

Yoga Therapy for Addressing Stress and Anxiety in Children and Teens

Evelyns Gaiti

Table of Contents

Introduction.....	2
Understanding Stress and Anxiety.....	3
Definition of Stress.....	3
Effects of Stress on Health.....	3
Overview of Anxiety Disorders.....	4
Generalized Anxiety Disorder.....	5
Medication.....	6
Defining the Seven Senses and Sensory Integration.....	8
Self-knowledge and Self-regulation.....	10
Dysfunction of the Sensorial System (SPD).....	12
Mindfulness.....	14
Defining Mindfulness.....	14
Benefits.....	14
Applying Mindfulness to Anxiety.....	15
Yoga Therapy.....	16
Yoga Therapy for Anxiety Disorders.....	17
Case Study.....	17
Yoga Class Involving Family.....	19
Therapist’s Intentions.....	19
Class Template.....	20
Results.....	23
Conclusion.....	26
References.....	27

Introduction

For children and teenagers, Anxiety is a normal response to stress. Occurrences such as tests, meeting new people, speaking in public, social acceptance, and participation in sports, can easily make both children and teenagers feel worried or uneasy. However, in comparison to others, some may have a much stronger reaction. Despite not currently being in the situation, just the thought of a particular event may cause significant anguish and distress.

This presentation will provide an overview of Anxiety Disorders and their prevalence in these populations. Furthermore, it will examine how to help kids manage stress and Anxiety, by incorporating Yoga Therapy in an inclusive yoga class, which is based on both mindfulness and sensory integration.

Integration is the critical aspect of the solution, because this therapeutic yoga class requires that several components have been combined in order to design a formula that may help both children and teens to manage anxiety that arises from daily events.

Practices from the Eastern philosophy of ancient yoga and mindfulness are merging with the Western medical practices of understanding sensory integration. Incorporating both disciplines has helped manage stressful situations, which may produce stress and Anxiety in children, pre-teens and teens.

Understanding Stress and Anxiety

Definition of Stress

Stress is the body's reaction to a stimulus that involves an adjustment or response, by invoking a change physically, mentally, or emotionally. As a person can experience stress from their environment, body or even thoughts, stress is considered an ordinary part of life. Even occurrences that can be considered positive, such as a promotion, a mortgage, or the birth of a child, can produce stress (“What Is Stress?”).

Effects of Stress on Health

Although stress can be positive by keeping us alert and vigilant, stress has the capacity to become negative when a person continually faces stressful situations that seemingly have no relief. When this occurs, stress-related tension builds and the body’s autonomic nervous system activates physiological changes to allow the body to counter the tension (commonly known as “fight or flight”). Despite this response being utilized for cases of emergency, chronic stress can activate these responses for significantly longer periods of time. As a result, the body begins to experience “wear and tear” both emotionally and physically (“What Is Stress?”).

When chronic stress occurs, it eventually leads to distress, which is a condition that is a negative stress reaction. Distress can cause numerous physical symptoms such as headaches, elevated blood pressure, sleep disturbances, weight loss/gain, body aches, and worsened pre-existing conditions. It can also cause serious emotional symptoms such as depression, panic attacks, and anxiety disorders. Furthermore, stress is linked as one of the top six leading causes of death, including heart disease and cancer (“What Is Stress?”).

Stress becomes increasingly dangerous when people engage in abusive uses of substances or behaviors in order to relieve stress. These substances and negative behaviors may include food, alcohol, tobacco, drugs, gambling, sex, and compulsive shopping. Despite any intention of relieving stress, these substances and behaviors entrap distressed people into a vicious cycle of continual stress (“What Is Stress?”).

Overview of Anxiety Disorders

Although it may seem counterintuitive, anxiety happens to be a normal reaction to stress and can actually be beneficial in certain situations because it can highlight particular dangers and help the body prepare for a situation. An Anxiety disorder differs from normal feelings of stress, because there an excessive amount of anxiety that is caused as a reaction to stimuli. Two critical aspects of diagnosing an Anxiety disorder is that the anxiety is disproportionate to either the age or situation, and it hinders the person’s ability to function normally (Parekh, 2017).

Anxiety disorders are the most common mental illness in the U.S., affecting 40 million adults in the United States age 18 and older, or 18.1% of the population every year. The statistic for children in the United States is even more alarming, with Anxiety disorders affecting one in eight children. Despite the fact that anxiety disorders are highly treatable, yet only 36.9% of those affected by a disorder receive treatment. There are several types of anxiety disorders, including generalized anxiety disorder, panic disorder, specific phobias, agoraphobia, social anxiety disorder and separation anxiety disorder (Parekh, 2017).

However there is a significant need for treatment, which is evident from the statistics. People with an anxiety disorder are three to five times more likely to go to the doctor and six

times more likely to be hospitalized for psychiatric disorders than those who do not suffer from anxiety disorders. Despite all of this, 80 percent of kids with a diagnosable anxiety disorder are not getting treatment (“What’s the Tie,” 2015). Although children goes through phases and stress is a normal part of childhood, children suffering from an anxiety disorder will suffer from fear, shyness, and will begin to avoid activities and particular places.

Generalized Anxiety Disorder

Affecting approximately 6.8 million adults or 3.1% of the U.S. population, Generalized Anxiety Disorder (GAD) is an extremely common Anxiety disorder that is common in the U.S (“Generalized Anxiety Disorder,” 2013). Characterized by persistent and excessive worry about a number of different things, the person finds it difficult to control their worry about issues such as money, health, work, or personal relationships. The more pressing issue is that people with GAD do not know how to stop the vicious cycle of worrying, and often will struggle with physical symptoms, such as headaches and stomachaches. The key difference between Generalized Anxiety Disorder and normal stress is the amount of time experiencing stress and particular set stressors.

When their anxiety level is mild to moderate or with treatment, people with GAD can function socially, have full and meaningful lives, and be gainfully employed. Many with GAD may avoid situations because they have the disorder, or they may not take advantage of opportunities due to their worry (social situations, travel, promotions, etc). Some people can have difficulty carrying out the simplest daily activities when their anxiety is severe. Typically, children with GAD will worry excessively about a variety of things such as grades, family issues, relationships with peers, and performance in sports. Additionally, they are generally

extremely hard on themselves and strive for perfection, while seeking reassurance and approval from others. The median age of onset for anxiety in children is six years old, proving it starts at an extremely early age.

As previously mentioned, Generalized Anxiety Disorder is treatable and there are multiple options for treatment. Cognitive behavioral treatment (CBT) has been extensively researched and specifically targets thoughts, physical symptoms and behaviors. Mindfulness based approaches and Acceptance Commitment Therapy have also been investigated with positive outcome. Relaxation techniques, meditation, yoga, exercise, and other alternative treatments may also become part of a treatment plan.

Medication

There are multiple medication options for those with GAD, the number of Americans on medications used to treat psychological and behavioral disorders has substantially increased since 2001; more than one-in-five adults was on at least one of these medications in 2010, up 22 percent from ten years earlier. Trends among childrens are mirroring those of the adults, which include rapidly rising at significant rates of prescription medication. The most notable increase in the use of these medications was seen in children ages 10-19; utilization increased among this age group by almost 50 percent (“America’s State of Mind,” 2011).

Medication will typically include SSRI’s (Selective Serotonin Reuptake Inhibitors) and Benzodiazepines. The key difference between the two is that SSRI’s are long-term, while Benzodiazepines are for acute anxiety and is short-term (Patino, 2014).

SSRIs increase the level of a brain chemical called serotonin, and low serotonin levels are linked to anxiety. SSRIs are commonly prescribed for kids with anxiety because SSRIs are only taken once a day, are non-addictive, and usually have few side effects. SSRI medications include Fluoxetine (Prozac), Setraline (Zoloft), Paroxetine (Paxil), Citalopram (Celexa), and Escitalopram (Lexapro). Potential side effects of taking these medications include weight changes, dizziness, nausea, and headaches (Patino, 2014).

On the other hand, Benzodiazepines are utilized to ease acute anxiety in children. “Acute” anxiety refers to anxiety that is so severe it makes it difficult to carry out everyday activities. This would include panic attacks, post-traumatic stress disorder after a natural disaster or abuse, or having serious phobias. The issue is that they cannot be prescribed long-term as they lose their effectiveness over long periods of time. Medications that treat acute anxiety include benzodiazepines, which are usually used for short-term treatment of acute anxiety. This class of drugs includes: Lorazepam (Ativan), Alprazolam (Xanax), and Clonazepam (Klonopin). These medications can cause significant side effects such as drowsiness, headaches, weakness, nausea, muscle pains, and memory issues (Patino, 2014).

Percentage of Mental Illnesses in Young Children

These estimates are based on sample of young people ages 13-18

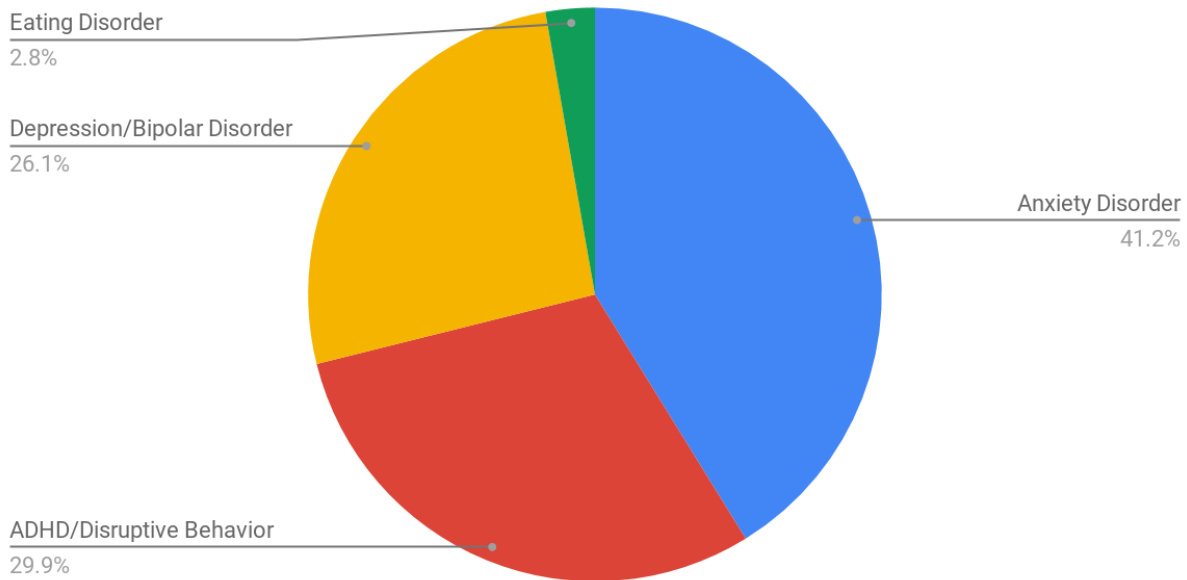


Figure 1. Percentage of Mental Illnesses in Young Children. Adapted from "America's State of Mind," 2006, Medco.

Defining the Seven Senses and Sensory Integration

During a yoga class, the instructor guides their pupils to focus on the breath and become aware of their body. Whether it be going into a Downward Dog or a Warrior II, an instructor will encourage their students to feel their bodies through all of the senses. Questions will arise, such as "What is your body telling you?", "Where is your mind?", or "Are your muscles tight?". By becoming conscious of one's self, body, mind and spirit, a yoga class involves sensory integration.

All the information that is collected in the brain derives from the senses, each sensor will collect information from the current environment and sends it to the brain. Based on this information collected from the senses, that is how the brain helps a person understand the world

around them. In order to understand the world through the senses, it is necessary to expand the notion of 5 senses to adding another two senses. These addition senses are other ways to receive information, which are proprioception and vestibular. Proprioception refers to the sense of the relative position of one's own parts of the body despite not being able to see them, while vestibular deals with the self-awareness of body balance and movement (“Humans Really Have Seven Senses,” 2014).

Sensory integration focuses on the integration and balance of the senses in reaction to stimuli in the environment. Each one of the senses is a complex system, which take the information and send it to the brain the brain interprets the signal and send back the responses. For this task of stimuli and responses, the brain combines the information that is receiving from the multiple sensory systems. This process of all the senses working together is referred to as sensory integration (“Sensory Systems Work Together,” 2018).

Written over 1,700 years ago, The Yoga Sūtras of Patañjali are a collection of 196 Indian sutras on the theory and practice of yoga. It synthesized and organized knowledge about yoga from older traditions into one book containing multiple words of wisdom. Within this collective work, The Pratyahara is described, which is described as the first step to mastering the mind. Described as a “withdrawal of the senses”, it focuses on being aware of how the senses function and the activities taking place both in the body and mind. With continual practice, it’s possible to achieve a state of peace in the mind.

Many influential texts emphasize the importance of sensory integration and understanding The Bhagavad Gita, an influential Indian religious text that has served as a foundation for yoga, emphasizes the importance of the senses. *“As the senses contact the objects*

of the senses, feelings of heat and cold, pain and pleasure occur, Arjuna. These sensations come and go; they are impermanent. Patiently endure them, great Prince.” Chapter 2, The Yoga of Wisdom, verse 14. Living Gita, The Bhagavad Gita, 700 verse Hindu scripture, states "Even as a tortoise draws in its limbs, the wise can draw in their senses at will" (verse 2.58, translation from The End of Sorrow by Eknath Easwaran).

For our children and teenagers, it is essential to have total awareness of the senses and their functions, through self-knowledge. When performing the poses and breathing, there is an easy transition into relaxation and meditation. By involving sensory integration, yoga therapy can help both children and teenagers by giving them the ability to identify their emotions and senses, and how to manage them during Anxiety episodes.

Self-knowledge and Self-regulation

“In philosophy, “self-knowledge” standardly refers to knowledge of one’s own sensations, thoughts, beliefs, and other mental states.” (Gertler, 2015). By understanding various sensations, we have insight as to how feelings and emotions can be caused by the sensorial system. Mastering the sensory process can allow children and teenagers to organize incoming sensory information, which in term will give them the ability to respond to stimuli in a positive manner. While an inefficient sensorial system will lead to disruptive behavior and anxiety.

“Behaviorally, self-regulation is the ability to act in your long-term best interest, consistent with your deepest values... Emotionally, self-regulation is the ability to calm yourself down when you're upset and cheer yourself up when you're down” (Stosny, 2011).

It is relevant to mention that working with an inclusive yoga class, Yoga Therapy may be practiced with both atypical and typical kids, because a typical kid may also have experiences

similar to atypical children and teenagers. This signifies that his responses may be out of balance because they are not appropriate to the respective environment and their sensory integration system could potentially be working ineffectively. This could be caused by a multitude of factors, including lack of sleep, poor nutrition and stress. All of these possibilities could contribute to an imbalance in the nervous system, therefore the capacity to filter stimuli of the surrounding environment is lacking.

Yoga therapy for stress and anxiety for children and teens can involve a vast universe of conditions and diagnostics to work on. Yoga therapy as an integrative process can be applied on typical children and teens as well as on cases of high function Autism, Down Syndrome, ADD, ADHD, mild Cerebral Palsy and SPD among others. This study has selected Sensory System and Sensory Process Disorder as common denominators of the aforementioned condition.

Whether the child has been given a diagnosis of SPD or not, their senses can be easily overwhelmed with components of daily life, such as family, school, and social lives. This instance could significantly benefit these children with an intervention of multifaceted practice of yoga therapy. When sensorial system becomes disorganized, the child or teenager will have difficulties with coordination, balance, visual, hearing, and poor motor skills. Although stress is beneficial in small doses as it produces positive results for necessary fight or flight situations, continual episodes of stress and anxiety significantly impact the quality of life for daily life.

Practicing yoga therapy and mindfulness in an inclusive yoga class may contribute to children and teenagers to understand imbalances in their own bodies and emotions. Pranayamas, breathing techniques, revitalize their bodies and allow them to destress. Different poses, otherwise known as the asanas, will allow them to channel their energy, which will help them

balance out their nervous system. Relaxation and visualization will allow for meditation, putting them into the right mindset for all of this to occur.

Dysfunction of the sensorial system (SPD)

Sensory processing is the neurological procedure of organizing the information we take in from our bodies and the world around us for use in daily life. “Over 80 percent of the nervous system is involving in processing and organizing sensory input...” (Kranowitz, 2011). The brain is in charge of absorbing the information, which is derived from the senses, along with regulating all information.

However, there are situations where the central nervous system is ineffective when processing sensory information. Dr. A. Balzer-Martin, a leading occupational therapist, first described the problem 50 years ago when she formulated the theory of Sensory Integration Dysfunction, otherwise known as Sensory Processing Disorder. This describes the inability to utilize information received through the senses that is necessary for normal functions in daily life. It may cause a variety of symptoms in children, such as clumsiness, hostility, aggressiveness, disruptive behavior, and effects on learning (Kranowitz, 2011).

According to Dr. Lucy Jane Miller, one of America’s leading occupation therapists, the statistics report a minimum of 1 in 20 children in the US have SPD (“Statistics,” 2018). Within Sensory Processing Disorders, there are various categories and sub-categories. There is Sensory Modulation, which includes Sensory Over Responsivity, Sensory Under Responsivity, and Sensory Seeking.

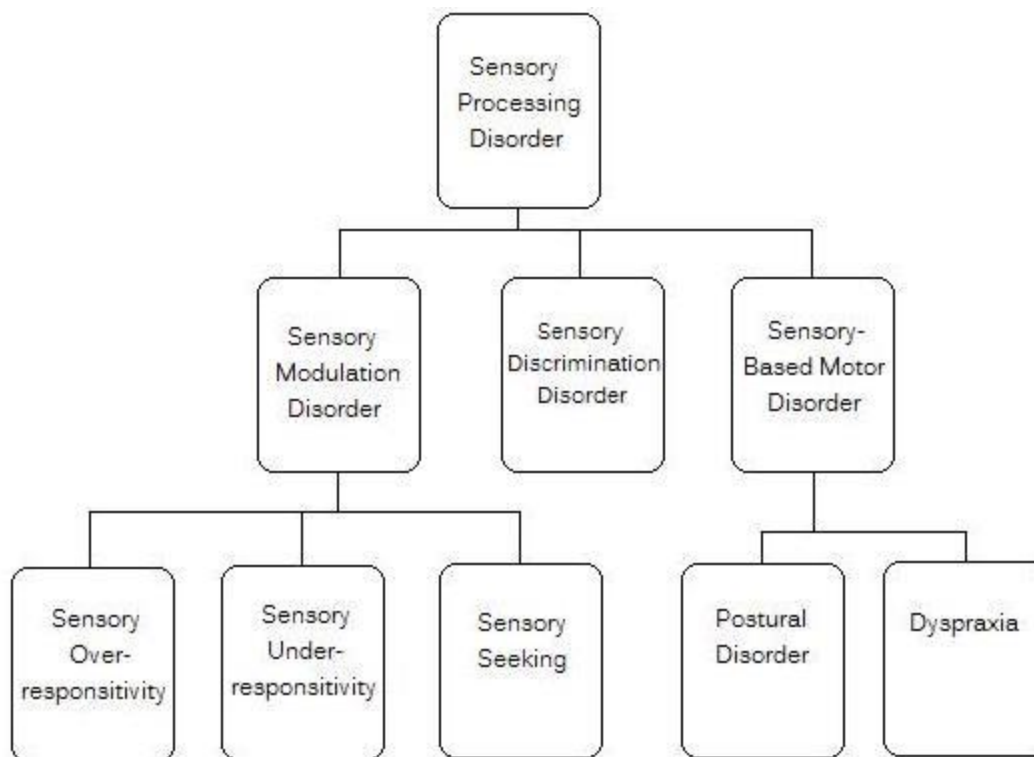


Figure 2. Sensory Processing Disorder. Adapted from "The Out-of-Sync Child: Recognizing and Coping with Sensory Processing Disorders," 2011.

Multiple symptoms may arise from Sensory Processing Disorders, including behavioral, physical, and psychosocial. Behavioral symptoms can include difficulties calming down, refusal to eat, hypersensitivity to particular fabrics, oversensitivity to sounds, and withdrawing from touch. While physical symptoms may include clumsiness, fatigue, constant motion, poor motor control, and odd posture. In addition to both of these, psychosocial symptoms may include social isolation, Anxiety, Depression, aggression, and avoidance of larger groups (“Effects, Signs, & Symptoms,” 2018).

Although the precise cause for SPD is still relatively unknown, some of the potential causes for SPD may include: genetic, birth complications, and environmental factors. In addition to this, children born to adults on the autism spectrum may be at a higher risk (“About SPD,” 2018).

Mindfulness

Defining Mindfulness

Mindfulness includes the perception of experiences that are occurring in the present moment. This means being conscious of feelings, thoughts, and bodily sensations. It is also processing information from both the inner and external world, without influence from emotions. If the mind is able to fully experience something without judgment, then that is the process of mindfulness.

An example of mindfulness could occur while someone is simply sitting down having aware of his feelings and sensations. There would be a focus on physical movements, temperature, smells, the weight distribution in the chair, the pattern of his own breath, the feeling of calmness or agitation. An example of a lack of mindfulness would be the mind jumping around with various thoughts, while doing something such as driving. While driving, the mind could jump from yesterday's events to a lack of time management. This could potentially create a disconnect that could cause someone to arrive at a destination, with no knowledge of how they got there.

Benefits

There are plenty of benefits of practicing mindfulness, which could benefit a multitude of people. Numerous Psychology experts have conducted specific research, which has proved the benefits of mindfulness. Chambers et al. (2008) asked 20 novice meditators to participate in a 10-day intensive mindfulness meditation retreat. After the retreat, the meditation group had significantly higher self-reported mindfulness and a decreased negative affect compared with a control group. They also experienced fewer depressive symptoms and less rumination. In

addition, the meditators had significantly better working memory capacity and were better able to sustain attention during a performance task compared with the control group.

In 2010, Hoffman et al. conducted a meta-analysis of 39 studies that explored the use of mindfulness-based stress reduction and mindfulness-based cognitive therapy. The researchers concluded that mindfulness-based therapy may be useful in altering affective and cognitive processes that underlie multiple clinical issues. Those findings are consistent with evidence that mindfulness meditation increases positive affect and decreases anxiety and negative affect. (Farb et al., 2010; Williams, 2010). Improvements to working memory appear to be another benefit of mindfulness, research finds. A 2010 study by Jha et al. Another study examined how mindfulness meditation affected participants' ability to focus attention and suppress distracting information (Moore and Malinowski, 2009).

Research also supports the notion that mindfulness meditation decreases emotional reactivity. (Ortner et al., 2007). More cognitive flexibility. Another line of research suggests that in addition to helping people become less reactive, mindfulness meditation may also give them greater cognitive flexibility. Siegel, 2007a) Meditation also activates the brain region associated with more adaptive responses to stressful or negative situations (Cahn & Polich, 2006; Davidson et al., 2003)

Applying Mindfulness to Anxiety

Thinking about situations either from the past or the future can potentially generate a state of anxiety. As previously mentioned, mindfulness has numerous benefits such as focus, reduced anxious thoughts, and peace of mind. Therefore practicing mindfulness by placing yourself in the present can reduce anxiety.

Although there are multiple exercises to practice mindfulness, two simple examples would include a body scan and mindful breathing. A body scan consists of focusing on your own presence may include focusing on your senses. This would include focusing on each sense (i.e. touching, feeling, seeing, tasting). By taking a moment to go through all the senses, it can bring someone to the present moment. Another exercise would consist of paying particular attention to the pattern of your breath. A person would focus on how breathes go in and out, temperature, and the depth of breathes. When practiced several times and consistently, it can ease anxiety.

Multiple studies confirm the benefits of mindfulness when applied to both children and teenagers that suffer from Anxiety disorders. In a study conducted with both fourth and fifth grade girls from two different public schools, group meetings were set for one hour each week for 8 weeks and focused on mindfulness training through yoga. The results clearly demonstrated an increase of self-esteem and self-regulation, with a greater frequency of coping abilities when encountering stress (White, 2012). Another study focused on children from 8 to 12 years old, placing them in short therapy sessions focused on mindfulness and sensory-based activities. This study provided empirical evidence in support of these activities enhancing awareness and overall success (Baer, 2014).

Yoga Therapy

The IAYT defines yoga therapy as "the process of empowering individuals to progress toward improved health and well-being through the application of the teachings and practices of yoga... Yoga therapy is the appropriate application of these teachings and practices in a therapeutic context in order to support a consistent yoga practice that will increase self-awareness and engage the client/student's energy in the direction of desired goals. The goals of yoga therapy include eliminating, reducing, or managing symptoms that cause suffering;

improving function; helping to prevent the occurrence or reoccurrence of underlying causes of illness; and moving toward improved health and wellbeing. Yoga therapy also helps clients/students change their relationship to and identification with their condition...”. (Educational Standards, 2012).

Yoga Therapy for Anxiety Disorders

Multiple studies demonstrate the benefits of the application of Yoga Therapy to help children and teenagers with both stress and Anxiety disorders. A study investigated the effects of yoga as a sensory regulation tool in reducing adolescent distress in an acute care psychiatric hospital, examining the relationship between those effects and the patients' sensory-processing patterns. The findings contributed to the conclusion that yoga sessions had a significant impact on both distress levels and pulse rates because yoga has therapeutic effects as a sensory regulation intervention in psychiatric treatment (Re, McConnell, Reidinger, Schweit, & Hendron, 2014). Reviewing evidence from 1990 to 2014 focusing on yoga interventions addressing anxiety amongst children and teenagers, the American Journal of Occupational Therapists found a strong correlation between reduced levels of anxiety and engagement in yoga therapy (Weaver & Darragh, 2015).

Case Study

From my experience as a Developmental Therapist and Expert Yoga Teacher, I was able to create a program focusing on the benefits of Yoga Therapy, sensory integration, and mindfulness approach techniques. Over the course of 9 weeks, there were four children/teenagers that were observed for the purpose of this case study, in order to demonstrate the impact of these classes on the management of anxiety.

1. Condition/Diagnosis: C.F. is an eight-year-old sweet girl, mom reported she is experiencing a lot of anxiety episodes due to changes happened into her life.

Client's Intentions (parents): I want to C.F. learn how to cope with her anxiety by connecting with her body and mind and enjoy herself in the meantime.

Client's Intentions (child): C.F. wants to wake up in the morning without cry and be able to go through the day without nerviness feelings.

2. Condition/Diagnosis: I.H. is an eight-year-old energetic girl, mom reported she has diagnosis ADD. Occasionally she has hard time putting her thoughts and feelings into words, some time she is reserved and shut herself down when something is bother her.

Client's Intentions (parents): I want to I.H. to be able to concentrate for long periods of time and learn self-control, be able to calm herself down.

Client's Intentions (child): I.H. expressed that she came to the class because her mother asks her to do it, she likes the yoga out-fit, and she want to have fun.

3. Condition/Diagnosis: C.P is an eight-year-old enthusiastic, kind boy. Mom reported he is no able to sleep along in his own bed, suffering for fear to darkness. He is an anxious kid always concern to do well with homework and grades. When Mom was pregnant his husband fell down and broke his head the floor was cover with lot of blood, she said that scene was a shock for her, she couldn't feel the baby move for one week. C.P. was very attach to his Grand -Pa and his suffered his lost three years ago. Mom reported that those incidents maybe are part of the cause for C.P. fears and anxiety.

4. Condition/Diagnosis: J.M. is a twelve-year-old quiet girl. Mom reported she has been diagnosed with Autism, Anxiety, Depression, Epilepsy and Scoliosis. She gets upset with loud noises, too much people in small settings; to handle transition she needs to be told ahead of time otherwise she will be anxious. Sensory overload upset her. She doesn't like to be barefoot. When she is nervous, she become distracted and will sweat a lot in her hands and back. She is able to follow one command at the time, no multiple commands. She has been victim of bullying, due to these incidents, parents change her from a regular school into a special school. She expressed, that in her head, she still listen the voices of the negative comments that classmates did to her, and it trigger episodes of anxiety.

Client's Intentions (parents): I want to J.M. to be able to engage in techniques that help her to with stress and anxiety.

Client's Intentions (child): J.M. to stop the voices in her head.

Therapist's Intentions

Impulse children and teens to develop ability of self-knowledge, knowing their strengthened and weakness, it will help them to understand what is happened inside their minds and bodies (mindfulness approaches). Give them tools that will assist them to integrate their senses into balance (sensory integration / self-regulation). We want our children and teens be able to management challenge on daily life being more functional, efficiencies and promoting success at home and school.

Yoga Classes Involving Family

Before therapeutic yoga classes start, parents/caregiver are invited for a 45 minutes meeting to hear about how the program work, in this meeting they can make questions and

explain with more detail their needs and expectation for their children. Every four classes parents/ caregivers are invited to join the kindness circle. Their participation allows them to help their kids through the mindfulness approach. Every two weeks a mindfulness project is sending home where children and parents/caregivers are able to enhance their family bond, communication and support.

Class Template

This is one model of the therapeutic yoga class, every class breathing exercises, sensory and mindfulness activities change.

Therapeutic Yoga Class

Age: 5 - 12-Year-Old for inclusive class use visual schedule.

Time: 50 to 60 minutes

Intention: breathing awareness, self-confident, self-awareness, management anxiety, (negative / freighting thoughts).

Introduction Activity (Greetings) 5 minutes.

- Hello circle: kids standing making a circle, each kid will strake a pose selected from the deck, each kid will say hello I am a tree or a warrior and I feel_____. (Book about feelings optional)
- Make questions about what they want to learn today in the class, keep record of the responses. Review homework together, you can include caregivers. Check where is the attention of the children when they are doing this activity.

Middle Activity

Warm-up 15-20 minutes using Proprioceptive / Vestibular

Sun Salutation Surya Namaskar B sequence with visual support, (cards)

- Let the kids take turns and guide it.

Yoga Adventure (circus time)

Transportation: Train holding ankles (group pose). To travel inside the adventure, we are going to crawl holding ankle of the kid in front, as a train. Kids in table position one behind the other holding the ankle of the kid in front of you. Kids will move as a train around the area. Let the kids mentioning the items and animals in the circus, and make the poses, monkey, elephant, lion, giraffe, acrobat walking over a cord, hang glider with hula hoop, jump together holding arms, etc. Return by slow walking on balance beam using the drum's beat (mindfulness walk / sensory auditory).

Breathing activity / mindfulness breathing / (sensory tactile) 20 minutes.

- Breathing Awareness: using simple words describe to the children your own breathing experience, the image in your mind and the feelings in your body, how do you do, what you do feel, how you do notice the movements of your breath on your body, where you do feel it, how you are focusing on your breath, where is your attention / concentration, how it assists you to relax your body and mind, how it makes you feel calm and centered.
- Paint the Breath: colors and papers, paint vertical lines following the breathing up inhale, down exhale, with eyes close.

Clear Negative thoughts (mindfulness game / sensory tactile-auditory)

- Pass the Water Cup: kids sitting or standing in circle, holding a cup with water, make eye-contact pass the water and say hi and one word that describe how the body feel (give words to choose, if it is necessary).

- Blind fold the kids and pass the water cup in silent, teacher will guide “pass the water to the right or left” at the end ask for the level of effort regarding the game, it was hard or easy? How did they feel? What did they think during the game?
Keep record of the responses.
- Talk with the kids about experiences they have had as a challenge, some of them will mention the negative thought they have had because they are afraid to not be able to achieve a task, or to be embarrassed because they will not do well at any activity or event; every time they mention a negative / fear thought or feeling place a chip inside a container which you can open on the bottom. When everybody has mentioned their fears and worries, ask them to take a deep breath and to open the bottom of the container. Explain “this is what we do with the chatter and negative thoughts that appear in our heads when we are facing an event.” We breathe, dumped, and let them go.

Close activity (10 minutes)

Relax time: using bean bags on the belly.

- Savasana observe the breath: long breath; pay attention to long inhale and long exhale, how does it feel? Is fast? is slow? Is it cool? Is it warm? Is it smooth? It is rough? Does your body feel different how? where? Is it in your head, your tummy, your shoulder? **Notice:** the whole body, mention to the kids each part of their bodies; and how they are feeling; hungry, calm, cold, warm, relax, tense.
Have you notice or feel any change?

The Kindness Circle: sitting with crossed legs.

- Into this portion of the class kids can make wishes for themselves, for the family and for the world, this activity can vary; kids can make wishes or thankful list or happy thoughts list. Also the wishes can be made as a piece of art. *Example:* draw a tree with the wishes on the leaves or a sky with clouds. Other option is to do dramatization about /wishes / thankful list / happy thoughts/ with body expression.

Positive affirmation

- Tell the kids how good they did in class, one by one. Make positive affirmations in group, we are happy, we are strong, etc.

Assign Breathing exercise as homework:

- Practicing breathing; inhale deep for 4, with hand on belly, and exhale longer for 6. Make it by 7 times. It can be practiced alone or with family, sitting or lying down, use a comfortable position. (A breathing chart is being sent home to save data about the breathing exercises.)

Results

After the nine week Therapeutic Yoga program, there were multiple positive effects demonstrated among the children observed.

1. C.F expressed she was happy because she can self-regulate herself and is no longer crying any more in the mornings, she has been practicing breathing and focus in a rock which has a meaningful word in its “love”. She felt content, less stressed and is embracing the new house accommodation, she was open now to try new things and she asked her mother for piano lessons.

2. I.H. at the Kindness Circle: YT asked her to make a wish for herself; she responded: I don't need anything. Make a wish for your family; she responded: They don't need anything, YT asked her to make a wish for the world, she responds: I don't know. YT noticed I.H. was reserved and aggressive when she talks. However, when YT told her a positive complement she smiled, and was more willing to give herself a chance. I.H. at the Kindness Circle: she talked about her parents divorced, putting down her defensiveness attitude. She wished for her parents back together and she started to cry. YT told her sometimes we cannot change the circumstances around us, but we can choose to not suffer for that, thinking in things that make us happy. YT asked her what word you can place in your mind while you make your breathing exercise that will make you happy? She responded I don't know, my puppy, but somebody stole it. YT suggested maybe your favorite color. Ok she said, blue, I will think on blue during my breathing exercise, blue remind me my dad. These results were reported by the mother after the third-class. I.H.'s behavior has changed she is more relaxed and is treating better her siblings. She is calmer and centered.

3. Even mom informed C.P. is afraid of the darkness YT do not asked anything about it, the healthy tactic to talk about this is to wait until the kid will mention it. C.P. at the Kindness Circle: he expressed he is afraid of the dark after other kid revealed it. YT approach the situation applying the "The 5 Whys" technique." 5 Whys is an iterative interrogative technique used to explore the cause-and-effect relationships underlying a particular problem. The primary goal of the technique is to determine the root cause of a defect or problem by repeating the question "Why?". Each answer forms the basis of the next question. Results Reported. Apparently, C.P. found the answer to face his fear, and

even if it has a deeper root, he concluded that the solution was to buy a flashlight to place it under his pillow. Mom reported: C.P. is practicing breathing exercises daily and she want him to continue in the therapeutic yoga class for more sessions.

4. J.M. at Clear Negative Thought Mindfulness Game. She expressed a worry though, about fail during a challenge game, when YT gave her a chipa chip that represent the thought, to place inside a container, told her “this is you worry thought, place it in here, breath and let it go”, she replayed “wow my worry is so small”. Results Reported. She has demonstrated understanding about the worry-thoughts. She showed improvement about to follow multiple sequence directions, she understood better about to imitate the poses, earning more flexibility. She was able to take her socks off for the yoga class. Mom expressed, she wants for her to continue in the Therapeutic yoga class for more sessions.

Conclusion

The benefits of the Yoga Therapy, sensory integration, and mindfulness are evident, with multiple universities making studies to verify those benefits. The results of those studies concluded that yoga sessions significantly impacted both distress levels and pulse rates, because yoga has therapeutic effects as a sensory regulation intervention. Studies show evidence that mindfulness meditation increases positivity, while decreasing anxiety and negative effects. Combining these two approaches with exposure to sensory integration activities, my case study demonstrates changes in behaviors in the children and teenagers. Changes in behavior included self-regulation skills, discovering repetitive thought patterns, breathing pattern tools, and handling stress with a healthier approach.

In conclusion, the focus of this program is to increase self-confidence of children and teenagers, while teaching them mindfulness and yoga in order to successfully manage stress and Anxiety when encountering triggers in their daily lives. Anxiety is the most common mental illness among children and teenagers, with little relief for many. Although stress is a necessary survival mechanism, it does not have to become or remain a disorder, and there are many tools we can utilize to overcome it.

References

- About SPD*. (2018). Retrieved from <https://www.spdstar.org/basic/about-spd>
- America's State of Mind* [PDF]. (2011). Medco.
- Baer, R. (2014). *Mindfulness-Based Treatment Approaches : Clinician's Guide to Evidence Base and Applications*. London: Academic Press.
- Effects, Signs & Symptoms of Sensory Processing Disorder*. (2018). Retrieved from <http://www.ascentchs.com/developmental/sensory-processing/symptoms-signs-effects/>
- Generalized Anxiety Disorder (GAD)*. (2013). Retrieved from <https://adaa.org/understanding-anxiety/generalized-anxiety-disorder-gad>
- Gertler, B. (2015, May 18). Self-Knowledge. Retrieved from <https://plato.stanford.edu/entries/self-knowledge/>
- Humans Really Have Seven Senses (Don't Forget Proprioception and Vestibular Sensation)*. (2014). Retrieved from <https://bigthink.com/ideafeed/humans-really-have-seven-senses-dont-forget-proprioception-and-vestibular-sensation>
- The International Association of Yoga Therapists. (2012). *Educational Standards for the Training of Yoga Therapists* [PDF]. Retrieved from https://cdn.ymaws.com/www.iayt.org/resource/resmgr/Docs_Articles/IAYTDef_YogaTherapy_Ed_Standards
- Kranowitz, Carol S. (2011). *The Out-of-Sync Child: Recognizing and Coping with Sensory Processing Disorder*. Print.

- Parekh, R. (2017). *What Are Anxiety Disorders?* Retrieved from <https://www.psychiatry.org/patients-families/anxiety-disorders/what-are-anxiety-disorders>
- Patino, E. (2014). *A Guide to Anti-Anxiety Medications*. Retrieved from <https://www.understood.org/en/friends-feelings/managing-feelings/stress-anxiety/a-guide-to-anti-anxiety-medications>
- Re, P., McConnell, J., Reidinger, G., Schweit, R., & Hendron, A. (2014, November). Effects of yoga on patients in an adolescent mental health hospital and the relationship between those effects and the patients' sensory-processing patterns. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/25327305>
- Sensory Systems Work Together*. Retrieved November 02, 2018, from <https://learn.genetics.utah.edu/content/senses/worktogether/>
- Statistics. (2018). Retrieved from <https://www.sensory-processing-disorder.com/statistics.html>
- Stosny, S. (2011). *Self-Regulation*. Retrieved from <https://www.psychologytoday.com/us/blog/anger-in-the-age-entitlement/201110/self-regulation>
- Weaver, L. L., & Darragh, A. R. (2015). Systematic Review of Yoga Interventions for Anxiety Reduction Among Children and Adolescents. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/26565100>
- What Is Stress? Symptoms, Signs & More*. (n.d.). Retrieved from <https://my.clevelandclinic.org/health/articles/11874-stress>

What's the Tie between Mental Health and Juvenile Justice? (2015). Retrieved from

<https://childmind.org/2015-childrens-mental-health-report/>

White, Laura S. (2012). Reducing Stress in School-age Girls Through Mindful Yoga. *Journal of Pediatric Health Care*, 26(1), pp. 45-56