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Mindfulness, movement, & music: implementing a yoga program for children

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MINDFULNESS, MOVEMENT, & MUSIC: IMPLEMENTING A YOGA PROGRAM
FOR CHILDREN

BRIANA DARCY

Submitted in partial fulfillment of
the requirement for the degree of
Doctor of Nursing Practice

AUGSBURG COLLEGE
MINNEAPOLIS, MINNESOTA

APRIL 2017

**Augsburg College
Department of Nursing
Doctor of Nursing Practice Program
Final Scholarly Project Approval Form**

The Scholarly Project Committee and Graduate Nursing Faculty at Augsburg College Doctor of Nursing Practice-Family Nurse Practitioner Program, approve the following Scholarly Project entitled "Mindfulness, Movement and Music: Implementing a Yoga Program for Children" for Briana Darcy, a DNP-FNP candidate in the Graduate Program at Augsburg College. This project has met the requirements necessary to complete the Scholarly Project: Written Defense and Oral Presentation.

Final Scholarly Project Approved **Date:** 12 April 2017

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Abstract

The prevalence of stress-related physical and psychological diseases is continually increasing. Underserved children have a high risk for developing stress-related conditions as a result of multiple social, physiological, and environmental factors. This DNP/FNP scholarly project focuses on the stress-reducing effects of the integrative therapies of yoga, mediation, music, and mindfulness. A program includes concepts of yoga, meditation, mindfulness and music listening to provide children with low-cost coping techniques that help combat the ill effects of stress in their lives. It was implemented in Rochester, MN. Participant reactions were favorable, as well as evaluations by faculty at the place of implementation. This scholarly project follows guidelines for doctoral education of advanced practice nurses as well as national guidelines for health promotion and disease prevention. It is embedded in Jean Watson's human caring theory. It may be applied to daily DNP/FNP practice as an integrative therapy for the use in anxiety, ADHD, depression, and emotional behavioral disorders. It is a great recommendation for low-impact, strengthening exercise.

Keywords: Yoga, Children, Meditation, Mindfulness

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Mindfulness, Movement, & Music: Implementing a Yoga Program for Children

Chapter One: Introduction

Mental illnesses affect 43.6 million Americans per year, resulting in the greatest disease burden of the US today (ODPHP, 2017). Stress often has a negative impact on the progression and management of mental diseases and emotional-behavioral disorders. Chronic stress can predispose people to chronic health conditions such as hypertension and diabetes. Stress not only affects adults in our society, but also greatly affects children. Some common childhood stressors may include bullying, unstable home environments, and learning disabilities. Without effective coping skills, children are at a greater risk of developing mental illnesses or emotional behavioral disorders. It is imperative that children are equipped with skills to withstand stressors and promote resiliency. This scholarly project seeks to develop, implement, and evaluate a yoga program for children that incorporates the integrative therapies of yoga, mediation, and music to help children effectively manage stress, and promote resiliency.

This Doctor of Nursing Practice/Family Nurse Practitioner (DNP/FNP) scholarly project addresses mental and physical health promotion in children of the early to middle childhood years. The program incorporates mindfulness, meditation, yoga, and music to teach coping skills for the purpose of stress reduction, resiliency, and improved emotional/behavioral intelligence. This program incorporates methods of stress reduction that are safe, individualized, and affordable. It encompasses the work of establishing healthy coping and stress reduction practices in a world that is seeing increasingly more stress-related disease processes manifesting in both child and adult populations. This yoga for kids program is beneficial to the practice of transcultural, holistic, and

integrative DNP/FNP's as it focuses on integrative health promotion and prevention in the aggregate population of underserved children. It was developed to be easily adapted to many care settings including schools, homes, and community programs.

Research, implementation, and evaluation are key in the advancement of the discipline of nursing. Both evidence based practice and *métis*-based practice were used to guide the development and implementation of this scholarly project. DNP/FNP's play a key role in transforming evidence-based research findings into practice to improve current healthcare outcomes. Additionally, it is through continual practice in the discipline of nursing that DNP/FNP's develop their *métis*-based knowledge in order to guide clinical decision-making. With the careful integration of evidence based practice and *métis* based practice DNP/FNP's are able to provide quality healthcare that is tailored to fit individual patient needs.

With an emphasis on human caring and patterning, this scholarly project seeks to teach stress reduction and coping mechanisms to youth through the application of yoga, mindfulness, and music listening. With the increasing educational demands and exposure to stressful environments, the healing effects of yoga, mindfulness, and music listening will prepare children with skills to manage stressful situations and hopefully slow increasing rates of stress-related illness in children and adults. Coping skills learned through these healing practices will help children establish positive health behaviors such as emotional balance, physical activity, deep breathing, and self-awareness. The program was implemented in the community setting of the Boy's and Girl's Club of Rochester, Minnesota. The children participating in this project were in the age categories of early to middle childhood, which are targeted age groups in terms of needs for assistance in

national standards for disease prevention and health promotion in the national standards of “Healthy People 2020”.

Essentials of Doctoral Education for Advanced Nursing Practice

The AACN has established essential guidelines for the scholarly work of those seeking a DNP/FNP degree. These guidelines serve to prepare DNP students with tools necessary for the advancement of the nursing profession and seek to achieve nationally established goals for the future of healthcare. This DNP scholarly project endorses several of the AACN guidelines including scientific underpinnings for practice, organizational and systems leadership for quality improvement and systems thinking, clinical scholarship and analytical methods for evidence-based practice, and clinical prevention and population health for improving the nation’s health.

Through the health promotion and prevention elements of this project, the scientific underpinnings of nursing are expressed. Nursing endorses a holistic view of health and humanity. It recognizes that people are directly affected by continuous interaction with their environment (AACN, 2006). One’s health and well-being are established through human behavior patterning. Thus, by assisting children with the task of developing healthy coping mechanisms and stress reduction strategies, this project directly addresses human behavior patterning. It gives children tools to build healthy behavioral habits in order to enhance resiliency in stressful life situations. Furthermore, it focuses on an alternative healthcare delivery model that seeks to provide access to underserved populations.

DNP/FNP work in organizational and systems leadership involves the assessment of current healthcare delivery models in addition the conceptualization and development

of new care delivery models. This doctoral essential requires advanced practice nurses to take an active role in health policy to advocate for changes that must be made to advance health outcomes for specific populations. This scholarly project involves organizational and systems leadership through the development of a program that focuses on current national objectives to improve health mental and physical health for all Americans. Additionally it addresses goals to enhance healthcare accessibility and outcomes in children of the early to middle childhood age range as well as cohorts of underserved or marginalized people.

The essential of clinical scholarship and analytical methods for evidence-based practice is represented in this scholarly project. Through the scholarly research of yoga, mindfulness, and music listening, the author seeks to understand the effects that these healing modalities have on the mind, body, and spirit of individuals. Gaps in research were found upon literature review of these integrative therapies, especially regarding the effects that yoga, mindfulness, and meditation have on children. It is through bringing established knowledge into practice that the discoveries of healthcare can be evaluated at a personal level. The author decided to implement and qualitatively evaluate a project that would further establish the understanding and impact that these healing modalities have on children. The art of nursing is expressed in the human caring interaction founded in the implementation of this project.

This scholarly project focuses on the AACN established guideline of clinical prevention and population health in order to improve the nation's health. Research suggests that yoga, mindfulness, and music listening are healing modalities that may promote healthy stress management and coping skills. This integrative program focuses

on preparing underserved children with the knowledge and methods to yoga, mindfulness, and music to promote healthy lifestyle behaviors and attitudes. Through the DNP/FNP's development, implementation, and evaluation of this yoga program for children, further contributions can be made to establish the efficacy and effectiveness of these integrative approaches in health promotion and well-being in children.

Therefore, this scholarly project seeks to improve the outcomes of mental health in our country by implementing a program that has a deep focus in integrative therapies that have been proven to reduce several mental health disorders as well improve stress management. Children of early to middle childhood ages are the main focus of this project, offering an early introduction to these therapies in order to promote successful health promotion and prevention measures. Doctoral essentials for advanced practice nursing are met through the development, implementation, and evaluation of this project. This scholarly project is backed in research of stress, yoga, mindfulness, and their effects on adults and children.

Chapter Two: Literature Review

Underserved children face many stressors in their daily lives. Some of these stressors may include anxiety, trauma, abuse, bullying, unstable home environments, poverty, malnourishment, and learning disabilities. These unfortunate social situations may progress into psychological and/or physiological disorders if the child does not have functional coping mechanisms or support systems. Research suggests that most mental health disorders in adults, occur in early to middle childhood and adolescence. Currently, 7.5% of adolescents reach diagnostic criteria for one or more mental health disorders (Ferreira-Vorkapic et al., 2015). The prevalence of emotional and behavioral disorders (EBD) is increasing in the United States. It is estimated that 12-13% of school-aged children in the U.S. have an EBD (Steiner, Sidhu, Pop, Frenette, & Perrin, 2013). These numbers are predicted to be even higher for children of minority and disadvantaged populations. Access to mental health services is also reduced in minority and disadvantaged children (Steiner et al., 2013). Untreated EBD may result in poor performance in school, poor personal relationships, failure to complete high school, unemployment, incarceration, substance abuse, and suicide (Steiner et al., 2013). Therefore, a great need is revealed for interventions that will help these children cope with stress and improve resiliency in hopes of enhancing their overall quality of life.

Stress Response

Due the increase in stress related diseases, it is important to understand the stress response and it's affects on one's physical and mental health. When a person is exposed to a stressor, the body activates a sympathetic response releasing the hormones epinephrine and norephinephrine. These hormones are responsible for enabling a "fight-

or-flight” response, which activates physiological processes that support the body’s capacity for survival. The hormones norepinephrine and epinephrine increase the heart rate and force of contraction, blood pressure, breathing rate, and dilate the pupils (Waller, 2010). The sympathetic response inhibits the actions of the parasympathetic system, which are responsible for relaxation, digestion, healing, and sexual functions. When someone is under consistent stress, there is an imbalance of sympathetic and parasympathetic action in the body.

Chronic stress causes the body to activate adaptation mechanisms. Cortisol is released to allow the body to continue the stress response, which increases the blood sugar to provide for the body’s increased energy needs in order to accommodate for the perceived stressor (Waller, 2010). Chronic increased levels of cortisol can cause immunosuppression, decreased inflammatory responses, and increased blood sugar. Prolonged stress can impact psychosocial balance causing anxiety disorders or depression. Thus, chronic stress can be responsible for increased risk of both mental and physical disease. Mind-body techniques including yoga and mindfulness may help provide underserved children with cost effective coping techniques and behavioral practices that will help them to foster success in both their personal and future professional lives.

Yoga and Stress in Adults

Yoga is an ancient practice that incorporates body postures (asanas), controlled breathing (pranayamas), relaxation (yoganidra), and meditation techniques (Ferreira-Vorkapic et al., 2015). The first records of yoga date back to ancient Hindu scripture 5,000 years ago (White, 2009). Yoga focuses on wholeness and integration or mind-

body-spirit (White, 2009). It asserts that the mind and breath are connected; thus by controlling one's breath the mind is affected in relation to the breath (White, 2009). The theory of the mind-breath correlation in yoga has been studied in the adult populations. Research suggests that yoga and meditative practices contribute to alleviating anxiety and stress by down-regulating the hypothalamus-pituitary axis (HPA), which plays a role in the sympathetic response (Sengupta, 2012). Yoga has been found to balance the parasympathetic and sympathetic responses, which may decrease stress-related illnesses (Sengupta, 2012). More specifically, studies that assessed specific laboratory values related to stress levels have shown that practicing yoga resulted in decreased levels of the following values: salivary cortisol, 24-hour nor-epinephrine and epinephrine, blood pressure, heart rate, and plasma renin (Sengupta, 2012). These are all biological markers of stress suggesting that yoga works at a biological level to decrease stress in the body. Furthermore, studies investigating the effects of yoga in adults have shown psychological effects including decreased anxiety and increased feelings of well-being (Sengupta, 2012).

The effects of yoga have been studied extensively in adults. There are numerous randomized controlled trials (RCT), meta-analysis', and literature reviews that investigate the impact of yoga and meditation on the stress response and other physiologic functions. In adult populations, yoga has been shown to decrease hypertension, cholesterol, episodes of angina, decrease episodes of hyperglycemia, increase insulin sensitivity, improve pregnancy outcomes, and improve quality-of-life in cancer patients (Sengupta, 2012). Many of the previous values can be correlated with stress-related disease processes.

Unfortunately, there are few RCT's that show strong validity in the health effects of yoga and meditation in underserved children.

The following studies reviewed pertained to the effects of yoga on stress, well-being, emotional behavior disorders and ADHD. Most of the studies investigated children's reactions to yoga and meditation interventions; however, it was found that research on yoga in adult populations is much more extensive and thorough. Because this scholarly project focuses on helping underserved children, multiple studies that were reviewed investigated the effects of yoga programs implemented in underserved populations of children. Major themes of this literature review which included studies published from 2004-2015 will now be discussed.

Yoga and ADHD

Multiple studies investigated the effects of yoga on attention deficit hyperactivity disorder (ADHD). Mind-body-spirit connections in yoga may help children to manage behavioral and emotional symptoms correlated with ADHD. Attention deficit/hyperactivity disorder (ADHD) is one of the most common neuropsychiatric disorders in children and adolescents that often persists into adulthood. It is a growing concern in healthcare because the incidence and prevalence rates of ADHD are rising yearly. The percentage of children diagnosed with ADHD has risen by 42% in the last decade (Parsons, Garzon, & McCoy, 2015). Medication treatment of ADHD involves the use of stimulants which are controlled substances. This poses a barrier for some children, especially those who are of highly mobile populations due to the difficulty in obtaining the drugs. Furthermore, stimulants may cause undesirable side effects in children such as decreased appetite, stunted growth, and insomnia.

A randomized control trial by Jensen and Kenny researched the effects of yoga on symptoms of ADHD (2004). The study included 14 boys aged 8-13 years, who were of middle to lower socioeconomic status in Wales, Australia. The procedures involved twenty 1-hour, weekly sessions of yoga. Yoga techniques involved respiratory, postural, relaxation, and concentration training (Jensen & Kenny, 2004). Parent assistance was encouraged with yoga practice at home. The control group consisted of 8 boys who participated in cooperative games involving skills such as taking turns, sharing, and talking (Jensen & Kenny, 2004). The children were stabilized on medication in both groups. ADHD symptom changes were assessed with pre and post tests using the Conners' Teacher Rating Scale-Revised: Long (CTRS-R:L) and the Conners' Parent Rating Scale-Revised:Long (CPRS-R:L). The experimental yoga group showed significant improvement in eight of the subscales of the CPRS-R:L with the control group showed improvement in six of the subscales. Major improvements in the yoga group included decreased symptoms of hyperactivity and restlessness/impulsiveness. Boys attending the most sessions showed the greatest reduction in ADHD symptoms and on parent and teacher rating scales. Those who practiced yoga at home showed decreased ADHD symptoms on the parental scales. Limitations in this study include the small sample size, un-blinded evaluators, inconsistent variables in both the control and experimental groups, and inconsistent evaluation due to teachers evaluating children when they are medicated and parents evaluating children at a potentially unmedicated state (Jensen & Kenny, 2004).

Another study investigated a peer-mediated multimodal intervention program for children with ADHD (Mehta et al., 2012). The study was conducted in a school in

Najibabad, India with an initial sample of 69 children who were diagnosed with moderate to severe ADHD. During the yearlong study 8 of the children had to be dropped from the study as a result of unstable ADHD symptom management and needing to be stabilized on medication. The intervention consisted of a peer-mediated yoga and meditation program that was conducted by high-school students. The program involved aspects of yoga and meditation, play therapy, and positive reinforcement (Mehta et al., 2012). Proficiency tests were administered to the high-school students conducting the program to assure that they had reasonable skills of yoga and meditation. The program was conducted in 1-hour sessions, twice weekly for a year. Evaluation of ADHD was done initially using the Initial Teacher Vanderbilt Assessment (Mehta et al., 2012). Teacher Vanderbilt raw score assessments were completed after 6 weeks, and a year (Mehta et al., 2012). Parent assessments were completed initially and after 6 weeks of the program. Performance assessment by teachers indicated improvement in academic performance such as reading, and improved peer interactions (Mehta et al., 2012). Parent evaluations noted improved behavior, organizational skills with homework, and decreased impulsivity in children. Peer interaction was not directly measured, however it was apparent that it had a positive impact on children's self-esteem. Limitations of this research include limited sample size, and lack of control group (Mehta et al., 2012).

A randomized control trial investigating yoga as an adjunct intervention in the treatment of ADHD involved inpatient children between the ages 5-16 who were diagnosed with ADHD and stabilized on medication therapy (Hariprasad, Arasappa, Varambally, Srinath, & Gangadhar, 2013). The 9 children who met inclusion criteria were rated by a research associate not involved in the treatment with the Conner's

abbreviated rating scale (CARS), clinical global impression (CGI), and ADHD rating scale (ADHD-RS). Ratings were conducted at the beginning of the study, discharge, and once monthly for the first three months of follow-up care (Hariprasad et al., 2013). The yoga instructor who was in charge of conducting the yoga sessions evaluated the children's yoga skills at the same times. The children and their caregiver received at least 6 individual yoga training sessions while in the hospital. All participants practiced yoga for at least 8 days in the hospital (Hariprasad et al., 2013). Reduction of ADHD symptoms from initiation of the study to discharge was statistically significant. The follow-up scores after discharge showed no improvement, likely due to discontinuation of yoga therapy. It was found that when the children stopped, or decreased yoga practice, ADHD symptoms worsened. Thus suggesting that home guided yoga practice may benefit ADHD. Drawbacks of this study involve the absence of a control group, intervention blinding, and school behavioral assessments (Hariprasad et al., 2013).

Peck, Kehle, Bray, and Theodore conducted a study investigating on-task behaviors of children with ADHD after the intervention of yoga (2005). The study included 10 elementary school students from ages 6-10 who were not diagnosed with ADHD, but were evidenced to be on-task for less than 80% of the time in the classroom. The students watched the "Yoga Fitness for Kids" video produced by Gaiam, 2003, twice a week, for 30 minutes (Peck et al., 2005). The school psychologist observed time on task for these children and their non-affected peers using a structured Behavioral Observation From (BOF). The children were each screened at least twice using the BOF by the school psychologist and an intern, which established an adequate interobserver agreement (Peck et al., 2005). The students were observed twice a week for 7 weeks. Students

showed improvement in time on task after the first yoga session and levels remained higher than baseline levels for the remainder of the study (Peck et al., 2005). After the intervention, on task levels of the yoga group remained proportionate to the on task levels of their peers. A limitation of this research includes the absence of an equal control group. Children with attention problems were evaluated against those who were not perceived to have attention problems. Also, there is potential bias in the evaluation of children's on task behavior as a result of the evaluator serving dual roles in the research considering the evaluator also implemented the yoga classes (Peck et al., 2005).

Yoga and Underserved Children

A randomized control study was conducted in Bangalore, India involving 180 children of a socioeconomically disadvantaged background (Chaya, Nagendra, Selvam, Kurpad, & Srinivasan, 2012). The study evaluated cognitive performance of children who underwent yoga and meditation exercises. The children were randomly divided into a yoga group or physical activity group. They participated in daily activities for 3 months, not including Sundays or Holidays (Chaya et al., 2012). The yoga intervention was taught by two yoga instructors, one completing a certificate degree, and the other a masters of yoga science (Chaya et al., 2012). Children were taught exercises including concepts of stretching, asanas, breathing, meditation, and concentration. The physical-activity group did stretching activities and aerobic exercise. Cognitive function was assessed at baseline, 3 months, and 6 months. Children were instructed not to engage in yoga or structured physical activity for the last 3 months (Chaya et al, 2012). Cognitive abilities were assessed using Malin's Intelligence Scale for Indian Children (MISIC) and the Indian adaptation of the Wechsler Intelligence Scale for Children II (WISC-II). The

results revealed no significant cognitive overall differences between the yoga group and physical activity group. However, differences in cognitive abilities were found between groups. Significant cognitive improvement was found in the yoga group in block design at 3 and 6 months, and coding at 6 months (Chaya et al., 2012). The physical activity group showed significant cognitive improvement in analogies. Overall, improvement in cognitive tests was significantly higher than expected improvement after 6 months for both groups. Yoga was found to show greater cognitive improvement in the categories of attention and visual-spatial abilities in children (Chaya et al., 2012). This could be a result of yoga's ability to calm the mind and increase alertness, which is consistent with previous literature suggesting yoga's effects on attention, memory, and spatial abilities (Chaya et al., 2012). Limitations of this study include the absence of a true control group, and inability to control amount of physical activity that each group participated in.

A study conducted in the South Bronx, New York assessed the effect of yoga on children's self-esteem in addition to their physical and mental well-being. The study included 71 fourth and fifth grade students who were divided into a control group or yoga group. The yoga group participated in classes held 1-hour per week for 12 weeks (Berger, Silver, & Stein, 2009). Qualified yoga instructors conducted the yoga classes. The non-yoga group participated in physical activities of their choice. Assessments were conducted for both groups pre-intervention and post-intervention. Assessments included the Emotional Well-being Assessment, Harter's Self-Perception Profile for Children (SPPC), the Physical Appearance subscale, the Global Self-Worth subscale, the Yoga Teachings scale, and Physical well-being assessments including flexibility and balance. Data was analyzed using the SPSS database. The groups were found to be unequal upon

baseline assessment, with the yoga group scoring higher in the Yoga Teachings scale and lower in flexibility measurements. Results revealed that the yoga group scored significantly better on the Negative Behaviors subscale (Berger et al., 2009). Negative behaviors included in this measurement consisted of screaming, yelling, hitting someone, and throwing things when upset (Berger et al., 2009). This could be a result of the calm, nonviolent coping mechanisms expressed in yoga teachings. Children in the yoga group also scored significantly higher in One-Leg Standing test, indicating better balance (Berger et al., 2009). Although statistic significance was not found in changes of global self-worth or physical appearance, children reported improvements in liking oneself, liking the way their body feels, behavior in class, strength, and the ability to calm oneself (Berger et al., 2009).

Another study that was evaluated the effects of a yoga intervention on a total of 37 students from an urban school district who were diagnosed with an Emotional Behavioral Disorder (EBD) (Steiner et al., 2013). The students were in fourth and fifth grade. They participated in two, 1-hour yoga sessions per month for 3.5 months. The yoga sessions were taught by certified yoga instructors experienced in teaching yoga for kids. The yoga sessions followed the Yoga Ed Protocol involving relaxation training, breathing techniques, child-adapted postures, social components, imagery, and meditation techniques (Steiner et al., 2013). Teachers completed pre and post assessments including the Behavior Assessment Scale for Children, Second Edition Teacher Rating Scale-Child (BASC-2 TRS-C), The Swanson Kotkin, Agler, M-Flynn and Pelham Rating Scale (SKAMP), and a Satisfaction with Intervention questionnaire (Steiner et al., 2013). Parents completed pre and post intervention assessments measuring their children's

adaptive and problematic behaviors at home and in community settings including the Behavior Assessment Scale for Children, Second Edition Parent Rating Scale (BASC-2 PRS-C), the Background information Questionnaire, and the Satisfaction with Intervention questionnaire (Steiner et al, 2013). The students also completed pre and post intervention assessments including the State-Trait Anxiety Inventory for Children (STA-IC), the Kidscreen-27, the Baron Emotional Quotient Inventory (BARON-EQiv: YV), and the Satisfaction with Intervention questionnaire (Steiner et al., 2013). The yoga instructors completed attendance, engagement, and behavioral assessments throughout the yoga sessions as well. There was difficulty in obtaining consent for children as many of the parents either did not respond to calls, mail, or could not be reached. The study showed positive signs of satisfaction with the yoga intervention from teachers, students, and parents. Some parents reported that their children were more calm and relaxed with increased happiness and energy (Steiner et al., 2013). Additionally, 13% of parents noted increased positive and helping behaviors in their children (Steiner et al., 2013). Teacher reports exhibited statistically significant improved attention in class, adaptive skills, reduced depressive symptoms, behavioral symptoms, and internalizing symptoms. Student anxiety scores increased post intervention. This could be a result of several factors including mandatory statewide standardized testing at the time of post-intervention assessment, a school breakout of H1N1 that resulted in the school being quarantined, and difficulty in understanding the assessment tools despite the fact that they were approved for children of the same developmental age levels. Limitations in this study include small sample size, poor response from parents on assessment tools, and possible bias in evaluators, and the absence of a control group.

Therefore, research suggests positive effects of yoga and meditation interventions in children. A good portion of the literature showed improved effects of the yoga and meditation exercises, yet not statistically significant results. Studies in adults suggest strong evidence of the positive effects of yoga and meditation on stress and stress-related disease processes. More research needs to be done to further establish valid evidence-based guidelines in the use of yoga and its therapeutic effect in children with increased stress or EBD's. There were multiple barriers to obtaining valid evidence that were discovered upon researching the effects of yoga and meditation in children.

Barriers to Research

One barrier that was frequently exposed in this literature review was the process of consent. Children are considered a vulnerable population as research subjects. Therefore, consent must be conducted very carefully with children with many checks and balances built in to the process. The population of subjects was very limited by the consent process in many of the studies that were reviewed for this scholarly project. In a study by Berger, Silver, and Stein a total of 235 children were able to participate in a study; however, due to the consent process, only 71 total students were included in the research (2009). Only 93 parents returned consent forms in this study, which drastically decreased the subject population, further limiting the validity of the study.

A number of the studies investigated the effects of yoga and meditation on underserved child populations. This proposed another issue with the process of consent, as many of the children of this population are considered highly mobile, meaning their living environment is not consistent. Thus, contacting the children's parents at home was difficult for researchers, further hindering the consent process. Issues that may account

for highly mobile families include poverty, homelessness, foster care, migrant work patterns, family disruptions, and immigration (Steiner et al., 2013). In a study investigating the effects of yoga on children with EBD in an urban setting, 80% of the students who did not participate in the study could not be contacted because of an inactive/incorrect phone number or no answer (Steiner et al., 2013). In the U.S., approximately 25% of U.S. third graders in urban areas are considered highly mobile (Steiner et al., 2013). It is disheartening that valid evidence is so difficult to produce as a result of their current social situation, considering this is a population that could greatly benefit from yoga and its stress-reducing effects in theory,

Another barrier in the process of gaining consent for children of underserved populations was parent illiteracy. In a study of children in India, from a socioeconomically disadvantaged background, the majority of parents of children participating in the study were illiterate (Chaya, Nagendra, Selvam, Kurpad, & Srinivasan, 2012). In this study, the researchers arranged a meeting to discuss the study, where the consent form was read to the parents and their responses were entered on the forms with a neutral observer witnessing the process (Chaya et. al, 2012). This approach is ideal; however, it may not be attainable in other study arrangements. Illiteracy is difficult to gauge and is a socially sensitive subject. For example, in a study conducted in the U.S. on urban children with EBD's, the parental consent return was very low, in which case study conductors could not even reach many parents by telephone (Steiner et al, 2013). It was noted in this study that many parents of the children in the study did not speak and/or read English (Steiner et al., 2013). Thus, illiteracy could very well have been a barrier to the consent return process in this study. Parents may have avoided

returning telephone calls and consent forms due to social sensitivity around language barriers.

Another barrier proposed in this literature review is the inability to sustain a control group. As a result of common research laws of beneficence, researchers have obligations to treat study participants. This is especially prevalent in the studies conducted that compared the effects of yoga versus no treatment on ADHD. Many of the studies were conducted with yoga as an adjunct therapy in patients who were already taking stimulant medications. In some studies, children had to drop out of the research due to the need to be stabilized on medications. Furthermore, the interaction of yoga and stimulant medications is not well known. For example, stimulant medications may interfere with the efficacy of yoga techniques. Additionally, many studies were conducted in schools, where there was already physical activity programs initiated. It would be unattainable and possibly unethical to suspend children's participation in physical activity for the duration of the studies.

In this literature review, many limitations to research were found as a result of these barriers in studies that investigated the effects of yoga on well-being and stress related conditions such as EBD and ADHD. There is a need for further research in the population of children in general including the aggregate population of underserved children investigating the effects of yoga with randomized controlled trials involving clear control groups, effective sample sizes, and unbiased evaluators. However, it is clear that these research gold standards are very difficult to obtain in this population.

Chapter Three: Conceptual and Theoretical Framework

The theoretical principles of this scholarly project are rooted in Jean Watson's Human Caring Theory. Watson's theory encourages DNP/FNP's to consider the caring connection between people, specifically nurses and patients. Her human caring model transcends curing, as the top priority of the scientific health model, and emphasizes the healing power of unified connectedness and transpersonal caring. The human caring theory embraces all ways of knowing, being and doing. It acknowledges ethical, intuitive, personal, aesthetic, and spiritual/metaphysical means of knowing and being (Watson, 2012). It embodies a universal sense of reality and connection of all people and things.

Jean Watson points out in her book "Human Caring Science: A Theory of Nursing" that stress related diseases were becoming recognized back in the 1930's (2012). Since then, stress-related disease processes have increased dramatically. The inability to cope with everyday stress taxes the body, and can cause both physical and mental illnesses as discussed earlier in this paper. Some physical stress-related disorders include hypertension, migraines, peptic ulcers, asthma, and certain cancers. Additionally, depression, anxiety, alcoholism, relationship struggles and addiction are all mental ailments that can be evoked or exacerbated by stress. Poorly managed stress is also related to low productivity, absenteeism, poor self-worth, failure, hospitalizations, and premature death (Watson, 2012). The literature review for this project includes studies investigating yoga and mindfulness as a treatment method for stress related or exacerbated illnesses, including ADHD. Yoga is a whole-body practice that encompasses mind-body-spirit attunement. When the body's energies are aligned it can

work together as a whole, rather than the counterproductive contrary as a result of compensatory mechanisms. Balanced energy supports the most desired healing environment for the body, mind, and spirit.

With current national shifts toward preventative medicine, the professional nursing community is compelled to find methods of healing that address the issue of stress-management, coping-mechanisms, caring, and healing. This project embodies the shift toward a more preventative, holistic health care model that addresses the human caring science cornerstones of human interaction and relationships. It focuses on mindfulness and stress management through yoga concepts, principles, and practice. Watson notes the necessity for the profession of nursing to shift toward whole person medicine, addressing the mind, body, and soul of the patient (2012). This DNP/FNP developed yoga and mindfulness program encompasses this request as it focuses on restoring caring and healing relationships that guide patients toward harmony in all aspects of their lives and health.

Caritas Processes

Watson has developed a value system that defines 10 Caritas processes. The 10 Caritas processes emphasize meaning and compassion. The Caritas articulate the DNP/FNP's role in helping people gain increased self-knowledge, self-control, self-caring, and inner healing despite external influences or health conditions (Watson, 2012). This scholarly project embodies Watson's Caritas processes in lessons about mindfulness, self-awareness of emotions, mutual teaching, storytelling, and self-control exercises. This project diverts from the administrative, technological, impersonal direction that the profession of nursing has become increasingly submerged in. It

redirects the DNP/FNP toward a caring focus that cherishes the wholeness of humanity and emphasizes the values defined by Watson.

Watson's human caring theory helps DNP/FNP's to support people in strengthening their self-identity. Her second Caritas process establishes the importance of being authentically present in order to meet the needs of others. In a safe, meditative yoga environment DNP/FNP's may help children to acknowledge fears and pain. In doing so, they may be inspired to look beyond any physical and structural setbacks that they face. Yoga and mindfulness play a significant role in the search for self-identity. These practices help people channel their thoughts into patterns of inner awareness. Watson suggests that illness is disharmony within oneself, whether that is mind, body, or spirit (2012). Through the practice of yoga and mindfulness, children can begin to find self-awareness and reestablish a mind, body, spirit understanding. This would help to restore harmony and cultivate healing. Through group yoga practice and mindfulness discussions, DNP/FNP's and children can communicate with each other more effectively to develop and strengthen human caring relationships. Watson discusses the necessity of authenticity in building relationships that will render trust and foster healing. According to the human caring theory, the nurse-patient relationship is interdependent. And the human-to-human caring relationship that takes place has the power to change outcomes and shape humanity (Watson, 2012).

Watson also defines the importance of the DNP/FNP's role of cultivating one's self spiritually and expanding consciousness. This project directly addresses the topics of developing spiritual practices and nurturing personal growth and individual beliefs. Specific lessons were included in this scholarly project that discuss the topic of the

transpersonal transmission of energy within the environment. Other items include self-reflection exercises, respecting others for their opinions, practicing gratitude, detecting negative feelings and working through them, and discovering one's beliefs about the world. In addition to the centering features of yoga itself, these lessons help children to gain a better idea of who they are and how they interact with the world through their thoughts, words, and actions. The yoga and meditative practices expand consciousness and spirituality among the children and DNP/FNP involved.

Additionally, the program addresses the expression of feelings, another Caritas Process in Watson's theory. As the DNP/FNP is supportive of the expression of both positive and negative feelings of the children involved in the program, they create a safe space for caring relationships and spiritual growth. Children's yoga has a strong focus on storytelling. Storytelling activates multiple areas of our brain that generate episodic memory, the kind of memory that relates to social events (Bragdon & Piret, 2015). Engaging episodic memory establishes a connection and often a stronger recall than declarative memory triggers. Declarative memory relates to lists and facts. Thus, children can retain information longer and use it more effectively in day-to-day life. In this program, storytelling was used to express feelings, understanding, and concepts. It helped to foster active listening among the group of children, which in turn strengthened caring, trusting, and authentic relationships among the group. The nature of episodic memory storage in storytelling also grants children the ability to recall the coping skills learned in class and apply them to life experiences.

The promotion of interpersonal teaching and learning is another Caritas process exhibited in this project. By creating a safe teaching-learning environment, the

DNP/FNP can foster unity and meaning among the group. The DNP/FNP must tailor the program to individual learning needs and styles. The program was developed to incorporate mutual teaching, in which the children teach each other along with the DNP/FNP involved. Collaboration and co-creation evolve through the exercises of reciprocal teaching. Children can direct the lessons toward their collective concerns or understandings, thus guiding experiences in a direction that would benefit them the most.

Watson emphasizes the notion that the human caring theory is developed to allow nurses to go beyond the western developed structure of disease, mechanics, and separateness of the human physically, mentally, spiritually, and universally. She speaks of the metaphysical aspect of the human caring theory, and it's plea for nurses to see the individual and his/her connectedness to the whole. She asks the profession of nursing to admire all human life, find a love of humanity, and help to foster autonomy, inner wisdom, and freedom of choice (Watson, 2012). This call to a reverence for life and liberty embraces the metaphysical aspects of healing through interpersonal connection and cultivation of loving-caring-healing relationships. As DNP/FNP's seek to incorporate spiritual human caring into their practice, patients will be granted a greater healing experience. Not only will this approach to healthcare enhance healing, but it also strengthens illness prevention and resiliency, which is a primary objective of this scholarly project. This project allows children to express themselves in a safe, welcoming, and authentic environment. It encompasses the value of human-to-human caring interaction between DNP/FNP's and children. It provides an opportunity for co-creation and collaboration among generations. This scholarly project establishes an opportunity for DNP/FNP's to promote self-worth and strengthen self-identity among

children who are struggling. Children are equipped with enhanced emotional understanding and coping skills.

Watson suggests that nurses play a leading role in preserving humanity through enhancing dignity (2012). Through the commitment to human caring, nurses act to bear many spiritual components of civilization. This idea dates back to the founders of nursing. Florence Nightingale distinguished that nursing is a spiritual practice, with human caring as a core foundation of human survival (Watson, 2012). Therefore, Watson's theory of human caring science establishes the spiritual, holistic, and transpersonal bedrock of this scholarly project. Through human caring, the DNP/FNP plays a societal role in working to improve the destiny of children's lives by preparing them with much needed authentic, caring relationships, spiritual resources, self-identity, emotional intelligence, and coping skills that will serve them throughout their future endeavors. This scholarly project embraces the spirituality of the DNP/FNP's role in preventative, holistic health care in society today.

Chapter Four: Methodology and Evaluation

The yoga for children project was implemented at the Boys and Girls Club of Rochester, MN. Three age groups of children participated. A separate hour session was held for individual groups of 6, 7, and 8-year-olds. The sessions took place twice per week for six consecutive weeks. The lessons consisted of a variety of different tools to help foster resiliency and stress management including but not limited to yoga, music, meditation, interactive games, lessons about the body, energy, self-awareness, and emotions. These tools were used as hands-on learning techniques to prepare children with coping skills for challenging life situations that they may face. They were also used to help foster emotional awareness and social-emotional intelligence.

In preparation for the development and implementation of this project, the author obtained certification as a yoga for kid's instructor through the Move with Me Yoga Adventures program. The program has a focus on integrating story, exercise, and self-regulation to build fitness, focus, and social-emotional intelligence (Piret & Kalish, 2015). Fundamental principles in this yoga training include the educational and connecting power of storytelling, connecting mind and body in the learning process, self-regulation, and the role of mindfulness in the development of self-control and social-emotional intelligence. This particular type of yoga practice is immersed in play. It is a low-stress approach that aims to support children in the learning process.

Over the course of the sessions, the instructor and other adult helpers observed the children's progress in the program. Observations were noted about the children's participation in the different activities, their focus, attitude, verbal feedback, and excitement. The children also gave feedback at the end of the program. In response to the

continuous feedback interpreted by the instructor, the activities that were included each day were modified over the course of the program. For example, in the initial program set up, each 1-hour class contained at least 10 to 15 minutes of singing and dancing. The instructor thought that this would be fun and engaging for the students. However, after the first two weeks of the program, it was noticed that the children did not enjoy singing and dancing and often became off task during that time. Some kids even said, “I don’t like to dance.” The instructor felt that there were likely several factors that contributed to the decreased desire to sing and dance, including shyness, peer judgment, and the thought that dancing was for “little kids”. Therefore, the singing and dancing portions of the program were either incorporated into separate exercises and games or dropped from the lessons all together. The children participating appreciated the change and the instructor found that they complained less and participated more.

Another alteration made from continuous developmental evaluation of the program was the length of the classes. The instructor and helper noticed that kids had a difficult time focusing for an entire hour on the separate lessons that were offered each day. After the first four weeks of the program, the instructor asked the children what she could do to make them enjoy the class more and focus more intently on the lessons. One child said, “Dodgeball.” Another child said, “Playground time”. Therefore, a change was made to make the classes 45 minutes long with a 15-minute free time in the end. The free time was granted if the children stayed on task and behaved well during the first portion of the class. This was an incredibly successful approach to maintaining focus during the lessons and allowed the children to express themselves in free play at the end of each class.

Data collection involved a descriptive and qualitative review of comments collected at the completion and throughout the implementation of the project. During the review process, the children had many comments to give about the success of the program. Many said they enjoyed it and would do it again. Others were able to lead the group of students as well as instructor in “sun salutations” by the end of the program. Sun salutations are standard sets of yoga poses that are repeated consecutively. During a meditation exercise, one of the adult helpers noted, “I couldn’t believe that they all could sit still for so long and want to be quiet.” When asked if the children learned any skills that they might use in the future, the kids mentioned that they were already showing their parents their yoga poses, being more aware of their emotions, and more in tune with their surroundings. Some kids pointed out that they liked and learned a lot from the lessons about energy, water, and transfer of energy through the body.

Overall, the children seemed to enjoy the program and verbalized the desire to participate in the program again. One of the directors of the Boys and Girls club requested that a similar program directed toward adolescents and teens be implemented at their facility. Children were able to verbalize lessons that they had learned throughout the 6-week program, and demonstrate poses and skills learned. One participant even led a brief yoga session in the last week on his own, without prompting from the instructor. In the analysis of these findings, children demonstrated understanding and comprehension of the lessons taught throughout the program. They expressed appreciation and enjoyment of the program. Leaders at the facility conveyed interest and disclosed a need for a similar program adapted for other age groups. In conclusion, this program is believed to be successful. Although it is impossible to measure the full

benefit of the program to the children on an individual or collective basis, it is important to consider that making an impact on even one child is a success.

Chapter Five: Significance and Implications

Through the avenue of mindfulness, meditation, and movement, this DNP project addresses key aspects of preventative health that affect daily nurse practitioner practice. The program was created and implemented in efforts to prepare children with coping skills to help them manage difficult challenges they may face in their lives. This work is reflective of the doctoral education essentials for advanced nursing practice as well as national objectives set forth by the federal government in the guidelines of “Healthy People 2020”. This section confirms the significance and implications of this scholarly project in reference to advanced nursing practice essentials as well as national goals in disease prevention.

The essentials of doctoral education for advanced nursing practice most represented in this scholarly project include II and VII. These essentials are necessary competencies for all APRN doctoral students to have mastered by the completion of their graduate program. Each essential was addressed in chapter 1. The following two essentials were found to be well represented in this scholarly project.

Organizational Systems Leadership for Quality Improvement Systems Thinking

This essential asks the DNP graduate to improve processes in existing healthcare delivery systems to eliminate health disparities in particular patient populations (AACN, 2006). This project addresses mental health issues among underserved populations. The DNP developed a plan that would deliver preventative mental health education to an underserved population in an economically feasible manner. Through this scholarly project, the author educated children with limited healthcare resources available to them about self-care, coping skills, and resiliency. The DNP student took steps toward

eliminating health disparities and improving health outcomes in this cohort of children. The children involved in the program, employees of the Boys and Girls Club, as well as the DNP student who developed and conducted the project, evaluated this care delivery approach. Leaders of the Boys and Girls club returned positive feedback about the project and were interested in expanding the program to address other age groups of children at the facility. For the future implementation of this project, other professional healthcare providers may implement this project such as nurses or yoga instructors. The use of alternate instructors would likely improve the economic feasibility of this project.

Clinical Prevention and Population Health for Improving the Nation's Health

Clinical prevention involves the use of health promotion and risk reduction strategies to improve health (AACN, 2006). Population health pertains to healthcare that is directed toward specific aggregate groups of people. This project aims to assist the population of underserved youth with clinical prevention methods aimed at mental health promotion. Through the analysis of data included in chapter 3 of this paper, the DNP student was able to identify mental health risk factors for underserved urban youth. Therefore the mindfulness and movement curriculum was developed and implemented by the author to address mental health promotion and disease prevention strategies for underserved children. The area of implementation of the project aims to bridge gaps in health care access to the groups of children at the Boys and Girls Club of Rochester. With a community-based approach to healthcare promotion, the DNP student was able to directly access the children's healthcare needs by meeting them in the community setting of the Boys and Girls Club. This approach limited common barriers for this community in accessing healthcare. Thus, all children were able to participate as they desired, and

none were excluded as a result of transportation or financial barriers. Furthermore, the DNP student included evaluation of the project and recommendations for further implementation. The process and purpose of this project meet the DNP essentials set forth by accrediting bodies to ensure comprehensive educational standards are met.

Healthy People 2020 Guidelines

Healthy People 2020 is a series of objectives developed by the federal government that addresses specific health prevention goals set for the year 2020. These goals respond to some of the most significant health threats to Americans currently living in the US. They were created to improve health outcomes in relation to common preventable diseases and health disparities in the US (CDC, 2014). The Healthy People 2020 topics currently consist of 42 objectives that focus on a broad range of disease states. The healthy people 2020 topics that relate to this project include early childhood health, mental health and mental disorders, nutrition and weight status, and social determinants of health. As the objectives for each topic vary, this project globally contributes to all of these subjects in some way. Correlations of this scholarly project and its contributions toward these goals are further established in the following sections.

Early Childhood Health

According to the Office of Disease Prevention and Health Promotion (ODPHP), the early and middle childhood years are times of great mental, physical, and social-emotional growth in children. The ages included in the early to middle childhood years are birth to 12 years. They are critical years for the foundation of developmental skills in building healthy relationships as well as preparation for adolescence (2017). Healthy and stimulating social, family, and school environments are critical during this time. Common

conditions that children are most at risk for developing during this age range include child maltreatment, behavioral and emotional disorders, and chronic conditions such as asthma (ODPHP, 2017). Furthermore, children subjected to inadequate caregiving and increased environmental stressors may have impaired growth and delayed milestone achievement. This markedly impacts their development and may affect school success, health literacy, decision-making skills, self-discipline, eating habits, as well as healthy relationship skills (ODPHP, 2017). The ODPHP states that evidence suggests adult disease patterns can be traced back to development in early/middle childhood, thus reinforcing the urgency for interventions in health promotions of children in this age group (2017).

This scholarly project focuses on several of these common childhood issues and aims to address health promotion and disease prevention strategies. The key concepts of this project include social-emotional regulation, mindfulness, and coping skills. They were selected in consideration of the development of crucial social-emotional and cognitive skills during early to middle childhood. The objectives outlined in Health People 2020 pertain to increasing professional help in schools, and community resources for children of these age ranges. It is hopeful that children who are exposed to inadequate caregiving or environmental stressors will be able to use the learned coping skills to improve personal resiliency and success in school and social development. Thus, children may have improved outcomes in adulthood as a result of proper growth and development in their childhood years. The setting of this project complies with goals of healthy people 2020.

Mental Health

The ODPHP boldly states that mental diseases are the most common cause of disability and the highest disease burden in the US (2017). Objectives in the It is estimated that 18.1% or 43.6 million Americans endure mental disease per year (ODPHP, 2017). Mental health and physical health are closely related. Mental diseases often affect one's ability to participate in physical exercise as well as other health promotion behaviors (ODPHP, 2017). Mental health is also closely correlated with one's nutrition, being linked to cases of over-nutrition as well as under-nutrition. Additionally, mental health conditions may contribute to, or cause chronic physical health conditions such as heart disease and diabetes.

With developmental skills established in the early to middle childhood ages playing a significant role in mental, emotional, and behavioral health, healthy people 2020 recognizes this age range as critical to the beginning of mental health promotion interventions. The ODPHP notes that the greatest opportunity for mental health prevention education is among children and adolescents (2017). Objectives in the federal guideline aim toward interventions in school programs, increased healthcare opportunities and screening, as well as family health interventions. They have found that school-based emotional and behavioral interventions have also improved academic performance in children (ODPHP, 2017).

This scholarly program is equipped to attend to the goals of decreasing mental illness in the US through mental health promotion at the early to middle childhood level. Mental health promotion is at the forefront of this scholarly project with the awareness and development of social-emotional skills, as well as behavioral interventions. The

mindfulness aspects of this program provide children with excellent skills to improve self-awareness and emotional intelligence, both essential skills in healthy relationship building.

As healthcare providers, DNP/FNP's see and manage mental health diseases in primary care as well as in specialty practice. Many nurse practitioners, physician assistants, or family medicine physicians will say that mental health issues are one of their most frequent complaints in primary care acute visits. Often medications, in addition to behavioral interventions, are recommended to patients with allegations of mental health issues. It is not rare that adults will accept pharmacological treatment, but refuse counseling or other behavioral interventions. Unfortunately, medications help, but it is behavioral interventions that provide lasting effects on common mental health conditions such as anxiety, depression, and OCD. Without behavioral interventions, these conditions are likely to recur after pharmacological therapy is discontinued. This project aims to provide children with mental, emotional, and behavioral skills to ideally prevent the prevalence of mental disease in the future. These skills can also be used to prevent exacerbations of psychiatric disease processes in children or adults with these conditions. This scholarly work offers an integrative approach to health promotion and disease prevention through the practice of yoga and mindfulness. With the education of these mental health interventions, it is hopeful that children and adults will recognize the significance of these interventions.

Physical Activity

The objective of improving physical activity is met through the implementation of this scholarly project. Exercise is important for decreasing prevalence of both physical

and mental disease. Regular physical exercise can lower the incidence of coronary heart disease, stroke, type II diabetes, hypertension, depression, and breast cancer in adults (ODPHP, 2017). Regular physical activity has been proven to improve cardiopulmonary and muscular fitness, bone health, decrease depression rates and severity, and reduce total body fat (ODPHP, 2017). The US ODPHP recommends a minimum of 150 minutes of moderate physical activity or 75 minutes of vigorous activity weekly (2017). Current statistics suggest that nearly 80% of adults and adolescents in America fall short of the recommended physical activity weekly. Improving structural opportunities for exercise such as sidewalks and trails as well as recommendations to decrease TV time and mandating recess are current suggestions for increasing daily exercise for Americans.

With a primary focus in yoga movement, this scholarly project reflects the importance of physical activity. The yoga component of each lesson comprised 15-20 minutes of each class. As explained in the literature review section of this paper, yoga practice involves holding and changing postures along with breath regulation. It improves balance, stability, flexibility, muscle strength, and cardiorespiratory response. Yoga improves self-efficacy in individuals as they continue to practice it and find strength and growth in their abilities. The ODPHP denotes self-efficacy as a positive correlating factor in people who are physically active (2017). Yoga is considered moderate exercise at the minimum practice level, and some forms of yoga are considered vigorous. Yoga provides a non-competitive form of individual or group exercise for children that may be practiced anywhere. Yoga is an affordable option for schools and childcare facilities to promote and practice as an effective method of physical activity. This program addresses the objectives of healthy people 2020 in the promotion of safe

physical activity to youth. It also attends to the goals of improving access to physical activity programs because it was conducted in a facility that offers great assistance to low-income families.

This project applies directly to DNP/FNP's and other providers who practice in primary care and family medicine. National objectives require healthcare providers to address physical activity with all physicals or health prevention visits. Common barriers to physical activity include cost, transportation, embarrassment, pain, fear of injury and other physical disabilities to participate. Yoga eliminates many of these obstacles considering it is a low-cost exercise that can be practiced anywhere, along with the ability to adjust the practice in accordance to personal preferences in ease or difficulty. DNP/FNP's may recommend yoga to virtually any patient who enters the office. Therefore, this scholarly project incorporates national guidelines to increase exercise in children. DNP/FNP's may suggest yoga as integrative therapy in increasing physical activity in addition to improving mental health and mindfulness.

Social Determinants of Health

The physical, social, and economic opportunities that each person has available to them in order to maintain health are called the social determinants of health. Healthy people 2020 emphasizes the national healthcare initiative's dedication to improving social determinants of health for all Americans as one of the four overarching goals of the decade (ODPHP, 2017). Social determinants of health are related to the environment where people are raised, live, work, eat, sleep, learn, play and worship. Unequal environments for these daily activities have caused diverse health inequities that range from increased risk of crime or accidental injury to poor access to healthy food and clean

water. The purpose statement of the social determinants of health initiative in Healthy People 2020 is to create quality social and physical environments that promote good health for all Americans (ODPHP, 2017). Key factors in determinants of health include economic stability, education, social context, health care, and neighborhood environments (ODPHP, 2017). Some suggestions for improvement of the key factors that determine health involve equal education opportunities, improved transportation access and availability, access to healthcare, health literacy, early childhood education and development, food security, and housing stability. Clearly, this is a broad topic that encompasses a great deal of work both through healthcare providers as well as government structures in America. It is through collaboration between professionals and community members that the disparity in the social determinates of health will be improved.

DNP/FNP students are educated about political structures that regulate healthcare goals, roles, and overall functioning in the country. They are equipped with tools to help advocate for the better health of communities and populations of people. Healthcare providers see the effects of social and physical inequality every day. Much of the work that encompasses narrowing the discrepancies of the social determinants of health asks healthcare providers to be political activists. Health promotion and disease prevention also play a large role in improving social determinants of health in at risk populations.

This DNP/FNP scholarly project allows children of underserved families access to a health promotion program that is focused on mental and physical health topics. This project was conducted in an area that allows equal opportunity for success of all children in the area. In the facility where this program was conducted, children are fed a healthy

breakfast, lunch, and dinner. They have access to educational and physical fitness activities, safe play environments, along with positive role models. All of these opportunities are offered at a very low cost for families in the area in order to decrease any discrepancies in availability to local children. This project and the environment in which it was conducted address the work to improve social determinants of health for Americans. In the future, this project may be sustained through government grants sought by the DNP author to increase the availability of the classes to more children. It is through political activism that DNP's can help bring awareness to our government representatives regarding the necessity for programs like this one.

The work of this scholarly project directly addresses multiple essentials for doctoral education in advanced nursing practice as well as the national guidelines of "Healthy People 2020". Thus, this project directly affects the role of the DNP/FNP as a healthcare provider. With strong ties to Watson's human caring theory, the yoga for children project is devoted to human connectedness and transpersonal caring through sharing and storytelling. With much of their work in primary care and family medicine addressing mental health, encouraging physical fitness, and overall health promotion, DNP/FNP's could recommend this program to parents of children ages 5-12. Furthermore, DNP/FNP's may advocate for the necessity of this program and others similar to it to be incorporated in local community education classes, physical fitness programs, and daily classroom activities. This is a very versatile program that is fun and educational. It is significant to DNP/FNP's interested in integrative health options as it offers yoga, meditation, and mindfulness activities which are main pillars in integrative health philosophy. Considering the vitality of healthy development of social and

emotional skills for children in early to middle childhood, it is hopeful that programs like this one will continue to be implemented. As the national guidelines suggest, there is a great need for increased education and resources for mental health, physical fitness, and access to healthcare opportunities, especially for children. This project is aimed to promote health in children and improve their health outcomes as adults.

With strong ties to Watson's human caring theory, this yoga for children program is devoted to human connectedness and transpersonal caring. The DNP/FNP candidate is dedicated to advancing nursing science and health outcomes. The population of children that this project was directed toward is in need of improved access to healthcare resources. This project may help them to establish better social and emotional intelligence and in turn affect their prosperity in the future. DNP/FNP's may promote this program and others similar to as methods to improve mental, physical, and spiritual health. As an integrative program, it is versatile, low cost, and safe. It prepares children with resiliency and coping skills for their future, and in turn affects the health of generations to come.

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Mindfulness, Movement, & Music

Implementing a Yoga Program for Children

By, Briana Darcy RN, BSN
In partial fulfillment of the Doctor of
Nursing Practice Degree



<http://www.massagetherapycanada.com/patient-care/yoga-may-benefit-kids-with-cancer-study-3485>

Objectives

- * Explain purpose and concepts of this DNP scholarly project.
- * Describe this project's fulfillment of the essentials of doctoral education in advanced practice nursing.
- * Identify theoretical nursing foundations of this project.
- * Analyze outcomes and reactions to the implementation of the mindfulness, movement, and music program.
- * Support significance and implications of this project to daily DNP/FNP practice.

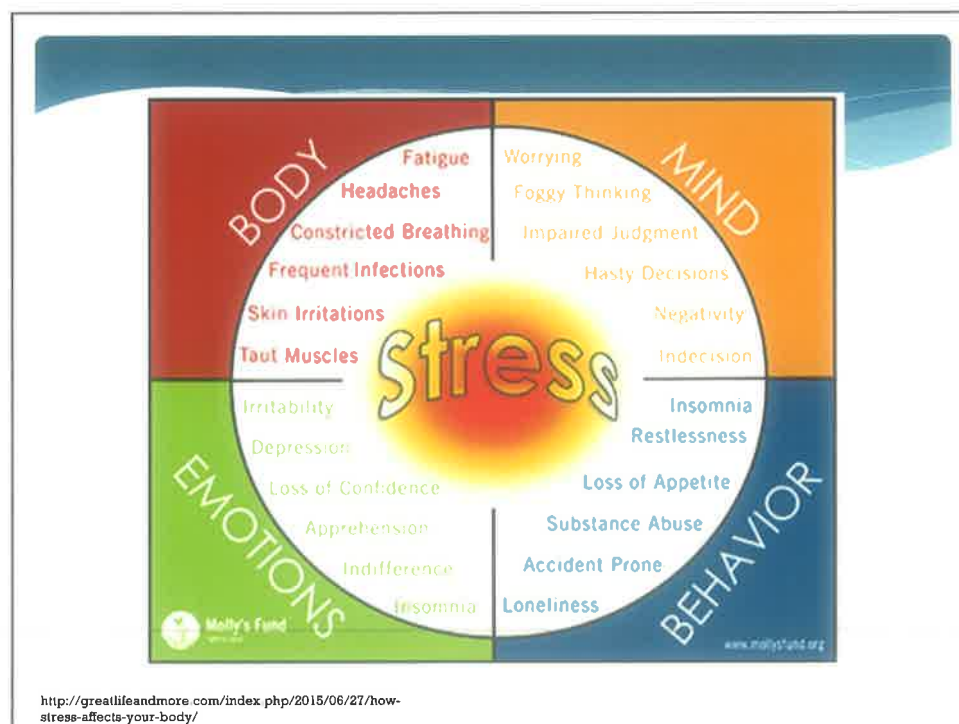


The Scoop



- * **Common childhood stressors:** anxiety, mental disorders, trauma, abuse, bullying, unstable home environments, poverty, malnourishment, and learning disabilities
- * **7.5% of adolescents reach diagnostic criteria for one, or more mental health disorders**
- * **It is estimated that 12-13% of school-aged children in the US have an emotional/behavioral disorder (EBD)**
- * **Mental diseases are the most common cause of disability and the highest disease burden in the US**

(Ferreira-Vorkapic et al., 2015) (Steiner, Sidhu, Pop, Frenette, & Perrin, 2013) <http://www.cbsnews.com/news/autism-detected-later-in-minority-children-study/> <http://www.heyigmund.com/anxiety-in-kids/>

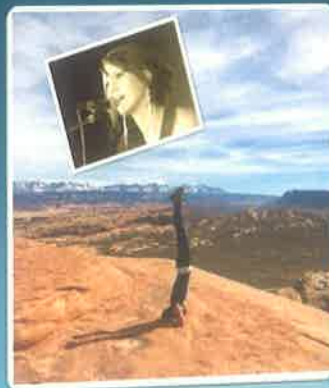


The Purpose

To prepare children with coping skills to manage daily stressors and mental illnesses in order to support resiliency, peace, and hope through the integrative modalities of yoga and music.



https://img.clipartfest.com/5e3d33898413e4a1507191e417255a6_balance-is-key-biblical-clipart-symbols-for-spirit-mind-body-and-soul_1000-989.jpeg



The Story

- Yogini- 9 years
- Musician- 15 years
- Desire to share these integrative outlets with children
- Allow them to explore the healing and uplifting dimensions of yoga and music

Yoga Philosophy



- * Yoga is an ancient practice that incorporates body postures (asanas), controlled breathing (pranayama), relaxation (yoganidra), and meditation techniques
- * First beginnings of yoga date back to 5,000 years ago
- * Focuses on wholeness and integration of mind-body-spirit
- * Mind and breath are connected

(Ferreira-Vorkapic et al., 2015) (White, 2009) <http://www.societywellness.com/category/stressaleep/>

The Data: Adults

- * Yoga and meditative practice **alleviate anxiety and stress by down regulating HPA**
 - * Balances sympathetic and parasympathetic responses
- * Studied extensively in adults
 - * Lab studies show decrease in:
 - * Salivary cortisol levels, epinephrine and nor-epinephrine levels, blood pressure, heart rate, plasma renin levels, cholesterol, episodes of angina, hyperglycemia
 - * Improvements in insulin sensitivity, pregnancy outcomes, quality of life in cancer patients

The Data: Children

* Yoga and ADHD

- * Decreased symptoms of hyperactivity and restlessness/impulsiveness
- * Increased practice often decreased symptoms
- * Withdrawal of practice often equaled return of symptoms

(Chaya et al., 2012)

* Underserved youth

- * Yoga was found to show cognitive improvement in attention and visual-spatial abilities in children
- * Decreased negative behaviors
- * Increased positive behaviors
- * Improved balance and self efficacy
- * More calm, relaxed, happy, and energetic

Barriers to Data Collection



- * Few studies in children
- * Limited subject size
- * Vulnerable population
- * Poor study designs
- * Low health literacy
- * Inability to sustain control group due to ethical reasons

<http://blog.schneider-electric.com/smart-cities/2015/12/15/seven-barriers-better-smarter-city-services/>

The Theory

- * Dr. Jean Watson's "Human Caring Theory"
- * Universal connectedness
- * Balanced energy supports the most desired healing environment for the body, mind, and spirit.
- * Embraces human interaction and relationships
- * Project embodies Watson's "Caritas Processes" via lessons about mindfulness, self-awareness of emotions, mutual teaching, storytelling, and self-control exercises



<http://www.blumaize.net/im/jeans/jean-watson-3.jpg>

Methods



- * Certified Move with Me Yoga Adventures Teacher

- * Key concepts:

- * Educational and connecting power of storytelling
- * Connecting mind and body in the learning process
- * Self-regulation
- * Role of mindfulness in the development of self-control and social-emotional intelligence

<https://move-with-me.com/shop/adventure-skills-poster-18-x-24/>

Content



- * Yoga
- * Music
- * Mindfulness meditation
- * Interactive games
- * Exercises/Lessons

Implementation

- * Boys and Girls Club of Rochester, MN
- * Three age groups
 - * 6, 7, & 8 year olds
- * 1 hour sessions, 2 days per week for 6 weeks.



Developmental Evaluation

- * Changed activities according to preference and enjoyment
- * Changed times allotted to specific activities due to attention
- * Changed music component of program



Evaluation

- * Qualitative/descriptive data collection
- * Responses from children:
 - * Most said they enjoyed it and would do it again
 - * Some children volunteered to lead sun salutations
 - * "I like to show my parent's my yoga poses."
- * Responses from adults:
 - * "I couldn't believe that they all could sit still for so long and want to be quiet."
 - * Asked to have a similar program for teens at the club

Essentials of Doctoral Education for Advanced Nursing Practice and National Goals



- * Clinical Prevention and Population Health for Improving the Nation's Health
 - * Population: Underserved youth
 - * Clinical prevention: Mental health promotion
 - * Bridging barriers with implementation at Boys and Girls club
 - * Variety of coping skills and clinical tools taught to encourage mental wellness
- * Healthy People 2020
 - * Early Childhood Health
 - * Mental Health
 - * Physical Activity
 - * Social Determinants of Health

Transcultural, Integrative, and Holistic care

- * Transcultural care:
 - * Implemented in area with aggregate population of underserved youth
 - * Diverse group of children
- * Integrative care:
 - * Implemented yoga, mindfulness, meditation, energy medicine, and music
- * Holistic care:
 - * Preventative, natural approach to mental health promotion and disease prevention
 - * Mind-body-spirit

Recommendations for DNP/FNP Clinical Practice

- * Early health promotion and disease prevention
- * May be implemented in a variety of settings
- * May be suggested at every well child visit
- * Helpful when used as integrative therapy for children and adults with ADHD, EBD, anxiety, or depression
- * Great suggestion for a non-competitive, safe, and low impact strengthening exercise
- * Develop a similar program for teens



<https://rmuohp.edu/about-the-university/university-news/doctor-nursing-practice/lnp-care-model/>

Conclusions and Acknowledgements



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- * Faculty at the Boys and Girls club
- * Yoga instructors
- * Meditation and mindfulness mentors
- * Family and friends

<https://childrencyoga.com/growing-up-with-yoga/>

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