Developing a Teacher Anxiety Rating Scale Suitable for Five to Seven-Year-Old Children

by

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A Thesis submitted to the Faculty of Graduate Studies of

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Abstract

This thesis describes the development of a rating scale designed to be used by teachers to identify anxious and shy children, aged 5 to 7 years, in Kindergarten and Grade One. Currently, there are no instruments designed specifically for that purpose that address this age group. Children experiencing difficulty with internalizing disorders such as anxiety, shyness, and behavioural inhibition represent a growing segment of the population (Merrell, 2001). Evidence indicates that the educational, psychological, and emotional needs of these children are not being addressed (Barlow, 2002). I interviewed Kindergarten and grade One teachers to find out what behaviours, drawn from the literature on childhood anxiety disorders, they recognize as shyness and anxiety.

Information obtained from the teachers then was used to formulate, construct, and evaluate a rating scale to be administered by teachers. The thesis begins with an overview, followed in Chapter 2 by a literature review of the research on anxiety in young children. The methods used to obtain the information salient to the formulation and construction of a rating scale are discussed in Chapter 3. The data are presented in a two-study format. The first study employed both quantitative and qualitative methods, using semi-structured interviews with teachers, and their completion of a prototype rating scale. The second study consisted of the administration of the scale and comparisons of its psychometric properties to other instruments. The thesis concludes with a discussion, in Chapter 4, of the results and limitations of the studies.

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Dedication

To Nell, Paula, and Suzanne

To Steve for invaluable support

Thanks for always being there

Table of Contents

Developing a Teacher Administered Anxiety Rating Scale Suitable for Five to Seven-Year-Old Children

Chapter I

Introduction

Statement of the Problem

In this thesis I describe two related studies. In the first, I examined the concepts, perceptions, and opinions of kindergarten and grade one teachers about anxiety in young children aged five to seven years. The reason for obtaining this data or these perspectives from these teachers was to assist in the development of a rating scale designed to identify young children who are in distress because of feelings of anxiety. Anxiety in young children may have strikingly negative effects on their daily lives (King, N. J., 1993; Vasey, Crnic, & Carter, 1994; Silverman, LaGreca, & Wasserstein, 1995; Weems, Silverman, & LaGreca, 2000).The goal was to create a rating scale that could be administered effectively by teachers in the classroom setting. Although there are tests available that include subtests or subsections with questions relating to internalizing behaviours, including anxiety, there is no test currently available which is both teacher administered and solely dedicated to the identification of anxiety in children aged five to seven years. Specifically, the goals of the study were to: (1) describe the development and formulation of a teacher administered rating scale designed for the early identification of anxiety in young children, and (2) evaluate the results of its administration with young children, especially with respect to its technical adequacy and psychometric properties in comparison to other instruments.

Increasingly, teachers are confronted with a growing number of children who engage in a wide range of inappropriate behaviours (Charles, 2002). Some of these misbehaviours are overt and easily recognized as problem behaviours. However, there are some behaviours which may be confusing to teachers because they are not overt, but are difficult to notice. Yet, the teachers may sense that something is amiss. Anxiety, shyness, or inhibition may be explanations for the problems that some children are experiencing. Anxiety, shyness, inhibition, and depression are classified as internalizing problems or disorders which children may experience, but do not express.

Significance of the Study. This study is intended to help educators to understand better how they might identify young children who have problems with shyness, anxiety, and behavioural inhibition. The steps involved in the development of a suitable instrument to be used for the early identification of children at risk of developing anxiety will be presented. It is anticipated that the results of this study will help provide a basis for determining the educational, medical, and psychological interventions designed to best accommodate the young children in our schools who are afflicted by anxiety.

Internalizing problems. Anxiety, shyness, and behavioural inhibition are referred to as internalizing disorders because the principal feature of these problem behaviours is that the children who are experiencing them most often tend to experience them in an internal fashion. That is, they hold in the distress to which these disorders give rise, rather than expressing it outwardly. The three terms, anxiety, shyness, and behavioural inhibition, often are used in an interchangeable fashion. This likely is due to their being very closely enmeshed in meaning. For the purposes of this study, anxiety is the preferred

term. Nevertheless, the other two features (shyness and behavioural inhibition) are included in my usage.

It is the very nature of the disorder that can prove to be problematic for teachers. If the child is holding in feelings of anxiety, there is little likelihood that their existence will be suspected or identified by the teacher. However, the child may be behaving in a manner that does not make sense to the teacher. Consequently, the problems the child experiences either may go unrecognized or be misinterpreted by the teacher. In both cases they are likely to be left untreated. As a consequence, internalizing disorders have been designated as "secret illnesses" (Reynolds, 1992).

As a rule, internalizing disorders are made up of problems that are derived from overcontrolled symptoms (Cicchetti, & Toth, 1991). The term, "overcontrolled," is used to suggest that these problems of anxiety occur when the children try "to maintain too much or inappropriate control or regulation of their internal emotional and cognitive state - in other words, the way they think about the way they feel" (Cicchetti & Toth, 1991). Hence, internalizing disorders are a challenge to recognize by external observation.

Anxiety Problems. The anxiety problems of children have become a subject of both professional and public concern during the past twenty years. Until the latter part of the nineteenth century, little attention was devoted to these problems. Indeed, for most of the twentieth century, little consideration was given to these difficulties (Kendall, & Flannery-Schroeder, 1998) and there was a widespread belief that certain internalizing disorders did not exist in children at all (Merrell, 2001). However, there is now a considerable body of research indicating that these problems exist in children and are rather widespread (Barlow, 2002; Biederman, Rosenbaum, Chaloff, & Kagan, 1995;

Kagan, Reznick, & Snidman 1988; Merrell, 2001; Wittchen, Nelson, & Lachner 1998;Wittchen, Kessler, Pfister, & Lieb 2000; Rosenbaum, Biederman, Hirshfeld, Bolduc, & Chaloff, 1991). Also, some studies indicate that anxiety in children and adolescents is one of the most prevalent psychiatric problems (Last, 1993; Esau, Conradt, & Petermann, 2000). Further, research indicates that young children with anxiety disorder may exhibit symptoms ranging from mild to severe, but that with early intervention, it is treatable (Chorpita, & Barlow, 1998; Rapee, 2001; Rubin & Burgess, 2001).

Distinguishing between normal anxiety and pathological anxiety. There are three factors to consider when researching a topic like anxiety. One is the difficulty is in establishing a diagnostic differentiation between anxiety that is "normal," and anxiety that is pathological. According to Barlow (2002),

> ... normal anxiety is limited in intensity and duration, and is associated with adaptive defenses. Anxiety is self-defeating or pathological when it is noticeable, intense, disruptive, and paralyzing, or when it triggers self-defeating defensive processes, also called symptoms (p. 11).

Anxiety is considered by some researchers to be a common and essential feeling that contributes to developing successfully in social functioning and in emotional growth. (Albano & Detweiler (2001). Anxiety is present in early childhood. Infants at six months of age have displayed fear of strangers, and anxiety at separation from primary caregivers (Skarin,1977; Thompson & Limber, 1992). Indeed, anxiety about strangers and fear of separation continue in childhood to about age three. However, as children experience these situations, over time, they become accustomed to the anxiety-provoking situation,

and in time either greatly reduce the fearful effects they are experiencing or the effects disappear.

Albano and Detweiler set out three extensive components that should be taken into account in differentiating social anxiety from social phobia in youth. These are:

> (1) the magnitude of the social fear(s) in the context of developmental expectations, (2) the persistence of the anxiety reaction over time despite repeated (opportunities for) contact with the anxiety-provoking cue, and (3) the degree of interference in functioning across a variety of domains (1995, p.166).

Further, to this discussion of differentiating anxiety that is pathological from anxiety that is not, Albano and Detweiler state that "social anxiety is a part of normal development and is expected to occur at appropriate times and to some degree throughout the lifespan" (1995, p. 166).

What researchers such as Albano and Detweiler are saying, in effect, is that there are at least three major factors that can assist in differentiating anxiety that is a regular experience in a child's life from anxiety that is problematic or pathological. These factors are the severity of the anxious feelings, the frequency of the anxious feelings, and how long the symptoms have persisted. In summary then, it appears the most crucial aspect in distinguishing between anxiety that is normal from that which is pathological is the degree to which the anxiety interferes with the daily life of the child.

Aspects of anxiety. One difficulty in discussing a topic such as anxiety is that there are three terms that are frequently used interchangeably. These are fear, anxiety, and panic. These terms, while similar are not the same. Fear is believed to be directed by a specific stimulus. Anxiety is more widespread and is not brought about by a particular

fearful stimulus. Panic is a more intense experience than is fear and anxiety and the child usually has difficulty identifying the cause that evoked the panic reaction (Davis, & Buskist, 2004).

Another major difficulty in studying a topic such as this is in determining what behaviours constitute anxiety. Anxiety is multi-faceted. Accordingly, children with anxiety may exhibit their symptoms in several forms. They may manifest their anxious behaviours in one form, or in a combination of them (McNeil, 2001). This gives rise to at least nine different types of anxiety (see Appendix F). Consequently, it becomes important to possess an instrument that will provide guidance to teachers, clinicians, parents, and others who are interested in assisting young children with anxiety. This guidance and assistance can best be provided if the interested parties are able to pinpoint accurately the signs of problematic anxiety difficulties in young children.

Is anxiety acquired or innate? A third element in discussing a topic such as anxiety lies in determining whether anxiety is a character trait, temperament, or an acquired behaviour. Anxiety as a character trait,"...is a relatively stable state of affairs, such that an individual is chronically anxious in certain situations." (Ormrod, 2004). Anxiety as an acquired behaviour refers to a behaviour that was learned or acquired as the child grew. Temperament is believed to originate from one's neurobiology. According to Merrell, "Temperament in infants serves as a sort of template for later personality development." (2001, p.18). Research by Kagan et al (1990) indicated that infants and young children whose temperaments make them easily excitable, highly alert, and extremely reactive to unfamiliar stimuli, are more likely than other children to develop anxiety, shyness, and behavioural inhibition

There is little research that can definitively distinguish anxiety that is a normal part of a child's disposition, a trait, from anxiety that is a more a problematic one, a characteristic. Barlow refers to people with a disposition to behave anxiously in a consistent manner regularly, and in different circumstances as having a personality trait (Barlow, 2001). Spielberger, Gorsuch, & Lushene (1970) describe people who are behaving anxiously most of the time as having an anxiety trait, whereas, those people who are anxious at the moment have an anxiety that could be called a condition. A condition implies a temporary state. Overall, it would appear that for some children, there exists a genetic predisposition to acquiring an anxiety disorder. Although statistical studies are relatively few, it would appear that about 30% of children with anxiety appear to have genetic factors that lead to anxiety (Stein 1998).

Social and performance anxiety is considered to be a normal human reaction in a variety of situations. For example, it is common for children to experience some anxiety in new and unfamiliar situations, such as entering a new school, meeting new people, and performing in front of the class. The goal of treatment for children with anxiety is not to eliminate it, especially in social and performance anxiety, but to minimize it so as to be more manageable in meeting the anxiety-provoking situation or person (Hope, Heimberg, Juster, & Turk, 2000).

Purpose of the Studies. The purpose of these studies was twofold. The first objective was to develop an instrument suitable for teachers to use in identifying children who either have an anxiety disorder or who may be prone to developing one. This instrument was designed in the form of a rating scale to be used by teachers. This scale is used to identify anxious, shy, or fearful children aged 5 to 7 years. There are no

instruments currently in use, which can be administered by teachers that exclusively address this particular age group. Also, there are no instruments for this age group focussed specifically on anxiety. In this study, I interviewed 25 kindergarten and grade one teachers to ascertain what behaviours they recognize as shyness and anxiety in young children. The behaviours the teachers identified then were framed in a manner consistent with the literature on childhood anxiety disorders. The information was obtained from the teachers by the administration of a prototype instrument called The Teacher Ratings of Survey Items. The information obtained from this preliminary test was evaluated to determine consistency with a test called The TeacherAdministered Rating Scale of Anxiety in Young Children Aged Five to Seven Years (TRAC) (Coaching for Confidence Research Team, 2002).

The second objective of this investigation was to analyze the psychometric properties of the TRAC. This analysis of psychometric properties involved examining the reliability of the TRAC by comparing the results obtained by its completion by parents and teachers with three other well known and widely used test instruments which contain items related to anxiety.

The following chapter begins with a review of fundamentals concerning anxiety that have been put forth by principal researchers and theorists. These principles, which for the most part are contained in research, studies, and reports, and the literature on anxiety help lay the foundation for an understanding of the subject. Literature related to the definition, epidemiology, incidence, prevalence, biological bases of anxiety, and co-morbidity of anxiety will be reviewed and discussed within the boundaries of this study.

Chapter 2

Review of Literature

Introduction

Anxiety disorders are among the most common mental health problems (Kagan, 1989; Kessler, McGonagle, Zhao, Nelson, Hughes, Eshleman, Wittchen, & Kendler, 1994; Esau, Condrat, & Petermann, 2000; Last, 1993). At one time, little information was available about the frequency of occurrence of these disorders in the community. Recent large scale epidemiological studies have produced an abundance of knowledge and information about the extent of these disorders, the age of their inception, as well as comorbid and associated disorders that may accompany them (Kessler, et al., 1994; Offord, Boyle, Campbell, Goering, Lin, & Wong, 1996).

Prevalence

In recent years, there has been an emphasis on epidemiological studies which has produced considerably more information about the prevalence of anxiety disorders (Kessler et al, 1994; Offord, Boyle, Campbell, Goering, Lin, & Wong, 1996; Roberts, Attkisson, & Rosenblatt, 1998). For the most part, these studies have referred to adult populations. A recent study reported that:

> ...approximately 29% of the population in the united States is estimated to have had one or more diagnosable anxiety disorders at some point in their lives, making anxiety disorders the most common category of diagnoses in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV*; American Psychiatric Association, 1994; see Kessler, Berglund, Demler, Jin, & Walters, 2005; (Mineka & Walters 2006).

Kessler et al. (1994) reported that the most common mental health problems in the community are anxiety disorders. The range of prevalence of anxiety disorders is vast, and the true rates are not readily apparent (Hoffmann & DiBartolo, 2001). Obtaining prevalence and frequency rates for anxiety disorders is somewhat complicated due to the difficulty of determining what exactly constitutes anxiety disorders. There are at least nine disorders that come under the category of anxiety disorders. Each of these nine has a variety of prevalence and frequency rates. Nevertheless, Kessler at al. (1994) have reported that the prevalence in adult populations ranges from a 17% prevalence in the last 12 months to a 25% lifetime prevalence.

Prevalency in Children

At one time, little information was available about the frequency of occurrence of mental disorders in the community. Recently, large-scale epidemiological studies have produced much information about the prevalence of these disorders, age of onset, and patterns of comorbidity (Kessler et al., 1994; Offord et al., 1996; Roberts et al., 1998). Kessler et al (1994) undertook a study which "presented estimates of lifetime and 12-month prevalences of 14 DSM III-R psychiatric disorders from the National Comorbidity Survey (NCS), the first survey to administer a structured psychiatric interview to a national probability sample in the United States" (p.8). The researchers used the revised version of the Composite International Diagnostic interview to obtain information from persons 15 to 54 years old. Data was obtained from interviews with 5388 people conducted between 1990 and 1992 from the NCS. Kessler, Demler, Frank, Olfson, Pincus, Walters, Wang, Wells, & Zaslavsky, 2005) presented data from the NCS Replication (2001-2003) which were

obtained from 4319 people. The interviews consisted primarily of face-to-face interviews using diagnoses from the DSM IV.

Kessler et al (2005) found that the prevalence of mental disorders did not change significantly from 1990 to 2003. They found that the rates went form 29.4 percent in1990 to 30.5 percent in 2003.The mental disorders that were examined were anxiety disorders, mood disorders, and substance abuse.

Offord et al (1996) presented a study of a one-year prevalence of 14 psychiatric disorders in a community sample of Ontarians aged 15-64 years. The data on psychiatric disorders were collected on 9953 respondents using the University of Michigan revision of the Composite International Diagnostic Interview (UM-CIDI). DSM III R criteria were used to define the psychiatric disorders.

The results indicated that almost 1 in 5 Ontarians (18.6%) had one or more of the disorders measured in the survey. The distribution of individual disorders varied by sex and age. For example, prevalency rates are higher among the young (15-24 years of age); approximately 1 in 4. The distribution of the disorders by sex occurs in that anxiety and depression are more common in women and substance abuse and antisocial behaviours have a higher prevalence in men. Comorbidity of disorders was found to be high with 1 in 4 respondents (24.2%) classified as having at least one additional disorder.

It is normal for the percentages of the prevalence of anxiety disorders in children to vary from study to study because different assessment measures are involved. This does not mean that we can't or don't understand different anxiety problems in children. It just means that when different assessment techniques are used, slightly different results are obtained. Since children often meet the criteria for more than one anxiety disorder, some studies may

just give an overall rate for anxiety disorders or list the most common disorders. Some disorders, such as OCD, are not as common so the numbers may not be reported.

Some studies have reported a high prevalency rate of anxiety disorders in children. "... In a sample of 792 eleven year olds, Anderson, Williams, McGee, & Silva found the following rates of anxiety disorders: 3.5% for separation anxiety disorder, 2.9 % for overanxious disorder, 2.4 % for simple phobia, and 1.0 % for social phobia." (Bernstein, Crosby, Borchardt, & Perwien, 1996, p.1110). In a sample of 1,869 12-16 year olds, Bowen, Offord, & Boyle (1990), reported prevalency rates of 3.6 % for separation anxiety disorder, 2.4 % for overanxious disorder.

Anxiety is a rather encompassing term. As a result, "...so many of its characteristics are common, it has been quite difficult to develop an accurate estimate of how many children and youth have anxiety disorders" (Merrell, 2001, p.7). Other studies report a variety of rates for various anxiety disorders. A few studies reported that simple phobia, separation anxiety disorder, and overanxious disorder were the most widespread.

Figure 1 illustrates the wide variety of prevalency rates of anxiety and specific anxiety disorders found in children. Figure 1 also provides an overview of key diagnostic features for the different major anxiety disorder types. "Of 15 epidemiological studies, 11 estimate the prevalence of childhood anxiety disorders at greater than 10%." (Pine, 1994, p.302). Unfortunately, many of these studies include children up to the age of 15. Consequently, it is difficult to apply these findings to young children ages 5 to 7 with any certainty. Another complicating factor making it difficult to obtain statistical data about this age group, 5 to 7 years, is that many of the anxieties are comorbid with each other. This makes it difficult to apply the findings of some studies to specific anxiety disorders.

One of the largest community studies reported to date is the Great Smoky Mountains Study of Youth (Costello, Angold, Burns, Stangl, Tweed, Erkali, & Worthman, 1996). This study was carried out with 4500 of 11758 children aged 9, 11, and 13, and found that the most common psychiatric diagnosis at 5.7% was anxiety disorder (Costello et al. 1996). Also, one investigator considered the Great Smoky Mountains Study of Youth to be the best research study to date to address important research issues such as prevalence, incidence, duration, comorbidity, the role of developmental factors, etiology, community-based epidemiological studies, biological factors, and presence or absence of mental health services (Roberts, Attkisson, & Rosenblatt, 1998).

Roberts et al. (1998) reviewed recent studies and reported that the median prevalence rates of clinical disorders in the studies were 8% for preschoolers and 12% for preadolescents. Each anxiety disorder has its own distinct features; consequently, prevalence and frequency rates vary from one to the other. Also, the few large-scale studies that have been conducted to determine the proportions of the population that suffer from psychological or psychiatric disorders often have overlooked children and youth (Merrell, 2001). Further, after reviewing previous studies on anxiety in children and adolescents, Morris & Kratochwill (1983), estimated that the number of children affected by anxiety disorders is 8% of the general population. Merrell disagreed. He felt that this estimate is overstated, and that the true prevalence is likely to be 3 - 4%.

Age of onset. One of the first reliable studies carried out to investigate the ages of onset of anxiety in young children, selected 368 participants for a 14-year longitudinal study (Giaconia, 1994). The children were from a community population rather than a

referred group. Giaconia et al's results were that simple phobia was the earliest of all disorders to manifest in children. Interestingly, Giaconia's study found that the foremost period of risk for developing a simple phobia reached its peak at ages two through five. Although this study had many limitations, as ethnicity and socio-economic status were not sufficiently representative to enable generalizations to a large population to be made, its findings do indicate the need for the early identification of anxiety disorders.

Several studies have addressed the issue of the age at which children first begin to display symptoms of anxiety. These studies indicate that separation anxiety disorder, avoidant disorders, social phobias, and simple phobias are the most common disorders to manifest early. One study reported that the median age of onset was 10 years of age for phobias (Bourdon, Boyd, Ray, Burns, Thompson, & Locke, 1988). Other researchers have presented findings consistent with Bourdon et al.'s findings (McGee, Feehan, Williams, Partridge, Silva, & Kelly, 1990; Cohen, Cohen, Kasen, Velez, Hartmark, Rojas, Brooke, & Streuning, 1993; Verhulst, F. C. 1995).

Temperamental predisposition. Temperamental predisposition to anxiety on the part of many children appears to be one of the most singular causes leading to the development of childhood anxiety disorders. Researchers have reported that the likelihood of a child approaching or withdrawing from a novel situation, person, place, or thing is an enduring temperamental characteristic (Kagan, Reznick, & Snidman, 1988).

A number of studies have addressed the issue of temperamental character traits as they may affect a predisposition toward the development of the internalizing symptoms characteristic of children with anxiety disorders. For the most part, these studies report that early temperamental character traits predispose children to anxiety. This appears to

Figure 1: Types of Anxiety in Children

Type	Definition	Prevalence	Researchers
Separation Anxiety Disorder	▪ Distress on separation from major ▪ attachment figure. ▪ Inappropriate and excessive anxiety concerning separation from home. Must exhibit distress when separation is anticipated, worry of harm to others, fear or reluctance to be alone, nightmares, physical complaints at separation.	3.5-5.45% 3.6%	Morris & Marsh; Bowen et al. (1990) Offord, et al (1996)
Social phobia	▪ Marked and persistent fear of scrutiny or performance in social settings. ▪ May manifest in crying, tantrums, freezing, or clinging	1.0% 2-3%	Anderson et al (1987) Morris & Marsh
Specific phobia	▪ Marked and persistent fear that is excessive or unreasonable, cued by the presence or anticipation of a specific object or situation (e.g. flying, heights, animals). ▪ May be expressed by crying, tantrums, freezing, clinging	2.4%	Anderson et al (1987)
Posttraumatic Stress Disorder	▪ Flashbacks and other recurrent symptoms following experience of, witnessing, or confronting violent or dangerous events. ▪ Symptoms may be expressed by recurrent recollections of the event; recurrent distressing dreams of the event; trauma-	5%	Kilpatrick & Saunders (1999)

Figure 1 continued

	specific reenactment may occur.		
Panic disorder	▪ Consists of overwhelming panic attacks which may manifest in rapid heartbeats, dizziness, and other physical symptoms.	Rare in pre-adolescence	Albano, Chorpita, & Barlow, (1996)
Obsessive Compulsive Disorder	▪ Consists of: 1. obsessions which may be recurrent, intrusive, persistent, unwanted thoughts, impulses or images that cause marked anxiety, and 2. compulsions which may manifest as repetitive, stereotypical behaviours	1 % 12-20%	Pine, 1994; Achenbach, Howell, McConaughy, & Stanger (1995)
Generalized Anxiety Disorder (Includes Overanxious disorder of childhood)	▪ Excessive anxiety and worry occurring more days than not about events or activities (such as school performance); ▪ Difficult to control worry and anxiety; ▪ May manifest in the following symptoms: restlessness, on edge, fatigued, difficulty concentrating or mind going blank, irritability, sleep disturbance.	2.9%	Anderson et al (1987)

hold true for both boys and girls (Caspi, McGee, Moffitt, & Silva, 1995;Kagan, 2001; Kagan, Reznick, & Snidman, 1988). What these studies indicated was that children identified as shy, fearful and inhibited, as early as ages 3-5, were highly likely to be reported later as being anxious.

Etiology. Various researchers have attributed different reasons for the etiology of anxiety disorders. The most notable theoretical views of the sources of anxiety have been grounded in research into social phobia and social anxiety (Hofmann & DiBartolo, 2001). This research, however, produced a great deal of helpful information in understanding the theoretical bases for the onset of these disorders and conceptualizations of their possible causes. These viewpoints can be considered from four perspectives: (1) biological, (2) behavioral, (3) cognitive, and (4) interpersonal (Hofmann & DiBartolo, 2001). It is important to note that it is by no means certain that these causes act individually. It is likely that some combination of these causes acting together bring about anxiety.

Biological bases. Research into the biological bases for anxiety has focused on the physical symptoms which this disorder evokes in people. Most notable among the physiological symptoms are: blushing, tachycardia, tremors, sweating, and dyspnea (Moutier & Stein, 2001). It is believed that these are indicators that might ensue from a number of biological systems including the autonomic, endocrine, and immune systems (Moutier & Stein, 2001). If medications produce a diminution or even a complete eradication of symptoms, then it would appear that there was biological basis to the disorder. Consequently, it can be seen that because of these biological system reactions and the reactions of people with anxiety to medications, that the evidence for a biological basis for the occurrence of anxiety is a strong one.

Biological research into the onset of anxiety is ongoing. Investigators are also investigating neuroimaging, responses to pharmacologic intervention, neurotransmitter functions and genetics (Moutier & Stein, 2001) in their efforts to understand anxiety. The autonomic, endocrine, and immune systems are among the many systems affecting the development and maintenance of anxiety disorders. It appears that the attempts by the body to combat toxins that trigger the body's response to the appearance of these toxins in the body, unleash chemicals, which can bring about the physiological symptoms previously noted, blushing, tachycardia, tremors, sweating, and dyspnea. Medications may be administered to alleviate both these symptoms and the social phobia causing them. Some of the pharmacologic interventions that have been researched are, monoamine oxidase inhibitors (MAOIs) (a psychotropic), and serotonergic drugs (SSRIs). Results of the administration of these pharmacologics are somewhat mixed. Some psychotropics have been utilized successfully in the treatment of social phobia. However, the association of the administration of psychotropic medications and the effects on the neurotransmitter system are "...a weak indicator of causality." (Moutier & Stein, 2001, p.191)

Temperament is among the possible biological causes of anxiety. Webster's dictionary defines temperament as "...disposition, characteristic mental and emotional reactions as a whole."(Webster, 1990). The difficulty in discussing temperament as a causal factor in anxiety is in establishing a uniform meaning. On the whole, it would appear that investigators use temperament in the sense of a predisposition to behavior. That is, that children's temperaments are what cause them to act in the way that they do. The concept of temperament is somewhat complex, because there is no definitive proof

that temperament is entirely inherited or entirely idiosyncratic to any particular child. It appears that children's temperaments are a combination of genetic inheritance and environment. This is an area that requires a great deal more investigation. The problem is in ascertaining to what extent, if any, a child's tendency to develop an anxiety disorder is an inherited characteristic as opposed to an outcome of environmental influences. Since it is likely that children's caregivers and siblings have significant effects on their child's later development it is likely a child's social history is a strong determinant in how he or she ascribes significance to events in his or her life (Kagan, 2001).

Behavioural influences. For the most part, behavioural interpretations of anxiety focus on the classic stimulus-response model. Early researchers (McNeil, Lejuez, & Sorrell, 2001; Saudino, 2001) believed that the Pavlovian model explained the onset of the disorder. They ascribed the development of anxiety to previously encountered aversive experiences. In other words, the child learned to become anxious because of uncomfortable, even frightening, occurrences in early life (Mineka & Zinbarg, 2001; Trower & Gilbert, 2001).

Later researchers put forth theories that attributed the development of anxiety to a deficient knowledge of social skills in combination with inappropriate anxiety-inhibiting behaviour (Hopko, McNeil, Zvolensky, & Eifert, 1999). It would appear that this explanation emphasizes the social deficiencies of children with anxiety disorders. It stresses their lack of ability to do what they think should be done leading to experiences of social phobia or at the least to a socially anxious experience.

Beidel & Morris (1995) have formulated one of the most comprehensive explanations for the occurrence of social phobia. Their conceptualization involves many

psychological factors as contributors to the onset, and maintenance of social phobia. Included in their explanation are, "...direct conditioning, observational learning, and information transfer." (p. 181-211).

By observational learning, these researchers are referring to the idea that children model a great deal of what they do and feel by observing others in their environment. Bandura has conducted studies in this area of how children learn. His research is now considered classic as it is accepted widely as a legitimate explanation for the reasons why children may behave as they do (Bandura, 1997). The important point is that there are several factors to consider in looking at behavioural elements as causes of anxiety disorders.

Cognitive variables. Some researchers argue that cognitive factors contribute to the onset and to the perpetuation of some anxiety disorders, most commonly, social anxiety and social phobia (Butler, 1985; Rapee & Heimberg, 1997). It is important to understand the process by which cognitive factors affect the development of social anxiety, as successful treatment hinges on cognitive change (Turk, Lerner, Heimberg & Rapee, 2001).

The cognitive factors that are most commonly referred to involve attributions about or judgment of other people, places, and things. Children with anxiety disorders, especially social anxiety, tend to make negative evaluations of the world around them. One researcher found that socially anxious children tended to expect others to judge them in a negative fashion even though the contact between them had been rather fleeting, as fleeting as a brief glance (Leary, 1988).

Basically, the problem is that children with anxiety disorders need to change the ways in which they view the world. If they always expect the worst from others, then they are likely operating at a very poor level of social interaction and may be handicapped in their ability to form considered judgments.

A few researchers believe that this inability to form balanced judgments relates to the negative self-image that many anxious children develop. They describe themselves in negative terms such as boring, wimpy, incompetent, and abnormal (Turk, Lerner, Heimberg, & Rapee, 2001). As a whole, these findings have serious implications for successfully treating children experiencing anxiety.

Anxiety reduction techniques should form part of a treatment plan. These techniques can include social skills training and teaching the children to make more realistic assessments of what the environments require of them. Sometimes, exposure activities can be employed to assist in reducing the fear reactions that these socially anxious children have in response to their surroundings. For example, they can be placed in situations that often evoke fear and distress, and under the guidance of a trained clinician, their fears and distress can be gradually lessened, if not extinguished through systematic desensitization techniques (Morris & Kratochwill, 1998).

Interpersonal processes. One other issue of importance in ascribing an origin to the onset of anxiety disorders is the impact of family on the development of the disorder. Mineka and Zinbarg (2006) indicated that children whose parents had anxiety disorders appeared to have an increased likelihood of incurring the disorder.

An interpersonal process refers to an information transfer whereby children may develop social phobia, for instance, based on what they frequently hear at home or what

they may hear from other caregivers. They come to associate social settings with what they hear the important people in their lives saying. Depending on the comments these people make, the children develop judgmental attitudes derived from those in their surroundings. It would be necessary, for the successful treatment of this condition to teach the child to accept the fact that there are different perspectives to many situations and that the judgments being made by their caregivers are only one way of looking at a given situation. The children must be taught that there are other possibilities besides those modeled by their caregivers. Of course, respect must be paid to the child's caregivers and their judgments.

Implications of untreated anxiety. Studies of the onset of anxiety disorders have indicated that they often begin in early childhood or adolescence (Wittchen, Nelson, & Lachner, 1998; Wittchen, Kessler, Pfister, & Lieb, 2000). It is only in recent years that large community studies of the epidemiology of childhood disorders have become available (Shaffer, Fisher, Dulcan, Mina, Davies, Piancentini, Schwab-Stone, Lahey, Bourdon, Jensen, Bird, Canino, & Regier, 1996; Wittchen, Nelson, & Lachner, 1998). A variety of researchers have found that anxiety disorders and the symptoms of anxiety have implications for the development of emotional and behavioural problems in adolescence (Barlow, 2002; Patton, Carlin, Coffey Wolfe, Hibbert, & Bowes, 1998; Pine, Cohen, Gurley, Brook, and Ma, 1998; Schatzberg, Samson, Rothschild, Bond, & Regier, 1998; Biederman, Rosenbaum, Bolduc-Murphy, Farone, Gertsen, Meminger, Kagan, Snidman, & Reznick, 1990). Their research suggests that untreated anxiety disorders in early childhood can lead to anxiety and depression in adolescence, which in turn, if left untreated, may lead to similar more entrenched symptoms in adulthood. In fact, these

studies present explicit verification that anxiety disorders have a tendency to continue into adulthood, if there is no intervention to deal with them. Also, studies indicate that when anxiety disorders are ignored, and consequently left untreated, they often lead to the establishment of psychiatric disorders over time which then become more difficult to treat and to manage (Anderson, Williams, McGee, & Silva,1987; Last, Perrin, Hersen, & Kazdin,1995).

The fact that the development of more serious symptoms later in life can result from untreated anxiety disorders in childhood or adolescence, makes the identification of young children with these disorders all the more necessary. A complicating factor in the early identification of young children with anxiety problems or disorders is that the estimates of the prevalence of anxiety disorders in young people vary widely. As previously noted, Morris & Kratchowill (1998) have reported that anxiety problems affect about 8% of the general child population, while Merrell has reported that only about 3-4% of children are affected by anxiety (Merrell, 2001 p.7-9).

Negative Affectivity. Anxiety and depression together come under the heading of negative affectivity. Barlow (2000) describes negative affectivity as a state consisting of a feeling of being out of control. The child begins centring on future events that are perceived to be threatening, unpredictable, uncontrollable, or undesirable. This negative affective state results in a shift in attention in which the child becomes self- preoccupied. This self- preoccupation is a self-focus whereby the child negatively evaluates his or her abilities to deal with a supposed or perceived threat. It is essential that caregivers understand that belief in or perception of a threatening situation, person, place, or thing is a source of distress for the child. The discomfort and anguish are very real for the child,

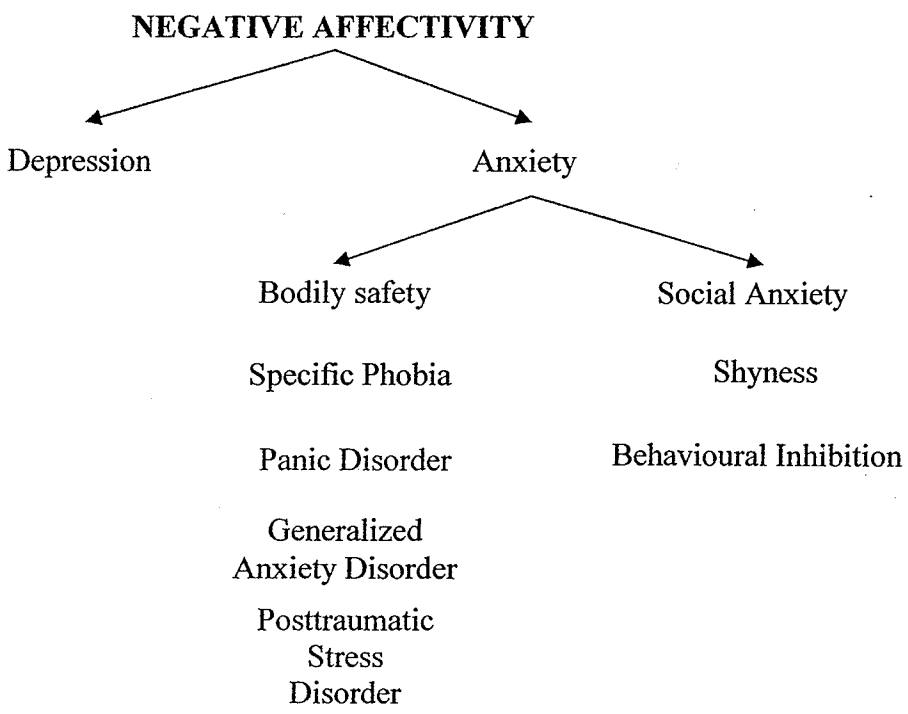
even though some onlookers may be dismissive of the child's reactions, on the grounds that the fear is unfounded. This is a situation which may serve to create even more anxiety in the child because his or her fears are not being taken seriously.

Figure 2 illustrates the close association that anxiety and depression have with each other. They are subsumed under negative affectivity precisely because of this strong relationship. There are several researchers who contend that the tripartite model refers to the close relationship between anxiety, depression, and physiological hyperarousal (Merrell, 2001; Barlow, 2002) These researchers believe that the relationship between these negative affective behaviours is not only strong but also, to some extent, intertwined.

Figure 2 also indicates that anxiety can manifest in at least eight ways. Some of the terms listed under anxiety have subtypes of their own. For instance, social anxiety can include fear of public speaking and avoidant personality (McNeil, 2001). Avoidant personality refers to a situation which can include anxiety to such an extent that the child will keep away from anxiety provoking people, events, objects, and situations. Specific phobia refers to a fear of a single object, situation, or person. The number of specific fears and phobias are almost countless. A list posted on the Internet by Culbertson contains more than 500 names of phobias (www.phobialist.com). The list also provides a description of each of them. Culbertson claims to have obtained these names from a variety of publications (Barlow, 2001 p.382).

Other Disorders with anxiety. There are several disorders listed in the DSM IV which have anxiety as a significant feature. One of these is agoraphobia. This avoidant

Figure-2 Relationship between anxiety and depression



behaviour can manifest in several ways. Agoraphobia is described as, "Anxiety about being in places or situations from which escape might be difficult (or embarrassing) or in which help may not be available in the event of having an unexpected or situationally predisposed panic attack." Additionally, these anxiety-inducing situations are avoided or else they are endured (DSM IV TR, 2002).

Another problem, which has anxiety as a significant feature, is social withdrawal. This is another internalizing condition that underlies or accompanies anxiety and depression and can be misidentified as anxiety disorder. Children who are socially anxious tend strongly to evade social contact with others, which often leads to a condition referred to as social withdrawal (Albano & Detweiler, 2001; Merrell, 2001). Some researchers argue that social anxiety is a regular and necessary emotion, which enables children to develop adequate social behaviours and develop in a normal fashion. It is only when the levels of social anxiety are excessive, particularly in the clinical form of social phobia, that significant impairment occurs (Albano & Detweiler, 2001; Barlow, 2002;).

Most researchers prefer using the term social anxiety disorder rather than social phobia because the former term indicates that the problem is a more comprehensive one than the latter (Barlow, 2001). Social anxiety disorder contains a number of crucial features, including: illogical self-evaluation, little interest in social interaction, excessive fear, and being a major component in many other anxieties and disorders such as mood disorder. As social anxiety is not yet considered a separate disorder, it is extremely difficult to obtain information about its prevalence or frequency (Merrell, 2001; Barlow, 2001).

Social anxiety is considered one of the most incapacitating of childhood anxiety disorders (Albano, Chorpita, & Barlow, 1996; Albano, Detweiler, & Logsdon-Conradsen, 1999; Schneier, 1997). Unfortunately, information about this particular problem in young children is rather sparse. This lack of information is likely due to the complicated manifestations of its symptoms. Because social anxiety is present in many other disorders, it is difficult to obtain accurate data concerning this condition.

Another complicating factor is that young children experience many fears as well as shyness, and behavioural inhibition (Albano, Chorpita, & Barlow, 1996; Albano, Detweiler, & Logsdon-Conradsen, 1999). These feelings of fear are quite common in young children and this gives rise to the difficulty of accurately ascertaining the difference between the "normal" development of a child's reactions and the development of a disorder containing social withdrawal. Another factor contributing to the difficulty of ascertaining a diagnosis of social anxiety is the widespread belief that this may be a stage or phase that the child is going through and that given time, the child will outgrow his or her fears (Beidel & Morris, 1995; Kashdan & Herbert, 2001; Rapee, 1995).

This leads to a discussion as to the appropriateness of children's reactions to fearful experiences. At what point is the child's reaction pathological, (i.e., developmentally inappropriate), as opposed to worrisome but acceptable? The difficulty lies in distinguishing between anxiety and normal childhood concerns and worries.

Three factors determining the presence of anxiety. Essentially, three factors can assist in determining if a child has an anxiety disorder. They also can assist in ruling out other problems that may appear to resemble social anxiety, such as mutism and daydreaming. The three factors are: (1) frequency, (2) severity, and (3) duration.

Frequency refers to whether the child's reaction to a fear inducing situation occurs often, usually described as happening more often than for other children of similar age (DSM IV, 1994). Severity refers to the effects the child's reaction has on his or her daily life, in terms of the extent to which the anxiety disrupts his or her routine. Duration refers to the length of time the child has been experiencing negative reactions to stimuli that he or she deems to be fearful or anxiety provoking. Obviously, if the child's reaction occurred just one time, then there is little likelihood that the child has an anxiety disorder. However, if the reaction of the child has been present for a considerable period of time, at least six weeks according to the DSM IV 1994, then the possibility of the child having an anxiety disorder is higher, and a subject of concern to all.

There are other problematic areas which accompany or form part of an anxiety disorder. The main point is that these disorders or problem behaviours frequently have their genesis early in childhood among inhibited children. Left untreated, the difficulties may lead to adolescent social problems (Schwartz, Snidman, & Kagan, 1999). Schwartz et al maintain that a young child's temperament might contribute to social phobia and other types of severe social anxiety.

Social anxiety and inhibited behavior. Schwartz et al (1999) investigated seventy-nine 13 year olds who had been categorized as inhibited adolescents. This categorization was determined in two ways. One way was by direct interview, while the other was by direct observation. A year later, the subjects were assessed using both a standardized interview and direct observation. The results indicated that there was a strong relationship between inhibition in the children who earlier had been identified as inhibited, and generalized social anxiety in adolescence. The authors state that the interview and

observational data indicated that important aspects of an inhibited temperament are preserved from the second year of life to early adolescence, which predispose an adolescent to social anxiety. Behavioural inhibition is a term used to refer to a child's reluctance to interact with unfamiliar persons, places, or things.

The point to be taken from this discussion is that anxiety disorders are rather all encompassing, due to their inclusion in a variety of disorders as well as accompanying difficulties. The research reinforces the need to provide a strategy for early identification of these at-risk children. The earlier that assessment occurs, the more likely that a successful intervention can be employed, if not to eliminate the problems caused by anxiety, then at least to reduce their impact significantly. The relationship between early childhood anxiety and problems in later life, both in adolescence and adulthood, reaffirm this need for early identification.

While the number of anxiety disorders, and the considerable variation in the particular ways in which they manifest themselves, makes it difficult to obtain a clear understanding of them and to grasp the full scope of the problems they present, they do have three elements in common. These elements are: subjective feelings, overt behaviours, and physiological responses (Merrell, 2001). Merrell refers to the sharing of these three common elements as the tripartite model. Further, he adds that there are two terms that are also closely related to anxiety: fears and phobias. While there is considerable similarity between these two terms, there are significant differences as well (Merrell, 2001).

Subjective feelings. One of the symptoms common to anxiety disorders is subjective feelings. These feelings refer to the child's negative affectivity discussed

earlier. These feelings include discomfort, fear, or dread. The child experiences discomfort because of a feeling of lack of power over events which he or she perceives as frightening. Events are perceived as frightening because the child has had negative experiences in similar situations, or previously has not been taught to manage new and unfamiliar situations, or is unable to cope with unfamiliar people. The child's inability to handle a novel situation increases his or her level of discomfort, leading to feelings of anxiety.

Another subjective feeling which a child can experience is related to discomfort. The child may experience a feeling of fear, or even dread. The child becomes agitated when involved in certain situations. If the agitation is not recognized and no intervention occurs to help the child, this agitation may become so pronounced as to cause the child to become fearful. This fear can be fear for one's safety, fear of being judged, or an inexplicable pervasive sense of foreboding. This foreboding can be overwhelming in that it is difficult to pin point its exact nature, thus making it puzzling to deal with. These feelings usually occur in social settings such as school, but can occur in other social settings such as family outings and gatherings.

The negative affectivity, or subjective feelings, which the child experiences can lead to overt behaviours such as avoidance and withdrawal. Avoidance and withdrawal are maladaptive coping strategies that some children employ in order to avoid the fear-inducing situation they are concerned about (Barlow 2002; Cohn & Hope, 2001; Merrell, 2001). Children who feel uneasiness concerning particular people, places, or things will endeavour to avoid them. Such children will, at times, employ extraordinary means to avoid that which they fear.

A third element common to anxiety disorders involves the child's physiological responses. These responses to anxiety provoking situations can include, but are not restricted to, sweating, nausea, trembling, and general arousal. The child can experience a heightened sense of danger and this may then lead to evading the anxiety-provoking situation (Barlow, 2000; Kagan, 2001; Merrell, 2001).

Characteristics of anxiety. Anxiety is characterized by excessive fear, worry, or feelings of panic. Excessive fear refers to the feelings of children who experience dread that is stronger than normally expected in ordinary situations. Worry refers to the unease which children experience when there is no ostensible reason to be concerned. Panic, as a type of anxiety disorder, is agitation in anticipation of some dangerous or unnamed fear (Barlow, 2002).

Anxiety is characterized also by anxiety provoking thoughts or obsessions. These anxiety provoking thoughts or obsessions refer to intrusive, recurrent, and unwanted thoughts that cause apprehension in the child. Although these anxiety provoking thoughts and obsessions are similar to Obsessive Compulsive Disorder, (OCD) they do not fall into that category. Rather, they refer to thoughts which are similar to OCD, but do not have the intensity or frequency to constitute a diagnosis of OCD. Children with anxiety may experience preoccupations with people, places, or objects they perceive as fearful. These preoccupations are not as numerous or as acute as the obsessions of OCD. The obsessions of OCD often are recurrent and severe (Barlow, 2002; McNeil, 2001).

For a complete listing and description of different types of anxiety disorders, according to the (DSM IV TR, 2002) please see Appendix G. In terms of my study, the focus is on separation anxiety, social phobia, and generalized anxiety disorder.

Anxiety and Later Difficulties

Several research teams have noted that difficulties with anxiety tend to start early in life and often persist into later life (Kagan, Reznick, & Snidman, 1988; Pine, Cohen, Gurley, Brooks, & Ma, 1998; Regier, Rae, Narrow, Kaelber, & Schatzberg, 1998; Schatzberg, Samson, Rothschild, Bond, & Regier, 1998). Anxiety disorders early in life have been found to be risk factors for the development of unhealthy behaviours. For example, several researchers (Patton, Carlin, Coffey, Wolfe, Hibbert, & Bowes, 1998; Pine, et al, 1998; Schatzberg, et al, 1998) have found that the symptoms of anxiety are associated with a higher risk than normal for the initiation of smoking, possibly due to an increased susceptibility to peer influences.

In the study by Patton et al (1998), a sample of 2032 14 to 15 year old students drawn from schools in the state of Victoria Australia were surveyed with a computerized questionnaire which included a retrospective journal for tobacco use. The survey also included a structured psychiatric interview. The results of this study indicated that depression and anxiety, along with peer smoking, predicted the initiation of experimental smoking. More specifically, depression and anxiety accentuated the risks associated with the influence of peer smoking. Their findings concluded that depressive and anxiety symptoms are associated with higher risks for smoking initiation through an increased susceptibility to peer influences.

Pine et al (1998) investigated the relationships among anxiety and depressive disorders of adolescence and adulthood. An epidemiologically selected sample of 776 New York adolescents were given psychiatric assessments in 1983, 1985, 1992, using structured interviews. The researchers used logistic regression analyses, and a set of

Markov analyses to quantify the magnitude of the association between adolescent anxiety and adult anxiety or depressive disorders. They "... focused on longitudinal associations of narrowly defined DSM anxiety or depressive disorders" (Pine et al, 1998, Abstract).

The results indicated that adolescent anxiety or depressive disorders predicted an approximate two to three fold increased risk for adulthood anxiety or depressive disorders. One interesting finding was that, while most adolescent disorders were no longer present in young adulthood, most adult disorders were preceded by adolescent disorders.

The researchers concluded that an anxiety or depressive disorder during adolescence presents a strong risk for recurrent anxiety or depressive disorders during early adulthood. Moreover, most anxiety and depressive disorder in young adults may be preceded by anxiety or depression in adolescence. As there is a strong relationship between anxiety in young children and anxiety in adolescence, the need for early intervention to treat this disorder becomes obvious.

Nelson and Wittchen (1998) also found an association between anxiety and depression in adolescents, and the establishment of regular smoking. Anxiety disorders also have been related to limited educational and occupational attainment (Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1994; Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1995; La Greca and Lopez, 1998) and limited social support. Limited social support refers to a situation where there is little or no assistance provided by agencies or family to the child with anxiety disorders. This is often a result of caregivers and others in the child's life being unaware of the anxiety

disorder; or being aware, but not knowing what to do or where to go for assistance (Muris, Meesters, Merkelbach, Sermon, & Zwakhalen, 1998).

Anger. A link has been suggested between stress and anxiety, which can manifest as anger (Kagan, 1998; Barlow, 2002). Kagan's longitudinal study involved children who were identified early as being inhibited. Kagan examined surveys concerning anxiety that had questioned children about the occurrence of problems such as worries and fears, as well as sources of anxiety. He felt that more emphasis should be placed on the children's experiences with other unpleasant emotions such as anger, as anxiety can be accompanied by anger. Consequently, it would be a good idea to learn more about the connection between the two emotions. Barlow (2002), on the other hand, argues that anger, in the form of "anger attacks," appears to be somewhat similar to anxiety and mood disorders. Indeed, Lee and Cameron (2001) reported that 75% of patients with anxiety disorders experienced angry outbursts. The conclusion of Barlow and other researchers (Fava, Anderson, & Rosenbaum, 1990; Rosenbaum, Fava, Pava, McCarthy, Steingard, & Bouffides, 1993) was that there is a relationship between anxiety disorders and anger or anger attacks.

Barrett, Rapee, Dadds, & Ryan (1996) found that there are anxious children who take a negative view of social situations that are not clear cut in terms of what is expected of them. Interestingly, these researchers also found that anxious children experienced increased avoidance after interacting with their parents.

Additionally, it has been reported that there is an association between social phobia and antisocial behaviour (Davidson, Hughes, Georges, & Blazer, 1993; Walker &

Stein, 1995, as some individuals with social phobia display aggressive behaviours (Marks, 1987).

An overview article on research into causes, diagnosis, prevention, and treatment of child and adolescent violence from the National Institutes of mental Health (NIMH), stated that:

> The obviously angry adolescent has other conditions such as anxiety disorders and depression (as seen in the quiet withdrawn young person) more often than would occur by chance. Research in this area indicates that very young children with conduct problems and anxiety disorders or depression display more serious aggression than youths with only conduct problems (NIMH, 2000).

According to Chartier, Walker, & Stein (2003), the early intervention or prevention of social fears or social phobia has the potential to reduce the risk of comorbid disorders. As a result, helping children to deal with common anxiety issues may help to prevent the development of disorders later in life. Of course, the ability to provide an intervention is predicated on the ability to identify children with anxiety.

Primary prevention. As in other areas of health care, primary prevention is the approach that holds the greatest promise in dealing with large- scale public health problems such as the presence of anxiety in young children. Treatment of individuals who are already experiencing a health problem is relatively costly, and some individuals, perhaps most individuals in the mental health arena experiencing a disorder, may not receive timely, consistent, or effective treatments (Lin, Goering, Offord, Campbell, & Boyle, 1996; Young, Klap, Sherbourne, & Wells, 2001). Hence, there is a need to focus on the development of preventative programs designed to reduce the risk for and

prevalence of anxiety disorders among young people. It is likely preventative programs will fit best in community settings such as the schools, day cares, and other places where young people meet. A principal feature of effective preventative programs is early identification.

Difficulties with testing. The testing of young children, for whatever reason, is fraught with peril; and to do so runs the risk of further complicating an already intricate situation. In 1987, the National Association for the Education of Young Children (NAEYC) issued a position paper on the use of standardized testing with children three through eight years of age. The NAEYC statement iterated the Standard for Educational and Psychological Testing (American Psychological Association, 1985) and specifically addressed the assessment of young children. The NAEYC position paper argued that certain tests used for kindergarten screening are suspect, because the normal behaviour of young children is rather variable. In addition, it was noted that young children might not be able to demonstrate what they know and what they can do can do because of problems in reading, writing, and responding. These problems, which could include such basics as, difficulty with pencil grip, lack of vocabulary, unfamiliarity with test requirements, and weak sustainability of attention, can apply to tests of all types. They include academic achievement tests, but also teacher-administered tests of any type. Among these test instruments are surveys and rating scales, including those that require direct input from the children. According to Merrell,

> Despite the obvious advantages of using self-report instruments..., some concerns should also be considered. One concern involves the cognitive maturity that is required for a child to understand the demands of various self-report tests and to

> make accurate differentiations on response choices. Most experts agree that for typical children, it is very difficult for those younger than the age of 8 years to comprehend accurately and complete self-report instruments...(2001, pp.47-49).

Since behavioural rating scales and self-report instruments are thought to be unreliable for very young children (National Association for the Education of Young Children, 1987), and as children often first begin to experience anxiety disorders in the social context of schooling, it is appropriate to focus on the role of the teacher in the early identification and prevention of anxiety disorders for children in Kindergarten and Grade One. Some of the most commonly administered psychological assessment forms include a self-report measure. However, the use of self-report measures for children from birth to age four is not appropriate, because their behaviours are not as determined or as obvious at this age and it is difficult for young children to rate their own behaviours with any meaningful result (National Association for the Education of Young Children, 1987; Campbell, & Rapee, 1996). This is likely due to the fact that many young children who experience anxiety disorders begin to experience them in a social context where there are unfamiliar people and unfamiliar settings. Self-report measures are inappropriate at this young age, as children at this age are unfamiliar with testing procedures, lack the language necessary for reading, interpreting, and completing such an instrument. Young children often do not possess rudimentary skills such as the use of a pencil for completing the instrument.

Preventative Programs.

Early intervention and identification. Preventative programs are action plans designed for the provision of remedial interventions for children experiencing difficulty

with, in this instance, problems identified as potential precursors to anxiety. Intervention programs designed to assist children must be preceded by an identification process that can then provide a framework for the intervention.

Recently, there have been exciting developments in the prevention of anxiety disorders through school programs for children eight years of age and older (Kagan, 1998; Pine, et al 1998; Regier, Rae, Narrow, Kaelber, & Schatzberg, 1998; Patton et al., 1998; Nelson & Wittchen, 1998). A good example of a successful preventative program for anxiety disorders is the Queensland Early Intervention and Prevention of Anxiety Project in Australia (Dadds, Spence, Holland, Barrett, & Laurens, 1997). This project evaluated the effectiveness of a cognitive-behavioural and family-based group intervention for preventing the onset and development of anxiety problems in children. A total of 1,786 7 to 14 year olds were screened for anxiety problems using teacher nominations and children's self-reports. Some of the children met the criteria for full-blown anxiety disorders, while others showed some signs of anxiety problems but not at the level required for the diagnosis of a disorder. After recruitment and diagnostic interviews, 128 children were selected and assigned to a 10-week school-based child-and–parent-focused psychosocial intervention or to a monitoring group.

According to Dadds, Spence, Holland, Barrett, & Laurens (1997), the intervention was based on The Coping Koala: Prevention Manual (Barrett, Dadds, & Rapee, 1996) an Australian modification of Kendall's (1992) Coping Cat anxiety program for children. The Coping Koala prevention manual is a Cognitive Behaviour Treatment program (CBT) that teaches children strategies for coping with anxiety. The 10 sessions are conducted within a group format. The strategies are developed and implemented by each

child. The child applies his or her own plan for a graduated exposure to fear stimuli. The program encourages the child to use physiological, cognitive, and behavioural coping techniques to deal with the anxiety that the fear stimuli create. The program was conducted by clinical psychologists over 10 weekly sessions of one to two hours each.

Parental meetings were held at the intervention schools. These sessions were held in weeks 3, 6, and 9. Session 1 introduced parents to child management skills, and how to employ these skills to deal with their child's anxiety. The remaining 2 parental sessions described what the children were discovering about the program and how parents could make use of the same strategies to manage their own anxiety.

The monitoring groups, called the comparison groups, received no intervention but were informed that they would be contacted for monitoring in 12 weeks and then at 6-month intervals for 2 years.

Both groups showed improvements immediately postintervention. At six months follow-up, the improvement was maintained in the intervention group only, indicating a reduced rate of existing anxiety disorders and a lower rate of onset of new anxiety disorders. Further, the study showed that these results were maintained 24 months, only after participation in the program (Dadds, et al. 1997). Overall, the results showed that anxiety problems and disorders identified by using child and teacher reports can be treated successfully through an early intervention school-based program. Such a program could be used for the younger age group (5-8 years) of this study. However, a self-report form like that used by Dadds, et al would not be a realistic instrument for younger children with inadequate reading and writing skills. A teacher rating scale might be more appropriate for use with Kindergarten and Grade One children.

Problems of young children with anxiety. The problems that young children with anxiety disorder experience are many, and these difficulties can be exacerbated by their environment as well. Situations that could be fear inducing (perceived or real) include school, unfamiliar people and events, and family expectations at home. Fear also can involve the fear of being judged. This fear of being judged includes the social judgments of others, such as fellow students and other peers. Other worrisome events include academic assessments, both formal and informal. Consequently, it can be seen that not only is the child's fearful disposition a problem, but it can be heightened by these external factors.

To date, research into childhood anxiety disorders has been focussed on children aged 8 and over. The move into the school system is a major transition point in the life of a young child and has an affect on his or her family as well. It is important to recognize that significant fear or anxiety reactions to attending school are not uncommon with young children, particularly those in kindergarten and first grade (Merrell, 2001) Consequently, children who experience high levels of anxiety, or who have a predisposition towards anxiety, may find the move into the school system a stressful time, possibly, because it requires them to be away from their parents. It also creates many new social and, academic performance demands. In childhood, social phobia, also known as social anxiety disorder, often is linked with overanxious disorder. Other symptoms that frequently accompany social anxiety disorder are elective mutism, school refusal, separation anxiety, behavioural inhibition, and shyness (Barlow, 2002).

Selective Mutism. Selective mutism was previously referred to as "elective mutism." Selective mutism is classified in the DSM IV TR as one of the "Disorders

Usually First Diagnosed in Infancy, Childhood, or Adolescence." (DSM IV TR, 2000). 2006). According to the Web page of the Selective Mutism Foundation, this disorder was ignored until the organization came into existence (2000). The DSM IV TR describes the essential features of selective mutism this way, "Failure to speak in specific social situations. Selective mutism should not be diagnosed if solely due to lack of knowledge of required spoken language. Selective mutism should not be diagnosed if related to embarrassment or a communication disorder" (p. 126).

> The disturbance brought about by selective mutism must interfere with the child's education. The difficulty must last for at least one month and not be restricted to the first month of school as children may be shy and reluctant to speak in a new setting. The children with this problem may communicate by gestures, or by short, monosyllabic monotone utterances, or even in an altered voice. (Selective Mutism Foundation, 2006).

School refusal. School refusal is a problematic emotional difficulty that was originally termed school phobia (Johnson, Falstein, Szurek, & Svendsen, 1941). School refusal is more than the simple refusal to attend school. What appears to be outright refusal to attend school is likely to be truancy. It is important to distinguish between school refusal and truancy. One essential differentiation between the two, is that children who experience school refusal experience it with severe emotional distress about the notion of going to school. This distress can manifest itself as anxiety, depression, or somatic complaints. In this case, somatic complaints refer to the child experiencing physical difficulties such as headaches and stomachaches in association with his or her refusal to go to school.

On the other hand, children with truancy usually have an absence of anxiety or fear about attending school. They often have antisocial behaviours and do not stay at home as do children with school refusal. The contrasts between the two, school refusal and truancy, are stark, and well defined (Fremont, 2003).

Separation Anxiety. "The combined prevalence of the group of disorders known as anxiety disorders is higher than that of virtually all other mental disorders of childhood and adolescence" (Costello, Angold, Stangl, Tweed, Erkanli, & Wothman, 1996). A common type of anxiety disorder is separation anxiety disorder. In order to establish a diagnosis of separation anxiety disorder, the symptoms must cause distress in the child's social or academic functioning and persist for at least one month (DSM IV, 1994). Typical manifestations of separation anxiety by a young child may take the following forms: excessive crying at separation from the primary caregiver, temper tantrums, and clinginess, especially in younger children. This latter behaviour is common and refers to a situation where the child with separation issues physically hangs onto the primary caregiver. Indeed, the young child may not allow the caregiver to leave his or her sight for even a few moments. As young children lack the vocabulary and maturity to express their feelings, the child's behaviours must be interpreted as being an indicator of interior feelings.

Behavioural Inhibition

Shyness, anxiety and schooling. Behavioural inhibition is a term that is used to describe, "a temperamental style characterized by a pattern of behaviors including withdrawal, shyness, fearfulness (of unfamiliar persons, objects, and situations), and avoidance" (Kagan, Reznick, & Snidman, 1988). Behavioural inhibition is believed to be

closely associated with the later development of high social anxiety, social phobia, and panic disorder (Mick & Telch, 1988; Biederman, Rosenbaum, Chaloff, & Kagan, 1995; Rosenbaum, Biederman, Hirshfield, Bolduc, & Chaloff, 1991). The development of later anxious problems such as panic and phobias makes it all the more important that an effective intervention and treatment tools be designed for young children once they have been identified to be at risk for the development of anxiety disorders.

Individuals with considerable risks for developing anxiety problems can be identified during their first years of life (Kagan, 1998). The discovery that behavioural inhibition, a characteristic seen from the first years of life, is a strong predictor of later anxiety and affective disorders (Kagan & Snidman, 1999) means it may be possible to identify the early onset of anxiety disorders and to test prevention and intervention programs early in the course of the disorder. According to Gray and McNaughton (1982, 1996), it is an active and sensitive behavior inhibition system, reacting to signals of novelty or punishment, that forms the biological basis of anxiety. Kagan, Reznick, & Snidman, (1987) have described a temperament construct, which they termed "behavioral inhibition to the unfamiliar" (BI), in young children. The researchers depict BI as the predisposition to be irritable as an infant, unusually shy and fearful as a toddler, and quiet, cautious, and withdrawn in the preschool and early school age years, with marked behavioral restraint and physiological arousal in unfamiliar situations. Some studies (Kagan, Reznick, & Snidman, 1988; Rosenbaum et al, 1991) show that there is a link between behavioral inhibition and the development of anxiety disorders. Young children suffering from behavioural inhibition are at an increased risk for developing multiple anxiety disorders in later childhood. Biederman, Rosenbaum, Hirshfeld, Faraone, Bolduc,

Gersten, & Meminger, Kagan, Snidman, & Reznick, in a 1990 study, found that inhibited children had increased risk for multiple anxiety, overanxious, and phobic disorders. They suggested that behavioural inhibition also may be associated with risk for anxiety disorders in children. The most comprehensive research on behavioural inhibition comes from ongoing longitudinal studies conducted by Kagan's and his colleagues (Biederman, et al., 1990). Kagan's team wanted to see if there were connections between certain behaviours in infancy and early childhood that were predictors for anxiety in later childhood. In 1994, Kagan administered a battery of visual, olfactory, and auditory stimuli to a sample of 462 children, 4 months of age. The goal of his study was to identify those children who were more likely to display anxiety later in life. The children's reactions to these stimuli were then described as either "high reactive," or "low reactive."

Most of the children (N=369) returned to the laboratory at age 14 and 21 months, where they were exposed to a variety of unfamiliar events. About 30% of the sample showed four or more fears at 14 months old and 21 months old, which Kagan considered to be a high level of fear. One half of the children, who had been classified as high reactive infants, had four or more fears at both 14 months and 21 months of age; compared with 10% of those who had been classified as low reactive. Kagan reports that 75% of these children who had been considered low reactive had either no fears or only one fear at both ages.

A majority of these children were evaluated again when they were 41/2 years old. The children interacted with an unfamiliar adult who administered a battery of tests that measured the child's cognitive level, heart rate, and blood pressure. The children were also involved in a play session with other unfamiliar children.

Kagan found that 46 % of the children who had been high reactive infants were classified as inhibited when playing with two other unfamiliar children compared with only 10% of low reactive infants. Moreover, the children who had been classified as high-reactive infants displayed significantly fewer smiles and spontaneous comments with the examiner than did the children classified as low reactive.

Some of the children (164) were evaluated at age 7 1/2 years of age. The mothers of the children who were observed at 4, 14, and 21 months were asked to complete a 3 point scale questionnaire that contained 34 descriptions of behaviours that were appropriate for children of this age. The mothers were then contacted by telephone and asked to elaborate on their responses, as well as to provide specific examples supporting their answers. Kagan employed three sources of data; the questionnaire, interviews with the mothers, and interviews with the children's teacher. If all three sources agreed that a child met the criteria for anxious symptoms, the child was then placed in an anxious group. As a result of this study, 43 children were classified as possessing anxious symptoms. Considering all of the results, Kagan concluded that " a classification of high reactive at 4 months was as good a predictor of anxious symptoms at 7 ½ years..." (Kagan, 2001 p.222).

Additionally, Barlow (2002) reported that there have been numerous studies linking behavioural inhibition in early childhood with social anxiety and social phobia in adolescence. A valid, reliable measure of early childhood anxiety symptomatology is essential to the prospect of identifying those children at risk of developing an anxiety disorder. Behavioural inhibition is a multifaceted phenomenon whose biological, physiological, and behavioural origins have been described (Eysenck, 1967, 1981; Gray,

1982; Gray, 1985; Gray & McNaughton, 1996; Kagan, 1989, 1994; Kagan & Snidman, 1991, 1999; Kagan, Snidman, & Arcus, 1992; Kagan, Reznick, & Snidman, 1988).

Behavioural inhibition has been described as a child's initial withdrawal from unfamiliar persons, settings, or challenging events followed by comfort seeking from someone well known to him or her. Also, the child looks fearful and distressed, suppresses any ongoing play or social behaviour, and refrains from interacting at all with the unfamiliar object or setting, and from vocalizing and smiling (Kagan, 1989; Kagan & Snidman, 1991,1999; Kagan, Snidman, & Arcus, 1992).

Shyness. Shyness is a term that is replete with meaning. One researcher described it in this way, "a heightened state of individuation characterized by excessive egocentric preoccupation and over concern with social evaluation...with the consequence that the shy person inhibits, withdraws, avoids, and escapes." (Zimbardo, 1982, p.466). The result of this heightened emotion is that the child becomes unable to function in an appropriate way. Shyness is a problem that has an impact on the ordinary functioning of the child in his or her daily routine. In this context then, shyness can be equated with social anxiety (Henderson & Zimbardo, 2001; McNeil, 2001).

Shyness is defined as anxiety and behavioural inhibition in social situations (Leary, 1986). In school, the primary symptom of anxiety disorder is behavioural inhibition (Kagan, Reznick, & Snidman, 1988). Behavioural inhibition most frequently manifests as shyness. Shyness occurs most frequently in situations that are novel, suggest evaluation of the person, where the person is conspicuous, or when others are intrusive (Buss, & Plomin, 1986; Crozier, 1995).

Young shy children often show an apparent eagerness to observe others, combined with a reluctance to speak to or join with them (Asendorpf, 1993). As an example, shy children may remain silent around unfamiliar people, even when spoken to. Shy children may refuse to enter a new setting such as a classroom without being accompanied by a parent. In addition, shy children may refuse to participate in athletic or play activities. They may look at the ground when around unfamiliar individuals and they may go to great lengths to avoid calling attention to themselves. Shy children want to interact with unfamiliar others, but don't because of their fear (Asendorpf, 1993). Asendorpf reported that recent nonclinical studies of children who do not often interact with their peers have identified one of the three kinds of solitude as being "social-evaluative shyness." Social-evaluative shyness was described, by Asendorpf, as being high shyness in early familiar peer groups. He added that social-evaluative shyness was a risk factor for the development of internalizing problems in mid-childhood. The study reported that this type of shyness mirrored a high sensitivity to peer attitudes, and that this sensitivity may lead to internalizing problems.

These five problem areas that can often accompany anxiety disorders are indications of how complex this area is. Selective mutism, school refusal, separation anxiety, behavioural inhibition, and shyness individually can pose formidable difficulties for the children afflicted by them, and for the provision of their treatment. Anxiety is a difficult, and problematic disorder, but the possibility of the accompanying features makes the condition so much more onerous.

Anxiety and schooling. The effects of anxiety on the ability of children to operate publicly and to engage in social interactions with their peers may seriously impair their

ability to form friendships. One of the interesting side effects of young children learning to make friends, is their development of empathy and prosocial behaviour (Seifert & Hoffnung, 1987). These of course are excellent qualities for young children to possess, enabling them more easily to make friends. However, anxiety to such an extent that it impairs the acquisition of these qualities makes it more difficult for some children to become part of their school communities.

Difficulties in dealing with anxiety also may reduce a child's ability to learn (Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1994; Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1995). Ialongo et al (1995) studied a large community sample of children (n=570). In their 1995 study, it was found that children who scored in the top third of anxiety symptom self-ratings in Grade One, were 10 times more likely to score in the bottom third of achievement scores, as measured on a standardized achievement test, four and a half years later. The results of this study were similar to the results of Ialongo et. al's. 1994 study which was of a shorter duration but using the same sample. In the latter study, children who scored in the top quarter of anxiety self-rating scales in the fall of Grade One, were 7.7 times more likely to be in the bottom quarter of scores on reading achievement in the spring term. The authors concluded that their results suggest that difficulty with anxiety may related to academic development and that intervening to reduce anxiety might have an ameliorative impact on academic progress (Walker, 2006).

Instruments used for identification of anxiety. Since Kindergarten and Grade One are part of a universal system of public education, this age is ideal for health-related screening programs. From an educational perspective, this is the ideal time to initiate

prevention and early intervention programs (Roberts, Attkisson, & Rosenblatt, 1998). In fact, it is common for Kindergarten and Grade One students to be screened for problems in vision, hearing, language, motor development, social behaviour, and attention span (Walker, 2006). However, a barrier to developing effective early identification, prevention, and intervention programs is that most measures of anxiety have been developed for older children, at later grades, who read and write. Few measures are available for children under eight years of age.

Presently, there are instruments that have subtests or sections designed to identify some characteristics of anxiety, shyness, and depression in early childhood. However, these areas are secondary to the main purpose of these instruments. Consequently, assessment in these areas is not as complete as might be obtained using an instrument specifically designed to identify the full constellation of the characteristics of anxious and shy behaviours in early childhood.

While there are some instruments such as the Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1992) and the Behavior Assessment for Children (BASC) (Reynolds & Kamphaus, 2004) that have a component or subscale dealing with anxiety that are appropriate for the Kindergarten to Grade one age group, anxiety, unfortunately, is not a major constituent part of these instruments. Instead, it is subsumed in a broader spectrum of behaviours. In addition, although these measures are widely used and possess highly acceptable levels of validity and reliability, as well as being easy to administer, they are inadequate for use by teachers, because they were designed to be administered in their entirety by a parent, the teacher, or as a self-report by an older child (8 years and

over). Also, the ages of the children in this study preclude the use of a self-report scale that requires a high level of reading or writing.

A reliable instrument. Since there has been a large increase in the number of adults with anxiety disorders, phobias, and depression (Kessler, et al, 1994; Offord et al, 1996) and several studies have indicated that there is a relationship between anxiety in early childhood and the later diagnosis of these difficulties (Pine et al, 1998; Regier et al, 1998; Schatzberg et al, 1998; Lewinsohn, Gotlib, Lewinsohn, Seeley, & Allen, 1998); it is imperative that a reliable instrument be developed that will identify children who are highly anxious and at risk for anxiety disorder at the earliest possible opportunity. Unfortunately, no such instrument now exists. A computer search using the key words "anxiety in young children" and "rating scales" of several databases including (a) Educational Resources Information Center (ERIC), (b) PsycInfo, (c) National Institute for Mental Health (NIMH), (d) Dissertation Abstracts, (e) PubMed, and (f) several journals, including the Journal of Consulting and Clinical Psychology, Archives of General Psychiatry, Journal of the American Academy of Child and Adolescent Psychiatry, and the Journal of Clinical Child Psychology did not identify a measure for use by teachers, designed to rate anxiety among school aged children aged five to seven years.

It would be helpful to have such an instrument for two reasons. First, a teacher rating scale would be helpful in identifying children who are experiencing difficulty with anxiety, shyness, or fearfulness. Teachers have a unique and valuable perspective because of their extensive and enduring contacts with individual children and their ability to compare the functioning of one child with others at the same age. Second, a teacher rating scale would be helpful in identifying anxious children and evaluating the

effectiveness of school-based programs aimed at reducing problems with anxiety. Such a rating scale should be the beginning component of an assessment for anxiety, shyness, and depression, comparable to interview data, not the last word (Martens, 1992).

Challenges to the Assessment of Anxiety in Children

Problems to be considered. There are at least seven difficulties that need to be addressed in considering assessment of children for anxiety. First, is that prevalence statistics are inconsistent. Second, this inconsistency of knowledge of the prevalence of anxiety in young children is confused by overlapping and variable definitions and measures. Third, co-morbidity with other conditions and disorders is common, adding confusion. Fourth, definitions of anxiety and anxiety subtypes are not agreed upon. Fifth, explanations for the etiology of anxiety disorders are complex and sometimes contradictory. Sixth, cognitive or behavioural trait variables are often emphasized depending on the theoretical orientation and professional training of the researchers. Seventh, anxiety in the home, in the clinic, and in the school may manifest differently.

Methods of identification. At present, a full assessment protocol for a child suspected of being anxious involves his or her early identification, by parents or teachers. This is followed by a series of information gathering activities to confirm the initial identification. The information gathering activities usually consist of interviews with the parents, child, and teacher. The next step is an observation of the child in the school setting. Kendall & Flannery- Schroeder (1998) state that, " Behavioural observations are best accomplished in the children's natural environments (e. g., school, home)." (p.27). Following this, a clinician administers an instrument to determine the existence and severity of an anxiety disorder. Parent rating scales are the most widely used measures at

this stage. This is followed by an intervention to assist the child in dealing with the effects of the disorder. This method is time consuming, as there are several steps that have to be followed. In addition, some of the steps involved, such as observing and interviewing, require specialized training. The child's progress then is monitored to determine the success of the intervention.

Rating scales

The term rating scale has many meanings. It is a term used to refer to a measurement continuum on which persons can be ordered with respect to the quantity or quality of some variable (Aiken, 1996). The notion of rating involves the assignment of a value to the variable measured. In the case of this study, the variable to be measured is anxiety.

The major advantages of checklists and rating scales over interviews and observations are efficiency, objectivity, and comprehensiveness. There is an ease of administration in using checklists and rating scales that is not found in other means of gathering information about a child's anxiety. The use of rating scales also precludes the child from being put in an evaluative, conspicuous, and intrusive situation thus confounding the measurement of anxiety with an experience that provokes it. Rating scales can be completed by teachers, parents, and other informants. In this way, a multitude of viewpoints can be obtained. The nature of a rating scale allows it to present more problems and thus obtain a wider range of information than other forms of information gathering such as observations and interviews (Aiken, 1996).

In contrast to the present approach to assessing anxiety in young children, the use of a teacher rating scale is likely to be less time consuming. It is anticipated that no

special training of teachers will be required to administer a rating scale. The teacher rating scale has another advantage in that it does not unnecessarily alert the child or parents to the concerns of the educators. As Wilson and Bullock have noted

> Behavior rating scales have a unique position in the psychometric spectrum in that they provide a behavior assessment of the individuals being rated. This single attribute has made behavior rating scales very useful, because value judgments about the appropriateness or inappropriateness of behavior is based upon the multiple perceptions of those who observe an individual within a given environment. A second feature of behavior rating scales is their brevity and ease of use, which makes it possible for a rather broad range of behaviors to be assessed in a time-efficient manner. A third positive aspect is the fact that the sophistication level of the rater is not a crucial element in the rating process (Wilson, & Bullock, 1989, p. 186).

However, rating scales differ from naturalistic observations such as interviews and direct observations in that the information obtained is gathered in an informal manner. Scales also involve interpretation rather than simply recording observations (Anastasi, 1988).

Rating scales are useful for evaluating the more global aspects of behaviour. They are also useful for assessing behaviours that are difficult to measure directly. Results based on rating scales also can be compared with results obtained from more specific observational procedures, such as interval or event recording. Ratings are valuable in some assessment situations because they are less costly than other methods in terms of time and personnel resources (Sattler, 1992, p. 494).

Teacher rating scales have been in use for a number of years in a number of areas related to mental health. For example, they have been widely used in evaluating behaviour, attention deficit, and hyperactivity problems in the classroom (Aiken, 1996). Their efficacy is well established (Aiken, 1996; Sattler, 1992) and, consequently, their use is widespread (Aiken, 1996; Sattler, 1992).

Some instruments do include a number of questions that comprise an anxiety subscale as part of a rating system for a broad range of behaviours. Two of the rating scales most commonly used by teachers are The Child Behavior Checklist (CBCL) (Achenbach and Edelbrock, 1991) and The Conners Rating Scales (CRS) (Conners, Sitarenios, Parker, & Epstein, 1998). According to a review by Martens (1992), the Conners Rating Scales are "...among the most widely used assessment instruments for childhood problem behaviours in the world" (p.234). The Child Behavior Checklist is a widely used instrument designed to obtain parents' ratings of their children's problems and competencies. Each of these rating systems has a rating scale version designed specifically for use by teachers.

The Child Behavior Checklists. Achenbach and Edelbrock have developed three instruments to assess children's behavioral symptoms: The Child Behavior checklist (CBCL), The Teacher's Report Form (TRF) and the Youth Self-Report (YSR). The CBCL was designed for parents to report on the behaviours of their children that may indicate they are experiencing psychological difficulties. The TRF is a teacher version of the CBCL "designed to provide standardized descriptions of behavior, rather than diagnostic inferences" (Achenbach & Edelbrock, 1983). The TRF is one of the most

frequently used problem-behavior rating scales with children ages 6 to 16 years (Elliot & Busse, 1992).

The CBCL consists of 113 behaviour problem items scored on a 3-step response scale, plus 20 social competence items. The raw scores then can be converted to T-scores. Coefficients of reliability are above .90. Several tests of criterion related validity support the validity of this instrument. The CBCL has been found to be a reasonably reliable instrument. Test-retest reliability, interrater reliability, and longer term stability were assessed and found to be .74, .96, and .60 respectively (Achenbach & Edelbrock, 1983). Although the test-retest score is barely acceptable and the interrater reliability is high, the stability score is inadequate. The literature reviewing this particular rating scale, for the most part, seems to agree that it is a reliable scale with strong validity (Eiraldi, Power, Karustis & Goldstein, 2002; Aiken, 1996; Christenson, 1992; Elliott, & Busse, 1992). Unfortunately, the scale is aimed at children 6 years and over. Also, one of the major problems with this scale is that there is only one subscale out of nine that deals with anxiety and, even at that, anxiety remains only a part of a subscale. This provides too small a sample of items to be of use in the study of anxiety, shyness, and depression in the target population and raises serious questions about the construct and content validity of the instrument with respect to shyness in particular and early childhood anxiety disorder in general.

The TRF is designed to be filled out by teachers and usually can be completed in less than an hour. The TRF provides a behaviour profile. Behaviour problems are identified and arranged into clinical scales, which are based on an extensive factor analysis of checklist items. There are 9 behaviour problem scales. These are arranged

under the following headings: internalizing syndromes, mixed syndromes, and externalizing syndromes. The exact position of the nine scales in relation to the three headings varies with the sex and age of the child. See Figure 3, to see how the behaviour problem scales, based on the Teacher's Report Form, are arranged for boys age 6-11.

In summary, the Child Behavior Checklist is a valuable addition to the field of the assessment of children. It is quite useful in distinguishing clinical from nonclinical populations and in supplying a broad overview of a child's behavior problems from the parents' point of view (Keyser and Sweetland 1984), but is inadequate as a tool for the diagnosis of childhood anxiety. Low test-retest reliability and stability scores compromise the use of the tool to monitor interventions for anxiety. Poor construct and content validity due to too few items in the areas of shyness and anxiety compromise the usefulness of the CBCL in the identification and characterization of the disorder in children.

The Conners Rating Scales. The Conners Rating Scales (CRS) is an instrument that was designed to identify hyperactivity in children. However, it also has been found to be helpful in identifying other problem behaviours. The CRS is made up of two forms: the Revised Conners Parent Rating Scale (CPRS-R) and the Revised Conners Teacher Rating Scale (CTRS-R).

The CTRS-R is designed to obtain information, through screening, to help in understanding several important domains of child behavior (Conners, Sitarenios, Parker, & Epstein, 1998). Conners et al (1998) describe the use of the scales to assist clinicians in assessing, diagnosing, and treating children's behaviour problems. There are two versions for use by teachers, a 28- item version and a 39-item version. The 39-item evaluation

administered by teachers will be discussed. The CTRS-R is designed to identify behavior problems and other signs of adjustment disorders in children aged 4 to 12 years. The 39-item version contains 6 factors for 3 to 17 year old children, oppositional, hyperactivity-impulsivity, inattentive/cognitive problems, social problems, anxious/shy, and perfectionism.

The original CTR-S had the following factors: hyperactivity, conduct problem emotional overindulgent, anxious-passive, asocial, and daydream-attendance problem. The revision has included a more definitive delineation of behaviour problems to be screened. Symptoms are rated on a 4-point scale. Raw scores on the factors are converted to *T* scores. *T* scores two or more standard deviations above the mean may indicate problem areas. The literature indicates that the Conners' Teacher rating scale has adequate reliability and validity (Sattler, 1992; Conners, & Blouin, 1998; Aiken, 1996; Martens, 1992; Oehler-Stinnett, 1992.

There many studies, critiques, evaluations, and reports about these two instruments. The CBCL and CRS have become the benchmarks by which many other clinical decision-making tools are judged (Doll, 1998). Some of the areas where comparisons of the CBCL and the CRS have been made to other instruments are: ease of administration (including scoring and interpretation), validity, reliability, and economy of design.

Unfortunately, these instruments, although widely used, have only a very small number of items focussed on anxiety and do not provide sufficient information for research applications. Although these popular instruments are widely used and accepted, they put less emphasis on anxiety than is required for research or identification purposes.

Many of these instruments are useful in identifying children who may be at risk of developing problems in behaviours that could include anxiety. However, anxiety is not the main focus of these measures. Although useful in identifying at risk children, they are not specific to anxiety and include it only as part of a broad band of problem behaviours, or as a possible co-existing characteristic. In addition, these instruments do not make suggestions for monitoring interventions, or for intervention evaluation. Although, they may be re-administered after a period of time to monitor any changes in the severity or frequency of the behaviours identified, they are silent on what to do to assist in educators dealing with these behaviours.

As mentioned earlier, there are few measures of anxiety with good psychometric properties available to be used at the Kindergarten to Grade Two levels (Walker, et al, 2006). An exception is the Spence Preschool Anxiety Scale (SPAS, Spence et al., 2001), This is a 28 item questionnaire completed by a parent. It uses a five-point scale to indicate the frequency of a variety of anxiety symptoms. It has been evaluated in a large community sample ranging from 2.5 to 6.5 years of age. Confirmatory factor analysis (Dadds & Roth 2001; Dadds, et al, 1999;) indicated that the subscales for generalized anxiety, social anxiety, obsessive-compulsive disorder, physical injury fears, and separation anxiety are generally consistent with the major anxiety disorders described in the Diagnostic and Statistical Manual IV (DSM-IV, 1994).

Spence et al (2001) presented the findings of a study which involved 1138 children and their parents. The parents were asked to complete an interview, which was rated on a five-point scale from "not at all true" to "very often true." The study involved a large community sample of 3, 4, and 5 year olds and found that the items sorted into main

factors corresponding to the main categories in DSM-IV relevant to this age group. These were: generalized anxiety, social phobia, separation anxiety, fears of physical injury, and obsessive compulsive disorder with a higher order anxiety factor (Spence, Rapee,McDonald, & Ingram, 2001). This study revealed that three year olds scored highest on the anxiety measure, but that four and five year olds scored similarly. Unfortunately, the SPAS was designed for parents to administer, but not teachers.

As noted previously, the measurement of anxiety is much less developed for the five to seven years age group than it is for those 8 years and over. Most children who are eight years of age and over are able to respond to self-reporting measures concerning anxiety, while Kindergarten aged children typically are not able to do the reading and writing tasks required. There has been some work on pictorial rating scales for anxiety in young children, but this work is at a preliminary stage (Peter Murius, personal communication to Dr John Walker, 2001; Turgeon, Vitaro, Marchand, & Brousseau, 2001). Teacher ratings have proven quite valuable in previous studies of other early childhood problems as teachers have the advantage of being familiar with many children at specific ages.

Summary of challenges in developing an anxiety measure. Some of the challenges that need to be overcome in developing and designing an anxiety measure for young children are: the age of the children, the attitudes of the teachers to using such a measure, skepticism about the notion of anxiety in young children, and the need to establish all types of reliability and validity.

Children from five to seven years of age pose a problem for developing a rating scale in that a self-report scale likely would not be of useful. This is because children at

this age are just beginning to develop the ability to read and write. Consequently, their academic skills are unreliable. A rating scale, to be completed by their teacher, would overcome this difficulty. It would allow for an unobtrusive report with respect to a child who is suspected of having anxiety or shyness problems. An interview, or an observation is likely to produce further anxiety for children who are already experiencing uneasy feelings about the presence of a stranger in the classroom. This would likely be all the more so if the child were aware that he or she is the subject of the observation. An interview leaves no doubt in the mind of the child that there is something amiss and that he or she is the subject of investigation.

Teachers' attitudes to the use of such a measure is a concern that has to be addressed. Many teachers are familiar with the use of rating scales. However, they may need to be reassured that using a rating scale to identify an anxious child is going to be in the child's best interests at such a young age. This might be accomplished by explaining the content of the scale, how the information will be used, and that the scale is valid and reliable. Also, teachers would have to be informed that all results are confidential and assured that children who are identified as fitting the profile of an anxious child will receive appropriate and timely treatment. Or, at least, that treatment options will be offered to the family.

There are many other factors that present challenges to the development of an anxiety measure. Measures currently being used are often too general to be applied for use in assessing anxiety in young children. Most measures are broadly based instruments which may contain a sub scale dealing with anxiety, but anxiety as such is not their purpose or focus.

Most measures are oriented towards older children, adolescents, and adults. The purpose of this study is to develop an instrument for use with young children from five to seven years of age. Consequently, these instruments are not suitable for this study.

Existing rating scales that are in wide use, e.g. The Behavior Assessment System for Children (the BASC), and the Conners Teacher Rating Scale (the CTRS-S) were not developed for use in schools with early years students.

Teachers are persons with whom young children spend a great deal of time. Teachers require as much knowledge about their students as they can possibly obtain in order to be able to successfully deliver the education needed. As a result, teachers need to be brought into the early identification and intervention process. They play a crucial part in the early identification and often will be required to assist in an intervention plan for young children with anxiety.

Therefore, the development of a valid and reliable rating scale for use by kindergarten and grade one teachers to identify young children aged 5 to 7 years with anxiety would be an important contribution to education.

Chapter 3

Method

Introduction

In this study, a mixed methods research approach was employed using both quantitative and qualitative methods. The data are presented in a two-study format. The first study employed both quantitative and qualitative methods, involving semi-structured interviews with teachers and the completion of a prototype rating scale. The second study employed a quantitative method involving the administration of a revised version of the prototype scale from Study 1, and comparisons of its psychometric properties to other instruments.

Key theme analysis. A key theme-analysis was used to formulate the common or emergent themes in the data, and proved valuable in endorsing the items that appeared in the prototype rating scale (TRAC). This confirmation of items in the TRAC meant that any reconstructing of the Teacher Survey was not necessary. It became interesting to see that a variety of teachers had many descriptions in common for anxiety in children. This commonality gives reassurance that the emergent themes have validity because the notions shared about what constitutes anxiety and shyness appeared to be consistent within this group.

Study 1

Participants

The subjects consisted of twenty-five provincially certified full time kindergarten and grade one public school teachers. All participants in the study were in the employ of

one of three urban school divisions in Winnipeg, Manitoba, and were selected from several schools in these divisions. In the schools chosen for the research, all that was required for participation of the teachers was their permission and the permission of the principals of their schools. Approval to conduct this research was sought and obtained from the school principals concerned, the Education/Nursing Research Ethics Board (ENRB) Office of Research Services, the University of Manitoba, and the Health Research Ethics Boards Faculty of Medicine, University of Manitoba.

Participant Profile. There were specific criteria that I sought in the choice of teachers for this study. They had to be full time teachers willing to participate freely in the survey and interview. As well, the principals of their schools had to be supportive of the research. The school divisions were selected primarily on the basis of easy access to the schools, the teachers, and the school principals. The schools, with one exception, were all within short distances of each other. First, the schools were selected. Then the principals were contacted and then the teachers were contacted. Schools and principals familiar to me were the first ones contacted. The Anxiety Disorders Clinic contacted one school that is part of the clinic's program, and the teachers there were asked to participate in the study.

The teachers who were surveyed taught Kindergarten, grade one or, in some cases were teaching or have taught both. The range of experience varied from a teacher with one year of experience, to teachers with more than twenty-five years of experience.

Instruments. Two instruments were used in the first study. They were developed to elicit teachers' attitudes and concepts about childhood anxiety. The instruments were developed by the team from the Anxiety Disorders Clinic at St. Boniface General

Hospital. Members of this team, all psychologists, had expertise in various areas of child behaviour as well as in childhood anxiety. Several methods were employed by the team to formulate the two prototype instruments. For development of the Teacher Interview Questionnaire (The TIQ), the members of the team consisting of a group of experts first engaged in brainstorming ideas. Then, a review of the literature designed to derive questions for the TIQ was undertaken. The questions chosen were then reviewed by the team.

The Teacher Interview Questionnaire is a semi-structured interview containing six open-ended questions divided into two sections of three questions each (See Appendix D). The first section of the Teacher Interview Questionnaire form consists of three questions asking teachers to describe behaviours that an anxious, fearful, or shy child might exhibit in school settings. The second section consists of three questions also designed to elicit the teachers' descriptions of anxious, fearful, or shy children who are not especially anxious, shy, or fearful in social situations.

It is considered to be a semi-structured interview because the questions are written for teachers to complete but may also be discussed with the interviewer. The questions are open-ended and allow for latitude in the teachers' answers. The teachers were given a choice as to whether they wished to complete the questionnaire on their own or with assistance. All teachers were given the opportunity to complete the TIQ on their own after a brief discussion about behaviours that might describe a shy, fearful, or anxious child. The teachers then filled in the answers to questions of a general type regarding anxiety in young children.

The second instrument that was used is called the Teacher Ratings of Survey Items for Children (TRAC) (See Appendix E). development of this prototype scale followed the format previously described. That is to say, that a team of experts from the Anxiety Disorders Clinic at St. Boniface General Hospital engaged in brainstorming ideas for inclusion in a prototype instrument. The team conducted a review of the literature and examined specifically three instruments which had items relating to anxiety in children. These three instruments were the Behavior assessment System for Children (The BASC), the Conners Teacher Rating Scale (The Conners), and the Spence Preschool Anxiety Scale (The SPAS). The team of experts then reviewed the questions for suitability of fit for inclusion into a prototype scale. This is a rating scale consisting of 50 questions. The scale consists of two sections. The first forty-six questions are in the form of a five point Likert scale requesting participants to circle the appropriate response to a variety of questions about what constitute the most typical description of how a fearful, shy, or anxious child may present in the school setting. The second part of the TRAC consists of four spaces for teachers to enter in any descriptions or other related information that they might feel may be missing from the survey questions of the TRAC.

The TRAC scale used in this study was devised by members of the Anxiety Disorders Clinic in St. Boniface General Hospital, in St. Boniface, Manitoba. This scale was devised so as to select the most common features of a child displaying anxiety, shyness, or inhibited behaviour. Members of the Clinic collaborated in designing this scale by reference to existing scales. As these scales were devised to indicate children, adolescents, and adults with these disorders, it was felt that with modifications, some of

the items contained in these scales could be of use in the development of a scale for purposes of this study.

Qualitative Methods

For Study 1, a qualitative research method was deemed to be an appropriate approach because it allowed the researcher to gain an understanding of the perspective of teachers involved (Bogdan & Biklen, 2003; Denzin & Lincoln, 2000). In qualitative research, it is common for the researcher to attempt to understand the actions of the informants as well as their interpretations of the world around them (Bogdan & Lutfiyya, 1996). This study was an attempt to bring such a human dimension to the collection and interpretation of the data obtained. This attempt to gain the perspectives of the participants was accomplished through personal contact with the participants by way of a conversational dialogue that related to the questions and possible answers prior to the completion of six pre-set questions (See Appendix D). It is my belief that by engaging the teachers in this personal way, the results were useful in revealing those characteristics and behaviours that helped to compose a reliable and valid instrument for the identification of Kindergarten and Grade One children at risk for developing anxiety disorder.

The data was gathered using semi-structured interviews with the teachers participating in the study. Discussions with the teachers about their perceptions of what constituted shyness and anxiety in young children preceded the introduction of the prototype rating scale that they were asked to fill out. The semi-structured interviews, along with the open- ended questions on the prototype scale allowed for the combining of the data management as well as the data analysis. Combining the semi-structured

interviews with the information obtained from the prototype rating scale is one crucial facet of qualitative research (Merriam, 2002).

This study used a variety of methods in gathering data. Several researchers have referred to this approach, involving the use of semi-structured interviews, and open-ended questions as the interweaving of methods in data gathering and data. Analysis (Bogden & Biklen, 2003; Denzin & Lincoln, 2000; McEwan & McEwan, 2003). Each teacher's response was analyzed independently as well as considered with the other teachers' responses.

One important procedure in qualitative research is the analysis of the data received from respondents to identify emergent themes common to the respondents' selections and answers (Bogden & Biklen, 2003). Looking at the information in this way enables the researcher to consider different themes that could emerge from the data. Checking over these common themes serves as a means of establishing whether the whole procedure is operating in a way that fits in with the goal of obtaining information for the development of a useful rating scale.

Specifically, the responses were analyzed with the intention of identifying common themes in the teachers' comments about the prototype rating scale. It was interesting to see that the teachers' responses about what constituted anxiety had similarities, in spite of the fact that they did not know each other and their comments were made at different times and in different places.

Teachers' questions and concerns. It was hoped that the establishment of these themes would allow for a restructuring of some of the rating scale questions that may be vague or repetitive and the inclusion of a few questions that had not been included in the

original prototype. Some teachers wanted to know if they should have an individual student in mind when answering the questions on the rating scale prototype, or if they should express what they felt were qualities that applied in a general fashion to children whom they considered to be nervous and anxious. Concerns such as these were addressed readily by inviting the participant teachers to think about these concepts in general; but allowing that, if this proved difficult, they could answer with a specific child in mind. However, it is imperative to note that the participating teachers were reminded not to give any responses that may in any way, serve to identify any child. The point here is that through the use of a qualitative research method, a personal discussion of a very salient point of procedure, would allow the participants to complete the subsequent rating scale with confidence, and to seek procedural clarification during the process. A strictly quantitative approach would have precluded the possibility of such a valuable interchange.

Development of the questions. The interview questions for the Teacher Interview Questionnaire were developed by a team of experts in the field of anxiety disorders from St. Boniface General Hospital, of which the principal researcher was a part. These questions were designed to elicit opinions from the respondents, and to generate discussion relating to the characteristics that make up anxiety and shyness in young children. The teachers were asked to think of a child or children who would, in their opinion, exhibit the characteristics associated with anxiety, shyness, and inhibited behaviour. When questions arose as to what I thought these terms meant, I engaged in a brief discussion with the teachers, with the goal of having them articulate those features and behaviours which they felt made up these problems. Then, the teachers were asked to

answer the six questions of the structured interview in the Teacher Interview Questionnaire. It was found that the preceding discussions were helpful to them in both formulating and writing out their responses.

The categories that were addressed by the interview questions related to two comments to which the teachers were asked to respond. Each of the comments had three questions that were answered by the teachers. The first comment is "Some children are very shy or socially anxious in school settings." The three questions relating to this comment that were to be answered are: Question 1. "What descriptive words would you use for this type of child in the classroom?" Question 2. "What behaviours would you see in the classroom or the school that would suggest to you that a child is particularly shy or socially anxious?" Question 3:"What situations may be difficult for this child in the school setting?"

The second comment was "Some children may be fearful or anxious even if they may not be especially shy in social situations." Teachers were asked to respond to this comment by answering the same three questions as for comment one. Question 1. "What descriptive words would you use for this type of child in the classroom?" Question 2, "What behaviours would you see in the classroom or the school that would suggest to you that a child is particularly shy or socially anxious?" Question 3, "What situations may be difficult for this type of child in the school setting?" Issues of usefulness of the scale. There are at least 7 characteristics that must be incorporated into the design of a teacher rating scale for the identification of young children with anxiety (Gay & Airasian, 2000; Graziano & Raulin, 2000; Aiken, & Groth-Marnat, 2006).

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Plausibility. A scale will be useful if it is plausible. The plausibility of the scale refers to its credibility for use in measuring what it is intended to. In this way, it is much like the validity of a test instrument, in that a properly designed instrument must measure what it purports to measure. If the rating scale does not possess this critical quality then it is not useful, and should be discarded. According to Aiken, "Perhaps the simplest or most straightforward method of obtaining evidence for the validity of a psychometric instrument is to examine its content." (Aiken, 1996 p.100). This examination of the content may be accomplished in several ways. However, from a qualitative research methods perspective, the use of experts' judgments of the extent to which the content of the instrument pertains to the purpose for which it was constructed would be employed. There are other ways to help establish plausibility or validity, but as they employ a quantitative approach they will be discussed later.

Practicality. The second quality necessary for establishing a useful rating scale for teacher use is the need for it to be practical. That is to say, the rating scale must be useable in a hands-on way and give the administrator of the scale a sense that it is a worthwhile instrument because it is practical and not too abstract.

Ease of administration. A third quality that a successful rating scale must have is that it should be easy for the teacher to administer. It should not require extensive training in its administration. The instructions have to be clearly and simply written so as to be

readily comprehensible by classroom teachers who may have limited experience and training in the administration of psychometric instruments.

Appropriate and responsible. A fourth characteristic to ensure a successful rating scale is that it should be professionally appropriate and responsible. These two terms refer to the need to assure that the rating scale has the qualities of a well-constructed instrument. The most notable feature of such an instrument is that it must measure what it states it measures in a consistent fashion. This means that a successful rating scale is reliable if its results are free from errors of measurement (Aiken, 1993, p.78). These errors include being affected by such factors as the internal state of the child, such as illness or low enthusiasm, or external influences such as an uncomfortable environment in the classroom at the time of the administration of the instrument.

Inexpensive. A fifth characteristic that can ensure a useful scale is that it be inexpensive. It must be inexpensive in terms of cost to purchase, in terms of time to administer, and in terms of personnel time needed to become familiar with the administration and interpretation of the instrument.

Ease of scoring and interpretation. A sixth quality that a successful rating scale should have is that it must be easy to score and interpret the results obtained. The obtained scores should not have to be manipulated or transformed in order to arrive at their meaning. Ease of interpretation will enhance the teacher's ability to use the test with confidence.

Suggested interventions. A seventh characteristic that a rating scale should possess is that it should suggest preferred interventions based on the results obtained

from the scale. Many standardized instruments do not offer suggestions for intervention after the results have been secured.

These seven characteristics that together make up a successful rating scale can be viewed from a qualitative research perspective. The degree to which these qualities appear or do not appear may best be determined by looking beyond any numerical or statistical data about these variables. Although statistical information would certainly be helpful, a thorough investigation using observation of these variables is the preferred method. The researcher must ask him/herself if the variables are present or not? If not, does the absence of any particular variable have a detrimental effect on the validity, reliability, stability, and usefulness of the rating scale? Once acceptable answers to these questions are obtained, then the researcher can proceed in knowing the status of the scale from a quantitative perspective.

Procedure for Study 1

School principals from the various school divisions were sent a letter requesting the participation of Kindergarten and grade one teachers who might be prepared to present themselves as candidates to be interviewed for the study. Please see Appendix A, Letter to the Principal.

The letter contained the process involved in the interviews. Also, the letter included the rationale for the study (See Appendix A). Teachers of Kindergarten and grade one were canvassed by the principal to see if any would be interested in participating in the study. Those interested in being a participant notified the principal. The principal, by a phone call, related to me whether there were interested parties or not. Those who indicated a desire to be participants, as indicated by the school principal, then

received a letter from the principal investigator outlining the procedure to be employed in the interview (See Appendix B). The principals did not know the specific identities of the participants

Twenty-five teachers were recruited from five different schools located in three different school divisions. These school divisions are all in the City of Winnipeg, or close by. I was a teacher in one of the school divisions for many years. As a result, the process of obtaining approval from the principals of these schools, and possible interested participants was not as involved as it would have been in other school jurisdictions. A few members of the Anxiety Disorders Clinic at St. Boniface General Hospital also have been involved in working with children from one of the major school divisions within the city limits, and consequently obtaining approval for conducting the research, as well as soliciting interested teachers here also was straightforward. The principals were asked for permission to conduct an investigation with teachers interested in the process as well as in the topic of the research.

The teachers then were contacted by phone by the principal investigator to set appointment dates. The principal and teachers were informed that the interviews and the completion of the survey form should take no more than a half-hour. It should take about10 minutes for the teachers to participate in and complete the Teacher Interview Questionnaire form (TIQ). The teachers were able to complete the TRAC in about 15 to 25 minutes. Teachers were sent a letter outlining the procedures to be used in the interviews and completion of the survey.

The principal investigator alone conducted the interviews. The goal of the interviews was to find out what behaviours children exhibit at school that teachers

recognize as shyness, anxiety, nervousness, or inhibition. The teachers were given a Teacher's Consent Form to read and sign prior to filling out the questions and survey form (Appendix C). The Teacher's Consent Form was explained to the teachers prior to their participating in the interviews, and before they signed their consent.

To obtain the teachers' data, at the interview session, the teachers were presented a two-page form called the Teacher Interview Questionnaire form (Appendix D). This form requested information about their perceptions of shy, anxious, or inhibited children. The two pages of the Teacher Interview Questionnaire will be completed as an interview. At first, this was done by informing the teachers that the purpose of the semi-structured interview was to assist them in formulating and conceptualizing an idea about what might constitute anxiety, shyness, and inhibition in young children. The information was also designed to put the teachers at ease in the event that they may have some anxiety about the process. The teachers were asked to think about the behaviours that they would associate with a child who appears to exhibit shyness, anxiety, and inhibition. The ideas that the teacher may be considering could refer to either a child in their current class or perhaps a child or children from past classes.

The teachers then were presented with a form containing three open-ended questions about children who may be very shy or socially anxious in school settings. Teachers were informed that they could complete the form alone, using a pen or pencil or, if they wish, to discuss the questions and then complete the form. The purpose of administering these questions is twofold: one, to obtain important information as to what the teachers perceive as behaviours describing anxiety and shyness, and second, to prepare teachers to conceptualize how these behaviours manifest themselves, so as to

better prepare them for filling in the survey form. The completion of the Teacher Survey should take no more than ten to fifteen minutes.

Participants were informed that the principal investigator is available for assistance should it be needed. A further three questions were asked concerning children who may be fearful or anxious although they may not be especially shy in social situations (See Appendix C.) Immediately following completion of this semi-structured interview, teachers will then complete a Teacher Ratings of Survey Items form (TRAC) (Appendix E).

The Teacher Ratings of Survey form (TRAC) was constructed by the members of the Anxiety Disorders Clinic at St. Boniface General Hospital of whom the principal investigator is a part (See Appendix E). This semi-structured interview and completion of the brief survey form lasted about 20 to 30 minutes. Teachers completed the forms, which were then placed in sealed envelopes provided for them. The identity of the participant was known only to the principal investigator. The names of the teachers did not appear on the interview form or the 50-item survey. A number was assigned to each of the completed forms so as to enable the investigator to keep track of the forms. Assigning of a number would allow for ease of communication should the need arise. The principal investigator then collected these completed forms which were then placed in a secure facility to which only the principal investigator will have access. Participation in this interview and survey form involved no risk for participants. Teachers were given a consent form to sign indicating that they have understood to their satisfaction the information regarding their participation in the research project and that they agree to participate as subjects. See appendix C for the Teachers Consent form.

All data was treated as confidential information. No individual results were released to anyone except the principal investigator. To ensure confidentiality, personal information or data collected about participants in the investigation is not about the purpose of the investigation. The purpose of the investigation is the suitability of a survey form for use in identifying shy and anxious young children, not the teachers who are the participants providing the information. As a consequence, personal data about individual teachers were not reported or made public. Information or data collected will not be associated with the participant's name or other identifying information. Access to the information will be limited to the principal investigator directly involved in the research. The principal investigator may share results with other researchers in the field. The shared information will not include the participant's name. As mentioned earlier, the data collected will be kept in a secure locked cabinet to which only the principal investigator will have access. The data are password protected on a computer.

The principal investigator will provide feedback to the participants. This could be done by presenting the participants with a printed copy of the results. The information obtained from these forms could then be examined so as to determine which behaviours teachers typically use to describe shy, anxious, or inhibited children. The behaviours most often chosen by the teachers will then be used to form the revised rating scale. A draft version of this scale will then be constructed. When this dissertation thesis is approved, participating teachers will be provided with feedback about the study's findings.

It was intended that if the results of Study 1 showed consistency among (1) the literature, (2) teachers informal ideas about anxiety in school children derived from

interview questions, and (3) TRAC questions, then the psychometric properties of the TRAC would be assessed. This assessment is presented in Study 2

Study 2

Participants.

The subjects in this study consisted of 16 teachers and the parents of children who were identified as having anxiety disorder by the Anxiety Disorders team at St. Boniface General Hospital. The parents were selected as they were participating in a program for parents of shy and fearful children called Coaching for Confidence. The teachers completed a battery of three tests, the TRAC (Coaching for Confidence research team, 2002) and the anxiety subscales of the Conners (CTR-S) (Conners, Sitarenios, Parker, & Epstein,1998), and the Behavior Assessment System for Children (BASC) (Reynolds & Kamphaus, 2004). As part of the research, the parents completed the Spence Preschool Anxiety Scale (SPAS) Spence, Rapee, McDonald, & Ingram, 2001), a form describing their children. These parents then asked the teacher as part of the research to complete the battery of three tests describing the child's functioning in the classroom. The teacher received an honourarium of $ 10 for returning the completed forms to the researcher. The Children were not participants in this study.

Features of Quantitative Research

For Study 2, quantitative research methods were deemed to be an appropriate use for this investigation because they allowed for a numerical interpretation of the information obtained. In this way, the data can be examined and presented in a manner so as to present the interpretation of the information in a measured way. This enabled the data to be subjected to a statistical analysis.

There are many definitions or descriptions of quantitative research. Gay & Airasian describe quantitative research in this way:

> Quantitative methods of research are based on the collection and analysis of numerical data, usually obtained from questionnaires, tests, checklists, and other formal paper-and-pencil instruments. ...Quantitative researchers generally have little personal interaction with the people they study, since most data are gathered using paper and pencil, structured, noninteractive instruments.
>
> Underlying quantitative research methods is the belief or assumption that we inhabit a relatively stable, uniform, and coherent world that can be measured, understood, and generalized about (2000 pp.8 & 9).

There are two principal applications in the use of statistical analysis. These are (1) descriptive statistics, and (2) inferential statistics. Descriptive statistics make it easier to understand and categorize the data. Inferential statistics assist the researcher in making inferences or deductions about the participants in the investigation (Graziano & Raulin, 2000). In Study 2 an approach utilizing elements of both descriptive and inferential statistics was used.

For Study Two, the aim of the investigation was a twofold one. The first goal was to administer the Teacher Rating of Anxiety in Young Children instrument (TRAC) with the teachers of a group of children who were nominated by their parents as being anxious children. The second goal was to compare the results obtained from the TRAC with the anxiety items from the Spence Preschool Anxiety Scale (SPAS or the Spence), Conners Teacher Rating Scale (CTRS), and the Behavior Assessment Scale for Children (BASC).

These are shorter but more widely used teacher ratings, which are designed to cover a much broader age range of children than the TRAC.

Descriptive statistics. According to Graziano & Raulin, "There are three important groups of descriptive statistics: (1) frequency distributions, (2) graphical representations of data, and (3) summary statistics. Interpretation of the data employed these groups of descriptive statistics, and they will be presented in a way so as to describe the psychometric properties of the TRAC.

Psychometric properties of the TRAC. The American Heritage Dictionary defines psychometrics in this way, "The branch of psychology that deals with the design, administration, and interpretation of quantitative tests for the measurement of psychological variables such as intelligence, aptitude, and personality traits" (1969, p.1056).

With this definition in mind, there are several properties that will be presented. The TRAC was compared with three other instruments. The resulting data from these comparisons can be used to determine the efficacy and reliability of the TRAC. Favourable comparisons with well known and widely used psychometric instruments will mean that the TRAC has reasonable and acceptable properties for use in identifying anxiety in young children. These comparisons are called correlations.

Correlations.

The comparison of the four instruments (the TRAC, the SPAS, the CTR-S, and the BASC) with each other will be performed once information from the four instruments has been gathered. Each participant was assigned an ID number. Then, a number was designated for each response. The responses were recorded using a five-point Likert

scale, ranging from 0 to 5. For example, from the TRAC the choices were, Not at all Typical=0, Seldom Typical=1, Sometimes Typical=2, Quite Often Typical= 3, and Very Often Typical=4. The responses were then coded for use in a statistical program. The statistical program used was the Statistical Package for the Social Sciences (SPSS). This is a very widely used program and is likely the most popular in use.

The code was used in this way: when a response was 0 (Not at all Typical), it was assigned a numerical value of 0. Subsequent responses were assigned numbers in a similar way, e.g. a response of 1 (Seldom Typical) received a value of 1; a response of 2 (Sometimes Typical), received a value of 2; a response of 3 (Quite Often Typical) received a 3; and a response of 4 (Very Often Typical) received a value of 4.

The SPSS is a computerized program which allows for the cross comparisons of test instruments such as those used in this study. The resulting cross comparisons are referred to as correlations. The program assigns a value to the strength, or the lack, of the relationship among these instruments. The value in this instance is called the product-moment correlation, the Pearson r. This is the most common technique for calculating cross comparisons, or correlation coefficients.

The strength of a relationship using a Pearson r correlation coefficient is shown by the size of the correlation. A number is assigned to the instrument under consideration. A number close to either a +1 or a –1 is a sign of a strong correlation indicating that the variables match so closely, that if we know the value of one of them, it can be predicted with a high degree of accuracy, the value of the other. Hence, if the correlation coefficient among the four instruments corresponds highly to each other, then it is a strong indication that the TRAC possesses a high degree of reliability.

"Correlational research involves the collecting of data in order to determine whether, and to what degree, a relationship exists between two or more quantifiable variables." Gay & Airasian, 2000, p.321). In this case, the variables being compared are the anxiety items in three instruments with the TRAC.

In correlational studies the scores from one variable are being compared with the scores from another variable. Each comparison is assigned a number called a correlation coefficient. A correlation coefficient is a number which is assigned to describe whether the relationship between the variables is a close one or not. The correlation coefficient is a number between –1.00 to +1.00. The majority of correlation coefficients are expressed in decimal numbers. These can be negative or positive. A correlation coefficient indicates the strength of the relationship between the two variables being researched. A correlation coefficient close to either –1 or +1 indicates a strong relationship between them. The importance of this information, is that knowing the correlation coefficient of one variable allows us to predict the level of the other with a high degree of accuracy (Ormrod, Saklofske, Schwean, Harrison, & Andrews, 2006)

There are different methods of calculating a correlation co-efficient. The most commonly used method is the product moment correlation. This is more commonly referred to as the Pearson *r*. The Pearson *r* is used most often because the majority of instruments in education measure such characteristics as personality and achievement. The data from these types of tests is usually reported in an interval form. Interval scores are scores that contain a uniform space or gap between the scores. This allows for an easier establishment of a Pearson *r* in determining a relationship than other methods of establishing a correlation coefficient. To determine the Pearson *r*, a formula is applied,

incorporating the data from the variables to be compared. The implementation of this formula yields something called statistical significance. This term refers to the conclusion that can be drawn from the results. If the results are statistically significant that indicates that the results obtained by using the Pearson *r* are not likely to have occurred by chance. As a result, the strength of the relationship between the variables can be determined with confidence. The Pearson *r* is a more precise technique than other measures of correlation computation.

Procedure for Study 2

Sixteen teachers completed a battery of four test instruments. The parent participants were selected on the basis of being members of a group of parents of children with anxiety disorders. The parents were asked for their participation in completing the Spence Preschool Anxiety Scale (SPAS). The tests were administered to the parents by members from the St. Boniface General Hospital team from the Anxiety Disorders Clinic. The teachers of these children were asked for their co-operation in completing a battery of three tests, the Conners Teacher Rating Scale (CTR-S), the Teacher Rating of Survey Items (TRAC), and the Behavior Assessment Scale for Children (BASC), and the TRAC. The CTR-S, and the BASC contain items in subtests that deal with anxiety. These tests are not wholly committed to anxiety, but rather to a global approach to identifying several problematic behaviours of children.

The information obtained from all the test items dealing with anxiety will be compared with each other. The results overall indicate that the reliability of the TRAC compares favourably with the other tests. Reliability means that the test has a high likelihood of identifying the children with anxiety. The reliability measure used was an

assessment of the internal consistency of the TRAC. The findings indicate that the TRAC has good internal consistency. That is, that the reliability of the scores produced by the TRAC is consistent. If the child were to be assessed again at a later time, the results have a very high probability of confirming the earlier results. This is an indication that the TRAC is a test that can be employed with conviction.

A reasonable level of validity was established through the content and item analysis previously described. Validity gives the confidence that the interpretations of the test results are appropriate. Validity is that quality of a test whereby it purports to measure what it intends to. This means that the TRAC does measure the presence of anxiety in young children. According to Gay & Airasian, "... a test is valid for a particular purpose for a particular group." (2000, p.630).

Comparisons of results obtained from the four tests was accomplished by using a computer program, the Statistical Package for the Social Sciences (SPSS) that gave the correlations between, and among, the SPAS, TRAC, CTR-S and the BASC. These correlations gave information as to how well, or not, the results obtained are consistent. This consistency, in turn gave information as to the reliability and validity of the TRAC. The results of these comparisons will be presented in Chapter IV.

Chapter 3

Findings

The focus of this study was to develop a rating scale designed for use by teachers to identify anxious and shy children, aged 5 to 7 years, in Kindergarten and grade one. Organized in two parts, the first part of the study, Study 1, required teachers to be given a semi-structured interview, as well as complete a 50-question prototype rating scale. In the second part of the study, Study 2, the psychometric properties of the final version of the Teacher Rating Scale for Children Aged 5 to Seven Years (TRAC) were compared with the psychometric properties of three other instruments, the Spence Preschool Anxiety Scale (SPAS), the Conners Teacher Rating Scale (CTR-S), and the Behavior Assessment Scale for Children (BASC).

Study 1

Study 1 employed a predominantly qualitative approach for data collection. The data were collected using a semi-structured interview employing two sets of three questions. Meetings with the teachers were arranged. These meetings took place in the teachers' classrooms before or after school or during lunch periods. At no time was teacher class time taken. The session began with a form called the Teacher Interview Questionnaire (TIQ) (Appendix D). The teachers were given the opportunity to review the form and were encouraged to discuss the three comments and the six questions about the comments.

A discussion ensued between the teachers and the principal investigator. For the most part, the discussion centred around the notion of anxiety and whether the teacher should have a single student in mind, or a couple of children past or present, when

completing the questionnaire and the Teacher Survey of Items form. After a short period of time, usually about five minutes, the teachers began completion of the Teacher Interview Questionnaire form (TIQ) (See Appendix D). This approach allowed the teachers to ask questions and assisted them in formulating responses to the questions. In discussing this procedure at the end of the interview, teachers found it to be helpful and not as intimidating as expected. At all times, teachers were encouraged to ask questions about what they were being asked to do. Very few said they needed further clarification. In interviews after the procedure was completed, most teachers replied that they felt comfortable in completing the items and that the interview was helpful in reducing any stress or doubts about what they were getting themselves into.

Analysis of teacher responses. An analysis of teacher responses to the six questions in the Teacher Interview Questionnaire (TIQ) (Appendix D) was conducted with a view to ascertaining emergent themes common to the 26 teacher responses. The data analysis was conducted in a multi-step process. First, the responses were recorded question by question on sheets of paper in such a way that all responses to each question were collected together. This resulted in 104 pages of data. Data was taken from the teachers' written verbal responses and also entered on sheets of paper. The information was then distilled by identifying emergent themes. These themes were then identified by key words and words associated with these key words. This was accomplished by spreading the 104 pages on a table and underlining or highlighting the salient terms and key words with a marker. By reading and rereading the data I was eventually able to formulate these 19 themes that fully captured the essence of what these teachers had to say.

The data was examined carefully by reading it for common themes. These themes were identified and written down in an organized fashion. That is to say, the themes were directly recorded from the teachers' responses. The responses were summarized on sheets of paper. There was a rather simple code used in processing the data. The teacher responses were assembled by looking at common words, terms, and phrases. The commonalities were sorted out by examining carefully which teacher responses matched. The data was then reexamined so as to verify the results obtained.

Bias. Researcher bias was mitigated by using the words of the teachers to code and sort their responses. Words and phrases of same or very similar meaning were compared across all respondents. I tried to avoid reading meanings into the teachers' words. Their responses were taken at face value. There was little to no interpretation by me. Strict usage of the teachers' words was the sole criterion used. Nevertheless, the manner of drawing up the common themes could not entirely disallow the possibility of some bias no matter how insignificant, and thus constitutes a limitation of the study.

Emergent Themes

Common themes were derived from responses by the participants to two comments that were then followed by three questions related to each comment, for a total of six responses. The first comment that the participants were asked to react to was: "Some children are very shy or socially anxious in school settings." After the comment was read and noted by the participants, a brief discussion was held whereby any questions arising from the comment were answered, or clarification of any concern was offered to those that felt the need.

The teachers' descriptors of anxiety in young children are consistent with descriptions in the literature of the characteristics displayed by children with anxiety. Specifically, researchers refer to three types of manifestations of symptoms. These are personal sensations such as fear, uneasiness, dread, and panic, observable reactions such as evading, and withdrawal, and, physical responses such as sweating, nausea, trembling, and extensive arousal (Merrell, 2001). Barlow describes anxiety using words such as "fear," dread," "phobia," "fright,' "panic,' and 'apprehensive" (2001, p.7). Kagan refers to some of the characteristics of anxiety as , "shy," "inhibited," and "timid" ((2001, p.225).

The first question asked teachers to respond using descriptors that they felt characterized anxiety. The second question asked for teachers to describe anxious behaviours. The last question asked teachers to describe situations that they felt were anxiety- provoking. The first question based on the first comment was, "What descriptive words would you use for this type of child in the classroom?" The teachers' responses are reported in Appendix F. The teachers' responses were listed verbatim on sheets of paper. These lists were then examined to ascertain the most common words, or group of words that the teachers used as descriptors for this type of child. These descriptors became the themes by which children were identified as having some characteristics of anxiety. The themes common to this question were counted and are presented in Table 1. The results are presented in a hierarchical fashion, with the most frequent characteristic noted first, followed by sixteen more descriptors.

The teachers' descriptors indicate that the theme most common to this question was "quiet." Teachers' explanations for quiet extended beyond merely being silent. The

overall gist of this particular descriptor, in the actual words used by the teachers, is incorporated the following comments. "repressed," "remove self from activities," "withdrawn," "refuses to try," " a watcher-doesn't take first turn," "doesn't initiate conversations," "closed." In general, the impression that these and the many more responses to Comment 1 from Question 1 indicates that while quiet is the primary descriptor, or central theme, that teachers would use to characterize the anxious child, that the descriptor is a much broader term than merely not speaking. From this, it could be concluded that the teachers' attempts to describe this child involved an extensive range of descriptors rather than a simple one-word listing of adjectives.

The descriptors are presented as the teachers described them. A few were shortened or condensed, but contain the essence as well as the actual words used by the teachers.

Tables 1,and 2 are tables that summarize the teachers' responses to comment 1, question. 1, "Some children are very shy or socially anxious in school settings. What descriptive words would you use for this type of child?" Table 1 is a table composed of teachers' specific descriptors of shy or socially anxious children. Table 2 is a table of these descriptors in groups or clusters.

Table 2 presents the results from Table 1 in groups or clusters of descriptors. The descriptors from Table 1 were scrutinized and five common themes were identified. The teachers' descriptors were then placed in five groups into which the seventeen descriptors could be organized. The results were that all seventeen descriptors were able to be assigned into the five groups. The outcome of this grouping indicates that over 60 % of the descriptors fall into two categories. The first group, numbering twenty responses,

Table 1 Shy or Socially Anxious Child-Teachers' Descriptive Words

Descriptor	Frequency
1. Quiet	12
2. Withdrawn	6
3. Isolate self	5
4. Loner	4
5. Cry	4
6. Nervous	3
7. Hesitant	3
8. Fearful	3
9. Timid	3
10. Worried	2
11. Soft-spoken	2
12. Anxious	2
13. Upset	2
14. Unwilling to take chances	2
15. Afraid	1
16. Nervous tics	1
17. Nervous habits	1

describes children who the teachers felt were anxious, as being "quiet," "withdrawn," and "soft-spoken." The second group, numbering sixteen responses, describes children who displayed anxiety by "being nervous," "fearful," "timid," "worried," "anxious," and "having nervous tics and nervous habits." In the remaining three clusters, amounting to over 35 % of all clusters, teachers' descriptors portrayed children as "isolating themselves," "being loners," "crying," "being upset," "hesitant," and "unwilling to take chances." These groupings employed descriptors that are consistent with descriptions that are used by researchers in the field (LaGreca, & Lopez,1998; Henderson, & Zimbardo, 2001).

The teachers' descriptions of what they perceive to be anxiety in young children demonstrate consistency with each other's descriptions. This is not so surprising as the teachers' experiences with young children are relatively similar. What was unexpected was to find the teachers' descriptions similar to researchers (Merrell, 2001Barlow, 2002;) in the field of study of anxiety. In my speaking with the teachers, none had studied or read any experts in the area.

Comment 1, Question 2 "What behaviours would you see in the classroom or the school that would suggest to you that a child is particularly shy or socially anxious?" The teachers' responses are set out in Table 3 in a hierarchal fashion, with the most frequent descriptor listed first. Once again, the responses are consistent with the descriptions of anxious children as found in the literature (Barlow, 2001; Biederman et al, 1995, and Kagan et al, 1988).

Many of the teachers' responses to Comment 1 Question 2, repeat descriptors used in Comment 1, Question 1. There is no anomaly in this, as the first comment

Table 2. Shy or Socially Anxious Child-Teachers' Descriptors by Groups

Descriptors	Frequency
1. Quiet, withdrawn, soft-spoken.	20
2. Nervous, nervous tics, nervous habits, fearful, timid, worried, anxious.	16
3. Isolate self, loner.	9
4.Cry, upset	6
5. Hesitant, unwilling to take chances	5

referred to a general approach to be taken by teachers describing anxious children; while Question 2 asks for teachers to describe an anxious child in the classroom or school setting.

Out of 58 responses by teachers, more than 40 % described the most common manifestations of anxious behaviour in the school setting as being "refusal to speak," "crying," "non-participation," "difficulty joining groups," and "quiet." Here are a few sample remarks in the teachers' own words referring to this comment. "refuses to speak," "doesn't talk," "reticent," "cries," "reluctant to talk or answer questions."

The remaining 60% described the most common manifestations of anxious behaviour in the school setting as children "isolating themselves," "unwilling to take risks," "needing reassurance," "clinging," "speaking softly," "not smiling,' "withdrawing from groups."

Table 4 presents the results from Table 3 in groups or clusters of descriptors. The results indicate that over 70% of the cluster descriptors fall into three groups. The first group describes children who the teachers felt exhibited anxious behaviours in the school setting as refusal to speak. Some of the teachers described these behaviours in this way, "shy," 'doesn't talk," "often chooses solitary activities," "reticent," "shuts down during work time," "mute," and "reluctant to talk or answer questions.

"The second cluster describes children who cry. Some teachers described this behaviour in these ways, "crying," "crying when left alone," "no smile-cries a lot," "cries when given a task," and "cries easily."

Table 3. Shy or Socially Anxious Child -Teachers' Descriptors of Behaviours

Behaviours	Frequency
1. Refuses to speak	10
2. Cries	9
3. Poor or non-participation	7
4. Difficulty joining groups	6
5. Quiet	6
6. Isolating self	4
7. Unwilling to take risks	4
8. Needs reassurance	3
9. Clings	3
10. Speaks softly	3
11. No smile	2
12. Withdraws from group	1

The third group describes children who are either non-participants or are poor at participating, children who experience difficulty joining groups, children who self-isolate, and children who withdraw from group activities. Some teachers describe these behaviours in these ways, "has difficulty joining groups or asking for a turn," "often chooses solitary activities," "fights with others," "hangs back,' "withdraws from group activities-chooses individual activities," "watches other children but doesn't participate," "silent in groups," and "speaks so silently as to be inaudible."

Comment 1, Question 3 was " What situations may be difficult for this type of child in the school setting?" The themes common to this comment were counted and are presented in Table 5. Once again the information is presented in a hierarchical fashion, with the most frequent responses being listed first.

Out of forty-one responses, over 80% described the most common anxiety provoking situations as being "difficulty with groups,' "changes in routine,' and "social problems." These three descriptors are followed by two more that teachers describe as being problematic situations for children experiencing anxiety, namely, "difficulties dealing with transitions in the classroom", and having a substitute teacher."

Table 6 presents the results from Table 5 in groups or clusters of descriptors. The results indicate that over 80% of descriptors fall into three categories. The first group describes children who teachers felt had problems with groups. These problems are set out in the following teachers' descriptions, "speaking in groups," "working with groups," and "performing in front of groups."

The second cluster describes children who experienced difficulty with "changes in routine." These difficulties manifested themselves specifically in any new situations,

activities, or new learning, in which the child was expected to participate. These new situations could include unexpected fire drills as well as new academic work. Another problem presented itself as difficulty as having to go outside the classroom to a new setting, be it the gymnasium, the music room, or another classroom.

The third cluster describes children who experienced difficulty in "social activities" These social activities occurred in the classroom during routine work time. These activities were part of the lessons that the teachers were demonstrating. These types of difficulties included a situation where a class was to work with other children. An anxious child would experience difficulty "having to choose a work partner," "being part of a sharing circle." Another feature that anxious child could display would be working with "a student new to the class," and "difficulty asking for help."

The following two tables, Table 7, and Table 8, refer to Comment 2, Question 1, "Some children may be fearful or anxious even if they may not be especially shy in social situations." The first question asked teachers to respond by using descriptors that they felt characterized these children. The second question asked for teachers to describe behaviours that they felt indicated that a child was particularly shy or anxious. The third question asked teachers to describe situations that they felt were anxiety-provoking for children.

The first question based on the second comment was, "What descriptive words would you use for this type of child in the classroom?" The themes common to this question were counted and are presented in Table 7. The descriptors used by the teachers,

Table 4. Shy and Socially Anxious Child-Teachers' Descriptors by Groups of Suggested Behaviours of Anxiety

Descriptors	Frequency
1. Refuses to speak, quiet	16
2. Cries	9
3. Poor or non-participation, difficulty joining groups, isolating self, withdraws from group	18
4. Unwilling to take risks, needs reassurance, clings,	10
5. Speaks softly	3
6. No smile	2

Table 5. Shy and Socially Anxious Child-Teachers' Descriptors of Anxious Situations

Descriptor	Frequency
1. Groups (speaking in; working with, in front of, performing to)	14
2. Changes in routine (any new situations, activities, new learning, outside class	10
3. Social (choosing a work partner, sharing circle, new student, asking for help)	10
4. Transitions	4
5. Substitute teacher	3

Table 6 Shy and Socially Anxious Child-Teachers' Descriptors of Anxious Situations by Groups

Descriptors	Frequency
1. Groups	10
2. Changes in routine	10
3. Social	10

maintain consistency with descriptions in the literature. The results are presented in a hierarchical fashion, with the most frequent characteristics noted first, followed by three more descriptors.

Table 8 presents the results from Table 7 in groups or clusters of descriptors. The results indicate that over 50% of the descriptors fall into two categories. The first group describes children who the teachers felt were nervous. The second group describes children who displayed anxiety by appearing to be generally uncomfortable. The teachers indicate that the theme most common to this question was "nervous.' Some words used to describe this descriptor are, "tense," "jumpy," "shy in formal settings," 'avoids new situations," "scared," "easily upset," and "needy."

Comment two, Question 2 " What behaviours would you see in the classroom or the school that would suggest to you that a child is particularly shy or socially anxious?" The themes common to this question were counted and are presented in Table 9.
The descriptors used by the teachers, maintain consistency with descriptions in the literature. The results are presented in a hierarchical fashion, with the most frequent characteristics noted first, followed by six more descriptors. Table 10 presents the results from Table 9 in groups or clusters of descriptors. The results indicate that all of these descriptors fall into four categories. The first group describes children who the teachers felt were engaging in self-stimulatory behaviours. This included such behaviours as "clinging," thumb-sucking," "sucking on shirt," "bites nails," "scratch self," "rocking," "tapping," and "twirling hair."

The second group describes children who the teachers felt were isolated or who isolated themselves. Teachers referred to these children as "refuses to work in co-

operative setting," "afraid to join groups," " interacts with others in inappropriate ways e.g. rude language, attention grabbing techniques such as pinching, teasing, taking a toy from someone."

The third group describes children who the teachers felt displayed somatic complaints. Teachers referred to these children as " asks to go home," "stomach ache etc.," and "says they are sick frequently."

The fourth group describes children who the teachers felt displayed isolation. The children appeared to fall into two groups here: those who isolated themselves, or those who were isolated from their peers.

Comment 3 Question 3 is "What situations may be difficult for this type of child in the school setting?" The teachers' responses are set out in Table 11 in a hierarchical fashion, with the most frequent descriptor listed first. The responses are much the same as descriptions found in the literature.

Table 12 presents the results from Table 11 in groups or clusters of descriptors. The results indicate that all of the cluster descriptors, all forty-one of them fall into two categories. The first cluster consists of situations whereby teachers describe children who are anxious in most classroom situations. Teachers' comments here were collected into similar groups, or common themes. Teachers referred thirty-five times to anxiety provoking situations that appeared to bother these children. Their remarks are noted in loud," "story telling," "participating in discussion," " being asked to talk in front of

Table 7.The Fearful Child-Descriptive Words

Descriptor	Frequency
1. Nervous	5
2. Uncomfortable	2
3. Withdrawn	2
4. Avoids new situations	1

Table 8 The Fearful Child-Teachers' Descriptors by Groups

Descriptors	Frequency
1. Nervous	5
2. Uncomfortable	2

Table 9 the Fearful Child-Teachers' Descriptors of Behaviours of Anxiety

Behaviour	Frequency
1. Self-stimulation	17
2. Isolation	9
3. Social (peers and teachers)	8
4. Poor self-confidence	7
5. Somatic complaints	5
6. Crying	4
7. Clinging	2

Table 10. The Fearful Child-Teachers' Descriptors by Groups of Behaviours of Anxiety

Descriptors	Frequency
1. Self-stimulation	17
2. Social (peers and teachers),poor self-confidence	15
3. Somatic complaints, crying, and clinging	11
4. Isolation	9

class," "difficulty even to speak one to one individually," and "difficulty working in group setting." Most of these situations are ones that routinely take place in classrooms. These are situations that are somewhat difficult for children to avoid, making the problem more difficult.

The second cluster, with a frequency of six, describes children who experience social problems. Teachers referred to children with these difficulties using the following observations: "having conversations with peers," "difficulty taking turns," "working with new people," "chooses solitary activities," "difficulty with extra-curricular activities," "social situations," "parties," "new people," "concerts," and "playtime-having to choose what to do."

TRAC items and Teachers' descriptors.

A study to determine whether there was a correlation between the items in the TRAC and the teachers' descriptors in the TIQ was undertaken. A comparison of descriptors was used and a count of the descriptors was conducted to ascertain whether there was a correspondence and how strong it was. Items in the Teacher Administered Rating Scale of Anxiety in Young Children (TRAC) were found to correspond with descriptors that teachers provided in the TIQ forms. These descriptors were presented in their replies to comments one, two, and three to the two questions. Tables 13, 14, and 15 are examples of this correspondence between the items in the TRAC and teachers' replies to questions in the TIQ form.

The most frequent of the teachers' descriptors of characteristics of anxiety from

Table 11 The Fearful Child-Teachers' Descriptors of Anxious Situations

Descriptor	Frequency
1. Classroom activities	23
2. Change of routine	12
3. Social difficulties	6

Table 12 The Fearful Child-Teachers' Descriptors of Anxious Situations by Groups

Situations	Frequency
1. Classroom activities and change of routine	35
2. Social difficulties	6

Comment One from both Question One and Two were recorded on a sheet of paper. In the case of Table 13, the most common descriptors used by teachers to describe anxious features in children were seven. These seven features are, quiet, withdrawn, isolate self, cries, nervous, hesitant, and fearful. I then examined the TRAC to see whether any of these descriptors appeared to be included in any of the items in the TRAC. It was what amounted to a cross referencing in an informal way. The work was somewhat tedious but proved to be worthwhile, as many descriptors were incorporated in the items of TRAC. Table13 presents the correspondence between items found in the TRAC with teachers' descriptions of anxiety. This comparison indicates that there is a high correspondence between the TRAC and the descriptors of anxiety.

Table 14 presents the correspondence between items found in the TRAC with teachers' descriptions of behaviours that demonstrate anxiety. The teachers' descriptions were those from the Teacher Interview Form. For this table, the teachers' behavioural descriptors were scrutinized and were placed into one of five thematic groups. These five groups are: "refuses to speak," "cries," "poor or non-participation," "difficulty joining groups," and "quiet."

I then sifted through the items in the TRAC to see whether any of these descriptors were included in the TRAC. This informal cross-referencing proved useful, as many descriptors from the Teacher Interview Form were found also among the TRAC items.

Table 13. Correspondence Between Items in the TRAC and Seven Teachers' Descriptors Of Anxiety from Question 3, Comments One and Two

Anxiety Descriptors	TRAC Items
1. Quiet	21, 37
2. Withdrawn	18
3. Isolate self, loner	2, 3, 18, 23
4. Cry	6, 7, 8, 42
5. Nervous	10, 11, 19, 26, 43, 45, 46
6. Hesitant	4, 5, 9, 10, 11, 23, 26, 34, 43
7. Fearful	1, 2, 3, 4, 5, 8, 9, 10, 11, 13, 18, 19, 26, 39, 40, 44, 45

The correspondence between the two teacher descriptors of "poor or non-participation," and "difficulty in joining groups," had the highest level of correspondence of all the items in this table. Teachers , in their own words, described these behaviours as "reluctant to volunteer answers," "reluctance to join a group already playing," problems with extra-curricular activities," and "chooses individual activities over group activities."

There were twelve items in the TRAC that matched with the teachers' descriptors of "poor or non-participation." There were seven items in the TRAC that matched with the teachers' descriptors from the Teacher Interview Questionnaire Form regarding "difficulty in joining groups.". The remaining three clusters contain eleven items from the TRAC that correspond to the descriptions given by teachers in the Teacher Interview Questionnaire Form. This leads one to the conclusion that there appears to be a positive link between these descriptors and the TRAC items.

Table 15 presents the correspondence between items found in the TRAC with teachers' descriptors of situations that cause anxiety in children. In Table 15, the most common descriptors used by teachers were reduced to three. These three features are "changes in routine," "groups," and "social."

I then looked through the TRAC to determine whether any of these descriptors might be included in any of the items in the TRAC. This cross-referencing, although somewhat tedious, turned out to be beneficial, for many of the descriptors were found in the items of the TRAC.

The three situations corresponded with twenty-five TRAC items. This appears to demonstrate a definite correspondence between the TRAC and the teachers' descriptors of situations that cause anxiety in children. The first descriptor, "changes in routine," is a

Table 14 Correspondence Between Items in the TRAC and Teachers' Descriptors of Five Behaviours of Anxiety from Question Two Comments One and Two

Behaviours	TRAC Items
1. Refuses to Speak	13, 14, 43
2. Cries	6, 7, 8, 42
3. Poor or non-participation	2, 3, 4, 5, 13, 15, 16, 23, 24, 25, 27, 43
4. Difficulty in Joining Groups	2, 3, 12, 18, 23, 24, 27
5. Quiet	21, 24, 28, 43

common indicator used to describe problems that children may have who are experiencing difficulties with anxiety. Teachers described this descriptor in these terms, difficulties "with new teacher," "with new routines," "new friends," "substitute teachers," "any change in behaviour of adults they trust," "unstructured time," "surprises," "fire drill," "power failure," and "new material to work with."

Difficulties with groups, the second teacher descriptor, was described by teachers in these words, "difficulty in joining a group," " difficulty in choosing a group," "fear of rejection by group members," "large group assemblies," and "difficulty working in a co-operative setting." Social problems, the third descriptor was described in these words by teachers, "difficulty having conversations with peers," "uneasy in parties, " difficulty meeting new people," and "doing something outside the comfort zone."

There is a global consistency between the teacher's comments and items in the TRAC. However, there appears to be an inconsistency between what teachers emphasize in Table 1 reporting the teachers' descriptors, and Tables 13, 14, 15, reporting TRAC items. First, the consistency with the research literature and the SPAS, the BASC, and the CTR-S is more important than with the teachers' informal comments. Teachers are not trained to recognize anxiety disorder. Using this instrument will likely change their ideas over time. Teachers have limited experience in dealing with children who have anxiety disorders.

Findings

Study 2

Study 2 consisted of the administration of The Teacher Administered Rating of Anxiety in Young Children (TRAC) and comparisons of its psychometric properties to

Table 15. Correspondence Between Items in the TRAC and Teachers' Descriptors of Three Situations of Anxiety from Question 3, Comments One and Two

Anxious Situation	TRAC Items
1. Changes in routine	2, 3, 4, 7, 9, 16, 18, 19, 33, 43
2. Groups	2, 3, 12, 13, 18, 23, 24, 27
3. Social	2, 3, 11, 12, 14, 15, 35

other instruments. The term psychometric properties refers to the measurement of the characteristics of instruments such as questionnaires and tests. Some of the characteristics that can be compared are reliability, and validity. The comparisons, for the most part, are set out in a numerical fashion, such as a correlation co-efficient. What the employment of psychometric properties allows the researcher to do is to establish the existence of a relationship among several instruments. If the measurement of the properties establishes a positive relationship, then the tests are considered to possess a degree of correspondence among them. This then allows a researcher to confirm with confidence, that a test instrument, such as the TRAC possesses characteristics that give it validity, reliability, and authenticity.

The term is used here to indicate whether the properties of the TRAC correlate with the properties of other more widely used and established instruments. The other instruments were administered to the families of the same children who had been the subjects of the administration of the TRAC. This study employed a quantitative approach to the interpretation of data that was collected from a comparison of the Teacher Rating of Anxiety (TRAC) to the other widely used tests. The results of the data from the TRAC were correlated with the results obtained from the administration of the three other instruments that have anxiety items as a subsection of the overall test. These tests are: (1) The Spence Preschool Anxiety Scale (SPAS), (2) The Conners Teacher Rating Scale (CTR-S), and, (3) The Behavior Assessment Scale for Children (BASC).

The Spence Preschool Anxiety Scale (SPAS) (Spence et al, 2001) is a 28-item questionnaire that is completed by a parent. Confirmatory factor analysis indicates that

subscales for several kinds of anxiety are consistent with the major anxiety disorders described in the Diagnostic and Statistical Manual IV (DSM IV, 1994).

The Revised Conners Teacher Rating Scale (CTRS-R) (, initially designed to identify hyperactivity in children, has also been found to be helpful in identifying children with other problem behaviours such as anxiety. This is a 39-item evaluation to be administered by teachers.

The Behavior Assessment Scale for Children (BASC) (Reynolds, & Kamphaus 2004) is an instrument designed for use by teachers, parents, and the child. It is a multidimensional approach to evaluating the behavior and self-perceptions of children. It has five components that can be used individually or in any combination. The three core components are Teacher Rating Scales (TRS), Parent Rating Scales (PRS), and Self Report of Personality (SRP). Additional components include Structured Developmental History (SDH) and Student Observation System (SOS). The BASC measures positive (adaptive) as well as negative (clinical) dimensions of behavior and personality (Maddox, 1997).

Establishment of a close, positive relationship among the TRAC, the SPAS, the CTR-S, and the BASC will allow for the researcher to demonstrate that the TRAC has a significance that allows for its administration with a high degree of certainty as to its merits as an instrument for the identification of anxiety in young children.

Scoring Procedure

Correlations between the four instruments were obtained from the administration of the TRAC, the SPAS, the CTR-S, and the BASC. The results were acquired from 16 children. The TRAC, the CTR-S, and the BASC are teacher-administered instruments

while the remaining one, the SPAS is completed by parents. The teacher rating scale that was developed by the St. Boniface General Hospital team was found to correlate well with the anxiety items from the items of the other three.

A research study can generate a great quantity of raw data. All collected data must be accurately scored and organized in a methodical way. Accurate scoring and methodical organization facilitates the analysis of the data. To ensure that the instrument is scored accurately and that all the data are methodically organized, the responses to the instrument must be scored in a consistent manner. This can be accomplished by making sure that the scoring uses the same methods and standards for all the participants and their responses. Gay & Airasian (2000) comment that where test questions are responded to on a standard, machine-scorable answer sheet, the accuracy of the scoring process is increased. (p434).

Psychometric Properties

A psychometric property is a term that refers to the measurable characteristics, and the statistical critique, of the results of mental and mood tests. The most common of these characteristics are reliability, validity, and relationship comparisons. The information generated from these characteristics is usually in the form of a statistic. The statistic allows for the ability to draw conclusions about the strength, the direction, and the utility of the characteristics of the test under discussion. This information assists researchers in coming to a conclusion about the employment of a particular test.

Scoring. Each participant was assigned an ID number. The next step was to assign a numerical value to each response. For example, teachers were asked the following question, number 8,

"Cries easily when anxious."

Not at all Typical	Seldom Typical	Sometimes Typical	Quite Often Typical	Very Often Typical
0	1	2	3	4

Responses were coded as 0=0, 1=1, 2=2, 3=3, and 4=4.

The statistical program used was the Statistical Package for the Social Sciences (SPSS). Gay (1987) describes this program as, "the one that is probably available at more universities and college centers than any other" (p.427).

Measures of relationship. One major type of descriptive statistics is measures of relationship. These measures indicate whether, and to what extent, a relationship exists between two or more measureable factors. This is not a causal relationship, but an indication of a relationship or connection between the factors concerned. The degree of relationship is expressed by a statistic known as a correlation coefficient. A correlation coefficient is a decimal number between –1 and +1. A correlation coefficient for two variables indicates the direction and strength of the relationship between these variables. The direction of the relationship is shown by the sign of the coefficient. If the number is a positive one, this indicates that the relationship between the factors being considered is a positive correlation. If one variable increases then the other also increases. If the number is a negative one then this is an indication that the relationship between the two variables is a negative one. That is to say, as one variable increases, the other decreases.

Strength of the relationship. The correlation coefficient used is the Pearson product moment. The strength of the relationship is shown by the magnitude of the correlation coefficient. A number close to either +1 or –1 is a sign of a strong correlation.

Table 16. Correlations between the four instruments

		sumpspence	sumteach	sumCTRS	sumBASC
sumspence	Pearson Correlation	1	.553*	.316	.483
	Sig. (2-tailed)		.026	.234	.058
	N	16	16	16	16
sumteach	Pearson Correlation	.553*	1	.838**	.883**
	Sig. (2-tailed)	.026		.000	.000
	N	16	16	16	16
sumCTRS	Pearson Correlation	.316	.838**	1	.791**
	Sig. (2-tailed)	.234	.000		.000
	N	16	16	16	16
SumBASC	Pearson Correlation	.483	.883**	.791**	1
	Sig. (2-tailed)	.058	.000	.000	
	N	16	16	16	16

* Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

This means that the variables correspond so closely, that if we know the value of one of them, we can predict, with a relatively high degree of precision, the value of the other.

The Pearson r. The most commonly used technique for calculating a correlation coefficient is the product- moment correlation, the Pearson *r*. The value in using this particular correlation coefficient is well-expressed by Gay and Airasian:

Since most instruments used in education, such as achievement measures and personality measures, are treated as interval data, the Pearson *r* is usually the appropriate coefficient for determining relationship. Further, since the Pearson *r* results in the most precise estimate of correlation, its use is preferred even when other methods may be applied (Gay & Airasian, 2000, p,329).

The TRAC score was highly correlated with the anxiety items of the CTR-S, (Pearson r =.838), and correlated satisfactorily with the BASC (Pearson r = .883). These latter scores are considered to be well within a reasonable and acceptable range and suggest that the TRAC relates well to other teacher measures of the same concept (i.e., the Conners and the BASC). Although the correlations with the well validated parent measure (the SPAS) are lower, they may be considered to be still reasonable given that teachers and parents see children in different situations and there are also different raters of the instruments. The teacher rating scales in Study 1 were administered by the same person, the principal investigator, while in Study 2, the scales were provided to the teacher by the parent and then returned in the mail.

Levels of Significance. Levels of significance is a term that refers to the possibility that a difference will be found by chance when no actual difference exists. The most

commonly used probability level is the 0.05 level (Gay, 1988) or a 5% probability that a difference will be found by chance when no true difference exists. The results of the data indicate that one result is significant at the 0.05 level. This is the relation between the sum of the scores of the SPAS and the sum of the scores of the TRAC. The Pearson *r* is calculated at .553. This indicates that although not as strong a relationship as the other tests, nevertheless it is an acceptable result.

The results of the remaining two correlations are significant at the 0.01 level. The relation between the sum of scores of the CTR-S, and the sum of the scores on the BASC with the sum of the scores on the TRAC indicate a significance of 0.01. The Pearson *r* was calculated at .838 and .883 respectively.

It is of the utmost importance that the rating scale to be developed for use by teachers possesses adequate reliability and validity. Essentially, reliability is the degree to which the rating scale will measure what it is supposed to measure under the same conditions and using the same subjects (Gay, 1987; Gay & Airasian, 2000). Consequently, the more reliable a test is, the more confident we can feel that any scores obtained from its use will be the same if the test were to be readministered. The data analysis presented in Table 16 indicate that the properties of the TRAC are such as to be depended upon to enable it to be implemented with confidence.

As can be seen from Table 16 the items from the TRAC correlate sufficiently with the anxiety items from the SPAS (Pearson *r* =.553). This is considered by the team to be a reasonable, and consequently acceptable score. The SPAS was rated by the mothers. Consequently, the results are considered to be reasonable given the different perspectives of parents and teachers about the concept of anxiety and what constitutes it.

Reliability. According to Aiken & Groth-Marnat " No psychometric instrument can be of value unless it is a consistent, or *reliable*, measure," (p. 87). Unfortunately, there are factors which may prevent a newly constructed instrument from achieving reliability. These factors are referred to as threats to reliability. Two ways that may be used to control for threats to the reliability of the rating scale are the achievement of high levels of test-retest and internal consistency measures of reliability. Test-retest is a conservative method to estimate reliability. This method requires the test administrator to obtain the same score the first and second administrations of the same test with the same subjects. The three main parts to this method are:

1. administer the rating scale at two separate times for each subject;
2. calculate the correlation between the two separate administrations; and
3. assume that there is no change in the trait being measured, between test 1 and test 2.

According to Gay & Airasian, "Internal consistency is a commonly used form of reliability that deals with one test at a time" (2000, p.173). Internal consistency estimates reliability by grouping questions from the rating scale that measures the same concept. After collecting responses to these questions, a correlation is determined to see if the rating scale is reliably measuring the concept. One way to compute a correlation value for the questions on a rating scale is by using a Cronbach's Alpha (Aiken, 1996, p.81). Cronbach's Alpha is a score which is obtained by splitting the questions from the rating scale in all possible ways, and then generating a number to indicate the correlational value among the questions. The closer the correlation coefficient is to the number one, the higher the reliability of the scale.

Scores from three measures, the Behavior Assessment Scale for Children, (BASC), the Conners (CTR-S), and the Teacher Rating Scale for Anxiety (TRAC) were calculated using the statistical program known as the Statistical Package for the Social Sciences (SPSS). This result produced a score called a Cronbach alpha. A Cronbach alpha is "A more general formula for estimating the reliability of a rating scale or any other psychometric instrument on which responses to items are assigned two or more scoring weights..." (Aiken, p. 80). The resulting output indicates that scores for all three measures are very good. The score for the TRAC is quite high. This is partly because it is a longer scale, and longer scales have higher Cronbach's scores.

The results compared two anxiety scales with the TRAC. The scales used were the anxiety scale in the BASC, and the anxiety scale in the Connor's. The TRAC had more items than the other scales (BASC and Conners). Scales with more items generally produce higher scores on the Cronbach's alpha statistic (Gay & Airasian, 2000, p.174;Aiken & Groth-Marnat,2006, p.92). The reliability statistics for the TRAC gave a Cronbach's alpha score of 0.969. The reliability statistics for the BASC was a Cronbach's alpha of 0.853. The reliability statistic for the Conners was a Cronbach's alpha of 0.763. These statistics mean that the TRAC has a high internal consistency. This, in turn means that the questions on the TRAC measure childhood anxiety with a high level of consistency without significant deviation.

Validity. Validity measures the degree to which a test actually measures what it purports to measure. It provides a check on how well a test fulfills its function (Anastasi, 1988). According to Aiken, (1996), there are three types of validity: content validity, criterion-related validity, and construct validity. Content validity is the degree to which a test

measures an intended content area. Content validity may be measured by content analysis. Content analysis is facilitated by careful definitions of the variables that the instrument is intended to measure and the relationships or interactions among those variables (Aiken, 1996).

Criterion-related validity. Criterion-related validity includes both concurrent and predictive validity. Criterion-related validity is so called because it determines validity by relating performance on a test to performance on another criterion (Gay, 1987). Concurrent validity refers to a situation where the measures are obtained at the same time as scores on the instrument being validated. When the criterion measures do not become available until some time in the future, then predictive validity of the instrument becomes the focus of the study.

Construct validity. Construct validity refers to the extent to which the instrument is an accurate measure of a particular construct, or psychological variable (Aiken, 1996). Gay & Airasian describe a construct as a nonobservable trait, an abstraction that is devised to explain behaviour (2000). An important criterion used in establishing the validity of tests is age differentiation. This is a situation where a test is checked against chronological age to see if the scores show a progressive increase with increasing age. This is not a concern here as the functions of this rating scale are not intended to measure clear-cut, consistent age changes.

Construct validity of the scale. In order to supply proof for the idea that the anxiety items selected for inclusion in the prototype rating scale were actually measuring the concept of anxiety, scores were obtained from the prototype rating scale, and were then compared to those obtained from several other tests. Even though the anxiety scales

of the other tests, the Behavior Assessment Scale for Children (the BASC) and the Conners Teacher Rating Scale (CTR-S) produce a broader appraisal of internalizing behaviours, of which anxiety is merely one characteristic, nevertheless a comparison should establish a moderate to high correlation with the TRAC, as all the instruments are purporting to measure the same construct, namely anxiety.

Judgment of experts. Another method of establishing the construct validity of the rating scale is the use of the judgments of experts. This refers to their judgments with respect to the extent with which the content of the scale relates to the construct under consideration. Experts in the field of anxiety disorders with expertise in test construction would give their feedback as to the construct validity of the scale. Their opinions could prove to be invaluable, as they could offer practical advice about the reliability as well as the validity of the scale. This was discussed in more detail in the Methods section

Validity of the TRAC was established using expert judgment. The team at St. Boniface General Hospital examined the items in the TRAC and in comparison to similar instruments found the TRAC items to be valid. This team was made up of psychologists with expertise in the areas of childhood anxieties, testing, and the psychometric properties of test instruments. The teachers who were interviewed provided valuable information and insight into determining whether the items in the TRAC did indeed measure the concept of anxiety in the various ways that children exhibited it. Discussions by the team and input from the teachers, during the semi-structured interviews were quite helpful in guiding the final composition of the TRAC.

Summary

The findings of the study imply that the TRAC is a reliable, valid, and useful instrument that may be used with confidence in the early identification of young children with anxiety disorder, or a heightened sense of anxiety. Comparisons of the TRAC with other like instruments which contained a section on anxiety, indicated that the TRAC corresponds favourably with these established tests.

Further, the results of the study appear to indicate that early intervention can bring about a more successful treatment plan for the children and their families. Early identification provides a greater likelihood of a beneficial resolution of the troubles that this disorder causes.

The problems that young children with anxiety disorders face in the classroom, and the risk that untreated anxiety often leads to more serious difficulties later in adolescence and adulthood make it imperative that a system of early identification be put in place so as to allow for a timely intervention to assist them. The behaviours displayed by many of these young children can be a source of confusion for teachers unfamiliar with symptoms and signs of anxiety in children. An important feature of anxiety disorders is that the symptoms are involuntary. It is vital that teachers be made aware of these symptoms, as they work with many children and have the opportunity to help in providing assistance for them.

This study was undertaken to obtain and evaluate the teacher responses to a survey. The information acquired was then used to develop a rating survey (the TRAC) designed for easy use by a classroom teacher of children ages 5-7. The results of the information gathered from the participants were analyzed with a view to incorporating

them into the construction of a reliable, valid, and practical measure for identifying anxious, shy, and inhibited young children in kindergarten and grade one. It is my conviction that this teacher administered rating scale will be a helpful instrument in the early identification of those young children at risk for the development of an anxiety disorder.

Conclusion

Limitations and suggestions for the future: Study 1. The participants offered their time to participate in this research. This indicates that they were an exclusive group. In and of itself, this is not necessarily a major limitation, but a larger sample of teachers representative of the profession at large would have given the research a stronger outcome. Also, the inclusion of random samples of rural, semi-rural, and remote school populations would serve to enhance the generalizability of the study. Teachers were eager to provide assistance and participation in this study. Their support for the study was overwhelming.

The semi-structured interview was a helpful exercise. The subjects indicated approval of this procedure, and indeed, most stated that they enjoyed this dynamic interaction. Possibly, further research involving the use of a semi-structured interview format should be considered.

The process of obtaining information from the participants might be enhanced by allowing for the gathering of information in a group setting, as it became apparent to me that the teachers appreciated the dynamic interchange with the principal investigator. Perhaps, information gathering could be obtained in groups of three or four. Teachers indicated that the exchange of opinions and the clarification I gave to them were helpful

in guiding the formulation of their notions as to what constitutes anxiety, and in completing both the interview process, and the TRAC.

The nature of the qualitative investigation used Study 1 made it possible to verify that the teachers found the scale useful, plausible, practical, easy to administer (does not require extensive training in its administration), inexpensive, professionally appropriate and responsible, and easy to interpret.

This work was designed to incorporate the perspectives of teachers who are working with children experiencing high levels of anxiety and are, as a result, not doing as well in school as they could. Consequently, advice and suggestions were sought out from teachers in the field as to their perceptions about what behaviours constitute anxiety in young children.

The findings from Study 1 influenced the development of the TRAC. The data gathered from the information provided by the teachers was examined and analysed by the team from St. Boniface General Hospital. Their deliberations resulted in the final version of the TRAC. Items were looked at to see whether they provided consistency with the responses which teachers gave.

*Limitations and suggestions for the future Study 2:*Further testing of the validity and reliability of the TRAC over time and with larger and more diverse populations of early years teachers should be considered. During this process, the predictive validity of individual items on the TRAC could be assessed.

I found that this study demonstrated a need for a community- based model in which parents, teachers, and clinicians work together to manage both the identification and treatment of young children with anxiety disorders. In this particular model, parents

would be the first to initiate the process of identifying children at risk of either having an anxiety disorder or of developing one. Parents who are concerned about their child's behaviours, and suspect, or are not sure of, what the behaviours signify, first would talk with the child's teacher. Then, teachers would be involved in administering the TRAC so as to distinguish those children at risk of developing an anxiety disorder from children with a non-pathological level of anxiety. Parents would be consulted and they would be encouraged to contact the local health care providers. The information obtained by the teachers would then be submitted to clinicians. The professionals or clinicians then, would be engaged to provide interventions that would furnish the families of these young children with resources and treatment plans designed to deliver assistance in dealing with the problems these anxiety- induced behaviours create. So, a confluence of parents, educators, and clinicians, and psychologists would be a result of using this model.

More study is needed to determine the effects of using a tri-partite model for the delivery of service to young children. This model is not strictly a pen-and-pencil one. It requires the input from several sources. It is important to establish if the teacher component, that is, the implementation of the TRAC requires a professional development seminar, or if provision of a manual for implementation is sufficient.

Limitations concerning anxiety and culturally different groups. This study proposes a close relationship between anxiety and shyness. Indeed shyness can be a key indicator of anxiety. Further research into the cultural aspects of what it is to be perceived as shy should be undertaken. This is all the more important given that a considerable number of children in many Canadian cities are of aboriginal origin or are children of immigrant families where what our Canadian culture perceives as shy may indeed

represent culturally appropriate behaviour. There is virtually no research on shyness and anxiety in our Canadian aboriginal population. Barlow puts it quite well, " With the enormous difficulties in defining 'anxiety' even in Western cultures, it is not surprising that problems increases across cultures. This makes an investigation into the basic nature of anxiety all the more compelling." (Barlow, 2001, p.35).

Implications for best practice. There are several implications for best practices that arise out of these studies. Among these ramifications are the importance of early identification, the necessity of early intervention, and the need for a community based model to ensure effective delivery of early intervention and identification.

The early identification of anxiety in young children must encompass a tri-partite model that includes the teacher, the parent, and the clinician. The teacher will be able to participate in the early identification not only through teacher ascertainment of potential anxiety in children, but also through the administration of the TRAC to these children, with due parental notification. Early identification can be accomplished through teacher training at colleges and universities, and by the provision of in-service and professional development programs for teachers. The pre-service training could be located in the Educational psychology departments of the teacher training institutions.

The parents will participate actively in both alerting the teacher of their concerns about their child's level of anxiety and, attendance at the Clinic for provision of the delivery of services to assist the child in dealing with the anxiety, once it has been so identified.

The clinician will provide assistance to the family with the services necessary for remediation of the difficulties this disorder can cause. The clinician will make available

to the child, the child's family, and to the teachers of the child suggestions for dealing with the disorder in the family, the school, and the community.

Implementation of a course of action that incorporates these three crucial elements, the home, the school, and the clinician will give greater assurance of the likelihood of the development of an efficacious treatment plan for the young child.

More study is needed to determine the effects of using a tri-partite model for the delivery of service to young children. This model is not strictly a pen-and-pencil one. It requires the input from several sources. It is important to establish for teachers, whether the implementation of the TRAC requires a professional development seminar, or if provision of a manual for implementation is sufficient.

There is provision now in public schools for the screening of children with hearing, and vision difficulties. A similar approach could be studied to see if this may be a necessary approach to dealing with anxiety disorder. The process could be grounded in the early identification by the teacher of children appearing to be vulnerable to anxiety. The teachers' findings would then be verified by the parents and clinicians. Research is necessary to investigate all of the possible implications that adoption of such a model would entail.

Implications for future research. Some recommendations for future research could include examining the following questions. To what extent could the research assist other educational professionals, such as teacher assistants, and clinicians? Could the research apply to a wider variety of students, such as ESL students, and other students with special needs? Could this method be applied to other major childhood disorders? Would a longitudinal study be helpful in remediation of therapy? Could this method be

used to track improvements over time? Research into answering these questions would go a long way to enhance the lives of many young children.

Future research could be employed to implement a test-retest procedure to ensure reliability of the scale. Also, to address the weighting of the TRAC items, a discrimination analysis should be used to determine the most and least predictive items so as to revise the scale should this be needed.

REFERENCES

Achenbach, T. M., & Edelbrock, C. (1983). *Manual of the Child Behavior Checklist. And Revised Child Behavior Profile*. Burlington, VT: Department of Psychiatry.

Achenbach, T. M., & Edelbrock, C. (1992). *Manual for the Child Behavior Checklist/2-3 and 1992 Profile*. Burlington, VT: University of Vermont, Department of Psychiatry.

Achenbach, T. M., Howell, C. T., McConaughy, S. H., & Stanger, C. (1995). Six-year predictors of problems in a national sample of children and youth: I. Cross-informant syndromes. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 336-347.

Aiken, L.R. (1996). *Rating Scales and Checklists*. New York: John Wiley & Sons, Inc.

Aiken, L. R. & Groth-Marnat, G. (2006). *Psychological Testing and Assessment* (12th ed.). Boston, MA: Pearson Education Group.

Albano, A. M. & Detweiler, M. F. (2001). The Developmental and Clinical Impact of Social Phobia in Children and Adolescents. IN S. G. Hofmann & P. M. DiBartolo (Eds.). *From Social Anxiety to Social Phobia* (2001) Needham Heights, MA: Allyn & Bacon. (pp. 162-178).

Albano, A. M., Chorpita, B. F., & Barlow, D. H. (1996). Childhood anxiety disorders. In E. J. Mash (Ed.). *Child psychopathology*. (pp.196-241). New York: The Guilford Press.

Albano, A. M., Detweiler, M. F., & Logsdon-Conradsen, S. (1999). Cognitive-behavioral interventions with socially phobic children. In S. W., Russ & T. H. Ollendick, (Eds.). *Handbook of psychotherapies with children and families* (pp. 255-280). New York: Plenum Publishers.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental Disorders (4th ed.). Washington, DC. Author.

Anastasi, A. (1988). *Psychological Testing* (5th ed.). New York: MacMillan.

Asendorpf, J. B. (1993). Abnormal shyness in children. *Journal of child Psychology and Psychiatry, 34*, 1069-1081.

Anderson, J. C., Williams, S., McGee, R., & Silva, P. A. (1987). DSM-III disorders in preadolescent children: prevalence in a large sample from the general population. *Archives of General Psychiatry 44*:69-76.

Barlow, D. H. (2002). *Anxiety and Its Disorders* (2nd ed.). New York: The Guilford Press.

Barrett, P. M., Rapee, R. M., Dadds, M. M., & Ryan, S. M. (1996). Family enhancement of cognitive style in anxious and aggressive children. *Journal of Abnormal Child Psychology, 24*, 187-203.

Beidel, D. C. & Morris, T. L. (1995). Social phobia. In J.March, et al. (Eds.). *Anxiety disorders in children and adolescents*. (pp.181-211). New York: The Guilford Press.

Beidel, D. C., Turner, S. M., & Morris, T. L. (2000). Behavioral treatment of childhood social phobia. *Journal of Consulting and Clinical Psychology*, 68(16), 1072-1080.

Benjamin, R. S., Costello, E. J., & Warren, M. (1990), anxiety disorders in a pediatric sample. *Journal of Anxiety Disorders 4*:293-316.

Bernstein, G. A., Crosby, R. D., Perwien, A. R., & Borchardt, C. M. (1996), Anxiety disorders of childhood and adolescence: a critical review. Journal of Anxiety Disorders 10:97-114.

Biederman, J., Rosenbaum, J., Chaloff, J., & Kagan J. (1995). Behavioral inhibition as risk factor for anxiety disorders. In J. Marsh (Ed.), *Anxiety disorders in children and adolescents* (pp61-68), New York: Guilford Press.

Biederman, J., Rosenbaum, J., Bolduc-Murphy, E. A., Faraone, S. V., Gersten, M., Meminger, S. R., Kagan, F., Snidman, N., & Reznick, S. (1990) Psychiatric correlates of behavioral inhibition in young children of parents with and without psychiatric disorders. *Archives of General Psychiatry*, 47, 21-26. In D. H. Barlow, Anxiety and Its Disorders, p.48.

Bogdan, R. C. & Biklen, S. K. (2003). *Qualitative research for education: An introduction to theories and methods* (4th Ed.). Boston, MA: Pearson Education group.

Bogdan, R. C. & Lutfiyya, Z. (1996). Standing on its own: Qualitative research in special education. In Stainback & Stainback, *Controversial issues confronting special education: Divergent perspectives* (2nd Ed.) (229-236). Boston, MA: Allyn & Bacon.

Bourdon, K. H., Boyd, J. H., Ray, D. S., Burns, B. J. Thompson, J. W. Locke, B. Z. (1988). Gender differences in phobias: results of the ECA community survey. *Journal of anxiety disorders, 2*, 227-241.

Bowen, R. C. Offord, D. R. & Boyle, M. H. (1990), The prevalence of overanxious disorder and separation anxiety disorder: results from the Ontario Child Health Study. *Journal of the American Academy of Child Adolescent Psychiatry 29*:36-44.

Buss, A. H., & Plomin, R. (1984). *Temperament: Early Developing Personality Traits.* Hillsdale, NJ: Erlbaum.

Campbell, M. A. & Rapee, R. M. (1996). Current issues in the assessment of anxiety in children and adolescents: A developmental perspective. *Behaviour Change* 13 (3);pp. 185-193.

Caspi, A., Henry, B., McGee, R. O., Moffitt, T. E., & Silva, P A. (1995). Temperamental origins of child and adolescent behavior problems: from age three to age fifteen. *Child Development 66*:55-68.

Charles, C. M. (2002). *Building Classroom Discipline* (7^{th} *ed.*). Boston, MA: Allyn and Bacon.

Chartier, M. J. Walker, J. R., & Stein, M. B. (2001). Social phobia and potential childhood risk factors in a community sample. *Psychological Medicine*, 31 (2), 307-315.

Chartier, M. J., Walker, J. R., Stein, M. B. (2003). Considering comorbidity in social phobia. *Social Psychiatry and Psychiatric Epidemiology*, 38: 728-734.

Christenson, S. L. (1992). *Review of the Child Behavior Checklist.* In the Eleventh Mental Measurements Yearbook. Conoley, J.C., & Kramer, J.J. (Eds.). Lincoln: University of Nebraska and Buros Institute of Mental Measurement.154-155.

Chorpita, B. F., & Barlow, D. H. (1998). The development of anxiety: The role of control in the early environment. *Psychological Bulletin, 124, No.* 1, 3-21.

Coaching for Confidence Research Team(2002). *Teacher Rating of Anxiety in Children,* unpublished manuscript. Department of Clinical Health Psychology, University of Manitoba, M5-St. Boniface General Hospital, 409 Tache Ave., Winnipeg, MB R2H 2A6. attention Dr. John Walker

Conners, C. K. & Blouin, A. G. (1998, August). *Hyperkinetic syndrome and psychopathology in children.* Paper presented at the meeting of the American Psychological Association, Montreal. Review of the Conners' rating scales in the Eleventh Mental measurements Yearbook, by Martens, B. K.Kramer, J. J. & Conoley, J. C. (Eds), and Murphy, L. L., Managing editor (1992), 161-162.

Conners,C. K., Sitarenios, G., Parker J. D., & Epstein, J. N., (1998). The revised Conners Parent Rating Scale (CPR-S): Factor structure, reliability, and criterion validity. *Journal of Abnormal Child Psychology, 26,* 257-268.

Conners, C. K., Sitarenios, G., Parker, J. D., & Epstein, J. M. (1998). Revision and Restandardization of the Conners Teacher rating scale (CTRS-R): Factor structure, reliability, and criterion validity. *Journal of Abnormal Child Psychology, 26,* 279-291.

Costello, E. J., & Angold, A. (1995). Epidemiology. In J. S. March, (Ed.). *Anxiety Disorders in Children and Adolescents.* New York: The Guilford Press, pp109-124.

Costello, E. J., Angold, A., Stangl, D. K., Tweed, D. L., Erkanli, A., & Wothman, C. M. (1996). The Great Smoky Mountains of Youth: Goals, design, methods, and the prevalence of DSM-III-R disorders. *Archives of General psychiatry, 21* (53), 1129-1136.

Crozier, W. R. (1995). Shyness and self-esteem in middle childhood. *British Journal of Educational Psychology, 65*, 85-95.

Dadds, M. R. & Roth, J. H. (2001). Family processes in the development of anxiety problems. In M. W. Vasey & M. R. Dadds (Eds.), *The developmental psychopathology of anxiety* (pp. 278-303). New York: Oxford University Press.

Dadds, M. R., Spence, S. H., Holland, D. E., Barrett, P. M., & Laurens, K. R. (1997). Prevention and early intervention for anxiety disorders: A controlled trial. *Journal of Consulting and Clinical Psychology, 65*, 627-635.

Davidson, J. T., Hughes, D. L., & Georges, L. K. (1993). The epidemiology of social phobia: Findings from the Duke epidemiological catchment area study. Psychological Medicine, 23, 709-718. In M. J. Chartier, J. R. Walker, & M. B. Stein, *Considering comorbidity in social phobia.* Social Psychiatry and Psychiatric Epidemiology (2003) 38: 728-734.

Davis, S. F. & Buskist, W. (2008). 21st Century Psychology: A Reference Handbook, Volume 2. Thousand Oaks, CA.: Sage Publications Inc. page 264.

Denzin, N. K. & Lincoln, Y. S. (2003). *Strategies of qualitative inquiry.* London: Sage Publications.

Doll, B. (1998). Review of the Child Behavior Checklist in the Thirteenth Mental Measurements Yearbook. Conoley, J.C., & Kramer, J. J. (Eds.). Lincoln: *University of Nebraska and Buros Institute of Mental Measurements.217-220.*

Eiraldi, R. B. Power, T. J., Karustis, J. L., & Goldstein, S. G. (2002). Assessing ADHD and Comorbid Disorders in Children: The Child Behavior checklist and the Devereux Scales of Mental Disorders. *Journal of Clinical Child Psychology, 29, No. 1*, 346.

Elliott, S. N., & Busse, R. T. (1992). Review of the Child Behavior Checklist in the *Eleventh Mental Measurements Yearbook.* Conoley, J. C., & Kramer, J.J. (Eds.). Lincoln: University of Nebraska and Buros Institute of Mental Measurements.155-159.

Esau, C. A. Condrat, J. & Petermann F. (2000). Frequency, comorbidity, and Psychosocial impairment of anxiety disorder in German adolescents. *Journal of Anxiety Disorders, 14* (3), 263-278.

Eysenck, H. J. (Ed.). (1967). The biological basis of personality. Springfield, IL: Charles C. Thomas. In D. H. Barlow, *Anxiety and Its Disorders*. New York: The Guilford Press. P. 44.

Eysenck, H.J. (1981). A model for personality. New York, N.Y.: Springer-Verlag. In Barlow (2002). p.44.

Fergusson, D. M., Horwood, L. J., & Lynsky, M. T. (1993). Prevalence and comorbidity of DSM-III-R diagnosis in a birth cohort of 15 year olds. *Journal of the American Academy of Child and Adolescent Psychiatry, 32* (6), 1127-1134.

Fremont, W. P. (2003). School refusal in children and Adolescents. *American Family Physician 68* (8).

Gay, L. R., (1987). *Educational Research* (3rd ed.). Columbus, Ohio: Merrill Publishing Company.

Gay, L.R. & Airasian, P. (2000). *Educational Research: Competencies for Analysis and Application (6th ed.).* Upper Saddle River, NJ: Prentice-Hall.

Giaconia, R. M., Reinherz, H. Z., Silverman, A. B., Pakiz, B., Frost, A. K., & Cohen, E. (1994). Ages of onset of psychiatric disorders in a community population of older adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 33*, 706-717.

Goyette, C. H., Conners, C. K., & Ulrich, R. F. (1978). Normative data on revised Conners Parent and Teacher Rating Scales. J*ournal of Abnormal Child Psychology, 6*, 221-236. In Eleventh Mental Measurements Yearbook.

Gray, J. A. (1982). *The neuropsychology of anxiety*. New York: Oxford Press. In Barlow (2002). p. 45.

Gray, J. A. (1985). Issues in the neuropsychology of anxiety. In A. H. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders*. Hillsdale, NJ: Erlbaum.

Gray, J. A., & McNaughton, N. (1996). The neuropsychology of anxiety: Reprise. In D. A. Hope (Ed.), *Nebraska Symposium on Motivation*: Vol. 43. *Perspectives on anxiety, panic, and fear*. Lincoln: University of Nebraska Press. In D. H. Barlow *Anxiety and Its Disorders (2nd ed.)*, New York: The Guilford Press.

Graziano, A M., & Raulin, M. L. (2000). *Research methods: A process of inquiry*. Needham Heights MA: Allyn & Bacon.

Henderson, L., & Zimbardo, P. (2001) Shyness Social Anxiety, and Social Phobia in S. G. Hofmann & P. M. DiBartolo *From Social Anxiety to Social Phobia: Multiple* Perspectives, Needham Heights, MA: Allyn & Bacon 46-64.

Hofmann, S. G., & Di Bartolo, P. M. (2001). *From social anxiety to social phobia. Multiple perspectives*. Needham Heights, MA: Allyn & Bacon.

Hope, D. A., Heimberg, R. G., Juster, H. R., & Turk, C.L. (2000). *Managing social* anxiety: A cognitive-behavioral therapy approach: Client Workbook. San Antonio, TX: The Psychological Corporation.

Ialongo, N., Edelsohn, G., Werthamer-Larsson, L., Crockett, L., & Kellam, S., (1994). The significance of self reported anxious symptoms in first grade children. Prediction of anxious symptoms and adaptive functioning in fifth grade. *Journal of Child Psychology and Psychiatry, 22*, 441-455.

Ialongo, N., Edelsohn, G., Werthamer-Larsson, L., Crockett, L., & Kellam, S., (1995). The significance of self-reported anxious symptoms in first grade children. Prediction of anxious symptoms and adaptive functioning in fifth grade. *Journal of Child Psychology and Psychiatry, 36*, 427-437.

Johnson, A. M., Falstein, E. I., Szurek, S. A., Svendsen, M.(1941). School phobia. *American Journal of Orthopsychiatry* 11:702-711.

Kagan, J., Reznick, J. S., & Snidman, N. (1988). Biological bases of childhood shyness. *Science, 240*, 167-171.

Kagan, J. (1989). Temperamental contributions to social behavior. *American Psychologist, 44*, 668-674. In Barlow (2002). p.46.

Kagan, J. (1994). *Galen's Prophecy.* New York, N. Y.: Basic Books.

Kagan, J. & Snidman, N. (1991). Temperamental factors in human development. *American Psychologist, 46*, 856-862. p.46.

Kagan, J., & Snidman, N. (1999). Early childhood predictors of adult anxiety disorders. Biological Psychiatry, 46, 1536-1541.In Barlow (2002).

Kagan, J., Reznick, J. S., & Snidman, N., (1988). Biological basis of childhood shyness. *Science, 240*, 167-171.

Kagan, J., Snidman, N., & Arcus, D. M. (1992). Initial reactions to unfamiliarity. *Current Directions in Psychological Science, 1(6)*, 171-174.

Kashdan, T. B. & Herbert, J. D. (2001). Social anxiety disorder in childhood and adolescence: Current status and future direction. *Clinical Child and Family Psychology review, 4 (1),* 37-61.

Kendall, P.C. (1992). *Coping Cat workbook.* Ardmore, PA: Workbook Publishing.

Kendall, P. C. & Flannery-Schroeder, (1998). Methodological issues in treatment research for anxiety disorders in youth. *Journal of Abnormal Child Psychology, 26 (1)* 27-38.

Kessler, R.C., McGonagle, K.A., Zhao, S., Nelson, C. B. Hughes, M., Eshleman, S., Wittchen, H. U. & Kendler, K. S. (1994). Lifetime and twelve month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Survey. *Archives of General Psychiatry, 51*, 8-19.

Kessler, R. C., Demler, O., Frank, R. G., Olfson, M., Pincus, H. A., Walters, E. E., Wang, P. S., Wells, K. B., & Zaslavsky, A. M. (2005). Prevalence and treatment of Mental disorders, 1990 to 2003. *New England Journal of Medicine*, 352 (24) 2515-2523.

Keyser, D.J., & Sweetland, R. C. (1984-1994). *Test critiques*. 1. Austin, TX: Pro-Ed. 181-182.

Kilpatrick, D. & Saunders, B. (1997). Prevalence and Consequences of Child Victimization: Results from the National Survey of Adolescents, Final Report. *Research in Brief, Washington, D. C.: U.S. Department of Justice.*

King, N. J. (1993). Simple and social phobia. In T. H. Ollendrick & R. J. Prinz (Eds.). *Advances in clinical child psychology (vol. 15*. pp. 305-341). New York: Plenum Press.

King, N., Murphy, G. C., & Heyne. (1997). The nature and treatment of social phobia in youth. *Counseling psychology quarterly, 10*, 377-387.

Koomen, H. Y., Hoeksma, J. B., Keller, H. F. C. M., & DeJong, P. F. (1999). Scales for teachers' assessment of inhibition and security seeking in kindergarten children. *Psychological Reports*, 84, (3, Part 1), 767-772.

LaFreniere, P.J., & Dumas, J.E. (1996). Social Competence and Behavior Evaluation in Children Ages 3 to 6 years: The short form (SCBE-30). *Psychological Assessment, 8, No. 4*, 369-377.

LaGreca, A.M. & Lopez, N., (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Child Psychology, 26*, 83-94.

Last, C. G. (1993). Introduction. In C. G. Last (Ed.), *Anxiety across the lifespan: A developmental perspective*. (Pp2-11). New York: Springer.

Last, C. G., Perrin, S., Hersen, M., & Kazdin, A. E. (1992). DSM III-R anxiety disorders in children: sociodemographic and clinical characteristics. *Journal of the American Academy of Child and adolescent Psychiatry, 31*, 1070-1076.

Leary, M. R. (1986). The impact of interactional impediments on social anxiety and self-presentation. *Journal of Experimental Social Psychology, 22*, 122-135.

Lewinsohn, P.M., Gotlib, I.H., Lewinsohn, M., Seeley, J.R., & Allen, N.B. (1998). Gender differences in anxiety disorders and anxiety symptoms in adolescents. *Journal of Abnormal Psychology, 107*, 109-117.

Lin, E., Goering, P., Offord, D. R., Campbell, D., & Boyle, M. H. (1996). The use of mental services in Ontario: Epidemiologic findings. *Canadian Journal of Psychiatry, 41*, 572-577.

Maddox, T. (Ed.) (1997). Tests: A Comprehensive Reference for Assessments in Psychology, Education, and Business. Pro-Ed : Austin,TX. (p.251)

Marks, I. (1987) *Fears, Phobia, and Rituals.* New York, N.Y.: Oxford University Press, p.368. In M.J. Chartier, J.R Walker, J. R., & M. B. Stein. Considering comorbidity. Social Psychiatry and Psychiatric Epidemiology, (2003), 38:728-734.

Martens, B.K. (1992). Review of the Conners' Rating Scales in the *Eleventh Mental Measurements Yearbook.* Kramer, J. J., Conoley, J.C., & Murphy, L.L. (Eds.). p.233-234.

McEwen, E. L. & McEwen, P. J. (2003). *Making Sense of Research.* California: Corwin Press.

McGee. R., Feehan, M., Williams, S., Partridge, F., Silva, P. A., & Kelly, J. (1990). DSM-III disorders in a large sample of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*, 611-619.

National Association for the Education of Young Children (1987). *Standardized Testing of Young Children 3 Through 8 years of Age.* Washington, Dc: Author.

National Institutes for Mental Health (200). *An overview that summarizes research into the causes, diagnosis, prevention, and treatment of child and adolescent violence.* Retrieved September, 2006 from http://www.nimh.nih.gov.publisting.cfm?

Nelson, C.B., & Wittchen, H.U., (1998). Smoking and nicotine dependence: Results from a sample of 14 to 24 year- olds in Germany. *European addiction Research, 4,* 42-49.

Nunnally, J. C., (1972). *Educational Measurement and Evaluation* (2nd ed.). New York: McGraw-Hill Book Company.

Oehler-Stinnett, J. (1992). Review of the Conners' Rating Scales. in the Eleventh Mental *Measurements Yearbook.* Kramer, J.J. Conoley, J. C. & Murphy, L.L. (Eds.). p. 234-240.

Offord, D.R., Boyle, M.H., Campbell, D.,Goering, P., Lin, E., & Wong, M., (1996). One year prevalence of psychiatric disorder in Ontarians 15-64 years of age. *Canadian Journal of Psychiatry, 41,* 559-563.

Ormrod, J. E. (2004). *Human Learning* (4th Ed.).Upper Saddle River, NJ: Pearson Education, Inc. p.443.

Ormrod, J. E., Saklofske, D. H., Schwean, V. L. Harrison, G. L. & Andrews, J. J. (2006). *Principles of Educational Psychology* (Canadian Edition). Upper Saddle River, NJ: Pearson Education Inc.

Patton, G.C., Carlin, J.B., Coffey, C., Wolfe, R., Hibbert, M., & Bowes, G. (1998). Depression, anxiety, and smoking initiation: prospective study over 3 years. *American Journal of Public Health, 88*, 1518-1522.

Paxil CR Home page. GlaxoSmithKline. Glossary. Retrieved October 10, 2006, from www. Paxilcr.com/Glossary.jsp/.

Perrin, E. C., Stein, R. E. K., & Drotar, D. (1991). Cautions in using the Child Behavior Checklist: Observations Based on Research About children with a Chronic Illness. *Journal of Pediatric Psychology, Vol.16, No. 4*, 411-421.

Pine, D. S. (1994). Child-adult anxiety disorders. *Journal of the American Academy of Child and Adolescent Psychiatry, 33*, 280-281.

Pine, D.S., Cohen, P., Gurley, D., Brook, J., & Ma, Y. (1998). The risk for early adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. *Archives of General Psychiatry, 55*, 56-69.

Rapee, R. M. (1995). Descriptive psychopathology of social phobia. In R. G. Heimberg, M.R. Leibowitz, et al. (Eds.). *Social Phobia: Diagnosis, assessment, and treatment* (pp.41-66). New York: The Guilford Press.

Rapee, R. M. (2001). The development of generalized anxiety. In M. W. Vasey & M. R. Dadds (Eds.), *The developmental psychopathology of anxiety* (pp. 481-503). New York: Oxford Press.

Regier, D.A., Rae, D.S., Narrow, W.E., Kaelber, C.T., & Schatzberg, A.F. (1998). Prevalence of anxiety disorders and their comorbidity with mood and addictive disorders. *British Journal of Psychiatry, 173* (*Suppl. 34*), 24-28.

Reynolds, C.R. & Kamphaus, R. W. (2004). *Behavior Assessment System for Children 2nd Edition (BASC-2)*. Pearson Assessments: Bloomington, MN.

Roberts, R.E., Attkisson, C., & Rosenblatt, A. (1998). Prevalence of psychopathology among children and adolescents. *American Journal of Psychiatry, 155*, 715-725.

Rosenbaum, J. F., Biederman, J., Hirshfeld, D. R., Bolduc, E. A., & Chaloff, J. (1991). Behavioral inhibition in children: A possible precursor to panic disorder or social phobia. *Journal of Clinical Psychiatry, 52*, 5-9.

Rubin, K. H., & Burgess, K. B. (2001). Social withdrawal and anxiety. In M. W. Vasey & M. R. Dadds (Eds.), *The developmental psychopathology of anxiety* (pp. 407-434). New York: Oxford University Press.

Salvia, J., Ysseldyke, J.E., (1985). *Assessment in Special and Remedial Education* (3rd ed.). Boston, MA. Houghton Mifflin Company.

Sattler, J. M., (1992). *Assessment of Children* (3rd ed.). San Diego: Jerome M. Sattler Publisher, Inc.

Saudino, K. J. (2001). Behavioral Genetics, Social Phobia, Social Fears, and Related Temperaments. In S. G. Hofmann, & P. M. DiBartolo (Eds.), *From social anxiety to social phobia: Multiple perspectives* (pp. 200-215), Needham Heights, MA : Allyn & Bacon

Schatzberg, A. F., Samson, J.A., Rothschild, A. J., Bond, T.C., & Regier, D. A. (1998). McLean Hospital depression research facility: Early-onset phobic disorders and adult-onset major depression. *British Journal of Psychiatry, 173 (Suppl. 34)*, 29-34.

Schneier, F. R. (1997). Quality of life in anxiety disorders. In H. Katschnig, H Freeman, & N. Sartorious (Eds.). *Quality of life in mental disorders* (pp.149-163).

Schwartz, C. E., Snidman, N, & Kagan, J. (1999. Adolescent social anxiety as an outcome of inhibited behavior in childhood. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, (8):1008-1015.

Seifert, K. L. & Hoffnung, R. J. (1987). *Child and Adolescent Development.* Boston, MA: Houghton Mifflin Company.

Selective Mutism Foundation (2000). Retrieved January 10, 2006 from http:www.selective mutism foundation.org/

Shaffer, D., Fisher, P., Dulcan, M.K., Mina, K., Davies, M., Piacentini, J., Schwab-Stone, M. E., Lahey, B. B., Bourdon, K., Jensen, P. S., Bird, H. R., Canino, G., & Regier, D. A. (1996). Criterion validity of the NIMH Diagnostic Interview Schedule for Children Version 2.3: Description, acceptability, prevalence rates, and performance in the MECA study. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 865-877.

Shear, K., Jin, R., Ruscio, A. M., Walters, E. E., & Kessler, R. C. (2006). Prevalence and correlates of estimated DSM- IV child and adult separation anxiety disorder in the National Comorbidity Survey Replication. *American Journal of Psychiatry. June, 163 (3),* 1074-1083.

Silverman, W. K., LaGreca, A. M., & Wasserstein, S. B. (2000). What do youth referred for anxiety problems worry about? Worry and its relation to anxiety and anxiety disorders in children and adolescents. Journal of Abnormal Child Psychology, 28, 63-72.

Verhulst, F. C. (1995). A review of community studies. In F. C. Verhulst& J. M. Kook (Eds.), *Epidemiology of child and adolescent psychopathology* (pp. 146-177) Cambridge, MA: Oxford University Press.

Walker, J. R. (2000). Coaching for Confidence: Evaluation of a community-based prevention program for the parents of anxious Kindergarten-aged children. Manuscript submitted for publication.

Walker, J. R. & Stein, M. B. (1995). The epidemiology of social phobia. In M. B. Stein (Ed.). *Social phobia: Clinical and research perspectives.* Washington, D. C.: American Psychiatric Press, 43-75.

Walker, J. R., Cox, B. J., Freeman, W., Mills, R., Hiebert-Murphy, D., Feldgaier, S., & Warren, M. Coaching for confidence: Evaluation of a community-based early intervention program for kindergarten-aged children with anxiety. Paper presented at the Annual Meeting of the Association for Behavioral and Cognitive Therapies, Chicago, November 2006.

Wilson, M. J., & Bullock, L. M. (1989). Psychometric characteristics of behavior rating scales: Definition, problems, and solutions. *Behavioral Disorders*, *14*, 186-200.

Wittchen, H. U., Nelson, C. B., & Lachner, G., (1998). Prevalence of mental disorders and psychosocial impairments in adolescents and young adults. *Psychological Medicine*, *28*, 109-126.

Wittchen, H. U., Kessler, R.C., Pfister, H., & Lieb, M. (2000). Why do people with anxiety disorders become depressed? A prospective-longitudinal community study. *Acta Psychiatrica Scandinavica*, *102*, (*Suppl.406*), 14-23.

Young, A. S., Klap, R., Sherbourne, C.D. & Wells, K.B. (2001). The quality of care for depressive and anxiety disorders in the United States. *Archives of General Psychiatry, 58*, 55-61.

Zimbardo, P.G. (1977). *Shyness*. New York, N.Y.: The Berkley Publishing Group.

Zimbardo, P. G. (1982). Shyness and the stresses of the human connection. In L. Goldberger & S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (pp. 466-481). New York: Free Press. In S. G. Hofmann, & P. M. DiBartolo (Eds.), From social anxiety to social phobia: multiple perspectives (pp.46-64), Needham Heights, MA: Allyn & Bacon.

Appendix A

Letter to the School Principal

Dear

Re: Survey of Teachers' Opinions About Items for an Early Years Anxiety Rating Scale

I am writing to introduce my project and myself and to ask whether you and your school staff might be willing to help with a project I am doing as part of the research for my Ph.D. in the Faculty of Education. I am a partially retired teacher and I am working on my Ph.D. on a part-time basis. As part of this work, I have been working with a team of researchers focusing on anxiety problems in Kindergarten-age children. The researchers are associated with the Anxiety Disorders Clinic at St. Boniface General Hospital. Their names are Dr. Brian Cox, Dr. Steve Feldgaier, Dr. Wendy Freeman, Dr. Diane Hiebert-Murphy, and Dr. John Walker Ph.D., Director of the Anxiety Disorders Clinic. All of these individuals are associated with the University of Manitoba in a professional capacity.

Anxiety problems are the most common emotional difficulties seen in our communities. Difficulties with anxiety are seen in some children even at the pre-school level. Community research indicates that young people who experience difficulty with anxiety are at risk later in life for the development of problems with depression and substance abuse and are even at greater risk for the development of problematic health behaviours such as cigarette smoking. Due to their wide range of experience in dealing with children, classroom teachers are in an excellent position to provide opinions about the extent to which a particular student experiences difficulty with anxiety. To this point, there is no widely accepted teacher rating scale that allows a teacher to provide ratings concerning a particular student's anxiety. Our research group hopes to develop such a measure as part of our work focused on developing preventative school-based programs to help children and parents deal with difficulties with anxiety.

As the purpose of the research is to devise a rating scale to be used by Kindergarten/Grade one teachers, it would be very helpful to obtain information from teachers about the behaviours they see in this age range that suggest anxiety may be a problem. My project involves interviewing Kindergarten and grade one teachers and asking them several open-ended questions about how shy or anxious children behave in school situations. I will then ask each teacher I interview to complete a Teacher Rating Survey consisting of 46 items asking how characteristic each item is of the shy or anxious children they have seen over the years. The teacher meetings will be scheduled at a time that will be convenient for the teacher and will not disrupt the classroom routine. This structured interview and completion of the brief survey will require about 20-30 minutes. The completed forms will be placed in a coded envelope that will be sealed. The names of the teachers will not appear on the interview form or the 46-item survey. The names of participating teachers will be retained on a master list held only by the investigator (Joe Goulet). All data will be treated as confidential information. Information or data collected will not be associated with the participant's name or other identifying information and the

results of this survey will be published and shared in a summarised form that does not reveal the identity of any participating teacher.
When the survey is completed, participating teachers and schools will be provided with a copy of the summary report. If a teacher provides permission to be recontacted, he or she will be asked for comments about the draft of the Teacher Anxiety Rating scale that will follow from the survey. Participation in the survey by schools and by individual teachers is completely voluntary.

I will be telephoning within the next ten days to see if it would be appropriate for Kindergarten and Grade 1 teachers in your school to receive information about this survey. A copy of a letter addressed to teachers about the survey is attached. If, after consulting with kindergarten and Grade 1 teachers, you think that it would be appropriate for teachers to receive this information, I can provide additional copies of the letter for teachers. I will then consult with you about the best method for me to contact teachers to see if they are interested in participating. I would be happy to arrange to visit the school at the time of a lunch hour or staff meeting to introduce myself to the teachers and to ask who might be interested in participating.

Thank you for your assistance with this project. Please feel free to contact me or my research supervisor (Dr. John Walker) if we can provide any additional information.

Sincerely yours,

Joseph Goulet B.A. Med.
Teacher, Principal Investigator
T.S. Service Clinic
M-4 St. Boniface General Hospital
Ph. (204) 237-2690

John Walker PhD.
Supervisor
Anxiety Disorders Clinic
M-5 St. Boniface General Hospital
Ph. (204) 237-2055

Appendix B

Letter to Teachers

University of Manitoba
Faculty of Education

(Teacher's Letter)

Dear Mr. or Ms.

Re: Survey of Teachers' Opinions About Items for an Early School Years Anxiety Rating Scale.

I am writing this letter to introduce myself and to ask if you would be willing to help with a study that I am doing as part of the research for my PhD. in the Faculty of Education, University of Manitoba. I am a partially retired teacher and am working on my PhD on a part time basis. As part of this work, I have been working with a team of researchers focusing on anxiety problems in Kindergarten age children. The researchers are associated with the Anxiety Disorders Clinic of St. Boniface General Hospital. Their names are Dr. Brian Cox, Dr. Steve Feldgaier PhD, Dr. Wendy Freeman PhD, Dr. Hiebert-Murphy PhD, and Dr. John Walker PhD, Director of the Anxiety Disorders Clinic at St.Boniface General Hospital.

The purpose of this research is to devise a rating scale to be used by Kindergarten/Grade One teachers. It would be helpful to obtain information from teachers about the behaviours they see in this age range that suggest that anxiety may be a problem. Community research indicates that young people who experience difficulty with anxiety are at risk later in life for the development of problems with depression and substance abuse and are even at greater risk for the development of problematic health behaviours such as cigarette smoking.

Due to their wide range of experience in dealing with children, classroom teachers are in an excellent position to provide opinions about the extent to which a particular student experiences difficulty with anxiety. To this point, there is no widely accepted teacher rating scale that allows a teacher to provide ratings concerning a particular student's anxiety. Our research group hopes to develop such a measure as part of work focused on developing preventative school-based programs to help children and parents deal with difficulties and anxiety.

My project will involve interviewing Kindergarten and Grade One teachers and asking them several open-ended questions about how shy or anxious children behave in school situations. I will then ask each teacher I interview to complete a Teacher Rating Survey consisting of 46 items-asking how characteristic each item is of the shy or anxious children they have seen over the years.

This meeting will be scheduled at a time that is convenient for you and will not disrupt the classroom routine. This structured interview and completion of the brief survey will require about 20 to 30 minutes. The completed forms will be placed in a coded envelope that will be sealed. Your name will not appear on the interview form or the 46-item survey. The names of participants will be retained on a master list held only by the investigator(Joseph Goulet). All data will be treated as confidential information. Information or data collected will not be associated with your

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name or other identifying information and the results of this survey will be published and shared only in a summarised form that does not reveal your identity.

When the survey is completed, you and the school will be provided with a copy of the summary report. If you provide permission to be recontacted, you will then be asked for comments about the draft of the teacher anxiety rating scale that will follow from the survey.
Participation in the survey is completely voluntary.

Your principal has received a similar letter from me outlining the nature of the study. He /she will be informing Kindergarten/ Grade one teachers of this survey. If there are interested teachers, then I will contact your principal about the best method for me to contact them. I would be happy to arrange a visit to the school before school starts, at lunchtime, at a staff meeting, or after school finishes. If these are not convenient times, then a mutually agreed upon time can be set up, that will not inconvenience you or your school duties.

Thank you for your assistance in this project. Please feel free to contact me or my research supervisor (Dr. John Walker) if we can provide you with any additional information.

Sincerely yours,

Joseph Goulet B.A. MEd.
Teacher, Principal Investigator
T.S. service
M-4 St. Boniface General Hospital
Ph. (204) 237-2690

John Walker PhD.
Supervisor
Anxiety Disorders Program
M-5 St. Boniface General Hospital
Ph. (204) 237-2055

Appendix C

Teacher Consent Form

University of Manitoba
Faculty of Education

Teacher's Consent Form

Research Project Title: Teacher Survey re Shy and Anxious Children in the Classroom

Researcher: Joseph Goulet (Principal Investigator)
Dr. John Walker Supervisor

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The purpose of this research is to devise an instrument (a rating scale) to be used by teachers, that will identify shy and/or anxious children in Kindergarten/ Grade One. To accomplish this, the principal investigator will interview Kindergarten/ Grade One teachers.

Teachers will be presented a two page form requesting information about their perceptions of shy/anxious children. This will be done by asking several questions. Teachers will then be asked to complete a Teacher Rating Survey consisting of 46 items. This structured interview and completion of the brief survey form will last about 20 to 30 minutes. Teachers will complete the forms placing them in sealed envelopes provided for them which the Principal Investigator will collect.
Participation in this interview and survey form involves no risk for participants.

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All data will be treated as confidential information. No individual results will be released to anyone except the principal investigator. To ensure your confidentiality, personal information or data collected about participants in the investigation is not about the purpose of the investigation, and so will not be reported or made public. Information or data collected will not be associated with the participant's name or other identifying information.

Access to the data collected will be limited to the principal investigator directly involved in the research. The principal investigator may share results with other researchers in the field. The shared information will not include the participant's name. All data collected will be kept in a secure locked cabinet to which only the principal investigator will have access. The data will be password protected on a computer.

The principal investigator will provide feedback to the participants. This will be done by presenting the participants with a printed copy of the results. This will be orally explained to them. At the same time, participants will be asked their opinions about the draft of the rating scale that will follow from the questions they answered in the initial interview and from the survey form that was completed.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Principal Investigator
Joseph Goulet B.A., MEd.
T.S. Service Clinic
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Appendix D

Teacher Interview Questionnaire

1

TEACHER SURVEY

SHY AND FEARFUL CHILDREN IN THE CLASSROOM

Teacher's Number: _____ Gender: M / F

Number of years teaching: Kindergarten ____ , Grade 1 ____ Grade 2 ____, Other Grades ____

Shyness and anxiety are normal human emotions. Some children, however, are much more shy or fearful than the average child. For these children, anxiety may interfere with their enjoyment of school, activities with other children, and new experiences (such as swimming lessons or children's sports).

We are interested in how teachers of Kindergarten and Grade 1 age children recognise shyness or fearfulness in some children in the classroom. We will ask about shyness and social anxiety in one section of questions and then repeat the same questions about the child who may be fearful but not particularly shy or socially anxious.

Some children are very shy or socially anxious in school settings.

1. What descriptive words would you use for this type of child in the classroom?

2. What behaviours would you see in the classroom or the school that would suggest to you that a child is particularly shy or socially anxious?

3. What situations may be difficult for this type of child in the school setting?

Some children may be fearful or anxious even if they may not be especially shy in social situations.

1. What descriptive words would you use for this type of child in the classroom?

2. What behaviours would you see in the classroom or the school that would suggest to you that a child is particularly shy or socially anxious?

3. What situations may be difficult for this type of child in the school setting?

Appendix E

Teacher Rating of Survey Items

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TEACHER RATINGS OF SURVEY ITEMS

We are working to develop a short questionnaire for teachers to use in describing the shy or fearful child in the school setting. There are many possible questions that could be used, but we would like to develop a shorter list of the most typical descriptions of how the fearful or shy child is seen in the school setting. How typical of the shy or fearful child in the school situation are the descriptions below?

TODAY's Date

__ / __ / 2 0 0 _

Month Day Year

Office Use Only

ID Number

1 2 3 4 5 6 7 8 9 0

Date

	Not at all Typical	Seldom Typical	Sometimes Typical	Quite Often Typical	Very Often Typical
1. Has difficulty leaving the parent or person who drops off at the start of the day.	O 0	O 1	O 2	O 3	O 4
2. Has difficulty joining other children in play situations.	O 0	O 1	O 2	O 3	O 4
3. Has difficulty joining other children in physical activities.	O 0	O 1	O 2	O 3	O 4
4. Reluctant to try new activities.	O 0	O 1	O 2	O 3	O 4
5. Reluctant to try activities involving physical confidence (such as in the gym).	O 0	O 1	O 2	O 3	O 4
6. Becomes upset easily when makes a mistake.	O 0	O 1	O 2	O 3	O 4
7. Becomes upset easily in unfamiliar situations.	O 0	O 1	O 2	O 3	O 4
8. Cries easily when anxious.	O 0	O 1	O 2	O 3	O 4
9. Has difficulty dealing with transitions in classroom activities.	O 0	O 1	O 2	O 3	O 4

	Not at all Typical	Seldom Typical	Sometimes Typical	Quite Often Typical	Very Often Typical
10. Cautious when there is an unfamiliar adult in the situation.	O 0	O 1	O 2	O 3	O 4
11. Cautious when there is an unfamiliar child in the situation.	O 0	O 1	O 2	O 3	O 4
12. Has difficulty with larger groups such as school assembly.	O 0	O 1	O 2	O 3	O 4
13. Reluctant to speak in front of other children.	O 0	O 1	O 2	O 3	O 4
14. Reluctant to ask questions from teacher or assistant.	O 0	O 1	O 2	O 3	O 4
15. Reluctant to answer question from teacher or assistant.	O 0	O 1	O 2	O 3	O 4
16. Reluctant to try new craft or learning activity.	O 0	O 1	O 2	O 3	O 4
17. Lacks physical confidence.	O 0	O 1	O 2	O 3	O 4
18. Reluctant to go with class on an outing.	O 0	O 1	O 2	O 3	O 4
19. Reacts with apprehension to changes in routine.	O 0	O 1	O 2	O 3	O 4
20. Reluctant to go to the washroom/restroom alone.	O 0	O 1	O 2	O 3	O 4
21. Speaks very quietly.	O 0	O 1	O 2	O 3	O 4
22. Makes less eye contact than other children.	O 0	O 1	O 2	O 3	O 4
23. Stays in the background in group activities.	O 0	O 1	O 2	O 3	O 4
24. Reluctant to volunteer an idea in group activities.	O 0	O 1	O 2	O 3	O 4

	Not at all Typical	Seldom Typical	Sometimes Typical	Quite Often Typical	Very Often Typical
25. Rarely volunteers for classroom activity.	O 0	O 1	O 2	O 3	O 4
26. Clings to a familiar person (an adult or a friend).	O 0	O 1	O 2	O 3	O 4
27. Reluctant to be the centre of attention in a group.	O 0	O 1	O 2	O 3	O 4
28. Often asks for reassurance - even when it doesn't seem necessary.	O 0	O 1	O 2	O 3	O 4
29. Complains of stomach aches.	O 0	O 1	O 2	O 3	O 4
30. Complains of headaches.	O 0	O 1	O 2	O 3	O 4
31. Complains of other physical symptoms.	O 0	O 1	O 2	O 3	O 4
32. Requests to call parent or other caretaker to go home.	O 0	O 1	O 2	O 3	O 4
33. Reluctant to try different foods.	O 0	O 1	O 2	O 3	O 4
34. Often asks for help with routine activities.	O 0	O 1	O 2	O 3	O 4
35. Has fewer friends than other children.	O 0	O 1	O 2	O 3	O 4
36. Smiles less often than other children.	O 0	O 1	O 2	O 3	O 4
37. Speaks up less often than other children.	O 0	O 1	O 2	O 3	O 4
38. Shy.	O 0	O 1	O 2	O 3	O 4
39. Easily frightened.	O 0	O 1	O 2	O 3	O 4
40. Timid.	O 0	O 1	O 2	O 3	O 4

	Not at all Typical	Seldom Typical	Sometimes Typical	Quite Often Typical	Very Often Typical
41. Sensitive.	O 0	O 1	O 2	O 3	O 4
42. Easily upset.	O 0	O 1	O 2	O 3	O 4
43. Reluctant.	O 0	O 1	O 2	O 3	O 4
44. Fearful.	O 0	O 1	O 2	O 3	O 4
45. Worried.	O 0	O 1	O 2	O 3	O 4
46. Nervous.	O 0	O 1	O 2	O 3	O 4
Any other descriptions that you would suggest for children of this age.					
_____	O 0	O 1	O 2	O 3	O 4
_____	O 0	O 1	O 2	O 3	O 4
_____	O 0	O 1	O 2	O 3	O 4
_____	O 0	O 1	O 2	O 3	O 4

Thank you for taking the time to complete these questions.

Appendix F

Responses to the Six Questions Asked in the Interviews

Teachers were asked verbally, to respond to the comment that "Some children are very shy or socially anxious in school settings." The comment was followed by three questions to each of which teachers supplied a response. Here are the questions asked and the teachers' responses.

Question 1. **What descriptive words would you use for this type of child in the classroom?**

Teacher 1 (T1)-repressed; hang back; tends to cry; cling to caregiver; parallel play; go to one child is comfortable with. T2-withdrawn; remove self from activities; quiet.
T3-nervous tics; (nail biting); wets; cries.
T4- withdrawn; refuses to try; cry; bite nails; stutter; doesn't want to come to school.
T5- quiet; follower not a leader; watcher; doesn't take the first turn; doesn't initiate conversations or only to teacher; nervous habits (nail biting, hair chewing, playing with hair).
T6-hesitant; easily upset; (anxious); easily frustrated (easily cries, has temper tantrums).
T7-shy; closed; upset; worried; quiet; moody.
T8-hesitant; restricted; + caution toward school, life.
T9-quiet; timid; reluctant; nervous; hand motions; rocking.
T10-not a risk-taker; loner.
T11-quiet; withdrawn; non-verbal; timid; difficulty with peer relations (i.e. friendship, sharing); requiring adult intervention to complete a task.
T12-no response
T13-lack of participation; lack of eye contact; soft speaking voice; extremely compliant; emotionally steady.
T14-crying; sweating; teary-eyed; no eye contact; non-participant; fidgets.
T15-nervous; timid; fearful; non-risk taker; quiet; reluctant.
T16-loner; plays by him/herself; lacks self confidence.
T17-downcast; unresponsive; quiet spoken; sullen
T18-introverted; often immature; soft spoken; non verbal.
T19-nervous; unconfident; fidgety; jumpy; worried; fearful.
T20-cautious.
T21-withdrawn; loner.
T22-hesitant; quiet; watchful; compliant.
T23-difficulty engaging in group settings; quiet.
T24-nervous. fearful; afraid; anxious; emotional; quiet.
T25-quiet; withdrawn; "in his/her own world."
T26-quiet; alone; withdrawn.

The most common themes in this question are the following:

Quiet 12

Withdrawn	6
Worried	2
Nervous	3
Hesitant	3
Isolate self	5
Soft-spoken	2
Loner	4
Cry	4
Fearful	3
Afraid	1
Timid	3
Anxious	2
Nervous tics	1
Nervous habits	1
Upset	2
Unwilling to take risks	2

Question 2 **What behaviours would you see in the classroom the school that would suggest to you that a child is particularly shy or socially anxious?**

T1-isolating self; unwilling to take risks; needs reassurance; freezes in new situations.
T2-withdraws from group activities; chooses individual activities over group; sits by self; crying when left; clings to parent/teacher; refusal to participate in certain activities.
T3-stays to self; no smile; cries a lot.
T4-cries when given a task; tries to cope with children's work; refuses to speak; never volunteers; hides; says "I can't."
T5-has difficulty joining a group or asking for a turn.
T6-shy; doesn't talk; often chooses solitary activities; very polite; reticent; waits for turn; anxious; will sometimes lash out physically or verbally; overactive bladder; likes to be in control of all variables; super sensitivity; obsessive compulsive about some things.
T7-no participation; "accidents;" "shuts down" during work time; extremely quiet with teacher (possibly peers as well); wants more attention; crying; feeling "sick"; separation anxiety (especially at beginning of school year).
T8-quiet; at times fearful; inability to try activities; mute; may cry; fights with others; frequent trips to the washroom and lockers; sometimes restricted to only maybe one area during choice.
T9- hangs back; reluctant to talk or answers questions; crying.
T10-watches other children but doesn't participate; very quiet (silent) in groups; seldom volunteers information.

T11-loner; prefer to work by themselves; difficulty with social skills; cannot make eye contact; cannot express themselves (i.e. greeting).
T12-no response
T13-timid; quiet; scared.
T14-sitting and not answering questions; looking for reassurance that they are on the right track; won't go with others-just those they are comfortable with.
T15-does not participate; reluctant/hesitant behaviours; cries; does not want to be noticed.
T16-does not ask for help; not join activity; not speak at sharing time; comes in slowly; rarely answers; speaks quietly-so soft not easily heard; cries easily; not able to make choices.
T17-cries easily; won't always respond to questions; with teacher or alone at recess; not interacting with peers; asks teacher for help; needs to if work is done or being done correctly.
T18-chooses to work alone; doesn't initiate conversation with peers; non risk taker; needing adult closeness.
T19-nervousness if not looking at you; fidgety; unable to keep still.
T20-not speaking; speaking softly; not joining in; playing alone; complaining of sickness.
T21-not willing to answer out in class; plays by themselves.
T22-playing by self; sitting on the edge of a group; watches before proceeding with an activity; waits to be invited to join a group.
T23-very quiet; limited eye contact; hesitant; limited interaction; needs to be guided through situations (e.g. play).
T24-sticks to adult; doesn't wish to socialize with peers/speak to teacher.
T25-cries easily; wanting/asking to go home.
T26-sitting alone; holding hands with adult; clinging to adult.

The most common themes in this question are:

Isolating self	4
Unwilling to take risks	4
Needs reassurance	3
Clings	3
Difficulty joining groups	6
Freezes in new situation	3
Withdraws from group	1
Refuses to speak	10
Speaks softly	3
Cries	9
Poor or non/participation	7
Quiet	6
No smile	2

Question 3-**What situations may be difficult for this child in the school setting?**

T1-changes in routine; transitions; fire drill; arrival of new students; substitute teacher; challenged by more assertive students.

T2-transition times; group (large) work; asked to share ideas or thoughts; large group outside of comfort zone; visitors (e.g. when another class comes in to visit); substitute teacher.

T3-in playground; less structured play; when child has to be more sociable; perform (show).

T4-sharing ideas; speaking in front of group, class, or even teacher; any new situations; going to another room for instructions with another teacher (P. E., music); substitute teacher.

T5-finding a partner to work with; joining a group already playing; asking someone else when he/she doesn't understand; choosing a play centre; group discussions/sharing circle.

T6-shy/anxious-might be upset by new situations; likes routine; shy-easily bullied.

T7-new situations-beginning of the year-new teacher-new routines-new friends-substitute teachers.

T8-transitions between areas/time of day; subs; new students; changes in the schedule/fire drills; outside security of room (once comfortable).

T9-recess; teacher asking questions/calling on students; new situations; first few days of school.

T10-performance; interaction with other classes.

T11-group work-co-operative play; transitions; accepting change.

T12-no response

T13-participating; asking for help; recess time to play with someone; finding a partner in class; giving an answer out loud.

T14-speaking in front of the class; taking risks for new activities; in new lessons given; show and tell activities.

T15-group participation; writing activities; interaction with peers; initiating own learning.

T16-large group activities; drama; speaking; asking for help.

T17-recess; joining up to work with other students; asking for help when unsure; any change in routine.

T18-group work; independent choices (i.e. moving from station to station); non-routine change in schedule.

T19-presenting in front of group; choosing a partner for an activity; approaching someone to address a problem assertively; finding a playmate at recess if they are not asked to play; "breaking" a rule.

T20-group situations; new activities; unplanned, spontaneous activities; different teachers.

T21-any new learning; speaking in front of class.

T22-sharing; partner games; group activities; gym.

T23-large group meetings; co-operative groups; responding to text; "sharing stone."

T24-new activities; substitutes; difficult students.

T25-activities outside classroom (not routine); i.e. school- wide activities, field trips; substitute teachers.

T26-sharing in groups; new activities; activities; outside the home room;

The most common themes in this question:

Difficulty in groups	14
Changes in routine	10
Social situations in school	10
Transitions of all kinds	4
Substitute teacher	3

The second comment that teachers were asked to provide responses for was the following:

Some children may be fearful or anxious even if they may not be especially shy in social situations. Teachers responded to the 3 questions in this way.

Question 1 What descriptive words would you use for this type of child in the classroom?

T1-uncomfortable; wound up; tense.
T2-nervous; anxious; jumpy or overactive.
T3-depends on situation; formal-shyness.
T4-refuse to work with or co-operate; becomes angry.
T5-avoids new situations; stays with the same people all the time.
T6-anxious-searching for friendship; acceptance-self-conscious; might have some difficulty in setting limits for appropriate behaviours.
T7-scared; nervous; easily upset, worried; compulsive; angry.
T8-home body; not competitive; quiet; seeking attention-negative behaviours.
T9-needy; needs nurturing.
T10-nervous; withdrawn.
T11-frequency, duration, and intensity alter their illogical thought disorder; fears that require adult intervention to help work them through the situation.
T12 no response
T13-attention (positive or neg.).
T14-cry when left; wants reassurance; needs comfort/positive reinforcement.
T15-loud; inappropriate; nervous energy.

T16-stands back; jumps when someone comes near or raises hand; scribbles out work or erases a lot; easily upset.
T17-hangs back; quiet; not a risk taker
T18-talkative; stubborn; non-compliant.
T19-fidgety; nervous; afraid of breaking a rule.
T20-cautious; resistant to change.
T21-no response
T22-resistant to change; cries easily; dependent; perfectionism.
T23-their eyes mirror their feelings; anxious; comfortable with routine/structure (uncomfortable without it).
T24-worried; afraid; nervous.
T25-insecure.
T26-afraid of failure/afraid to try; repeat directions; ill; crying-complaining.

The most common themes of this question are the following:

Uncomfortable	2
Nervous	5
Avoids new situations	1
Withdrawn	2

Question 2 What behaviours would you see in the classroom or the school That would suggest to you that a child is particularly shy or socially anxious?

T1-crying; clinging to an adult or friend; clinging to familiar routine
T2-thumb-sucking; sucking on shirt; jumpy or overly active; can't sit still.
T3-very quiet-doesn't talk; cry; bite nails-scratch self.
T4-refuses to work or co-operate; becomes angry.
T5-afraid to join groups-fear of rejection; interacts with others in inappropriate ways-rude language, "attention getting" techniques (pinching, teasing, taking a toy away from someone).
T6-anxious-has temper tantrums; cries easily; needs order; shy-chooses solitary activities-afraid to ask for help.
T7-more quiet than usual; nervous habits (chewing on clothing, nails, picking at things); feeling "sick;" asking questions to gain reassurance; wanting more attention; "closed off;" the look on their face; angry.
T8-no interest in playing with new children/making new friends; hesitant to try new activities-needs adult reassurance; reluctant to leave classroom.
T9-clings to adult; self-stimulating in some way-rocking, tapping, twirling hair.

T10-fidgeting with clothes or objects; head down; go behind another child so s/he isn't first; asks to go home-stomach ache, etc.
T11-cry; difficult to reassure or calm down; need someone or something else to distract their experience or thought; certain behaviours indicate uneasiness like hand wringing, pricking skin.
T12-no response
T13-always trying to please adults and peers (giving presents); always defying adult's rules (classroom rules).
T14-will play by themselves; don't speak; need to go to the bathroom often; will find a way out of the group lesson; will try to avoid a situation that makes him/her anxious.
T15-bluster; jittery; difficulty in following directions.
T16-no response
T17-doesn't like new things; won't join in even if encouraged;-a loner-prefers quiet activities; say they are sick frequently.
T18-has own ideas as to what's next; chooses to work alone; doesn't offer suggestions or ideas in fear of ridicule.
T19-afraid of breaking a rule; unwilling to take risks; jumpy and unrelaxed.
T20-not speaking or softly spoken; not volunteering information; lack of confidence in his/her opinion or ability; easily swayed.
T21-worries about small things (e.g. leaving shoes at home); doesn't want to speak to the teacher.
T22-separation from parent difficult; thumb-sucking; tapping; hair twirling etc.
T23-reacts when teacher is out of their eyesight (where are you going? what are you doing?)
T24-doesn't participate; will not speak; cries a lot; nervous habits (chews nails, pulls at clothes, plays with fingers).
T25-refusal to do a certain activity; clinginess to an adult.
T26-ask same question repeatedly; ask to go to the washroom (leave the room); sore stomach/headache; disturbing the others/off task.

The most common themes of this question are:

Crying	4
Clinging	2
Self-stimulation	17
Somatic Complaints	5
Isolation	9
Social (peers and Teachers)	8
Poor self-confidence	7

Question 3: What situations may be difficult for this type of child in the school setting?

T1-suprises-fire drills, power failures, change of routine; large group assemblies, concerts; transition to a different room; new activities; new material to work with; substitute teacher; new adults coming in to work or visit.
T2-when they are unsure of activity; substitute teacher; doing something outside of their comfort zone i.e. field trip.
T3-asking child to talk in front of class-even on 1to1 speak to him individually.
T4-work in co-operative group setting.
T5- having conversations with peers (taking turns); using appropriate phrases in conversations (finding the right words); working with new people.
T6-anxious-buddy reading is unsettling; doesn't like recess-never chooses games- can't stand to lose; can't play bingo; shy-any activity which requires her to take risks, speak out loud, perform or pick a partner.
T7-new people-teacher or other adults; changes in routine when they do not know what to expect; introduction of anything they fear into their environment so that they are not in control; beginning of school (1^{st} weeks or months); in K and in gr.1 where they have to do a full day and be away from home; lunch time when a trusted adult may not be available; introduction of a new concept in class-unknown may feel like loss of control.
T8-school-new situations/new classmates-grade transitions; extra-curricular activities; reading out loud story telling; participation in discussions.
T9-social situations; parties; new people or situations; first day of school'
T10-concerts; class performances.
T11-first day, week or month of school; changes in routines i.e. sub or change in schedules; recess; lunchroom; physical education; group work; working independently.
T12-no response
T13-confrontation; discipline (dealing with consequences).
T14-group lessons.
T15-difficulty in following directions; difficulty in settling down.
T16-seat work-fear of making mistakes; group activities-fear of making mistakes; centres-playtime-having to choose what to do.
T17-"free time;" noisy situations; if mom is in the room they are "clingy;' difficult to come to school then parting with mom; field trips difficult for them; substitute teachers difficult.
T18-makers of own rules; leader in a group to ensure it goes their way.
T19-having to do something on the spot without a chance to prepare; trying new things; doing things by themselves in front of the class; asking teacher for clarification and reassurance frequently.

T20-new or different activities; any changes.
T21-afraid to make mistakes so doesn't try.
T22-new activities; changes in seat placement; substitute teachers; field trips; sharing.
T23-substitute teachers; transitions (gym, music room); multiple teachers; new settings.
T24-changing to new activities; going to another class (music, gym, transition times); peer tutoring (older/other children in class); substitutes; parent volunteers helping out.
T25-activities out of the ordinary routine.
T26-group work; one person "performing" in front of whole class; showing their work to everyone.

The most common themes of this question are the following:

Classroom activities	23
Change of routine	12
Social difficulties in school	6

Appendix G
Diagnostic and Statistical Manual IV Text Revision (2000) (DSM IV-TR)

According to the Diagnostic and Statistical Manual IV Text Revision 2000 (DSM IV-TR), anxiety disorders may include but are not limited to the following:

1. Social Phobia.
2. Specific Phobia.
3. Separation Anxiety Disorder.
4. Overanxious Disorder.
5. Posttraumatic Stress Disorder (PTSD).
6. Panic Disorder.
7. Obsessive Compulsive Disorder.
8. Avoidant Disorder.
9. Generalized Anxiety Disorder (GAD).

A discussion of the main characteristics of most of these disorders will follow. (DSM IV TR). Avoidant disorder and overanxious disorder are included in Generalized anxiety disorder.

1. Social Phobia (Social Anxiety Disorder). Here are a few characteristics of Social Phobia :

A. A marked and persistent fear of one or more social performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way that will be humiliating or embarrassing. **Note**: In children, there must be evidence of the capacity for age-appropriate social relationships with familiar people and the anxiety must occur in peer setting, not just interactions with adults.

B. Exposure to feared social situation almost invariably provokes anxiety. **Note**: In children, anxiety may be expressed by crying, tantrums, freezing, or shrinking from social situations with unfamiliar people.

C. The person recognizes that the fear is excessive or unreasonable.

Note: In children this feature may be absent.

D. The feared social or performance situations are avoided or else endured with intense anxiety or distress.

E. The avoidance, anxious anticipation or distress in the feared social or performance situation(s) interferes significantly with the person's normal routine, occupational functioning, or social activities or relationships.

F. In individuals under age 18 years, the duration is at least 6 months.

2. Specific Phobia:

A. Marked and persistent fear that is excessive or unreasonable, cued by the presence or anticipation of a specific object or situation (e.g., flying, heights, animals, receiving an injection, seeing blood).

B. Exposure to the phobic stimulus almost invariably provokes an immediate anxiety response, which may take the form of a situationally bound or situationally predisposed Panic Attack. **Note**: In children, the anxiety may be expressed by crying, tantrums, freezing, or clinging.

C. The person recognizes that the fear is excessive or unreasonable. **Note**: in children, this feature may be absent.

D. The phobic situation(s) is avoided or else is endured with intense anxiety or distress.

E. The avoidance, anxious anticipation, or distress in the feared situation(s) interferes with the person's normal routine, occupational (or academic) functioning, or social activities or relationships, or there is marked distress about having the phobia.

F. In individuals under age 18 years, the duration is at least 6 months.

3. Separation Anxiety Disorder

A. developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached, as evidenced by three (or more) of the following:

(1) recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated
(2) persistent and excessive worry about losing, or about possible harm befalling, major attachment figure
(3) persistent and excessive worry that an untoward event will lead to

separation from a major attachment figure (e.g., getting lost or being kidnapped)
(4) persistent reluctance or refusal to go to school or elsewhere because of fear of separation
(5) persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings
(6) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home
(7) repeated nightmares involving the theme of separation
(8) repeated complaints of physical symptoms (such as headaches, stomachaches, nausea, or vomiting) when separation from major attachment figures occurs or is anticipated

B. The duration of the disturbance is at least four weeks.

C. The onset is before age 18 years.

D. The disturbance causes clinically significant distress or impairment in social, academic (occupational), or other important areas of functioning.

E. The disturbance does not occur exclusively during the course of a Pervasive Disorder, Schizophrenia, or other Psychotic Disorder....

4. Generalized Anxiety Disorder (Includes Overanxious disorder of Childhood)

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).

B. The person finds it difficult to control the worry.

C. The anxiety and the worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months). **Note**: Only one item is required in children.

(1) restlessness or feeling keyed up or on edge
(2) being easily fatigued
(3) difficulty concentrating or mind going blank
(4) irritability
(5) muscle tension
(6) sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)

D. The focus of the anxiety and worry is not confined to features of an Axis I disorder,

E. e.g., the anxiety or worry is not about having a Panic Attack (as in panic Disorder), being embarrassed in public (as in Social Phobia), being contaminated (as in Obsessive Compulsive Disorder), being away from home or close relatives (as in Separation Anxiety Disorder), gaining weight (as in Anorexia Nervosa), having multiple physical complaints (as in Somatization Disorder), or having a serious illness (as in Hypochondriasis), and the anxiety and worry do not occur exclusively during Posttraumatic Stress Disorder.

5. Posttraumatic Stress Disorder (PTSD).

A. The person has been exposed to a traumatic event in which both the following were present:

(1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others

(2) the person's response involved intense fear, helplessness, or horror. **Note**: In children, this may be expressed instead by disorganized or agitated behaviour.

B. The traumatic event is persistently reexperienced in one (or more) of the following ways:

(1) recurrent and intrusive distressing recollections of the event, including images, thoughts, and perceptions. **Note**: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.

(2) recurrent distressing dreams of the event. **Note**: In children, there may be frightening dreams without recognizable content.

(3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those on awakening or intoxicated). **Note**: In young children, trauma-specific reenactment may occur.

(4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

(5) psychological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

C. persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following

(1) thoughts, feelings, or conversations associated with the trauma

(2) efforts to avoid activities, places, or people that arouse recollections of the trauma

(3) inability to recall an important aspect of the trauma

(4) markedly diminished interest or participation in significant activities
(5) feeling of detachment or estrangement from others
(6) restricted range of affect (e.g., unable to have loving feelings)
(7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
(1) difficulty falling or staying asleep
(2) irritability or outbursts of anger
(3) difficulty concentrating
(4) hypervigilance
(5) exaggerated startle response

E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

6. Panic Disorder
Panic Disorder Without Agoraphobia
A. Both (1) and (2):
(1) recurrent unwanted Panic Attacks
(2) at least one of the attacks has been followed by 1 month (or more) of one of the following:
(a) persistent concern about having additional attacks
(b) worry about the implications of the attack or its consequences (e.g., losing control, having a heart attack, "going crazy")
(c) a significant change in behaviour related to the attacks

B. Absence of Agoraphobia

C. The Panic Attacks are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism)

D. The Panic Attacks are not better accounted form by another mental disorder, such as Social Phobia (e.g., occurring on exposure to feared social situations), Specific Phobia (e.g., on exposure to a specific phobic situation), Obsessive Compulsive Disorder (e.g., on exposure to dirt in someone with an obsession about contamination), Posttraumatic Stress Disorder (e.g., in response to stimuli associated with a severe stressor), or Separation Anxiety disorder (e.g., in response to being away from home or close relatives).

Panic Disorder With Agoraphobia

The criteria here is the same as Panic Disorder Without Agoraphobia except, of course, that Agoraphobia is present.

7.Obsessive Compulsive Disorder

A. Either obsessions or compulsions:

Obsessions as defined by (1), (2), and (4):
(1) recurrent and persistent thoughts, impulses, or images that are experienced, at some time during the disturbance, as intrusive and inappropriate and that cause marked anxiety or distress
(2) the thoughts, impulses, or images are not simply excessive worries about real-life problems
(3) the person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with some other thought or action
(4) the person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind (not imposed from without as in thought insertion)

Compulsions as defined by (1) and (2):
(1) repetitive behaviours (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly
(2) the behaviours or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however, these behaviours or mental acts either are not connected in a realistic way with what they are designed to neutralize or prevent or are clearly excessive

B. This does not apply to children.

C. The obsessions or compulsions cause marked distress, are time consuming (take more than 1 hour a day), or significantly interfere with the person's normal routine, occupational (or academic) functioning, or usual social activities or relationships.

D. If another Axis I disorder is present, the content of the obsessions or compulsions is not restricted to it (e.g., preoccupation with food in the presence of an Eating Disorder; hair pulling in the presence of Trichotillomania; concern with appearance in the presence of Body Dysmorphic Disorder; preoccupation with drugs in the presence of a Substance Use Disorder; preoccupation with having a serious illness in the presence of Hypochondriasis; preoccupation with sexual urges or fantasies in

the presence of a Paraphilia; or guilty ruminations in the presence of Major Depressive Disorder).

The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition.

Appendix H

Ethics Approval and Permission to Quote

UNIVERSITY OF MANITOBA

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APPROVAL CERTIFICATE

28 February 2002

TO: Joseph Gaudet (Advisor J. Walker)
Principal Investigator

FROM: Lorna Guse, Chair
Education/Nursing Research Ethics Board (ENREB)

Re: Protocol #E2001:003
"Survey of Teachers' Opinions about Items for an Early School Years Anxiety Rating Scale"

Please be advised that your above-referenced protocol has received human ethics approval by the the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Goulet

From: "Chad Thompson" <CThompson@psych.org>
To: <umgoule5@cc.umanitoba.ca>
Sent: Tuesday, November 28, 2006 12:42 PM
Subject: FW: Request for permission to reprint Text from APA/APPI books and journals including all editions of the DSM

Hi Joseph - Please feel free to use the material listed below in your thesis. We do not require permission for students to use our material. Let me know if you have any questions.

Thanks.

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APPROVAL FORM

incipal Investigator: Dr. John Walker

Protocol Reference Number: H2004:043
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- **Study Protocol (submitted March 19, 2004)**

ie above underwent expedited review and was **approved as submitted** on March 31, 2004 by Dr. K. Brown, MD, BA, Chair, Health Research Ethics Board, Bannatyne Campus, University of Manitoba on behalf of the committee per ur letter dated March 31, 2004. The Research Ethics Board is organized and operates according to Health Canada/ICH ood Clinical Practices, Tri-Council Policy Statement, and the applicable laws and regulations of Manitoba. The embership of this Research Ethics Board complies with the membership requirements for Research Ethics Boards fined in Division 5 of the *Food and Drug Regulations*.

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incerely yours

en Brown, MD, MBA
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