

MINDFULNESS-BASED PRACTICE IN SCHOOLS

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CERTIFICATE OF APPROVAL

CAPSTONE PROJECT

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Mindfulness-Based Practice in Schools

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### Abstract

The effect of stress on children is pervasive and ongoing into adulthood. Stressful life events can vary in terms of frequency and intensity and can include stressors such as family discord, peer relationships, academics, and overuse of technology. These types of stress can occur as single, major events or as frequent minor events. Although certain types of stress can be positive, it is important that children develop adequate coping strategies in order to deal with negative stress. Without coping strategies, children can experience negative effects physically, emotionally, behaviorally, and intellectually. A major role of a school counselor is assisting children in developing coping strategies. One such strategy they can implement through individual, group, and classroom lessons are mindfulness-based practices. These practices include yoga, meditation, guided imagery, and muscle relaxation. The individualized application of these practices to students, in addition to the short amount of time needed for practice makes it highly useful within a school setting.

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### Mindfulness-Based Practice in Schools

Human beings experience stress early, even before they are born. A certain amount of stress is normal and necessary, but our complex modern society has greatly increased the amount of stress to which children are exposed (Tennant, 2005). Stress symptoms in children can manifest both physically as well as psychologically as well as have implications for future health. Increases in muscle tension, blood pressure, heart rate, and breathing occurring during times of stress create a propensity for the development of disorders such as diabetes, cancer, and coronary heart disease (Lewis, 1996). Psychologically children may experience a wide range of symptoms such as changes in appetite, headaches, stuttering, aggression, withdrawal, feelings of helplessness or despair (Goleman, 1997; Feinstein, 2004). These symptoms can also have lifelong consequences for children as they may lead to problems later in life such as alcoholism, depression, eating disorders, and anxiety (The National Council on the Developing Child, 2005).

In addition to the immediate and long-term consequences of stress, pervasive stress symptoms can also be consequential for children and teachers in the classroom. Continual stress can create deficits in a child's intellectual abilities, which can ultimately affect learning capacity (Goleman, 1997). Furthermore, children may exhibit negative classroom behavior such as aggression, withdrawal, and refusal to cooperate (Goleman, 1997) due to underdeveloped self-regulatory skills.

One way recent literature has found beneficial in managing current stress and preventing future stress is through mindfulness based techniques. Although mindfulness research focuses primarily on the treatment of stress symptoms in adults, this author will specifically examine the effectiveness of mindfulness techniques in schools. Since assisting students in developing coping strategies to manage negative stress symptoms is often left to the school counselor, this paper

will also discuss how the school counselor can use them to maximize student success, which is primarily achieved through individual and group counseling sessions in addition to classroom lessons (Lapan, Gysbers, & Kayson, 2007). Thus, this paper will identify ways in which school counselors can utilize mindfulness techniques in a variety of ways within their own practice.

### Literature Review

#### Types of Stress

Stress is an inevitable part of life and as such all children will experience stress to varying degrees throughout their lives. The National Institute of Mental Health (NIMH) succinctly defines stress as “the brain’s response to any demand” (The National Institute of Mental Health, p.2). This response can be triggered by a variety of events that may be positive or negative, real or perceived, mild or harmless, and may be long or short term (The National Institute of Mental Health). Because of the great variety of response to stress, it is important to note that not all stress is bad. A certain amount of stress is necessary for adaptation and survival. It is when stress is severe or prolonged that negative consequences occur (Tennant, 2005). To differentiate the response types, The National Council on the Developing Child (2005) defines three types of stress: positive, tolerable, and toxic.

Positive stress results from adverse experiences such as meeting new people or getting a shot. This type of stress results in minor physiological changes such as increased heart rate and hormonal changes (The National Council on the Developing Child, 2005). These changes are adaptive in that they prepare the body to respond to the event. When a person feels in control and able to manage the situation, a positive response to stress can provide energy to meet the current challenge (Tennant, 2005). Positive stress experiences are often short-lived, and with proper support can be overcome relatively quickly.

Tolerable stress is the result of adverse experiences that are typically more intense than positive stress such as death of a loved one, or parental separation or divorce. This type of stress can be similarly short lived when a caregiver properly supports the child. When support is provided, tolerable stress may change to positive, which may benefit the child developmentally (The National Council on the Developing Child, 2005). If the child is not adequately supported and the stress is sustained for long periods of time, tolerable stress may turn into toxic stress.

Toxic stress results from intense adverse experiences, such as abuse or neglect that are sustained over long periods of time. When a person feels threatened and not in control of the situation, the reaction of the stress response system can result in destruction to the body and brain (Tennant, 2005). Children are unable to effectively manage this type of stress themselves and often do not have the support of a caregiver. As a result, the stress response system becomes activated for an extended amount of time, which may lead to negative consequences such as permanent brain development changes (The National Council on the Developing Child, 2005).

In each of these types of stress, the stress response system is activated. The degree of functioning for the child is dependent on how quickly stress levels can return to a normal baseline with the support of caring adults or other intervention. Prolonged exposure to toxic stress without the support of an adult may lead to impaired functioning of the brain and overall health (The National Council on the Developing Child, 2005). The impact of chronic toxic stress on a developing brain includes: impaired connection of the brain circuits, high levels of stress hormones and damage to the hippocampus, the area of the brain responsible for learning and memory (The National Council on the Developing Child, 2005). The consequences of toxic stress on the brain can have lasting effects, including the development of a smaller brain, all of which can have lasting effects into adulthood.

### Causes of Stress in Children

Causes of stress in children range by frequency and intensity and may include such things as family difficulty including divorce or separation, neglect, maltreatment, family violence, or disagreements with parents (Witkin, 1999). Single, severe stressful events can have as great an impact on the stress a child experiences as frequent, minor stressful events. In each case, it is important that adults understand the damaging effects stress can have on children's health and behavior in order to help children manage stress. Children often learn to respond to stress by what they have seen and experienced in the past, therefore it is equally important that children learn coping mechanisms to manage their own stress in order to handle stress in a more positive way (American Academy of Pediatrics, 2014).

Children may also experience stress as a result of peer relationship difficulties such as self-esteem related issues including judgment or evaluation by others, problems with romantic relationships, or problems with friendships (Tennant, 2005). As children begin developing their own identities, they often develop their own social circles. The nature of changing friendships and romantic relationships in addition to pressure to conform to school norms can be a constant source of stress. Positive adult role models are important in order for children to learn how to manage various peer relationships. Encouraging children to respect themselves and ask for respect from peer groups is one way adults can assist children in developing healthy relationships (American Psychological Association, 2014). Additionally, it is important that children and adolescents develop their own sense of self-worth and mechanisms for coping with stressful peer relationships (Tennant, 2005).

Academic issues such as failing an exam, performance pressure, high stakes testing, unrealistic classroom demands, or future planning may lead to additional stress for children

(Feinstein, 2004). Although these situations are often unchangeable by classroom teachers, it is important that they understand the degree of academic stress children face. It is also important for teachers to be able to differentiate between children with normal amounts of stress, and those who are stressed to the point of physical harm. Children must also feel comfortable and confident to ask for help if they are having difficulty managing it on their own (American Academy of Pediatrics, 2014). In high stress academic situations, children must also be able to self-soothe, and develop adequate strategies for preparing and relaxing before high stress academic tasks (Tennant, 2005).

Lastly, technology can play a role in increased stress for children due to excessive screen time in general or exposure to violence on the screen (Tennant, 2005). Children and adolescents are exposed to a great variety of technology every day. Limiting use when appropriate is an important job of parents and teachers in order to allow the brain time to rejuvenate. Additionally, children may need encouragement to include physical activities necessary for stress reduction (American Psychological Association, 2014). It is also important for children to learn when they need to take breaks from technology in order to make time for slower paced, relaxation activities (Tennant, 2005). The extent to which the child experiences, and is able to cope with each stressor or combined stressors, is often related to the symptoms experienced.

### Effects of Stress in Children

The effect of stress often relates greatly to the perception of the event. In stressful events that are not severe or prolonged, the stress itself is neutral. It is the person's response to the perception of the event that determines the outcome of the response (Tennant, 2005). The consequence of the response to stress can be either positive or negative. Stress is positive when the body prepares for action, activating the higher level thinking centers of the brain. This creates

a feeling of stimulation and energy for the individual so they are able to handle emergencies, meet challenges, and overall excel (Tennant, 2005). On the other hand, stress is negative when a person feels threatened and as though they are unable to handle the situation. In this case, the body and mind are also affected but in ways that can be destructive to physical and mental health (Tennant, 2005). When stress is constant and unrelieved it becomes destructive, as the body does not have time to recover and relax (Witkin, 1999). The continuous activation of the stress activation system causes the body to release stress hormones even when there is no real stress present. The hyper aroused state of increased stress hormones, increased blood pressure, increased breathing and heart rate, and consistent muscle tension can result in a variety of negative immediate as well as long-term consequences (Tennant, 2005).

Symptoms of negative stress can manifest in a variety of ways in children. Physically in children with responses such as changes in appetite, headaches, new or recurrent bedwetting, sleep disturbances, stuttering, or stomach pain, (Witkin, 1999). Children may also show signs of stress behaviorally with symptoms such as aggression, fighting, refusal to cooperate, temper tantrums, or withdrawal (Goleman, 1997). Furthermore, stress can cause brain integration to break down. When constant danger signals are triggered in the brain the child may experience emotional feelings of helplessness, despair, and anxiety (Feinsten, 2004). These feelings may be indicative of a child displaying symptoms such as anger, crying, whining, worrying, questioning, or an overall inability to control emotions (Tennant, 2005).

These symptoms may have immediate negative intellectual consequences for the child such as learning, memory, or performance difficulties (Goleman, 1997). The HeartMath Institute has shown that stress leads to chaotic heart rate patterns which lead to chaotic, non-coherent, disorganized patterns in the brain (Childre & Martin, 1999). When under high anxiety situations

such as testing, children with unmanaged stress experience an even greater increase in heart and brain patterns that inhibit the brain's ability to process information (Tennant, 2005). These symptoms decrease the brain's ability to process information, recognize information, and overall problem solve (Childre & Martin, 1999). Additionally, stress can cause an over or underproduction of dopamine which is responsible for thinking and focus. An overproduction results in anxious, hypervigilant, or perfectionistic behavior, while an underproduction results in inattentive, unmotivated behavior (Bailey, 2001). Children may also experience short and long memory difficulty. Stress can diminish the prefrontal lobe, which aids in the maintenance of working memory (Goleman, 1997) and can also lead to the death of brain cells in the hippocampus, which is responsible for forming long-term memories (Allen & Klein, 1996).

In addition to immediate consequences, children may also experience long term health related consequences. One such consequence is the suppression of the immune system, which may lead to a lifetime of chronic health problems (The National Council on the Developing Child, 2005). Due to constant hyper arousal of the stress response system, the body produces high levels of the stress hormone, cortisol which may be implicated in the development of AIDS, Multiple Sclerosis, diabetes, cancer, coronary artery disease, Alzheimer's disease, and Parkinson's disease later in life (Lewis, 1996). Furthermore, hyper arousal symptoms can result in the development of stress disorders such as high blood pressure, headaches, stomachaches, reduced eyesight, and neck and back pain (Tennant, 2005). Behavioral consequences such as increased risk for health and behavior outcomes such as depression, drug or alcohol abuse, risk for intimate partner violence, and suicide attempt also increase with continuous stress (The National Council on the Developing Child, 2005).

In addition to stress, or as a result of sustained stress, many children also face mental health disorders such as anxiety and depression (The National Council on the Developing Child, 2005). . An estimated 18% of children ages 12-17 in the United States meet criteria for either depression or anxiety (U.S. Department of Health and Human Statistics, 2012). These disorders often occur as the result of a combination of genetic, environmental, psychological, and developmental factors. Children with these disorders often experience similar symptoms to those who experience stress. The outcomes for these children are also often dependent on the degree to which the child has the support of a caring adult. The degree of functioning for these individuals may also depend on how well they are able to cope with stressful situations. If children are unable to develop adequate coping strategies, anxiety or depression is likely to persist into adulthood.

### Coping Strategies

As stress is an unavoidable part of life, it is important that children develop self-regulation and coping strategies early on. Moffitt, Arseneault, Blesiky, Dickson, Hancox, Harrington, et al. (2011) purport that early self-regulatory skills are predictive of children's successful adjustment in the longer term as these skills are linked with positive development outcomes, greater self esteem, professional attainment, and better health in childhood and adolescence. Furthermore, self-regulation skills aid children in the pursuit of short and long-term goals as it involves modulating feelings, thoughts, and behaviors (Flook, Goldberg, Pinger, Davidson, 2015). In essence, the better able children are to calm themselves, the better able they are to behave in positive ways as being calm.

When self-regulated calmness occurs, the right prefrontal lobe's response to emotions integrates with the left prefrontal lobe's ability to regulate these emotions (Tennant, 2005). After

this process children are better able to reflect on their own emotions, control their impulses, manage negative emotions, soothe one's self, consider consequences, make thoughtful decisions, and relate to others in more empathetic ways (Tennant, 2005). Each time a child goes from stressed to calm, the neural pathways between the impulsive, reactive brain areas involved in self-regulation are reinforced (The National Institute of Mental Health, 2009). Although building this reinforcement takes time, Mischel, Shoda, and Peake (1990) report that self-regulatory ability at age 4 predicts intentional capacity, self-control, and frustration tolerance during later adolescence.

### Role of a School Counselor

The primary role of a school counselor is to maximize student success (Lapan, Gysbers, & Kayson, 2007). Through advocacy, collaboration, and leadership, school counselors support a safe and equitable learning environment that promotes education for all students (Sanhu, 2000). American School Counseling Association (2014) outlines three domains by which school counselors develop programs: academic, career, and social/emotional. School counselors address each of these domains using prevention and intervention strategies through individual counseling sessions, group counseling sessions, and classroom lessons. School counselors also act as a consultant to parents and teachers who are in greater contact with the students. Throughout the school-counseling program, an area of focus for school counselors is assisting children in developing adequate coping strategies. Because of the pervasiveness of stress, anxiety, depression, and related psychological disorders in children, it is important that all school-aged children develop adequate coping skills to manage stress effectively before graduating from high school.

### Mindfulness-Based Practice

One such way to promote the development of coping strategies and self-regulation is through mindfulness-based techniques. Although mindfulness is rooted in Buddhist traditions, current protocols are secular and do not utilize any religious components (Steiner, Sidhu, Pop, Frenette, & Perrin, 2012). Mindfulness can be defined as “developing mindful awareness that is acquired through the intentional practice of sustained and non-judgmental attention to present moment experience” (Kabat-Zinn, 2003 p. 144). Through the practice of attending to the details of the present moment, children are better able to pay attention to the events in the present rather than deliberating about past regrets or future fears (Sipe & Eisendrath, 2011). Practiced mindfulness training is also associated with improved self-regulation, intentional control, and reduced psychological stress in youth (Barnert, Himmelstein, Herbert, Garcia-Romeu, & Chamberlin, 2013).

Furthermore, the intentionality of mindfulness training allows for more flexible cognitive and behavioral response (Sipe & Eisendrath, 2011). For this reason, this training can be useful for a variety of psychological disorders such as depression, anxiety, attention deficit hyperactivity disorder, as well as other emotional disorders (Lasselle & Russell, 1993). In children who have experienced trauma, mindfulness activities can be effective in reducing emotional distress over the long term (Earley, Chesney, Frye, Greene, Berman, & Kimbrough, 2014). Additionally, children with physical disabilities such as epilepsy, asthma, and irritable bowel syndrome may also find symptom reduction (Carthy, Horesh, Apter, & Gross, 2010).

In practicing mindfulness, a variety of techniques can be used such as yoga, meditation, guided imagery, and muscle relaxation (Steiner, Sidhu, Pop, Frenette, & Perrin, 2012). The use of mind-body techniques can be particularly beneficial; for example, calm breathing helps to

focus the mind and regulate the autonomic nervous system while physical poses (such as in yoga) improve flexibility and strength (Schure & Christopher, 2008). The result of using these mind-body techniques is an improvement of coping skills in children that can be used to combat feelings of distress in stressful situations at home or at school (Steiner, Sidhu, Pop, Frenette, & Perrin, 2012). Because the duration of most mindfulness practices is under one hour, it may be particularly useful for the practicing school counselor.

### Mindfulness in Schools

Mindfulness based practices are one way in which school counselors can assist students in decreasing symptoms of stress, anxiety, depression, and other psychological disorders while also reducing physical health symptoms. In addition to utilizing mindfulness techniques in individual and group sessions, school counselors can also use mindfulness-based strategies in classroom lessons. Furthermore school counselors can promote the use of such strategies by teachers in the general classroom and by parents at home. By providing children with adequate coping skills at an early age, students are likely to experience continued success in coping with stress throughout their lifetime.

Overall, research shows the effectiveness of mindfulness-based strategies in a school setting. In addition to effectiveness, mindfulness techniques can be taught in a short amount of time. In a study of preschool children, after only twelve weeks of mindfulness-based curriculum, students showed improvements in learning, health, and social-emotional development (Flook, Goldberg, Pinger, & Davidson, 2015). In another study, students engaged in 15-minute mindful lessons one time per week in addition to two minute brief lessons taught by the classroom teacher on the other four days of the school week. After only seven weeks, children were

reportedly improved at paying attention, showing calm and self control while participating in activities, and demonstrating caring and respect for others (Black & Fernando, 2013).

Creating a less stressful environment for students involves successful collaboration between school counselors and teachers. In addition to teaching mindfulness lessons, school counselors can assist teachers in creating mindful classrooms. One way to do this is to advise teachers to practice mindfulness skills as stressful situations arise in the classroom. During times of transition, before taking a test, before a presentation, during a frustrating part of a lesson, when students are tired and need a break, or when the energy becomes chaotic, teachers can use 2-5 minute techniques in order to reduce the stress in their classroom (Tennant, 2005).

Studies have also shown the effectiveness of mindfulness curriculum when used with minority students. In one study of low income and ethnic minority students, researchers found that mindfulness classroom curriculum not only improved self-control, attention, participation, and caring for others in children, but also improved the perception of classroom behavior by teachers (Black & Fernando, 2014). The implication of this finding could include fewer behavior and other referrals by teachers. With the education of appropriate coping strategies, teachers may be better able to select students with a real need for additional services.

Research has additionally shown the effectiveness of mindfulness for children with more severe emotional and behavioral symptoms. In one such study, researchers found that implementing weekly mindfulness practices such as yoga, meditation, and body scanning resulted in long lasting effects of lowered anxiety, depression, and posttraumatic stress symptoms (Earley, Chesney, Frye, Greene, Berman, & Kimbrough, 2014). In another study of children with emotional and behavioral disorders, researchers found that after implementing a

regular yoga class within the school curriculum, almost all students exhibited decreased depressive, behavioral, and internalizing symptoms and increased attention and adaptive skills.

The effectiveness of mindfulness curriculum across age levels and to differing emotional and behavioral extents is evident. By teaching mindfulness lessons in the classroom, integrating mindfulness in individual and group sessions, and assisting teachers in using mindfulness techniques, school counselors can ensure all students will experience fewer stress, anxiety, depression, and other psychological symptoms and physical health symptoms. Additionally, when mindfulness based practice are implemented at all levels, students will learn appropriate coping skills for their individual level of need for utilization in stressful situations across all environments.

### Discussion

Stress among children is pervasive, and ongoing. The long and short-term consequences of stress can be consequential for children at home, in the classroom, and can have lasting effects into adulthood. The numerous reasons for stress such as family relationships, peer relationships, academic stress, and overuse of technology although ranging in frequency and intensity, can have equally damaging effects. Additionally these stressors often occur simultaneously and may continue into adulthood. Although not all types of stress are negative, it is important that children learn coping skills for stress management as stress continues throughout the lifespan.

Though individual and group counseling in addition to classroom lessons, school counselors are responsible for ensuring that all children acquire adequate coping strategies. School counselors can also be a resource to classroom teachers in developing different classroom approaches. One beneficial strategy for managing stress is through mindfulness-based practice. This type of practice is one that can be learned at a young age and used as a coping strategy

throughout adulthood. Types of mindfulness-based practices that can be taught within the school include yoga, meditation, guided imagery, and muscle relaxation. Mindfulness-based practice can be utilized with limited amount of time making them highly beneficial for use in a school setting. By teaching mindfulness-based practices in individual sessions, group sessions, counselor guided classroom lessons, or by helping teachers to implement strategies in the classroom, school counselors can ensure that students have adequate coping strategies for dealing with stress throughout their lifespans.

Due to a lack of in depth research about the use of mindfulness-based practices in schools, future research could focus on specific ways school counselors and teachers could use these practices. Additionally, longitudinal research could focus on which practices are most retained by students for use as a coping strategy in the future. From a multicultural standpoint, similar research could outline practices that are beneficial for specific populations. In depth research such as this, would help school counselors and other educators advocate for time allocated for mindfulness-based practices within the school day.

### Conclusion

The findings related to mindfulness-based practice research are important to school counselors and all educators. The pervasiveness of stress in children necessitates a need to develop adequate coping skills. Acquiring these skills is not only beneficial to students as they finish their K-12 education, but will also be beneficial for stressors throughout adulthood. School counselors, teachers, and other educators can facilitate this learning through mindfulness-based practices such as yoga, meditation, guided imagery, and muscle relaxation. As these strategies can be taught under flexible settings and time constraints, mindfulness-based practices can be used widely throughout the school. Flexibility of use in addition to the short and long-term

benefits of mindfulness-based practice in reducing stress in children makes it a highly useful strategy for school counselors and teachers.

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