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Lauren Larson

Minnesota State University, Mankato

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Assessment of Perceived Levels of Stress and Coping Mechanism Use Among
Elementary School Teachers

By

Lauren Larson

A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Science
In
Community Health Education

Minnesota State University, Mankato

Mankato, Minnesota

May 2021

April 28, 2021

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Lauren Larson

This thesis has been examined and approved by the following members of the student's committee.

Dr. Mary Kramer

Dr. Joseph Visker

Dr. Mark Windschitl

Acknowledgements

I would like to express my deepest gratitude to my committee members, Dr. Mary Kramer, Dr. Joseph Visker, and Dr. Mark Windschitl, for their guidance and encouragement throughout my research project. This work would not have been possible without their persistent help and unwavering support. I would also like to thank my family and friends for their love and support. To my husband, Eric, thank you for being my rock. I could not have done this without you.

Table of Contents

Chapter One: Statement of the Problem	1
Statement of the Problem	2
Significance of the Problem	3
Purpose Statement	5
Research Questions	5
Limitations	5
Delimitations	6
Assumptions	6
Definition of Terms	6
Attrition	6
Burnout	6
Coping	6
Occupational stress	6
Protective factors	6
Risk factors	7
Stress	7
Chapter Two: Review of Literature	8
Stress	8
Teacher Stress	9
Influences on Occupational Stress	11

Impact of Occupational Stress	12
Coping Mechanisms	14
Chapter Three: Methodology	16
Research Questions	16
Research Design	16
Subject Selection	17
Instrumentation	17
Data Collection	20
Data Analysis	20
<i>Table 1</i>	21
Summary	22
Chapter Four: Results	23
Introduction	23
Participants	23
Demographics	23
<i>Table 2</i>	24
What are the perceived levels of stress experienced by elementary school teachers In Minnesota?	26
What coping mechanisms are used among elementary school teachers in Minnesota?	26
<i>Table 3</i>	27

What is the relationship between the perceived level of stress experienced by elementary school teachers in Minnesota and the stress coping mechanisms used?	28
<i>Table 4</i>	28
Summary	29
Chapter Five: Summary, Conclusions, and Recommendations	31
Summary	31
Recommendations for Health Educators	32
Recommendations for Future Research	33
References	34
Appendices	40
Appendix A: Institutional Review Board Letter of Approval.....	41

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Abstract

The teaching profession is known to be highly stressful. Teacher stress is a real concern as there is a well-established link between job stress, burnout, and teacher attrition. Teacher attrition rates are currently at concerning levels in the United States and around the world. A cross-sectional, correlational study design was used to assess the relationship between perceived levels of stress and coping mechanism use among elementary school teachers. Participants consisted of a convenience sample of 420 public elementary school teachers in Minnesota. A 48-item survey which included the Perceived Stress Scale and Brief COPE was used to measure perceived levels of stress and coping mechanism use among participants. Results from this study found that the average total stress score on a scale of 0 to 40, with higher scores indicating higher perceived stress, for teachers surveyed was 27.04. The coping mechanisms most utilized by teachers who participated in this study were "Acceptance", "Active coping", and "Planning". Statistically significant relationships were found between total stress scores and the following coping mechanisms: Self-distraction, Active coping, Denial, Substance use, Emotional support, Use of informational support, Behavioral disengagement, Venting, Positive reframing, Planning, Religion, and Self-blame. Findings from this study confirm the prevalence of stress among elementary school teachers and a relationship between perceived levels of stress and coping mechanism use.

Chapter One: Statement of the Problem

Stress is defined as an imbalance between risk factors and protective factors.

This conceptualization facilitates identification of factors that help or hinder a sense of well-being (Prilleltensky, Neff, & Bessell, 2016). Stress is often displayed through negative feelings, behaviors, and thoughts. An individual's experience of psychological discomfort and associated disorders that result from general working conditions is referred to as occupational stress (von der Embse, Ryan, Gibbs, & Mankin, 2019). High levels of occupational stress have been linked to an increased risk of physical injuries, cardiovascular disease, high blood pressure, depression and increases in negative personal behaviors such as anger, anxiety, and irritability (Mosadeghrad, 2014).

Workers in all professions may be prone to occupational stress, but those working in "human services" professions may experience occupational stress at particularly high levels (Maslach, 2003). Human services can include any profession that exists to aid people in their time of need and "improv[e] the overall quality of life of service populations" (National Organization for Human Services [NOHS], n.d., para. 1). Teachers, who are not only responsible for educating their students, but who are also often called upon for various duties necessary for the overall well-being of students, are likely to experience high levels of stress. The ability of teachers to effectively cope with high levels of stress is essential for schools and the students they serve.

Statement of the Problem

Within people-oriented professions such as teaching, the therapeutic or service relationships that providers develop with recipients require an ongoing and intense level of personal and emotional contact (Maslach & Leiter, 2016). While such relationships can be rewarding and engaging, they can also be quite stressful (Maslach & Leiter, 2016). The prevailing norms within these professions are to be selfless and put others' needs first; to work long hours and do whatever it takes to help a client or patient or student (Maslach & Leiter, 2016) thus leading to burnout.

When the actual or perceived ability of teachers to cope with high levels of stress is diminished, burnout can result. Burnout is a chronic psychological syndrome prompted by occupational stress and characterized by physical and mental exhaustion, cynicism, and feelings of poor personal accomplishment (Chesak et al., 2019). Burnout is of particular concern in the teaching profession as it is associated with reduced quality of instruction and diminished ability to engage and teach effectively, both of which can lead to potential student harm (Chesak et al., 2019).

The relationship between burnout and health is complex, in that poor health contributes to burnout and burnout contributes to poor health (Maslach & Leiter, 2016). Personal and organizational costs of burnout have led to proposals for various intervention strategies, with a primary emphasis on intervention strategies that occur on the individual level (Maslach & Leiter, 2016). Many of these individual strategies have been adapted from other work done on stress, coping, and health, and one of the

most common recommendations include developing coping skills (Maslach & Leiter, 2016). Research on teacher stress has focused primarily on the relationship between stress and burnout, but there has been little research done on the relationship between stress and coping skills among teachers.

Significance of the Problem

Teacher stress is associated with many characteristics of the teaching profession, including separation from other adults, inadequate opportunities for reflection, student misbehavior, the profession's emotional needs, high workload, changes due to reform efforts, inadequate salary or resources, and expectations from the school administrators (Chesak et al., 2019). Teacher stress is a real concern as there is a well-established link between job stress, burnout, and teacher attrition (Klassen, 2010).

Although statistics vary by region, studies show that 30% to 50% of new teachers leave the teaching profession within the first five years of their career. Within the first three years, 20% to 30% of new teachers leave the profession (Prilleltensky et al., 2016). Employment data for the 2017-2018 school year from the Minnesota Staff Automated Reporting System (STAR) found that more than 7,000 Minnesota public school teachers from the 2016-2017 school year did not return to teach in the same school district in 2017-2018 (Wilder Research, 2019). Of the 7,010 teachers who did not return, 24.7 percent cited "personal reasons" as the reason for leaving (Wilder Research, 2019).

Employment data for the 2017-2018 school year also revealed that slightly more than half (52.5%) of teachers holding an active teaching license in Minnesota are not

currently working as a teacher in a public school. Of the teachers holding an elementary education license in Minnesota, 22.3% are not using it (Wilder Research, 2019). No data was available on teachers holding a middle or secondary education license in Minnesota.

Teacher attrition represents a potentially devastating loss of personnel and resources at the school level, forcing schools to spend time and resources to rebuild their staff (Ryan et al., 2017). Rather than allocating the money to students and teachers, schools with high turnover must face costs in recruitment, re-training, and retention efforts for new teachers (Ryan et al., 2017). Alternatively, districts may be forced to place standard-license teachers outside of their licensure area to teach or hire teachers with special permissions or out of compliance.

In Minnesota schools, elementary education is one area with a high number of teachers working under special permissions or out of compliance (Wilder Research, 2019). During the 2017-2018 school year, 477 elementary education teachers worked under special permissions or out of compliance (Wilder Research, 2019).

Whether for the protection of the physical and emotional health of teachers, for the well-being of students, or for the improvement of the public education system, a better understanding of perceived levels of stress and coping mechanism use among teachers is essential.

Purpose Statement

The purpose of this study is to assess the relationship between perceived levels of stress and coping mechanism use among elementary school teachers.

Research Questions

1. What are the perceived levels of stress experienced by elementary school teachers in Minnesota?
2. What coping mechanisms are used among elementary school teachers in Minnesota?
3. What is the relationship between the perceived level of stress experienced by elementary school teachers in Minnesota and the stress coping mechanisms used?

Limitations

1. The sample from this study may not be representative of the general population of elementary school teachers.
2. The time frame for data collection for this study will be limited to three weeks.
3. Financial resources for this study will be limited.
4. Data collection for this study will be dependent on honest responses to survey questions.
5. Data collection for this study will take place during the COVID-19 pandemic.

Delimitations

1. Data collection for this study will be limited to elementary school teachers in Minnesota.
2. The time frame for data collection for this study will be limited to three weeks.

Assumptions

1. Participants will understand the nature of all survey questions.
2. Participants will answer all questions honestly and to the best of their ability.

Definition of Terms

1. Attrition: A reduction or decrease in numbers, size or strength (Merriam-Webster, n.d.).
2. Burnout: A psychological syndrome emerging as a prolonged response to chronic interpersonal stressors on the job (Maslach & Leiter, 2016).
3. Coping: Any cognitive, emotional, or behavioral effort to address a potentially harmful stressor (Folkman & Lazarus, 1988).
4. Occupational stress: An individual's experience of psychological discomfort and associated disorders that result from general working conditions (von der Embse et al., 2019).
5. Protective factors: Attributes of the person or environment that enhance the likelihood of positive outcomes for person and the system alike (Prilleltensky et al., 2016).

6. Risk factors: Characteristics of the person or the environment that increase chances of a negative outcome for the person or system (Prilleltensky et al., 2016).
7. Stress: An imbalance between risk and protective factors (Prilleltensky et al., 2016)

Chapter Two: Review of Literature

The purpose of this study is to assess the relationship between perceived levels of stress and coping mechanism use among elementary school teachers. The themes presented in this chapter include stress, teacher stress, influences on occupational stress, impact of occupational stress, and coping mechanisms.

Stress

The word stress as applied to the human condition was first made popular by physiologist Hans Selye. Stress was defined as the non-specific response of the body to any demand for change (The American Institute of Stress, n.d.). According to The American Institute of Stress (n.d.), Selye's theories on stress attracted considerable attention and stress became a popular buzzword that completely ignored its original definition. Stress is defined in many different ways. Classically, stress is defined as a condition that seriously perturbs the physiological and psychological balance of an individual (Franklin et al., 2012). The dominant model of stress among psychological researchers today understands stress to result from a perceived imbalance between demands and resources (McCarthy, 2019). Stress is often referred to as a "balance model" (Meurs & Perrewé, 2011).

Stress is viewed from four main perspectives: as a stimulus, as a response, as an interaction between a stimulus and a response, and as a transaction (Jain et al., 2013). When stress is viewed as a transaction, it is not a factor that resides in the individual or the environment, rather it is embedded in an ongoing process that involves individuals

interacting with their environment, making appraisals of those encounters, and attempting to cope with the issues that come about (Jain et al., 2013). In this regard, an environmental stimuli is not inherently a stressor. A stimuli only becomes a stressor when individuals recognize it as a threat and believe it is beyond their ability to cope with (Jain et al., 2013).

The term stress carries a negative connotation. It is generally accepted that prolonged or intense stress can have a negative impact on an individual's mental and physical health (Johnson et al., 2005). In recent literature, however, there has been an increased appreciation of the positive consequences of stress (Quick & Henderson, 2016). Stress with positive consequences is referred to as good stress or eustress, while stress with negative consequences is sometimes referred to as bad stress or distress (Quick & Henderson, 2016).

Teacher Stress

The teaching profession is known to be highly stressful (Johnson et al., 2005; Kyriacou, 2001). The profession is characterized by numerous and varied challenges including administrative burdens, long hours, classroom management difficulties, and lack of autonomy (McCarthy, 2019). Occupational stress among teachers is referred to as teacher stress. Teacher stress is often defined as the experience of negative or unpleasant emotions resulting from aspects of the work as a teacher (Collie et al., 2012; Kyriacou, 2001). It can also be defined as an imbalance between risk factors and protective factors (Prilleltensky et al., 2016). Teacher stress is associated with numerous

characteristics of the profession, including separation from other adults, inadequate opportunities for reflection, student misbehavior, the profession's emotional needs, high workload, changes due to reform efforts, inadequate salary or resources, and expectations from school administrators (Chesak et al., 2019).

According to Kyriacou (2001), teacher stress results from a mismatch between the pressures and demands made on educators and their ability to cope with those demands. When these demands take a toll, job dissatisfaction, workplace fatigue, burnout, and reduced occupational commitment result (McCarthy, 2019). Burnout is of particular concern in the teaching profession as it is linked with reduced quality of instruction and diminished ability to engage and teach effectively (Chesak et al., 2019).

High levels of teacher stress have a strong effect on the performance, career decisions, physical and mental health, and overall job satisfaction of teachers (Jepson & Forrest, 2006). Teachers' job satisfaction is important as it influences performance, commitment, absenteeism, physical and mental health, and overall wellbeing (Klassen, 2010). Within the teaching profession, job dissatisfaction leads to attrition, which is at concerning levels (Chesak et al., 2019). In the United States, 8% of teachers leave the profession each year, and studies show that 30% to 50% of new teachers leave the teaching profession within the first five years of their career (Chesak et al., 2019; Kraft & Papay, 2014; Prilleltensky et al., 2016).

Teacher stress is not unique to the United States. Research has yielded consistent findings around the world, with approximately 20-25% of the teaching

workforce reporting high levels of stress (McCarthy, 2019). This holds true for 25% of teachers in Great Britain and Italy, 20-22% in Malaysia and Germany, and 25-26% in Australia (McCarthy, 2019). The actions of administration, the management style of the school principal, and the school's organizational climate can all affect a teacher's sense of well-being (Prilleltensky et al., 2016).

Influences on Occupational Stress

A broad set of occupational demands, along with environmental stressors, can trigger the stress response (Quick & Henderson, 2016). In the workplace, occupational stress is considered to result from a combination of high demands and low decision latitude (Rosenthal & Alter, 2012; Quick & Henderson, 2016). Uncertainty about workplace aspects and poorly managed conflict in the workplace are two additional leading causes of occupational stress (Quick & Henderson, 2016).

The organizational environment for people-oriented professions, such as teaching, is often shaped by various social, political, and economic factors that result in work settings that are high in demands and low in resources (Maslach & Leiter, 2016). Teachers spend less than 5% of their work time collaborating with peers, isolating them from colleagues for much of the day (Scholastic and the Bill & Melinda Gates Foundation, 2012). According to the Economic Policy Institute, public school teachers' weekly wages in 2015 were 17.0 percent lower than those of comparable workers (Allegretto & Mishel, 2016). In addition, teachers often face significant social and political scrutiny in regard to how they do their jobs (McCarthy, 2019).

When the demands of the organization seem out of balance with a sense of personal control, tension can create a great amount of stress (Prilleltensky et al., 2016). Teachers with high job demands and low resources are most vulnerable to stress and the most at risk for lowered job satisfaction, greater burnout, and lowered occupational commitment (Lambert et al., 2015).

In the last three decades, the United States has made dramatic changes in the way it measures and evaluates teacher effectiveness (Ryan et al., 2017). The practice of measuring teaching quality through student performance on standardized assessments has become standard practice (Ryan et al., 2017). Test-based accountability policies have begun to emerge from state departments of education as a way to evaluate educator effectiveness, and some states use standardized test scores to make decisions on teacher job performance, evaluation, tenure, and merit pay (von der Embse et al., 2016). The changes in test-based accountability policies at the federal and state level have contributed to increased stress among teachers (von der Embse et al., 2016, Ryan et al., 2017).

Impact of Occupational Stress

Occupational stress was identified as one of the top ten occupational health problems in the United States in the 1980s (Quick & Henderson, 2016). Since then, the experience of workplace stress has been subject to a large amount of research. It is now generally accepted that prolonged or intense occupational stress can have a negative impact on an individual's mental and physical health (Johnson et al., 2005).

Occupational stress is a known health risk for a range of disorders and diseases, including psychological, behavioral, and medical (Quick & Henderson, 2016).

Occupational stress is not an acute condition that can be cured, but rather a chronic condition that requires an understanding of the epidemiology of the problem (Quick & Henderson, 2016). The epidemiology of occupational stress is considered in three stages: 1) the causes of stress, 2) the stress response, and 3) the consequences of the life history (Quick & Henderson, 2016).

A thorough literature review conducted by Rosenthal and Alter (2012) revealed a strong association between occupational stress and blood pressure elevation and cardiovascular disease. Research has linked cardiovascular disease to working conditions such as social isolation, shift work, chemicals, and physical hazards (Quick & Henderson, 2016). The two lead presenting complaints associated with stress are anxiety and depression (Mosadeghrad, 2014, Quick & Henderson, 2016). High levels of stress have been shown to impair attention, working memory, and decision making (Chesak et al., 2019).

In addition to health, occupational stress has been linked with numerous adverse professional outcomes. In the teaching profession, these outcomes include burnout, absenteeism, poor performance, low levels of job satisfaction, and eventually the decision to leave the profession (Klassen, 2010, Ryan et al., 2017). Teachers experiencing burnout can negatively influence colleagues by contributing to increased personal conflict and work disruption (Chesak et al., 2019). Burned-out teachers are less

likely to manage challenges in the classroom, leading to lower levels of on-task behavior in students. A negative feedback loop can develop in which difficult student behaviors contribute to an escalation in emotional exhaustion of the teacher, leading to worse student behaviors (Chesak et al., 2019).

Coping Mechanisms

Coping is defined as any cognitive, emotional, or behavioral effort to address a potentially harmful stressor (Folkman & Lazarus, 1988). It is the set of intentional, goal-directed efforts people engage in to minimize the physical, psychological or social harm of an event or situation (Carroll, 2013). Coping mechanisms are essential to minimize the impact of stress and determine the degree of resilience or susceptibility (Franklin et al., 2012).

Psychologists typically distinguish between two main types of coping strategies. The first, termed problem-focused coping, is aimed at problem solving or doing something to change the stressful situation (Folkman & Lazarus, 1980, McCarthy, 2019). The second, termed emotion-focused coping, is aimed at reducing or managing the emotions that are associated with stress (Folkman & Lazarus, 1980, McCarthy, 2019). While most stressors elicit both types of coping, problem-focused coping tends to predominate when people feel that something constructive can be done. When people feel the stressor is something that must be endured, emotion-focused coping tends to predominate (Folkman & Lazarus, 1980).

Coping styles are often referred to as active or passive. Coping is referred to as active when an individual attempts to deal with a challenge, faces fears, participates in problem solving, and seeks social supports (Franklin et al., 2012). Passive coping involves denial, avoidance of conflicts, suppression of emotions, and behavioral disengagement. Coping style varies between individuals and situations and play a role in determining whether stress-related disorders develop (Franklin et al., 2012).

Chapter Three: Methodology

The purpose of this study is to assess the relationship between perceived levels of stress and coping mechanism use among elementary school teachers. This chapter describes the research design, subject selection, instrumentation, data collection, and data analysis procedures used for this study.

Research Questions

1. What are the perceived levels of stress experienced by elementary school teachers in Minnesota?
2. What coping mechanisms are used among elementary school teachers in Minnesota?
3. What is the relationship between the perceived level of stress experienced by elementary school teachers in Minnesota and the stress coping mechanisms used?

Research Design

A cross-sectional, correlational design was used in this study. Cross-sectional studies are designed to collect data at a specific point in time. A correlational study examines the relationships or associations between variables. This study used a correlational design to assess the relationship between the perceived levels of stress and coping mechanisms used among elementary school teachers.

Subject Selection

Participants for this study consisted of a convenience sample of public elementary school teachers in Minnesota. According to the Minnesota Department of Education (2019), there are 999 schools in Minnesota with a school classification of type 10 (public elementary). This classification includes Pre-Kindergarten through grade six. Contact information for the organization head (principal, superintendent, director, etc.) of every public elementary school can be found on the Minnesota Department of Education's website. The researcher used this list to contact the organization head of all 999 public elementary schools in Minnesota via email. The researcher asked the organization head to forward their email containing the survey link on to all licensed teachers at their school.

According to the Minnesota Department of Education (2019), the population of public elementary school teachers in Minnesota is approximately 25,000. For this study sample to be representative of the total population, a sample size of 378 was needed (Krejcie & Morgan, 1970).

Instrumentation

The first section of the survey measured the perceived levels of stress among participants using the Perceived Stress Scale (PSS) (Cohen, Kamarck & Mermelstein, 1983). The PSS is a 14-item survey used to measure the perception of stress, or the degree to which situations are seen to be stressful in one's life (Cohen et al., 1983). The survey questions ask participants to indicate how often they felt or thought a certain

way about life changes, hassles, irritations, etc. during the last month. Participants are asked how often they have been upset because of something that happened, how often they have felt nervous and “stressed”, and how often they have been angered because of things that happened that were outside of their control. Participants are also asked to indicate how often they have found that they could not cope with all the things they had to do, how often they have found themselves thinking about things they have to accomplish, and how often they have felt difficulties were piling up so high that they could not overcome them (Cohen et al., 1983). Responses are measured using a 4-point response system ranging from never to very often, and individual scores range from 0 to 40, with higher scores indicating higher perceived stress (Cohen et al., 1983).

The PSS has been proven to possess reliability and validity (Cohen et al., 1983). The PSS was validated on three samples, two of college students and one of participants in a community smoking-cessation program (Cohen et al., 1983). Coefficient alpha reliability for the PSS in these samples was .84, .85, and .86, respectively. The test-retest correlation in the sample of college students who were retested after two days was .85 (Cohen et al., 1983).

The second section of the survey identified the extent to which coping mechanisms were being utilized using the Brief COPE (Carver, 1997). The Brief COPE is an abbreviated form of a previously published measure called the COPE inventory (Carver et al., 1989). The full COPE is a 60-item instrument with 4 items per scale, while the Brief COPE consists of 14 two-item subscales (Carver, 1997). Two scales from the full

COPE were omitted because they had not proven useful in previous work, three scales that had been proven to be problematic in previous work were refocused slightly, and one scale was added to create the Brief COPE (Carver, 1997). The two scales omitted from the full COPE were Restraint Coping and Suppression of Competing Activities. The Positive Reinterpretation and Growth scale became Positive Reframing, the scale originally termed Focus on and Venting of Emotions became Venting, and the Mental Disengagement scale became Self-Distraction. The final step in item selection was the addition of the Self-Blame scale. Self-blame was added because research using other coping measures has found it to be a predictor of poor adjustment under stress (Carver, 1997). Data support the internal reliability and validity of the abbreviated scales (Carver, 1997). The Brief COPE was initially validated on a sample of 168 survivors of Hurricane Andrew. A reliability analyses revealed alpha reliabilities that all met or exceeded the value of .50, which is the value regarded as minimally acceptable (Carver, 1997). The Brief COPE includes 28 items and measures 14 conceptually differentiable coping strategies. Some of these strategies are known to be generally adaptive, while others are known to be problematic (Carver, 1997). The Brief COPE provides researchers a quick way to assess potentially important coping responses (Carver, 1997). Each of the 14 subscales is comprised of 2 items, and total scores on each subscale range from 2.00 (minimum) to 8.00 (maximum). Higher scores indicate higher utilization of a coping strategy.

The third and final section of the survey consisted of a self-report questionnaire. Demographic variables of participants including gender, age, and race were collected. This section contained structured items that asked the respondents to choose from the possible answers provided.

Data Collection

Upon approval by the Institutional Review Board (See Appendix A), the researcher contacted the organization head of all public elementary schools in Minnesota via email. The researcher explained who they were and why they were conducting the research. The researcher asked the organization head to forward their email containing the survey link on to all licensed teachers at their school. Participants were given two weeks to respond to the survey. After two weeks, a reminder email was sent to all organizational heads and an additional week to respond was given. Data was collected using *Qualtrics Online Survey Software*®.

Data Analysis

Descriptive statistics including frequencies, percentages and measures of central tendency and dispersion were used to analyze the summated scores of the PSS and Brief COPE Inventory and the responses to the demographic questionnaire. A Pearson correlation was used to assess the relationship between perceived levels of stress and coping mechanisms. All data was analyzed using the *Statistical Package for the Social Sciences (SPSS*®) version 27, a software package used for interactive statistical analysis.

Table 1*Table of Specifications*

Research Question	Survey Items	Level of Data	Analysis
What are the perceived levels of stress experienced by elementary school teachers in Minnesota?	-Individual items of the PSS	-Ordinal (individual items)	-Descriptive statistics including frequencies, percentages, and measures of central tendency and dispersion
	-Total summated scores of the PSS	-Interval/Ratio (summated scores)	
What coping mechanisms are used among elementary school teachers in Minnesota?	-Individual items of the Brief COPE Inventory	-Ordinal (individual items)	-Descriptive statistics including frequencies, percentages, and measures of central tendency and dispersion
	-Total summated scores of the Brief COPE Inventory	-Interval/Ratio (summated scores)	
What is the relationship between the perceived level of stress experienced by elementary school teachers in Minnesota and the stress coping mechanisms used?	-Total Summated Scores of PSS	-Interval/Ratio	-Pearson correlation
	-Total Summated Scores of the Brief COPE Inventory		

Summary

Data for this study was collected using a survey and a convenience sample of public elementary school teachers in Minnesota. Perceived levels of stress were measured using the Perceived Stress Scale (PSS). Coping mechanisms used were identified using the Brief COPE Inventory. Data from the PSS and Brief COPE Inventory was analyzed using descriptive statistics, and a Pearson correlation was used to assess the relationship between perceived level of stress and coping mechanisms used. All data was analyzed using the *Statistical Package for the Social Sciences (SPSS®)* version 27, a software package used for interactive statistical analysis.

Chapter Four: Results

Introduction

The purpose of this study was to assess the relationship between perceived levels of stress and coping mechanism use among elementary school teachers. Data collected was analyzed using *Statistical Package for Social Sciences (SPSS®)* version 27.

The study answered the following research questions:

1. What are the perceived levels of stress experienced by elementary school teachers in Minnesota?
2. What coping mechanisms are used among elementary school teachers in Minnesota?
3. What is the relationship between the perceived level of stress experienced by elementary school teachers in Minnesota and the stress coping mechanisms used?

Participants

A total of 600 participants initially responded to the survey; however, 180 surveys were discarded due to missing data. A total of 420 survey responses were collected and used for analysis.

Demographics

Among the 420 public elementary school teachers who participated in this study, the majority (86.9%) were female. The teachers surveyed were predominately White (97.1%) and not of Hispanic, Latino or Spanish origin (96.4%). A slight majority (58.8%) of

these teachers have completed a master's degree. As shown in Table 2, the age of the teachers surveyed varied greatly, as did the number of years they have been in the teaching profession.

Table 2

Demographics of the Sample

Characteristic	<i>n</i>	%
Gender		
Male	51	12.1
Female	365	86.9
Non-binary	1	0.2
Other	1	0.2
Age		
20-24 years old	27	6.4
25-29 years old	47	11.2
30-34 years old	62	14.8
35-39 years old	59	14.0
40-44 years old	57	13.6
45-49 years old	51	12.1
50-54 years old	57	13.6
55+	60	14.3

Characteristic	<i>n</i>	%
Years in the teaching profession		
Less than 1	13	3.1
1-2	28	6.7
3-5	43	10.2
6-10	80	19.0
11-15	70	16.7
16-20	63	15.0
21+	123	29.3
Ethnicity		
Not of Hispanic, Latino, or Spanish origin	405	96.4
Mexican, Mexican American, Chicano	2	0.5
Puerto Rican	1	0.2
Another Hispanic, Latino, or Spanish origin	8	1.9
Race		
White	408	97.1
Black or African American	3	0.7
Other Asian	1	0.2
Some other race	4	1.0
More than one race	2	0.5

Characteristic	<i>n</i>	%
Highest educational level		
Bachelor's Degree	165	39.3
Master's Degree	247	58.8
Doctorate	4	1.0

What are the perceived levels of stress experienced by elementary school teachers in Minnesota?

Individual stress scores for participants in this study were obtained by reversing the codes on the seven positive items and summing across all 14 items on the PSS. Results indicated that the average stress score for teachers surveyed was 27.04 (SD = 8.25).

What coping mechanisms are used among elementary school teachers in Minnesota?

Results from the Brief COPE indicated that the coping mechanism most used was “Acceptance” (M = 5.94; SD = 1.33), which includes practices such as accepting the reality of a stressful situation and learning to live with it (Carver, 1997). Other commonly used coping mechanisms included “Active coping” (M = 5.85; SD = 1.29), which involves concentrating efforts on doing something about a situation and taking action to try to make the situation better, and “Planning” (M = 5.80; SD = 1.35, which entails trying to come up with a strategy about what to do and thinking hard about what steps to take (Carver, 1997). The coping mechanism utilized the least was “Denial” (M = 2.73; SD =

1.26), which involves saying “this isn’t real” to oneself and refusing to believe something has happened (Carver, 1997). The mean scores obtained for all 14 subscales are illustrated in Table 3.

Table 3

Descriptive Statistics for the Brief COPE Subscales

Subscale	<i>n</i>	Mean	SD
Acceptance	419	5.94	1.33
Active coping	419	5.85	1.29
Planning	418	5.80	1.35
Positive reframing	419	5.68	1.37
Use of informational support	420	5.47	1.61
Emotional support	420	5.45	1.54
Self-distraction	418	5.38	1.39
Humor	420	4.82	1.72
Religion	419	4.81	2.08
Venting	417	4.78	1.44
Self-blame	419	4.36	1.63
Substance use	420	3.03	1.61
Behavioral disengagement	420	2.95	1.25
Denial	416	2.73	1.26

What is the relationship between the perceived level of stress experienced by elementary school teachers in Minnesota and the stress coping mechanisms used?

Pearson correlations were conducted to assess the relationship between perceived levels of stress and coping mechanisms. Results of the Pearson correlations revealed weak, negative, statistically significant relationships between total stress scores and three coping mechanisms, “Active coping” ($r = -.126$), “Positive reframing” ($r = -.286$), and “Religion” ($r = -.152$). Conversely, weak, positive, statistically significant relationships were found between total stress scores and six coping mechanisms, “Self-distraction” ($r = .227$), “Denial” ($r = .260$), “Substance use” ($r = .343$), “Emotional support” ($r = .167$), “Use of informational support” ($r = .174$), and “Planning” ($r = .107$). Moderate, positive, statistically significant relationships were found between total stress scores and three coping mechanisms, “Behavioral disengagement” ($r = .520$), “Venting” ($r = .460$), and “Self-blame” ($r = .488$). There was no statistically significant relationship between total stress scores and “Humor” or “Acceptance”. Results of the Pearson correlations can be found in Table 4.

Table 4

Significant Correlations Between Total Stress Scores and Coping Mechanisms

Coping mechanism	r-score	p-value	Strength
Self-distraction	.227	.000	Weak
Active coping	-.126	.011	Weak

Coping mechanism	r-score	p-value	Strength
Denial	.260	.000	Weak
Substance use	.343	.000	Weak
Emotional support	.167	.001	Weak
Use of informational support	.174	.000	Weak
Behavioral disengagement	.520	.000	Moderate
Venting	.460	.000	Moderate
Positive reframing	-.286	.000	Weak
Planning	.107	.031	Weak
Religion	-.152	.002	Weak
Self-blame	.488	.000	Moderate

Summary

The purpose of the study was to assess the relationship between perceived levels of stress and coping mechanisms used among elementary school teachers. On a scale of 0-40, with higher scores indicating higher perceived stress, teachers surveyed reported an average stress score of 27.04. The most common coping mechanisms utilized by teachers who participated in this study were Acceptance, Active coping, and Planning. Significant relationships were found between total stress scores and the following coping mechanisms: Self-distraction, Active coping, Denial, Substance use, Emotional support, Use of informational support, Behavioral disengagement, Venting,

Positive reframing, Planning, Religion, and Self-blame. No significant relationship was found between total stress scores and Humor or Acceptance.

Chapter Five: Conclusion and Recommendation

Summary

This study consisted of a convenience sample of public elementary school teachers in Minnesota. Participants were asked to complete a 48-item online survey that was distributed via email. Data was collected using *Qualtrics Online Survey Software*® and analyzed using *Statistical Package for the Social Sciences (SPSS)*® version 27.

The 48-item survey consisted of three sections. The first section contained the Perceived Stress Scale (PSS), a 14-item survey used to measure the perception of stress. The second section consisted of the Brief COPE, a 28-item survey that measures 14 conceptually differentiable coping strategies. The last section of the survey consisted of 6 demographic questions, including gender, age, years in the teaching profession, ethnicity, race, and highest level of education completed.

A total of 420 survey responses were collected and used for analysis. Among the teachers surveyed, the majority were non-Hispanic, white females. On a scale of 0 to 40, the average stress score of teachers surveyed was 27.04. The coping mechanism most used among teachers who participated in this study was "Acceptance". This study found weak, negative, statistically significant relationships between total stress scores and three coping mechanisms ("Active coping", "Positive reframing", and "Religion"), weak, positive, statistically significant relationships between total stress scores and six coping mechanisms ("Self-distraction", "Denial", "Substance use", "Emotional support", "Use of

informational support”, and “Planning”), and moderate, positive, statistically significant relationships between total stress scores and three coping mechanisms (“Behavioral disengagement”, “Venting”, and “Self-blame”).

While the PSS does not provide a breakdown between low and high levels of stress, an average stress score of 27.04 indicates that teachers who participated in this study are experiencing stress on a relatively high level. According to this study, the coping mechanism most utilized by teachers is “Acceptance”. This means that teachers often accept the reality of stressful situations and learn to live with them. This doesn’t come as a surprise, as the prevailing norms within people-oriented professions such as teaching are to be selfless and put others’ needs first; to work long hours and do whatever it takes to help a student. While we can’t conclude from this study whether higher levels of stress are a result of certain coping mechanisms, we can conclude that perceived levels of stress are associated with both adaptive and problematic coping mechanisms.

Recommendations for Health Educators

Findings from this study confirm the prevalence of stress and the use of both adaptive and problematic coping mechanisms among elementary school teachers. Health educators should know that perceived levels of stress are associated with coping mechanism use among teachers. Understanding this association provides health educators with opportunities to design new interventions and implement evidence-based programs for teachers. Interventions should include education on stress

reduction and how adaptive and problematic coping mechanisms are associated with levels of stress.

Recommendations for Future Research

This study provides a snapshot of the perceived levels of stress and coping mechanism use among elementary school teachers. To gain a better understanding of the relationship between these variables, future researchers should examine elementary school teachers over the course of a school year. This study was limited to public elementary school teachers in Minnesota. Future research should examine public elementary school teachers in a larger population. Lastly, future research should examine the difference in coping mechanism use among those who are experiencing high levels of stress and those who are experiencing low levels of stress. The more we understand about the relationship between perceived levels of stress and coping mechanism use, the better equipped we are to support the physical and emotional health of teachers, the well-being of students, and the improvement of the public education system.

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Appendices

Appendix A

Institutional Review Board Letter of Approval



January 25, 2021

Dear Mary Kramer:

Re: IRB Proposal entitled "[1679620-2] Assessment of Perceived Levels of Stress and Coping Mechanism Use Among Elementary School Teachers"
Review Level: Level [I]

Your IRB Proposal has been approved as of January 25, 2021. On behalf of the Minnesota State University, Mankato IRB, we wish you success with your study. Please bear in mind that your research activities must comply with all federal, state, and Minnesota State system guidelines and directives related to the COVID-19 health crisis. Since circumstances may change, you are responsible for monitoring developments that may affect your ability to conduct your research.

Remember that you must seek approval for any changes in your study, its design, funding source, consent process, or any part of the study that may affect participants in the study (see <https://research.mnsu.edu/institutional-review-board/proposals/process/proposal-revision/>). Should any of the participants in your study suffer a research-related injury or other harmful outcomes, you are required to report them immediately to the Associate Vice-President for Research and Dean of Extended Campus at 507-389-1242.

When you complete your data collection or should you discontinue your study, you must submit a Closure request (see <https://research.mnsu.edu/institutional-review-board/proposals/process/proposal-closure/>). All documents related to this research must be stored for a minimum of three years following the date on your Closure request. Please include your IRBNet ID number with any correspondence with the IRB.

Cordially,

A handwritten signature in black ink, appearing to read "Bonnie Berg".

Bonnie Berg, Ph.D.
IRB Co-Chair

A handwritten signature in black ink, appearing to read "Jeffrey Buchanan".

Jeffrey Buchanan, Ph.D.
IRB Co-Chair

A handwritten signature in black ink, appearing to read "Mary Hadley".

Mary Hadley, FACN, Ph.D.
IRB Director

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Minnesota State University, Mankato IRB's records.