

THE EFFECTS OF YOGA-BASED SOCIAL-EMOTIONAL LEARNING ON EMOTION
REGULATION, PERCEIVED STRESS, AND WORRY

A Dissertation

by

AMANDA FAUCHER

BFA, Arizona State University, 2003
MS, Capella University, 2008
MS, Walden University, 2015

Submitted in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

in

COUNSELOR EDUCATION

Texas A&M University-Corpus Christi
Corpus Christi, Texas

May 2020

© Amanda Faucher

All Rights Reserved

May 2020

THE EFFECTS OF YOGA-BASED SOCIAL-EMOTIONAL LEARNING ON EMOTION
REGULATION, PERCEIVED STRESS, AND WORRY

A Dissertation

by

AMANDA FAUCHER

This dissertation meets the standards for scope and quality of
Texas A&M University-Corpus Christi and is hereby approved.

Joshua Watson, PhD
Chair

Robert Smith, PhD
Committee Member

Richard Ricard, PhD
Committee Member

Steven Seidel, PhD
Graduate Faculty Representative

May 2020

ABSTRACT

Children today face a myriad of stressors that challenge their ability to cope. Whether it's bullying, shootings, school violence, or suicide, these events include some level of emotion dysregulation (Bradley, Whisenhunt, Adamson, & Kress, 2011). Schools are facing increasing pressure to help students learn more than academics (Lenkeit & Caro, 2014). Some states, such as Illinois and New York, have even implemented social-emotional learning standards (Payton et al., 2008). Still, suicide remains as the second leading cause of death among children ages 10-18, second only to unintentional injury (Center for Disease Control [CDC], 2018a).

The purpose of this study was to see if combining yoga with social-emotional learning would have an impact on emotion regulation, perceived stress, or worry among elementary-aged children. This quantitative, Mixed-ANOVA design with a control group studied 36 students in the fourth and fifth grades, 30 of whom were Hispanic. All participants were attending a bilingual elementary school in south Texas. The curriculum employed was an empirically supported, standardized, yoga-based social-emotional learning program that had been used in prior research with older children (junior high school and up). An experimental design was selected to determine the effects of a yoga-based social-emotional learning program on elementary-aged students.

Data collection occurred pre-, during, and post-intervention. The intervention group showed small improvement over the treatment as usual (TAU) group, however there were no statistically significant differences between two the groups after treatment. Given some improvement in a small amount of time, it is recommended that the yoga-based social-emotional learning program be considered for future research due to its cost effectiveness and flexibility in

scheduling. Implications of the results and additional recommendations for future research are discussed.

DEDICATION

This dissertation, and the completion of this degree, is dedicated to my mother, who spent my entire life teaching me the importance of growing emotionally as well as academically. This amazing woman made countless sacrifices to herself while supporting me reaching the highest levels. I'm blessed to have had such an incredible role model and cheerleader helping to shape the woman that I am today. I remain a work in progress, but she is not. In a world filled with mothers, mine truly stands alone.

ACKNOWLEDGEMENTS

It is difficult to express the level of appreciation to those who have helped me along this journey and put that into words. First, I would like to thank Dr. Joshua Watson, my dissertation chair, who took me under his wing and supported me with this study. Even when stepping into a leadership role in our department, he always made time for me – and answered emails at all hours of the day. He made sense of things that were overwhelming to me. His vast research expertise helped me configure the best design for my study. As a student, a researcher, and a person, I am better after knowing him and studying under him these past few years. He had faith in me when I didn't have it in myself and helped me get through very challenging times. If I could help future students even a fraction of how he helped me, I will consider my career in academia a success.

I would like to thank Dr. Robert Smith, who I connected with in a particularly challenging point in life. Dr. Smith was the primary reason I made a move to Texas, knowing that the faculty here would be unlike any other program. His unwavering dedication to me was clear from the beginning, as he did his best to encourage and ease any anxiety I may have had. His constant praise made me feel like I could accomplish anything.

I appreciate the assistance of my committee members, Dr. Richard Ricard and Dr. Steven Seidel. Though tough at times, the feedback I received from them made my study stronger and helped me learn what it takes to become a researcher. I am better prepared for my future endeavors after completing this process with them.

I am thankful for friends, family members, and my fellow cohort members, as it would have been impossible to go through this without support. In particular, I would like to thank my

fiancé Adam, who took on extra responsibilities around the house when I needed time to study and who stood by my side every day, encouraging and supporting me every step of the way. God knew exactly what I needed when He placed him in my life. I'm not sure I could ever repay the love and kindness he has shown to me while I look forward to this next chapter in our lives. Lastly, I am thankful for the love and support of Jake and Nik. Although they are no longer here with me on Earth, their memories remain firm in my heart. I would not be where I am today without their support, inspiration, and ability to make me feel as though I could accomplish anything. Jake – Forever and Ever, Amen.

TABLE OF CONTENTS

CONTENTS	PAGE
ABSTRACT.....	v
DEDICATION.....	vii
ACKNOWLEDGEMENTS.....	viii
TABLE OF CONTENTS.....	x
LIST OF TABLES.....	xiv
LIST OF FIGURES.....	xv
CHAPTER I: INTRODUCTION.....	1
Social-Emotional Learning.....	4
Problem Statement.....	7
Purpose of the Study.....	9
Significance of the Study.....	9
Methodology Overview of the Study.....	11
Delimitations.....	12
Limitations.....	13
Definition of Terms.....	13
CHAPTER II: REVIEW OF THE LITERATURE.....	17
Theoretical Perspective.....	17
Emotion Regulation.....	18

Historical Conceptualization of Emotion Regulation	20
Current Research.....	20
Emotion Regulation in Children and Schools.....	22
Perceived Stress	24
Stress and Emotion Regulation.....	25
Worry	26
Worry and Emotion Regulation.....	27
History of Social-Emotional Learning.....	28
Social-Emotional Learning in Schools	30
Somatic Psychology and the Mind-Body Connection	32
Yoga.....	34
Yoga as a Therapeutic Technique	36
Yoga and Children	40
CHAPTER III: METHODOLOGY	42
Identification of Methodology and Rationale	42
Research Questions.....	43
Sampling Procedure	43
Description of Participant Characteristics.....	44
Context of the Study	45
Measurement of Construct.....	45

Emotion Regulation Questionnaire for Children and Adolescents.....	45
Perceived Stress Scale for Children.....	46
Penn State Worry Questionnaire for Children.....	47
Intervention.....	48
Emotion Regulation, Perceived Stress, and Worry Variables.....	49
Data Collection.....	50
Evaluation of Fidelity.....	51
Data Analysis.....	52
Primary Analysis.....	52
Representation of Data.....	52
CHAPTER IV: FINDINGS.....	54
Preliminary Analyses.....	54
Model Assumptions.....	55
Presentation of Descriptive Characteristics of Respondents.....	59
Research Questions and Results.....	60
Summary.....	64
CHAPTER V: DISCUSSION AND CONCLUSION.....	65
Summary of the Study.....	65
Findings.....	65
Limitations.....	69

Implications for Practice	72
Implications for School Counselors.....	72
Implications for Teachers.....	73
Implications for School Administrators.....	74
Suggestions for Future Research.....	75
Summary	77
REFERENCES	79
LIST OF APPENDICES.....	100
Appendix 1: IRB Approval.....	101
Appendix 2: Consent/Assent Forms.....	104
Appendix 3: Scales.....	112

LIST OF TABLES

TABLES	PAGE
Table 1. Healthy and Unhealthy Emotion Regulation Strategies.....	19
Table 2. Levene's Test of Equality of Error Variances	58
Table 3. Mauchly's Test of Sphericity.....	58
Table 4. Descriptive Statistics.....	60
Table 5. Univariate Tests	62
Table 6. Tests of Between-Subjects Effects.....	62

LIST OF FIGURES

FIGURES	PAGE
Figure 1. Estimated Marginal Means of Emotion.....	63
Figure 2. Estimated Marginal Means of Stress	63
Figure 3. Estimated Marginal Means of Worry	64
Figure 1. Estimated Marginal Means of Emotion.....	63
Figure 2. Estimated Marginal Means of Stress	63
Figure 3. Estimated Marginal Means of Worry	64

CHAPTER I: INTRODUCTION

We see stories of violence, fighting, bullying, suicide, and mass shootings in the media on a near-daily basis. What do these topics all have in common? They are all issues that schools in the United States face and are issues involving emotional dysregulation (Bradley, Whisenhunt, Adamson, & Kress, 2011). Vohs and Baumeister (2004) stated, “nearly every major personal and social problem affecting a large number of modern citizens (such as alcoholism, drug addiction, obesity, excessive spending, and violence) involves some kind of failure of self-regulation” (p.3). However, when violence concerns with children surface, the public tends to reach out to politicians to fix issues such as gun control, harsher punishments for crimes, or armed security in schools. While these are valid public opinions, I believe there is a core issue not being addressed. For example, with or without guns, there was a person, and in some instances, an emotionally disturbed child who pulled the trigger.

Regarding harsher punishments, our prison and juvenile justice systems are expensive to taxpayers, and the yearly cost continues to rise. Each state sets its budget, but North Carolina alone plans to spend \$47.6 million in the fiscal year 2020 with a scheduled increase to \$62.7 million in the fiscal year 2021 (Juvenile Jurisdiction Advisory Committee, 2019). The exact amount of national expenditures varies depending on how they are calculated by federal officials. For example, researchers may or may not include the lost tax earnings accrued while a person is incarcerated, the public assistance they are more likely to receive, or recidivism costs when determining these national averages. Regardless of what data is included, researchers know that the expenditures for young people alone are in the range of \$8-21 billion each year (Justice Policy Institute, 2014). According to the Office of Juvenile Justice and Delinquency Prevention (2018), in 2017, law enforcement agencies made an estimated 10.5 million arrests, 30% of whom

were adolescents and young adults aged 15-24. There have been many programs that school districts have attempted to reduce rates of violence and bullying. Still, the most effective programs (aside from increased discipline) are those that teach social-emotional learning.

Children who experience stress and lack emotion regulation are more prone to bullying (Committee for Children, 2012). The Center for Disease Control and Prevention (CDC, 2018) estimated that 24% of K-12 students have been in a physical fight on school property one or more times within the year of their 2017 survey, and 7% of students opted to stay home from school at least once over the 30-days before the survey due to feeling unsafe on their way to and from school. Aggressive victims (those individuals who both bully and have been bullied) experience high levels of peer rejection, emotional distress, emotion dysregulation, and hyperactivity (Toblin, Schwartz, Gorman, & Abou-Ezzedine, 2005). Technology and social media have increased the avenues for bullying by adding cyberbullying to the list of growing concerns (Committee for Children, 2019). As a result of emotion dysregulation, children may struggle to deal with feelings and become involved in a conflict. Deficits in emotion regulation or an increase in stress and worry play a role in academic adjustment as these students tend to have lower GPA's and test scores (Toblin et al., 2005).

A study by Neacsiu, Fang, Rodriguez, and Rosenthal (2017) concluded that problems with emotion regulation is a significant predictor of suicidal ideation; above and beyond all other factors such as negative affect, affective intensity and lability, and demographic and clinic characteristics. Findings were consistent with a prior study (Pisani et al., 2013). Harris et al. (2018) reported that emotion dysregulation and stress play a major role factor in suicide attempts, except for those diagnosed with posttraumatic stress disorder and borderline personality disorder, in which emotion regulation was not independently associated with suicide.

The study cited above, however, involved adults in the United States, supporting the need for conducting similar research with children.

When researching stressors that impact young people, it becomes apparent that children are struggling. For example, suicide is the second leading cause of death among children ages 10-18, second only to unintentional injury (CDC, 2018a). Bullying and depression are factors closely related to suicide (CDC, 2014). It was noted that 20.8% of students report being bullied in school, including being made fun of, called names, were the subject of rumors, pushed, shoved, tripped, spit on, or excluded from activities on purpose (CDC, 2018a). Of that number, 33% reported being bullied more than once a month during the school year. 19% of bullied students said that it adversely impacted how they felt about themselves, while 14% reported it harmed their friends, family, and schoolwork. Furthermore, 9% reported it hurt their physical health (National Center for Education Statistics [NCES], 2016). In 2015, 21% of students experienced cyber-bullying (NCES, 2016).

Another concerning issue that children and schools face is the possibility of a shooting. Due to differing laws of reporting across the 50 states and various definitions of “mass shooting” or “school shooting,” obtaining reliable statistics on shootings remains problematic. Also, not all states, including Illinois, Florida, and New York, report all data on homicide to the FBI (FBI, n.d.). Using the limited data that is available, it appears as though school shootings have decreased substantially since the 1990s. However, media coverage is on the rise and skewing the public perception when about 1% of homicides involving school-aged children take place in schools (“School Violence Myths,” 2017).

School shootings are not obsolete and remain a concern with devastating effects, leading to emotional stress, bullying, and other types of violence. While all individuals with emotion

dysregulation may not struggle with these issues, it is a common denominator among those who do, and it is worth addressing. Since emotional dysregulation is heavily related to violence, fighting, bullying, suicide, and mass shootings, this dissertation focused on the impact social-emotional learning can have on emotional regulation, stress, and worry, while suggesting tools that students can use to cope with today's stressors. Since bullying, depression, and suicide begins in elementary-aged children, I chose to study this population. Bullying, depression, violence, and suicides are commonplace with young children (CDC, 2018a; NCES, 2016; Neacsiu, Fang, Rodriguez, & Rosenthal, 2017).

Social-Emotional Learning

Scholars define social-emotional learning as, "the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions" (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2019, para. 1).

According to CASEL, there are four competencies that make up social-emotional learning.

- Growth mindset: The belief that one's abilities can grow with effort. Students with a growth mindset see effort as necessary for success, embrace challenges, learn from criticism, and persist in the face of setbacks (Dweck, 2006).
- Self-efficacy: The belief in one's own ability to succeed in achieving an outcome or reaching a goal. Self-efficacy reflects confidence in the ability to exert control over one's motivation, behavior, and environment (Bandura, 1997).
- Self-management: The ability to regulate one's emotions, thoughts, and behaviors effectively in different situations, such as includes managing stress, delaying gratification, motivating oneself, and setting and working toward personal and

academic goals (CASEL, 2019). Throughout this dissertation, self-management will be used interchangeably with “emotion regulation.

- Social awareness: The ability to take the perspective of and empathize with others from diverse backgrounds and cultures, to understand social and ethical norms for behavior, and to recognize family, school, and community resources and supports (CASEL, 2019).

There are many approaches to bringing social-emotional learning (SEL) into schools. Recent research supports the notion that SEL has a positive impact on the stress levels of students (Collie, Shapka, Perry, & Martin, 2015; Durlak, 2011; Payton et al., 2008). Left untreated, many psychological stressors, such as interpersonal conflicts and academic pressure, later become mood and psychological disorders. The cumulative prevalence of psychiatric problems seen by age 21 now exceeds 80%, with the majority having a childhood or adolescent onset (Butzer, Bury, Telles, & Khalsa, 2016). A study by Copeland, Shanahan, Costello, and Angold (2011) showed that 61.1% of their 1,420 participants met criteria for a psychiatric disorder, while another 21.4% had met “not otherwise specified” criteria. School districts have always been faced with significant pressure to perform academically, typically measured by standardized testing. However, recent studies in neuroscience, psychology, and pedagogy suggest that the social-emotional competence of students plays a role on academic performance (Durlak, 2011; Harper, 2010; Martinsone & Damberg, 2016; McKenzie et al., 2013). As a result, school districts should take an interest in classroom instruction in addition to social and emotional growth, to develop well-rounded children. Children need the skills to cope with the stressors that impair academic success to learn effectively. Kendziora and Yoder (2016)

stated that even small investments in social-emotion learning can show improvement in overall school climate, gains, and social-emotional competence.

A variable closely linked to social-emotional growth is yoga. Yoga is inherently designed to increase mindful awareness, an established predictor of emotion regulation and coping (Aldao, Nolen-Hoeksema, & Schweitzer, 2010; Finlay-Jones, Rees, and Kane, 2015; Hayes & Feldman, 2006). SEL curriculums are starting to include yoga and other mindfulness components to further develop programs (Butzer et al., 2016). Eastern cultures have relied on yoga for emotional and spiritual growth for at least 2,500 years (Pandurangi, Keshayan, Ganapathy, & Gangadhar, 2017), even having roots in religious doctrines, like the Bhagavad Gita (Pandurangi et al., 2017), but in the United States, it is often seen as a component of the fitness world, and as something that takes place in health clubs. That idea is changing as the popularity of the practice continues to grow, and people begin to view yoga as a lifestyle, and more than just a fitness practice (Mathur, 2015).

When incorporating yoga with social-emotional learning, one study showed an increase in emotional regulation, positive thinking, and cognitive restructuring in response to stress when implemented in a high-risk, inner-city high school (Frank, Koehler, Peal, & Bose, 2017). Some states, such as Illinois and New York, have recognized the value of social-emotional learning and have implemented state standards to that effect (Payton et al., 2008). However, research on yoga-based SEL programs is still in its infancy, and further research is needed to fuel a more substantial response from the school district administration and state/federal level policymakers (Khalsa & Butzer, 2016).

Problem Statement

Regulatory bodies in the area of education tend to focus on academics, usually measured by large-scale assessments (Lenkeit & Caro, 2014), but that is only one area of growth and development. Pressure to raise test scores has led to many school districts making cuts in the areas of arts, physical education, and other areas outside of the STEM (science, technology, engineering, mathematics) subjects or areas on state testing initiatives (Adamson, 2019; National Center for Education Statistics, 2016; Wendler, 2019). In 2008, most states cut school funding as a result of the recession. Funding has progressively increased since then, but by 2015, 29 states were still spending less per student than they were in 2008 (Leachman, Masterson, & Figueroa, 2017). I question how schools can be expected to do more with less money, given the reality of these numbers. However, some critics oppose the idea that budget cuts carry a profound impact. These critics suggest that cost-saving measures could be employed with little to no effect on the students since school funding has allowed for ample waste (Jackson, Wigger, & Xiong, 2018). Federal regulations, such as the No Child Left Behind Act, placed significant emphasis on test scores. Moreover, emotion regulation is not a tested subject. Despite its lack of direct benefit to testing scores, indirect benefits of social-emotional learning and emotion regulation, such as those previously mentioned, are significant enough to continue to research (Durlak, 2011; Neacsiu et al., 2017; Payton et al., 2008).

This study examined the efficacy of the emotion regulation component of *Transformative Life Skills* as a yoga-based social-emotional learning program to address the importance of teaching children how to manage emotions, stress, and worry. This program may be appropriate for adoption by school districts as an impactful intervention of children having trouble with regulating their emotions, stress, and worry levels. If successful, this program involving little to

no cost to schools, including no additional staff, can be implemented by teachers (even those without any yoga experience) by following the scripted program and implementing it into their classrooms at their own time. While social-emotional learning is starting to be recognized as beneficial for school districts to implement, few studies include yoga as a potentially significant component of this learning process and how it can assist with teaching emotional regulation skills.

School districts have always been faced with pressures to help students perform academically. However, in recent times, there is an emphasis on finding ways to treat the “whole child,” thus including more than academics in the daily curriculum. Since repeated studies have shown that social and emotional growth also increases academic performance, then finding the right program could offer multiple benefits (Durlak, 2011; Martinsone & Damberg, 2016; McKenzie et al., 2013). It is vital that an effective program to help the students is developed and seamlessly implemented. Effective and feasible programs perhaps will mediate the increase in stressors that our youth face today that often leading towards violence, bullying, psychiatric conditions, or suicide.

It is known that stressors left untreated can become psychological conditions or mood disorders, yet Chandler et al. (2018) found that school counselors, the mental health professionals in schools, were often unable to help due to being engaged in non-counseling duties. The work roles and responsibilities of 1,244 K-12 school counselors have been examined. Researchers found there is often role confusion and ambiguity in the counselor’s job descriptions. The authors suggested that the struggle often stemmed from the older concept of “guidance counseling,” which implies more of a clerical and administrative type of role. The American School Counseling Association’s (ASCA) model, in part, has helped refine the school

counselor's roles. Despite this, many school counselors continue to coordinate testing, handle schedule changes, discipline children, and even substitute for teachers (Chandler et al., 2018).

Purpose of the Study

This study primarily seeks to test whether a yoga-based social-emotional learning program impacts emotional regulation in elementary school students. The social-emotional learning program included yoga interventions, specifically designed to increase mindfulness and spirituality. The children studied were in grades four and five. I implemented a four-week yoga-based SEL program in a local elementary school called the Early Childhood Development Center. This experimental study was designed to measure emotion regulation as well as related variables (perceived stress and worry) before, during, and after the intervention by utilizing age appropriate self-report SEL scales with the students. The timing of the data collection intended to show when, if ever, students started to show a change in the constructs assessed in the study.

Significance of the Study

The goal of this study was to seek evidence of a yoga-based SEL program with a curriculum that minimized the time and fiscal impact of the school districts. Imagine what daily life would be like if children understood how to manage emotions. If they learned to get along with one another, learned how to deal with rejection and academic pressure, or even started each day getting in the habit of soul-searching and meditation, life could be very different for these children. Robertson, Daffern, and Bucks (2012) stated that individuals with the ability to regulate their emotions are less likely to behave in aggressive ways, suggesting that the improvement of these skills may subsequently lead to decreased instances of school violence, bullying, and suicide attempts.

Social-emotional learning could potentially have an impact on students, school staff, and the greater community. Researchers say that untreated stressors at an early age can lead to psychological and mood disturbances later in life (Carter, Garber, Ciesla, & Cole, 2006; Grant et al., 2009; Roberts, Roberts, & Chan, 2009). Students endure stress regularly – whether it is environmental, chronic, or related to trauma. Regardless of the type of stress experienced, it can impact young children, including their ability to learn. Stress has an impairment effect on brain functioning in the areas of memory, listening, language, and thinking (Bidyut, Ancin, Frank, & Malik, 2017).

Since the skills mentioned above are necessary for young children to be successful in school, this subject impacts students, caregivers, educators, and support staff at every level. A social-emotional learning program could provide school counselors with the tools to assist students and teachers with emotional regulation skills to help students cope with stress and worries. Also, the convenience of this curriculum allows for teachers to be able to implement it according to their schedules and their convenience (Bidyut et al., 2017), making it feasible for school districts facing budgetary concerns.

If yoga-based social-emotional learning programs demonstrate beneficial effects on stress management and general well-being, schools might find additional benefits, such as improvements in self-regulation, physical fitness, and behaviors/mental state. A change in these critical factors can perhaps influence and mediate problems facing young children (Butzer et al., 2016). The program could potentially impact bullying prevalence, suicide rates, and school violence, in addition to academic performance and attrition.

Methodology Overview of Study

The location of the study was a bilingual elementary school in an urban area of South Texas, with a population of about 330,000. The study utilized students in the fourth and fifth grades, which had a total population of 40. The parents of 38 students granted participation permission. A minimum sample size of 34 participants was determined to have a power of at least 0.8, according to an *a priori* power analysis run using G*Power software. After obtaining the 38 students, a simple random sampling method was used to divide the students evenly into two groups within their prospective grade levels – the treatment group and the control group. The sample consisted of 19 students in each grade level. Eleven students in fifth grade were in the treatment group while eight students participated in treatment as usual, and eight students in fourth-grade were in the treatment group. In contrast, 11 participated in treatment as usual. No students dropped out of the study for any reason; however, the data for two students had to be removed due to the students being absent from school on the final data collection day.

The Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA), the Perceived Stress Scale for Children (PSS-C), and the Penn State Worry Questionnaire for Children (PSWQ-C) were administered at three different points – within one week before starting the intervention, half-way through the intervention (after completing six lessons), and within one week after completing the intervention. All participants were given the scales at the same time. Lessons were done three times a week for four weeks to comply with the suggestion of the publisher. The duration of each lesson varied based on the length of discussion but ranged from 20 minutes to 35 minutes. Data was then inputted into SPSS and analyzed to determine if there were any meaningful changes after implementing this curriculum. Chapter 4 will discuss the results of the analysis in detail.

Delimitations

I anticipated that due to time constraints with state testing at the school, I would only be able to implement the emotional regulation portion of the *Transformative Life Skills* curriculum for four weeks. There are four sections of the entire yoga-based social-emotional learning program, but only one was studied (the emotion regulation portion). According to the developers of the *Transformative Life Skills* curriculum, there is a great deal of flexibility allowed in this program since it is designed for teachers to be able to implement at their convenience. For the purpose of this study, the curriculum was implemented in its ideal form, which was three times per week, with one lesson occurring each day (Bidyut et al., 2017). However, if a school were to adopt this curriculum, this delimitation would not likely exist. Teachers would be able to implement the curriculum while working around state testing and other obligations, since it is can be implemented at their convenience. Having an outside person coming in means having to schedule and prepare in advance, leaving less flexibility in scheduling throughout the day.

This study only used the fourth and fifth grades to avoid the need to adapt the curriculum language to accommodate younger children. Prior research exists on older children, but I was unaware of any research using this curriculum with elementary-aged children. The *Transformative Life Skills* curriculum does offer a modified version for younger children for future research. Once again, if a school were to adopt this curriculum, this delimitation would not exist because teachers would have access to the appropriate curriculum and be able to implement only the level that is appropriate for their prospective grade levels and not need to combine different grade levels. The curriculum would be done in class.

Limitations

The elementary school in this study includes preschool to fifth grade, which is a limitation. It is also a primarily Hispanic elementary school in south Texas, so ethnic diversity is limited. Further research is needed to generalize effectiveness among other ethnicities and age groups. All scales used were self-report scales completed by the children. Limitations with self-report scales include students being too embarrassed to share actual answers or feeling as though they need to answer in a way other than the truth. Students could also exaggerate their initial responses by underreporting severity or frequency of questions asked, not being aware (or unwilling to admit) there are concerns with their ability to control their emotions. Similarly, the opposite could also occur, which may include students exaggerating their responses to make things seem worse than the reality. Also, researchers have validated the ERQ-CA is for ages 10-17 (Gullone & Taffe, 2011), and some of the fourth-grade students included in the sample were nine years of age.

Definition of Terms

Social-Emotional Learning: the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions (CASEL, 2019).

Emotion Regulation: The ability to regulate one's emotions, thoughts, and behaviors effectively in different situations. Self-regulations may include managing stress, delaying gratification, motivating oneself, and setting and working toward personal and academic goals (CASEL, 2019). Throughout this dissertation, emotion regulation will be used interchangeably with "self-management."

Emotion Dysregulation: An individual's inability to exercise any or all aspects of the modulatory process involved in emotion regulation, to such a degree that the inability results in the individual functioning meaningfully below his or her baseline (Bunford, Evans, & Wymbs, 2015).

Yoga: The process of uniting the body via the mind and spirit to promote physical and mental wellness (Bridges & Sharma, 2017). It is a mind-body practice composed of physical postures, breathing techniques, and meditation (Patwardhan, 2017).

Self-efficacy: The belief in one's own ability to succeed in achieving an outcome or reaching a goal. Self-efficacy reflects confidence in the ability to exert control over one's motivation, behavior, and environment (Bandura, 1997).

Self-Awareness: Self-awareness is the ability to assess one's feelings, interests, values, and strengths accurately: including a consistent desire for self-improvement (CASEL, 2019).

Self-Management: The ability to regulate one's emotions, thoughts, and behaviors effectively in different situations. Self-regulations may include managing stress, delaying gratification, motivating oneself, and setting and working toward personal and academic goals (CASEL, 2019). Throughout this dissertation, self-management will be used interchangeably with "emotion regulation."

Growth mindset: The belief that one's abilities can grow with effort. Students with a growth mindset see effort as necessary for success, embrace challenges, learn from criticism, and persist in the face of setbacks (Dweck, 2006).

Perceived Stress: the feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given period. Perceived stress incorporates feelings about the uncontrollability and unpredictability of one's life, how often one has to deal with irritating hassles, how much change is occurring in one's life, and confidence in one's ability to deal with problems or difficulties. It does not measure the types or frequencies of stressful events which have happened to a person, but rather how individuals feel about the general stressfulness of their life and their ability to handle such stress (Phillips, 2013).

Worry: a chain of thoughts and images, negatively affect-laden and relatively uncontrollable. The worry process represents an attempt to engage in mental problem-solving on an issue whose outcome is uncertain but contains the possibility of one or more negative outcomes (Borkovec, Robinson, Pruzinsky, & DePree, 1983).

Transformative Life Skills curriculum: a social-emotional learning program that includes active yoga postures, breathing techniques, and centering meditation. This strength-focused curriculum aids students in learning skills for self-awareness, impulse control, and managing stress and anxiety. It is a transformative program because when practiced regularly the skills taught can ultimately become habits and traits. There are four units: stress resilience, self-awareness,

emotion regulation, and healthy relationships. The program is scripted and does not require any formal equipment.

CHAPTER II: REVIEW OF THE LITERATURE

Theoretical Perspective

The theoretical perspective most aligned with this study is somatic psychology. “Somatic psychology” is a term coined by Thomas Hanna in 1988 for something that has existed longer than the field of psychology. The name comes from the Greek word “soma,” meaning “body.” The theory focuses more on the conscious experience of the body, rather than the unconscious (Aposhyan, 2004). Aposhyan (2004) states that the relationship between the mind and the body in a fundamental connection to healthy human functioning and allows for access into the physiological aspects of autonomic neurological regulation, which helps treat a variety of mental health conditions. The theory acknowledges that even the slightest micro-movement can change the neurological state, while specific breathing techniques can stimulate the frontal lobe and enhance processing. Given this foundation, it is not difficult to see the importance of adding a somatic piece to a social-emotional learning program. Chapter 2 will discuss the origins of somatic psychology and yoga in greater detail.

A related theoretical perspective is the existential work of Rollo May, which strives to understand humans within their personal world and capabilities. May hypothesized that Western culture has disintegrated to the point that society is unaware of how anxiety has increased while ways of coping with anxiety have decreased. He believed in looking deeper within each client he worked with and much like somatic psychologists, believed individuals experience could carry more weight than any formal techniques alone (May, 2009). Rollo May’s insightful observations of society’s faults show ample evidence for the need for self-reflection and awareness. He points out the devastating effects that societal norms and corporate structures can have on an individual as well as the need for therapy sessions to be more about the presence of two individuals and less

about disease-model protocols. May thought therapists needed to be present in the moment and able to be authentic and fully engaged (May, 2009; Ratner, 2019).

Emotion Regulation

Emotions are a normal part of daily life and something that is experienced by everyone. However, the level of impact that certain emotions have on a person can vary. Some find emotions to be overwhelming and challenging to control. It is the interpretation of the emotion, not the emotion itself, that leads people to believe they cannot handle them (Rolston & Lloyd-Richardson, n. d). Emotion regulation is the process through which individuals modify their emotional state so that it is decreased (i.e., attenuated) or increased (i.e., strengthened). These modifications might include physiological, experiential, or behavioral adjustments that correlate with emotions (Cole et al., 2004). In contrast, scholars define emotion dysregulation as, “an individual’s inability to exercise any or all aspects of the modulatory processes involved in emotion regulation, to such a degree that the inability results in the individual functioning meaningfully below his or her baseline (Bunford, Evans, & Wymbs, 2015, p. 188).

Emotion regulation has the goal of finding ways to influence emotions towards a direction that is more helpful than harmful (Gross, 2015). To accomplish this (and often without realizing it), people utilize a variety of emotion regulation strategies throughout the day. Some are healthy while others are not, meaning, some may leave lasting damage (Rolston & Lloyd-Richardson, n.d). The following are examples of healthy and unhealthy emotion regulation strategies:

Table 1
Healthy and Unhealthy Emotion Regulation Strategies

<i>Healthy</i>	<i>Unhealthy</i>
1. Talking with friends	1. Abusing alcohol or other substances
2. Exercising	2. Self-injury
3. Writing in a journal	3. Avoiding or withdrawing from difficult situations
4. Meditation	4. Physical or verbal aggression
5. Therapy	5. Excessive social media use, to the exclusion of other responsibilities
6. Taking care of self when physically ill	
7. Getting adequate sleep	
8. Paying attention to negative thoughts that occur before or after strong emotions	
9. Noticing when you need a break – and taking it!	

(Rolston & Lloyd-Richardson, n. d.)

Attention to emotion regulation has grown in the last two decades. As a result, research has increased significantly, and it has been realized that emotion regulation impacts all areas of life and all significant sub-areas of psychology, including industrial/organizational, personality, clinical, health, biological, cognitive, developmental, and social. In 1990, research on emotion regulation was nearly non-existent, while in 2013, almost 12,000 citations were using the words “emotion regulation” (Gross, 2015). Emotion regulation encompasses both intrinsic and extrinsic domains. For example, intrinsic emotion regulation is when one has the desire to regulate his/her *own* emotions. Extrinsic emotion regulation is when one has the desire to regulate *someone else’s* emotions, such as soothing a crying child (Gross, 2015).

Regulating emotions could be either automatic or intentional. There are five emotion regulation types: situation selection, situation modification, attentional deployment, cognitive change, and response modulation (DeSteno, Gross, & Kubzansky, 2013). *Situation selection* is the process of placing oneself in situations where we would expect desirable emotions to arise.

Situation modification is the process of altering one's physical environment to alter emotions (DeSteno, Gross, & Kubansky, 2013). *Attentional deployment* refers to not necessarily changing settings but shifting attention to a different aspect of stimuli, such as distraction, rumination, worry, or thought suppression. *Cognitive change* refers to changing how one appraises a situation, subsequently altering its emotional meaning, such as reappraisal or humor (Campbell-Sills & Barlow, 2007; DeSteno, Gross, & Kubansky, 2013). *Response modulation* refers to the act of influencing a response after an emotional response has already been generated, such as suppressing expressions, using drugs, or exercising (Dan-Glauser & Gross, 2011; DeSteno, Gross, & Kubansky, 2013).

Historical Conceptualization of Emotion Regulation Construct

A study by Schacter and Singer (1962) suggested that emotions were dependent on how events were interpreted instead of the bodily experience itself. This idea sets the foundation for the broader recognition of emotion regulation. Lazarus (1982) theorized that cognition is a sufficient condition for emotion alone and not merely a social experience. Since then, the field of emotion regulation started to develop in research and literature. Campos, Campos, and Barret (1989) recognized that people's emotions were more than just feelings that are being expressed, but also a show of how a person establishes, maintains, or disrupts the relationship of that expression with the environment and level of significance to that person. This concept spearheaded the idea that emotions were a relational process stemming from connections with coping mechanisms.

Current Research

The foundation of researching emotion regulation stems from the current conceptualizations of psychopathology, exposure to stressful circumstances, and the connection

between stress and emotions (Compas et al., 2017). Evidence shows that emotion dysregulation plays a central role in the development of social impairments and risky behaviors (Bunford, Evans, & Wymbs, 2015; Compas et al., 2017). A meta-analytic review of 212 studies found a significant overlap with coping and emotion regulation since they are concerned with the same set of strategies to adapt to a stressful situation. Therefore, emotion regulation should be further studied with its cognitive and behavioral counterparts (Compas et al., 2017).

Some would theorize that not all emotion regulation is a positive thing. For example, suppressing one's emotions can raise sympathetic nervous system arousal and make it difficult to express emotions over time (Niedenthal et al., 2006). It is also worth noting that varied definitions of emotion regulation or emotion management have led to some differences in research. For example, Southam-Gerow and Kendall (2001) stated that there is a vast difference between "emotion regulation" and "emotion control." Emotion regulation refers to the adjustment of behaviors to be appropriately expressive, whereas emotion control refers to the restraint of the emotional process. This lack of clarity might explain the occasional disparity of research results.

One study looked at whether a 15-minute focused breathing regime would assist in building emotion regulation by decreasing the intensity of negative emotional responses amongst undergraduate students compared to unfocused attention and worry groups. Researchers utilized scales, such as the PANAS, and heart rate measurement. The focused breathing group reported the most stable and least emotionally volatile of the other two, with the worry group being the most volatile in response to the slides shown, becoming less overwhelmed by explicitly negative slides. However, some researchers suggested that the group may have handled the negative slides better due to viewing them as "just pictures." More research would be needed to be sure that the

focused breathing exercises are as effective at building emotion regulation concerning real-life situations (Arch & Craske, 2006).

Emotion Regulation in Children and Schools

The development of skills for regulating emotional experiences, such as perceived stress, is hierarchical, beginning with the biological process that contributes to a child's emotional and cognitive functioning (Calkins, Graziano, & Keane, 2007; Callear, 2014). Functional Magnetic Resonance Imaging (fMRI) studies have been able to examine cortical efficiency. They have shown that emotion regulation becomes more efficient with age, suggesting that younger children be taught necessary regulatory skills to continue acquiring emotion regulation skills throughout life (Callear, 2014; Lamm & Lewis, 2010). However, self-soothing behaviors, such as thumb sucking and eye closing, in response to overstimulation, are foundational emotion regulation skills observed early in infancy (Callear, 2014).

Holodynski and Friedlmeier (2006) state that from age six until adolescence, children can internalize more and can begin replacing overt behaviors with mental strategies and acquired verbal skills to regulate emotions. Children before the age of adolescence are the age group that this dissertation will be focused on because children who have not developed adequate emotion regulation skills before adolescence are at a high risk of engaging in risky behavior as well as developing borderline personality symptoms (Callear, 2014). Emotion dysregulation is regarded as a process that underlies a wide range of clinically relevant behaviors and psychological symptoms (Finlay-Jones, Rees, & Kane, 2015). The lack of emotion regulation skills has been linked to depression, self-injury, eating disorders, and substance use in adolescents (Daly, 2015; Hasking et al., 2010; Weinberg & Klonsky, 2009).

Instilling emotion regulation skills in children offers the opportunity for children to build on this foundation and develop positive psychological growth. One study of 71 children aged 7-9 in the United Kingdom revealed that those who participated in an eight-week mindfulness program taught by teachers showed significant improvements in negative affect, with a large effect size ($p = 0.002$, $d = 1.08$). They also found a significant negative correlation between changes in mindfulness and emotion regulation scores. In the end, the researchers determined that the *Paws b* program was well-received by children, feasibly delivered by teachers, and that emotion regulation skills significantly decreased negative affect while improving meta-cognition (Vickery & Dorjee, 2016). Similarly, according to another study, mindfulness approaches are associated with a reduction in behavior problems and relationship problems on students diagnosed with ADHD (Bunford, Evans, & Wymbs, 2015).

While some research supports the importance of emotion regulation skills, opposing research supports a different view. These rival researchers found that over-regulating emotions can increase the likelihood of aggressive behaviors and avoidance of emotions, subsequently building up emotions that can no longer be contained (Robertson, Daffern, & Bucks, 2012). Emotion regulation can take a variety of forms, but not all types are healthy in the long-term. An example of this is the concept of avoidance. Avoidance includes avoiding emotions, thoughts, images, memories, and physical sensations. While it could be useful at times, it is problematic when it persists and causes distraction, cognitive distortions, repression, substance abuse, self-harm, dissociation, and suicide (Hayes & Feldman, 2006).

Gratz and Roemer's (2004) multidimensional model posits that individuals who have difficulties with emotion regulation already might also have trouble recognizing, understanding, or accepting emotional states, making it a challenge to access coping skills and control impulsive

behaviors in the face of an emotionally-challenging situation. These challenges can make those individuals more likely to engage in negative rumination or avoidance, thus increasing negative affect. When considering the benefits or negative aspects of emotion regulation, it is essential to find both sides and be sure the implemented techniques align with the idea that emotion regulation should help transform negative emotions and not suppress them (Hayes & Feldman, 2006).

The American School Counselor Association (ASCA) has been active in advocating for more research on how to treat the “whole child,” meaning personal, social, and behavioral development in addition to the academics that schools already teach. This organization promotes group work focused on emotional coping and relationships with peers and parents (Augustyniak, Brooks, Rinaldo, Bogner, & Hidges, 2009). This vision aligns closely with goals set by the government in its focus on education reform, where health and wellness are promoted through specific components (Hyde, 2012). ASCA offers a national model that heavily promotes the idea of doing more counseling within the schools and connecting with local experts within the district. Their two-year training program offers consultation and program implementation tools to create a comprehensive school counseling program (ASCA, 2020).

Perceived Stress

A variable that I tested is perceived stress due to its assumed connection to emotion regulation. As previously discussed, children undergo great deals of stress in a typical day, making their perceived amount of stress relevant to this research. Stress can refer to both internal and external situations, sometimes resulting in anxiety, anger, sadness, envy, jealousy, fright, guilt, and shame. After stressful situations are mitigated, positive emotions can often emerge (Wang & Saudino, 2011).

A study by Williams, Turner-Henson, Davis, and Soistmann (2016) found that stress in 31 children was largely correlated with depressive symptoms. Students are likely to experience stress when faced with bullying or rejection from peers. Students who experience high levels of stress or who are bullied are more likely to have depressive symptoms (Williams et al., 2016). Additionally, researchers found that students reporting higher levels of stress were more likely to bully others (Konishi & Hymel, 2008). Konishi and Hymel (2008) reported that social support and coping skills, such as distraction, decreased levels of stress. Given the prevalence of suicide in this age group (CDC, 2018a), looking at stress and variables that increase depression or violence warrant further research.

When thinking about other stressors students face in school, such as violence, it should be noted that there are correlations between aggression and stress hormones. There is no evidence to show that students with high levels of stress will become aggressive. However, there is evidence to show that higher levels of stress increase the likelihood of being aggressive (Adelson, 2004), a possible cause of violence or bullying. Studying ways that children could learn to cope with stress could potentially decrease instances of violence or bullying.

Stress and Emotion Regulation

A study by Wang and Saudino (2011) suggests that individuals vary in their abilities to cope with stress and manage their emotions, and these abilities might differ across ages. Directly coping with stress involves the ability to manage emotions and vice versa, making the overlap between both variables apparent. For example, to utilize emotion regulation, one needs to be able to get rid of stressful thoughts by openly expressing them and being able to create positive cognitive change (Wang & Saudino, 2011). Accessing emotion regulation skills often promotes a more positive response to perceived stress (Finlay-Jones, Rees, & Kane, 2015).

Stress and emotion regulation are linked developmentally. A child's ability to regulate his/her reaction towards a stressful event relies on the assumption that he/she can manage emotions. The ability to achieve this is often associated with the child's social skills because emotion regulation helps boost social competence, which subsequently boots stress coping skills. In contrast, emotionally dysregulated children set a foundation for social isolation and rejection from peers, consequently causing psychological stress (Wang & Saudino, 2011). Reappraisal of an internal or external situation is a regulatory process that requires emotion regulation to cope with stress, making it a challenge to fully understand one without also looking into the other (Wang & Saudino, 2011). Finlay-Jones, Rees, and Kane (2015) suggest that exploring emotion regulation difficulties is a critical factor in separating stress from self-compassion.

From a physiological perspective, the activation of the hypothalamic-pituitary-adrenal (HPA) axis indicates a connection between the two variables as HPA is associated with emotion regulation in children and triggered by a stressful event (Stansbury & Gunnar, 1994; Wang & Saudino, 2011). Despite the clear connection, little is known about the etiology of emotion regulation and perceived stress or why there is a variance in abilities to manage these factors as it relates to genetic and environmental attributes (Wang & Saudino, 2011). However, older adults tend to report less stress and negative emotions than children and younger adults. This difference is a result of their more significant amount of life experiences that have caused them to develop higher emotional maturity and learn to cope with stress and negative emotions positively (Almeida, 2005; Wang & Saudino, 2011).

Worry

The other variable that was tested is worry due to its assumed connection to emotion regulation. Excessive worry is the critical element of disorders such as generalized anxiety

disorder (GAD), which remains one of the most difficult of the anxiety disorders to treat (Salters-Pedneault, Roemer, Tull, Rucker, & Mennin, 2006). Worry represents the cognitive component of anxiety and is related to self-doubt and intrusive thoughts, which, in turn, affects general well-being. As such, if children experience worry and anxiety, it can have significant implications for learning and achievement in school (Eysenck, Derakshan, Santos, & Calvo, 2007; Lauermann, Eccles, & Pekrun, 2017) as a result of the diminished ability to hold attention to a given task (Eysenck et al., 2007).

In terms of cognitive process, a study by Donovan, Holmes, Farrell, and Hearn (2017) on 114 children aged eight to 12 found that worry is significantly and positively correlated with intolerance of uncertainty, positive beliefs about worry, negative beliefs about worry, negative problem orientation, and cognitive avoidance. These five variables accounted for 59% of the variance in child worry, with negative beliefs about worry accounting for 25% and cognitive avoidance accounting for 14% of the variance (Donovan et al., 2017). Some examples of negative beliefs about worry include thoughts such as, “I have to stop worrying,” “My worrying will never end,” or “I have no control over my worrying (“Positive and Negative Beliefs About Worry,” 2017).” Cognitive avoidance is a term used to describe strategies such as distraction, worry, or thought suppression (Sagui-Henson, 2017).

Worry and Emotion Regulation

Specific emotion regulation deficits, such as deficits in emotional clarity, acceptance of emotions, ability to engage in goal-directed behaviors when distressed, and impulse control are all associated with worry (Salters-Pedneault et al., 2006). In Borkovec’s avoidance model of worry, Borkovec proposed that worry is a cognitive activity that is enhanced by emotional distress (Borkovec, Alcaine, & Behar, 2004; Salters-Pedneault et al., 2006). Avoiding emotion

through worry can interfere with emotion regulation, leading to a lower level of functioning and a higher level of stress over time (Salters-Pedneault et al., 2006).

Salters-Pedneault et al. (2006) stated, “As the cycle of worry becomes more frequent and intense, it is also possible that emotion regulation deficits contribute to the maintenance of the disorder; as anxiety is maintained and intensified through attempted avoidance, the individual may feel increasingly confused by and averse to their emotional experience, thereby motivating further automatic or strategic attempts to avoid through worry.” Additional research is needed, but preliminary evidence suggests that emotion dysregulation is often present in those with GAD and chronic worry. In contrast, those who worry often have more robust negative emotional responses, making emotion regulation more difficult (Salters-Pedneault, 2006).

A study by Neudert, Stark, Kress, & Hermann (2017) included using functional magnetic resonance imaging (fMRI) with 26 healthy females showed that worry is related to distraction, which can reduce negative emotions. This study further posits that emotion regulation becomes difficult in those with worry, as it prevents the emotional processing of stressful stimuli. Another study by Lewis, Yoon, and Joormann (2016) found that habitual use of worry, rumination, and reappraisal was associated with cortisol reactivity and suggested that high worriers have greater reactivity to stressors.

History of Social-Emotional Learning

SEL has been around since ancient Greece when Plato proposed a holistic curriculum that included moral judgment when he wrote *The Republic* (Edutopia, 2011). In 1907, Maria Montessori opened the first Montessori school intending to educate the whole independent child cognitively, socially, emotionally, and physically. This approach to learning allows the child to have a great deal of freedom by setting the pace and allowing modifications to education.

American's caught on shortly after, with the first Montessori school opening in New York in 1907. (American Montessori Society, 2019). During this same period, John Dewey introduced the idea of social responsibility and taking others into account while doing an activity (Dewey, 1916). Personal social responsibility would later become a principal of SEL.

Formal programs started in the 1960s with The Comer School Development Program, which began in New Haven, Connecticut, and focused on multidisciplinary efforts to address educational and health issues, including ways to increase social and emotional skills to help students in this area of low academic achievement. Dr. James Comer, a child psychiatrist from the Yale Child Study Center, and his colleagues worked with two of the lowest income and lowest achieving elementary schools in the city (ranked 32 and 33 out of 33). Later, in the 1980s, those same two schools were rivaled for the highest incomes, had the best attendance records, and limited behavior problems, all while maintaining an academic performance higher than the national average. Continued research has supported the need to link development, academic learning, and the preparation of students for adult life (Yale School of Medicine, 2018).

Psychologist Claude Steiner (2003) first began discussing the concept of emotional literacy in 1970. Emotional literacy is defined as “the ability to understand your emotions, the ability to listen to others and empathize with their emotions, and the ability to express emotions productively,” and involves five key skills:

1. Knowing your feelings: being able to define feelings and recognize their cause.
2. Having a heartfelt sense of empathy: recognizing other people's feelings.
3. Learning to manage our emotions: how to express negative emotions harmlessly and productively while knowing how the emotional expression of any kind affects other people.

4. Repairing emotional damage: learning to apologize and make amends; taking responsibility and asking for forgiveness.

5. Putting it all together: the ability to tune into others, sensing their emotional states, and interacting effectively.

In 1994, the Collaborative to Advance Social and Emotional Learning (later called CASEL) was created, hosting conferences and heavily advocating for the field and focusing on preventing school violence. The name change in 2001 reflected the necessity of keeping academics as a part of all research in the field. Nine CASEL collaborators published *Promoting Social and Emotional Learning: Guidelines for Educators* in 1997, establishing and defining the specifics of the field (Edutopia, 2011).

The No Child Left Behind Act was replaced in 2015 by the Every Student Succeeds Act (ESSA), which gave power to each state to address issues that hit closest to home. Though this piece of legislation does not explicitly mention SEL, it does allow for federal funding for schools that opt to incorporate non-academic programs into their schools, including summer learning, school leadership, and after-school programs. Additionally, many SEL interventions meet the ESSA evidence requirements for funding (Wallace Foundation, 2017).

Social-Emotional Learning in Schools

Emotions and the ability to regulate them can either enhance or impede learning (Martin and Ochsner, 2016). In young children, the ability to activate self-management is often unbalanced as a result of the still-developing pre-frontal cortex. This area of the brain is not fully developed until about age 25 and helps to explain why children and adolescents may have a harder time regulating emotion naturally. It takes practicing skills often and rewarding that practice to be able to think before acting effectively, but the process of growing up includes the

ability to gain control over behavior and emotions (Berger, 2011; Martin and Ochsner, 2016; Uytun, 2018). Without this, there cannot be concepts of responsibility or accountability, as they would not make sense (Berger, 2011). Ideally, children begin learning self-management as early as their toddler years. Still, these abilities continue to develop throughout adolescence, as insight to their thinking as well as improved attention becomes more prominent (Berger, 2011).

Due to a variety of reasons, such as budget cuts or poor test scores, many schools are restricting classroom time that is not directly preparing children for subjects tested by the state. Some even compare the teacher's job performance linked to the results of these tests. These cuts severely impact the availability of SEL programs (Schonfeld et al., 2015; Seifer, Gouley, Miller, & Zakriski, 2004). However, learning in school is a social activity, and the overall climate of the classroom and school can positively or negatively affect children's readiness to learn, subsequently influencing their level of engagement, motivation, and performance, as such, strengthening the social-emotional skills of children serves as a foundation for developing academic success (Schonfeld et al., 2015).

SEL programs are shown to increase the ability to be able to identify, label, and understand emotions, develop empathy and appreciate the interests of others; identify positive solutions to interpersonal conflicts by utilizing social problem-solving methods; and better maintain positive interpersonal relationships. Researchers state that increasing competency in these areas can improve cognitive, affective, and behavioral competencies such as self-management, social awareness, relationship skills, and responsible decision-making (CASEL, 2019; Schonfeld et al., 2015). Despite limited research in this area, these facts provide reasonable suspicion that SEL would have a positive impact on academic achievement, ...or at the very

least, gear towards treating the “whole child” and creating a different atmosphere in which learning will take place.

The study of emotion regulation in children is a relatively new field and also called “affect revolution” at times, but the number of research publications has increased substantially since 1989 (Adrian, Zeman, & Veits, 2011). A multi-year study of social-emotional learning studied 213 social-emotional learning programs and 270,034 students from urban, suburban, and rural elementary and secondary schools found multiple benefits of SEL compared to students who did not experience the program. These benefits include higher grades and test scores, an 11th-percentile gain in academic achievement; increased social and emotional skills; positive social and classroom behavior; fewer conduct problems (classroom misbehavior and aggression); higher attitudes about themselves, others, and school; and less emotional distress and depression. Only 17% of the studies analyzed included academic outcomes (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Kendziora & Yoder, 2016), further supporting the notion that SEL has not been as broadly researched with academics as other attributes that SEL supports. Conley, Durlak, and Kirsch (2015) found similar results in a replication meta-analysis.

Somatic Psychology and the Mind-Body Connection

The term “somatic psychology” is a recent term from 1988 used to describe a phenomenon that’s been experienced for centuries and specifically expressed within Eastern cultures. The term “somatic” came from the Greek word “soma,” meaning “body.” This theory regards the non-verbal to be just as important as the verbal and recognizes the physiological aspects of autonomic neurological regulation (Aposhyan, 2004). Long before the name “somatic psychology” existed, Sigmund Freud attempted to initiate a neuro-physical basis of psychology with his writing, “Project for a Scientific Psychology.” Later, he furthered his work on the mind-

body connection with his ideas on id, ego, superego, psychosexual stages, and his use of the couch in psychoanalysis, whereas clients were moved out of a familiar position to invite unconscious material to the surface (Aposhyan, 2004).

The mind-body connection became something that was not fully embraced in the United States due to the criticism of J. B. Watson, who argued that the field of psychology should focus on objective studies of behavior and acknowledge the relationship between the environmental surroundings and behavior. Early foundations of behavior therapy and educational learning theories also rejected the idea of the mental state on cognition since they could not be directly observed. Subsequently, the mind-body connection was determined to be unfit for scientific study by Watson. The recent popularization of using the scientific method within the field of psychology made studying the mind-body relationship a challenge (Wilson, 2008; Zinbarg & Griffith, 2008).

In later years, around the 1970s, the mind-body connection would resurface in relevance with the teachings of Bandura as well as studies on autism spectrum disorder, music therapy, and sensory and spatial play amongst children. However, despite growing knowledge in the mind-body connection, mental health fields continue to have a lack of consensus as to how or if these approaches should be utilized due to a lack of clarification on how mind-body theories could be applied in practice. Many therapeutic approaches continue to favor dualism, which essentially treats the mind and the body as separate entities, leaving body concerns to other medical professionals (Leitan & Murray, 2014).

Some additional historical influence came from Carl Jung, who developed expressive techniques leading to body-centered approaches to psychotherapy. While he did not work with the body directly, his idea of active imagination opened the door for further mind-body work. An

active imagination is a technique to visualize dreams and the unconscious and bringing it to the surface by use of images or other creative outlets, which could include writing, acting, dance, music, etc. (Aposhyan, 2004). One of the most notable contributors to the field was a former student of Freud's, Wilhelm Reich, who began his career in 1935 by adding body components to psychoanalysis. He defined emotions as "manifestations of plasmatic movements of tangible bio-energy," and studied ways that psychological tension led to muscular tension, subsequently inhibiting orgasms. He further added the body to psychology by encouraging the idea of punching pillows or mattresses to release tension (Aposhyan, 2004).

Yoga

Yoga is an ancient Indian spiritual practice that appears to be showing benefits in various areas of research. Scholars say yoga's meditative process is characterized by its method of attaining intuitive knowledge and engaging in spiritual changes through the application of consciousness (Hanna, Wilkinson, & Givens, 2017). Though the exact timeframe of the origins of yoga remains unknown but dates back to about 2,500 to 5,000 years ago in India. Yoga has references in the Bhagavad Gita and can be seen in ancient drawings (Pandurangi, Keshavan, Ganapathy, & Gangadar, 2017). It is one of the oldest forms of holistic health. The physical practice can vary by style and personal beliefs but generally aims to combine postures with breathing techniques and focus to create physical and psychological homeostasis (Butzer et al., 2015; Frank, Bose, & Schrobenhauser-Clonan, 2014).

"Yoga," in Sanskrit, means "to unite (Pandurangi et al., 2017)," and refers to any method by which a person is brought closer to God, reality, or a state of being (Daly, 2015). Yoga is designed to be a purposeful way of being and a change in lifestyle, far more than poses and breathing techniques (Taylor, 2016). Yoga has eight components, often referred to as "the eight

limbs of yoga.” They are restraint and moral discipline (Yama), positive duties (Niyama), controlled poses (Asana), breathing techniques (Pranayama), sensory withdrawal (Pratyahara), focused concentration (Dharana), meditative absorption (Dhyana), and bliss/enlightenment (Samadhi). This eight-limbed path is now known as Ashtanga yoga (Cope, 1999; Newlyn, 2018).

In the second century A. D., the *Upanishads*, and *Bhagavad-Gita* were written and focused on overcoming weakness, being your best self, and recognizing karmic debt. During this time, a radical group in India lived on the edge of established religions and Vedic values, which they claimed discriminated against gender, education, and caste system establishment. This group believed that the only real authority was the soul itself and could not be known by interventions of priests and bureaucracy, but instead, only discovered through direct experiences. This group of yogis practiced deep meditation with Prince Siddhartha, later to be known as the Buddha (Cope, 1999; Daly, 2015).

This long-practiced method of spirituality is said to overcome suffering to reach a higher level of consciousness, accomplished by using the body, mind, and breath and by enhancing self-awareness and self-management (Iyengar, 2014). Using yoga to seek enlightenment originated within the Hindu and Buddhist religions. Now, it is a discipline of its own, offering health benefits, self-discipline, and raised consciousness (Simpkins & Simpkins, 2011, p.45). Seeking pure consciousness could provide an intuitive understanding of the deepest of levels (Hanna, Wilkinson, & Givens, 2017).

Though little is known about its author, *The Yoga Sutras of Patanjali*, was the first written account of the yogic practice. Practitioners of yoga report that Patanjali must have been an accomplished yogi. The book includes 195 yoga sutras and outlines the technical aspects of yoga. Patanjali viewed the body and soul as separate entities and believed the body would need

to be transcended to achieve enlightenment. From this foundation, several other schools of yogic thought were formed, challenging the dualistic aspects of Patanjali and incorporating elements of psychology and philosophy (Daly, 2015; Feuerstein, 2011).

Hatha yoga is the most widely practiced form of yoga in the world. It incorporates poses (asanas) and breath work (pranayama) along with mental focus, strength, flexibility, and relaxation, all to help develop awareness and consciousness. Hatha yoga was first introduced to the Western world by Yogi Swatmarama, a yoga guru from India in the 15th century. This popular method gave way to other yoga styles, such as Bikram, Astanga, and Kundalini. In the 1920s, yoga master Krishnamacharya began training students throughout Europe and North America, increasing the popularity of yoga. In 1947, Indra Devi founded a yoga institute in Hollywood, California. Since then, the popularity of yoga has risen dramatically and is found nationwide (Longe, 2012).

Yoga as a Therapeutic Technique

Mental health professionals might notice benefits of adding yoga to their practice or suggesting it to their clients due to the physical and neurological effects that stems from regular breathing, physical movements and improved awareness due to affecting both the parasympathetic and sympathetic nervous systems, as well as an increase in positive affect (Froeliger, Garland, Modlin, & McClernon, 2012; Grensman et al., 2018; Narasimhan, Nagarathna, & Nagendra, 2011). Engaging in yoga has been shown to reduce the impact of stress and mitigate traumatic experiences by teaching concepts of relaxation, focus, and emotion regulation. The applicability of these skills carries over to multiple areas of life, meaning a strong foundation can lead to lifelong healthy habits (Butzer et al., 2015; Frank et al., 2014; Toscano & Clemente, 2013).

Yoga would fit nicely within the framework of somatic psychology, which focuses on the mind-body connection. During the therapeutic process, the focus is on the experience of what is and how rather than what should be or why (Johnson, 2014), a stark difference to some traditional therapeutic techniques. Also, yoga is less about specific techniques and interventions and more about grounding the body for personal insight (Aposhyan, 2004), the very central idea of the yogic practice.

A study by Grensman et al. (2018) compared traditional yoga, mindfulness-based cognitive therapy, and cognitive-behavioral therapy on patients that were currently out on sick leave due to burnout in Sweden. This blinded, randomized controlled trial in various primary health care settings within the Stockholm area involved a total of 80 participants aged 18-65, all with a healthy BMI. The results of this study showed that traditional yoga had a similar treatment effect as cognitive-behavioral therapy and mindfulness-based cognitive therapy, according to the SWED-QUAL scale, on health-related quality of life. Using Cohen's *d*, 10 of the 13 subscales showed a medium or large effect with the traditional yoga intervention, whereas only seven of the 13 subscales showed at least a medium effect with CBT and MBCT. However, the other two subscales offered one additional large effect.

Clients often lack the tools needed to reach deeper emotions, yet they often have this asked of them during therapy sessions. Simpkins & Simpkins (2011) said, "Much like we wouldn't expect someone to read without knowing the alphabet or understanding how words are formed, we cannot expect clients to respond well to an intervention without first teaching them to notice signs they receive from thoughts and how those signs form patterns (p.xii)." Yoga enthusiasts claim yoga can help with these deficits – offering skills from simple recognition of breath to deep, reflective meditation. In the clinical setting, yoga has been used as a modality to

treat forms of trauma, eating disorders, autism spectrum disorder, attention deficit hyperactivity disorder, and support the increase of emotion regulation skills in special needs populations (Brandstaetter, 2014; Koenig et al., 2012).

The National Center for Complementary Alternative Medicine classifies yoga as mind-body medicine. It allows people to become aware of something previously unavailable to his/her cognitive mind (Arney, 2014). Efficacy of yoga with populations under the mental health umbrella has shown reliable results with depression, reducing fatigue, increasing focus, and increasing self-efficacy, among others in research studies (Butler et al., 2008; Schure, Christopher, & Christopher, 2008; Waelde, Thompson, & Gallagher-Thompson, 2004). Researchers have praised yoga for its physical benefits and ability to reduce stress, in the United States. However, not as much attention has been given to its comprehensive history of holistic improvements in the areas of physical, psychological, and spiritual health, and this gap remains (Adams & Puig, 2008).

Adding creative approaches to mental health treatments, such as adding yoga or other movement components, can have benefits that reach further than the creative medium itself. For example, creative outlets can pick up where words leave off. Using yoga to facilitate a more profound connection might allow for the better expression of feelings along with the ability to be open and think in different ways (Bradley, Whisenhunt, Adamson, & Kress, 2013). With children, it may be easier for them to engage and develop a level of comfort. Similarly, doing non-traditional group work may assist with relationships among peers. Utilizing creativity and non-traditional therapies reaffirms the idea that there are multiple ways to work with clients, as evidenced by the increasingly popular complementary and alternative medicine approaches

(Nichols, 2015). This idea especially holds when working with children and needing to find creative ways to increase engagement.

Yoga aids in not only relaxation but also in the activation of the brain and muscles. First discovered in the 1950s when studying brain waves, the fast activity of small amplitude and slow alpha rhythms were both seen at various stages of yogi meditation. Modern electroencephalograms (EEGs) have shown similar results. Yogic meditators had a faster beta wave activity than other participants, which is associated with alertness. They also had an increase in slower alpha and theta activity, which is associated with relaxation. Staying alert and relaxed simultaneously, while building self-awareness, can potentially have improved performance in a variety of situations (Simpkins & Simpkins, 2011).

Australia, among other countries, has recognized the need for improved mental health treatment and the benefits yoga can offer. However, inconsistencies amongst treatment have created challenges with research and replication due to a lack of training and manualized programs. Knowing each professional might be approaching treatment in different ways makes studying a challenge. To resolve this concern, researchers developed the Delphi method with feedback from 24 yoga professionals, mostly from Australia, but also India, Switzerland, and the United States. Of the 24, ten were also mental health professionals. The four components of yoga practice are breath regulation, postures, relaxation, and meditation. Breath regulation is useful for reducing depression and anxiety, while postures are useful at reducing depression. Relaxation and meditation are both considered to aid in the reduction of anxiety, all according to the consensus of the professionals (De Manicor, Bensoussan, Smith, Fahey, & Bouchier, 2015).

Yoga and Children

Children are spending more time with phones, computers, and other screens than ever, resulting in less communication with adults and other children. One should also consider the loss of some sensory experiences as a physical feeling of objects can now be replaced by apps, such as with various games. Yoga is said to increase sensory experiences among children (Neiman, 2015) as well as help alleviate the stress and hurriedness of today's climate that can place pressure on children (Toscano & Clemente, 2013). As a result, yoga has been introduced in schools, health centers, juvenile detention centers, churches, private yoga studios, and as a supplement to athletic training (Busch, 2007; Taylor, 2016).

Yoga has a focus in meditational attributes, which is a critical factor in determining how children and teens are affected by negative emotions, fostering pro-social and pro-academic traits (Arsenio, Cooperman, & Lover, 2000; Augustyniak et al., 2009; Pekrun, Goetz, Titz, & Perry, 2002;). When working with children and in the school setting, yoga must be adapted to meet the needs at that time and include age-appropriate language. Some programs have been created explicitly with child-friendly language in mind.

When practicing yoga with children, it becomes essential that they understand what yoga is and the principals attached to this practice. The original text, The Yoga Sutras of Patanjali, is a sophisticated text documenting what yoga is, it's meaning, and how one can reach the ultimate state of consciousness. These concepts often take years of focus and practice (Daly, 2015; Feuerstein, 2011). YoKid (2012), an organization promoting mindfulness in children in underserved areas, created a list in child-friendly language that explains these principles:

“Yama (Things Not to Do)

- Ahimsa: Don't be violent to myself or others; Be caring to myself and others.

- Satya: Don't lie; Be truthful with myself and others.
- Asteya: Don't steal; Be generous.
- Brahmachara: Don't waste my energy; Use my energy wisely.
- Aparagraha: Don't be greedy; Be grateful for what I have.

Niyama (Things To Do)

- Saucha: Be clean
- Santosha: Be happy with myself and others
- Tapas: Always work hard.
- Svadhyaya: Studying is important. Take time to learn about myself and the world around me.
- Ishvara pranidhana: Always trust the power inside of me.”

A study by Haden, Daly, and Hagins (2014) on self-reported wellbeing found that positive affect increased for the yoga group, but not significantly more than the control group. Although not a statistically significant increase, it was noted that negative affect increased with the yoga group as well, explaining that some students have an increase in stress and negativity that goes along with increased awareness. These findings align with some prior studies that have had similar results (Benavides & Caballero, 2009; Tharalden, 2012). While all styles of yoga share some components (such as postures, breathing techniques, meditation, relaxation, and the development of awareness), yoga styles can be modified based on developmental and individual considerations (Bremer, 2015).

CHAPTER III: METHODOLOGY

Identification of Methodology and Rationale

This study uses an experimental design with random assignment of participants and a control group. Within the potential population of fourth and fifth-grade students, all students have an equal chance of being selected (Balkin & Kleist, 2017). I assigned participants into groups from the entire fourth and fifth-grade populations using Random List's team generator. Each participant was assigned a number for privacy. Numbers were then input in the generator and randomly placed into either of two groups. If a child was unable to participate due to parents/guardians not giving permission, that child was removed from the group and data not included. For those participating in the study, but not randomly selected for the intervention, they were placed into the control group, which consisted the school's current "treatment as usual (TAU)" approach to social-emotional learning. The ongoing social-emotional learning that the school offers includes guidance lessons provided by the school counselor and the Life Skills training curriculum delivered by a local professional at the Council on Alcohol and Drug Abuse – Coastal Bend.

According to previous research, there is a link between social-emotional learning and emotion regulation. To further explore this, the experimental intervention group will receive the emotion regulation portion of the *Transformative Life Skills* curriculum. In contrast, the treatment as usual (TAU) group will receive traditional guidance lessons. The dependent variables are emotion regulation, perceived stress, and worry, according to the outcome of the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA), the Perceived Stress Scale for Children (PSS-C), and the Penn State Worry Questionnaire for Children (PSWQ-C). The independent variable is the yoga-based social-emotional learning program,

Transformative Life Skills. All data will be analyzed using a mixed analysis of variance (ANOVA) approach.

Research Questions

The research question for this quantitative study are as follows:

1. Is there a difference in emotion regulation skills after implementing a yoga-based social-emotional learning program, as measured by the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA) between the treatment and treatment as usual groups over time?
2. Is there a difference in perceived stress after implementing a yoga-based social-emotional learning program, as measured by the Perceived Stress Scale for Children (PSS-C) between the treatment and treatment as usual groups over time?
3. Is there a difference in worry after implementing a yoga-based social-emotional learning program, as measured by the Penn State Worry Questionnaire for Children (PSWQ-C) between the treatment and treatment as usual groups over time?

Sampling Procedure

The non-random sampling method for this study was convenience sampling.

Convenience sampling is when participants are identified based on accessibility to the researcher (Hesse-Biber & Leavy, 2011). I used the students at the Early Childhood Development Center because prior research has not included elementary-aged students in their studies. I work close by and have access to the students there. Prior to the study, I spoke to the principal and she was very supportive and willing to make scheduling accommodations for the intervention planned for this study to occur.

Description of Participant Characteristics

The location of the study was the Early Childhood Development Center, a bilingual elementary school in an urban area of South Texas, with a population of about 330,000. The study utilized grades four and five, which had a total population of 40 for the current school year. The parents of the students granted participation permission. Due to the bilingual nature of the program, the consent forms were distributed in both English and Spanish. An *a priori* power analysis was run using G*Power software. G*Power suggested that the sample size be at least 34 to have a power of 0.8, an effect size of .25, and a *p*-value of .05, using the calculations of Cohen's *f* (Cohen, 2013). A total of 38 students were obtained through parental permission and assent of the students. A random assignment was used to randomly divide the students evenly into two groups within their prospective grade levels – the treatment group and the control group. I offered the study to all students within the selected grade levels, regardless of gender, disability, socioeconomic status, ethnicity, or other factors. No additional criteria were necessary.

For this study, only fourth and fifth-grade students were invited to participate. Limiting the study to the older grades was due to the language and complexities of the curriculum. Significant modifications in the language would need to take place for younger children. The curriculum is designed for upper elementary grades through high school, but the authors have a separate but similar version for the younger elementary grades (Bose, Ancin, Frank, Malik, 2017).

The sample size included fourth and fifth-grade students from a bilingual elementary school in south Texas. There were 36 total participants (19 males, 52.8%; 17 females, 47.2%). There were 15 students that were nine years of age (41.7%), fourteen students that were ten years of age (38.9%), and seven students that were 11 years of age (19.4%). The majority were

Hispanic ($n = 30$; 83.3%), while the others identified as African Americans ($n = 3$; 8.3%), Asian Americans ($n = 2$; 5.6%), and Caucasian Americans ($n = 1$; 2.8%). The sample was evenly distributed among the grade levels, with eighteen in each.

Context of the Study

The findings of this study can trigger a more significant outcome. School districts are faced with ongoing pressures to raise test scores, but as a result of an increase in time spent on testing programs, there is a decrease in instructional time for teachers to utilize. Besides, many schools have reduced the available program offerings if they are determined to be incompatible with the standardized test subject matters (Harper, 2010; Smith, 1991). Physical activity can improve quality of life, yet only 17% of high schools meet the recommended amount (Eaton et al., 2010). Research also tells us that improved health increases school attendance (Basch, 2010), yet instructional time often takes precedence over physical activity when cuts need to take place. Since one in five children have symptoms of mental illness and mental illness leads to an increase in students dropping out of school (Breslau, 2010; Eaton et al., 2010), then a case for why school districts should care about social-emotional learning and physical activities, like yoga, can easily be presented.

Measurement of Construct

Emotion Regulation Questionnaire for Children and Adolescents

The Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA) is a slight modification of the original Emotion Regulation Questionnaire (ERQ) created by Gross and John (2003). Scholars developed the ERQ to measure emotion regulation in two ways – cognitive reappraisal and expressive suppression. Originally developed for adults in individualistic cultures, the ERQ-CA, uses the same questions with slightly modified language

that is more appropriate for children (Gullone & Taffe, 2011). The ERQ-CA is a 10-item self-report that uses a 5-point Likert-type response scale. The higher scores indicate a higher use of emotion regulation. The original ERQ uses a 7-point Likert-type response scale. The five points are as follows: 1 = strongly disagree, 2 = disagree, 3 = half and half, 4 = agree, and 5 = strongly agree. The cognitive reappraisal scores range from six to 30, while the expressive suppression scores range from four to 20 (Gullone & Taffe, 2011). Examples of cognitive reappraisal items include: “When I want to feel happier, I think about something different,” “When I want to feel happier about something, I change the way I feel about it,” and “I control my feelings about things by changing the way I think about them.” Examples of expressive suppression items include: “I keep my feelings to myself,” “I control my feelings by not showing them,” and “When I am feeling bad (e.g., sad, angry, or worried), I’m careful not to show it.”

The six items measuring cognitive reappraisal has an alpha reliability coefficient of ($\alpha = .83$) for 10-15-year-olds. 16-18-year-olds had an alpha reliability score of ($\alpha = .86$). The four items measuring expressive suppression had an alpha reliability of ($\alpha = .75$) for the total sample (Gullone & Taffe, 2011). These reliability results are consistent with those reported by Gross and John (2003), where the coefficients ranged from ($\alpha = .75$) and ($\alpha = .82$) on the cognitive reappraisal items and ($\alpha = .68$) to ($\alpha = .76$) on the expressive suppression items. Scores are also consistent with the Italian translation done by Balzarotti, John, and Gross (2010), indicating the adult version as well as its modified language for children, have internal consistency.

Perceived Stress Scale for Children

The Perceived Stress Scale for Children (PSS-C) is a scale created by White (2014) and modeled after the existing Perceived Stress Scale (PSS) created by Cohen, Kamarck, & Mermelstein (1983). Scholars developed the PSS-C to measure stress perception in children ages

5 to 18 in a brief, easy-to-answer format. The PSS-C is a 14-item self-report that uses a 4-point Likert-type response scale. The first question is not scored. A higher value on the total of the 13 scored questions equates to higher levels of stress perception. The scale measures perceived stress in four ways – stressors, emotional tone, security, and busyness. The four points are as follows: 0 = never, 1 = a little, 2 = sometimes, and 3 = a lot. An example of a stressor item includes: “In the last week, how often did you have enough time to do what you wanted?” An example of an emotional tone item includes: “In the last week, how often did you feel scared or nervous?” An example of a security item includes: “In the last week, how often did your mom or dad make you feel loved?” An example of a busyness item includes: “In the last week, how often did you feel rushed or hurried?” The creators developed seven questions with reverse wording and scoring, to increase the likelihood of accurate responses.

In testing by White (2014), 98% of the children in the sample of 153 described the questions as “easy.” The mean, median, and mode were consistent in values, and the overall distribution shape was slightly skewed, reflecting a tendency to report lower stress perception. Results showed a significant difference between the typical group and the clinical group of those already identified to have symptoms of anxiety, $t = 3.23 (151), p < .01$. This screening tool is designed to identify symptoms, monitor progress, and promote research, but further research is needed to conduct test/re-test reliability.

Penn State Worry Questionnaire for Children

Scholars designed the Penn State Worry Questionnaire for Children (PSWQ-C) to assess characteristics of abnormal worry rather than the content or frequency of worry (Muris, Meesters, & Gobel, 2001). It is a slight modification of the original Penn State Worry Questionnaire created by Meyer, Miller, Metzger, and Borkovec (1990) and made to be readable

at a second grade reading level (Chorpita, Tracey, Brown, Collica, & Barlow, 1997). The PSWQ-C is a 14-item self-report questionnaire that uses a four-point Likert-type response scale. The higher the overall score, the greater the indication for a higher tendency to worry. The original PSWQ uses a 5-point Likert-type response scale and has 16 items. The PSWQ-C's four points are as follows: 0 = never true, 1 = sometimes true, 2 = most times true, and 3 = always true.

The Cronbach's alpha for the 14-item PSWQ-C was ($\alpha = .82$) for 8-12-year-olds (Muris, Meesters, & Gobel, 2001). This study by Muris, Meesters, and Gobel (2001) found, confirming a prior study by Chorpita et al. (1997), that three items were not satisfactory, collectively having an alpha of < 0.25 . Removing these three items brought the alpha up to ($\alpha = .89$). Convergent validity was tested by computing correlations between scores on the original scale, the shortened scale, and just the three reversed items and compared to the Screen for Child Anxiety Related Emotional Disorders (SCARED). The highest association was between the original PSWQ-C and the SCARED generalized anxiety subscale. The three reverse coding items were not significantly associated with any of the SCARED scales, and correlations improved significantly when removing those items. In short, when using the scale on students aged 8-12, it is preferable to discard the three reversed items on the scale (Muris, Meesters, & Gobel, 2001). These validity results are consistent with those reported by Chorpita et al. (1997), who documented identical problems with those three items, but found meaning results when used with children aged 12-17.

Intervention

I implemented a yoga-based SEL program using a curriculum called *Transformative Life Skills* (TLS). For this study, I utilized the emotion regulation unit as it is the variable of social-emotional learning that most closely aligns with the problem statement. This section of the

curriculum dictated that the researcher should collect the students in the treatment group for three lessons per week, with each lesson being approximately 20 – 30 minutes in length. This schedule continued for four weeks, during which time a total of 12 lessons was completed, out of a total of 48 in the entire curriculum. While the curriculum allows for flexibility on this scheduling, the publisher states this is the ideal timeframe and schedule of completion. The curriculum is divided into four units – stress resilience, self-awareness, emotion regulation, and healthy relationships (Bose et al., 2017).

Emotion Regulation, Perceived Stress, and Worry Variables

The *Transformative Life Skills* curriculum was uniquely suited to address all desired variables. The Emotion Regulation unit consisted of the following 12 lesson topics: Your environment affects your thoughts and feelings, You can manage your thoughts and feelings, Centering yourself, Your thoughts and feelings affect your actions, Acting vs. reacting, Your actions affect your brain, Using tools to calm down, Using tools to energize, Being with emotions, Practicing making choices, Imagining possibilities, and Review and reteaching. Each lesson followed the following format:

- Background knowledge and discussion: The lesson topic included a brief reading on subjects related to emotion regulation, such as noticing feelings, managing emotions, calming down, or how thoughts can manifest into actions.
- Opening bell and focused breathing: This step encouraged students to focus on their bodies and the present moment while relaxing and releasing muscle tension.
- Mindful movement and the pose of the day: This series of basic yoga postures taught students how to focus their minds by using balance. The discussion throughout the postures encouraged students to be aware of discomfort and to utilize breathing to get

through. Later discussion would ask the students to reflect upon any experienced discomfort and talk about how (or if) they pushed through the discomfort. This section also encourages self-compassion as students are allowed to stop at any time. If they fall out of a balance pose, they are encouraged to join back in at any time.

- Mindful breathing: Students were asked to do various breathing exercises to re-engage any focus that may have drifted while learning postures. The deep breathing helped students to calm themselves and bring awareness to breath by connecting it to small arm or belly movements. Students were often asked to be mindful of any thoughts that entered their minds and encouraged to let those thoughts go and only focus on breath.
- Guided meditation and closing bell: This closing section offered a short amount of time for students to bring awareness to their bodies and practice muscle relaxation. Students are walked through the process of relaxing muscles in areas that carry stress and tension.
- Connection questions: Each lesson ended with questions for students to discuss what they took away from each lesson and how it could be applied to daily life. Examples of some connection questions are: *Do you think it's possible to stay calm and focused if you are surrounded by chaos? What advice might you give a friend who is dealing with difficult emotions, like fear, anger, or grief? Do you think practicing the TLS curriculum can help you pause before you act – why or why not? Can you share one pose or breathing technique that you could use as a tool to help you calm down?*

Data Collection

This study is an experimental, randomized control trial. Initially, IRB approval from Texas A&M University, Corpus Christi, was sought, after which the Corpus Christi Independent School District (CCISD) reviewed the IRB material and determined it was a suitable study that

aligns with the district goals and mission. Upon receiving IRB approval and approval from CCISD, I used a pre- and post-test design to obtain data. I administered the ERQ-CA, PSS-C, and PSWQ-C to both groups before the start of treatment, and group means were calculated. I collected the same data again, half-way through the program, after six lessons were completed. Upon completion of all 12 lessons, I administered the ERQ-CA, PSS-C, and PSWQ-C for the final time to both groups. Data collection was complete prior to the school having a month off for winter break. Scheduling the intervention to finish prior to the winter break was intentional so as not to have large gaps between lessons.

Evaluation of Fidelity

Transformative Life Skills offers a detailed manual for this curriculum. It presents the lessons in an easy-to-read, scripted format where the general layout is the same for each lesson. There is an initial focus with a singing bowl, bell, or other noise, followed by a brief lesson incorporating two or three yoga poses. In the end, the context of the poses is evaluated by questions and discussion with the students about how they might be able to utilize that day's lesson in daily life, when they are upset, or when they may experience any type of overwhelming emotion. Since the entire lesson, including discussion questions, is scripted, replication is very attainable.

Data Analysis

There are seven model assumptions in a mixed-ANOVA analysis. The dependent variables were measured at the continuous level (scores on the ERQ-CA, PSS-C, and PSWQ-C). The within-subjects factor will have at least two related groups. The same participants will be measured before, half-way through, and after the intervention (or treatment as usual, as applicable). The between-subjects factor will be met by having two groups – treatment and

treatment as usual (TAU) groups. Once data was collected, I checked for significant outliers that were present. To test for normality, I used the Shapiro-Wilk test in IBM Statistics Package for the Social Sciences (SPSS). To test for homogeneity of variance, I used the Levene's test in SPSS. To test for sphericity, I utilized Mauchly's Test of Sphericity (Lund Research, 2018). Only once these assumptions are met can the validity of my data be determined.

Primary Analysis

As previously mentioned, I calculated an *a priori* analysis using G*Power, which suggested that the minimum number of total participants would need to be 34 to have a power of at least 0.8. After compiling the available participants, I computed a Mixed-Model ANOVA design on SPSS software. Researchers use a Mixed-Model ANOVA design when testing two groups over some time and comparing the groups (Field, 2018). The test of the between-subjects effect will show if emotion regulation skills improved, regardless of time. In contrast, the within-subject test will determine if emotion regulation skills improved irrespective of the intervention that took place. Testing the interaction between both groups will determine if there is a statistically significant change in emotion regulation skills that is dependent on whether the intervention took place (Pelham, 2013).

Representation of Data

With this Mixed-ANOVA design, I will present the data in an ANOVA summary table, which could include the degrees of freedom, the sum of squares, mean squares, *F* ratios, *p* values for the sources, and effect sizes. Another commonly used table for this design is a table that presents the means and standard deviations (Nichol & Pexman, 2010). For simplicity and to clearly show results, I will also show a standard box chart showing the pre-test and post-test results of each group for any presentations or posters on this topic in the future. Regardless of the

visual representation used, I will describe all results and effect sizes in detail in the results section.

CHAPTER IV: FINDINGS

The purpose of this study was to evaluate the impact of a yoga-based social-emotional learning program on emotion regulation, perceived stress, and worry in a small, urban city in South Texas. This is an ethnically and economically diverse area, with most the residents classified as Hispanic. The independent variable was the grouping of participants (those who were given the *Transformative Life Skills* curriculum) and the treatment as usual (TAU) group, who received the guidance lessons that the school already provides. The dependent variables were emotion regulation, perceived stress, and worry. As only the emotion regulation portion of the curriculum was implemented, emotion regulation was looked at along with perceived stress and worry due to their close relationship and overlap (Wang & Saudino, 2011). All data obtained in the study was analyzed using the IBM Statistical Package for Social Science (SPSS) for Windows.

Preliminary Analyses

An a priori analysis was run using G*Power, which dictated that the minimum number of total participants would need to be 34 to have a power of 0.8, an effect size of .25, and a *p*-value of .05. Effect sizes evaluate the severity of the differences found in the statistical significance tests (Cohen, 2013). For this study, I calculated Cohen's *f* to determine the effect size (Cohen, 2013). Out of a potential 40 participants in the elementary school, I received permission from 38 families. While all students completed the treatment protocol (or TAU plan), two students were absent on the final day, causing them to miss the last data collection. Since this was the final day of school before a long holiday break, the previous data was removed from the study.

After compiling the data from the remaining 36 participants, analysis took place using a Mixed-Model ANOVA design using SPSS software. A Mixed-Model ANOVA design is used

when testing two groups over a period and comparing the groups (Field, 2018). The test of the between-subjects effect will show if emotion regulation skills, perceived stress, and/or worry changed, regardless of time. In contrast, the within-subject test will determine if emotion regulation skills, perceived stress, and worry changed significantly irrespective of the intervention that took place. The Mixed-Model ANOVA was conducted separately for each of the variables and will be presented with separate research questions. Testing the interaction between both groups will determine if there is a statistically significant change in emotion regulation skills, perceived stress, or worry that is dependent on whether the intervention took place based on when data was collected (Pelham, 2013).

Results from the preliminary analysis will include information on missing data and outliers. Then, the seven model assumptions will be addressed. Following this are descriptive statistics, gender distribution, ethnical distribution, and mean age of the sample participants. Lastly, the research questions will be presented with a full evaluation of each question's prospective results from this Mixed-ANOVA quantitative study.

Model Assumptions

In a Mixed-ANOVA, there are seven model assumptions. The first is that the dependent variable is measured on a continuous level. This model assumption is met by using the ERQ-CA, PSS-C, and PSWQ-C. Each of the scales are Likert-type in scoring. However, I looked at the total scoring on each scale and not the items individually, using these scores in a continuous way. Higher scores on the ERQ-CA meant higher emotion regulation skills. Higher scores on the PSS-C meant a higher stress perception. Higher scores on the PSWQ-C meant a greater tendency to worry.

The second model assumption is that the within-subjects factor should consist of at least two related groups. This is met due to administering the scales over three different time points – before, halfway through, and after completing the curriculum. The third model assumption is that the between-subjects factor should consist of at least two categorical, independent groups. This assumption is met by the computer-generated random selection of the sample into two groups – the treatment group and the treatment as usual group. The sample was split into groups without any crossover. Each participant was only in one group with 17 in the treatment group and 19 in the TAU group.

The fourth assumption is that there should be no significant outliers in any group of the within-subjects factor or between-subjects factor. Outliers are pieces of data that are far off the mean, subsequently skewing data in one direction or another. Outliers in my data were identified on three occasions in two of the scales (ERQY_Total and PSWQ_Total). After contemplating how to handle the outliers, they have remained in the data set. Grace-Martin (2020) suggests that outliers never be excluded for simply being an outlier. Data should only be dropped if it was an obvious error (i.e. an age of 380, when it was likely meant to be 38) or if data is plentiful (Ferguson, 2019; Grace-Martin, 2020). Given that there were only 36 participants, dropping outliers was not a desirable option. Because participants that had outliers were not outliers on most of the data collection points, deleting them would mean losing valuable data.

The fifth assumption is that the dependent variable should be approximately normally distributed for each combination of groups and factors. To ensure proper significance ratings, it is essential to determine whether data has a normally distributed bell curve shape. To test this, I analyzed the *Shapiro-Wilk* test of normality. I identified that normality was an issue in the

PerSt_Total, $p = .01$. When the log function was taken of the scores to transform the data, the value of PerSt_Total remained under .05. As a result, the variable was kept.

The sixth assumption is that there needs to be homogeneity of variances for each combination of the groups (the within-subjects factor and the between-subjects factor). This means that the clusters of scores are similar between the two groups. To test this, I analyzed the data using the *Levene's Test of Equality of Error Variances*. The *Levene's Test of Equality of Error Variances* on all three administrations of the ERQ-CA showed a significance of $p = .633$, $.772$, and $.431$, respectively, showing equal variances among both groups for all three administrations of the scale. The *Levene's Test of Equality of Error Variances* (see Table 2) on all three administrations of the PSS-C showed a significance of $p = .148$, $.478$, and $.024$, respectively, showing equal variances among both groups for two of the three administrations of the scale. The *Levene's Test of Equality of Error Variances* on all three administrations of the PSWQ-C showed a significance of $p = .468$, $.858$, and $.711$, respectively, showing equal variances among both groups for all three administrations of the scale. Since there was a violation to one of the data collections of the PSS-C, the data was reviewed further. No outlier scores were found in this measurement. In addition, there was no severe skewness displayed (.19). Skewness helps to assess the symmetry of the data distribution. A severely skewed data layout is generally present if the skewness is over +1 or under -1 (Hair, Hult, Ringle, & Sarstedt, 2017). Given the symmetry of this layout, the assumption of normality is met.

Table 2*Levene's Test of Equality of Error Variances*

		Levene	df1	df2	Sig.
		Statistic			
PSS_Total	Based on Mean	2.19	1	34	.148
PerSt_Total	Based on Mean	.51	1	34	.478
PSSC_Total	Based on Mean	5.57	1	34	.024
ERQ_Total	Based on Mean	.23	1	34	.633
EmReg_Total	Based on Mean	.08	1	34	.772
ERQY_Total	Based on Mean	.63	1	34	.431
PSWQ_Total	Based on Mean	.53	1	34	.468
Penn_Total	Based on Mean	.03	1	34	.858
PSWQC_Total	Based on Mean	.14	1	34	.711

Note. PSS_Total, PerSt_Total, and PSSC_Total refer to the three data collections of the PCC-C. ERQ_Total, EmReg_Total, and ERQY_Total refer to the three data collections of the ERQ-CA. PSWQ_Total, Penn_Total, and PSWQC_Total refer to the three data collections of the PSWQ-C.

The seventh assumption is that sphericity is met. Sphericity means that the clusters of scores are similar between each within-group factor. For this study, this would mean each data collection point for the two separate groups. To test for sphericity, data was analyzed using the *Mauchly's Test of Sphericity* (see Table 3). This showed that the perceived stress variable had a significance of $p = .292$, the emotion regulation variable had a significance of $p = .222$, and the worry variable has a significance of $p = .162$. Given that the significance of all three variables was $p > .05$, sphericity can be assumed for all three variables.

Table 3*Mauchly's Test of Sphericity*

Within Subjects		Mauchly'	Approx		
Effect	Measure	W	Chi-Square	df	Sig.
Time	Stress	.92	2.46	2	.292
	Emotio	.91	3.01	2	.222
	n				
	Worry	.89	3.63	2	.162

Presentation of Descriptive Characteristics of Respondents

The sample included fourth and fifth-grade students from a bilingual elementary school in south Texas. There were 36 total participants (19 males, 52.8%; 17 females, 47.2%). 15 students who were nine years of age (41.7%), 14 students that were ten years of age (38.9%), and seven students that were 11 years of age (19.4%). The majority were Hispanic ($n = 30$; 83.3%), while the others identified as African Americans ($n = 3$; 8.3%), Asian Americans ($n = 2$; 5.6%), and Caucasian Americans ($n = 1$; 2.8%). The sample was evenly distributed among the grade levels, with 18 students in each group. In Table 4, I present the means and standard deviations for each of the scales at each time interval.

Table 4*Descriptive Statistics*

	Group	Mean	Std.	
			Deviation	N
PSS_Total	Yoga	16.88	6.96	17
	TAU	16.05	5.41	19
	Total	16.44	6.11	36
PerSt_Total	Yoga	13.35	7.64	17
	TAU	14.15	6.12	19
	Total	13.77	6.79	36
PSSC_Total	Yoga	11.29	8.07	17
	TAU	14.42	5.06	19
	Total	12.94	6.74	36
ERQ_Total	Yoga	33.35	6.27	17
	TAU	31.15	5.29	19
	Total	32.19	5.80	36
EmReg_Total	Yoga	32.47	5.42	17
	TAU	32.27	5.56	19
	Total	32.36	5.41	36
ERQY_Total	Yoga	33.70	4.55	17
	TAU	30.05	6.37	19
	Total	31.77	5.81	36
PSWQ_Total	Yoga	18.94	8.40	17
	TAU	17.26	7.70	19
	Total	18.05	7.97	36
Penn_Total	Yoga	18.05	8.09	17
	TAU	16.38	8.46	19
	Total	17.17	8.21	36
PSWQC_Tot al	Yoga	14.94	9.57	17
	TAU	16.15	10.24	19
	Total	15.58	9.81	36

Research Questions and Results

The research questions that guided this study were as follows:

Research Question 1: Is there a difference in emotion regulation skills after implementing a yoga-based social-emotional learning program, as measured by the Emotion Regulation

Questionnaire for Children and Adolescents (ERQ-CA) between the treatment and treatment as usual groups over time?

The *Univariate Tests* (see Table 5 and Figure 1) in the Mixed-Model ANOVA design determines if emotion regulation skills showed a significant change in either group over time. This test showed no statistically significant interaction between either group on the ERQ-CA, $F(2, 34) = 2.17, p = .121$, indicating no statistically significant change in emotion regulation over time. The *Tests of Between-Subjects Effects* (see Table 6) shows whether there was a difference between groups for each variable. For emotion regulation, there was no statistically significant difference, $F(1, 35) = 1.56, p = .220$.

Research Question 2: Is there a difference in perceived stress after implementing a yoga-based social-emotional learning program, as measured by the Perceived Stress Scale for Children (PSS-C) between the treatment and treatment as usual groups over time?

The *Univariate Tests* in the Mixed-Model ANOVA design determine if perceived stress showed a significant change in either group over time (see Figure 2). This test showed no statistically significant interaction between either group on the PSS-C, $F(2, 34) = 2.10, p = .130$, indicating no statistically significant change in perceived stress over time. The *Tests of Between-Subjects Effects* shows whether there was a difference between groups for each variable. For perceived stress, there was no statistically significant difference, $F(1, 35) = .29, p = .588$.

Research Question 3: Is there a difference in worry after implementing a yoga-based social-emotional learning program, as measured by the Penn State Worry Questionnaire for Children (PSWQ-C) between the treatment and treatment as usual groups over time?

The *Univariate Tests* in the Mixed-Model ANOVA design determines if the tendency to worry showed a statistically significant change in either group over time (see Figure 3). This test showed no statistically significant interaction between either group on the PSWQ-C, $F(2, 34) = 1.51, p = .228$, indicating no statistically significant change in worry over time. The *Tests of Between-Subjects Effects* shows whether there was a difference between groups for each variable. For worry, there was no statistically significant difference, $F(1, 35) = .06, p = .795$.

Table 5
Univariate Tests

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Time	Stress	253.530	2	126.765	7.528	.001	.181
	Emotion	4.809	2	2.404	.194	.824	.006
	Worry	120.557	2	60.279	3.639	.032	.097
Time * Group	Stress	70.937	2	35.469	2.106	.130	.058
	Emotion	54.017	2	27.008	2.175	.121	.060
	Worry	50.038	2	25.019	1.510	.228	.043

Table 6
Tests of Between-Subjects Effects

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	Stress	22202.411	1	22202.411	230.553	.000	.871
	Emotion	111425.181	1	111425.181	1591.663	.000	.979
	Worry	30960.002	1	30960.002	155.542	.000	.821
Group	Stress	28.781	1	28.781	.299	.588	.009
	Emotion	109.308	1	109.308	1.561	.220	.044
	Worry	13.625	1	13.625	.068	.795	.002
Error	Stress	3274.219	34	96.301			
	Emotion	2380.187	34	70.006			
	Worry	6767.569	34	199.046			

Figure 1
Estimated Marginal Means of Emotion

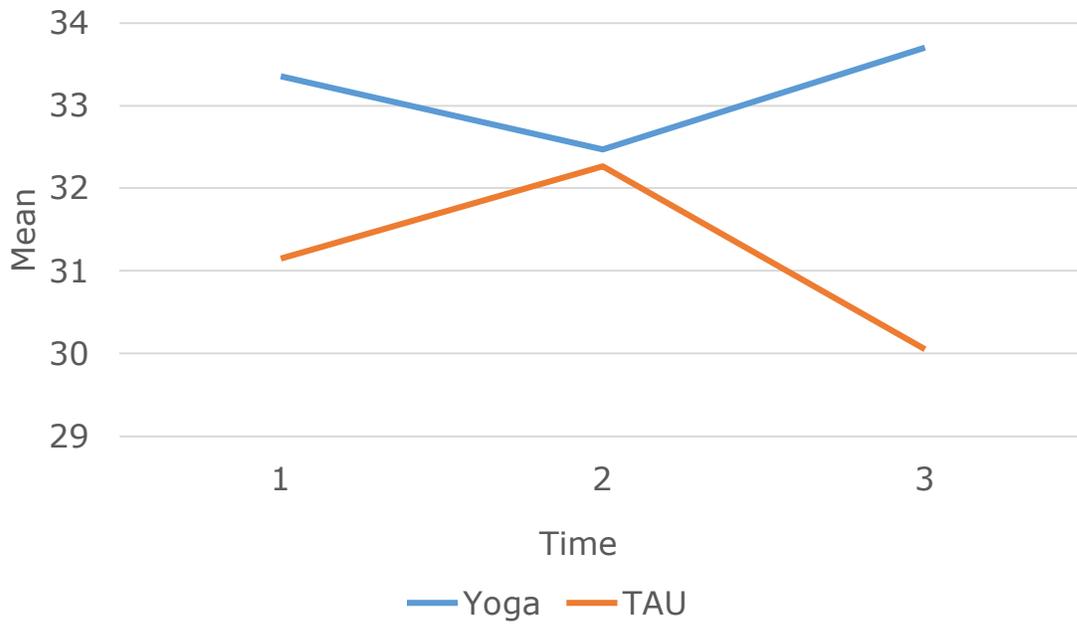


Figure 2
Estimated Marginal Means of Stress

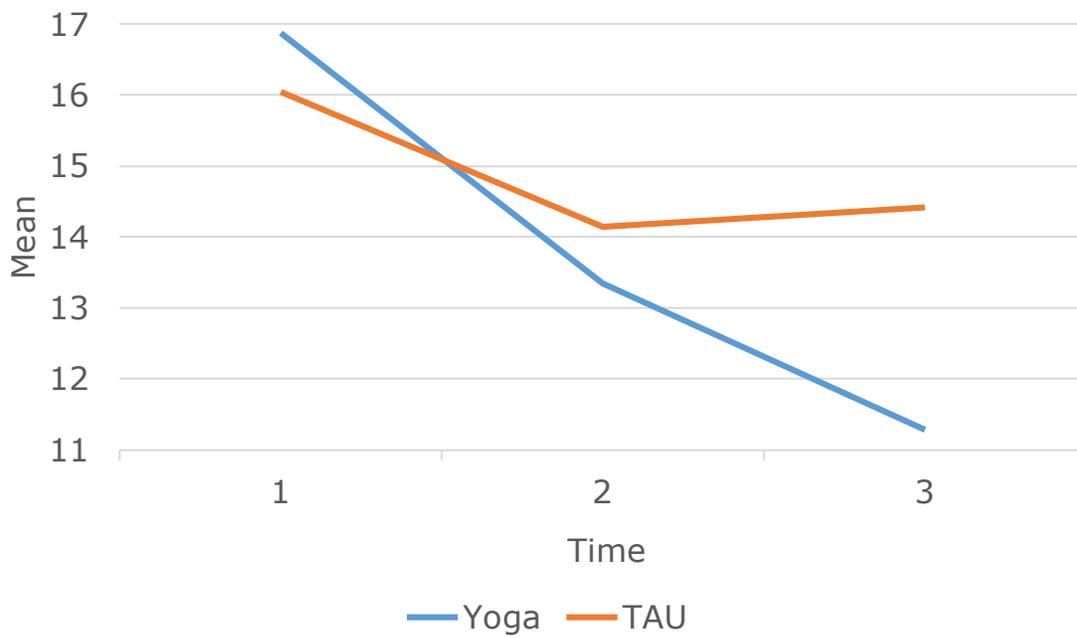
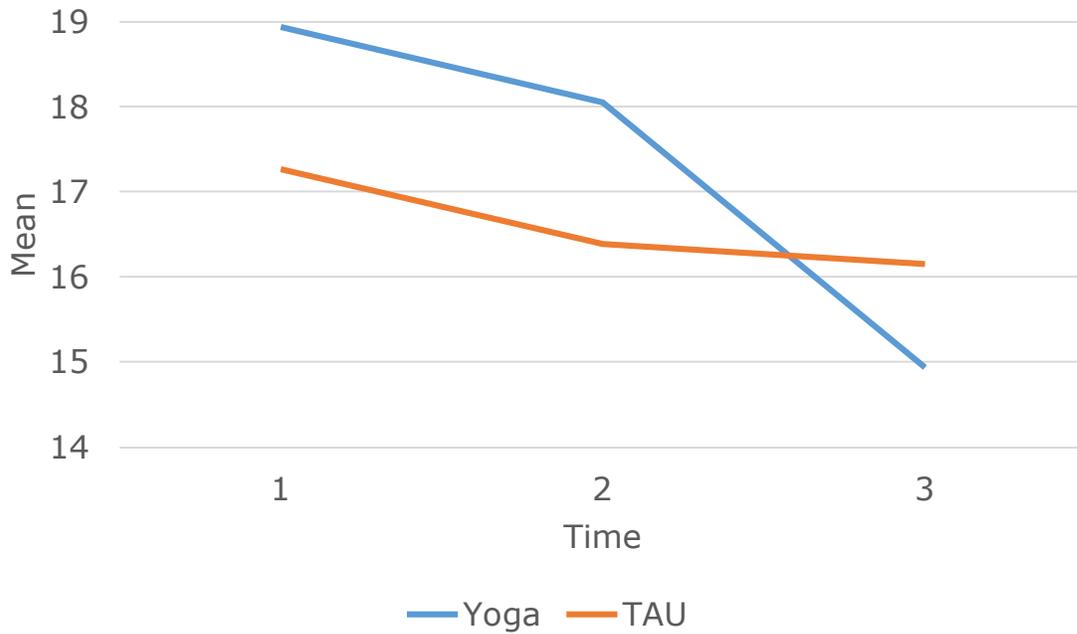


Figure 3
Estimated Marginal Means of Worry



Summary

In summary, all model assumptions were met. Improvement with either the treatment or treatment as usual groups remained non-significant over time. Though there was some additional improvement in the treatment group, there was no statistically significant difference between either the treatment group or the treatment as usual group. This applies to all three variables studied: emotion regulation, perceived stress, and worry. Any difference noted falls within the margin of error, thus warranting further study to fully determine efficacy of the curriculum.

CHAPTER V: DISCUSSION AND CONCLUSION

Summary of the Study

Children face ample stressors today, yet educational regulatory bodies tend to focus on academics, usually measured by large-scale assessments (Lenkeit & Caro, 2014). Academics, though, is only one area of growth and development. Growing social-emotional learning skills can mean helping children deal with stress, manage their emotions, show empathy for others, and increase coping skills to help deal with the challenging aspects of life (CASEL, 2019). With school districts focusing heavily on budgetary restrictions and the importance of academic growth, I sought to find a way for schools to be able to implement a social-emotional learning program, without requiring additional funding, feasibly and while taking minimal time away from teaching academics.

At first glance, the *Transformative Life Skills* curriculum was the perfect fit. This social-emotional learning program was yoga-based and heavily focused on mindfulness and building skills students could use to help build emotion regulation capabilities and cope with stress and worry. This four-unit curriculum is flexible and designed for a teacher or school counselor to be able to implement on his/her own and during a convenient time. Each section has lessons that were approximately 20-25 minutes in length. I sought to discover if the curriculum could be the perfect fit it appeared to be.

Findings

The results for perceived stress, emotion regulation, and worry all showed some improvement for both the treatment group and treatment as usual (TAU) group, none of which was enough to be statistically significant. When looking at emotion regulation, the mean score for each group did not change by more than 1 point between the first and third administration.

However, when looking at perceived stress, the treatment group had a mean score of 16.88 at baseline, when after the intervention, they had a mean of 11.29, a difference of 5.59. In contrast, the TAU group started with a baseline of 16.05 and ended with a mean score of 14.42, a difference of 1.63. The treatment group, therefore, scored an average of 3.96 points better on the final administration of the scale, despite these numbers not reaching clinical significance. To evaluate these noted score differences, I computed confidence intervals for participant scores at each data collection point. For the perceived stress measure, the 95% confidence interval for the group was 10.66 – 15.22. Because each group's post-test score fell within this range, it remains inconclusive whether this curriculum is actually effective at decreasing perceived stress among fourth and fifth grade students.

A similar event happened with the worry variable. The baseline mean for the treatment group was 18.94, and the final administration after the intervention was completed was 14.94, a difference of 4. In comparison, the TAU group started with a baseline of 17.26 and ended with a mean score of 16.15, a difference of only 1.11. However, both differences were not enough to reach clinical significance. To evaluate these noted score differences, I computed confidence intervals for participant scores at each data collection point. For the worry measure, the 95% confidence interval for the group was 12.26 – 18.90. Because each group's post-test score fell within this range, it remains inconclusive whether this curriculum is actually effective at decreasing worry among fourth and fifth grade students.

When thinking about the lack of significance, I had to consider many factors in deciding whether this study was flawed or worth replicating in the future. First, it should be remembered that only one section of the curriculum was implemented in this study, but the program does consist of four units, meaning only 25% of it was completed for this study. The decision to

utilize only one section of the program was to determine the ease of implementation and feasibility when working with elementary-aged children. Though the publisher states the curriculum could be used as low as the fourth grade, prior research has been done with older participants. Given that the treatment group showed more improvement despite only doing 25% of the curriculum leads me to believe that this curriculum is worth researching more on elementary-aged students and using the entire four-section curriculum. Also, previous research on this curriculum has been positive among older students (Frank et al., 2014; Frank et al., 2017).

It is interesting to note that the only variable that did not show improvement was the variable this portion of the curriculum was designed to improve. While it is possible this curriculum simply had higher benefits in other areas, it should also be noted that the ERQ-CA is validated for aged 10-17. This study included students that were age nine. At the time of the study, I was unaware of any other scale that was validated down to nine years of age. Information about the limitations of this scale is further detailed in the study limitations.

Overall, the intervention was well-received by teachers and parents, many of which made verbal remarks about how much their student/child was enjoying their time in the program. Formal qualitative interviews were not a part of this study, so this assumption is mostly based on anecdotal evidence, such as conversations with teachers and parents while on campus. The students appeared to enjoy the program just as much as evidenced by their excitement when I would come to campus. Despite not reaching statistical significance, scores never dropped, and students did not become worse or perform lower than their treatment as usual (TAU) counterparts. As such, it is my opinion that this curriculum is considered for further research since it was enjoyable to the students, but not yet for school district adoption. I was approached

during every campus visit by a member of the TAU group, asking when it would be his/her turn to do yoga. While this information is not reflected on the scales provided to the children, it speaks to their desire to engage and try a yoga-based program. However, I am unable to recommend program adoption to schools until further research is done, and statistically significant results are obtained.

Prior research has suggested that accessing emotion regulation skills often promotes a more positive response to perceived stress (Finlay-Jones, Rees, & Kane, 2015). This study offered conflicting results in that perceived stress showed some non-significant improvement, while emotion regulation did not result in a change. The lack of emotion regulation improvement could potentially be due to the time needed to build emotion regulation skills. The yoga-based curriculum used involved breathing exercises at the beginning and end of each lesson. A prior study by Arch and Craske (2006) found that 15-minute focused breathing exercises decreased the impact of negative emotions after completion. The effects were seen immediately, whereas emotion regulation skills (including breathing techniques) should start being taught at a young age, but will become more efficient with age (Callear, 2014; Lamm & Lewis, 2010). While this research supports the importance of teaching skills at a young age, other researchers report that older adults tend to report less stress and negative emotions than children and young adults, citing life experience and emotional maturity as a reason for this difference (Almeida, 2005; Wang & Saudino, 2011). Studies of brain development show that self-management in children can often be unbalanced due to the pre-frontal cortex not yet being fully developed until about the age of 25. As a result, it takes regular practice to be able to effectively think before acting by gaining control over behavior and emotions (Berger, 2011; Martin and Ochsner, 2016; Uytun, 2018). The developmental process of emotion regulation could explain why perceived stress and

worry showed some improvement while emotion regulation did not. If so, this concept would align with the previous research mentioned.

In contrast, there was a large, multi-year study done of over 213 social-emotional learning programs and 270,034 participants that found multiple benefits of SEL. The benefits found included higher grades and test scores, an 11th-percentile gain in academic achievement; increased social and emotional skills; positive social and classroom behavior; fewer conduct problems (classroom misbehavior and aggression); higher attitudes about themselves, others, and school; and less emotional distress and depression (Conley, Durlak, & Kirsch, 2015; Durlak et al., 2011). This meta-analysis studied the following variables: social and emotional skills, attitudes toward self and others, positive social behaviors, conduct problems, emotional distress, and academic performance. It did not study emotion regulation as a separate variable, but rather, looked at related variables and other areas of social-emotional learning (Durlak et al., 2011).

Limitations

I anticipated a lack of diversity in this primarily Hispanic area. This assumption held. Of 36 participants, 30 were Hispanic, three were African American, two were Asian, and only one was Caucasian. Having a predominately Hispanic sample size makes generalizing results a challenge. The validity of a study must involve more than proper controls and the ability to replicate. It also involves making decisions regarding who and what to study. In the fields of education and social sciences, all ethnicities are being treated therefore all ethnicities should be reflected in research in order to ensure adequate representation. There is no reason to believe that all approaches to learning are universal, and sometimes studying other cultures can provide different information and perspectives in research (Medin & Lee, 2012). Additional research with more diversity would be needed.

Similarly, since existing research took place using older students (Frank et al., 2014; Frank et al., 2017), more research would be necessary to evaluate the publishers' claims that this curriculum could be useful with elementary-aged children. Also, some elementary schools include sixth-grade students. Since the school used for this study no longer offers sixth grade, this study was limited to fourth and fifth-grade students.

I had anticipated some limitations in using self-report scales, as well as these specific scales as the ERQ-CA is validated for ages 10-17. This study included 15 students that were nine years of age. At the time of the study, I was unaware of any other self-report scale that was validated down to a younger age. To further analyze the impact this may have had on the emotion regulation results, I separated the scores for all three data collections of the ERQ-CA and found that the mean scores of the participants who were nine were very similar to the mean of the participants who were 10 ($M = 31.6$ and 32.2 respectively) on the first administration. Scores remained within two points of each other on all administrations. As a result, I do not suspect the young age of participants to have much of an impact.

Some general limitations with self-report scales might include students being too embarrassed to share actual answers or feeling as though they need to answer in a way other than the truth. Students could also exaggerate their initial responses by underreporting severity or frequency of questions asked, not being aware (or unwilling to admit) there are concerns with their ability to control their emotions. The same could be said for the opposite, which may include students exaggerating their responses to make things seem worse than the reality. It would be a challenge to know if any of these self-report limitations came to fruition.

I noticed that some of the students were confused with some of the reverse-coding questions. Some students asked for clarification on these questions, but it would be challenging

to know if the others thought they understood but did not, or if they were unwilling to ask for clarification. I speculate that some of this could be eliminated if questions were read aloud to students, instead of giving them the scale and asking for it to be turned in upon completion; however, this was never done so this cannot be confirmed.

The setting at which students complete the scales makes a difference as well. For example, in this study, students were completing the scales on the floor of the school gym, since the study was not completed in the classroom by the teachers. Given the young age of the students, they were often tempted to play, spin around on the floor, roll their pens, or engage in other distractions. Implementing some form of order and structure felt counterproductive to a mindful, yoga-based setting. I was left wondering if similar limitations would exist if the teachers were doing this curriculum on their own. Since teachers already maintain structure and discipline in the classroom, it is possible that a general sense of order would continue with this activity. Sprick (2013) stated the importance of consistency with students. Students are impacted by a lack of organization or schedule variances. The level of structure and schedule of class events should be evaluated and altered based on the age of students, maturity level, motivation level, and achievement level (Sprick, 2013). Teachers know their students best and can decide on when such a program can be fit into the day.

Teachers would also have the luxury to stop the program and do it at another time when students were calmer. However, in this study, students were removed from their classroom and brought to the gym – a location where they are used to being energetic and playing sports. Leaving the class setting it and of itself could disrupt the flow of the day, requiring several minutes to get students re-engaged and settled down. Teachers would likely be able to re-direct and engage their students much quicker since the students view them as a leader and

disciplinarian already. In contrast, I was coined “the yoga girl” by the students and subsequently had to spend some time taming the excitement of this new twist on their regularly scheduled day. Mulvahill (2016) notes some negative aspects of switching classrooms or teachers. There is less schedule flexibility throughout the day, so teachers have less freedom in the length of time spent on activities. Additionally, students are more likely to have behavior issues when having to learn a different set of rules/routines from different teachers. As a result, teachers could potentially have different and improved outcomes.

Implications for Practice

Furthering knowledge on social-emotional learning as well as the mind-body connection, is something that can benefit school faculty, students, and school counselors alike. Teachers may not be well-versed in yoga but are still capable of seeing the benefits of a program like this through increased research. Since the curriculum breaks down individual asanas (poses), previous yoga experience is not necessary. The goal is less about pose perfection and more about getting in touch with the inner self and helping children to learn ways to regulate their stressors while learning coping skills. Yoga has always been focused on grounding the body for personal insight (Aposhyan, 2004).

Implications for School Counselors

School counselors are sometimes faced with role ambiguity (Chandler et al., 2018). This is important because we know that stressors left untreated could lead to psychological conditions or mood disorders (Carter, Garber, Ciesla, & Cole, 2006; Grant et al., 2009; Roberts, Roberts, & Chan, 2009). School counselors are the mental health professionals in the school. The American School Counseling Association recommends a 250:1 ratio of students to counselors. However, the national average is currently 428:1 (Havlik, Ciarletta, & Crawford, 2019). With high case

loads and fewer working days than other jobs, school counselors need to find ways to work with children in a brief, but effective way if they are going to have an impact on the stressful events going on in schools, such as bullying, violence, or suicide.

School counselors, or any counselor in clinical practice, might consider using these concepts with the children they work with after learning some of the benefits. Counselors need to become educated to not venture outside of their scope of practice. However, counselors should also be aware that the scope of practice of what counselors can do can be expanded. Different clients will have different needs. Expanding knowledge means more ability to individualize care. In the school setting, it is known that children are facing a multitude of stressors. Not having emotion regulation skills can potentially lead to suicide (Bradley et al., 2011; CDC, 2018a; Neacsui et al., 2017), juvenile detention (Bradley et al., 2011), bullying (Committee for Children, 2012), psychiatric conditions (Butzer et al., 2016), violence, and other social issues (Bradley et al., 2011). Knowing this, counselors of all kinds should be mindful of building emotion regulation when working with any child or group of children.

Social-emotional learning programs can potentially help prevent some of these issues from occurring by developing knowledge, attitudes, and behaviors in students. Successful programs can help students learn to make friends, develop empathy, resolve conflicts, and make responsible choices when faced with stress, negativity, or adversity (Kendziora & Yoder, 2016; Weissberg, Durlak, Domitrovich, & Gullotta, 2015).

Implications for Teachers

Implementing a successful social-emotional learning program relies heavily on teacher support. In this case, the *Transformative Life Skills* curriculum is typically taught by teachers. Research shows that teachers who have positive beliefs about social-emotional learning will have

a greater openness to starting a new curriculum and teach it with a higher level of confidence (Collie, Shapka, Perry, & Martin, 2015). In a yoga-based curriculum such as this, teachers should be adequately trained or given the curriculum in advance to review. Teachers might experience hesitation to implement such a curriculum if they have little or no yoga experience. Although the curriculum does not require experience, teachers may struggle with their confidence to teach the necessary lessons.

In states/districts that are implementing social-emotional learning protocols, teachers may experience stress related to having more responsibilities and expectations. Teachers could have lower job satisfaction if they have an increase in stress. If implementing this curriculum, teachers need to be supported and ensured that they have the necessary skills to successfully teach the program (Collie et al., 2015). Another implication for teachers is the grade level of which they teach. Research shows that elementary level teachers are more likely to be open to a social-emotional learning program, whereas middle school and high school teachers are more resistant. The hesitation was due to switching classes at these age levels. Teachers have limited time with the children during each class period, leaving them with less time to build a relationship with the students as well as less time to teach a program without losing value time for their prospective subjects (Collie et al., 2015). Despite this program having lessons that only last approximately 20 minutes, teachers might struggle to find a spare 20 minutes when the students switch classes every hour or so.

Implications for School Administration

School administrators split focus on several important issues, such as budget, staff employment, test scores, discipline, emotional needs, violence, and other problems that must be thought about when managing a school. These individuals can benefit from a curriculum such as

Transformative Life Skills because it does not require any time, training, or cost to implement. However, for reasons mentioned above, teachers should be given the curriculum to review or given professional development opportunities to ensure they are comfortable teaching the material. Administration can help prevent teacher burnout and lower job satisfaction by supporting their teachers. Administrators need to be mindful that when starting a curriculum like this, the chances of success will be increased if the teachers “buy-in” to the concept and agree with the choices the administration is making (Collie et al, 2015; Melnick & Martinez, 2019).

While this study did not show that it reached statistical significance, it demonstrated improvement while being enjoyable to students without having any fiscal impact on the district. This program utilizes staff that is already in existence and therefore, additional staff contracts are not necessary. Administrators are tasked with the business aspects of running a school and as such, will need to weigh the cost to the benefit of everything a school puts into place. If a school is struggling with the budget, this curriculum is a low-cost/no-cost option that can bring social-emotional learning into schools. Research shows that even minor investments in social-emotional learning can pay off for individuals, schools, and society (Kendziora & Yoder, 2016). Given that this study did not show enough improvement to reach statistical significance, the administration should consider some of the limitations before implementing it. This research could have different results if taught by existing teachers and using the entire curriculum.

Suggestions for Future Research

This area of study, and the *Transformative Life Skills* curriculum could be further studied with other sample populations and grade levels. To further explore the potential efficacy of this curriculum, I recommend that this study be replicated with the same grade level students. It is recommended that the entire curriculum be used. The portion of the curriculum used was

emotion regulation. All areas of the program will need to be implemented to get the full effect. The other sections are stress resilience, self-awareness, and healthy relationships. Reflecting on CASEL's four competencies of social-emotional learning (growth mindset, self-efficacy, self-management, and social awareness), it is crucial to implement a complete program to increase the likelihood of touching on all areas of social-emotional learning. To further test this curriculum as compared to others, it would be ideal to have teachers put the program into their classrooms and/or school counselors to utilize as lessons, as it was designed to use existing staff. Additionally, prior studies have suggested that social-emotional competence can help to increase academic performance (Durlak, 2011; Harper, 2010; Martinsone & Damberg, 2016; McKenzie et al., 2013), but this study did not look at student grades to be able to compare. If replicated, this is a variable worth looking at since the curriculum in its entirety is long enough to notice changes in grades.

The study of this curriculum may also benefit from looking at it from a qualitative perspective to learn more about the experience of the counselors or teachers who implement the program. I am a former elementary school teacher with over 20 years of experiencing with yoga and dance. As a result, I did not experience any hesitation with implementing movement into a classroom setting. The curriculum can be performed by teachers or counselors (Bidyut et al., 2017), so it would be interesting to learn more about the ease and feasibility of implementation (or lack thereof) by teachers or counselors who may not have any experience working with yoga or mindfulness. A phenomenological design can help understand the experience of the teachers or counselors that are teaching the curriculum. It may also be interesting to examine the phenomenological design from the perspective of the students. In this study, anecdotal evidence was presented regarding how much the children enjoyed the program. The formal interview

could confirm that along with pulling out themes as to what the students took away from the experience, further detailing if the curriculum was impactful for reasons other than enjoyment.

Lastly, the original plan of the study was to utilize the emotion regulation curriculum and the ERQ-CA to test pre-test/post-test efficacy. During the dissertation proposal, it was suggested by the committee that I examine additional variables. When altering the study to include three data points instead of two, as well as three variables instead of one, the sample size remained the same. If replicating this exact study, additional participants should be used to ensure high powered efficacy. Finding a larger school with more potential participants and an increase in diversity would help provide a more accurate depiction of the effectiveness of this curriculum. This experimental study should be viewed as a starting point for a broader range of research.

Summary

Schools might prefer to focus on academics, but given the high rates of violence, bullying, suicide, and psychiatric issues, some schools (and states) are choosing to adopt social-emotional learning policies as a way to teach the whole child (Payton et al., 2008). Finding a yoga-based curriculum is an ideal way to do this as yoga is inherently designed to increase mindful awareness, and mindful awareness is an established predictor of emotion regulation and coping (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Finlay-Jones, Rees, & Kane, 2015; Hayes & Feldman, 2006). For schools and states that have not yet adopted social-emotional learning skills, researching this area becomes critical to influence administrators and policymakers.

Though schools should focus on more than academics, research shows that social and emotional growth has had a positive impact on academic performance (Durlak, 2011; Martinsone & Damberg, 2016; McKenzie et al., 2013), making it a worthwhile topic for schools and school counselors to consider. More importantly, social-emotional learning can offer

benefits that can further develop over time and into later adulthood. The benefits of finding the right program that works with the budget and population of the school could have multi-faceted benefits. After considering small benefits in a short amount of time and the lack of expense, it is my opinion that this curriculum is worth of consideration and future research.

REFERENCES

- Adams, C. M., & Puig, A. (2008). Incorporating yoga into college counseling. *Journal of Creativity in Mental Health, 3*(4), 357-372. doi:10.1080/15401380802527456
- Adamson, J. (2019). Oh, the humanities! Why STEM shouldn't take precedence over the arts. *Project Humanities*. Retrieved from <https://projecthumanities.asu.edu/content/oh-humanities-why-stem-shouldnt-take-precedence-over-arts>
- Adelson, R. (2004). *Hormones, stress, and aggression – a vicious cycle*. Retrieved from <https://www.apa.org/monitor/nov04/hormones>
- Adrian, M. Zeman, J., & Veits, G. (2011). Methodological implications of the affect revolution: A 35-year review of emotion regulation assessment in children. *Journal of Experimental Child Psychology, 110*, 171-197.
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*(2), 217-237. doi:10.1016/j.cpr.2009.11.004
- Almeida, D. M. (2005). Resilience and vulnerability to daily stressors assessed via diary methods. *Current Directions in Psychological Science, 14*, 64–68.
- American Montessori Society. (2019). *History of Montessori*. Retrieved from <https://amshq.org/Montessori-Education/History-of-Montessori-Education>
- American School Counselor Association (ASCA). (2020). *ASCA National Model*. Retrieved from <https://www.schoolcounselor.org/school-counselors-members/asca-national-model>
- Aposhyan, S. (2004). *Body-mind psychotherapy: Principles, techniques, and practical applications*. New York, NY: W.W. Norton.

- Arney, M. (2014). *Dancing toward enlightenment: A theoretical exploration of mind-body-spirit and Dance/Movement therapy* (Order No. 1525428). Available from ProQuest Dissertations & Theses Global. (1535272232). Retrieved from <https://manowar.tamucc.edu/login?url=https://search.proquest.com/docview/1535272232?accountid=7084>
- Arsenio, W., Cooperman, S., & Lover, A. (2000). Affective predictors of preschoolers' aggression and peer acceptance: Direct and indirect effects. *Developmental Psychology, 36*, 438–448.
- Augustyniak, K. M., Brooks, M., Rinaldo, V. J., Bogner, R., & Hodges, S. (2009) Emotional Regulation: Considerations for School-Based Group Interventions, *The Journal for Specialists in Group Work, 34*(4), 326-350, doi:10.1080/01933920903219060
- Balzarotti, S., John, O. P., & Gross, J. J. (2010). An Italian adaptation of the Emotion Regulation Questionnaire. *European Journal of Psychological Assessment, 26*, 61–67.
doi:10.1027/1015-5759/a000000
- Balkin, R. S., & Kleist, D. M. (2017). *Counseling research: A practitioner-scholar approach*. Alexandria, VA: American Counseling Association.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W.H. Freeman.
- Basch, C. E. (2011). Healthier students are better learners: A missing link in school reforms to close the achievement gap. *Journal of School Health, 81*(10), 593-598.
doi:10.1111/j.1746-1561.2011.00632.x
- Benavides, S., & Caballero, J. (2009). Ashtanga yoga for children and adolescents for weight management and psychological wellbeing: An uncontrolled open pilot study. *Complementary Therapies in Clinical Practice, 15*, 110-114.

- Berger, A. (2011). *Self-regulation: Brain, cognition, and development* (First ed.). Washington, District of Columbia: American Psychological Association. doi:10.1037/12327-000
- Bidyut, B., Ancin, D., Frank, J., & Malik, A. (2017). Teaching transformative life skills to students: A comprehensive dynamic mindfulness curriculum: Evidence-based lessons in stress resilience, self-awareness, emotion regulation, and healthy relationships (First ed.). New York, NY: W.W. Norton & Company.
- Borkovec, T. D., Alcaine, O., & Behar, E. (2004). Avoidance theory of worry and generalized anxiety disorder. In R. G. Heimberg, C. L. Turk, & D. S. Mennin (Eds.), *Generalized anxiety disorder: Advances in research and practice* (pp. 77–108). New York, NY: Guilford Press.
- Borkovec, T. D., Robinson, E., Pruzinsky, T., & DePree, J. A. (1983). Preliminary exploration of worry: Some characteristics and processes. *Behavioral Research Therapy*, *21*, 9–16
- Bose, B., Ancin, D., Frank, J., & Malik, A. (2017). *Teaching transformative life skills to students: A comprehensive dynamic mindfulness curriculum: Evidence-based lessons in stress resilience, self-awareness, emotion regulation, and healthy relationships* (First ed.). New York, NY: W.W. Norton & Company.
- Bradley, B., Defife, J. A., Guarnaccia, C., Phifer, J., Fani, N., Ressler, K. J., & Westen, D. (2011). Emotion dysregulation and negative affect: Association with psychiatric symptoms. *The Journal of Clinical Psychiatry*, *72*(5), 685-691.
doi:10.4088/JCP.10M06409BLU
- Bradley, N., Whisenhunt, J., Adamson, N., & Kress, V. E. (2013). Creative approaches for promoting counselor self-care. *Journal of Creativity in Mental Health*, *8*(4), 456-469.
doi:10.1080/15401383.2013.844656

- Brandstaetter, H. (2014). *Yoga generates huge benefits for children with autism*. Retrieved from <https://yogainternational.com/article/view/yoga-generates-huge-benefits-for-children-with-autism>
- Bremer, A. (2015). Fuel for learning: Impact of a mindfulness, yoga, and nutritional program on social-emotional skills and behavioral risk factors. (Doctoral Dissertation). Ohio State University, Columbus, OH.
- Breslau, J. (2010, March). *Health in childhood and adolescence and high school dropout: California dropout research project #17*. University of California, Santa Barbara. Retrieved from <http://cdrp.ucsb.edu/dropouts/download.php?file=researchreport17.pdf>
- Bridges, L., & Sharma, M. (2017). *The efficacy of yoga as a form of treatment for depression*. Los Angeles, CA: Sage Publications. doi:10.1177/2156587217715927
- Bunford, N., Evans, S. W., & Wymbs, F. (2015). ADHD and emotion dysregulation among children and adolescents. *Clinical Child and Family Psychology Review, 18*(3), 185-217. doi:10.1007/s10567-015-0187-5
- Busch, C. (2007). It's cool to be grounded. *Yoga Journal, 17*(5), 94-99.
- Butler, L. D., Waelde, L. C., Hastings, T. A., Chen, X-H., Symons, B., Marshall, A., . . . Spiegel, D. (2008). Meditation with yoga, group therapy with hypnosis, and psycho-education for long-term depressed mood: A randomized pilot trial. *Journal of Clinical Psychology, 64*, 86–820. doi:10.1002/jclp.20496
- Butzer, B., Bury, D., Telles, S., & Khalsa, S. B. S. (2016). Implementing yoga within the school curriculum: A scientific rationale for improving social-emotional learning and positive student outcomes. *Journal of Children's Services, 11*(1), 3-24. doi:10.1108/JCS-10-2014-0044

- Butzer, B., van Over, M., Noggle J.J., & Khalsa, S. B. S. (2015). Yoga may mitigate decreases in high school grades. *Evidence-Based Complementary and Alternative Medicine*, 1-8.
- Calkins, S. D., Graziano, P. A., & Keane, S. P. (2007). Cardiac vagal regulation differentiates among children at risk for behavior problems. *Biological Psychology*, 74, 144-153.
- Callaar, A. D. (2014). *Children's Emotion Regulation Inventory (ChERI): Measure development, item domains, and summary profiles*. (Doctoral Dissertation). Massey University, Palmerston North, New Zealand.
- Campbell-Sills, L. & Barlow, D. H. (2007). Incorporating emotion regulation into conceptualizations and treatments of anxiety and mood disorders. In J. J. Gross (Ed.), *Handbook of Emotion Regulation* (pp. 542-559). New York, NY: Guilford Press
- Campos, J.J., Campos, R.G., & Barrett, K. C., (1989). Emergent themes in the study of emotional development and emotion regulation. *Developmental Psychology*, 25(3), 394-402.
- Carter, J. S., Garber, J., Ciesla, J. A., and Cole, D. A. (2006). Modeling relations between hassles and internalizing and externalizing symptoms in adolescents: A four-year prospective study. *Journal of Abnormal Psychology*, 115(3), 428-442.
- Centers for Disease Control and Prevention. (2018). *About School Violence*. Retrieved from <https://www.cdc.gov/violenceprevention/youthviolence/schoolviolence/index.html>
- Centers for Disease Control and Prevention. (2014). *The relationship between bullying and suicide: What we know and what it means for schools*. Retrieved from <https://www.cdc.gov/violenceprevention/pdf/bullying-suicide-translation-final-a.pdf>
- Centers for Disease Control and Prevention. (2018a). *Youth risk behavior surveillance*. Retrieved from <https://www.cdc.gov/healthyyouth/data/yrbs/index.htm>

- Chandler, J. W., Burnham, J. J., Riechel, M. E. K., Dahir, C. A., Stone, C. B., Oliver, D. F., . . . Bledsoe, K. G. (2018). Assessing the counseling and non-counseling roles of school counselors. *Journal of School Counseling, 16*(7)
- Chorpita, B. F., Tracey, S. A., Brown, T. A., Collica, T. J., & Barlow, D. H. (1997). Assessment of worry in children and adolescents: An adaptation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy, 35*(6), 569-581. doi:10.1016/S0005-7967(96)00116-7
- Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Burlington, VT: Elsevier Science.
- Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development, 75*, 317–333.
- Collaborative for Academic, Social, and Emotional Learning (CASEL) (2019). *What is SEL?* Retrieved from <https://casel.org/what-is-sel/>
- Collie, R. J., Shapka, J. D., Perry, N. E., & Martin, A. J. (2015). Teachers' beliefs about social-emotional learning: Identifying teacher profiles and their relations with job stress and satisfaction. *Learning and Instruction, 39*, 148-157. doi:10.1016/j.learninstruc.2015.06.002
- Committee for Children. (2019). *Bullying Prevention in the Technology Age*. In *Bullying Prevention in the Technology Age*. (n.d.). Retrieved from <https://www.cfchildren.org/policy-advocacy/bullying-prevention-in-the-technology-age/>

- Committee for Children. (2012). *Bullying prevention in schools starts with social-emotional learning*. Retrieved from <https://www.cfchildren.org/wp-content/uploads/programs/docs/sel-bullying-paper.pdf>
- Compas, B., Jaser, S., Bettis, A., Watson, K., Gruhn, M., Dunbar, J., . . . Thigpen, J. (2017). Coping, emotion regulation, and psychopathology in childhood and adolescence: A meta-analysis and narrative review. *Psychological Bulletin, 143*(9), 939-991. doi:10.1037/bul0000110
- Cope, S. (1999). *Yoga and the quest for the true self*. New York, NY: Bantam Books.
- Copeland, W., Shanahan, L., Costello, E. J., & Angold, A. (2011). Cumulative prevalence of psychiatric disorders by young adulthood: A prospective cohort analysis from the great smoky mountains study. *Journal of the American Academy of Child & Adolescent Psychiatry, 50*(3), 252-261. doi:10.1016/j.jaac.2010.12.014
- Curry School of Education at the University of Virginia. (2018). *School Violence Myths*. Retrieved from <https://curry.virginia.edu/faculty-research/centers-labs-projects/research-labs/youth-violence-project/violence-schools-and-5>
- Daly, L. A. (2015). *Yoga and emotion regulation in high school students: The internal relationship*. (Doctoral Dissertation). Long Island University, Long Island, NY.
- Dan-Glauser, E. S., & Gross, J. J. (2011). The temporal dynamics of two response-focused forms of emotion regulation: Experiential, expressive, and autonomic consequences: Temporal dynamics of emotion regulation. *Psychophysiology, 48*(9), 1309-1322. doi:10.1111/j.1469-8986.2011.01191.x
- de Manincor, M., Bensoussan, A., Smith, C., Fahey, P., & Bouchier, S. (2015). Establishing key components of yoga interventions for reducing depression and anxiety, and improving

- well-being: A delphi method study. *BMC Complementary and Alternative Medicine*, 15(1), 85. doi:10.1186/s12906-015-0614-7
- DeSteno, D., Gross, J., & Kubzansky, L. (2013). Affective science and health: The importance of emotion and emotion regulation. *Health Psychology*, 32(5), 474-486.
doi:10.1037/a0030259
- Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York: The Macmillan Company.
- Donovan, C. L., Holmes, M. C., Farrell, L. J., & Hearn, C. S. (2017). Thinking about worry: Investigation of the cognitive components of worry in children. *Journal of Affective Disorders*, 208, 230-237. doi:10.1016/j.jad.2016.09.061
- Durlak, J. (2011). Study: Promoting students' personal and social development boosts academic outcomes, a guest blog by Joseph Durlak. San Rafael: Edutopia
<https://www.edutopia.org/blog/social-emotional-learning-learning-boostsacademic-outcomes-joseph-durlak>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82, 405-432.
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.
- Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J., . . . Chyen, D. (2010, June). Youth risk behavior surveillance - United States, 2009. *Morbidity and Mortality Weekly Report*, 59(SS-5). Retrieved from <http://www.cdc.gov/mmwr/pdf/ss/ss5905.pdf>
- Edutopia. (2011). *Social and emotional learning: A short history*. Retrieved from Edutopia:
<http://www.edutopia.org/social-emotional-learning-history>

- Eysenck, M. W., Derakshan, N., Santos, R., & Calvo, M. G. (2007). Anxiety and cognitive performance: Attentional control theory. *Emotion (Washington, D. C.)*, 7(2), 336–353
- Feuerstein, G. (2011). *The Encyclopedia of Yoga and Tantra*. Boston, MA: Shambhala Publications.
- Field, A. P. (2018). *Discovering statistics using IBM SPSS statistics* (5th, North American ed.). Thousand Oaks, CA: Sage.
- Finlay-Jones, A., Rees, C., & Kane, R. (2015). Self-compassion, emotion regulation and stress among Australian psychologists: Testing an emotion regulation model of self-compassion using structural equation modeling. *Plos One*, 10(7), e0133481.
doi:10.1371/journal.pone.0133481
- Frank, J. L., Bose, B., & Schrobenhauser-Clonan, A. (2014). Effectiveness of a school-based yoga program on adolescent mental health, stress coping strategies, and attitudes toward violence: findings from a high-risk sample. *Journal of Applied School Psychology*, 30(1), 29-49.
- Frank, J. L., Koehler, K., Peal, A., & Bose, B. (2017). Effectiveness of a school-based yoga program on adolescent mental health and school performance: Findings from a randomized controlled trial. *Mindfulness*, 8, 544-553. doi:10.1007/s12671-016-0628-3
- Froeliger BE, Garland EL, Modlin LA, McClernon FJ. (2012). Neurocognitive correlates of the effects of yoga meditation practice on emotion and cognition: a pilot study. *Frontiers in Integrative Neuroscience*, 6, 48. doi:10.3389/fnint.2012.00048
- Grant, K. E., McMahon, S. D., Dufy, S., Taylor, J. J., Compas, B. E., and Piscitelli, R. (2009). “Stressors and mental health problems in childhood and adolescents.” In Contrada, R. J.

- & Baum, A. (Eds), *The handbook of stress science: Biology, psychology, and health*. Springer: New York, NY, pp. 359-372.
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1), 41-54. doi:10.1023/B:JOBA.0000007455.08539.94
- Grensman, A., Acharya, B. D., Wändell, P., Nilsson, G. H., Falkenberg, T., Sundin, Ö., . . . Avdelningen för psykologi. (2018). Effect of traditional yoga, mindfulness-based cognitive therapy, and cognitive behavioral therapy, on health-related quality of life: A randomized controlled trial on patients on sick leave because of burnout. *BMC Complementary and Alternative Medicine*, 18(1), 80. doi:10.1186/s12906-018-2141-9
- Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, 26(1), 1-26. doi:10.1080/1047840X.2014.940781
- Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362
- Gullone, E., & Taffe, J. (2012). The Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA): A Psychometric Evaluation. *Psychological Assessment*, 24(2), 409-417. doi:10.1037/a0025777
- Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). Thousand Oaks, CA: Sage
- Hanna, F. J., Wilkinson, B. D., & Givens, J. (2017). Recovering the original phenomenological research method: An exploration of Husserl, yoga, Buddhism, and new frontiers in

- humanistic counseling. *The Journal of Humanistic Counseling*, 56(2), 144-162.
doi:10.1002/johc.12049
- Harper, J. C. (2010). Teaching yoga in urban elementary schools. *International Journal of Yoga Therapy*, 20(1), 99-109.
- Harris, L., Chelminski, I., Dalrymple, K., Morgan, T., & Zimmerman, M. (2018). Suicide attempts and emotion regulation in psychiatric outpatients. *Journal of Affective Disorders*, 232, 300-304. doi:10.1016/j.jad.2018.02.054
- Hasking P.A., Coric, S.J., Swannell, S., Martin, G., Thompson, H.K., & Frost, A.D.J. (2010). Emotion regulation and coping as moderators in the relationship between personality and self-injury. *Journal of Adolescence*, 33:767-773.
- Havlik, S., Ciarletta, M., & Crawford, E. (2019). "If we Don't define our roles, someone else will": Professional advocacy in school counseling. *Professional School Counseling*, 22(1), 2156759. doi:10.1177/2156759X19848331.
- Hayes, A., & Feldman, G. (2006). Clarifying the construct of mindfulness in the context of emotion regulation and the process of change in therapy. *Clinical Psychology-Science and Practice*, 11(3), 255-262. doi:10.1093/clipsy/bph080
- Hesse-Biber, S. & Leavy, P. (2011). *The practice of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.
- Holodynski, M., & Friedlmeier, W. (2006). *Development of emotions and emotion regulation*. Berlin, Germany: Springer-Verlag.
- Hyde, A. M. (2012). The yoga in schools movement: Using standards for educating the whole child and making space for teacher self-care. In J. A. Gorlewski, B. Porfilio, & D. A. Gorlewski (Eds.), *Using standards and high-stakes testing for students: Exploiting power*

- with critical pedagogy* (pp. 108-126). New York, NY: Peter Lang.
- Iyengar, B. K. S. (2014). *Yoga: The path to holistic health*. Dorling Kindersley.
- Jackson, C. K., Wigger, C., Xiong, H. (2018). *Do school spending cuts matter? Evidence from the great recession*. Retrieved from <https://www.nber.org/papers/w24203.pdf>
- Johnson, R. (2014). Somatic psychotherapy and research: Walking the common ground. *Body, Movement and Dance in Psychotherapy*, 9(2), 82-92.
doi:10.1080/17432979.2014.893449
- Justice Policy Institute. (2014). *Sticker shock: Calculating the full price tag for youth incarceration*. Retrieved from
http://www.justicepolicy.org/uploads/justicepolicy/documents/sticker_shock_final_v2.Kh
- Juvenile Jurisdiction Advisory Committee. (2019). *Juvenile Age Interim Report*. Retrieved from
<http://pulse.ncpolicywatch.org/wp-content/uploads/2019/01/JJAC-report.pdf>
- Kenziora, K. & Yoder, N. (2016). *When districts support and integrate social and emotional learning (SEL): Findings from an ongoing evaluation of districtwide implementation of SEL*. American Institutes for Research. Retrieved from <https://casel.org/wp-content/uploads/2017/04/When-Districts-Support-SEL-Brief.pdf>
- Khalsa, S. S. & Butzer, B. (2016). Yoga in school settings: A research review. *Annals of the New York Academy of Sciences*, 1373, 45-55. doi:10.1111/nyas.13025
- Koenig, K. P., Buckley-Reen, A., & Garg, S. (2012). Efficacy of the *Get Ready to Learn* yoga program among children with autism spectrum disorders: A pretest-posttest control group design. *American Journal of Occupational Therapy*, 66(5), 538-546.

- Konishi, C., & Hymel, S. (2009). Bullying and stress in early adolescence: The role of coping and social support. *The Journal of Early Adolescence, 29*(3), 333-356.
doi:10.1177/0272431608320126
- Lamm, B. & Keller, H. (2007). Understanding cultural models of parenting: The role of intracultural variation and response style. *Journal of Cross-Cultural Psychology, 38*(1), 50-57.
- Lauermann, F., Eccles, J. S., & Pekrun, R. (2017). Why do children worry about their academic achievement? An expectancy-value perspective on elementary students' worries about their mathematics and reading performance. *ZDM: The International Journal on Mathematics Education, 49*(3), 339-354. doi:10.1007/s11858-017-0832-1
- Lazarus, R.S. (1982). Thought on the relation between emotion and cognition. *American Psychologist, 37*, 1019-1024.
- Leachman, M., Masterson, K., & Figueroa, E. (2017). *A punishing decade for school funding*. Retrieved from <https://www.cbpp.org/sites/default/files/atoms/files/11-29-17sfp.pdf>
- Lenkeit, J., & Caro, D. H. (2014). Performance status and change - measuring education system effectiveness with data from PISA 2000-2009. *Educational Research and Evaluation, 20*(2), 146-174. doi:10.1080/13803611.2014.891462
- Lewis, E. J., Yoon, K. L., & Joormann, J. (2018). Emotion regulation and biological stress responding: Associations with worry, rumination, and reappraisal. *Cognition and Emotion, 32*(7), 1487-1498. doi:10.1080/02699931.2017.1310088
- Longe, J. L. (2012). *The gale encyclopedia of fitness*. Boston, MA: Cengage Learning.
- Lund Research. (2018). Mixed ANOVA using SPSS Statistics. Retrieved from <https://statistics.laerd.com/spss-tutorials/mixed-anova-using-spss-statistics.php>

- Martin, R. E., & Ochsner, K. N. (2016). The neuroscience of emotion regulation development: Implications for education. *Current Opinion in Behavioral Sciences*, 10, 142-148.
doi:10.1016/j.cobeha.2016.06.006
- Martinsone, B. & Damberg, I. (2016). Qualitative analysis of teachers' written self-reflections after implementation of a social-emotional learning program in Latvia. *International Journal of School & Educational Psychology*, 5(4), 215-225.
Doi:10.1080/21683603.2016.1225236
- Mathur, B. (2015). Changing perception makes yoga easier for non-hindus too. *The Times of India* Retrieved from
<https://manowar.tamucc.edu/login?url=https://search.proquest.com/docview/1689675890?accountid=7084>
- May, R. (2009). *Man's search for himself*. New York: W. W. Norton & Company.
- McKenzie, J., French, S., O'Connor, D., Mortimer, D., Browning, C., Russell, G., . . . IRIS trial group. (2013). Evidence-based care of older people with suspected cognitive impairment in general practice: Protocol for the IRIS cluster randomised trial. *Implementation Science*, 8(1), 91-91. doi:10.1186/1748-5908-8-91
- Medin, D. L. & Lee, C. D. (2012). Diversity makes better science. *Association for Psychological Science*. Retrieved from <https://www.psychologicalscience.org/observer/diversity-makes-better-science>
- Melnick, H. & Martinez, L. (2019). *Preparing teachers to support social and emotional learning*. Retrieved from <https://learningpolicyinstitute.org/product/social-and-emotional-learning-case-study-san-jose-state-report>

- Meyer, T. J., Miller, M. L., Metzger, R. L., & Borkovec, T. D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy*, 28(6), 487-495. doi:10.1016/0005-7967(90)90135-6
- Mulvahill, E. (2016). *Should elementary schools departmentalize? We look at the pros and cons*. Retrieved from <https://www.weareteachers.com/should-elementary-schools-departmentalize-we-look-at-the-pros-and-cons/>
- Muris, P., Meesters, C., & Gobel, M. (2001). Reliability, validity, and normative data of the Penn State Worry Questionnaire in 8–12-yr-old children. *Journal of Behavior Therapy and Experimental Psychiatry*, 32(2), 63-72. doi:10.1016/S0005-7916(01)00022-2
- Narasimhan L, Nagarathna R, Nagendra H. Effect of integrated yogic practices on positive and negative emotions in healthy adults. *International Journal of Yoga*. 2011;4(1):13–9
- National Center for Education Statistics. (2016). Indicators of School Crime and Safety: 2016. U.S. Department of Education. Retrieved from <https://nces.ed.gov/fastfacts/display.asp?id=719>
- Neacsiu, A. D., Fang, C. M., Rodriguez, M., & Rosenthal, M. Z. (2017). Suicidal Behavior and Problems with Emotion Regulation. *Suicide and Life-Threatening Behavior*, 48(1), 52-74. doi:10.1111/sltb.12335
- Neiman, B. (2015). *Mindfulness & yoga skills for children and adolescents: 115 activities for trauma, self-regulation, special needs & anxiety*. Eau Claire, WI: PESI Inc.
- Neudert, M., Stark, R., Kress, L., & Hermann, A. (2017). Trait worry and neural correlates of emotion regulation. *Zeitschrift Fur Psychologie-Journal of Psychology*, 225(3), 214-222. doi:10.1027/2151-2604/a000305

- Newlyn, E. (2018). *The eight limbs of yoga explained*. EkhartYoga. Retrieved from <https://www.ekhartyoga.com/articles/philosophy/the-8-limbs-of-yoga-explained>
- Nicol, A. A. M., Pexman, P. M., & American Psychological Association. (2010). *Presenting your findings: A practical guide for creating tables* (6th ed.). Washington, DC: American Psychological Association.
- Nichols, L. M. (2015). The use of mind-body practices in counseling: A grounded theory study. *Journal of Mental Health Counseling, 37*(1), 28-46.
doi:10.17744/mehc.37.1.v432446211272p4r
- Office of Juvenile Justice. (2018). *Statistics*. Retrieved from <https://www.ojjdp.gov/ojstatbb/default.asp>
- Pandurangi, A. K., Keshavan, M. S., Ganapathy, V., & Gangadhar, B. N. (2017). Yoga: Past and present. *American Journal of Psychiatry, 174*(1), 16-17.
doi:10.1176/appi.ajp.2016.16080853
- Patwardhan, A. R. (2017). Yoga research and public health: Is research aligned with the stakeholders' needs? *Journal of Primary Care & Community Health, 8*(1), 31-36.
doi:10.1177/2150131916664682
- Payton, J., Weissberg, R. P., Durlak, J. A., Dymnicki, A. B., Taylor, R. D., Schellinger, K. B., Pachan, M. (2008). *The positive impact of social and emotional learning for kindergarten to eighth-grade students: Findings from three scientific reviews*. Collaborative for Academic, Social, and Emotional Learning.
- Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist, 37*, 91–105.

- Pelham, B. W. (2013). *Intermediate statistics: A conceptual course*. Thousand Oaks, CA: Sage.
- Phillips A.C. (2013) *Perceived Stress*. In: Gellman M.D., Turner J.R. (eds) *Encyclopedia of Behavioral Medicine*. New York, NY: Springer.
- Pisani, A. R., Wyman, P. A., Petrova, M., Schmeelk-Cone, K., Goldston, D. B., Xia, Y., & Gould, M. S. (2013). Emotion regulation difficulties, Youth–Adult relationships, and suicide attempts among high school students in underserved communities. *Journal of Youth and Adolescence*, 42(6), 807-820. doi:10.1007/s10964-012-9884-2
- Positive and Negative Beliefs About Worry. (2017). Retrieved from https://thinkcbt.com/images/Downloads/Cognitive_Change_Resources/POSITIVE-AND-NEGATIVE-BELIEFS-ABOUT-WORRY-THINK-CBT-V-16.08.17.pdf
- Ratner, J. (2019). Rollo may and the search for being: Implications of may's thought for contemporary existential-humanistic psychotherapy. *Journal of Humanistic Psychology*, 59(2), 252-268. doi:10.1177/0022167815613880
- Robertson, T., Daffern, M., & Bucks, R. S. (2011;2012;). Emotion regulation and aggression. *Aggression and Violent Behavior*, 17(1), 72-82. doi:10.1016/j.avb.2011.09.006
- Roberts, R. E., Roberts, C. R., & Chan, W. (2009). One-year incidence of psychiatric disorders and associated risk factors among adolescents in the community. *Journal of Child Psychology, Psychiatry, and Allied Disciplines*, 50(4), 405-415. doi: 10.1111/j.1469-7610.2008.01969.x.
- Rolston, A., & Lloyd-Richardson. (n.d). *What is emotion regulation and how do we do it?* Cornell Research Program on Self-Injury and Recovery. Retrieved from <http://selfinjury.bctr.cornell.edu/perch/resources/what-is-emotion-regulationsinfo-brief.pdf>

- Sagui-Henson S.J. (2017) *Cognitive Avoidance*. In: Zeigler-Hill V., Shackelford T. (eds) *Encyclopedia of Personality and Individual Differences*. New York, NY: Springer, Cham
- Salters-Pedneault, K., Roemer, L., Tull, M. T., Rucker, L., & Mennin, D. S. (2006). Evidence of broad deficits in emotion regulation associated with chronic worry and generalized anxiety disorder. *Cognitive Therapy and Research*, 30(4), 469-480. doi:10.1007/s10608-006-9055-4
- Schacter, S., & Singer, J.E. (1962). Cognitive, social and physiological determinants of emotional state. *Psychological Review*, 69, 379-399
- Schonfeld, D., Adams, R., Fredstrom, B., Weissberg, R., Gilman, R., Voyce, C., . . . Speese-Linehan, D. (2015). Cluster-randomized trial demonstrating impact on academic achievement of elementary social-emotional learning. *School Psychology Quarterly*, 30(3), 406-420. doi:10.1037/spq0000099
- Schure, M. B., Christopher, J., & Christopher, S. (2008). Mind–Body medicine and the art of Self-Care: Teaching mindfulness to counseling students through yoga, meditation, and qigong. *Journal of Counseling & Development*, 86(1), 47-56. doi:10.1002/j.1556-6678.2008.tb00625.x
- Seifer, R., Gouley, K., Miller, A. L., & Zakriski, A. (2004). Implementation of the PATHS curriculum in an urban elementary school. *Early Education and Development*, 15, 471–486. doi:10.1207/s15566935eed1504_6
- Simpkins, A. M., & Simpkins, C. A. (2011). *Meditation and yoga in psychotherapy: Techniques for clinical practice*. Hoboken, N.J: John Wiley.
- Smith, M. L. (1991). Put to the Test: The Effects of External Testing on Teachers. *Educational Researcher*, 20(5), 8–11. doi:10.3102/0013189X020005008

- Southam-Gerow, M. A., & Kendall, P. C. (2002). Emotion regulation and understanding: Implications for child psychopathology and therapy. *Clinical Psychology Review, 22*(2), 189-222. doi:10.1016/S0272-7358(01)00087-3
- Sprick, R. S. (2013). *Discipline in the secondary classroom: A positive approach to behavior management* (3rd ed.). San Francisco, CA: Jossey-Bass.
- Stansbury, K., & Gunnar, M. R. (1994). Adrenocortical activity and emotion regulation. *Monographs of the Society for Research in Child Development, 59*(2–3), 108–134
- Steiner, C. (2003). *Emotional literacy: Intelligence with a heart*. Fawnskin, CA: Personhood Press.
- Taylor, J. V. (2016). *The experiences of school counselors who integrate yoga into a comprehensive school counseling program: A phenomenological approach* (Doctoral dissertation). Available from ProQuest Dissertations Publishing (10145795).
- Tharaldsen, K. B. (2012). Mindful coping for adolescence: Beneficial or confusing? *Advances in School Mental Health Promotion, 5*(2), 105-124.
- Toblin, R. L., Schwartz, D., Gorman, A. H., & Abou-Ezzeddine, T. (2005). Social–cognitive and behavioral attributes of aggressive victims of bullying. *Journal of Applied Developmental Psychology, 26*(3), 329-346. doi:10.1016/j.appdev.2005.02.004
- Toscano, L. & Clemente, F. (2008). Dogs, cats, and kids: Integrating yoga into elementary physical education. *Strategies, 21*(4), 15-18.
- Uytun, M. C. (2018). “Development period of prefrontal cortex.” In Starcevic, A. & Branislav, F. (Eds), *Prefrontal Cortex*. London, England: Intech Open

- Vickery, C., & Dorjee, D. (2016). Mindfulness training in primary schools decreases negative affect and increases meta-cognition in children. *Frontiers in Psychology, 6*, 1-13. doi:10.3389/fpsyg.2015.02025
- Vohs, K. D., & Baumeister, R. F. (2004). Understanding self-regulation. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 1–9). New York, NY: Guilford Press.
- Waelde, L. C., Thompson, L., & Gallagher-Thompson, D. (2004). A pilot study of a yoga and meditation intervention for dementia caregiver stress. *Journal of Clinical Psychology, 60*, 677–687. doi:10.1002/jclp.10259.
- Wallace Foundation. (2017). *How the Every Student Succeeds Act can support social and emotional learning*. Retrieved from <https://www.wallacefoundation.org/knowledge-center/Documents/Social-and-Emotional-Learning-Interventions-Under-ESSA-brief.pdf>
- Wang, M., & Saudino, K. J. (2011). Emotion regulation and stress. *Journal of Adult Development, 18*(2), 95-103. doi:10.1007/s10804-010-9114-7
- Weinberg, A. & Klonsky, E. (2009). Measurement of emotion dysregulation in adolescents. *Psychological Assessment, 21*(4), 616-621.
- Weissberg, R. P., Durlak, J. A., Domitrovich, C. E., & Gullotta, T. P. (2015). Social and emotional learning: Past, present, and future. In J. A. Durlak, C. E. Domitrovich, R. P. Weissberg, & T. P. Gullotta (Eds.), *Handbook for social and emotional learning: Research and practice* (pp. 3–19). New York, NY: Guilford Press.
- Wendler, E. (2019). Decline in school arts programs follows funding drop, but cuts aren't equally felt. *State Impact Oklahoma*. Retrieved from

<https://stateimpact.npr.org/oklahoma/2019/01/17/decline-in-school-arts-programs-follows-funding-drop-but-cuts-arent-equally-felt/>

White, B. (2014). The Perceived Stress Scale for Children: A Pilot Study in a Sample of 153 Children. *International Journal of Pediatrics and Child Health*, 2, 45-52. doi: 10.12974/2311-8687.2014.02.02.4.

Williams, S. G., Turner-Henson, A., Davis, S., & Soistmann, H. C. (2017). Relationships among perceived stress, bullying, cortisol, and depressive symptoms in ninth-grade adolescents: A pilot study. *Biological Research for Nursing*, 19(1), 65-70. doi:10.1177/1099800416656396

Yale School of Medicine (2018). *About the Comer school development program*. Retrieved from <https://medicine.yale.edu/childstudy/communitypartnerships/comer/>

YoKid. (2012). *Kid-friendly yoga philosophy*. Retrieved from <https://www.yokid.org/2012/01/kid-friendly-yoga-philosophy/>

LIST OF APPENDICES

APPENDIX	PAGE
Appendix 1: IRB Approval	101
Appendix 2: Consent/Assent Forms.....	104
Appendix 3: Scales.....	112

APPENDIX 1



**Department for Technology Services
Office of Information Systems**

CORPUS CHRISTI INDEPENDENT SCHOOL DISTRICT
2525 Belton Street, Corpus Christi, Texas 78416
Office: (361) 878-3932 Fax: (361) 878-4860
Website: www.ccisd.us

July 25, 2019

Ms. Amanda Faucher
Doctoral Student
Department of Counseling and Educational Psychology
Texas A&M University-Corpus Christi
6300 Ocean Drive, Unit 5834
Corpus Christi, TX 78412-5813

Dear Ms. Faucher:

The members of the CCISD External Research Review Committee granted you **Approval** to conduct your research entitled *The Effects of a Yoga-Based Social-Emotional Learning Program on Emotion Regulation* in Corpus Christi Independent School District.

Additionally, the **Approval** indicates that your request meets all research/evaluation and FERPA standards. In that connection, we appreciate the copy of the *IRB Proposal* from Texas A&M University-Corpus Christi, IRS NUMBER: HSRP#: [TO BE DETERMINED]. Approval Date: [TO BE DETERMINED]. We expect to receive an approved IRB Proposal when the requirements are met.

This **Approval** also allows the ECDC principal, as well as the 4th and 5th grade teachers, students and parents identified in your *Application for External Research* the option of participating in your study. No campus principal, teacher, parent, or student is required to participate in external research in CCISD. Final permission is at their discretion.

Therefore, Ms. Faucher, please contact Principal Kellye Loving, ECDC, to receive written permission to conduct your research on the *CCISD Principal Consent Form* and the *CCISD External Research Outside Researcher/Investigator Statement of Confidentiality*. Both documents may be found on our home page at www.ccisd.us on the Departments, District Support, and External Research pathway.

Only after you have received permission from Principal Loving at ECDC, may you contact the 4th and 5th grade teachers at ECDC using the *CCISD Teacher Consent Form* that must be submitted to this office prior to your investigation.

Page Two
Letter to Ms. Amanda Faucher

Additionally, this **Approval** allows the parents/guardians of the approximately 40 students identified in your *Application for External Research* the option of participating in your research. No campus parent/guardian or student is required to participate in external research in CCISD. They also choose to participate or not.

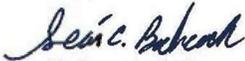
As we have indicated, parent consent and assent forms are required—sometimes in English and Spanish. We appreciate your submission of three of them, along with your application. However, please discuss the changes to them that Dr. Moynihan-McCoy discussed with Dr. Joshua Watson, Department Chair and Supervising Professor, on the phone Tuesday of this week while you were traveling in the Ukraine.

When we return to the AY2020 new school year for administrators next Monday, Dr. Moynihan-McCoy will establish a shared, hosting arrangement for you through Google Cloud so that you may submit all of the required forms and any other pertinent documents to her via the Internet making it possible for you to use unlimited data space during your study.

It is a pleasure to welcome you to the District today as a researcher as you begin your study, Ms. Faucher. At the conclusion of your work, please provide us with a copy of your research. We want to share your findings with educators across CCISD.

Should you need any additional assistance during your research, feel free to contact Dr. Toni Moynihan-McCoy at 361-878-3900, ext. 10161 and/or via email at toni.moynihan-mccoy@ccisd.us.

Sincerely,



Sean Babcock, MS
Senior Director

SB/tmm

Cc:

Roland Hernandez, Ph.D, Superintendent of Schools
Maria Luisa Guerra, Ed.D, Deputy Superintendent
Laura Monette, MS, Associate Director, Student Information Systems/
State and Federal Reporting
Toni Moynihan-McCoy, Ph.D, Administrative Officer, Information Systems
Kellye Loving, M.Ed, Principal, ECDC
Joshua Watson, Ph.D, Department Chairman, Department of
Counseling and Educational Psychology,
Texas A&M University-Corpus Christi
Rebecca Ballard, JD, MA, CIP, Director, Research Compliance and
Export Control Officer, Division of Research and Innovation,
Texas A&M University-Corpus Christi



DATE: October 29, 2019
 TO: Joshua Watson, College of Education and Human Development
 CC: Amanda Faucher, College of Education and Human Development
 FROM: Office of Research Compliance
 SUBJECT: Amendment Approval

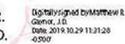
On October 29, 2019, the Texas A&M University-Corpus Christi Institutional Review Board reviewed the following submission:

Type of Review:	Amendment
Level of Review:	Expedited Category 7, Research on individual or group characteristics or behavior
Protocol Title:	The Effects of a Yoga-Based Social-Emotional Learning Program on Emotion Regulation
Investigator:	Joshua Watson
IRB ID:	71-19-A
Funding Source:	None
Documents Reviewed:	800.01 Template Dear Subject Letter 1200.02 Template Tiered Informed Permission - Assent Consent Template - Social Behavioral 1300.03 Form Amendment Submission IRB Update (5) PSSC PSSC2 PSWQ-C
Description of Change:	Study instrument change: two additional scales were added Informed consent change: informed consent was updated to reflect additional scales Advertisement/recruitment change: recruitment letter was updated to reflect additional scales

TAMU-CC IRB **approved** the amendment. **Approved changes may now be implemented.**

Please do not hesitate to contact the Office of Research Compliance with any questions at irb@tamucc.edu or 361-825-2497.

Respectfully,

Matthew R. 
 Gaynor, J.D.

Office of Research Compliance

APPENDIX 2

PERMISSION AND CONSENT TO PARTICIPATE IN A RESEARCH STUDY AT TEXAS A&M UNIVERSITY-CORPUS CHRISTI

The Effects of a Yoga-Based Social-Emotional Learning Program on Emotion Regulation

WHO IS DOING THIS STUDY?

A study team led by Dr. Joshua Watson and Amanda Faucher is doing this study.

We are asking for you and your child to be a part of this research study. Please read the information below and ask questions about anything that you do not understand before you make a choice.

WHY IS THIS STUDY BEING DONE?

The purpose of this study is to introduce a yoga-based social-emotional learning program to ECDC in hopes of finding innovative and cost-effective ways to improve emotion regulation in children. Emotion regulation is a person's ability to appropriately react to an emotional experience. Emotion regulation has been shown to help students cope with stress, something that impacts their ability to learn. Emotion regulation also impacts the prevalence of bullying, school violence, and the development of mental illness. This program will involve 12 lessons that are approximately 30 minutes in length taking place over a 4-week period.

WHO CAN BE IN THIS STUDY?

We are asking you and your child to be a part of this research study because we are looking to test this program on the fourth and fifth grades.

To be eligible to be in this study, your child must be in the fourth or fifth grade. No other requirements are needed.

WHAT WILL HAPPEN TO MY CHILD IN THIS STUDY?

Being in this study involves participating in 12 lessons from the emotion regulation portion of the *Transformative Life Skills curriculum*. If you agree to be in this study, your child will be in this study for four weeks.

If you decide to be in this study, the following things will happen to your child:

- Your child will have the opportunity to participate in a yoga-based social-emotional learning program titled, *Transformative Life Skills*. This will take place during PE time for 12 sessions over

4 weeks. Data will be collected before the start of the study as well as after the 12 sessions have been completed.

- Participation will **involve collecting information about your child**. See Appendix: Study Procedures- Collecting Information to learn more.
- Your child will be **asked to answer some questions** by filling out a questionnaire called the ERQ-CA (Emotion Regulation Questionnaire for Children and Adolescents), the Penn State Worry Questionnaire for Children (PSWQ-C), and the Perceived Stress Scale for Children (PSS-C). These questionnaires will take about 5 minutes each to complete. See Appendix: Study Procedures- Questionnaire to learn more.

WHAT ARE THE RISKS OF THE STUDY?

There are certain risks in this study. The main risk may include:

- Emotional distress during meditation: To mediate this risk, students will be able to stop and take breaks and/or drop out of the study at any time.
- There is a slight risk of loss of confidentiality. Your confidentiality will be protected to the greatest extent possible. See Appendix: Confidentiality Risks to learn how your information is protected.
 - **Results of this study may be made public. If made public, your child will not be identified in any publications or presentations.**

If you have any of these problems or changes in the way you feel about you or your child being in the study, you should tell the study team as soon as possible.

There may be risks we do not know about now. We will tell you about any new information that might change your decision to stay in the study.

WHAT ABOUT CONFIDENTIALITY?

When information collected about you and your child includes identifiers (like names, addresses, phone numbers and social security or individual taxpayer identification (ITIN) numbers), the study can involve confidential information.

A research record will be created and kept in a password-protected personal laptop. The research record may include documents that have your name, date of birth, and demographic information (age, ethnicity, gender).

By signing this consent form, you are allowing your child's identifiable information to be recorded in the research record.

All research records will be maintained in a confidential manner. We will share you or your child's information only when we must, will only share the information that is needed, and will ask anyone who receives it from us to protect your privacy.

By signing this form, **you are permitting the following people to have access to you and your child's identifiable information for the research purposes:** Dr. Joshua Watson and Amanda Faucher (PhD student).

You are also permitting your child's identifiable information to be shared with everyone listed below:

- The research team, which includes the study personnel listed on this form and other persons involved in this study at Texas A&M University, Corpus Christi;
- The Institutional Review Board;
- Government/regulatory agencies (both US and international), such as the Office for Human Research Protections the Food and Drug Administration, or international equivalent, the National Cancer Institute and/or other National Institutes of Health offices who protect human subjects and oversee the conduct of research; and

What if I do not want to allow use of my or my child's information?

You may choose not to sign this consent form and be in the study.

What if I change my mind?

You may cancel your permission to use and share your child's identifiable information at any time by contacting the study personnel. If you cancel your permission, your child may no longer participate in this study. Your child's identifiable information that has already been collected for the study may still be used; however, no new information will be collected except information related to adverse events or other safety issues.

WHAT ARE THE BENEFITS OF BEING IN THIS STUDY?

There may be no direct benefit to you or your child from being in this research study. By being in this study, may help researchers learn more about effective ways to teach emotion regulation skills to children. Yoga and social-emotional learning have been shown to have great benefits on a student's ability to regulate emotions as well as academic performance increases. The research team hopes to further research in this area as well as offer a unique and creative approach that children may or may not be familiar with and may not normally get to participate in.

WHAT ABOUT EXTRA COSTS?

Participation in this study will not result in any extra costs to you. You will not have to pay anything extra if your child participates.

WHAT WILL I RECEIVE FOR BEING IN THIS STUDY?

You will not receive any payment for participating in this study.

WHAT ARE THE ALTERNATIVES TO BEING IN THIS STUDY?

Instead of being in this study, you may choose to participate in the regular PE activities. Please note that participants will continue to participate in PE, with the exception of the 12 lessons that will be taught during the 4 weeks (3 lessons per week).

WHAT ARE MY RIGHTS AS A STUDY PARTICIPANT?

Being in a research study is voluntary. Your child does not have to be in this study. If you choose not to participate, there will be no penalty or loss of benefits to which you are otherwise entitled.

What if I change my mind?

You may withdraw from the study at any time without penalty or loss of benefits to which you are otherwise entitled.

We will inform you of any new information that develops during this study. This information may affect your decision to stay in the study. If you choose to withdraw from the study, you must tell the study team as soon as possible. See Appendix: Withdraw for more information about what to expect if you withdraw.

WHO SHOULD I CALL IF I HAVE QUESTIONS OR PROBLEMS?

Dr. Joshua Watson oversees this research study. **You may call Dr. Watson at 361-825-2739 with questions at any time during the study.**

You may also call Amanda Faucher the study coordinator, at 361-373-0473 with any questions you may have.

You may also call Texas A&M University-Corpus Christi Institutional Review Board (IRB) with questions or complaints about this study at irb@tamucc.edu or 361-825-2497. The IRB is a committee of faculty members, statisticians, researchers, community advocates, and others that ensures that a research study is ethical and that the rights of study participants are protected.

PERMISSION OF PARENT OR LEGALLY AUTHORIZED REPRESENTATIVE

The purposes, procedures, and risks of this research study have been explained to me. I have had a chance to read this form and ask questions about the study. Any questions I had have been answered to my satisfaction. A copy of this signed form will be given to me.

I agree to be in this study.

I give permission for _____ to participate in this research study.

Signature of Parent or Legally Authorized Representative

Date

ASSENT OF MINOR

I have been told what will happen to me if I am in this study. I know I do not have to be in this study. I may quit the study at any time and no one will be mad at me. I am able to ask questions. My questions have been answered. I agree to be in this research study.

Signature of Minor

Date

STUDY PERSONNEL

Any questions that have been raised have been answered to the individual's satisfaction.

Signature of Person Obtaining Consent

Date

Print Name of Person Obtaining Consent _____

Appendix: Study Participants

Up to 44 students will be asked to be in this study at Early Childhood Development Center from the 4th and 5th grades.

Appendix: Study Procedures - Collecting Information

Your participation will involve collecting information. The following information will be

- You do not have to give any information to the study that you do not want to give. By signing this form, you are authorizing the collection and use of the information outlined in this form.
- We will ask you questions about your child's demographic information (age, ethnicity, gender).
- Information above collected for this study will be shared with the research team.

Appendix: Study Procedures- Questionnaire

ERQ-CA: Your child will be asked about: ways they are able to regulate their feelings. Some questions may be embarrassing or uncomfortable to answer. Sample questions that you may be asked are:

- I keep my feelings to myself
- When I am feeling bad, I am careful not to show it.

PSWQ-C: Your child will be asked about ways they are able to regulate their worries. Some questions may be embarrassing or uncomfortable to answer. Sample questions that you may be asked are:

- I am always worrying about something
- I find it easy to stop worrying when I want

PSS-C: Your child will be asked about how often they feel stress. Some questions may be embarrassing or uncomfortable to answer. Sample questions that you may be asked are:

- In the last week, how often did you feel rushed or hurried?
- In the past week, how often did you feel you had enough friends?

You do not have to answer questions you do not want to.

Appendix: Withdraw

If you withdraw your child from the study early for any reason, the information that already has been collected will be kept in the research study and included in the data analysis. No further information will be collected for the study.

APPENDIX 3

Children's perceived stress, occupational patterns, and health_Fall_2006 BPW

Perceived Stress Scale (Children)

The following questions ask you about your feelings and thoughts during the last week. For each question you will be asked to circle the picture that best fits your answer.

Name:

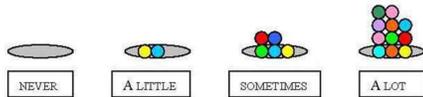
Date:

Age:

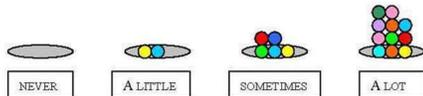
Birthday:

I am a: Boy Girl

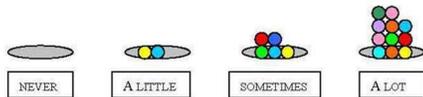
1. Which one has a lot of something?



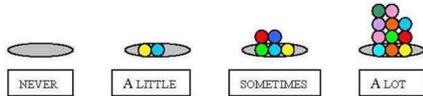
2. In the last week, how often did you feel rushed or hurried?



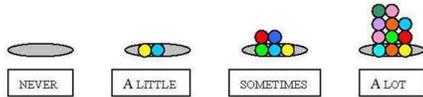
3. In the last week, how often did you have enough time to do what you wanted?



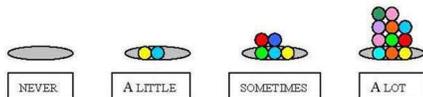
4. In the last week, how often did you feel worried about being too busy?



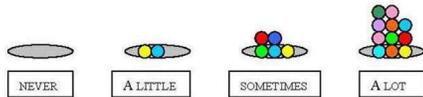
5. In the last week, how often did you feel worried about grades or school?



6. In the last week, how often did your mom and/or dad make you feel better?

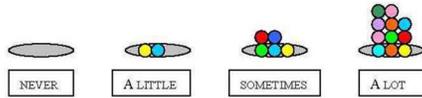


7. In the last week, how often did your mom and/or dad make you feel loved?

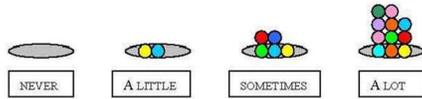


© 2006 The University of New Hampshire. All Rights Reserved.
Developed by Dr. Barbara P. White

8. In the last week, how often did you feel scared or nervous?

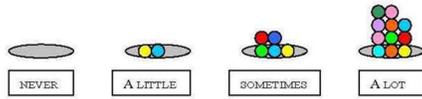


9. In the last week, how often did you feel angry?



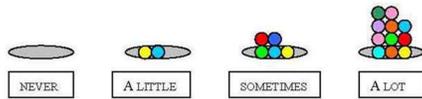
What made you angry?

10. In the last week, how often did you feel happy?

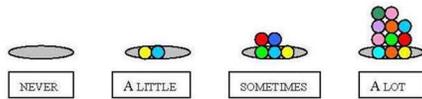


What made you happy?

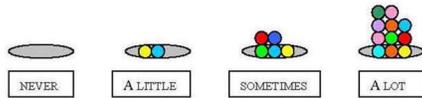
11. In the past week, how often did you get enough sleep?



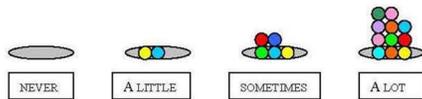
12. In the past week, how often did you have fights with your friends?



13. In the past week, how often did you play with your friends?



14. In the past week, how often did you feel that you had enough friends?



Thank You!

Emotion Regulation Questionnaire (youth)

[Adapted from Gross, J.J., & John, O.P. (2003).]

These 10 questions are about how you feel inside, and how you show your emotions/feelings. Some of the questions may seem similar to one another, but they are different in important ways.

Please read each statement, and then **circle** the choice that seems **most true for you**. Do not spend too much time on any one item. Remember, this is not a test. There are no right or wrong answers. We really want to know what you think.

1. When I want to feel happier, I think about something different.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
2. I keep my feelings to myself	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
3. When I want to feel less bad (e.g., sad, angry or worried), I think about something different.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
4. When I am feeling happy, I am careful not to show it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
5. When I'm worried about something, I make myself think about it in a way that helps me feel better.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
6. I control my feelings by not showing them	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
7. When I want to feel happier about something, I change the way I'm thinking about it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
8. I control my feelings about things by changing the way I think about them.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
9. When I'm feeling bad (e.g., sad, angry, or worried), I'm careful not to show it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
10. When I want to feel less bad (e.g., sad, angry, or worried) about something, I change the way I'm thinking about it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree

PSWQ-C

Directions. This form is about worrying. Worrying happens when you are scared about something and you think about it a lot. People sometimes worry about school, their family, their health, things coming up future, or other kinds of things. For each sentence that you read, circle the answer that best tells how true that sentence is about you.

1. My worries really bother me.	never true	sometimes true	most times true	always true
2. I don't really worry about things.	never true	sometimes true	most times true	always true
3. Many things make me worry.	never true	sometimes true	most times true	always true
4. I know I shouldn't worry about things, but I just can't help it.	never true	sometimes true	most times true	always true
5. When I am under pressure, I worry a lot.	never true	sometimes true	most times true	always true
6. I am always worrying about something.	never true	sometimes true	most times true	always true
7. I find it easy to stop worrying when I want.	never true	sometimes true	most times true	always true
8. When I finish one thing, I start to worry about everything else.	never true	sometimes true	most times true	always true
9. I never worry about anything.	never true	sometimes true	most times true	always true
10. I've been a worrier all my life.	never true	sometimes true	most times true	always true
11. I notice that I have been worrying about things.	never true	sometimes true	most times true	always true
12. Once I start worrying, I can't stop.	never true	sometimes true	most times true	always true
13. I worry all the time.	never true	sometimes true	most times true	always true
14. I worry about things until they are all done.	never true	sometimes true	most times true	always true