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THE ABILITY OF MISSISSIPPI SCHOOL PERSONNEL TO RECOGNIZE AND ACT ON
INTERNALIZING DISORDERS IN STUDENTS

A Thesis

presented in partial fulfillment of requirements

for the degree of Master of Arts

in the Department of Psychology

The University of Mississippi

By

MADISON VARNER

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Abstract

Childhood internalizing disorders traditionally do not garner much attention in academic settings; however, previous research has found that 1 in 4 public school students in Mississippi experiences some form of an internalizing disorder. These disorders strongly affect both behavior (e.g. bullying, school attendance, and social performance) and academic performance (e.g. literacy, mathematical learning). Under several existing pieces of legislature, public schools should already be providing treatment for these disorders; however, few schools have any provisions for the numerous students silently struggling. The primary objective of this study was to investigate teachers' understanding of internalizing disorders and their frequency in school populations as well as their understanding of the provisions of the Individuals with Disabilities in Education Act (IDEA) of 1975 and its amendments from 1990, 1997, and 2004 as a potential barrier to identifying and supporting students with internalizing disorders. Participants included 40 teachers from 2 top-performing 6A school districts, ranging in teaching grade levels from K-12. Half of the participants were special education teachers, and the other half were general education teachers. A semi-structured interview adapted from the TARIQ was used to assess teacher demographics and knowledge of topics of interest (Headley & Campbell, 2013; appendix). The findings indicated that teachers generally lack knowledge of internalizing disorders, their typical presentations, or their frequency among students. Furthermore, teachers lack basic conceptual knowledge of IDEA policies and their ramifications toward internalizing disorders. Finally, although special education teachers show significantly more understanding of

IDEA policies, neither special nor general education teachers have an adequate understanding of IDEA policies or internalizing disorders relevant to the support and intervention for students with internalizing disorders.

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CHAPTER 1

INTRODUCTION

Overview of Anxiety: Anxiety, as an emotion, is “characterized by marked negative affect and bodily symptoms of tension in which a person apprehensively anticipates future danger or misfortune” (Barlow, 2002). This emotion is commonly experienced, and can sometimes be beneficial; for example, anxiety provokes action in the body known as the fight or flight response (Kunimatsu & Marsee, 2012). Fight or flight responses have been linked to advantageous outcomes from an evolutionary perspective since the activation of the sympathetic nervous system provides increased oxygen and blood flow to muscles through cardiovascular and respiratory action. In other words, anxiety is very useful in circumstances where the action of running from or fighting against predators is necessary for survival. In non-life-and-death scenarios, the emotional experience of anxiety can, in lower intensity, encourage people to study, practice, or prepare for upcoming experiences in life (Yerkes & Dodson, 1908). It is a narrow tightrope, however, between having beneficial amounts of anxiety and having impairing levels of anxiety; too much or too little anxiety may lead to impairment in day-to-day functioning. This “sweet spot” of anxiety is known as the Yerkes-Dodson Law, and its effects have been observed in everything from memory and task completion to sports performance (Jeong & Biocca, 2012).

Anxiety disorders, as a category of psychological diagnoses, are different from these normative emotional experiences of anxiety in that disorders are characterized by impairment in daily functioning. Therefore, the presence of an anxiety disorder diagnosis implies that the afflicted individual experiences the emotional and physiological arousal of anxiousness to such a

degree that they present a barrier to normal functioning in their day-to-day life; further, these arousal states often occur in incongruent environments to the threat perception (Barlow et al., 2015).

Across all types of anxiety disorders, core symptoms of physiological arousal can include nausea, increased heart rate, increased blood pressure, tremors in the hands, pupil dilation, hot and cold flashes, and tightness in the chest and/or throat – the same physiological sensations associated with sympathetic nervous system activation. Occasionally, these sensations culminate in the phenomenon of a panic attack, but similar somatic activation/panic symptoms can occur across all anxiety disorders. Additionally, emotional arousal is central across anxiety disorders, the symptoms of which can include intense feelings of fear, confusion, unreality (i.e., a dreamlike state where one's surroundings are not perceived as being reflective of reality), and/or separation from the self (i.e., dissociation). Taken together, these symptoms can vary in their intensity and manifest differently as a function of the specific anxiety disorder.

When experienced in childhood or adolescence, anxiety disorders are associated with significant impairment in school functioning, family life, and social skills development (Benjamin et al., 1990). Even more alarming, childhood anxiety disorders have been shown to be predictors of suicide attempts and psychiatric hospitalization (Ferdinand & Verhulst, 1995). Socially, children with any type of anxiety disorder tend to be rated by their peers as shyer, more withdrawn, less popular, and less likable relative to children who are not anxious (Mychailyszyn, 2010). This may be due in part to the fact that children with anxiety disorders tend to become easily upset and engage in physically and/or verbally aggressive behavior when experiencing emotional duress (Kendall & Pimentel, 2003). Similarly, there is evidence that children with significantly higher anxiety scores than their peers were more frequently categorized as victims

of bullying and/or bully-victims (i.e., those who both bully and are victims of bullying) in a study by Isolan et al. (2013). Children with clinical levels of anxiety have also been shown to exhibit significantly higher school absenteeism compared to non-disordered peers, which in turn increases the longitudinal risk for dropout (Ingul et al., 2012). Hodges & Plow (1990) also found that children with anxiety disorders tested as having lower average IQ scores than children without anxiety disorders; however, the consensus of the field has been that children with anxiety disorders are not generally different in their cognitive functioning than their peers (Weeks et al., 2014). Rather, interpretations of this observation have posited that clinically anxious children had lower average IQ scores because of mental preoccupation with their anxiety and worry, their lack of school attendance, and the overall cognitive impact of their chronic anxiety levels (Hodges & Plow, 1990). The impact of absenteeism, preoccupation, and cognitive impacts becomes more salient with the knowledge that children in the top quartile of anxiety scores are nearly eight times more likely to be in the lowest quartile of reading achievement and two-and-a-half times more likely to be in the lowest quartile in math achievement later in their educational efforts (Mychailyszyn, 2010). Further, these impairments may also be associated with other common symptoms of anxiety disorders, such as difficulty concentrating and sleep disturbances (Kendall & Pimentel, 2003). Overall, symptoms in physical, emotional, behavioral, and social domains are interrelated such that they form something of a ‘snowball’ effect during development that becomes progressively worse over time.

Alarming, research has shown that anxiety disorders can be present in children as young as preschool age (Angold & Egger, 2007). Furthermore, basic psychological assessment of children as young as 4 years old can successfully predict the presence of later psychological diagnosis at age 6 (Wichstrom et al., 2013). Similarly, Ialongo et al. (1995) gave 1st-grade

students basic self-report surveys about anxiety symptoms and found them to be predictive of the same students' scores in the 5th grade. Students who had been in the top 1/3 for anxiety symptoms earlier in life were twice as likely to be found in the top 1/3 of symptom experiences in the 5th grade, suggesting stability of symptoms across this 4-year span (and educational impairment can be inferred on that basis). Early-onset anxiety disorders (<13 years old) have also been found to have a more severe and disabling nature and tend to become chronic without clinical intervention (Simon & Bogles, 2009). Therefore, children and adolescents with anxiety disorders who are struggling with the aforementioned 'snowball' effect of symptoms are not likely to improve on their own.

Overview of Obsessive-Compulsive Disorder: Marked by obsessive thoughts or compulsive acts, obsessive-compulsive disorder (OCD) in children results in great discomfort when the individual tries to resist his/her compulsions or thoughts (ICD-10, pg. 117). This "discomfort" can be experienced as a sensation of disgust, physiological reactions of anxiety, or a combination of both (Whitton et al., 2015; Knowles et al., 2018). When anxiety-driven, this discomfort typically presents as an arousal of anxiety-related symptoms (as outlined under the "physiological and emotional arousal" subsection of anxiety disorders) because OCD of this nature is related to anxious patterns of cognitive rumination and catastrophizing (Rozenman et al., 2017). Unlike anxiety-driven OCD, disgust-driven OCD is associated with disgust sensitivity which comprises how easily a person is disgusted and how they perceive the experience of disgust (Knowles et al., 2018). Children with OCD, like other forms of internalizing disorders, exhibit functional impairment in areas such as family life, social skills, school, and daily living skills due to the symptoms of compulsive actions or thoughts and obsessiveness surrounding a given topic (Piacentini et al., 2007).

Major Depressive Disorder: Whereas anxiety frequently results in physiological hyperarousal of the body due to the “fight or flight response,” depressive symptoms tend to result in what can be conceptualized as the opposite physiological impact (Barlow et al., 2015). People experiencing depression are likely to have negative reactions to the physiological sensations associated with emotions such as happiness, surprise, and arousal, which can begin occurring in children as young as preschool age (i.e., 4 - 5 years old; Hirshfeld-Becker et al., 2011). Symptoms of depression in adults can include depressed mood, lack of interest, somatic symptoms, sleep disturbance, appetite disturbance, poor concentration, motor disturbances, negative cognitive cycles, suicidal ideation, and poor overall functioning (Charles & Fazeli, 2017). In children, these symptoms translate in different ways. For example, a depressed mood is more likely to be seen as irritability, temper tantrums, crankiness, and pervasive unhappiness (Charles & Fazeli, 2017). Lack of interest may be noticed in a loss of interest in play, motor disturbances may come across as walking slowly or restlessness, and functional disturbances may appear as terse relations with family and friends or poor academic functioning (Charles & Fazeli, 2017). Alarming, children who show symptoms at a very early point in their development are at a statistically greater risk of suicide as they enter adolescence (Emslie & Mayes, 1999).

Academically, children with depression are likely to fall behind in mathematics due to their tendency to become disinterested and inattentive to classroom activities (Hodges & Plow, 1990). Since mathematics is a subject that depends on building upon past knowledge and lessons, it is often the first subject in which a child’s educational deficit may be clearly seen (Hodges & Plow, 1990). Children and adolescents with depression are also likely to be victims of bullying and to fall behind in social development, especially because of the tendency to withdraw from

social situations (Kaltiala-Heino et al., 2009). Depression in children is also associated with family financial strain (McLaughlin et al., 2011), whereas in adolescence depression may also be associated with antisocial behaviors (e.g., bullying; drug use; suicidality; Brown et al., 2008).

Internalizing Disorders and Schools in Public Policy: The Individuals with Disabilities Education Act (IDEA) was developed to ensure that students with disabilities had adequate access to services and accommodations to ensure that their specific disabilities did not have a deleterious impact on the quality of their education. Under the IDEA policies and given the wide-reaching impacts of the symptoms found in internalizing disorders, psychological diagnoses are considered disabilities. Under the IDEA amendments of 2004, the internalizing disorders outlined above should already be regularly attended to in school settings through IEPs (individualized education plans; i.e., formalized plans to provide individualized support and intervention for a student's education) and other formal supports to the extent they result in barriers to educational attainment. IDEA policy defines a child with a disability as a child with, "... serious emotional disturbance..." and even elaborates that children ages 3 through 9 may also be included in that terminology when experiencing, "social or emotional development [delays]" (IDEA, pg. 8). Based on previously outlined impacts of anxiety, depressive, and obsessive-compulsive disorders, most children and adolescents experiencing an internalizing disorder would meet IDEA criteria for educational services. Each state within the United States is also expected to create its own State Department of Special Education following the IDEA federal guidelines. The Mississippi Department of Education follows the guidelines from IDEA, which classifies emotional disturbance as: "...a condition exhibiting ... an inability to learn that cannot be explained by intellectual, sensory, or health factors; an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; inappropriate types of behavior

or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; a tendency to develop physical symptoms or fears associated with personal or school problems...” (Weatherly, pg. 2). These symptoms must occur “over a long period of time and to a marked degree that adversely affects a child’s educational performance” (Weatherly, pg. 2); however, there is no formal definition of what constitutes a “long period of time,” and most psychological disorders are not short-lived. All the qualifiers potentially apply to internalizing disorders, but the latter three qualifiers are very directly associated with the symptoms described above in reviewing anxiety disorders, major depressive disorder, and obsessive-compulsive disorder.

Identification: Currently, students meeting these criteria are eligible for “Child Find,” a provision of IDEA policies. Child Find policy asserts that all children with disabilities “who are in need of special education and related services [must be] located and evaluated... a practical method [should be] developed and implemented to determine which children with disabilities are currently receiving needed special education and related services” (IDEA, pg. 27). The term “related services” does include psychological services, social work services, and early identification and assessment according to IDEA (Weatherly, pg. 3). Child Find requests begin the process for identifying children with a suspected disability. According to the Mississippi Department of Education’s Office of Special Education State Policy 74.19 Volume I guidelines, anyone who “has knowledge of or interest in a child ages birth through twenty-one (21) years, including but not limited to parents, teachers, and Teacher Support Team (TST) members, or representatives of other public agencies” may recommend a child for the Child Find process (pg. 7). Alarming, children are seldom included in the Child Find process (meaning that children typically do not refer themselves). Further, it is likely that due to the general lack of outward

symptoms associated with internalizing disorders, children experiencing these symptoms are not recommended for this process. Moreover, the afflicted individual may be the only person aware of the symptoms at all, thus facilitating long-term impairment before it is visible to anyone else.

One solution to this tendency for internalizing symptoms to be overlooked is the application of broad (potentially even universal) student screening for anxious, depressive, and/or obsessive symptoms. According to Mychailyszyn et al. (2011), the “gold standard of assessment is a multimethod, multi-informant approach” (pg. 225). This means that in order to best serve students with internalizing disorders, the education system should be using multiple people in each child’s life, including the child, to give a complete picture of symptoms. To accomplish this on a broad scale that potentially includes every student is likely untenable. Instead, screening via child self-report measures may be the best option, given that they are time/cost-effective and there are numerous options for scientifically supported instruments (Mychailyszyn et al., 2011). As an example, Balle & Tortella-Feliu (2010) conducted a study in which they screened for anxiety and depressive symptoms using a few simple self-report measures in a school setting with child and parent consent. Using the surveys, they identified 130 children out of 613 who were in the top 80th percentile of anxiety and/or depressive symptoms in comparison to national norms. The screeners used in their study were simple pencil and paper assessments, each taking no more than approximately 5 minutes to complete and costing little. Efforts like those of Balle & Tortella-Feliu are not isolated; the idea of screening for psychological disorders in schools is so mainstream, that Glover and Albers (2007) wrote an article on feasibility and the considerations necessary to implement screeners in schools across the country. As they point out, screeners can be an effective way for IDEA requirements and,

more importantly, student needs to be adequately met and address the problem of identifying internalizing disorders in children and adolescents.

Evaluation: Following Child Find’s initial recommendation for assessment, children are required to be assessed by a team of evaluators. In the context of the Mississippi Department of Education’s policies on IDEA, “The MET [multidisciplinary evaluation team] must [include]... qualified professionals... who can administer individual diagnostic assessments and interpret the results...” (Mississippi Special Education Policy 74.19, pg. 31). Evaluations conducted by one or more mental health professionals are utilized in determining students’ eligibility for services, and potentially in the development of an Individualized Educational Plan (IEP), if warranted.

General Provisions of IDEA for Treatment: The IEP for a student with internalizing disorders should resemble something close to psychological intervention. After all, IDEA legislation states that “a state policy that is in effect... ensures that appropriate early intervention services based on scientifically based research... are available” (IDEA, pg. 76). Congress additionally added in their findings of IDEA that “an effective educational system serving students with disabilities should... coordinate State and local education [and] mental health... in addressing the full range of student needs” (IDEA, pg. 89).

Further, under IDEA, students are also entitled to an education in the “least restrictive environment” possible (often abbreviated as LRE). Simply stated, LRE ensures that students with disabilities are offered an environment of inclusion with non-disabled peers in regular education classrooms to the extent possible. Therefore, as it pertains to the identification and treatment of internalizing disorders, students with emotional disabilities are entitled to treatment that does not impact their education negatively or remove them from a regular education environment to the extent possible. In situations where removal is necessary or warranted in

order to receive needed services, one approach that is often implemented is to remove students from classes in the same way that many “gifted” programs remove students for extra enrichment (only for the purposes of receiving behavioral interventions). By removing students for one hour from extracurricular classes such as music and art once a week for approximately one semester, schools may be able to provide clinical support using a well-known organizational mechanism to do so.

Previous Studies: Given the salient and pervasive ways that internalizing disorders can negatively impact an individual’s life and ability to succeed (particularly in educational terms), research directed toward discerning base rates of these conditions in schools appears warranted. In particular, conducting examinations of large, diverse samples within the state of Mississippi could facilitate a greater understanding of this problem in one of the most under-resourced states in the country. As already outlined, there are multiple legislative and policy regulations in place that would allow for treatment to be effective and non-disruptively carried out in schools across the state. In previous research, the current investigator learned about the degree to which such supports are needed in Mississippi public schools. In a sample of 10,891 Mississippi students from public schools (grade range: 2 -12), a significant percentage of students were clinically elevated across all areas of internalizing disorders (as measured by a widely utilized, well-researched self-report instrument). The average rate of clinical depression was 11.73%, compared to a national average between 1.00 - 2.00%. (Charles & Fazeli, 2017). Similarly, the average rate of clinical anxiety was 5.7%, in comparison to a national average between 2.00 - 4.00%. Panic Disorder was extremely elevated among Mississippi students with an average rate of 10.60%, compared to the national base rate of 4.70% (Chorpita, 2007). The average rate of clinical elevation in the Mississippi sample for obsessive-compulsive disorder symptoms was

5.30%, whereas that rate is between 0.24% and 4.00% among adolescents and children globally (Heyman et al., 2003; Douglass et al., 1995). There are many potential factors in the elevated levels of internalizing symptoms that Mississippi students experience, such as the extremely high rates of poverty and low-income status among families in the state and the lack of psychological education. Regardless of etiological interpretation, the overall findings of the author's previous research show that there is a definitive need to address internalizing disorders in the context of schools.

Trudgen and Lawn (2011) analyzed the data of semi-structured interviews with teachers to determine the threshold of teacher recognition and report of concerns about anxiety and depression in their students. Their interview questions were directed at how teachers identify behavioral symptoms, at what point in symptom recognition they seek help for the student, and what perceived barriers teachers face in reporting their concerns. Through the use of a detailed coding system, they analyzed the data from the interviews to find several thematic problems in mental health care within educational settings. The first issue they found was that the threshold of symptoms necessary for teachers to refer their students for services was highly variable and subjective. Another issue reported in the findings is that teachers, some of whom reported adequate knowledge of psychopathological symptoms in youth, overwhelmingly reported that they experienced difficulty translating that knowledge into actual recognition of students who needed help. For example, one teacher in the study said, "if they are there and not causing any issues you don't see [anxiety and depression]" (p. 133). Additionally, the participants gave varying estimates on the rates of anxiety and depression in students, with a range from 5% to 70%, which may also be related to the lack of mental health training that nearly all participants reported. Lastly, and most importantly, the teachers seemed to unanimously agree that they did

not know of any formal criteria to guide them when they did recognize anxiety or depression in a student. Interestingly, it should also be pointed out that this study was conducted in Australia, which is the 1st ranked educational system in the world according to the Human Development Index from the United Nations.

In 2013, Headley and Campbell published a study on teacher knowledge of anxiety and their ability to identify excessive anxiety in children. They pointed out that teachers are in a unique position to identify children with potential psychological disorders because of their exposure to children daily and the amount of time spent observing each student; however, teachers are not typically required to have any education or training in children's mental health. To investigate teachers' ability to identify excessive anxiety, Headley and Campbell interviewed 315 teachers (81% female) with a mean teaching experience of 16.72 years. They used the TAIRQ (Teacher Anxiety Identification and Referral Questionnaire), a four-part self-report questionnaire they developed for the study which asks questions related to anxiety symptoms and signs. They found in the analysis of the TAIRQ responses that teachers overwhelmingly identified anxiety as an emotional response, and very few ($n = 53$) reported physiological (i.e., heart rate changes, nausea, breathing changes) or ($n = 70$) cognitive (i.e., rumination, preoccupation, and difficulty concentrating) components. The ability to determine the excessiveness of anxiety was also highly variable, and very few teachers identified social problems ($n = 35$), academic problems ($n = 38$), or adjustment problems ($n = 21$) as markers of severe anxiety despite previous research indicating that these are common symptoms of anxiety and depression in children. Overall, Headley and Campbell concluded that teachers' understanding of anxiety symptomology was close to accurate; however, teachers' ability to

readily identify excessive anxiety and the consequences of anxiety disorders was severely lacking.

Cunningham and Suldo (2014) asked 238 fourth- and fifth-grade students to self-report their anxiety and depression symptoms using the Multidimensional Anxiety Scale for Children (MASC) and the Children's Depression Inventory (CDI). The 26 teachers of these participants were also asked to identify students they perceived to be at risk for experiencing problematic levels of anxiety and depression. Teachers identified 50 and 40.7% of students with at-risk levels of anxiety and depression, respectively; however, teachers also misidentified 16.2 and 17.5% of students as symptomatic for clinical anxiety and depression (again, respectively). These findings indicated that teacher accuracy in recognizing anxiety and depression in children is low and that teachers may not be reliable reporters of psychological distress.

Another study by Neil & Smith (2017) found that teachers in London schools had limited sensitivity to student anxiety and somatic symptoms. The researchers surveyed 51 teachers and asked them to rate their students on a scale of 1 to 5, with 1 being least anxious and 5 being most anxious. The teachers were also asked to carry out the same process for somatic symptoms such as aches, pains, upsets, nausea, and tiredness. The teachers were also asked to name up to 3 students with debilitating levels of anxiety and somatic symptoms (with a short description of the symptoms). These ratings were then compared to student-completed Spence Children's Anxiety Scale measures. The comparisons showed that teachers could reliably identify children with lower levels of anxiety than their peers; however, on the elevated side of the anxiety symptom spectrum, many of the children teachers believed to be anxious did not have elevated symptoms. Most alarmingly, qualitative analysis of the descriptions of behaviors provided by teachers

showed that they were not universally aware of major symptoms that signal anxiety in children, such as stomach aches, avoidance, and cognitive impairments (i.e., concentration, memory).

Layne et al. (2006) also sought to determine the effectiveness of educators in identifying anxiety and internalizing symptoms in pupils. In their study, 453 2nd through 5th-grade students completed the Multidimensional Anxiety Scale for Children (MASC) and their teachers were asked to nominate the three most anxious students in their classrooms. Their comparisons found that children identified by teachers as anxious had significantly higher scores on the MASC, and they concluded that teachers were adequate identifiers for students with internalizing problems.

Headly and Campbell (2011) used their Teachers' Anxiety Identification and Referral Questionnaire (TAIRQ) to assess the ability of 299 schoolteachers. They found that teachers were adequate at identifying children with severe levels of anxiety and children with minimal levels of anxiety. They also found a general trend in that as teachers identified more anxiety symptoms, they were more likely to report the child's condition to the guidance counselor. One caveat to their findings, however, was that teachers had immense difficulty distinguishing between moderate and severe anxiety symptoms. They also found that teachers were more likely to report moderate than severe anxiety in their students because of this difficulty. They hypothesized that this difficulty may be due to the preference teachers have towards noticing externalizing social difficulties rather than legitimate internalizing symptoms.

CHAPTER 2

PURPOSE AND HYPOTHESES

Few studies have measured teachers' awareness of internalizing disorders or their ability to spot symptoms in children; however, the few examples that set the precedent for this study have mixed results. Given this previous research, the aim of the present study is to investigate potential factors in why Mississippi's education system does not routinely screen for internalizing disorders and provide support services through the avenue of special education. The primary hypothesis of this study is that teachers' perceptions of the frequency of internalizing disorders in their classrooms and across students will be significantly ($p < 0.05$) under the actual rates (discerned from the researcher's previous work and/or comparison to national base rates from large-scale, published studies). A secondary hypothesis is that teachers will display a lack of awareness of self-report measures, federal regulations, state policies relating to reporting, and support services for psychological disorders. The third prediction is that teacher descriptions of internalizing symptoms will be qualitatively and semantically different from a clinical definition and, based on findings from Trudgen and Lawn (2011) and Neil and Smith (2017), teachers will have difficulty distinguishing clinically significant internalizing symptoms from typical anxiety symptoms and "gray" or moody days in students. The final prediction of the study is that special education teachers will give more qualitatively and semantically accurate definitions of identifying internalizing symptoms and will be more aware of how to address them within the IDEA policy framework compared to regular education teachers. Since conditions such as Autism Spectrum Disorder, ADHD, communicative disorders or delays, learning disabilities, and

traumatic brain injury (TBI) have high levels of comorbidity with anxiety and depression, the data from special education teachers should reflect a better understanding of anxiety disorders and Major Depressive Disorder (Syriopoulou-Delli et al., 2019; Mayes & Calhoun, 2006).

CHAPTER 3

METHODOLOGY

To recruit participants, the directories of two comparable school zones were used to contact teachers directly via email using a scripted recruitment email. The teachers were contacted simultaneously (within the same day) alphabetically per school; all high school teacher participants were contacted the same day, all middle school teacher participants were contacted the same day, and so forth. If teachers responded to the email indicating interest in participating, the principal researcher would then schedule an interview via either zoom or in-person at the school where the participant taught. Each interview lasted no more than 30 minutes and was conducted by either the principal researcher or a trained undergraduate research assistant. The interviews were recorded using audio recording devices; additionally, the responses of the interview were shorthand recorded on interview sheets by the interviewer in order to assist with later data coding and act as a reference during audio recording review.

Once interviews were completed, a second undergraduate research assistant was recruited to assist in data analysis as the second-rater for the interrater reliability measure to address the second, third, and fourth hypotheses. Both raters simultaneously were given access to the interviews and independently rated the responses to target questions according to 10-point scales for accuracy of response. The principal researcher also coded other data for analysis (i.e., demographics, yes/no questions, estimations of base rate responses). The analyses were then completed using SPSS version 25.

Participants: The study used structured interviews with teachers from each school-age grouping (lower elementary, upper elementary, middle school, and high school). A total of 40 teachers, 20 from special education and 20 from regular curriculum education, were interviewed for the study. Among these participants, 17% were male (33 female, 7 male); within special education teachers, 15% were male (17 female, 3 male) and within general education teachers, 20% were male (16 female, 4 male). The total ethnicity of participants was 87% white (35), 10% black (4), and 3% Native American (1). Within special education teachers, 80% were white (16), 15% were black (3), and 5% were Native American (1); within general education teachers 95% were white (19) and 5% were black (1).

The total education level of teachers was as follows: 55% have a master's degree (22), 35% have a bachelor's degree (14), 7% have a doctoral degree (3), and 3% have an associate degree (1). Among special education teachers, 55% have a master's degree (11), 30% have a bachelor's degree (6), 10% have a doctoral degree (2), and 5% have an associate degree (1). Among general education teachers, 55% have a master's degree (11), 40% have a bachelor's degree, and 5% have a doctoral degree (1).

Among special education teachers, 50% have a non-special education-related degree, otherwise known as alternate-route teaching. Among general education teachers, 95% percent have non-special education-related degrees, most being awarded degrees in teaching or the subject they now teach. The certifications for special education teachers were as follows: 65% mild/moderate k-12 endorsement (13), 15% reported having no endorsement (3), and 20% SPED K-12 general endorsement (4). Among regular education teachers the certifications were as follows: 1 National Board (5%), 1 Art K-12 (5%), 1 AVID (5%), 3 English K-12 (15%), 4 K-6 (20%), 1 Reciprocity Listening (5%), 1 Alternate Route (5%), 1 Wellness and Fitness (5%), 1

College and Career (5%), 1 Social Studies (5%), 1 Physics (5%), 2 French (10%), 1 General Science (5%), and 1 Physical Science (5%).

Of the total participants, 38% taught high school (15), 35% taught middle school (14), 17% taught upper elementary (7), and 10% taught lower elementary (4). Among special education teachers, 25% taught high school (5), 40% taught middle school (8), 25% taught upper elementary (5), and 10% taught lower elementary (2). Among general education teachers, 50% taught high school (10), 30% taught middle school (6), 10% taught upper elementary (2), and 10% taught lower elementary (2).

Measure: Like Headley and Campbell (2011; 2013), the principal researcher used an adapted form of the Teacher Anxiety Identification and Referral Questionnaire (TAIRQ). The TAIRQ is a four-part self-report questionnaire. The first part of the measure is focused on background information such as socio-demographic identifiers, teaching experience, and referral history (i.e., psychological referrals of students). The second part of the TAIRQ asks questions about specific symptoms of anxiety to gauge teachers' understanding of anxiety symptoms and anxiety disorders. Headley and Campbell (2013) categorized descriptions of anxiety from teachers as emotional, cognitive, physiological, behavioral, or as an inability to cope. The third part of the TAIRQ, which is excluded in the adapted questionnaire in the present study, is comprised of 4 vignettes to serve as hypothetical situations with children with internalizing symptoms of increasing severity. There is an additional 5th vignette in which the child has no internalizing symptoms. The 4th and final part of the TAIRQ examines teachers' abilities to recognize both typical and atypical symptoms of anxiety in children.

To address all aspects of the overall research question, however (i.e., depression and OCD symptom recognition), the current study adapted questions to also reference concerns about

OCD and depression symptoms. The resulting product is a structured interview format of 32 questions (see appendix). The first few questions are geared toward understanding teacher demographics, educational background, and professional teaching experience. The second set of questions is geared at understanding teachers' perceptions of internalizing symptoms (i.e., "what does anxiety look like in students at the age you commonly work with," "How is depression different from a child having a bad day?") The third set of questions ask for an estimation of percentage rates for each disorder (i.e., "how often, in percentage, do you believe anxiety occurs in students in the age range you work with at [insert school here]?"). The fourth and final set of questions targets referring students in accordance with special education policies such as IDEA and FAPE (i.e., "What are IDEA policies?" "What is an EMD ruling under IDEA policy?").

Analysis: To analyze the data for the primary hypothesis of the study, teacher responses were divided by grade ranges to match the primary investigators' previous data on base rates of anxiety, OCD, and depression in Mississippi public schools. The grade ranges were as followed: lower elementary (K – 3rd grade), upper elementary (4th – 5th grade), middle school (6th – 8th grade), and high school (9th – 12th grade). These norms are in accordance with the common breakdown of grade levels and schools in Mississippi public education. Then, by grade-range groups, a descriptive-statistics analysis was performed using SPSS. Power analysis with a beta of 0.80 and an assumed moderate effect size revealed that 74 interview subjects (i.e., teachers) would have been necessary to appropriately compare responses against the primary investigators' previous research data of Mississippi public schools. Unfortunately, the sample size collected, due to complications related to the ongoing COVID-19 pandemic, results in an underpowered analysis for each of the analyses performed. A posthoc power analysis revealed that the power of the sample size reached approximately 12% power ($\beta = 0.121$). This indicates

that there is a high likelihood of a Type II error, in which no effect is found even if effects do exist in the true population. Nonetheless, the proportions were compared using a t-test.

To assess the second hypothesis, the prediction that teachers would display a lack of awareness of federal regulations and state policies relating to reporting and support services for psychological disorders, the answers from the fourth set of questions on the questionnaire were analyzed. Responses were ratio coded based on how accurate the responses were on a scale of 1 - 10, with 10 representing clinical accuracy comparable to the written standard definition.. A multiple regression analysis of both raters' coded teacher responses was performed for both IDEA-question responses and EMD-question responses. The predictor for comparison was that the more years teachers have been working in education/teaching the better they should be at describing IDEA and EMD ruling eligibility. An additional qualitative analysis of coded responses was done using simple mean and standard deviation calculations; the rationale behind this analysis is such that if a 5 on the ratio scale indicates average understanding, teachers should have an average cumulative score of 5 or higher. Anything below a 5, with standard deviations also not approaching a 5 or higher, indicates a significant underperformance in awareness of federal and state policies related to IDEA and emotional disturbance.

To assess the third hypothesis, the prediction that teacher descriptions of internalizing symptoms would be qualitatively and semantically different from a clinical definition and that teachers would have difficulty distinguishing clinically significant internalizing symptoms from typical anxiety symptoms and “gray” or moody days in students, the second set of questions were analyzed. Responses were scored coded in each age division on a scale of 1-10 by two researchers (again, to establish inter-rater reliability). Analysis of coded responses was done via multiple regression in SPSS, and power analysis with a beta of 0.80 and assuming moderate

effect showed that 43 teachers are needed to detect an effect. The predictor for comparison was that the more years teachers have been working in education/teaching the better they would be at distinguishing more problematic forms of psychological distress. Additionally, a descriptive analysis of coded responses was done using simple mean and standard deviation calculations; the rationale behind this analysis is such that if a 5 on the ratio scale indicates average understanding, teachers should have an average cumulative score of 5 or higher. Anything below a 5, with standard deviations also not approaching a 5 or higher, indicates a lack of awareness of what internalizing disorders look like and how to distinguish them from normative distress.

To address the final hypothesis of the study, that special education teachers would give more qualitatively and semantically accurate definitions of identifying internalizing symptoms and would be more aware of how to address them within IDEA policy framework compared to regular education teachers, the data were divided into two categories: regular education teachers and special education teachers. Both groups' responses had already been coded in regard to both the IDEA framework and identification/recognition of internalizing symptoms. Therefore, the output of the previous two analyses was compared using a t-test to compare the groups. A power analysis with a beta of 0.80 and assuming a large-moderate effect revealed that 30 teachers were needed in both groups in order to effectively compare groups. As previously indicated, due to the ongoing COVID-19 pandemic, only 40 teachers agreed to participate; therefore, only 20 teachers were present in each group. A posthoc power analysis revealed that the power level of the study nonetheless reached approximately 80% power ($\beta = 0.809$).

CHAPTER 4

RESULTS

Hypothesis 1: The primary hypothesis of this study was that teachers' perceptions of the frequency of internalizing disorders in their classrooms and across students would be significantly ($p < 0.05$) under the actual rates (discerned from the researcher's previous work and/or comparison to national base rates from large-scale, published studies).

Among high school teachers, the average estimated rates of anxiety disorders, obsessive-compulsive disorder, and clinical depression were, respectively, 40.67% (SD = 29.24), 20.8% (SD = 18.80), and 31.93% (SD = 21.98). These were all significantly different ($p < 0.01$) from the actual base rates of disorders among Mississippi public high school students which occur as follows: anxiety disorders, 5.2%; OCD, 5.3%; and depression, 9.8%. Although these ratings are significantly different from the actual measured rates, they represent large *overestimations* in all cases (discussed further below).

Among middle school teachers, the average estimated rates of anxiety disorders, obsessive-compulsive disorder, and clinical depression were, respectively, 37.45% (SD = 24.61), 16.85% (SD = 13.60), and 24.29% (SD = 15.26). These were all significantly different ($p < 0.01$) from the actual base rates of disorders among Mississippi public middle school students which occur as follows: anxiety disorders, 4.3%; OCD, 3.4%; and depression, 9.8%. Similar to the results noted in high school teachers, these reports involved significant overestimation of the base rates of various symptoms.

Among upper elementary teachers, the average estimated rates of anxiety disorders, obsessive-compulsive disorder, and clinical depression were, respectively, 31.43% (SD = 29.97), 16.00% (SD = 14.20), and 29.29% (SD = 21.29). Only anxiety estimations were significantly different from the actual base rates of anxiety ($p = 0.05$), which were 7.6% (OCD was 7.2% and depression 15.06%). As with the previous two age groups, however, this estimation exceeded the actual base rate. Additionally, although both OCD and depression estimations were non-significantly different from the actual rates among Mississippi public upper elementary students ($p > 0.08$), this may have been due primarily to the small sample size for comparison (in that raw estimates were approximately double the actual base rates).

Among lower elementary teachers, the average estimated rates of anxiety disorders, obsessive-compulsive disorder, and clinical depression were, respectively, 27.5% (SD = 20.16), 13.00% (SD = 7.04), and 24.00% (SD = 17.48). All three estimations were non-significant ($p > 0.09$) in comparison to the actual base rates of 7.6%, 7.2%, and 15.06% (respectively). Similar to the analysis above, however, it appeared that teacher estimates among this small group widely exceeded actual cases, and thus the differences were likely non-significant primarily because of the small sample size.

Hypothesis 2 & 3: The second hypothesis was that teachers would display a lack of awareness of self-report measures of federal regulations and state policies relating to reporting and support services for psychological disorders. To assess this hypothesis, a linear regression was performed using the dual rater-coded responses about IDEA ($a = 0.96$) and EMD regulations and policies ($a = 0.91$) with the predictor for increased understanding of federal and state policies being years spent teaching (i.e., the more years a teacher has been working in education or teaching, the better his or her understanding of federal/state policies would hypothetically be due to more

exposure in the classroom). A previous power analysis with a beta of 0.80 and assuming a moderate effect size showed that 43 participants would be needed to detect an effect. As the present study had a total of 40 participants, the current study was slightly underpowered. A multiple analysis was carried out to investigate whether years of teaching could significantly predict each rater's coded rating of the teachers' responses about IDEA. The results of the regression indicated that the predictor was non-significant for both responses coded by rater 1 [$F(2,20) = 0.81, p = 0.68, r\text{-squared} = 0.11$] and by rater 2 [$F(2,20) = 0.75, p = 0.74, r\text{-squared} = 0.15$]. Another multiple regression analysis was carried out to investigate whether years of teaching could significantly predict each rater's coded rating of the teachers' responses about EMD rulings according to state and federal guidelines. The results of the regression indicated that the predictor was non-significant for both sets of responses coded by rater 1 [$F(2,20) = 1.00, p = 0.5, r\text{-squared} = 0.00$] and by rater 2 [$F(2,20) = 0.83, p = 0.66, r\text{-squared} = 0.09$].

The third hypothesis was that teachers' descriptions of internalizing symptoms would be qualitatively and semantically different from a clinical definition, and teachers would have difficulty distinguishing clinically significant internalizing symptoms from typical anxiety symptoms and "gray" or moody days in students. To assess this hypothesis, a linear regression was performed using the dual rater-coded responses about clinical definitions of anxiety ($a = 0.71$), depression ($a = 0.74$), and OCD ($a = 0.92$) with the predictor for increasing knowledge of internalizing disorders being years spent teaching (i.e., the more years a teacher has been working in education or teaching, the better his or her understanding of internalizing disorders would hypothetically be due to more exposure in the classroom). Previous power analysis with a beta of 0.80 and assuming a moderate effect size showed that 43 participants would be needed to detect an effect. As the present study had a total of 40 participants, the current study was slightly

underpowered. A multiple regression analysis was carried out to investigate whether years of teaching could significantly predict each rater's coded rating of the teachers' responses about each internalizing disorder. The results of the anxiety regression indicated that the predictor was non-significant for both responses coded by rater 1 [$F(2,20) = 0.99$, $p = 0.51$, $r\text{-squared} = 0.01$] and by rater 2 [$F(2,20) = 1.46$, $p = 0.21$, $r\text{-squared} = 0.19$]. The results of the depression regression indicated that the predictor was non-significant for both responses coded by rater 1 [$F(2,20) = 1.64$, $p = 0.14$, $r\text{-squared} = 0.25$] and by rater 2 [$F(2,20) = 1.02$, $p = 0.49$, $r\text{-squared} = 0.01$]. The results of the OCD regression indicated that the predictor was non-significant for both responses coded by rater 1 [$F(2,20) = 0.85$, $p = 0.64$, $r\text{-squared} = 0.09$] and by rater 2 [$F(2,20) = 0.70$, $p = 0.78$, $r\text{-squared} = 0.183$].

To additionally support these findings, a qualitative analysis of the coded responses was also performed. Responses to question 8, which asked "what is an anxiety disorder," were coded on a scale of 1-10 by two researchers, with 10 being the most clinically accurate definition according to DSM – V and ICD-10 standards ($\alpha = 0.71$). The average response across all 40 teachers was 2.14 ($SD = 0.59$). This corresponded to the criterion of the coding to a response of: "I don't know" followed by a limited explanation of symptoms the respondent associated with anxiety. For reference, a score of 3 would have met the criterion of: "I don't know" followed by a list of at least some symptoms the respondent associated with anxiety and some mention of extreme fear. As the mean level responses did not approach a level of 5 or higher, even when considering standard deviation, this indicated that teachers showed a general lack of understanding about the overt symptoms of pathological anxiety.

Responses to question 15, which read "What is major depression or MDD," were coded on a scale of 1-10 by two researchers, with 10 being the most clinically accurate definition

according to DSM – IV and ICD-10 standards (Interrater Reliability = 0.74). The average coded response was a 2.63 (SD = 1.13). This corresponded to a criterion rating of: “I don’t know” followed by a limited explanation of symptoms the respondent associated with depression. For reference, a 3 would correspond to “I don’t know” followed by a list of at least some symptoms the respondent associated with depression and some mention of the need for intervention to improve symptoms. Similar to results above, the response and its standard deviation did not approach a level of 5 or higher, indicating broad lack of knowledge about clinical depression.

Responses to question 21, which read “What is obsessive-compulsive disorder,” were coded on a scale of 1-10 by two researchers, with 10 being the most clinically accurate definition according to DSM – IV and ICD-10 standards (Interrater Reliability = 0.92). The average coded response was 3.18 (SD = 1.28). This average coded response corresponds to the rating criteria of: “I don’t know” followed by a limited explanation of symptoms the respondent associated with OCD (other than perfectionism and/or germ-phobia/cleanliness). For reference, a 4-point rating would indicate the criterion of: Mentions compulsive actions – may or may not list examples of compulsive actions – **OR** intrusive thoughts (does not mention both and uses the stereotype of germophobia). Since the response and its standard deviation did not approach a 5 or higher, this result was consistent with the trend noted above that indicated limited teacher knowledge of pathological level of obsessions and/or compulsions.

Responses to question 29, which read “Can you describe IDEA policies to me,” were coded on a scale of 1-10 by two researchers, with 10 being the most technically accurate definition according to federal policy and regulation standards (Interrater Reliability = 0.96). The average coded response was 3.61 (SD = 2.18). This average coded response corresponds to the rating criteria of: “I’m not sure” followed by a limited or vague (but not inaccurate) explanation

of one of the provisions of IDEA. For reference, a 4-point rating would have indicated a criterion response of “I’m not sure” followed by a superficial (but not incorrect) explanation of the provisions of IDEA, while a 5-point rating would have indicated a response meeting the criterion of either mentioning that IDEA is a set of legal provisions to ensure students have access to a free and appropriate public education or that it ensures students with disabilities are afforded accommodations to help them succeed. The mean level responses did not approach a level of 5 or higher, although when considering the standard deviation the overall rating exceeded this level. This indicated that teachers showed a slight lack of knowledge and understanding of what IDEA policies are and how they are applied, with a substantial percentage demonstrating an adequate level of knowledge.

Responses to question 30, which read “What constitutes an emotional disturbance under IDEA policies?” were coded on a scale of 1-10 by two researchers, with 10 being the most technically accurate definition according to federal policy and regulation (Interrater Reliability = 0.91). The average coded response was 2.15 (SD = 1.53). This average coded response corresponds to the rating criteria of: “I’m not sure” followed by an incorrect explanation of conduct disorder or ODD. For reference, a rating of a 3-point response would indicate a criterion being reached of: “I’m not sure” followed by a limited or vague explanation (but not inaccurate) of these conditions. Since the response and its standard deviation did not approach a level of 5 or higher, this indicated a lack of understanding of what constitutes an emotional disturbance and its associated overt symptoms.

To address the hypothesis that teachers would have difficulty distinguishing clinically significant internalizing symptoms from normative anxiety symptoms and “gray” or moody days in students, the following questions were posed on the structured interview: a) describe the

difference between a child with an anxiety disorder and temporary anxious emotional states (question 11) and b) describe the difference between a child with MDD and a child having a temporary low mood or “bad day” (question 17). A total of 52.5% of teachers ($n = 21$) indicated or otherwise demonstrated that they could not distinguish between anxiety symptoms indicative of an anxiety disorder and those of normative anxiousness. Similar levels were notable for the question on depression, with 37.5% of teachers ($n = 15$) indicating or otherwise demonstrating that they could not distinguish between depression symptoms indicative of clinical depression and those of normative “down” or negatively valenced emotional states.

Hypothesis 4: The following results address the fourth prediction of the current study, that special education teachers would give more qualitatively and semantically accurate definitions of identifying internalizing symptoms and would be more aware of how to address them within IDEA policy framework compared to regular education teachers. When asked to describe anxiety disorders, the average rating among special education teachers out of a 10-point ratio scale was a 2.05 ($SD = 0.57$). Among general education teachers, the average score was a 2.2 ($SD = 0.61$). A t test comparison between the two groups showed no significant difference ($p = 0.17$).

Similarly, when asked to describe clinical depression, the average rating among special education teachers out of a 10-point ratio scale was 2.75 ($SD = 1.19$). Among general education teachers, the average score was 2.5 ($SD = 1.09$). A t test comparison between the two groups also showed no significant difference ($p = 0.17$). When asked to describe obsessive-compulsive disorder, the average rating among special education teachers out of a 10-point ratio scale was 3 ($SD = 1.11$). Among general education teachers, the average score was 3.35 ($SD = 1.42$). Again, a t test comparison between the two groups showed no significant difference ($p = 0.11$).

When asked to describe IDEA policies and provisions, the average rating among special education teachers out of a 10-point ratio scale was a 4.5 (SD = 2.10). Among general education teachers, the average score was a 2.72 (SD = 1.86). A *t* test comparison between the two groups showed a significant difference ($p < 0.001$), indicating that special education teachers exhibited a greater degree of knowledge about IDEA policies than general education teachers. Similarly, when asked to describe what an emotional disturbance (EMD ruling) is under IDEA policies and provisions, the average rating among special education teachers out of a 10-point ratio scale was 2.6 (SD = 1.81) and the general education teachers' average score was 1.68 (SD = 1.00). A *t* test comparison between the two groups also showed a significant difference in this domain ($p < 0.01$), although the special education teachers' knowledge level still did not approach the aforementioned criterion for adequate (i.e., an average rating of 5).

Other Descriptive Statistical Findings: Related descriptive statistics of interest are also reported here for the sake of concise reading:

When asked if they would report each disorder, 85% indicated that they would report suspected anxiety disorders ($n = 34$), 100% indicated that they would report suspected clinical depression ($n = 40$), and 67.5% indicated that they would report suspected OCD ($n = 27$). When asked where or to whom they would report each condition, 52.5% of teachers would report to the counselor ($n = 21$), 17.5% would report to parents ($n = 7$), 5% would report to the school nurse ($n = 2$), 2.5% would report to the family support center ($n = 1$), 10% would report to the behavior specialist ($n = 4$), 10% would report to administration ($n = 4$), and 2.5% would report to contracted mental health personnel ($n = 1$).

When asked about whether or not each internalizing disorder was considered a disability, 65% of teachers stated that anxiety disorders are a disability ($n = 26$). Additionally, 82.5% of

teachers stated that depression is a disability ($n = 33$). Finally, 55% stated that OCD is a disability ($n = 22$). To ensure what is understood by disability, this question was consistently phrased as, “do you believe that (disorder) is a disability, on par with what currently constitutes eligibility for a 504 or IEP currently?”

Each teacher was also asked to name symptoms associated with each disorder. The average number of symptoms listed for anxiety disorders was 2.73 ($SD = 1.78$). The average number of symptoms listed for clinical depression was 2.58 ($SD = 1.36$). The average number of symptoms listed for obsessive-compulsive disorder was 1.45 ($SD = 1.04$). Additionally, teachers were asked to name any anxiety disorders they were aware of, with the average number of correct responses being 0.6 ($SD = 0.93$).

CHAPTER 5

DISCUSSION

The results of the study for each hypothesis show a surprising lack of knowledge about mental health issues among Mississippi public school teachers. Teachers generally lacked knowledge about internalizing disorders, IDEA policies, and EMD qualifying symptoms, all of which were germane to their specific functions as educators. Further, general education teachers and special education teachers differed only in their conceptualization of IDEA policies and EMD qualifying symptoms, with special education teachers being significantly better than general education teachers; however, neither group approached adequate knowledge of either policy and guidelines. This is potentially problematic in that the special education teachers were supposedly specifically trained to be aware of and attuned to emotional and behavioral difficulties as barriers to education.

Although groups were significantly different, the first hypothesis was not supported given that these differences were not in the expected direction. Teachers *over*estimated the rates of internalizing disorders at all levels, as opposed to underestimating prevalence as anticipated. This result was surprising because previous studies have shown that teachers typically underperform on tasks related to identifying and describing internalizing disorders, which has been posited to be due to a lack of knowledge and decreased awareness of their occurrence in students (Headley & Campbell, 2011; Headley, 2013). Further, results from the present study indicated that teachers struggled to identify anxiety symptoms, define anxiety disorders, and successfully differentiate between normative and dysfunctional anxiety (despite greatly elevated estimations

in comparison to measured base rates). Contextually, there is one significant factor that could account for this seemingly conflicting finding. The onset of COVID-19 brought with it significant changes and disruptions to the education field, the delivery of educational content, and the social and personal lives of teachers and students. Several studies have found recently that since the onset of the COVID-19 pandemic, the mental health of children and adolescents in the United States has significantly deteriorated (Almhizai et al., 2021). Teachers have also possibly experienced increased personal stress and anxiety, which may facilitate greater awareness of these symptoms in others (Baker et al., 2021). Additionally, teachers may be aware that there are increasing incidents related to mental health in their classrooms, which could have further biased their estimates. Anecdotally, of the 40 interviews conducted, when asked to estimate the base rates of these internalizing disorders, 23 of the teachers asked some variation of the clarifying question, “before or after the onset of COVID?” Although not systematic in terms of measurement, the frequency of this spontaneous occurrence suggests that teachers were generally aware of some distinctions and a rise in experience of symptoms after the onset of the pandemic.

The second and third hypotheses were supported by both the quantitative and qualitative analyses. Teachers did show a lack of awareness of federal and state policies pertaining to the Individuals with Disabilities in Education Act and the applicability of emotional disturbance rulings to internalizing disorders. Further, teachers also showed a lack of awareness of internalizing disorders and their typical presentation in children and adolescents. These results indicated that teachers lacked appropriate awareness of how these policies impact their role in intervention. Because of this deficit in knowledge, teachers are likely not fully acting as advocates, reporters, and support for students with internalizing disorders as they could be in

accordance with these policies. It also indicates that teachers lack appropriate awareness of how these conditions may negatively impact a student; therefore, they may not take action to provide intervention and support to students potentially falling behind in development or academics due to these disorders.

These findings were surprising as teachers, as reported and discussed above, typically overestimated rates of internalizing disorders. This incongruence in results may point to an awareness of general unease/malaise/emotional difficulty in students but a lack of language and knowledge necessary to more specifically discuss, describe, and identify problems in a clear and concise manner. If this is the case, however, it presents major challenges to intervention in education settings as adults needing to identify, report, and support students must first have the tools to observe and describe challenges in their students as they arise. Measurable limitations in the ability to do so, in combination with very biased perspectives on what constitutes pathological symptoms, could lead to numerous difficulties in addressing mental health needs of students.

Hypothesis 4 was mixed in support from results; there was no significant difference between special education and general education teachers in their ability to identify and describe internalizing disorders, which was not in line with the hypothesis. However, the two groups had significant differences in their abilities to describe and convey an understanding of IDEA and EMD policies, which supported the hypothesis. Particularly, as predicted, special education teachers had a better understanding of IDEA and EMD policies. However, caution should be used when interpreting this finding. Although special education teachers had a relatively better understanding of IDEA and EMD policies, they were still nowhere near an adequate understanding of these policies in order to support and advocate for their students.

While the non-significant findings related to internalizing disorders are in line with the findings of hypothesis 3, the significant differences between IDEA and EMD policy understanding require clarification. According to the findings of hypothesis 2, teachers, both special education and general education, lacked an understanding of IDEA and EMD policies. Thus, this apparent difference between special education and general education may seem paradoxical; however, while both groups lack awareness and understanding, special education teachers were significantly more knowledgeable than general education teachers. Put simply, special education teachers still lack adequate awareness and understanding to be effective at providing intervention and support for students with internalizing disorders falling under the EMD ruling (and therefore IDEA regulations), but they were much less so than teachers without specific training and experience dealing with these policies.

Other Descriptive Findings Discussion: Overall, these findings indicated that teachers lacked awareness of internalizing disorders and the policies and procedures in place that could serve a positive role in identifying and supporting students with these conditions. However, as mentioned in the earlier discussion, teachers were generally aware of some detrimental changes in student mental health since the onset of the COVID-19 pandemic. Additionally, the findings of the other exploratory questions from the survey show that teachers generally thought that they would be likely to report anxiety, depression, and OCD. Teachers had a significant variation in who they believed they should report suspected internalizing symptoms to, however, which was likely confounded with their views of the hierarchy and operations of the education system. This presents one potential barrier to implementing support to students with internalizing disorders in schools, in that the lack of centralized organization makes understanding these issues at a systemwide level very difficult. At a minimum, this suggests that there is a substantial need for a

universal approach for streamlined and straightforward reporting to a particular, easily identified resource within the school system.

Another potential barrier to intervention is that teachers lack a knowledge base about the specifics of various internalizing disorders. For example, the average number of correct symptoms teachers listed for anxiety disorders, clinical depression, and OCD was, respectively, 2.73 (SD = 1.78), 2.58 (SD = 1.36), and 1.45 (SD = 1.04). Moreover, the average number of correctly listed anxiety disorders was less than 1. Collectively, this indicates that teachers were typically only aware of no more than approximately 4 symptoms of internalizing disorders and far fewer possible presentations of clinical anxiety and were therefore unlikely to be able to identify specific disorders to begin the referral process in the first place. This presents a barrier to intervention, because without understanding and accurate calibration of indicators of distress teachers are unable to correctly identify students in need of support. Moreover, it may be possible that they are less likely to report to counselors or other potential resources when they lack the language to accurately describe and label concerning behaviors (and thus experience ambiguity in terms of interpretation of student behaviors that could suggest a need for help).

Finally, one surprising and paradoxical finding is that most teachers (55 – 82.5%) believed that internalizing disorders were a disability “on par with what currently constitutes eligibility for a 504 plan or an IEP currently” (the knowledge of which was notably limited). This was paradoxical because the way that EMD rulings are typically used is to provide support for students with severe externalizing disorders rather than those with internalizing disorders (Wagner et al., 2005). Therefore, the barrier to treatment indicated by this finding is not that teachers are necessarily doing anything wrong or missing details related to conditions that would impair students’ educational progress. Instead, this suggests that the way in which the education

system typically applies IDEA policies to education is potentially flawed and ignores an important subset of socio-emotional developmental impairment that can be attributed to psychological distress in the form of internalizing symptoms.

Limitations and Future Directions: One limitation of the present study is that it used a small sample size, particularly when considering comparisons between groups (i.e., special education vs. regular education teachers; teachers of various age groups). In the future, additional work should be conducted with a larger sample of teachers, ideally large enough to be sufficient for adequately powered analyses across all dimensions examined in this study. Furthermore, there is a need for standardization of measurement materials for understanding the barriers to providing intervention and mental health care in schools. Additional research should also interview other professionals responsible for the distribution of services within the education and special education departments of school districts (i.e., special education directors and coordinators, school administration, and school district superintendents and subcommittees).

The principal researcher intends to continue research within Mississippi school districts in order to develop intervention frameworks for mental health care within public education settings. Future research in this general area will focus on systems analysis of potential interventions designed to promote education, identification, referral, assessment, and evidence-based treatment in school settings. Extending these observations to larger groups in the context of program evaluation activities designed to provide immediate feedback to schools may enable advances in both applied research and policy development.

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APPENDIX

Teacher Questionnaire

Background Information Questions

1. How old are you?
2. What is your gender identity?
3. What is your ethnicity?
4. What is your educational background?
5. What certifications, if any, do you have?
6. How many years have you taught?
7. What age group do you primarily work with?

Psychopathology Specific Questions

8. What is an anxiety disorder?
9. Are there different types of anxiety disorders? If so, name them/describe them.
10. What does an anxiety disorder look like in the age group you work with?
11. Describe the difference between a child with an anxiety disorder and temporary anxious emotional states.
12. Would you report a child with anxiety? **[skip to question 14 if no]**
13. Where or to whom would you report a child with anxiety?
14. Do you consider anxiety a disability?
15. What is major depression or MDD?
16. What does major depression (MDD) look like in the age group you work with?
17. Describe the difference between a child with MDD and a child having a temporary low mood or “bad day.”
18. Would you report a child with anxiety? **[skip to question 20 if no]**

19. Where or to whom would you report a child with anxiety?
20. Do you consider depression a disability?
21. What is obsessive-compulsive disorder?
22. What does OCD look like in the age group you work with?
23. Would you report a child with OCD? **[skip to question 25 if no]**
24. Where or to whom would you report a child with OCD?
25. Do you consider OCD a disability?

Rates of Anxiety/ Depression/ OCD

26. How often, in a percentage estimate, do you think Anxiety occurs in students at the age range you work with?
27. How often, in a percentage estimate, do you think OCD occurs in students at the age range you work with?
28. How often, in a percentage estimate, do you think depressive disorders occurs in students at the age range you work with?

IDEA and Special Education Specific Questions

29. Can you describe IDEA policies to me?
30. What constitutes an emotional disturbance under IDEA policies?
31. Have you referred students for Child Find previously for EMD?
- 32. [only if yes to 31] Tell me what symptoms prompted that referral?**

Vita

Education

University of Mississippi – Clinical Psychology Doctoral Program

M.A. in Psychology - Clinical Emphasis, May 2022

Ph.D. in Psychology - Clinical Emphasis, Expected May 2025

Thesis: The Ability of Mississippi School Personnel to Recognize and Act on Internalizing Disorders in Students (*Supervisor: Dr. John Young*)

Dissertation: TBD

University of Mississippi – Sally McDonnell Barksdale Honors College

B.A. in Psychology and Studio Art, May 2019

Cumulative GPA: 3.61 | **Psychology GPA:** 3.82

Honors Thesis: Why Public Education Should Use Fiscal Resources to Screen for and Treat Childhood Internalizing Disorders (*Supervisor: Dr. John Young*)

Clinical Experience

Psychological Services Center; University, MS

Graduate Therapist, January 2020 – Current Supervisor: John Young, Ph.D.

Duties: Perform diagnostic services using semi-structured and structured diagnostic assessment interviews, create and plan individual treatment, monitor progress through behavioral monitoring and psychological evaluation, write treatment and progress notes following each treatment session (SOAP format), collaborate with other graduate therapists and supervisors as needed, and formulate case conceptualizations according to a biopsychosocial model.

Behavioral Consulting, LLC.; Oxford, MS

Consultant, August 2020 – December 2020

Supervisor: Alan Gross, Ph.D.

Duties: Address problem behaviors of students in classroom settings, record individual behavioral incidents, provide feedback and direction for teachers, monitor changes in behaviors over time, and assist teachers in developing effective classroom management strategies.

North Mississippi Regional Center; Oxford, MS

Graduate Intern, July 2020 – December 2020

Supervisor: Melinda Redding, Ph.D.

Duties: Perform diagnostic services using semi-structured and structured diagnostic assessment, code behavioral reports from staff, calculate antecedent frequencies for target behaviors, formulate recommendations to address target behaviors, determine reinforcer schedules to

increase positive and communicative behaviors, and research methods of diagnosis/treatment of various psychological concerns in populations with intellectual/developmental disorders.

Florida International University, Summer Treatment Program; Miami, FL

Pre-K Counselor, June 2018 – August 2018

Supervisors: Andre Maharaj, Ph.D. and Katie Hart, Ph.D.

Duties: Create and implement behavioral modification protocols (ABA) for young children with ADHD, ODD, and conduct disorder; create individualized behavioral interventions; observe and code behavioral interactions; and provide classroom reading instruction.

Research Experience

University of Mississippi, Scientific Infusion that Helps (S.I.T.H.) Lab

Graduate Student, August 2019 – Present

Research Assistant, January 2018 – May 2019

Supervisor: John Young, Ph.D.

Topic: Evidenced-based services for children and adolescents with various psychopathology; Evaluation of psychopathology in patients with severe pain symptoms

Duties: Administer structured diagnostic interviews (WASI, MINI5, and DIVA2.0), collect psychological participant data, perform data analysis, manage participant data and study credits, and assist with research projects

University of Mississippi, Language Acquisition Project (partnership with Cambridge University)

Research Assistant, February 2018 – October 2018

Supervisor: Christiana Christodoulou, Ph.D.

Topics: Language acquisition of the Southern dialect in children with and without language disorders

Duties: Administer structured diagnostic interviews, administer hearing tests and speech tasks, understand and use language software, use recording devices to collect data, enter and analyze data, manage participant information, and assist with research projects

University of Mississippi, Migraine and Behavioral Health Lab

Research Assistant, August 2017 – May 2019

Supervisor: Todd Smitherman, Ph.D.

Topics: The relationship between psychological factors, stress, and migraine headaches

Duties: Administer structured diagnostic interviews (SDHI), collect participants' physiological and psychological data, enter and analyze data, manage participant information and study credits, and assist with research projects

Teaching Experience

University of Mississippi, Psychology Department

Statistics Tutor, August 2021 – May 2022

Supervisor: Lauren Jordan, M.A.

Teaching Assistant

January 2022 – May 2022

Supervisor: Jennifer Pattel, M.A.

Class: Introduction to Psychology

August – December 2021

Supervisor: Jefferey Bednark, Ph.D.

Class: Introduction to Psychology

January - May 2020; August - November 2020

Supervisor: Lucy Leslie, Ph.D.

Class: Developmental Psychology

August - December 2019

Supervisor: Jennifer Caldwell, Ph.D.

Class: Online Abnormal Psychology

January – May 2019

Supervisor: Kristen Johnson, M.A.

Class: Applied Behavior Analysis

Presentations

Varner, M. S. (2022, March). *Development: What to Look for and What to Do*. Professional development talk given to the Lafayette/Oxford/University (LOU) community for early childhood services, Oxford, MS.

Varner, M. S., Richardson, P. W., Buchanan, K. E., Cochran, S. R., Rose, A. R., Smitherman, T. A. (2018, April). *Anxiety Sensitivity and General Psychological Health*. Poster presented at the 2018 University of Mississippi Conference on Psychological Science, University, MS.

Community and Departmental Engagement

Founded Placement, February 2022

Supervisors: John Young, Ph.D. & LaTonya Robinson

Description: Used independently collected data from the school district to show district leadership the existing, substantial need among students and teachers for mental health services within the education framework and initiated a collaborative agreement with Oxford School District in Oxford, MS to develop a new practicum placement site for graduate students within the University of Mississippi Clinical Psychology Department to provide assessment and mental health services.

Peer Mentor, October 2021 – Present

Supervisors: Carrie Smith, Ph.D. & Joseph Wellman, Ph.D.

Duties: Ensuring new students learn how to navigate graduate studies and assisting in their transition to both graduate school and a new cultural environment

Women's Graduate Student Organization – *founding member*, October 2021 – Present
Supervisor: Annette S. Kluck, Ph.D.

Rebels Against Sexual Assault – *peer mentor*, September 2021 – Present
Supervisor: Shelli Poole, M.A. – Violence and Prevention Office

Awards and Honors

Academic Excellence Scholarship (each semester)

Ole Miss First Leadership Scholarship (each semester)

Chancellor's List – Fall 2017, Spring 2018, Spring 2019, Fall 2020

Dean's List – Fall 2015, Fall 2016, Spring 2017, Fall 2018, Fall 2019, Spring 2020

Psi Chi - International Psychology Honor Society

Alpha Epsilon Delta Honor Society