School Psychologists' and Teachers' Knowledge of Behaviors Associated with Anxiety or Attention-Deficit/Hyperactivity Disorder in School Children

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The University of Wisconsin-Eau Claire, 2015
Under the Supervision of Dr. Michael Axelrod.

Children commonly show behaviors characteristic of anxiety or Attention Deficit/Hyperactive Disorder (ADHD) when attending school (American Psychiatric Association, 2013; Jarrett & Ollendick, 2008). Both teachers and school psychologists interact with students frequently during the school day (Havey, Olson, McCormick, & Cates, 2005). The results of empirical studies of teachers' and school psychologists' knowledge of behaviors associated with anxiety and ADHD are mixed (Epkins, 1995; Hepp, Visser, & Strain, 2008; Layne, Bernstein & March, 2006; Ohan, Cormier, Jerome, Gordon & Hustler, 1994; Verdi & Wilson, 2009; Weyandt, Fulton, Schepman, Herbert, Crittenden & Dalrymple, 2004). The purpose of the current study was to investigate teachers' and school psychologists' ability to accurately identify behaviors associated with anxiety and ADHD in school children. The participants were a sample of 58 second and third grade elementary teachers and 52 school psychologists from the state of Wisconsin. Each participant was sent an electronic link and asked to complete an online survey instructing him/her to rate behaviors associated with either anxiety or ADHD. Both scenario and

statement items were utilized. Depressive symptoms and oppositional behaviors were added as distracter items. Each scenario and statement utilized a Likert scale (1 = *Strongly Disagree* to 5 = *Strongly Agree*) to rate statements. Participants were also asked to report demographic information. Results of the study indicated that school psychologists and teachers agreed that behaviors associated with one disorder were indicative of that disorder. In addition, both school psychologists and teachers generally disagreed when rating behaviors associated with a different disorder as representative of the disorder presented. Results also indicated that school psychologists and teachers were less certain when rating the distracter items as clearly not indicative of a disorder. Implications for school psychologists and teachers regarding identification of behaviors associated with a disorder are discussed.

Michael Axelrod 7-9-15

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CHAPTER I

Statement of the Problem and Review of the Literature

Introduction

Anxiety disorders and Attention-Deficit/Hyperactivity Disorder (ADHD) are two clinical categories of disorders prevalent during childhood and described in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM-5*) (American Psychiatric Association, 2013; Barkley, 2006). Approximately 5 to 20% of children have been diagnosed with an anxiety disorder and between 7% and 10% have been diagnosed with ADHD in the United States (APA, 2013). Of those children with an anxiety disorder or ADHD, 30-70% will continue to meet criteria for the disorder throughout adolescence and into adulthood (Dadds, Holland, Laurens, Mullins, Barrett, & Spence, 1999; West, Taylor, Houghton, & Hudyma, 2005). There is some overlap between the symptoms of anxiety and the symptoms of ADHD. Specifically, both can manifest in the form of difficulty concentrating and sustaining attention, appearing on edge, avoidance of tasks, fidgeting, irritability, mood swings, restlessness, and temper outbursts (APA, 2013; Jarrett & Ollendick, 2008). Expectations in the school setting require students to complete work and stay on task, sit still, and regulate normal and extreme emotions (Graham, 2007; McLoone et al., 2006). With these demands, children with anxiety and ADHD-related behaviors (e.g., restlessness or moving from one's seat) can often have school-related problems (APA, 2013; Hughes, Lourea-Waddell, & Kendall, 2007; McLoone et al., 2006) and academic achievement may be adversely affected (Baum & Olenchak, 2002; Birchwood & Daley, 2012; Duchesne, Vitaro, Larose, & Tremblay, 2008; Grills-Taquechel et al., 2012).

Several aspects of school can be impacted by anxiety and ADHD-related behaviors. For example, poor academic performance and lower high school completion rates have been associated with both anxiety and ADHD behaviors (Duchesne et al., 2008; Hinshaw, 1992; Ma, 1999; Muris & Meesters, 2002; Wood, 2006). Research indicates that anxiety-related complaints by children predict lower academic performance (Hughes et al., 2008). Furthermore, childhood anxiety disorders are predictive of later problems in adolescence (e.g., depression), indicating the need for early identification and intervention (Bittner, Egger, Erklani, Costello, Foley, & Angold, 2007). ADHD symptoms interfere with behavioral expectations in school and are likely to adversely affect academic achievement (Baum & Ollenchak, 2002; Hinshaw, 1992). Early identification of anxiety or ADHD behaviors may lead to interventions and possibly improved academic outcomes.

Schools are responsible for identifying and intervening when a student's behavior affects academic achievement (Shoenfeld & Janney, 2008). Because teachers spend a substantial amount of time observing and interacting with students, teacher ratings of behavior are used to help identify behaviors associated with a disorder (Havey, Olson, McCormick, & Cates, 2005). School psychologists also observe student behavior and consult with teachers and other professionals regarding anxiety- or ADHD-related behaviors (Weyandt, Fulton, Schepman, Verdi, & Wilson, 2009). Thus, it is important for teachers and school psychologists to be able to identify symptoms and behavior associated with both anxiety and ADHD (Hughes et al., 2008; Morris, Shah, & Morris, 2002; Sherman, Rasmussen, & Baydala, 2008). The purpose of this study was to

investigate teachers' and school psychologists' accuracy in identifying behaviors associated with anxiety and ADHD in school children.

Behavioral Symptoms of Anxiety

Behaviors associated with anxiety can be developmentally appropriate in younger children (APA, 2013; Gullone, 2000). However, the same behaviors may indicate a disorder when they are identified as clinically significant, persist into middle childhood, or adversely affect daily functioning (APA, 2013; Gullone, 2000). No specific age of onset is evident according to the *DSM-5*, but early onset (i.e., before the age of 6) is possible (APA, 2013). Anxiety disorders consist of an intense fear of a situation or stimulus (APA, 2013; McLoone et al., 2006). According to research, children with anxiety perceive information from a situation or stimulus as negative or threatening, which, in turn, is manifested in behavioral symptoms often involving escape or avoidance (Ladouceur et al., 2005; Masi et al., 2001).

The following anxiety-related behaviors can be manifested in children and are outlined in the *DSM-5*: crying, tantrums, freezing (from movement), clinging to others, avoidance, restlessness or appearing on edge, becoming fatigued easily, difficulty concentrating or "mind going blank," irritability, trembling or twitching, or sleep disturbance (APA, 2013). In addition, physiological symptoms can include muscle aches or soreness, heart palpitations, sweating, shortness of breath, a feeling of choking, chest pain or discomfort, nausea or abdominal discomfort, dizziness or lightheadedness, a tingling sensation of chills, or heat flush (APA, 2013). Children may also show excessive conformity, perfectionism, overzealousness in seeking approval, and/or require excessive reassurance about their performance or worries (APA, 2013).

Behavioral Symptoms of Attention-Deficit/Hyperactivity Disorder (ADHD)

According to the *DSM-5* (APA, 2013), ADHD symptoms must be evident prior to the age of seven years. Most ADHD diagnoses occur when children are in elementary school (APA, 2013; Willoughby, Curran, Costello, & Angold, 2000), with average age of diagnosis at 7.5 years (generally in second grade) (Pastor & Reuben, 2008). Three subtypes of ADHD have been identified with the first being Attention-Deficit/Hyperactivity Disorder, Combined Type (ADHD-C). Children diagnosed with ADHD-C show symptoms of both inattention and hyperactive-impulsive behaviors. The second subtype is Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type (ADHD-I). The third subtype is Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type (ADHD-H). Most children with a diagnosis of ADHD display both inattentive and hyperactive-impulsive behaviors (APA, 2013; Barkley, 2006).

Specific behaviors help differentiate inattention and hyperactivity-impulsivity. According to the *DSM-5* (APA, 2013), inattentive behaviors include the failure to give close attention to details, making careless mistakes in schoolwork or other activities, having difficulty sustaining attention in tasks or play, appearing to not listen when spoken to directly, not following through on instructions, failing to finish work, having difficulty organizing tasks and activities, avoiding tasks requiring sustained mental attention, losing necessary things for tasks or activities, being easily distracted by extraneous stimuli and often being forgetful in daily activities. Hyperactive behaviors include fidgeting or squirming, moving from the seat in an environment in which staying seated is expected, running or moving about inappropriately for a specific situation, difficulty engaging in

activities quietly when expected, and appearing as if "on the go" or "driven by a motor." Impulsive behaviors, or acting without thinking, include blurting out answers before questions are completed, showing difficulty taking turns, and interrupting others.

In addition, children with ADHD may engage in problem behaviors involving temper outbursts, bossiness, stubbornness, excessive and frequent insistence that requests be met, mood swings, demoralization, rejection by peers, and poor self-esteem (Barkley, 2006). Associated problems have been documented in the school environment, including lower academic achievement, reduced high school completion rates, increased need for discipline, and social difficulties with peers (Baum & Olenchak, 2002; Birchwood & Daley, 2012; Duchesne, Vitaro, Larose, & Tremblay, 2008; Grills-Taquechel et al., 2012). Finally, children with ADHD frequently experience problems in multiple settings including home and school (APA, 2013; Barkley, 2006).

Comparison of Anxiety and ADHD Behaviors

Because the probability of a teacher working with a student with either anxiety- or ADHD-related behavior is high, comparison of the two disorders is important (McLoone et al., 2006). Complicating matters, behaviors associated with the two disorders may look similar. For example, difficulty concentrating and sustaining attention are symptoms of both childhood anxiety and ADHD (APA, 2013). Other behaviors that can occur in both types of disorder include appearing on edge, avoidance of tasks, fidgeting, irritability, mood swings, restlessness, and temper outbursts (APA, 2013; Jarrett & Ollendick, 2008).

Inattention and anxiety have been linked in the child psychopathology literature (Grills-Taquechel et al., 2012). Grills-Taquechel and colleagues asked students to complete rating scales related to anxiety and complete academic achievement tasks. They

also asked teachers to complete ratings of level of attention shown by students. The researchers found that student achievement was likely impacted by behaviors associated with both anxiety and inattention. Thus, complications may arise for school psychologists and teachers to accurately distinguish behaviors indicative of one disorder due to overlap of behavioral symptoms when using rating scales. In such cases, additional assessment techniques are likely required.

Complications: Anxiety vs. Depression

In addition to strong co-occurrence with ADHD, anxiety is often comorbid with depression (Clark & Watson, 1991; Jacques & Mash, 2004) and may impact the outcome of teachers' and school psychologists' identification of behaviors associated with a disorder. Anxiety and depression symptoms, as exhibited by children, are often measured using standardized rating scales such as the Children's Depression Inventory (CDI) (Kovacs, 1992) or the Revised Children's Manifest Anxiety Scale (RCMAS) (Reynolds & Richmond, 1985) (see Brady & Kendall, 1992; Epkins & Meyers, 1994; Turner & Barrett, 2003). When children respond to such anxiety and depression rating scales, the scores have been found to be highly correlated (Turner & Barrett, 2003). These results raise questions about the distinctiveness of the two disorders in children, or perhaps the utility of the rating scales to measure the constructs (Angold, Costello, & Erklani, 1999; Cole, Truglio, & Peeke, 1997). In any case, children with one disorder are likely to have symptoms of the other disorder.

A proposed model called the tripartite model of emotion describes the relationship between depression and anxiety (Clark & Watson, 1991; Jacques & Mash, 2004). According to the model, negative affect is generally related to both anxiety and

depression. In particular, low positive affect is described as specific to depression while physiological hyperarousal is described as specific to anxiety. Evidence supports greater differentiation of the two disorders with age (Clark & Watson, 1991; Jacques & Mash, 2004) and individuals identified as having anxiety during childhood may be identified as having depression in later years (Cole, Peeke, Martin, Truglio, & Seroczynski, 1998; Dobson, 1985; Kendall & Brady, 1995).

Analyses of the measures assessing behaviors associated with negative affect may indicate a childhood disorder such as anxiety, depression, or potentially ADHD in children. Even so, early identification of behaviors related to anxiety, depression and ADHD, when combined with early intervention for associated behaviors, may show greater positive outcomes in later years (e.g., higher academic achievement has been shown for students identified with a disorder over the course of students' academic career) (Balle & Tortella-Feliu, 2008; Barrett, Duffy, Dadds, & Rapee, 2001; LeBel & Chafouleas, 2010; Weisz et al., 2009). As a result, the relationship between these disorders should be carefully considered when attempting to determine whether teachers and school psychologists can accurately identify behaviors associated with anxiety and ADHD.

Teachers' Ratings of ADHD-related Behaviors

Several studies have indicated that both pre- and experienced in-service teachers can identify the behavioral symptoms associated with ADHD, but teachers' implementation of strategies to address student behavior requires ongoing professional learning and support (Arcia, Frank, Sanchez-LaCay, & Fernandez, 2000; Jerome, Gordon, & Hustler, 1994; Kos, Richdale, & Jackson, 2004; Lane, Pierson & Roberston,

2004; Ohan et al., 2008; Vereb & DiPerna, 2004; Weyandt et al., 2009). For example, Ohan and colleagues found that teachers have knowledge of behaviors associated with ADHD, yet with greater knowledge teachers also reported feeling inadequately equipped to address the behaviors. In addition, teachers reported complications with prior attempts to implement strategies to address ADHD-related behavior even though they indicated greater knowledge of behaviors associated with ADHD. These results were based on data collection through surveys and the reactions of teachers to vignettes of students displaying ADHD-related behaviors (Ohan et al., 2008). Other studies also report that teachers implement a vast array of strategies to address ADHD-related behaviors and some are useful while others lack a research-base (Arcia, Frank, Sanchez-LaCay, & Fernandez, 2000; Glass and Weger, 2000; West et al., 2005). Further support for the implementation of strategies to address ADHD may result in greater practical knowledge of ADHD in school children in conjunction overall knowledge as measured by surveys.

Teachers not only interact with students and implement strategies to address ADHD, but they also report on student behaviors using behavior rating scales as a part of assessment (Havey et al., 2005). A number of different behavioral rating scales can be completed by teachers when assessing students (for examples, see Havey et al., 2005; Jerome et al., 1994; Kos et al., 2004; Ohan et al., 2008; Weyandt et al., 2009). In a study by Stevens, Quittner and Abikoff (1998), the researchers asked teachers to watch videos of students with typical classroom behaviors and students with ADHD-related behaviors. After watching the videos, the teachers were asked to rate student behaviors as indicative of ADHD using standardized measures such as the Conners Teacher Rating Scale (Conners, 2001) and the Swanson, Nolan and Pelham Rating Scale-Fourth Edition

(SNAP-IV). In contrast to other research (e.g., Jerome, Gordon, & Hustler, 1994; Kos, Richdale, & Jackson, 2004; Ohan et al., 2008; Weyandt et al., 2009), results of the Stevens et al. (1998) study indicated that teachers who received education or obtained knowledge of ADHD, or had experience with students identified with ADHD were no more likely to identify ADHD-related behaviors than teachers without such knowledge, education or experience (Stevens et al., 1998).

Other research has examined the impact of specific variables on teacher ratings of behavior. For example, Havey et al. (2005) studied the potential impact of students' race on teachers' ratings of ADHD-related behaviors. Using the ADHD Rating Scale-IV (DuPaul, Power, Anastopoulos, & Reid, 1998), the researchers assessed teachers' ratings of behavioral symptoms displayed by their students. In this sample, teachers' classes consisted of students who were either entirely of Hispanic descent or entirely non-Hispanic white individuals. The researchers found that teachers reported ADHD behaviors at a greater rate regardless of the ethnicity of their students. Such ratings indicate potential problems with teacher identification of behaviors associated with ADHD when assessing students using standardized behavior scales (Havey et al., 2005).

In light of research, accuracy in the identification of behaviors associated with Attention Deficit/Hyperactivity Disorder (ADHD) and implementation of strategies to address ADHD appears to be inconsistent (Arcia, Frank, Sanchez-LaCay, & Fernandez, 2000; Jerome, Gordon, & Hustler, 1994; Kos, Richdale, & Jackson, 2004; Ohan et al., 2008; Weyandt et al., 2009; Stevens et al., 1998). Additionally, distinguishing behaviors as indicative of one disorder over the other may create challenges with accurate identification of behaviors associated with ADHD (APA, 2013; Barkley, 2006; Clark &

Watson, 1991; Havey et al., 2005; Jacques & Mash, 2004). Further understanding of teachers' accuracy in identifying behaviors associated with anxiety or ADHD may aid the diagnosis of child psychopathology and, more specific to school-based practices, identification of educational disabilities based on the Individuals with Disabilities Education Act.

Teachers' Ratings of Anxiety-related Behaviors

Teachers' ratings of anxiety-related behaviors are routinely utilized in assessment but have been discrepant with students' and parents' ratings (Loeber, Green, & Lahey, 1990). For example, research on inter-rater reliability of teachers and students suggests each group might better identify certain behaviors associated with anxiety. Layne, Bernstein, & March (2006) found that teachers' ratings of second and third grade students' anxiety-related behaviors correlated with students' self-report of anxiety symptoms as measured by the Multidimensional Anxiety Symptom Scale (MASC). The teachers identified more observable symptoms of anxiety (e.g., fidgeting and crying) but less often identified symptoms considered internal to the individual (e.g., mind going blank or muscle tension). Greater understanding of the rating patterns of different informants might be important to the overall assessment process.

Additional research speaks to the unique contribution each informant might add to assessment. Epkins (1995) evaluated teachers' ratings of students' behaviors as well, but with the Revised Children's Manifest Anxiety Scale (RCMAS). The ages of student participants were 8 to12 years and each student was enrolled in one of the participating teachers' classes. Furthermore, the enrollment occurred prior to a recent admission to a psychiatric facility. The participating children rated their own behaviors using a self-

report version of the RCMAS after admission to the facility. At the time of the study, researchers were aware of initial concerns resulting in admission to the facility (i.e., anxiety-related behaviors such as excessive crying), but were did not know diagnoses. The results indicated teachers' ratings of students' anxiety symptoms were not consistent with student self-reports as measured by the RCMAS. These results again point to the complexity of assessing child psychopathology using informant-based rating scales.

The literature is mixed regarding the validity of teacher ratings using a standardized rating scale assessing anxiety, the inter-rater reliability between teachers and students, and when environmental differences have been considered (Epkins, 1995; Layne, Bernstein, & March, 2006). Students' and teachers' ratings of overtly observable anxiety behaviors may be more similar than students' and teachers' ratings of subjective student experiences. Teachers' awareness of less observable behaviors has been identified as an area to be studied (Layne et al., 2006).

School Psychologists' Training on Anxiety- and ADHD-related Behaviors

The National Association of School Psychologists and state departments of public instruction specify standards for training and practice in school psychology (Crespi & Politikos, 2004; Smith & Ebmeier, 2009). As defined in those standards, school psychologists are required to receive training in specific domains (e.g., psycho-educational assessment, childhood disorders/psychopathology, consultation) to attain certification (Smith & Ebmeier, 2009; Smith, Frank, & Snider, 1984). When assessing students for anxiety disorders and ADHD, research has established that school psychologists provide appropriate multi-method assessment techniques including rating forms from parents and teachers (Davis, Kruczek, & McIntosh, 2006; Demaray, Shaefer,

& Delong, 2003). In addition, schools have reported an interest in having school psychologists engage in more consultation and collaboration (Gadow, Sprafkin, Salisbury, Schneider, & Loney, 2004; Watkins, Crosby, & Pearson, 2001), which may include anxiety- and ADHD-related knowledge dissemination. The role expectations for school psychologists specify that they have knowledge of disorders as well as the ability to present appropriate information to other professionals and parents (Frankenberger, Farmer, Parker, & Cermak, 2001).

Weyandt et al. (2009) assessed teachers' and school psychologists' knowledge of ADHD behaviors. The results indicated that school psychologists' knowledge level was significantly greater than that of teachers. Furthermore, the researchers proposed that school psychologists may be more accurate than teachers in identifying students with the disorder. An increased knowledge level is to be expected given the training school psychologists receive regarding specific disorders, but school psychologists' accuracy in identifying behavioral symptoms in children is an area that requires more empirical research.

Studies have assessed overall knowledge of anxiety disorders among teachers and school psychologists (Herbert, Crittenden, & Dalrymple, 2004; Layne et al., 2006; Loeber et al., 1990). Researchers developed rating scales to compare teachers' and school psychologists' knowledge of anxiety and ADHD (Herbert et al., 2004). The results indicated that school psychologists are more knowledgeable about anxiety-related disorders (e.g., social anxiety disorder), including behavioral symptoms, than are teachers. However, both school psychologists and teachers were more knowledgeable in

general about ADHD than about anxiety. Given the scarcity of studies in this area, there is need for further assessment of knowledge of anxiety and ADHD.

Purpose of the Study

Anxiety and ADHD symptoms are prevalent in the school age population (APA, 2013; Barkley, 2006; Dadds et al., 1999; Masi et al., 2001; McLoone et al., 2006; National Institute of Mental Health, 2006; West et al., 2005). Research has indicated that behavioral symptoms may interfere with academic achievement and high school completion rates (Birchwood & Daley, 2012; Duchesne et al., 2008; Ma, 1999; Hinshaw, 1992; Muris & Meesters, 2002; Wood, 2006). In addition, teachers and school psychologists are in contact with students who show behaviors that may be symptomatic of anxiety and/or ADHD throughout the school day (Brophy, 1986; Ghanizedah, Fallahi, & Akhondzadeh, 2009; McLoone et al., 2006).

However, research on identification of behaviors indicative of anxiety or ADHD by elementary school teachers and school psychologists is lacking (Epkins, 1995; Havey et al., 2005; Herbert et al., 2004; Jerome et al., 1994; Layne et al., 2006; Ohan et al., 2008; Stevens et al., 1998; Weyandt et al., 2009). Available research has indicated both teachers' and school psychologists' identification of anxiety- or ADHD-related behaviors in school children has been accurate, while other research indicates otherwise. In addition, early identification and intervention has been documented in research as supporting potentially positive outcomes for students (Bittner et al., 2007). Teachers and school psychologists may be involved in supporting students at varying levels of problem-solving processes including the assessment phase, indicating a need for investigating current knowledge and skill levels between the two groups of professionals.

The current study was focused on teachers' and school psychologists' ability to accurately identify anxiety- and ADHD-related behaviors that can be seen in school children. A survey was sent to second and third grade teachers and school psychologists including scenarios as well as a list of behaviors from children displaying behaviors associated with either anxiety or ADHD. The following research questions were examined:

1. Can school psychologists and teachers accurately identify behaviors associated with anxiety?
2. Can school psychologists and teachers accurately identify behaviors associated with ADHD?
3. Can either group more accurately identify anxiety-related or ADHD-related behaviors?

CHAPTER II

Method

Participants

A survey was sent to 300 second and third grade elementary school teachers and 150 school psychologists. Of those invited to participate, 58 teachers and 52 school psychologists completed the survey. For a participant to be included in the study, he or she was required to be currently employed full-time as a second or third grade elementary school teacher or a school psychologist in the State of Wisconsin. Each participant was also required to have a public email address that was available through the employer's website. Participants who met these requirements were selected to participate in the current study.

A database provided by the Wisconsin Department of Public Instruction was utilized to gather names of currently practicing second and third grade teachers and school psychologists. Computer software was utilized to assign a number to each participant within each group. Each participant was then randomized by the computer software and a sample was developed and utilized for the current study.

Instrument

Four surveys were constructed by the researcher in collaboration with a faculty member with expertise in school psychology. The items were primarily derived from the *DSM-IV-TR* (APA, 2000) and developed by the researcher as well as the faculty member. Each survey consisted of three components. The first component consisted of four scenarios that were developed by the researcher. Each scenario presented hypothetical students whose behaviors were indicative of either anxiety or Attention

Deficit/Hyperactivity Disorder (ADHD) within the school setting. Neither gender nor race/ethnicity was assigned to the hypothetical student. The participants were asked to indicate their agreement that the behaviors described were indicative of ADHD or anxiety with ratings of 1(*strongly disagree*), 2 (*disagree*), 3 (*neither agree nor disagree*), 4 (*agree*), or 5 (*strongly agree*).

The second component of the survey included 29 statements developed from the *DSM-IV-TR* describing behaviors related to anxiety (15 items), ADHD (10 items), and four distracter items involving behaviors related to depression and Oppositional Defiant Disorder (ODD) (APA, 2000). These items were rated according to agreement using the same five-point scale that was used for the scenarios. An open-ended question asking for participants' comments was also included.

Finally, the third component of the survey asked for demographic information. The following information was obtained from the participants: gender, degree(s) attained, license(s) held, age, number of years in the respective positions, and type of training received regarding ADHD or anxiety disorders.

Half the sample of teachers and half the sample of school psychologists received an electronic link to a survey that asked them to identify to what degree they agreed that the behaviors presented in the four scenarios and in the 29 statements were indicative of anxiety. They also were asked to complete the demographic component on the same survey. The other half of the sample of teachers and school psychologists received an electronic link to a survey asking them to rate to what degree they agreed the behaviors presented in the four scenarios and the 29 statements indicated ADHD, also completing

the demographic section. The surveys that were presented to each sample are found in Appendices A, B, C, and D.

Design and Procedure

The present study was a between-groups design. Two categorical predictor (or independent) variables were used. The first independent variable was type of profession (i.e., elementary school teacher or school psychologist). The second independent variable was type of disorder presented (i.e., anxiety or Attention-Deficit/Hyperactivity Disorder [ADHD]). The dependent variable consisted of the ratings of the degree of agreement that the scenarios and list of behaviors represented either ADHD- or anxiety-related behaviors.

Original online surveys were created by the researcher and an electronic link to a specified survey was sent to each participant via email. A cover letter to obtain informed consent was included in the body of the email and at the beginning of the survey with the purpose of the study outlined. The surveys were completed anonymously. A reminder email was sent two weeks later consisting of the same cover letter in the body of the email to prompt the teachers/school psychologists to complete the online survey. After the reminder email was sent the list of teachers' and school psychologists' names and email addresses was destroyed so that no respondents could be identified. The letters send to each sample of participants are found in Appendices E and F.

Data Analysis

The participants rated their level of agreement that the behaviors were indicative of ADHD or anxiety using a Likert scale: 1(*strongly disagree*), 2 (*disagree*), 3 (*neither agree nor disagree*), 4 (*agree*), or 5 (*strongly agree*). An analysis of the participants'

responses in consideration with the research questions resulted in the researcher clustering responses for a clear interpretation of the results. For each item and scenario, the frequency of ratings of 4 (*agree*) and 5 (*strongly agree*) responses were combined to calculate the percentage of accurate responses. The frequency of 1 (*strongly disagree*) and 2 (*disagree*) responses were combined to calculate the percentage of inaccurate responses. The frequency of ratings of 3 (*neither agree nor disagree*) responses was classified as an unknown response.

Clustering the responses allowed the researcher to provide interpretations in three main categories (percentage of agreement, percentage of disagreement, and percentage of uncertainty). In consideration of the research questions, the results indicated whether or not school psychologists can accurately identify behaviors associated with a disorder based on percentage of agreement and, based on comparison of results, indicated whether school psychologists or teachers can more accurately identify behaviors associated with a disorder.

CHAPTER III

Results

From the original sample of 150 school psychologists and 300 teachers, 62 (41.3%) school psychologists and 68 (22.7%) teachers responded to the survey. Data screening indicated surveys from 20 participants were left mostly blank and, as a result, were not utilized in the analysis. Therefore, the number of respondents with usable data was 52 school psychologists, giving a 35% response rate, and 58 teachers, giving a 19% response rate. Of the respondents, 26 school psychologists and 28 teachers responded to the anxiety survey and 26 school psychologists and 30 teachers responded to the Attention-Deficit/Hyperactivity Disorder (ADHD) survey.

The demographic information provided by participants is summarized and presented first, with the results of the items and scenarios provided thereafter. Responses on the survey were given based on the following 5-point Likert scale: 1 (*strongly disagree*), 2 (*disagree*), 3 (*neither agree nor disagree*), 4 (*agree*), and 5 (*strongly agree*). Percentages of responses for each item and scenario were calculated by clustering the responses of [4 (*agree*) and 5 (*strongly agree*)] as well as clustering the responses of [1 (*strongly disagree*) and (*disagree*)]. The responses with a rating of 3 (*neither agree nor disagree*) were analyzed and reported as a standalone category.

Demographic data showed that 80.8% of the school psychologists and 93.1% of the teachers were female. The mean years of experience reported by teachers indicated was 20.75 years (SD = 9.86) with a median of 20 years and a mode of 22 years. For school psychologists, the mean years of experience was 11.88 years (SD = 0.83) with a median of 9 years and a mode of 4 years. The mean age was 55.13 years for teachers (SD

= 8.89) and 40.04 years (SD = 10.73) for school psychologists. All school psychologists held a Master's degree or higher (e.g., Educational Specialist degree), while 51% of the teachers held a Master's degree. All school psychologists and teachers held a license from the Department of Public Instruction (DPI), with 17 school psychologists also holding the National Certification for School Psychologists (NCSP), which is considered the equivalent to a board certification. Training with regard to knowledge of disorders was also displayed based on disorder presented on the survey.

Table 1. *Demographic Information of Participants*

Profession	**School Psychologists**		**Teachers**	
Sample Size (N=110)	*52 (47.3%)*		*58 (52.7%)*	
Gender of Participants				
Male	10 (19.2%)		3 (5.2%)	
Female	42 (80.8%)		54 (93.1%)	
Years of Experience				
Mean	11.88		20.75	
Standard Deviation	00.83		09.86	
Median	9		20	
Mode	4		22	
Age (in years)				
Mean	40.04		55.13	
Standard Deviation	10.73		08.89	
Licenses Held				
NCSP	*17*		--	
General Education	--		51	
Special Education	--		1	
Other	26		5	
Missing Responses	9		1	
Degree Attained				
Masters or Higher	100%		51%	
Survey Label	**Anxiety** *(n=26)*	**ADHD** *(n=26)*	**Anxiety** *(n=28)*	**ADHD** *(n=30)*
Training				
Graduate Program	18	21	--	--
"on my own"	--	--	21	24
"pre-service education"	--	--	6	9
"in-services"	--	--	10	20
"after license"	--	--	9	16

Question 1: Can school psychologists and teachers accurately identify behaviors associated with anxiety?

Table 2 displays the percentages of agreement by participants in three categories: SA/A (strongly agree/agree), NA/ND (neither agree/nor disagree), and SD/D (strongly disagree/disagree). Primarily, scenarios 3 (not interacting with peers) and 4 (frequent seeking of approval) represent anxiety-related behaviors and scenarios 1 (confused about instructions) and 2 (moving in/from seat often) represent ADHD behaviors.

Table 2.

Percentage of Agreement and Disagreement that Scenario Items Indicate Anxiety.

Scenario No.	School Psychologists (n = 26)			Teachers (n = 28)		
	% SA/A	% NA/ND	% SD/D	% SA/A	% NA/ND	% SD/D
1. Confused about instructions.	7.69	53.85	38.46	32.14	28.57	39.29
2. Moving in/from seat often.	26.93	46.15	26.92	42.86	25.00	32.14
3. Not interacting with peers.	76.92	23.08	0.00	85.71	10.71	3.58
4. Frequent seeking of approval.	80.77	15.38	3.85	100.00	0.00	0.00

Both school psychologists and teachers rated "strongly agree" or "agree" for the anxiety-presenting scenarios (3 and 4), accurately indicating anxiety. For ADHD-presenting scenarios (1 and 2) school psychologists and teachers rated the items as "neither agree nor disagree," indicating uncertainty of whether or not the behaviors were or were not associated with anxiety. A greater level of uncertainty from the school psychologists was evident in rating ADHD-presenting scenarios (1 and 2) with a greater percentage of "neither agree nor disagree." Overall teachers' ratings of all scenarios indicated slightly more accurate identification of anxiety-related scenarios and scenarios not related to anxiety than school psychologists.

Table 3 displays the percentage of agreement in ratings for 15 anxiety statements as indicative of anxiety-related behaviors and 10 ADHD items as not indicate anxiety-related behaviors.

Table 3.

Percentage of Agreement and Disagreement that Behavior Items Indicate Anxiety.

Item No.	School Psychologists (n = 26)			Teachers (n = 28)		
ADHD Items						
	% SA/A	% NA/ND	% SD/D	% SA/A	% NA/ND	% SD/D
1. Fidgets with hands/feet.	38.46	50.00	11.54	46.43	25.00	21.43
4. Squirms in seat.	23.08	57.69	19.23	21.42	39.29	39.29
7. Runs about/climbs too much.	15.38	46.15	38.46	14.28	39.29	46.43
9. Difficulty playing quietly.	15.38	42.31	42.31	10.72	28.57	60.71
13. "On the go"/"driven by motor."	11.54	50.00	38.46	7.27	46.43	50.00
15. Leaves seat inappropriately.	19.23	57.69	23.08	7.14	46.43	46.43
19. Talks too much.	7.70	76.92	15.38	21.43	35.71	42.86
23. Blurts out answers.	7.69	50.00	42.31	10.66	32.14	57.14
26. Interrupts others.	7.69	57.69	34.62	7.15	35.71	57.14
29. Difficulty waiting turn.	7.69	50.00	42.31	17.85	39.29	42.86
Anxiety Items						
	% SA/A	% NA/ND	% SD/D	% SA/A	% NA/ND	% SD/D
2. Excessive crying.	76.92	23.08	0.00	78.57	17.86	3.57
5. Tantrums.	23.08	69.23	7.69	42.86	46.43	10.71
6. Avoids social situations.	76.92	19.23	3.85	75.00	14.29	10.71
8. Appears on edge.	84.62	11.54	3.85	85.71	3.57	10.71
10. Easily becomes fatigued.	26.92	65.38	7.70	35.71	28.57	35.72
11. Refused to go to school.	88.46	7.69	3.85	78.57	7.14	14.29
12. Irritated easily.	57.69	42.31	0.00	60.71	25.00	14.29
16. Overly conforming.	65.38	30.77	3.85	57.14	32.14	10.72
17. Redoes tasks.	84.62	11.54	3.85	85.71	7.14	7.15
18. Displays perfectionism.	84.46	7.69	7.85	71.43	21.43	7.15
21. Shows "overzealousness."	76.92	15.38	7.70	71.43	14.29	14.28
22. Excessive reassurance.	84.62	11.54	3.84	85.71	3.57	10.72
24. Separation distress.	92.31	3.85	3.84	89.29	7.14	3.57
25. Physical complaints.	84.62	15.38	0.00	50.00	32.14	17.85
28. Shows repetitive behaviors.	53.85	3.54	42.61	50.00	25.00	25.00

Both teachers and school psychologists tended to "agree" or "strongly agree" that anxiety statements in fact represented anxiety. Teachers showed greater overall accuracy in identifying ADHD behaviors as not associated with anxiety as evidenced by greater percentages of "strongly disagree" and "strongly agree." However, school psychologists tended to "neither agree nor disagree" the ADHD items were associated with anxiety. The school psychologists' uncertainty evident in most ADHD items impacted the percentage of "strongly disagree" or "disagree" ratings that accurately identified the behaviors as not associated with anxiety. The results indicate that school psychologists and teachers can accurately identify behaviors associated with anxiety and teachers more accurately rated ADHD items as not indicative of anxiety than school psychologists.

Question 2: Can school psychologists and teachers accurately identify behaviors associated with ADHD?

Table 4 displays the percentages of agreement by participants in three categories: SA/A (strongly agree/agree), NA/ND (neither agree/nor disagree), and SD/D (strongly disagree/disagree). Primarily, 1 (confused about instructions) and 2 (moving in/from seat often) represent ADHD behaviors while scenarios 3 (not interacting with peers) and 4 (frequent seeking of approval) represent anxiety-related behaviors.

Similar ratings were reported by teachers and school psychologists. For the first ADHD-related scenario [1 (confused about instructions)], results indicate a higher percentage of ratings of "neither agree nor disagree" for both school psychologists and teachers. However, the results for the second ADHD-related scenario [2 (moving in/from seat often)] indicated higher percentages of ratings of "strongly agree" or "agree" indicating greater accuracy. School psychologists appeared to rate anxiety-related

scenarios (3 and 4) as "strongly disagree" or "disagree", indicating the scenarios are not indicative of ADHD.

Table 4.

Percentage of Agreement and Disagreement that Scenario Items Indicate ADHD.

Scenario No.	School Psychologists (n = 26)			Teachers (n = 30)		
	% SA/A	% NA/ND	% SD/D	% SA/A	% NA/ND	% SD/D
1. Confused about instructions.	30.77	46.15	23.08	30.00	36.67	33.33
2. Moving in/from seat often.	69.23	15.38	15.38	70.00	23.33	6.67
3. Not interacting with peers.*	0.00	11.54	88.46	3.33	40.00	56.67
4. Frequent seeking of approval.*	0.00	7.69	92.31	10.00	20.00	70.00

* % accuracy based on cluster of ratings of 1 (*strongly disagree*) and 2 (*disagree*).

Table 5 displays the percentage of agreement in ratings for 15 anxiety statements as not indicative of ADHD-related behaviors and 10 ADHD items as indicate ADHD-related behaviors.

Both teachers and school psychologists generally rated ADHD items as "strongly agree" or "agree," with school psychologists indicated a split percentage between "strongly agree" or agree" and "neither agree nor disagree" on Item 19. Similarly, teachers' ratings resulted in 3-way split percentage between "strongly agree" or agree", "neither agree nor disagree" and "strongly disagree" or "disagree" on Item 12.

On items not associated with ADHD (anxiety items), school psychologists rated 11 out of 15 items as "strongly disagree" or "disagree" accurately while teachers rated 9 out of 15 items "strongly disagree" or "disagree". Some ratings by teachers and school psychologists resulted in higher percentages in the "neither disagree nor agree" rating category.

Table 5.

Percentage of Agreement and Disagreement that Behavior Items Indicate ADHD.

Item No.	School Psychologists (n = 26)			Teachers (n = 30)		
ADHD Items						
	% SA/A	% NA/ND	% SD/D	% SA/A	% NA/ND	% SD/D
1. Fidgets with hands/feet.	73.08	23.08	3.85	76.67	20.00	3.33
4. Squirms in seat.	76.92	23.08	0.00	73.33	23.33	3.33
7. Runs about/climbs too much.	88.46	7.69	3.85	90.00	10.00	0.00
9. Difficulty playing quietly.	65.38	30.77	3.85	56.67	16.67	26.66
13. "On the go"/"driven by motor."	96.15	3.85	26.92	90.00	6.67	3.33
15. Leaves seat inappropriately.	73.08	26.92	0.00	90.00	6.67	3.33
19. Talks too much.	50.00	50.00	0.00	53.33	30.00	16.66
23. Blurts out answers.	88.46	11.54	0.00	63.33	26.67	10.00
26. Interrupts others.	88.46	11.54	0.00	66.67	20.00	13.33
29. Difficulty waiting turn.	88.46	11.54	0.00	70.00	26.67	3.33
Anxiety Items						
	% SA/A	% NA/ND	% SD/D	% SA/A	% NA/ND	% SD/D
2. Excessive crying.	3.85	42.31	53.85	3.33	60.00	36.67
5. Tantrums.	23.08	50.00	26.92	16.67	50.00	33.33
6. Avoids social situations.	0.00	34.62	65.38	0.00	46.67	53.33
8. Appears on edge.	19.23	46.15	34.62	30.00	46.67	23.33
10. Easily becomes fatigued.	7.69	34.62	57.69	0.00	46.67	53.33
11. Refused to go to school.	7.69	61.54	30.77	3.33	50.00	46.67
12. Irritated easily.	30.77	42.31	26.92	33.33	33.33	33.33
16. Overly conforming.	0.00	19.23	80.77	3.33	33.33	63.33
17. Redoes tasks.	3.85	26.92	69.23	10.00	30.00	60.00
18. Displays perfectionism.	3.85	30.77	65.38	13.33	26.67	60.00
21. Shows "overzealousness."	7.69	42.31	50.00	3.33	43.33	53.33
22. Excessive reassurance.	11.54	42.31	46.15	20.00	33.33	46.67
24. Separation distress.	3.85	30.77	65.38	6.67	40.00	53.33
25. Physical complaints.	11.51	34.62	53.85	16.66	36.67	46.67
28. Shows repetitive behaviors.	3.85	42.31	53.85	40.00	36.67	23.33

Overall, both school psychologists and teachers accurately identified behaviors associated with ADHD. In addition, while some uncertainty is evident with ratings as to

whether or not anxiety items indicate ADHD, the majority of the school psychologists' and teachers' ratings indicated accurate ratings of these items as not indicative of ADHD.

Question 3: Can either group more accurately identify anxiety-related or ADHD-related behaviors?

Based on percentage of agreement in ratings, school psychologists and teachers responded similarly to most items indicating that neither group was more accurate at identifying behaviors associated with a disorder than the other. A few items received ratings that were evenly split between two rating categories (e.g., 50% of ratings for each "strongly agree" or "agree"), so a majority of the percentage of ratings between two categories could not be determined.

In addition to ADHD and anxiety items, distractor items were presented in the survey. Table 6 shows percentage of agreement and disagreement of ratings that each of the 4 statements presented are either anxiety or ADHD-related behaviors. Items 3 and 14 represented depression, according to *DSM-IV*, whereas items 20 and 27 represented Oppositional Defiant Disorder. The ADHD Label Group consisted of the school psychologists and teachers who had been instructed to determine whether the 29 items on the survey described ADHD-related behaviors.

Both school psychologists and teachers who received the survey with the anxiety-label rated "neither agree nor disagree" for 3 out of 4 items (numbers 14, 20, and 27) indicating uncertainty as to whether or not the items represent anxiety. In addition, teachers rated either "strongly disagree" or "disagree" for item number 3, while school psychologists rated "neither agree nor disagree," showing mixed results.

For school psychologists and teachers who received the survey with the ADHD-label, consistent ratings were evident for item number 3 (higher percentage of ratings of "strongly disagree" or "disagree") and number 27 (higher percentage of ratings of "neither agree nor disagree"). Inconsistent ratings between school psychologists and teachers were apparent for numbers14 and 20. Overall, school psychologist and teachers either rated "strongly disagree" or "disagree" accurately or were uncertain as shown by ratings of "neither agree nor disagree."

Table 6.

Percentage of Agreement and Disagreement that Behavior Items Indicate Anxiety or ADHD.

	ADHD Label Group					
Items	School Psychologists (n = 26)			Teachers (n = 30)		
	% SA/A	% NA/ND	% SD/D	% SA/A	% NA/ND	% SD/D
3. Sad.	3.85	23.08	73.08	3.33	36.67	60.00
14. Loses interest.	38.46	15.38	46.15	53.34	23.33	23.33
20. Actively defies.	15.38	61.54	23.08	30.00	33.33	36.67
27. Angry, resentful.	11.54	50.00	38.46	10.00	46.67	43.33
	Anxiety Label Group					
Items	School Psychologists (n = 26)			Teachers (n = 28)		
	% SA/A	% NA/ND	% SD/D	% SA/A	% NA/ND	% SD/D
3. Sad.	50.00	38.46	11.54	53.57	21.43	25.00
14. Loses interest.	34.61	42.31	23.08	39.29	35.71	25.00
20. Actively defies.	16.28	50.00	34.62	38.14	42.86	25.00
27. Angry, resentful.	30.77	50.00	19.23	39.29	35.71	25.00

CHAPTER IV

Discussion

The purpose of the current study was to investigate school psychologists' and teachers' identification of behaviors associated with anxiety and Attention Deficit/Hyperactivity Disorder (ADHD) in school children. Previous research is mixed regarding teachers' and school psychologists' identification of anxiety- and ADHD-related behaviors. In some research, identification of behaviors associated with anxiety or ADHD by either teachers or school psychologists was adequate while other research has indicated that these professionals show limited ability to accurately identify behaviors associated with anxiety or ADHD (see Davis, Kruczek & McIntosh, 2006; Demaray, Shaefer & Delong, 2003; Epkins, 1995; Havey et al., 2005; Herbert, Crittenden & Dalrymple, 2004; Layne et al., 2006; Weyandt et al., 2009). It was expected that teachers and school psychologists would accurately identify behaviors associated with a disorder (either anxiety or ADHD) on the survey. The findings from the current study indicate that both school psychologists and teachers, for the most part, similarly and accurately identified behaviors associated with either anxiety or ADHD as presented in this study.

In addition, this study compared school psychologists' and teachers' ability to identify behaviors not associated with a disorder (either anxiety or ADHD) on the survey. The hypothesis was that school psychologists would more accurately identify behaviors associated with a presented disorder because school psychologists often receive specialized training in the area of psychopathology. However, the results indicated that no one group of professionals more accurately identified behaviors associated with either anxiety or ADHD.

Can school psychologists and teachers accurately identify behaviors associated with anxiety or ADHD?

Results from the current study suggest that both school psychologists and teachers, when presented with statements of behaviors associated with anxiety or ADHD, accurately identified the behaviors as associated with that disorder which supports the researcher's hypothesis. In addition, when presented with behavior items from a *different* disorder both school psychologists and teachers accurately identified those items as not indicative of the disorder on the survey. These results support prior research indicating teachers and school psychologists identified behaviors indicative of anxiety or ADHD, but also contradict other research indicating limited consistency with teacher-student comparison with ratings (e.g., Havey et al., 2005; Herbert et al., 2004; Jerome, Gordon, & Hustler, 1994; Kos, Richdale, & Jackson, 2004; Layne, Bernstein, & March, 2006; Ohan et al., 2008; Weyandt et al., 2009).

Both teachers and school psychologists likely collaborate together with other professionals when discussing student concerns. School districts have an increased interested for school psychologists to be involved in the collaboration process (Gadow, Sprafkin, Salisbury, Schneider, & Loney, 2004; Watkins, Crosby, & Pearson, 2001). In addition, school psychologists gather a broad base of information during evaluations of behavior (Davis, Kruczek, & McIntosh, 2006; Demaray, Shaefer, & Delong, 2003) including teacher perceptions of the presenting problem and gather additional data via other modes of assessment (e.g., standardized assessments, observations, parent reports and ratings, review of prior information and interviews) (McIntosh et al., 2010; Sugai & Horner, 2009). These assessment techniques require both school psychologists' and

teachers' involvement within a collaborative process (Gadow, Sprafkin, Salisbury, Schneider, & Loney, 2004; Watkins, Crosby, & Pearson, 2001). For example, prior behavioral history, teacher behavior observations and psychological testing may be discussed in a problem-solving meeting. Such processes may help explain why ratings are similar between school psychologists and teachers. That is, teachers and school psychologists frequently work together and inform each other's understanding of behavior and psychopathology.

Can either group more accurately identify anxiety-related or ADHD-related behaviors?

The second hypothesis suggested that school psychologists would more accurately identify anxiety- and ADHD-related behaviors than teachers. School psychologists have a skill set based on graduate training in psychopathology but prior research is mixed regarding school psychologists' and teachers' identification of behaviors associated with ADHD or anxiety (Epkins, 1995; Herbert, Crittenden & Dalrymple, 2004; Jerome, Gordon & Hustler, 1994; Layne, Bernstein & March, 2006; Ohan, Cormier, Hepp, Visser, & Strain, 2008; Weyandt, Fulton, Schepman, Verdi, & Wilson, 2009). The results of the current study indicate that school psychologists and teachers are approximately equal in their accuracy, thereby contradicting results from prior studies indicating that school psychologists were more accurate than teachers in identifying behaviors associated with anxiety and ADHD (e.g., Herbert et al., 2004; Weyandt et al., 2009). Overall, the results of the present study did not show evidence that one group of professionals (either school psychologists or teachers) were more accurate in identifying behaviors associated with these two specific disorder groups.

Researchers have purported that it is important for teachers and school psychologists to be able to identify behaviors associated with anxiety and ADHD (Hughes et al., 2008; Morris, Shah, & Morris, 2002; Sherman, Rasmussen, & Baydala, 2008). The results from the current study indicate both teachers and school psychologists can accurately identify behaviors associated with these two problem sets. Perhaps the design of the study did not reflect prior researchers' designs or the surveys were not developed in a way that captured teachers' and school psychologists' knowledge in the same way and therefore may explain that school psychologists did not more accurately identify behaviors associated with a disorder. Furthermore, there may be less relevance for school psychologists and teachers to associate behaviors as symptoms of a psychological disorder (such as anxiety or ADHD) and more important to show skills in identifying behaviors as negatively impacting academic achievement. With this focus, professionals can collaborate to solve problems and determine potential solutions (e.g. evidence-based interventions) without formal identification of a disorder.

Additional Results

Behaviors associated with depression and Oppositional Defiant Disorder (ODD) were presented to both groups. School psychologists and teachers similarly rated these items within each label group (anxiety or ADHD). However, there was a difference between the two specific disorder label groups. School psychologists and teachers who had been asked whether all items on the survey represented ADHD agreed that the four distracter items represented ADHD. In contrast, school psychologists and teachers who had been asked whether all items represented anxiety "neither agreed nor disagreed" that the four distracter items represented anxiety.

Teachers and school psychologists neither agreed nor disagreed that the distractor items were representative of anxiety suggesting that anxiety, as a construct, may be less clear than ADHD from the perspective of the study's participants. Anxiety symptoms may be more internalizing and less observable than other symptoms (Korhonen et al., 2014, Pesenti-Gritti et al.; 2008), whereas behaviors associated with ADHD may manifest as externalizing symptoms and be more observable to teachers and school psychologists (Korhonen et al., 2014). Similarly, behaviors associated with Oppositional Defiance Disorder (ODD) maybe more observable to others than symptoms of depression. Assessing for internalizing disorders such as anxiety may be a challenge, especially in a survey format. On the other hand, surveys or rating scales are more appropriate for assessment of externalizing disorders such as ADHD because the symptoms are more observable.

Limitations and Future Research

Despite the study's promising results, there were several limitations. First, the generalizability of the results is limited. The population of participants was limited in region (Wisconsin) and scope (2nd and 3rd grade teachers; limited amount of participants). While the first hypothesis stating that school psychologists and teachers would accurately identify behaviors associated with either anxiety or ADHD was confirmed, the generalizability of the outcomes may not be applicable to the broader population of school psychologists and teachers in other geographic regions, or with assignments to positions working with other age groups. In addition, research suggests that experience impacts teachers' identification of behaviors associated with psychological disorders (Ohan et al., 2008). The current study failed to incorporate years of experience into the

analysis. Future research should consider replicating the current study using different subjects and considering years of experience as a covariate in the analysis.

Another limitation involved the type of response that was asked of subjects. Previous research utilized different methods (e.g., videotapes, standardized measures) to survey participants (e.g., Epkins, 1995; Havey et al., 2005; Herbert et al., 2004; Jerome et al., 1994; Layne et al., 2006; Ohan et al., 2008; Weyandt et al., 2009). In the current study, a Likert scale was used to collect participant responses to an investigator constructed survey. If the respondents were asked to rate items differently, such as identifying the disorder category that the behavior belonged to, the results might have been different. Categorical options based on the *DSM*-5, for example, might have resulted in more or less agreement among subjects. Research has shown that teacher ratings of behavior do play a role in identification of a disorder (Havey, Olson, McCormick, & Cates, 2005) and future research might consider the utilization of standardized rating scales of behavior with participants. The method used in future research would likely need to account for the potential challenges with use of ratings, whether standardized or researcher developed to help eliminate error, bias, or limited assessment techniques.

Another limitation was that the participants were expected to complete surveys individually, in isolation of other professionals (although the expectation was never clearly stated in this study). In a school setting, professionals seldom work in isolation of one another with regards to student behavior and identification of symptoms of a disorder (Gadow, Sprafkin, Salisbury, Schneider, & Loney, 2004; Watkins, Crosby, & Pearson, 2001). Therefore, the results may not be representative of the process or procedures in educational practice and limit the study's ecological validity. Future research may focus

on capturing the collaborative process or individual participant ratings of students within a more descriptive context.

Finally, students may exhibit behaviors that appear similar in a number of disorders. Behavioral symptoms associated with two or more disorders are evident in some children who are diagnosed with anxiety or ADHD (Hinshaw, 1992; Jarrett & Ollendick, 2012). Due to these overlapping behaviors, school psychologists and teachers may require greater context in a survey to accurately rate the behavioral items. For example, some of the "neither agree nor disagree" responses may indicate school psychologists' and teachers' experience with students with behaviors associated with multiple disorders or in various context-specific settings. With clarity, the ratings may have been either "agree" or "disagree."

Implications

School psychologists and teachers will likely interact with students who display anxiety- or ADHD-related behaviors (Masi, Mucci & Millepiedi, 2001; McLoone, Hudson & Rapee, 2006; National Institute of Mental Health, 2006). Students with anxiety or ADHD can have impaired academic achievement with symptomatic behaviors continuing through secondary education (Dadds et al., 1999; West, Taylor, Houghton & Hudyma, 2005). With these trajectories comes the expectation for education professionals to address student needs (Shoenfeld & Janney, 2008). School psychologists and teachers spend a substantial amount of time observing and interacting with students and completing ratings of behavior that may contribute to the identification of behaviors associated with a disorder (Havey, Olson, McCormick, & Cates, 2005) – a process which is essential to the development of individualized plans that will effectively promote

enhanced student success The current study found that, on average, school psychologists and teachers were able to accurately identify behaviors that are indicative of anxiety and ADHD.

Childhood disorders are predictive of later disorders in adolescence, indicating the need for early identification and intervention (Bittner, Egger, Erklani, Costello, Foley, & Angold, 2007). Early identification of behavioral symptoms and implementation of interventions for those symptoms will likely have an impact and result in improved academic achievement. Research has shown that initial intervention for both anxiety and ADHD shows reduced symptoms (Jarett & Ollendick, 2012). Birchwood and Daley (2012) indicated that students with ADHD in adolescence were more likely to report challenges with anxiety, depression and show lower academic achievement. To ensure current practice includes early identification to address behaviors that may impact academic achievement, school psychologists and teachers may seek out professional development in the area of identification of behaviors associated with disorders. As a result of improved school psychologists' and teachers' identification of behaviors impacting academic achievement, timeliness of intervention selection or programmatic support implementation may be positively impacted. Further research may focus on school psychologists' and teachers' identification of behaviors associated with a disorder at the earliest possible ages , and the provision of early intervention. With investigation of a specific population, clarification may occur as to the necessity of the skill to identify behavioral *symptoms* of a disorder vs. general identification of behaviors impacting academic achievement by school psychologists and teachers. Furthermore, recognition of

symptoms that may warrant clinical intervention outside the school envoronment may also be critically important to the well-being of some students.

Results from the current study suggest that the school psychologists and teachers in the present sample have similar knowledge regarding behaviors associated with anxiety and ADHD. Generally, each group was able to identify behaviors that are indicative of anxiety and ADHD with approximately the same degree of accuracy. Considering the outcomes of the current study, educators should be confident in teachers' and school psychologists' ability to accurately identify behaviors associated with anxiety and ADHD. Furthermore, data collection and assessment, observations of students, interviews with parents and families, and intervention development by school psychologists and teachers are all facets of their professional functionality and should be utilized.

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Appendix A: Teachers' Survey (ADHD Label)

Survey of Student Behaviors

The following survey consists of three sections: scenarios of student behaviors, a list of student behaviors and a short section of information regarding you as a professional. None of the information will be utilized for identification purposes. The information will be used strictly for research purposes. By selecting "Yes" below, you are consenting to participate in this survey and research study. Please complete all components of the survey.

Do you wish to complete the survey and participate in the research study?

Yes No

Section 1: Scenarios

Children often display behaviors associated with Attention-Deficit/Hyperactivity Disorder (ADHD). Please read the following scenarios of behaviors. After reading the scenarios, rate your level of agreement to the statement provided.

Example:
"Scenario (#) is an indication of Attention Deficit/Hyperactivity Disorder type behavior."

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 1:
In the classroom, a target student in second grade is sitting at a desk looking around the room. The teacher is giving instructions involving several steps for a lesson-related activity from the front of the room. After instructions, students move into assigned groups as the teacher has just instructed. The target student looks confused and asks "what are we doing?"

Scenario 1 is an indication of Attention Deficit/Hyperactivity Disorder type behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 2:
A third grade student moves around in the seat and stands up often. Peers of the student seem to notice the behavior and the teacher often redirects the student to sit down. The student has also been observed to get up and sharpen a pencil often.

Scenario 2 is an indication of Attention Deficit/Hyperactivity Disorder type behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 3:
The target student is in second grade and has been observed to avoid interacting with peers on a daily basis. The student repeatedly doesn't engage in activities at recess with others and will only talk with one or two other peers at one time. The student also observes peers often while appearing on edge most of the time.

Scenario 3 is an indication of Attention Deficit/Hyperactivity Disorder type behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 4:
A third grader often seeks approval from the teacher. The student works continually to complete tasks perfectly and likes a lot of reassurance. When completing tasks poorly, the student quickly becomes irritable. The teacher has noticed that as tasks are becoming more difficult, the student has become more and more irritable and performance has decreased on tasks.

Scenario 4 is an indication of Attention Deficit/Hyperactivity Disorder type behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Section 2: List of Behaviors

Please rate the following items as behaviors that you think are shown by a child with ADHD. The following scale is used to rate the behaviors below:

1 = Strongly Disagree	2 = Disagree	3 = Neither Agree nor Disagree	4 = Agree	5 = Strongly Agree

Please Circle One:

1. The child fidgets with hands or feet.	1	2	3	4	5
2. The child engages in excessive crying.	1	2	3	4	5
3. The child is persistently sad or experiences "empty feelings."	1	2	3	4	5
4. The child squirms in seat.	1	2	3	4	5
5. The child often tantrums.	1	2	3	4	5
6. The child avoids social situations.	1	2	3	4	5
7. The child runs about or climbs too much in situations in an environment in which doing so is inappropriate.	1	2	3	4	5
8. The child often appears on edge.	1	2	3	4	5
9. The child has difficulty playing quietly.	1	2	3	4	5
10. The child easily becomes fatigued.	1	2	3	4	5
11. The child has refused to go to school.	1	2	3	4	5
12. The child becomes irritated easily.	1	2	3	4	5

13. The child is 'on the go' or 'driven by a motor.'	1	2	3	4	5
14. The child loses interest in activities or hobbies of importance.	1	2	3	4	5
15. The child leaves his/her seat inappropriately in the classroom.	1	2	3	4	5
16. The child is overly conforming.	1	2	3	4	5
17. The child redoes tasks in an effort to make them perfect.	1	2	3	4	5
18. The child often displays perfectionism.	1	2	3	4	5
19. The child talks too much.	1	2	3	4	5
20. The child often actively defies or refuses to comply with adults' requests or rules.	1	2	3	4	5
21. The child shows overzealousness for approval.	1	2	3	4	5
22. The child requires excessive reassurance.	1	2	3	4	5
23. The child blurts out answers before questions have been completed.	1	2	3	4	5
24. The child displays separation distress from his/her parent.	1	2	3	4	5
25. The child makes complaints about physical problems such as muscle aches or soreness.	1	2	3	4	5
26. The child interrupts others (e.g., when others are responding to a question).	1	2	3	4	5
27. The child is often angry or resentful	1	2	3	4	5
28. The child shows repetitive behaviors.	1	2	3	4	5
29. The child has difficulty waiting his/her turn.	1	2	3	4	5

I would appreciate any comments you have about these behaviors:

_____

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Section 3: Information About Yourself

Please indicate the correct information below regarding yourself. Circle One:

1. Male Female
2. Degree(s) attained: _____
3. License(s) held: GE Special Education Other:_____
4. Age:_____

5. Grade I am teaching: Second Third

6. Years of teaching:_____

7. I have learned about ADHD:

_____ on my own (reading, etc.)
_____ during my pre-service education
_____ in in-service programs/workshops
_____ in courses taken after receiving license

Appendix B: Teachers' Survey (Anxiety Label)

Survey of Student Behaviors

The following survey consists of three sections: scenarios of student behaviors, a list of student behaviors and a short section of information regarding you as a professional. None of the information will be utilized for identification purposes. The information will be used strictly for research purposes. By selecting "Yes" below, you are consenting to participate in this survey and research study. Please complete all components of the survey.

Do you wish to complete the survey and participate in the research study?

Yes No

Section 1: Scenarios

Children often display behaviors associated with anxiety. Please read the following scenarios of behaviors. After reading the scenarios, rate your level of agreement to the statement provided.

Example:
"Scenario (#) is an indication of anxiety-related behavior."

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 1:
In the classroom, a target student in second grade is sitting at a desk looking around the room. The teacher is giving instructions involving several steps for a lesson-related activity from the front of the room. After instructions, students move into assigned groups as the teacher has just instructed. The target student looks confused and asks "what are we doing?"

Scenario 1 is an indication of anxiety-related behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 2:
A third grade student moves around in the seat and stands up often. Peers of the student seem to notice the behavior and the teacher often redirects the student to sit down. The student has also been observed to get up and sharpen a pencil often.

Scenario 2 is an indication of anxiety-related behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 3:
The target student is in second grade and has been observed to avoid interacting with peers on a daily basis. The student repeatedly doesn't engage in activities at recess with others and will only talk with one or two other peers at one time. The student also observes peers often while appearing on edge most of the time.

Scenario 3 is an indication of anxiety-related behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 4:
A third grader often seeks approval from the teacher. The student works continually to complete tasks perfectly and likes a lot of reassurance. When completing tasks poorly, the student quickly becomes irritable. The teacher has noticed that as tasks are becoming more difficult, the student has become more and more irritable and performance has decreased on tasks.

Scenario 4 is an indication of anxiety-related behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Section 2: List of Behaviors

Please rate the following items as behaviors that you think are shown by a child with anxiety. The following scale is used to rate the behaviors below:

1 = Strongly Disagree	2 = Disagree	3 = Neither Agree nor Disagree	4 = Agree	5 = Strongly Agree

Please Circle One:

1. The child fidgets with hands or feet.	1	2	3	4	5
2. The child engages in excessive crying.	1	2	3	4	5
3. The child is persistently sad or experiences "empty feelings."					
4. The child squirms in seat.	1	2	3	4	5
5. The child often tantrums.	1	2	3	4	5
6. The child avoids social situations.	1	2	3	4	5
7. The child runs about or climbs too much in situations in an environment in which doing so is inappropriate.	1	2	3	4	5
8. The child often appears on edge.	1	2	3	4	5
9. The child has difficulty playing quietly.	1	2	3	4	5
10. The child easily becomes fatigued.	1	2	3	4	5
11. The child has refused to go to school.	1	2	3	4	5
12. The child becomes irritated easily.	1	2	3	4	5

13. The child is 'on the go' or 'driven by a motor.'	1	2	3	4	5
14. The child loses interest in activities or hobbies of importance.					
15. The child leaves his/her seat inappropriately in the classroom.	1	2	3	4	5
16. The child is overly conforming.	1	2	3	4	5
17. The child redoes tasks in an effort to make them perfect.	1	2	3	4	5
18. The child often displays perfectionism.	1	2	3	4	5
19. The child talks too much.	1	2	3	4	5
20. The child often actively defies or refuses to comply with adults' requests or rules.	1	2	3	4	5
21. The child shows overzealousness for approval.	1	2	3	4	5
22. The child requires excessive reassurance.	1	2	3	4	5
23. The child blurts out answers before questions have been completed.	1	2	3	4	5
24. The child displays separation distress from his/her parent.	1	2	3	4	5
25. The child makes complaints about physical problems such as muscle aches or soreness.	1	2	3	4	5
26. The child interrupts others (e.g., when others are responding to a question).	1	2	3	4	5
27. The child is often angry or resentful	1	2	3	4	5
28. The child shows repetitive behaviors.	1	2	3	4	5
29. The child has difficulty waiting his/her turn.	1	2	3	4	5

I would appreciate any comments you have about these behaviors:

_____

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Section 3: Information About Yourself

Please indicate the correct information below regarding yourself. Circle One:

1. Male Female
2. Degree(s) attained: _____
3. License(s) held: GE Special Education Other:_____
4. Age:_____

5. Grade I am teaching: Second Third

6. Years of teaching:_____

7. I have learned about anxiety:

_____ on my own (reading, etc.)
_____ during my pre-service education
_____ in in-service programs/workshops
_____ in courses taken after receiving license

Appendix C: School Psychologists' Survey (ADHD Label)

Survey of Student Behaviors

The following survey consists of three sections: scenarios of student behaviors, a list of student behaviors and a short section of information regarding you as a professional. None of the information will be utilized for identification purposes. The information will be used strictly for research purposes. By selecting "Yes" below, you are consenting to participate in this survey and research study. Please complete all components of the survey.

Do you wish to complete the survey and participate in the research study?

Yes No

Section 1: Scenarios

Children often display behaviors associated with Attention-Deficit/Hyperactivity Disorder (ADHD). Please read the following scenarios of behaviors. After reading the scenarios, rate your level of agreement to the statement provided.

Example:
"Scenario (#) is an indication of Attention Deficit/Hyperactivity Disorder type behavior."

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 1:
In the classroom, a target student in second grade is sitting at a desk looking around the room. The teacher is giving instructions involving several steps for a lesson-related activity from the front of the room. After instructions, students move into assigned groups as the teacher has just instructed. The target student looks confused and asks "what are we doing?"

Scenario 1 is an indication of Attention Deficit/Hyperactivity Disorder type behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 2:
A third grade student moves around in the seat and stands up often. Peers of the student seem to notice the behavior and the teacher often redirects the student to sit down. The student has also been observed to get up and sharpen a pencil often.

Scenario 2 is an indication of Attention Deficit/Hyperactivity Disorder type behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 3:
The target student is in second grade and has been observed to avoid interacting with peers on a daily basis. The student repeatedly doesn't engage in activities at recess with others and will only talk with one or two other peers at one time. The student also observes peers often while appearing on edge most of the time.

Scenario 3 is an indication of Attention Deficit/Hyperactivity Disorder type behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 4:
A third grader often seeks approval from the teacher. The student works continually to complete tasks perfectly and likes a lot of reassurance. When completing tasks poorly, the student quickly becomes irritable. The teacher has noticed that as tasks are becoming more difficult, the student has become more and more irritable and performance has decreased on tasks.

Scenario 4 is an indication of Attention Deficit/Hyperactivity Disorder type behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Section 2: List of Behaviors

Please rate the following items as behaviors that you think are shown by a child with ADHD. The following scale is used to rate the behaviors below:

1 = Strongly Disagree	2 = Disagree	3 = Neither Agree nor Disagree	4 = Agree	5 = Strongly Agree

Please Circle One:

1. The child fidgets with hands or feet.	1	2	3	4	5
2. The child engages in excessive crying.	1	2	3	4	5
3. The child is persistently sad or experiences "empty feelings."					
4. The child squirms in seat.	1	2	3	4	5
5. The child often tantrums.	1	2	3	4	5
6. The child avoids social situations.	1	2	3	4	5
7. The child runs about or climbs too much in situations in an environment in which doing so is inappropriate.	1	2	3	4	5
8. The child often appears on edge.	1	2	3	4	5
9. The child has difficulty playing quietly.	1	2	3	4	5
10. The child easily becomes fatigued.	1	2	3	4	5
11. The child has refused to go to school.	1	2	3	4	5
12. The child becomes irritated easily.	1	2	3	4	5

13. The child is 'on the go' or 'driven by a motor.'	1	2	3	4	5
14. The child loses interest in activities or hobbies of importance.					
15. The child leaves his/her seat inappropriately in the classroom.	1	2	3	4	5
16. The child is overly conforming.	1	2	3	4	5
17. The child redoes tasks in an effort to make them perfect.	1	2	3	4	5
18. The child often displays perfectionism.	1	2	3	4	5
19. The child talks too much.	1	2	3	4	5
20. The child often actively defies or refuses to comply with adults' requests or rules.	1	2	3	4	5
21. The child shows overzealousness for approval.	1	2	3	4	5
22. The child requires excessive reassurance.	1	2	3	4	5
23. The child blurts out answers before questions have been completed.	1	2	3	4	5
24. The child displays separation distress from his/her parent.	1	2	3	4	5
25. The child makes complaints about physical problems such as muscle aches or soreness.	1	2	3	4	5
26. The child interrupts others (e.g., when others are responding to a question).	1	2	3	4	5
27. The child is often angry or resentful	1	2	3	4	5
28. The child shows repetitive behaviors.	1	2	3	4	5
29. The child has difficulty waiting his/her turn.	1	2	3	4	5

I would appreciate any comments you have about these behaviors:

_____

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Section 3: Information About Yourself

Please indicate the correct information below regarding yourself. Circle One:

1. Male Female

2. Degree(s) attained: _____

3. License(s) held: NCSP Other:_____

4. Age: _____

5. Years of working as a school psychologist:_____

6. I received training on ADHD in my graduate program: Yes No

Appendix D: School Psychologists' Survey (Anxiety Label)

Survey of Student Behaviors

The following survey consists of three sections: scenarios of student behaviors, a list of student behaviors and a short section of information regarding you as a professional. None of the information will be utilized for identification purposes. The information will be used strictly for research purposes. By selecting "Yes" below, you are consenting to participate in this survey and research study. Please complete all components of the survey.

Do you wish to complete the survey and participate in the research study?

Yes No

Section 1: Scenarios

Children often display behaviors associated with anxiety. Please read the following scenarios of behaviors. After reading the scenarios, rate your level of agreement to the statement provided.

Example:
"Scenario (#) is an indication of anxiety-related behavior."

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 1:
In the classroom, a target student in second grade is sitting at a desk looking around the room. The teacher is giving instructions involving several steps for a lesson-related activity from the front of the room. After instructions, students move into assigned groups as the teacher has just instructed. The target student looks confused and asks "what are we doing?"

Scenario 1 is an indication of anxiety-related behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 2:
A third grade student moves around in the seat and stands up often. Peers of the student seem to notice the behavior and the teacher often redirects the student to sit down. The student has also been observed to get up and sharpen a pencil often.

Scenario 2 is an indication of anxiety-related behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 3:
The target student is in second grade and has been observed to avoid interacting with peers on a daily basis. The student repeatedly doesn't engage in activities at recess with others and will only talk with one or two other peers at one time. The student also observes peers often while appearing on edge most of the time.

Scenario 3 is an indication of anxiety-related behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Scenario 4:
A third grader often seeks approval from the teacher. The student works continually to complete tasks perfectly and likes a lot of reassurance. When completing tasks poorly, the student quickly becomes irritable. The teacher has noticed that as tasks are becoming more difficult, the student has become more and more irritable and performance has decreased on tasks.

Scenario 4 is an indication of anxiety-related behavior.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Section 2: List of Behaviors

Please rate the following items as behaviors that you think are shown by a child with anxiety. The following scale is used to rate the behaviors below:

1 = Strongly Disagree	2 = Disagree	3 = Neither Agree nor Disagree	4 = Agree	5 = Strongly Agree

Please Circle One:

1. The child fidgets with hands or feet.	1	2	3	4	5
2. The child engages in excessive crying.	1	2	3	4	5
3. The child is persistently sad or experiences "empty feelings."					
4. The child squirms in seat.	1	2	3	4	5
5. The child often tantrums.	1	2	3	4	5
6. The child avoids social situations.	1	2	3	4	5
7. The child runs about or climbs too much in situations in an environment in which doing so is inappropriate.	1	2	3	4	5
8. The child often appears on edge.	1	2	3	4	5
9. The child has difficulty playing quietly.	1	2	3	4	5
10. The child easily becomes fatigued.	1	2	3	4	5
11. The child has refused to go to school.	1	2	3	4	5
12. The child becomes irritated easily.	1	2	3	4	5

13. The child is 'on the go' or 'driven by a motor.'	1	2	3	4	5
14. The child loses interest in activities or hobbies of importance.					
15. The child leaves his/her seat inappropriately in the classroom.	1	2	3	4	5
16. The child is overly conforming.	1	2	3	4	5
17. The child redoes tasks in an effort to make them perfect.	1	2	3	4	5
18. The child often displays perfectionism.	1	2	3	4	5
19. The child talks too much.	1	2	3	4	5
20. The child often actively defies or refuses to comply with adults' requests or rules.	1	2	3	4	5
21. The child shows overzealousness for approval.	1	2	3	4	5
22. The child requires excessive reassurance.	1	2	3	4	5
23. The child blurts out answers before questions have been completed.	1	2	3	4	5
24. The child displays separation distress from his/her parent.	1	2	3	4	5
25. The child makes complaints about physical problems such as muscle aches or soreness.	1	2	3	4	5
26. The child interrupts others (e.g., when others are responding to a question).	1	2	3	4	5
27. The child is often angry or resentful	1	2	3	4	5
28. The child shows repetitive behaviors.	1	2	3	4	5
29. The child has difficulty waiting his/her turn.	1	2	3	4	5

I would appreciate any comments you have about these behaviors:

_____

_____

_____

_____

_____

Section 3: Information About Yourself

Please indicate the correct information below regarding yourself. Circle One:

1. Male Female

2. Degree(s) attained: _____

3. License(s) held: NCSP Other:_____

4. Age: _____

5. Years of working as a school psychologist:_____

6. I received training on anxiety in my graduate program: Yes No

Appendix E: Teachers' Cover Letter

Dear Participant:

I am a graduate student in the School Psychology Program at UW-Eau Claire. For my thesis I am investigating the behaviors of children that may be of concern in the school setting. As a teacher you have a unique perspective on children that is invaluable. I am inviting you to participate in this study by completing an online survey.

You are one of 300 second and third grade teachers randomly selected from the list of elementary school teachers provided by the Wisconsin Department of Public Instruction. A link to the online survey is provided at the bottom of the email and will remain active until May 31, 2011. Your participation is entirely voluntary.

Two weeks after the survey has been emailed, each participant will receive a second email thanking those who have already completed the survey and reminding others to do so. By completing the survey, you are indirectly consenting to participate in this research project. Please do not put any identifying information in the survey as the responses must remain anonymous. If data from this study are to be presented or published, only grouped data will be published. The list of names used to send the survey and reminder emails will be destroyed as soon as the reminder emails are sent. In addition, all identifying variables, including i.p. addresses, will be removed from the data set before analysis.

If you have any questions about the purpose of this research study, you may call or write Dr. Barbara Lozar, Department of Psychology, University of Wisconsin – Eau Claire, Eau Claire, WI 54702, Telephone 715-836-5487. For questions regarding treatment as a study subject, you may call or write Dr. Don Bredle, Chair, Institutional Review Board for the Protection of Human Subjects, 168 Human Sciences and Services Building, University of Wisconsin – Eau Claire, Eau Claire, WI 54702, Telephone 715-836-2373.

I would greatly appreciate your participation in this study. Again, only 300 teachers are being surveyed and it is important to obtain a good sample of your opinions. Thank you very much for you time.

Sincerely,

_____

Nicholas B. Westphal - Student Researcher

Appendix F: School Psychologists' Cover Letter

Dear Participant:

I am a graduate student in the School Psychology Program at UW-Eau Claire. For my thesis I am investigating the behaviors of children that may be of concern in the school setting. As a school psychologist you have a unique perspective on children that is invaluable. I am inviting you to participate in this study by completing an online survey.

You are one of 150 school psychologists randomly selected from a list of school psychologists provided by the Wisconsin Department of Public Instruction. A link to the online survey is provided at the bottom of the email and will remain active until May 31, 2011. Your participation is entirely voluntary.

Two weeks after the survey has been emailed, each participant will receive a second email thanking those who have already completed the survey and reminding others to do so. By completing the survey, you are indirectly consenting to participate in this research project. Please do not put any identifying information on the survey as the responses must remain anonymous. If data from this study are to be presented or published, only grouped data will be published. The list of names used to send the survey and reminder emails will be destroyed as soon as the reminder emails are sent. In addition, all identifying variables, including i.p. addresses, will be removed from the data set before analysis.

If you have any questions about the purpose of this research study, you may call or write Dr. Barbara Lozar, Department of Psychology, University of Wisconsin – Eau Claire, Eau Claire, WI 54702, Telephone 715-836-5487. For questions regarding treatment as a study subject, you may call or write Dr. Don Bredle, Chair, Institutional Review Board for the Protection of Human Subjects, 168 Human Sciences and Services Building, University of Wisconsin – Eau Claire, Eau Claire, WI 54702, Telephone 715-836-2373.

I would greatly appreciate your participation in this study. Again, only 150 school psychologists are being surveyed and it is important to obtain a good sample of your opinions. Thank you very much for you time.

Sincerely,

_____

Nicholas B. Westphal - Student Researcher