doi:10.1196/annals.1410.007

Texas Demographics (n.d.). Need hidalgo county demographics for your business plan? Retrieved from http://www.texas-demographics.com/hidalgo-county-demographics

Thoits, P. (2010). Stress and health: major findings and policy implications. *Journal of Health and Social Behavior*, *51*(Suppl), S41-S53. doi:10.1177/0022146510383499

Trakhtenberg, E. (2008). The effects of guided imagery on the immune system: a critical review. *The International Journal of Neuroscience*, *118*(6), 839-855. doi:10.1080/00207450701792705

Ullrich, A., Lambert, R. G., & McCarthy, C. J. (2012). Relationship of German elementary teachers' occupational experience, stress, and coping resources to burnout symptoms. *International Journal of Stress Management, 19*(4), 333-342. doi:10.1037/a0030121

University of Houston (n.d.). News and Events. Expert on traumatic and job-related tackles middle school. Retrieved from http://www.uh.edu/class/news/archive/2011/june/psychology-mcintyre/

Utay, J., & Miller, M. (2006). Guided imagery as an effective therapeutic technique: A brief review of its history and efficacy research. *Journal of Instructional*

Psychology, 33(1), 40-43.

Van der Klink, J.J.L. & Schene, A.H. (2001). The benefits of interventions for work-related stress. *American Journal of Public Health, 91*(2).

Van der Linde, C. (2001). The teacher's stress and its implications for the school as an organization: How can TQM help? *Education, 121*(2), 375.

Varvogli, L., & Darviri, C. (2011). Stress management techniques: Evidence-based procedures that reduce stress and promote health. *Health Science Journal, 5*(2), 74-89.

Wolpe, J. (1978). Cognition and causation in human behavior and its therapy. *American Psychologist, 33*(5), 437-446. doi:10.1037/0003-066X.33.5.437

Wolters, C. A., & Daugherty, S. G. (2007). Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level. *Journal of Educational Psychology, 99*(1), 181-193. doi:10.1037/0022-0663.99.1.181

Wright, S., & Ballestero, V. (2012). Eastern Kentucky Teacher and Administrative Stress: Part II. *Online Submission*. Retrieved from ERIC database. (ED529289)

Wright, S., & Ballestero, V. (2012). Eastern Kentucky teacher and administrative stress: Part III. Online Submission. Retrieved from ERIC database. (ED537243)

Appendix A: Permission Request to use the CARD

Subject : Fw: Doctoral Dissertation Permission Request to use the CARD

Date : Sun, Nov 10, 2013 08:44 PM CST

From : XXXXXX

To : "XXXXXX

----- Forwarded Message -----
From: "Lambert, Rich" <XXXXXX>
To: "'McCarthy, Christopher J'" <XXXXXX>; ELSA GARCIA <XXXXXX>
Sent: Sunday, November 10, 2013 8:15 PM
Subject: RE: Doctoral Dissertation Permission Request to use the CARD

Hi Elsa. We would be happy for you to use the CARD in your research. We can also help with the scoring when the time comes. We have multiple versions of the CARD: Preschool, Elementary, Middle / High School, Administrator, and Counselor. Which version(s) do you need? Thanks, Rich

---

Richard G. Lambert, Ph.D., Ed.S.
Professor
XXXXXX
UNC Charlotte
Department of Educational Leadership
XXXXXX
Phone: XXXXX
Fax: XXXXX
Email: XXXXXX
Homepage: http://education.uncc.edu/rglamber

Director
Center for Educational Measurement and Evaluation
Homepage: http://education.uncc.edu/ceme

From: McCarthy, Christopher J [XXXXXX]
Sent: Sunday, November 10, 2013 5:18 PM
To: ELSA GARCIA
Cc: Lambert, Rich
Subject: Re: Doctoral Dissertation Permission Request to use the CARD

Hi Elsa, thanks for your interest in the CARD. I am copying this message to my co-author, Dr. Lambert, who can help you with use of the instrument. Good luck in your research, Chris

--
Christopher J. McCarthy, Ph.D.
Professor
Graduate Adviser and Associate Chair

XXXXXX
The University of Texas at Austin
Department of Educational Psychology
Counseling Psychology/Counselor Education Program
XXXXXX
XXXXXX

Office: XXXXXX
Phone: XXXXX
FAX: XXXXX

website:
http://ows.edb.utexas.edu/?q=site/coping-and-health-research-group

Editor-in-Chief, Journal for Specialists in Group Work

website:
http://www.tandf.co.uk/journals/titles/01933922.asp

From: ELSA GARCIA <XXXXXX>
Reply-To: ELSA GARCIA <XXXXXX>
Date: Saturday, November 9, 2013 10:06 PM
To: Chris McCarthy <XXXXXX>
Subject: Doctoral Dissertation Permission Request to use the CARD

Hello Dr. McCarthy,

I am a doctoral student working on my dissertation entitled The Effect of Guided Imagery Relaxation on the Stress Levels of Public school teachers in South Texas. I am contacting you because I would like to use the CARD as my assessment tool in my dissertation. I am respectfully requesting your permission to access and use the CARD in my dissertation research study. Your consideration and response to my request are greatly appreciated.

Sincerely,
Elsa N. Garcia

Appendix B: A Meditation for Relaxation and Wellness

Introduction

I am Belleruth Naparstek. This guided imagery is designed to help you rest, renew, and heal. Guided imagery is gentle but powerful, and it can reach places inside of you that conscience thinking sometimes can't. It's been shown to help reduce anxiety, depression, pain, and fatigue. It Improves self-esteem and energy and speeds up healing while letting the mind and body relax. Try to listen to this once or twice a day for several weeks. You'll find that over time it will have a stronger and stronger affect. Different parts of this will probably capture your attention at different times. Always feel free to ignore or change whatever doesn't suite you. Your unconscious mind will probably do that for you anyway. You don't need to pay perfect attention for this to work. In fact your mind will probably drift in and out naturally. You may even fall asleep and it will still have an effect; especially with repeated listening. If you notice your mind wandering you can gently guide it back, and because this imagery is designed to help you relax. It is best not to play it while driving. But you can listen to the affirmations anytime, and don't worry if it brings forth some unexpected emotion. That just means its working for you in a deep way. If you position your hands the same way each time you listen. This will be a kind of conditioning cue. Later you'll be able to use it to move very quickly into a place of deep relaxation so for now see if you can take this next while to commit yourself to this process of this engaging the power of your imagination to help you heal by gently immersing yourself in

this safe and easy process. All you have to do is settle in, relax and let yourself listen.

Guided Imagery

To begin with, see if you can position yourself as comfortably as you can. Shifting your weight so your body is well supported, and gently allowing your eyes to close. Becoming aware of the rise of your body as you breathe in, and the way it settles back down as you breathe out, so you can become more and more at tuned to the feel of your breathe moving in and out of your body, and now taking a nice deep full cleansing breathe and breathing out fully incompletely and with the next breathe in, imagining that your sending the warm energy of your breathe to any part of your body that sore or tense or tight, and releasing the tension with the exhale, so you can feel your breathe going to all the tight tense places. Warming and loosening and softening them and then gathering up the tension and breathing it out, so that more and more you can feel safe and conferrable relaxed and easy. Watching the cleansing action of your breathe. Arms and legs lose and conferrable. Tension draining from fingers and toes…and any unwelcomed thoughts that come to mind. Those too can be sent out with the breath, released with the exhale so that in just a moment your mind is empty…For just a split second it is free and clear space and your blessed with stillness…and any emotions you feel inside, those too can be noted and acknowledged and sent out with the breath so that our emotional self can be still and quiet like a lake wit not ripples. And now imagining a place where you feel safe and peaceful and easy…a

place you want to go to or go to now or someplace you've always wanted to be. It could be by the ocean or up in the mountains or dessert. It doesn't matter; just so it's a place that feels good and safe and peaceful to you…And allowing the place to become real to you in all its dimensions. Looking around you…enjoying the colors…the scenery…looking over to your left and once to your right and feeling whatever your sitting against, or lying upon…whether you're leaning against on oak tree or surrounded by sweet meadow grass…or walking in the woods on a punching carpet of pine needles…or you might be on the shore with cool wet sand oozing between your toes and gentle waves lapping around your ankles…or maybe you're just sitting on a rock in the sun and listening to sounds in the place….birds chirping, or the rustling sounds of the leaves...or the gentle soothing sound of a bubbling brook…just so your letting your ears become tuned to all the beautiful sounds of this place that is so safe and peaceful to you. And smelling its rich fragrance whether it's the sharp bracing scent of salt sea air…the sweet heavy fullness of meadow grass…the pungent dark green aroma of peat moss pine in the forest…sometimes the air is so latent with scent you can practically taste it on your tongue…and noticing the feel of the air on your skin as it caresses your face and neck and it might be crisp and dry or balmy and wet so our just letting your skin enjoy this place…that is so safe and peaceful to you. And letting its healing presence caress you and soak into your skin…letting it feel you, permeating muscle and tissue and bone…calming and soothing you all the way down into each and every cell…so with every beauty of this place…breathing it into your

body…letting it soak into every part of you…all the way down into your arms and legs…fingers and toes…infiltrating your whole body with peace and calm…able to feel the energy of this place forming a gently vibrating cushion all around you, softly surrounding and protecting you…becoming more and more palpable, and inside the cushion, you can feel safe and protected, relaxed and easy able to take in whatever is nourishing to you, but insulated from whatever you don't want or need….and now imaging this cushion of energy is drawing to it, all the love and sweetness that has ever been felt for you by anyone at any time…feeling it pulling all the caring, all the loving kindness that has ever been sent your way…every prayer and good wish, every smile and gesture of gratitude filling the field of energy around you, pulling it all in like a powerful magnet…calling every good wish home and so increasing the powerful protective field all around you…and perhaps sensing the presence of those who have loved or nurtured you…those who love you now, or who will love you in the future…just the ones you want with you, and sensing them around you…now people from your life, a life far long gone…there might even be a special animal standing guard, dear old friends, visitors, some remembered, some forgotten, or a grandparent or a powerful ancestor whose banner you've carried, a teacher, a god, sweet spirit, magical beings, guardian angels, some familiar, some not, it doesn't matter just so you feel their connection and support….you might even catch a fleeting glimpse of somebody, maybe noticing an old familiar scent or hearing the unique chatter of the dearly loved voice…possibly sensing a present at your side, or just behind

you, or feeling the soft weight of a soft gently hand and one might lean into some words of encouragement, and others might just be there to keep you company signaling their reassurance and seeing to your well-being…and suddenly you are certain you know with your whole heart…your whole being…that all is well, that you are surrounded by protection seen and unseen with you all the time…whenever you chose to notice or acknowledge their presence, and that you are better for knowing this…feeling all through your body the warmth of this awareness, and the strength and calm that it brings a tomb to the peaceful stillness at your center…and so feeling relaxed … arms and legs lose and heavy while you continue to breathe in and out strong and steady still aware of the special place, the cushion of energy and the support all around you, so very gently and with soft eyes you can allow yourself to come back into the room whenever you're ready, knowing in a deep place that you are better for this…and so you are.

Affirmations

Affirmations are positive statements designed for repeated listening; a sort of reprogramming of your unconscious mind to combat negative thinking. Over time it can have a profound cumulative effect. Some people find them easier to work with than guided imagery. See if you can listen to each statement in the state of open and relaxed tension breathing in deeply as you hear each one and breathing out as you repeat it to yourself. I know that there are times I become frightened, discouraged, angry or sad, and I accept what I feel as my inner truth of the moment. When I remember to feel, my breath moving in and out of my body I

return to my own inner peace and calm. More and more I can allow myself to let go of worrying about things that I cannot control and focus on my own inner peacefulness. I thank my body for what it has done for me in the past and all the things it will do for me in the future. I am learning to trust my body and to make good use of the information it offers to me. More and more I am learning to be gentle and considerate to myself. More and more I am learning to save my energy for what truly matters to me. More and more I am learning to pace myself. I welcome my ability to cushion myself from jarring events, moderating my responses from this new seed of balanced calm. I salute my own courage, strength, and endurance and fortitude. More and more I am learning to focus on doing what does me and my life good. I welcome the return of my strength, vitality, and sense of self. I can see and feel a balanced calm and through my body. I welcome my ability to listen to the wisdom of my body telling me to rest, pace my energy, and take gentle good care of myself. More and more I can appreciate the inborn power of my body's beauty, intelligence, and the ability to be real. More and more I am able to savor the gifts of the present. I welcome the ability to appreciate the beauty of my own being. More and more I can take the time to touch a leaf, smell the morning air, and receive the soft caress of the breeze on my soft face. I'm remembering to enjoy the pleasant feel of my body as it moves, stretches, breathes, rests, and settles in for sleep. More and more I can take pleasure in the simple joys of living. I welcome this new awareness of this peaceful power in my heart; the seed of my strength and the home of my spirit. I

know that I can better and better able to listen to my body and sense what it needs. I know that I am more and more able to sense when I'm tired and give myself room to rest. I am better and better able to seek out environments that re nourishing to me, and to avoid those that are not. More and more I can understand my body is my ally, my oldest friend, and my steadiest companion. More and more I am learning to be true to myself, judge by my own standards and listen to the voice of my own heart. I'm aware that with each breath in, I'm sending precious oxygen and rich nutrients to the places that need them. I'm aware that with each breath, I'm releasing toxins and cleansing myself. I salute the healing action of my own breath. I can see and feel radiant sunlight entering and warming my body, sending peaceful joy in sweet healing deep inside. I can see and feel a powerful energy wave of pure healing washing through me from head to toe; cleaning away any unwanted debris, and taking it out with the tide. I can see and feel a soft warm cushioning blanket of comfort surrounding me; enveloping me with healing, and softly soaking its energy in me. I know that I am nourished and sustained by all of the love and beauty that has come into my life. When I remember to feel my breath moving in and out of my body, I return to my own inner peace and calm. More and more I can allow myself to let go of worrying about things I cannot control and focus on my own inner peacefulness. I thank my body for all it has done for me in the past and all it will do for me in the future. I am learning to trust my body and to make good use of the information it offers me. More and more I am learning to be gentle and considerate toward myself. I

welcome my ability to listen to the wisdom of my body, telling me to rest, pace my energy, and take gentle good care of myself. More and more I can appreciate the inborn power of my beauty and intelligence and ability to heal. More and more I am able to savor the gift of the present. More and more I can feel my mind getting cleaner, my body stronger, my heart fuller, and my body freer. I know that I have things to do, purposes to accomplish, gifts to give, and I require a strong and healthy body to do this. In that I am held in the hands of God, and I am perfectly utterly safe, and so you are.