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Identification and Treatment of Anxiety in Students Receiving Special Education Services: A Review of the Literature

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IDENTIFICATION AND TREATMENT OF ANXIETY IN STUDENTS RECEIVING

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I would like to acknowledge the process. The important role that so many people have played in inspiring this paper to completion. To my students, my family, and the many other people who help me grow day to day. This paper is dedicated to those people who suffer due to anxiety and for those who have helped me to recognize its manifestations.

Abstract

Anxiety affects school achievement and is common in nearly every disability category treated by Special Education programs. This review of literature summarizes existing research on the prevalence of anxiety disorders in students in varying disability categories, looks at the evidence of anxiety manifestations and its effects on the classroom and reports on treatments used in the school environment. Some conclusions are made about productive interventions for anxiety disorders based on past research. Although not all studies pertain specifically to special education students it is recognized that some of the information regarding anxiety as it applies to the general population is appropriate. It is also recognized that, although widespread, anxiety has not been studied in depth in the field of special education programming, this is recognized as an area for possible future studies. Comments are made in conclusion as to how these findings apply to special education as a field and opportunities for furthering this research is discussed.

Table of Contents

CHAPTER I: INTRODUCTION

Anxiety is a condition that affects students with severe to profound learning disabilities on a daily basis. Creating a classroom environment that can alleviate anxiety is the first step to allowing students to make progress on their goals. Researching how to lessen student anxiety and how to apply these findings through classroom routines is the main focus of this study.

Anxiety is defined by the Merriam-Webster online dictionary as "a feeling of worry, nervousness, or unease, typically about an imminent event or something with an uncertain outcome." It is further described as a "desire to do something, typically accompanied by unease." When being discussed in Psychiatry it is described as a "nervous disorder characterized by a state of excessive uneasiness and apprehension, typically with compulsive behavior or panic attacks," (Merriam-Webster, 2019). Upon researching this topic, it becomes obvious that it is all these things. Depending on the person or people being studied anxiety may present itself in a way that fits one of these specific definitions more than another, but realistically, it is probably always a jumble of all these things.

Thompson, Robertson, Curtis and Frick (2013) describe anxiety as excessive fear and worry that is experienced by 10-20% of the general population of children. Common anxiety disorders in children and young adults include phobias, generalized anxiety disorder and separation anxiety disorder. This research also describes anxiety disorders as being characterized by "hyper-arousal in response to mild stimuli" (p. 57). This hyper-arousal often presents itself in the classroom as disruptive behavior and because anxiety

affects students so continuously it can be very hard to identify or prevent the stimuli that the student may be reacting to.

According to Schoenfeld and Janney (2017) the last few decades have called attention to anxiety in many mental health settings. Despite the surge of new cases addressing unhealthy anxiety levels in youth, educators are often not taught to recognize anxiety or distinguish it from other emotional, behavioral disabilities. These disorders often times lead to disruptive behavior which is much more observable than the quiet anxiety that may go unnoticed in a busy school environment. Often students are being categorized for behaviors that are only a symptom of their greater anxiety or fearfulness.

Schoenfeld and Janney (2017) also report that anxiety's effects on children range from impaired social and personal development to a greater likelihood of financial dependency and employment difficulties in young adulthood. In adults, anxiety disorders are associated with increased incidence of substance abuse and suicide. It seems clear that students suffering from anxiety would be adversely affected as well.

Anxiety disorders are often times a symptom of other developmental disabilities and sometimes a part of what is causing the delay of academic, social and career development of an individual. While it is recognized as something that is so damaging, a significant number of students with anxiety disorders remain underserved.

Thompson et al. (2013) report that students have identified many stressors that lead to their anxiety in the school environment. These are identified as, fear of failure, school phobia, difficulty in peer and adult interactions, fear of violence and/or bullying, separation anxiety and uncertainty about future goals. Although the US federal government has called on schools as the primary source of mental health interventions for

children and adolescents and despite all the research, interventions and prevention programs, a significant number of students who struggle with anxiety do not receive proper treatment.

Minahan and Rappaport (2012) concluded that if students are to succeed in school, they need a prescribed behavioral intervention plan that addresses anxiety, specific instruction in the underdeveloped skills leading to anxiety that helps them learn new responses to anxiety causing situations. Making these interventions clear and concise so that they can be applied in a busy classroom and supporting teachers with enough staff members to help students who suffer from anxiety are also important aspects of successful intervention.

For these reasons, the history and treatment of anxiety should be a base for special education classroom structure and instruction. In this review of literature, studies are compiled and compared to gain a better perspective of the research that has been done, and the topics that still remain to be explored in order to help educators and other mental health professionals to intervene and alleviate student anxiety.

There are many situations that can contribute to student anxiety. Thompson et al. (2013) found that students have identified multiple stressors that can contribute to heightened anxiety in their interactions at school. Some of these causes are fear of failure, school phobia, fear of violence and bullying, difficulty in social interactions between peers and adults, separation anxiety and uncertainty about the future.

Anxiety often only heightens as children grow up which proves that identification of anxiety in children and equipping them with tools to help them becomes even more important. Yu, Li, Wang and Zhang (2012) found that adolescence is a transitional period

where young people are especially prone to experiencing high levels of anxiety and depression. Many studies have shown that adolescent anxiety can be linked to poor academic performance, poor mental health, and substance abuse, and might foreshadow crime and malfunctioning in adulthood.

Considering the broad population of people affected by anxiety and the stages of life in which anxiety is prevalent, it is clear that educators can play a large role in either adding to or alleviating these disorders. We can also understand anxiety as a foundation from which many other problems can spring. In this sense it is applicable to the instruction of students in many different disability categories and important to identify as early on as possible in order to prevent students from being mislabeled.

This review highlights many studies that have had success as interventions, although much of it is not widespread. Some of the most interesting work is being done on a holistic level, where educators are teaching students to soothe their bodies through mindfulness and movement. These interventions seem most accessible and least subject to change from an educator's standpoint.

Jensen, Stevens and Kenny (2011) noticed specific breathing patterns in students displaying internalizing and externalizing behaviors. Many of these students who externalize their feelings in the form of disruptive or dangerous behavior report internalized feelings of anxiety and other emotional disorders. In order to treat these symptoms researchers had students take a Yoga Nidra class to help regulate students breathing patterns. Steiner, Sidhu, Pop, Frenette and Perrin (2012) did a similar study that used Yoga to treat students at the elementary level who were diagnosed EBD. Although

in both these studies the results were sorted, there were many students and teachers that reported benefitting from these treatments.

Since children presenting with challenging emotional and behavioral disorders may be resistant to traditional behavior plans, it is important to explore alternative options. With the knowledge that more that 13% of school aged children in the US suffer from EBD, and the negative outcomes that are often associated with such disorders it becomes even more important to help students explore treatment options that they can apply independently in their adult lives.

Macheski, Buhrmann, Bush, & Lowney, (2008) found that attending to students feelings must be a continual process, creating a way to take an "emotional temperature" of the classroom and learning environment as a whole. This is especially important in a special education classroom where there are often a lot of emotions to be noticed. In creating a "safe place" and building students trust, students are more likely to share and/or discuss their fears in a way in which their emotions can be "honored, processed and hopefully controlled". (p. 27).

While reading this review it is important to remember that many studies have been used from countries outside the United States, therefore the way disability categories are described are often different than what we are accustomed to. The verbiage may also differ depending on when these studies were published. Since the special education field is in constant flux, disability categories may be outdated. Since these discrepancies can be confusing, studies will be quoted using the exact wording used by the author(s).

This literature review aims to answer some of the guiding questions by compiling research and studies that concentrate on three different and equally important aspects of understanding and lessening student anxiety. Anxiety will be defined and looked at through the lens on a student receiving special education services. Anxiety will be described as an underlying factor to many different internalized and externalized student behaviors and tips will be provided as to how to recognize such student behaviors. Conclusions will be offered regarding Interventions and treatments for anxiety within the classroom and by supportive services.

When addressing extreme cases of anxiety in the classroom the following questions need to be asked: What is the cause of student anxiety and how does anxiety affect students receiving special education services? How does anxiety manifest in the classroom? How can our daily routines help to reduce stress and facilitate progress? What routines and strategies can be made consistent so that students can continue to have success after leaving our specific classroom environment?

CHAPTER 2: LITERATURE REVIEW

Literature Search Procedures

To locate the literature for this thesis, searches of Educator's Reference Complete, Expanded Academic ASAP, Education Journals, ERIC, Academic Search Premier, and EBSCO MegaFILE were conducted for publications pertaining to this topic. This list was narrowed by only reviewing published empirical studies from peer-reviewed journals that focused on anxiety, special education, professional development and interventions in education found in journals that addressed the guiding questions. The key words that were used in these searches included "reducing anxiety in the classroom," "anxiety in special education," "interventions to treat anxiety," "effects of student anxiety," and "anxiety and disability." The structure of this chapter is to review the literature on student anxiety in three sections in this order: Prevalence of Anxiety in Students with Disability; Anxiety Manifestations; and Treatments: Application in the Classroom.

Prevalence of Anxiety in Students with Disability

Thompson et al. (2013) found that anxiety is the most commonly diagnosed mental health issue for children and adolescents. While it is one of the most pervasive mental health concerns affecting students, a significant number of students with anxiety disorders remain underserved. The level of fear and worry that meets the required clinical criteria for an anxiety disorder is experienced by 10-20% of the general population of children (Dadds, Spence, Holland, Barrett, & Laurens, 1997). Frequently occurring anxiety disorders in youth include phobias, generalized anxiety disorder, and separation anxiety disorder, whereas agoraphobia, post-traumatic stress disorder and obsessive-

compulsive disorder are less frequently diagnosed in children and adolescents (Costello, 2003).

Thompson et al. (2013) concentrate on risk factors for the development of childhood anxiety, methods for counselors to assess anxiety in a school setting and school-based interventions for students. Based on the literature review, the authors make several recommendations to enhance services for students in need. They found that "several intrapersonal and environmental risk factors are associated with the development of clinical anxiety disorders in children and adolescents" (p. 35). Intrapersonal risk factors include behavioral inhibition, heightened physiological responding, negative emotionality, emotional deregulation, limited attention control, and emotional self-efficacy (Suveg & Zeman, 2004). Some environmental risk factors associated with anxiety in young people include anxious and overprotective parenting, mothers with depression and exposure to domestic violence (Thompson et al., 2013).

When analyzing environmental risk factors, Thompson et al. (2013) found that although genetic and personality contributions to anxiety are moderate, environmental factors such as parenting practices also play a significant role in children's manifestations of anxiety. Children with anxious parents are up to seven times more likely to develop anxiety than children of non-anxious parents. Parenting styles of depressed mothers are also considered potential contributors to the development and maintenance of childhood anxiety, when observed, studies have shown that depressed mothers tend to be more withdrawn, less nurturing and more inconsistent (Gelfand & Teti, 1990).

Thompson et al. (2013) explain anxiety and display research on the causation of anxiety disorder in a very clear way. They use a variety of sources to pull together their

information. The study lacks concrete examples or specific interventions for treatment.

Ideas for intervention are given, but specific tools are not. This is something that could be

expanded upon in future research.

Thakker et al. (2015) conducted their study to assess whether school students with

newly diagnosed Specific Learning Disability have a higher prevalence of anxiety

compared with their typical peers. In conducting this study the authors chose a sample

size of 138 students. A 1:1 ratio of students with specific learning disabilities and typical

students were taken. Two hundred and seventy six students were enrolled total. The

controls were age and gender-matched and students were from similar socioeconomic

strata. The study population was made up of students 8-15 years old who were newly

diagnosed with a specific learning disability. All students in the study were attending

schools in Mumbai, India where the medium of instruction was English.

In this study, anxiety was measured using the Spence Children's Anxiety Scale,

the Child Self-Report Version Questionnaire. The SCAS is a popular self-report

questionnaire to access children and adolescents' perceptions of the frequency with

which they experience symptoms relating to separation anxiety, social anxiety,

obsessions/compulsions, panic/agoraphobia, fears of physical injury, and generalized

anxiety.

Thakker et al. (2015) describe anxiety types and their meanings. Their study

concentrates on the correlation between student anxiety and newly diagnosed learning

disabilities. The six types of anxiety and their meanings are described as: separation

anxiety, which is the extreme fear or discomfort regarding separation from one's home or

from attachment figures; social anxiety, which is excessive anxiety when being among

people or performing in front of people, particularly those who are unknown; obsessions/compulsions; marked distress caused by recurrent thoughts, impulses or images that are intrusive and may lead to repetitive behaviors such as hand-washing and rechecking or mental acts such as praying; panic/agoraphobia; intense discomfort with somatic symptoms such as sweating, dizziness that may be accompanied by fear of being in places from which escape is difficult; fears of physical injury; extreme fear caused by a specific object (e.g., animals) or situation (e.g., driving through a tunnel); and generalized anxiety; excessive worrying about a number of events or activities.

The results of Thakker et al.'s study support the hypothesis that in the city of Mumbai, India a significantly higher proportion of learning-disabled students have clinical anxiety regardless of gender, age group, presence of comorbid ADHD, and/or associated medical conditions as compared to their general education peers.

School students with specific learning disabilities experience chronic academic underachievement and resulting stress. This study aimed to determine if school students with newly diagnosed specific learning disabilities were more likely to have anxiety than their typical peers (Thakker et al., 2015). The Spence Children's Anxiety Scale- Child self-report version questionnaire scores were significantly higher in eight to eleven year old learning-disabled male and female students when compared to their matched controls.

A significantly higher number of learning-disabled students were found to have "clinical anxiety" when compared to the controls regardless gender, age group, presence of comorbid attention deficit/hyperactivity disorder, or associated medical conditions. Students with newly diagnosed specific learning disabilities have greater odds of being "clinically anxious" relative to their general education peers (Thakker et al., 2015).

Farrer (2016) found that university students who face demographic factors including adversity have an increased risk of depression, generalized anxiety disorder or both. Students who experience psychosocial stressors including difficulties with time management and coping with studying are also associated with increased risk of depression, generalized anxiety disorder or both (Farrer, 2016). In studies that concentrate on anxiety in students without specifically addressing learning disabilities, it is easy to see how these same stressors may be exaggerated and unavoidable for those who are living with learning disabilities.

Farrer's (2016) study has many strengths. It provides information that has not been studied before and it provides the information in a clear manner. The method in which students were chosen was very thorough, making it easy to compare the study and control groups with great accuracy. The results were presented in a way that was easy to interpret and their use of data tables made comparison of the two groups very simple.

This study also has limitations. The design of the study makes it hard to prove a cause-effect relationship between newly diagnosed specific learning disabilities in comparison to general education peers. Researchers also stated that although they think data collection from students is most important, the collection of parent data would be useful as well.

Moradi (2015) studied mental health problems in children and young people with disabilities and defines mental health as "relating to how we think, feel, behave and interact with other people. At its simplest, good mental health is the absence of a mental disorder or mental health problem" (p. 42). Adults, children and young people with good

mental health are likely to have high levels of wellbeing, which means that they are feeling good and able to function well.

Pratt and Hill (2011) studied anxiety profiles in children with and without "developmental coordination disabilities"(p.47). The main focus of this study is to determine the prevalence of anxiety in students with DCD and to recognize specific characteristics of anxiety that children with DCD exhibit. Specifically addressing the cause of anxiety in students and whether there is a correlation between decreased motor skills and student anxiety.

A group of 27 parents of children with a diagnosis of DCD were chosen to complete the Spence Children's Anxiety Scale and their responses were compared to a group of 35 parents with typically developing children. The age of the children in both groups ranged from six to fifteen years old.

Parents of children with the DCD diagnosis completed The Spence Children's Anxiety Scale and the Developmental Coordination Disorder Questionnaire and results were compared. Tables compared the rate of impairment of the children and their patterns of anxiety. "Significant" group differences in specific anxiety areas included: "panic/agoraphobia, social phobia and obsessive compulsive anxiety." Parent reports show that children with DCD had elevated anxiety levels when compared with the matched controls.

Pratt and Hill's (2011) work is evidence that many children diagnosed with DCD experience low levels of emotional wellbeing. A strong point of this study is that it is the first, which not only documents reported levels of anxiety on a group level and individually and also researches the specifics of parent reported anxiety (Pratt & Hill,

2011). A limitation of this study is that parent reactions to child anxiety may not be accurate in the eyes of their DCD child or in the eyes of a teacher or social worker.

This research could be continued in the future by concentrating on questions in the areas of intervention, long-term outcomes, and the nature of the disorder itself. A strong point of this study is that the results were very straightforward and simple to understand. A weakness of this study is that the results were parent-reported, which may not be accurate to the feelings of the children in the study.

Escandell, Castro, del Sol, and Sevilla (2015) studied parents' perceived and self-perceived anxiety in children with autism spectrum disorder. Autism Spectrum Disorder (ASD) is characterized by a "series of deficits in social interaction and communication and restricted, repetitive, and stereotyped behavior patterns" (p.14). A large number of students with ASD also identify with having anxiety disorders. The goal of this study was to assess the perception of anxiety in a group of children and adolescents with ASD and the anxiety their parents think their children are experiencing.

The assessment used in this study was the Screen for Child Anxiety Related Emotional Disorder (SCARED). The participants were 38 children and 38 parents, one for each child or adolescent, the mean age of the children was 12 years old. The results of this study indicate that parental perception of anxiety is always higher than that reported by their child. This difference was reported as "significant" in the areas of "generalized anxiety, social phobia and anxiety in general". A strong point of this study was it reported clear results and a weak point of this study was that there was a lack of female subjects.

When analyzing intrapersonal risk factors, according to Eysenck and Eysenck (1985), neuroticism, the biological temperamental contribution to anxiety, is evidenced in

young children as behavioral inhibition, which is defined as a child's consistent tendency to display fear, restraint, or withdrawal from novel stimuli such as unfamiliar people, places, objects, or situations. Anxiety disorders are often characterized by hyper-arousal in response to mildly threatening stimuli (Mian, Wainwright, Briggs-Gowen & Carter, 2011).

Intimate partner violence was found to be associated with a wide range of developmental concerns that include but are not limited to anxiety disorders (Edleson, 1999). Studies exploring problems associated with exposure to domestic violence consistently find that child-witnesses exhibited anxiety and symptoms of posttraumatic stress disorder. In a recent study of 213 children aged 2-4 years, Briggs-Gowen (2010) found that exposure to intimate partner violence was associated with an increased risk of separation anxiety and posttraumatic stress disorder.

Paul, McKechanie, Johnstone, Owens and Stanfield (2015) reported on "The Association of Autistic Traits and Behavioral Patterns in Adolescents Receiving Special Educational Assistance" in a study that was designed to describe behaviors associated with autistic traits. In this study the authors used the Childhood Behavior Checklist and Social Communication Questionnaire to measure behavior and autistic traits. Participants included 331 adolescents receiving educational support in Scotland beginning in 2003. The sample was divided into three groups, which were defined by their scores on the Social Communication Questionnaire. The groups were: autism, pervasive developmental disorder and non-pervasive developmental disorder.

The study included students from 99 schools who were receiving special educational services and were estimated by their teachers to be in the "mid-borderline

intellectual disability area." Exclusion criteria for this study included "known syndromal intellectual disability, severe or profound intellectual disability, lack of speech, major sensory impairment or severe cerebral palsy" (p.48).

Paul et al. (2015) found that those with pervasive developmental disorders or autism display significantly higher levels of "withdrawal, somatic complaints, anxiety/depression, social, thought and attention problems, and aggressive behaviors" (p. 52). According to standardized diagnostic classifications, the autism spectrum is defined by "atypical functioning in social interaction, communication and repetitive behavior" (American Psychiatric Association, 2013). They found that those with autism were noted to attain significantly higher scores in the withdrawn, anxious/depressed, aggressive behavior and pervasive developmental problems syndrome scales of the Childhood behavior checklist than those who were not on the autism spectrum.

Nelson and Harwood (2011) stated that there are three theories that have been proposed to explain the possible relationship between specific learning disabilities and anxiety. The theory that is most commonly accepted is that anxiety develops as a secondary reaction to the academic difficulties experienced by learning disabled students. A second theory is that learning-disabled students primarily have high levels of anxiety that leads to the development of learning problems. A third theory is that of "cerebral dysfunction," which states that specific learning disabilities and anxiety are related to a third factor that is either "genetic/constitutional or based on brain dysfunction, that is, a biological factor and therefore, they frequently co-occur" (Paul et al., 2015, p. 27).

Wachelka and Katz (1999) studied test anxiety and found that although it may be a small problem to some it could be potentially serious when it leads to high levels of

distress and academic failure in otherwise capable students. Test anxiety is common in older students with learning disabilities. Extreme test anxiety affects 10-30% of all students, with a much higher prevalence in learning disabled and minority students (Strumph & Fodor, 1993). While a small amount of test anxiety can act as a motivator; it can enhance performance by encouraging the student to try. Too much anxiety has the opposite effect: it can disrupt mental functioning that is needed for the student to show their knowledge.

In their study Wachelka and Katz (1999) concentrated on reducing test anxiety and improving academic self-esteem in high school and college students with learning disabilities. They used a "randomized pretest-posttest control group design" to examine the effectiveness of a cognitive-behavioral treatment for reducing test anxiety and improving self-esteem in a group of 27 high school and college students with learning disabilities participated in the treatment. Before the study began all the students complained of test anxiety and showed elevated scores on the Test Anxiety Inventory.

Eleven of these students completed the eight weeklong treatments that consisted of "progressive muscle relaxation, guided imagery, self-instruction training, as well as training in study and test-taking skills." Results showed "significant improvement" in the treated group, which was not evident in an untreated control group of 16 students. Compared to the control group, the treated group showed "significant reductions" in test anxiety on the Test Anxiety Inventory, improvement in study skills and academic self-esteem.

One of the strengths of Wachelka and Katz's (1999) study is the researchers use of different treatments to help alleviate anxiety. The results were clearly displayed by

using a table to quickly compare test scores between students and over time. This study could be improved upon by conducting further research and follow up assessments to measure the degree of improvement over time and the effects of student's test performance or grades.

In their 18-month longitudinal study, Yu et al. (2016) focused on teacher autonomy and the way support from teachers reduces adolescent anxiety and depression. A total of 236 Chinese adolescents completed the questionnaires on "teacher autonomy support, basic psychological needs satisfaction, school engagement, anxiety and depression" in the fall and spring semesters of their 7th and 8th grade years, (p.20). Participants were from two junior high schools in southern China and were assessed four times with 6-month in between each assessment.

Students used three different forms of assessment: the teacher autonomy support questionnaire, the general basic needs satisfaction scale and the school engagement scale. The results showed that teacher autonomy support in the fall of 7th grade "boosted basic psychological needs satisfaction" in the spring of 7th grade, which "in turn increased school engagement and decreased anxiety and depression" (p. 22).

Yu et al. (2016) state that adolescence is a transitional period in which students are highly susceptible to anxiety and depression because of the "rapid changes in their physical growth and psychological and social development" (Vansteenkiste, 2012 p.18). Since adolescent anxiety and depression is so widespread and it affects students, their families, their school climate and their community as a whole, it is of very important to identify the factors related to the causation of adolescent anxiety and depression.

Yu et al.'s work was effective in many ways; it was interesting that it looked at the impact teachers have on student attitudes, school engagement and anxiety and depression levels. A weakness of this study was its complexity. Although it was interesting to see the ways that each of these aspects of school affected on another, using three different assessment scales provided for confusion in results reporting.

Arrah and Swain (2014) studied teachers' perceptions of students with special education needs in Cameroon secondary schools. In this study "130 teachers from five secondary government, denominational or lay private schools in Buea subdivision of Cameroon, Africa" completed a 26-item survey.

The results of Arrah and Swain's (2014) work show teachers perceptions of students with special education needs were "favorable", however specific areas of concern were brought up. The areas in which teachers had concern were: "insufficient resources for special education, lack of training to work with students with special education needs, additional stress and anxiety when teaching students with special education needs and preventing the learning of other students" (p.57).

A strength of Arrah and Swain's (2014) study is that it focuses the discussion on future directions for future research and creation of awareness of special education needs of students in Cameroon secondary schools. A weakness of this study is that although the results of the survey were analyzed using descriptive statistics, t-tests, and ANOVA, the content of the survey was not defined specifically, which made the results a little difficult to understand.

In Onwuegbuzie's study of Statistics Anxiety and the Role of Self-Perceptions (2000) the "relationship between 7 dimensions of self-perception and 6 dimensions of

statistics anxiety (p. 3)" was the focus of the study. The participants were 146 students enrolled in graduate-level research methodology courses. All of these students were enrolled in the college of education in a variety of disciplines (early-childhood education, elementary education, secondary education, and speech language pathology). The same instructor taught all the courses. Of this sample 91.2% were female which was typical of the proportion of women enrolled in the college of education at that time. Ages of the subjects ranged from 22 to 55.

In Onwuegbuzie's (1998) study the author administered the "Statistical Anxiety Rating Scale" to the students. This assessment scale measures statistic anxiety in a variety of academic situations. The results show that students with the lowest levels of "perceived intellectual ability, and perceived scholastic competence, and perceived creativity tended to have the highest level of anxiety, interpretation anxiety, test and class anxiety, computational self-concept, fear of asking for help, and fear of the instructor" (Onwuegbuzie 1998 p. 5).

Kirby, Williams, Thomas and Hill (2013) studied the "mood, general health, wellbeing, and employment status" in adults with suspected DCD. The study focused on the longer-term impact of having DCD in adulthood and considers the effect of employment on this group and its effect on psychosocial health and wellbeing. Participants reported on life satisfaction, general health and symptoms of anxiety and depression. The questionnaire used was a self-report. A comparison was made between those in and out of employment.

The group of unemployed adults with DCD reported significantly lower levels of life satisfaction. Both groups reported a number of health related issues that reflected

general health problems. There was no significant difference between those who were employed versus those who were unemployed in the General Health Questionnaire scores. Although both groups reported high levels of depressive symptoms and rated their satisfaction life very low, the unemployed group reported significantly more depressive symptoms and less satisfaction. The results showed a high level of anxiety for both groups using the Hospital Anxiety and Depression Scale.

A strong point of this study is that it adds to the evidence that addresses physical, mental health and wellbeing in adults with DCD. This study is also the first to provide information into the possible positive effects of employment in adults with DCD. It is also useful that these results were self-reported. A weakness to this study was the many forms and questionnaires that were used; it may have made the results simpler to find one effective form to use.

Burmudez, Sanchez, Sol and Sevilla (2015) "studied parents perceived and self-perceived anxiety in children with autism spectrum disorder." The main purpose of their study was to assess the perception of anxiety in a group of children and adolescents with ASD and the anxiety their parents think their children have. Since anxiety and ASD are often found to go hand in hand, many more anxiety assessments are being administered to children with ASD. Participants in this study were 38 children with a mean age of 12 and 38 parents with a mean age of 47. The study used the SCARED questionnaire and was distributed to families after consent forms were returned. Children and parents completed the forms within a couple days.

Graphs of results clearly showed that the lines of parents perceived anxiety was always higher than what was reported by their child. The authors conclude that the

presence of anxiety in children with ASD is recognized as a major health concern. This makes this report important because it analyzes the sub categories of anxiety and how those apply to the overall rating of general anxiety. This study also shows the difference in the perception of anxiety by parents in relation to the real anxiety felt by children with ASD. Although the authors did not note any limitation in the study I think the results could have been displayed more clearly. Also, as with a few other studies, the environment from which the sample was taken was not clearly defined.

Anxiety Manifestations

Increasingly, school-aged children present with challenging emotional and behavioral problems and may be resistant to traditional special education approaches (Smith, 2011). Untreated emotional and behavioral disorders are associated with negative outcomes including poor grades, poor personal relationships, failure to complete high school, unemployment, incarceration, substance abuse, and suicide (Smith, 2011). Given the pervasiveness of adolescent anxiety and depression and their far-reaching impacts on adolescent populations, families, school and communities, it is of vital importance to identify the factors related to adolescent anxiety and depression (Yu et al., 2016).

Stiner, Sidhu, Pop, Frenette and Perrin (2012) studied yoga in an urban school for children with emotional and behavioral disorders to examine the feasibility and potential for positive effects of yoga sessions within a school setting for children with Emotional Behavioral Disorders at an urban elementary school. Thirty-seven children with EBD completed a yoga intervention in small groups (7-10 students) twice per week for 3.5 months.

Participants were children in fourth and fifth grade (ages 8-11). All students selected had been identified by the special education director and the teaching staff as having an emotional and behavioral disorder including "anxiety, depression, aggression, conduct disorder, hyperactivity and attention difficulties" (p. 72). Students were placed into yoga sessions based on schedules; all classes took place before lunch and were taught by certified yoga instructors. Teachers, parents, and students completed a systematic pre and post-intervention assessment, and yoga instructors completed attendance and behavioral checklists.

The average attendance for the yoga sessions was 90%. Eighty percent of responders described being very satisfied with the intervention. Teachers reported "improved attention in class and adaptive skills and reduced depressive symptoms, behavioral symptoms and internalizing symptoms" (p. 76). This study's strengths include fact-based evidence and research in the ways that EBD students are affected by their disorder and the ways the symptoms of EBD hinder students' abilities to learn. It was also interesting that teachers, students and parents input were all included in the study. Although the input of parents was a point of interest it was also a weakness in the study because the response rate was lower compared to student and teacher response rates, which affected the data. The authors also mention that this was a small pilot study and "therefore lacks sufficient power to explore the results in detail" (p .78). Making the assessment strategy easier for students and parents to complete is one way the study could be strengthened.

Young (2016) studied the effects of graduation and compared of the worries of adolescents with and without intellectual disabilities. The author writes "graduating from

high school is an important time for adolescents, because of increasing autonomy and developing adult identities" (p. 85). This study concentrated on the emotional impact of worries in adolescents with and without intellectual disabilities at this time of transition.

To measure student anxiety 25 adolescents with mild to moderate intellectual disabilities and 27 adolescents with intellectual disabilities ages 15-18 years old took part in the study. The level of each participant's worries and anxiety were self reported and measured using a structured interview. When analyzing the results of the study the interviews showed differences between the worries of the two groups of participants.

The group with intellectual disabilities expressed more general worries about failure and personal threat; levels of distress and anxiety were significantly higher than the control group. The research concluded that the differences in worries between the two groups might be due to differences in life experiences and expectations. Researchers concluded that specific student worries should be explored and addressed at the time of graduation in order to facilitate a less stressful transition.

A strong point of Young's (2016) study was its focus on transition-aged students; it is the only study that concentrates on this time of life and the specific difficulties faced by adolescents with intellectual disabilities. A limitation to this study is that the interview and survey given to students was not clearly defined.

A research study conducted by Minahan and Rappaport (2012) that concentrated on anxiety in students and its effect on students' behaviors. They looked critically at the way identifying triggers and teaching more desirable responses can be a part of intervention plans in any classroom. This study presented research on the effect of anxiety and how it attributes to student behavior including inconsistent behavior and

avoidant behavior. Minahan and Rappaport (2012) also gave research- supported arguments as to why traditional behavior plans do not work. Minahan and Rappaport (2012) outlined the undeveloped skills that are present in students who present with anxiety disorders and what we can do as educators to strengthen those skills.

According to Meena Dasari, a psychologist from the New York University Child Study Center Institute for Anxiety and Mood Disorders, some anxiety symptoms may be unique to children with Asperger or who are on the autism spectrum. Some of these unique symptoms include: "increased insistence on routines and sameness; increased preference for rules and rigidity; increased repetitive behavior; increase in special interest; becoming easily explosive (anger outbursts); and demonstrating 'silly' behavior" (Minahan & Rappaport, 2012 p. 47).

Minahan and Rappaport (2012) explain that anxiety can present as a "hidden disability". Many times, the student looks fine and then explodes without explanation. For teachers, the inconsistent and erratic nature of anxiety-related behaviors can be very hard to understand and even harder to predict. A student can do the same thing every day, and due to changing anxiety levels, react very differently. Performance can also change drastically due to anxiety's effect on memory, attention and other abilities. In this way, constant anxiety can make students appear lazy or unmotivated.

Minahan and Rappaport (2012) also explain the importance in understanding the function of the behavior. A student's anxiety related behavior is often motivated by escape or avoidance. In some situations anxiety causes students to misbehave, if students are sent out of the classroom as a response to this behavior, this may accidentally

reinforce the avoidant behavior because the student is able to delay the assignment that they are escaping.

Greene (1998) states "students would behave if they could" p. 22). If a student is having behavior problems it is often because he or she has not developed necessary coping skills. Some student with anxiety may have the following underdeveloped skills: self regulation- the ability to calm self and manage frustration and thought stopping/thought interruption- the ability to short circuit the cycle of negative thinking by refocusing attention on a replacement thought.

Greene (1998) also reports that students who struggle with anxiety may also demonstrate underdeveloped coping mechanisms such as the use of thinking traps- the ability to recognize common patterns of thoughts that can increase anxiety and learn how to manage these thoughts, social skills- the ability to take another person's perspective and conversation skills, executive functioning- the ability to think before acting and to follow sequential steps to complete a task efficiently, flexible thinking- when anxious, flexibility of thought can help avoid episodes of becoming upset when things don't turn out as expected (Minahan & Rappaport, 2012).

Anxious children often have to try harder to complete tasks because they're trying to manage their anxiety simultaneously (Owens et al., 2008). Traditional behavior plans often do not meet the needs of students with anxiety and may even increase inappropriate behavior. For this reason, understanding the role of anxiety in causing these behaviors is important. Understanding and analyzing how environment may be unintentionally reinforcing behavior is also important (Minahan & Rappaport, 2012). If untreated anxiety

can persist for years, but proper interventions can decrease anxiety and improve learning (Ozsivadjian, Knott & Magiati, 2012).

This study offers many tools for educators to better understand and better treat anxiety in the classroom. This study effectively analyzes the causation of behaviors as a result of anxiety and also goes in depth in looking at how to prevent triggers and how to best intervene when anxiety is the cause of disruptive behavior. A limitation to this study is that it concentrates on students with Asperger Syndrome alone, but much of the research can be applied to special education students in multiple disability categories.

Schaaf, Toth-Cohen, Johnson, Outten and Benevides (2011) reported on the everyday routines of families of children with autism and examined the impact of sensory processing difficulties on the family. The purpose of the study was to explore the experiences of how sensory-related behaviors of children with autism affect daily family routines. In-depth, semi-structured interviews were conducted with four caregivers regarding the meaning and impact of their child's sensory-related behaviors on family routines both inside and outside their homes.

Findings of Schaaf's et al. (2011) study show that family members felt that sensory related behaviors are one factor that limited the family's participation in work, family and leisure activities. Parents and caregivers have to use certain strategies in order to manage behaviors and complete routines. This information is important to keep in mind when working with families of ASD children. This information is also important when thinking about the stress and anxiety level of the family as a whole. A limitation to this study is that the interviews were semi-structured and the content of the interviews were not clearly defined.

Jensen, Stevens and Kenny (2011) studied the respiratory patterns in students enrolled in schools for disruptive behavior before, during, and after Yoga Nidra relaxation. This study investigated the effects of one session of Yoga Nidra (relaxation technique) on "breathing patterns/respiratory effort in the thoracic and abdominal chest regions of boys with disruptive behavior using Respiratory Inductive Plethysmography" (p. 35). The participants were between 10-15 years old and attended a "special school for children with disruptive behavior" in Sydney, Australia. The results were compared with three students without disruptive behaviors.

Since the sample size of this research was relatively small, in-depth results were reported for each of the participants. The data was in-depth and easy to understand. It portrayed each student's individual needs and the affects the treatments had on them. This was a strong point of the study. Although the participant's results were recorded in depth the outcomes were not as clear. This small study was part of a larger one in which a relaxation response was realized in students after using the Yoga Nidra relaxation technique. In terms of analyzing results the small sample size was a weakness of the study.

Anxiety affects a wide variety of students. Anxiety is prevalent in university students who are studying to learn a new language. As reported by the observations by Koba, Ogawa and Wilkenson (2000) when students are anxious they are unable to "receive input and accordingly they fail to progress in their language acquisition". Jackson (2002) states that students refuse to participate in classroom discussions due to anxiety as well as other personal factors. Jackson (2002) observed that an anxious student presents as "refusing to participate voluntarily in classroom activities, has uncomfortable

experiences learning a second language, is always fearful of making mistakes, and is not willing to try any new linguistic forms"(p. 47).

Koba et al.'s (2000) research studied anxiety's role in the success or failure of foreign language learners. In order to conduct the research, visualization activities were developed and implemented in the Arabic foreign language classes. These activities were divided into the "pre-reading activities, during reading activities, and post-reading activities". The research concluded that these activities "helped students to strategize" and "showed improvement in reducing reading anxiety" (p. 51).

Datta (2014) did test-anxiety research on students with vision impairments and students with mild intellectual disabilities after finding an absence in research on test anxiety in students with disabilities. This study investigated the prevalence of test anxiety in the students in each of the two disability groups. All students in the study were in "specialist and mainstreamed educational settings" in South Australia. Twenty-five students with vision impairments and 20 students with intellectual disabilities were administered the Spielberger's Test Anxiety questionnaire which measured "worry, emotionality and total test anxiety" (p. 29).

Test scores were high for both groups but it was found that those students with vision impairments had slightly higher physically fearful symptoms (emotionality) in comparison to cognitive fears (worry) in a testing situation, while the opposite was true for students with intellectual disabilities.

A strong point of this study was comparing emotionality or externalizing symptoms with internalizing symptoms, which is something that has been talked about in other studies but not measured concretely. A limitation to this study is that there was no

control group to compare test scores to; instead there was comparison between visually

impaired and intellectually disabled.

Walchelka and Katz (1999) found that despite the increased prevalence of test

anxiety in college students with learning disabilities and despite the fact that they are

already at greater risk for academic failure because of skill deficiencies, there are very

few studies on the treatment of test anxiety in this population (Swanson & Howell 1996).

Bryan (1983) found that high test anxiety is also associated with low self esteem, poor

reading and math achievement, failing grades, disruptive classroom behavior, negative

attitudes towards school, and unpleasant feelings of nervousness and dread that stem

from an intense fear of failure.

Thompson, Robertson, Curtis and Frick (2013) state that anxiety disorders can

significantly impair children's social skills, academic success and emotional wellbeing

(Ost & Treffers, 2000). For example, a child's ability to concentrate on important

academic tasks and recall previously learned material may be impaired by physiological

arousal, inordinate attention to a perceived threat, and excessive worry (Ma, 1999). An

anxious child's ability to well in school can also be compromised by discomforts such as

stomachaches, headaches, and nausea (Dorn et al., 2003).

Due to these symptoms, anxiety may lead to poor attendance, diminished school

performance and undeveloped social skills (Barrett & Heubeck, 2000). D'Esposito, Blake

and Riccio (2011) also state that research has found that children who report being

bullied experience higher levels of anxiety and, conversely, students who experience high

anxiety are more likely to report being bullied.

It is known that high levels of anxiety have a deleterious effect on academic performance. Also, untreated anxiety over a period of time would contribute to negative educational outcomes such as failure to complete high school and failure to enter college. If left untreated, anxiety disorders increase the risk of depression, addictions, and risk of suicide for children and adolescents (Ost & Treffers, 2000). Sareen et al. (2005) for instance found that anxiety is the most significant risk factor for suicidal ideation and attempts.

Treatments: application in the classroom. Santiago, Kataoka, Forness and Miranda (2015) studied mental health services in special education and analyzed the quality of care. In this study, which took place in a large urban district, the authors surveyed 55 clinicians within the special education system. The focus was on the mental health services provided to students who were receiving "related-services counseling" as a supported service of their Individualized Education Plan. The clinicians in this study reported on their own characteristics, the services they provided within the district, and their work environments.

The measures taken into account by the councilors in the study were the "clinician's characteristics, the climate in which they work, and the quality of care provided" (p. 68). This included the use of manuals in their mental health services, coordination of care with other providers, parent involvement in treatment and use of standardized assessment instruments. The discussion of the results of this study found that clinicians who had specialized training, younger clinicians, and clinicians working in cooperative climates with less role overload were able to provide higher quality care to their students.

Clinicians providing mental health services within special education reported a wide range of treatment approaches. Less than half of clinicians reported providing evidence-based services in the treatment of ADHD and anxiety, and slightly more than half reported providing the appropriate evidence-based treatment for depression. One strength of this study is that the findings are conclusive and point to problems within the school systems that can be targeted in order to allow for better care for students. Overall the findings suggest that to improve the quality of services provided, focus must be on work climate and clinician training. A limitation of this study is that the sample is relatively small and only includes clinician perspectives, leaving open the possibility that self-reporting may actually overestimate clinician's ability to meet students Individual Education Plans.

Bastounis, Callaghan, Banerjee and Michail (2016) studied the effectiveness of the Penn Resiliency Program and its adapted versions in reducing depression and anxiety and improving explanatory style. The focus of Bastounis et al.'s (2016) study was to assess the effectiveness of the universal application of a resilience intervention that had been proposed for large-scale rollout. The Quality Assessment Tool for Quantitative studies of the Effective Public Health Practice Project was used to determine how effective the implementation of this program might be. Nine studies from Australia, the Netherland and the USA were compiled and "met the inclusion criteria" but no evidence was found to support that the Penn Resiliency Program reduced anxiety or depression for students.

Bastounis et al.'s (2016) study was chosen because, universal, school-based depression prevention programs have shown promising effects in reducing depressive

symptoms with theses results remaining for nine-months. Individual studies of these programs however have reported mixed results (Horowitz, Garber, Ciesla, Young & Mufson, 2007 p. 89).

The Penn Resiliency Program is a 12-session program implemented with 10-14 year old children with its duration ranging from 90-120 minutes per session. The program targets seven individual skills: assertiveness, negotiation, relaxation, procrastination, social skills, decision-making and problem solving. The aim of the program is to target the link between maladaptive cognitions and emotional behavioral outcomes by changing students' style of communication and by promoting goal setting.

Bastounis et al.'s (2016) study included all published works testing the effectiveness of the universal application of school based Penn Resiliency Program or any of its derivatives, targeting depression and anxiety. This review draws data from participants' ages 8-17, taking into account that depressive symptoms are not common before 8 years old. In this systematic review there was no evidence regarding the effectiveness of the Penn Resiliency Program in reducing depression or anxiety in the selected group of students.

There were several limitations found in Bastounis et al.'s (2016) study. First, there were a limited number of studies that met the inclusion criteria for analysis that led to a scarcity of data. The data that was assessed was post-intervention; although there is evidence that some of the effects of the program may emerge later. This was a difficult study to understand because the study was an analysis of other studies, while it provided some interesting research; it needs to be considered that it is pulling information from an

extremely large database. Since the studies being compared are on different continents, it is important to take into account the extreme differences in educational climates.

Macheski, Lowney, Buhrmann and Bush (2008) studied overcoming student disengagement and anxiety in theory, methods and statistics. Shared concerns about student disengagement and anxiety led them to believe in some important strategies. The strategies they found to be effective were: creating an ongoing active role in for students, establishing a common and comfortable language of discourse and establishing a means of monitoring students' feelings. Macheski et al.'s (2008) research provides ideas and examples of ways teachers can create a community of learners which helps to build student engagement and reduce student anxieties.

Macheski et al.'s (2008) research concentrates on the importance of creating a community of learners. Researchers believe that until the focus is on systematically changing the typical classroom climate of disengaged, highly anxious students and faculty who worry about teaching these classes, little will or can change. For these reasons it seems important that teachers begin to learn about how to create a more student-friendly, actively engaged community of learners. Such a community of learners is built on classroom dynamics and day-to-day interactions within and outside the classroom.

Macheski et al. (2008) found that the first day experience is very important. Their belief is that a key step in constructing a community of learners begins on the very first day, which needs to focus more on building relationships rather than course content. It is important that classroom activities be interactive and creates an environment that feels

emotionally safe to students while allowing them to get to know each other in an atmosphere that is non-threatening and fun.

Ongoing community building processes are also important. In this study, the authors identified three processes that need to be ongoing throughout the term in order to build a community of learners. The first is to create an active role for students. In order to achieve a learning community, students must be actively involved day to day which means that teachers need to build daily routines for student participation and involvement in the classroom. The authors found that creating a common language of discourse in the classroom is equally important. The challenge for teachers who are interested in creating an engaged community of learners is to take content and make it understandable and applicable to students' every day lives.

Creating a supportive emotional environment is also important in building a community of learners. Teachers can do this by paying close attention to students' emotions especially in moments when their fears and anxieties increase. In this way teachers can help to celebrate successes and normalize mistakes. An easy way to reduce student anxiety is to accept our own mistakes as teachers and model the ability to recover from mistakes and learn from them. Macheski et al. (2008) say that attending to students' feelings must be a continual process in order to build trust in the classroom and create an educational safe space. Although Macheski 's et al. (2008) study focused on high-level theory, methods and statistics classes, these strategies can be used in any classroom setting to build a community of learners to help alleviate stress and anxiety.

Foulder-Hughes and Prior (2014) studied ways to support pupils with DCD and ASD with the transition to secondary school. This study sought to investigate how

children with ASD and DCD felt about the transition to secondary school from primary. Face-to-face semi-structured interviews were used to gather results and data was analyzed thematically. The sample was a total of six children (five boys and one girl) all in sixth grade.

In the interviews students were able to voice their worries and offer support strategies that would help them but their worries exceeded their suggested support strategies. A strength of this study was that the data was collected from interviews directly from the students. A limitation of this study was that although the current study provides a base from which further research can be conducted on how to best support students, it does not make many suggestions of its own.

In her study on anxiety and learning, Rosenfeld (1978) concentrated on the relationship between anxiety and various types of performance and achievement. The general conclusion being that anxiety interferes with academic achievement, especially in college aged students. One clear implication from this conclusion is that effective teaching should incorporate efforts to handle the problem of anxiety associated with learning.

Rosenfeld (1978) found that a common misconception among teachers was that student anxiety was something that they had to handle within the classroom and was not caused or lessened by instruction. She found that various ways of conducting assessments and classroom interactions could possibly reduce anxiety and improve student performance and learning.

It can be concluded that no one method of teaching will be best for every student, teacher and subject combination. One consistent piece of advice in the literature on

teaching is that the effectiveness of any teaching method depends on the enthusiasm and interest of the teacher. Rosenfeld (1978) also concluded that within a given institution, a variety of instructional settings should be offered so that students can potentially choose the structure that best meets their learning style and need in a particular subject.

Schoenfeld and Janney (2008) authors of *Identification and Treatment of Anxiety in Students with Emotional or Behavioral Disorders: A Review of Literature*, found that anxiety affects school achievement, yet it is rarely targeted for intervention in students. Their review of literature summarizes the existing research of the prevalence of anxiety disorder in students with EBD, the academic effects of anxiety disorders in students with EBD and the school interventions designed to reduce them. In this review Schoenfeld and Janney offer conclusions regarding the state of educational intervention for these students and highlights the lack of studies related to anxiety in student with EBD, and discuss avenues for further research.

One important conclusion of this study was that often students are not identified for internalizing disorders such as anxiety; it is often that the students who are receiving intervention and services are those who display disruptive behavior. They also found that despite excellent intervention success reported by mental health professionals working with children and adolescents with anxiety disorders, school-based interventions for anxiety are almost never applied in either general or special education.

As a whole Schoenfel and Janney's review of literature revealed that research on anxiety has been conducted primarily in the United States and Australia. They found overwhelmingly more urban areas have been the subjects of research. They encountered unclear specifications of gender and of setting of school. They found that generally

studies did not use medical, psychiatric or mental health information to identify or track students with high levels of anxiety or those who may be receiving services specific to anxiety disorders.

Schoenfeld and Janney site the use of multiple sources of information to identify anxious students as an area of strength through out the studies with 64% reporting the use of two or more sources. Students served as the most common source of information. Other studies relied exclusively on teacher opinion surveys. Limitations to this study include restricting the reviews to English-language journals that may have excluded research conducted in non-English-speaking countries. It is also possible that studies in the area of mental health services and not included in education or psychology may have been overlooked.

CHAPTER III: DISCUSSION AND SUMMARY

Summary of Literature

Anxiety is one of the main psychiatric disorders that manifests in students with emotional and behavioral disorders. EBD symptoms in the classroom include aggression, fighting and disruption. These behavior problems are the most debilitating of the EBD symptoms and highly correlate with academic failure (Wagner, 1991). The presence of disruptive behavior in the classroom presents challenging situations that can impede academic progress (Burns, 1995). Teachers are confronted with significant classroom disciplinary challenges and can spend up to a fifth of their time disciplining students rather than teaching (Lippman, 1996).

Traditional behavioral plans for children with disabilities often neglect what they need to learn to manage their anxiety and the underdeveloped skills that contribute to their anxiety. School personnel often identify a desirable target behavior and try to reinforce it through rewards, which is usually ineffective. When educators don't recognize that anxiety prompts these behaviors, such as meltdowns or withdrawal, their methods can unintentionally exacerbate the students' inappropriate behaviors and add to their anxiety level (Minahan & Rappaport, 2012)

A student with high anxiety levels can fall behind academically because he or she is distracted and has impaired verbal working memory skills when anxious (Hopko et al., 2005). Minahan and Rappaport (2012) state that some students with anxiety can show consistent and recognizable signs but often we do not know a student is feeling anxious until we see behavioral signs. Their behaviors, such as yelling, kicking, crying, and leaving the classroom can be explained by the underlying cause of their behavior.

Classic behavioral attributes of anxiety in school can be defined as: easily frustrated, complains of physical pains, such as stomach aches and headaches; has trouble breathing, exhibits fear, seems on the lookout for danger, upset easily by mistakes (perfectionism), cries, startles easily, blushes, trembles, expresses worry frequently. Some less obvious behavioral attributes of anxiety in school can be defined as: has difficulty completing work, acts irritable, acts angry, doesn't follow school rules, has inconsistent patterns in antecedents, exhibits ritualistic or repetitive behavior, is inflexible, and acts out spontaneously; seems over-reactive (Minahan & Rappaport, 2012).

McKeachie (1955) describes anxiety as the state of an individual in a threatening situation from which he cannot immediately escape. It can be described by the American College Dictionary as distress or uneasiness of mind caused by apprehension of danger or misfortune. Anxiety may be inferred from verbal reports, physiological reactions, or general behavior. Most studies of anxiety and learning or performance have used the first method, generally obtaining the subject's report in response to a questionnaire.

The hallmark symptoms of an anxiety disorder are persistent and debilitating fear or worry that impairs a child's functioning (American Psychiatric Association, 2000) and exceeds what is considered developmentally normal (Keeley & Storch, 2009). Innocenti (2002) states that although breathing rates in young people with disruptive behavior have received little attention, a-typical breathing patterns and breath rates are more commonly associated with anxiety disorders. Disruptive behavior also known as externalizing behavior, is a term that is used to describe a constellation of behaviors that have serious

personal, social and educational implications for children and young people (Wicks-Nelson & Isreal, 2003).

Disruptive behaviors with anxiety as an underlier can include inattention, hyperactivity, non-compliance, impulsivity, and risk-taking behaviors associated with attention deficit hyperactivity disorder, oppositional defiant disorder and conduct disorder (APA, 2000). In children with anxiety and disruptive behavior disorders, the fight or flight response to stress is more frequently activated than in children without disruptive behavior (Beauchaine et al., 2001). In the healthy person, this response is temporary but where stress levels persist, atypical respiratory patterns endure, creating psychopathological conditions (Ramos & Arnsten, 2007).

Paul et al. (2015) found that many of the special education students studied displayed significant aggressive behavior without significant delinquent behavior that leads us to believe that these behaviors are born of frustration or anxiety, not of wanting to cause damage. Thakkar et al. (2015) concluded that high levels of anxiety have a deleterious effect on academic performance and that prolonged, untreated anxiety contribute to negative educational outcomes.

Santiago, Kataoka, Forness and Miranda (2008) state that our national health agenda focuses on the high unmet need for mental health services for children and adolescents, in improving access to services (Hunter et al. 2005). School based services can play a significant role in the early detection of psychological problems, referral to community programs, and provision of direct mental health services (Atkins, Hoagwood, Kutash & Seidman, 2010).

Jensen, Stevens and Kenny (2011) conclude that the therapeutic techniques that students are exposed to through practicing Yoga Nidra breathing may be safer and cheaper than some drug-based treatments. Steiner et al. (2012) found that decreased disciplinary issues and high motivation of the students towards the sessions might also reflect the importance of having trained yoga instructors. Seoud and Hassan (2017) recommend using different visualization activities in order to reduce anxiety, make their learning process more enjoyable and increase their understanding of the lessons.

Wachelka and Katz (1999) found that cognitive behavioral treatment using relaxation training and guided imagery helped reduce student test anxiety and also helped raise their academic self esteem and opinion of their effectiveness. Bastounis et al. (2016) reported that greater motivation and self-reported positive atmosphere in the classroom caused a reduction in depressive symptoms. Yu et al. (2016) concluded similarly in finding that increased autonomy opportunities could be an effective way of reducing anxiety and depression among adolescents. Ferrer et al. (2016) stated that their results suggest that the presence of social support may be a key protective factor in the experience of depression and anxiety among students.

Onwuegbuzie (2000) found that graduate students with low levels of perceived academic ability were most likely to have the highest levels of reported anxiety. Specific stressors identified by students as found by Thompson, Robertson, Curtis, and Frick (2013) are fear of failure, school phobia, difficulty in peer and adult interactions, fear of violence and/or bullying, separation anxiety, and uncertainty about future aspirations.

Macheski, Lowney, Buhrmann and Bush (2007) found that creating a community of learners and increasing students intrinsic motivation helped alleviate these fears.

Rosenfeld (2017) concluded that a variety of instructional settings and information should be offered so that students can choose the structure that best meets their learning needs. Schoenfeld and Janney (2017) concluded that if we are to be of service to students whose behavioral difficulties stand in the way of their academic success we have to shift our thinking away from compliance with classroom expectations and focus instead on the evaluation of the individual achievements of our students.

Limitations of the Research

To locate the literature for this thesis, searches of Educator's Reference Complete, Expanded Academic ASAP, Education Journals, ERIC, Academic Search Premier, and EBSCO MegaFILE were conducted for publications pertaining to this topic. This list was narrowed by only reviewing published empirical studies from peer-reviewed journals that focused on anxiety, special education, professional development and interventions in education found in journals that addressed the guiding questions. The key words that were used in these searches included "reducing anxiety in the classroom," "anxiety in special education," "interventions to treat anxiety," "effects of student anxiety," and "anxiety and disability."

After reviewing the source there was not enough sources to choose from including only articles in the realm of education exclusively. There was much more material concentrating on anxiety after widening the search criteria to include psychology publications. When looking for applicable articles. Chosen articles included studies with DCD/ASD and EBD students as participants (as identified in the American public school systems). I also tried to concentrate on treatments that were applicable to classroom teachers or other school support staff.

Sources from many countries were included in this literature review; this was useful because it included many different points of view. Although it was interesting to compare and contrast treatment methods and measures of anxiety in many different countries, it was also confusing. Many of the terminologies used to describe special education disability categories change often as our knowledge of the field grows. Since the terminology changes from year to year and differ depending on the country it can be hard to compare the results of the studies.

Although the topic of anxiety is well studied, the way it applies to special education students is not always specified. It was easy to find studies that concentrated on the way anxiety affects general education students, but a little more difficult to find studies that concentrated on specific special education disability categories.

Implications for Future Research

Current research, as reflected in this review, concentrates much more often on studies that focus on behaviors caused by anxiety. While this is an important thing to understand, as an educator it is also important that there be conclusive research pointing us in a direction for effective intervention. It was interesting to read about some of the more holistic tactics taken by educators. More data collection could lead to widespread use of these tactics in more school settings.

There were very few studies with conclusive evidence of effective programing on a large scale. The studies with many participants that seemed to be evaluating programs at a district wide level were generally successful. This leads the reader to believe that programming targeting anxiety needs to be more specific and done on a more case by case basis.

There are very few ways that anxiety itself is addressed in special education. It is usually treated as a symptom of something else, as was made apparent in the studies in this research, anxiety is a symptom of many other disability categories. The role of anxiety needs to be magnified, and considered more closely when deciding on interventions.

Implications for Professional Application

This research is important because anxiety plays such a large role in the interactions teachers have with students in special education settings. Anxiety often is overlooked or diagnosed as something else. If anything is clear, this research tells us that students who are suffering from anxiety will not be able to express that clearly. For that reason it needs to be something that educators can readily identify.

The more we learn about anxiety the more we can understand its prevalence and also its effects on our students. We often look at a student's behavior through the lens of how it affects our classroom environment but learning about anxiety helps us to understand that it is important to look at student's behavior on a smaller scale and identify when and how anxiety is the causing specific behaviors.

This is where intervention becomes important, as identified before; this is an area that could use more conclusive research in order to help educators provide educational settings that ease student anxiety. Learning specifically about how creating a culture of our own is something that stood out to me among the studies. It seems that if we are going in the direction of alleviating anxiety it is easy to continue in that direction, but the opposite seems true as well. It is important to understand that as educators the tone of our classroom builds throughout the year and reflects our shared experiences, if we are able

to keep our classroom in a positive light, and face conflicts together and resolve them successfully we are likely creating an environment that alleviates anxiety.

Conclusion

When addressing questions of anxiety a few conclusions can be made based on the literature provided. Student anxiety, although causation is varied, affects a wide range of students, and is especially important to address while working with special education students. Anxiety, although it is an internalized emotion, can causes many external behaviors that often effects the entire learning community adversely.

It becomes increasingly important to understand anxiety and seek interventions to help alleviate it in order to protect our students from the daily suffering in causes as well as teach them how to cope with their feelings and establish healthy habits that will help them in adulthood.

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