FLYING UNDER THE RADAR: SCHOOL RELUCTANCE IN ANXIOUS YOUTH

by

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(Under the Direction of Cynthia Suveg)

ABSTRACT

School reluctant youth may want to avoid school but do attend. It is important to consider emotional and social functioning in youth with school reluctance, given that such youth may make up an even greater percentage of youth with anxiety disorders than do children who are refusing school, and may exhibit significant impairment, despite their school attendance. This study examined associations among school reluctance, somatic complaints, impairment, and social and emotional functioning in a sample of youth diagnosed with one or more anxiety disorder. Based on child-report, school reluctant (SR) children exhibit greater loneliness, negative affect, and impairment than their non-school reluctant (NSR) peers. SR children have greater somatic problems than NSR children according to parent-report and greater social problems according to teacher-report. Results of this study suggest the need for parents, teachers, and clinicians to work together in the treatment of school reluctance in children with anxiety disorders.

INDEX WORDS: anxiety, children, school reluctance, psychosocial functioning, impairment

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CHAPTER 1

INTRODUCTION

Purpose of the Study

The purpose of this study was to examine correlates of school reluctance in children with anxiety disorders. Much literature to date has focused on understanding the etiology and correlates of school refusal in anxious youth, but has not focused on school reluctance. Youth with school refusal actually miss school, whereas youth with school reluctance may want to avoid school but for a variety of reasons do attend. Based on previous literature (Epstein & Sheldon, 2002; Hibbett & Fogelman, 1990), it is clear that school refusal is associated with deleterious outcomes (e.g., school dropout, poor psychosocial outcomes). It is important to consider emotional and social functioning in youth with school reluctance, given that such youth may make up even a greater percentage of youth with anxiety disorders than do children who are not attending school.

How This Study is Original

This study is original because it seeks to understand school reluctance, a relatively unstudied construct, in the context of anxiety disorders in youth. Though much literature in the area of school attendance and anxiety has been examined in children who refuse school, this study is poised to investigate variables such as emotional and social functioning that are associated with quality of life in children with anxiety disorders who are reluctant to attend school.

Expected Results

Based on empirical and theoretical literature (Kearney & Albano, 2004; Kearney, 2008; Kearney, 2002), it was hypothesized that children evidencing school reluctance would show greater impairment related to their anxiety disorder diagnosis, as well as a higher level of psychosomatic symptoms than those without school reluctance. Additionally, it was expected that children exhibiting school reluctance would have greater social and emotional difficulties than their non-school reluctant peers. Finally, it was hypothesized that clinical severity, social functioning, and emotional functioning would be significant predictors of school reluctance status.

CHAPTER 2

FLYING UNDER THE RADAR: SCHOOL RELUCTANCE IN ANXIOUS YOUTH

Introduction

Anxiety disorders (ADs) occur in children and adolescents, with approximately 2.4 to 17 percent of children experiencing clinically significant levels of anxiety (Kendall, 2012). Of children with ADs, a sub-set also exhibit school refusal. School refusal occurs equally among males and females and is not constrained by ethnicity or socioeconomic status (Hansen, Sanders, Massaro, & Last, 1998; Last & Strauss, 1990). Though the combination of anxiety in youth and school refusal has been linked with poor outcomes, little is known about youth with anxiety disorders who exhibit school reluctance (Kearney, 2001; Last & Strauss, 1990; Naylor, Staskowski, Kenney, & King 1994; Epstein & Sheldon, 2002). School reluctance can be operationalized as a child-motivated resistance to attend school or stay in class once at school, whereas school refusal is associated with the successful avoidance of attending school (Kearney & Silverman, 1996). The majority of the literature to date has focused on school refusal, rather than school reluctance, and studies including school reluctance tend not to differentiate it from school refusal (Berney et al., 1981; Moffitt, Chorpita, & Fernandez, 2004). Kearney and Albano (2004) reported that approximately 28% of children will refuse school at some point during their primary or secondary education. Thus, it is important to expand upon the literature on school refusal and specifically examine youth with school reluctance given the frequency of school refusal, and potential impairment associated with this phenomenon. Prior studies examining

children with anxiety disorders may also have included children with comorbid anxiety and school refusal. Of note, relatively few studies utilizing anxiety disordered populations report the percentage of children also experiencing school refusal. This lack of reporting makes it difficult to know what, if any, effects may be related to school refusal.

School Reluctance and Somatic Complaints

It is common for children with anxiety to experience physical symptoms, such as headaches, stomachaches, and muscle aches (Beidel, Christ, & Long, 1991). For example, Ginsburg and colleagues (2006) examined somatic symptoms in a sample of 128 children (ages 6-17) with an anxiety disorder and found that somatic symptoms were present in 96 percent of the sample. Additionally, somatic symptoms were associated with greater overall impairment, as well as greater anxiety severity suggesting that somatic symptoms and the physiological experience of anxiety are important considerations in overall psychosocial functioning (Ginsburg, Riddle, & Davies, 2006). Somatic complaints have also been linked with greater scholastic difficulties in anxious children. For example, one study found that greater occurrence of physical symptoms distinctively predicted poor scholastic performance in youth with anxiety disorders (Hughes, Lourea-Waddell, & Kendall, 2008). School refusal is also associated with somatic complaints, particularly gastrointestinal in nature (e.g., stomachaches; Bernstein, Massie, Thuras, Perwien, Borchardt, & Crosby, 1997). Bernstein and colleagues (1997) examined the relationship between school refusal, anxiety, and somatic symptoms and found that somatic symptoms were associated with declines in school attendance in youth with comorbid anxiety and school refusal. The relationship between school attendance, somatic symptoms, and anxious school refusal gives greater credence to the notion that the difficulties school refusing children have attending school may be due in part to the discomfort of somatic symptoms.

School Reluctance and Social Functioning

In addition to somatic complaints, youth with ADs also experience social difficulties, including poor social skills, avoidance of social events (e.g., birthday parties, extracurricular activities), and may be viewed unfavorably by their peers (see Kingery, Erdley, Marshall, Whitaker, & Reuter, 2010 for a review). For example, Jacob and colleagues (2014) found in a sample of 90 clinically anxious youth (ages 6-12) that those youth experiencing high levels of negative affect, low levels of positive affect, and greater reluctance to express their emotions exhibited poorer social functioning than anxious youth with high levels of positive affect and good emotion regulation coping skills. In another study, social functioning in anxious youth was examined via cluster analysis in a sample of clinically anxious youth (ages 7-12; Suveg, Jacob, Whitehead, Jones, & Kingery, 2014). The authors found that there was a subset of children who rated themselves as experiencing a great deal of peer victimization and high levels of loneliness; however, the difficulties were not reported by parents or teachers. The results of this study suggest that peer victimization and loneliness is not always readily identified by parents and teachers and child-report may be particularly important to consider when conceptualizing social functioning in children with anxiety disorders.

Previous research has identified that children with comorbid anxiety disorders and school refusal are likely to be labeled as shy and to have difficulty making and sustaining friendships. For example, Egger and colleagues (2003) examined peer relationships in a subset of anxious school refusing youth and found that the children were more likely to encounter both relational and overt peer victimization, were more withdrawn, and experienced more conflict in their interpersonal interactions than children exhibiting truancy or a combination of anxious school refusal and truancy. Peer victimization may be especially salient for children with school

reluctance, as they are not able to avoid aversive peer interactions; however, peer victimization experienced by children with school reluctance remains to be examined in the literature.

Although the presence of peer victimization is common in youth with anxiety disorders and children with comorbid anxiety and school refusal, receipt of pro-social support can serve to shield against the negative effects associated with peer victimization (Storch & Masia-Warner, 2004; Griese & Buhs, 2013). The presence of pro-social support is related to lower levels of loneliness, a rise in contentment, positive affect, and overall emotional well-being (Crick & Grotpeter, 1996). For example, Martin and Huebner (2007) examined social functioning and subsequent outcomes in a sample of 571 middle school students and found that the receipt of pro-social support buffered the experience of peer victimization and led to greater positive affect and overall satisfaction.

The risk of poor social functioning in children with anxiety disorders and comorbid school refusal highlights the need to better understand children with school reluctance and the nature of their peer relationships. A better understanding of social functioning in youth with school reluctance may foster interventions geared towards increasing positive peer experiences and protecting against loneliness in this under-studied population.

School Reluctance and Emotional Functioning

Adaptive emotional functioning is often difficult for children with anxiety disorders. Emotion regulation in particular refers to the ways that emotion experiences are perceived, maintained, and adapted (Thompson, 1994). A plethora of research finds children with ADs have emotion regulation difficulties (Suveg & Zeman, 2004; Southam-Gerow & Kendall, 2000; Hannesdottir & Ollendick, 2007; Zeman, Cassano, Perry-Parrish, & Stegall, 2006). For example, Suveg and Zeman (2004) examined emotional functioning in a sample of 26 anxious

youth (ages 8-12) and found that children with anxiety disorders had difficulty regulating their emotions, experienced emotions at high levels of intensity, and lacked confidence in their ability to manage their emotional experiences. Additionally, Southam-Gerow and Kendall (2000) examined emotion understanding in 38 children (ages 7-14) and found that anxious youth had difficulties understanding the concepts of hiding emotions and changing emotions. Both of these domains are related to emotion regulation, suggesting that anxious children experienced greater emotion regulation deficits compared to their non-anxious peers. Emotion regulation deficits may lead to the use of less adaptive strategies, such as suppression to manage emotions. Suppression of emotions may lead anxious youth who are school reluctant to inhibit their emotional responses which in turn may lead to less awareness by parents and teachers of problems related to the child's psychosocial functioning. Suveg and colleagues (2005) examined mother-child emotional interactions in 52 youth (ages 8-12) and found that mothers of anxious children were more likely to discourage the expression of emotions and use fewer positive emotion words in their interactions than mothers of non-anxious children. The discouragement of emotion expression in the family environment is likely to lead to inhibition of emotional displays and reluctance by the child to share his/her emotional experiences with others. School reluctant anxious youth may be particularly distressed, given the potential for emotion suppression in the context of attending school despite its aversive nature.

There is little research on the emotional functioning in children with school refusal, and even less research concerning children with school reluctance. The research that is available however, suggests that anxious youth with comorbid school refusal and anxiety also exhibit difficulties in emotional functioning. For example, in a sample of 42 children ages 10-14 Hughes and colleagues (2010) found that children with comorbid school refusal and anxiety

disorders utilized poorer emotion regulation strategies, such as inhibition or suppression, than the nonclinical group. The use of inhibition and suppression speaks to the notion that children with anxiety and school reluctance may utilize strategies to regulate their emotions that make it difficult for others to be aware of the child's emotional experience. Note that this is also in contrast to earlier findings reported by Suveg and Zeman (2004), who found that youth with anxiety disorders used more dysregulated styles of managing emotional experiences (e.g., slam doors when mad). Thus, parents of children who use dysregulated methods of managing emotions may be more aware of their child's emotions than parents of youth who suppress their emotional experiences. Either way, poor emotion regulation and poor emotional awareness is associated with low self-efficacy and difficulties relating to peers (Thompson, 1994).

For children with school reluctance, the aversive environment of school may lead them to experience even more difficulties with regulating the intensity and expression of their emotions. In addition, difficulty coping with emotions may lead to frustration for children who are school reluctant, as well as victimization by other children who see them as atypical. The emotional environment at home may not be supportive, as children with comorbid anxiety disorders and school refusal often live in homes characterized by disengagement and rigidity (Bernstein, Warren, Massie, & Thuras, 1999). Collectively, the results suggest that anxious youth exhibiting school reluctance may experience greater overall psychosocial impairment than anxious youth who are not school reluctant.

Impairment

Much literature to date has focused on the negative impact of childhood anxiety disorders on psychosocial functioning. For example, Langley and colleagues (2004) found that parents endorsed impairment in multiple domains, such as academic achievement, peer relationships, and

family functioning. Further, anxiety disorders often have a chronic course (Keller, Lavori, Winder, Beardslee, Schwartz, & Roth 1992) and are frequently comorbid with other anxiety and internalizing disorders, such as depression (Benjamin, Costello, & Warren, 1990; Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). The chronic course of anxiety disorders, the frequent presence of comorbid psychological difficulties, and associated impairment is important to consider when conceptualizing the effects of school reluctance in children with comorbid anxiety.

School refusal is associated with a host of deleterious short- and long-term outcomes, such as difficulties with peer relationships, poor scholastic performance, difficulties related to family functioning, and delinquency (Kearney, 2001; Naylor et al., 1994). Additionally, a study by Egger and colleagues (2003) examined psychosocial impairment related to school refusal and found that youth with comorbid anxiety and school refusal were more likely to experience depression than their non-anxious school refusing peers. Children who are school reluctant may experience heightened levels of depression compared to those youth who are school refusing, as school reluctant youth attend school but find school to be an aversive environment. Their regular attendance in school allows for a greater chance of anxious and school reluctant youth to experience peer victimization than school refusing children. Furthermore, Kearney (2001) identified additional variables related to school refusal and associated impairment, including defiance, aggression, somatic problems, and fear which are likely to lead to greater deficits in psychosocial functioning.

In sum, children with school refusal often exhibit symptoms of anxiety, and somatic problems, experience peer victimization and loneliness, utilize poor emotion regulation strategies, and experience impairment across multiple domains. Much less is known about the

social and emotional functioning, and impairment in school reluctant anxious youth, yet this is an important area of investigation given that such youth may comprise an even greater percentage of the anxious youth population. Consequently, this study sought to examine social and emotional functioning and impairment in a sample of school reluctant (SR) anxious youth in comparison to anxious youth who do not evidence school reluctance (NSR).

Hypotheses

In contrast to youth with anxiety disorders (ADs) who are not experiencing school reluctance, youth with ADs who are also experiencing school reluctance will:

1. Have greater somatic difficulties as indicated by parent-reported somatic problems on the Child Behavior Checklist, teacher-reported somatic problems on the Teacher Report Form, and child-reported physical symptoms on the Multidimensional Anxiety Scale for Children.
2. Have greater social difficulties as indicated by parent-reported social problems on the Child Behavior Checklist and social problems on the Teacher Report Form.
3. Have greater social difficulties as indicated by child-reported loneliness on the Asher Loneliness Scale, relational and overt victimization on the Social Experiences Questionnaire—Self-Report, and lower levels of pro-social support on the Social Experiences Questionnaire—Self-Report.
4. Have greater emotional difficulties as indicated by parent- and teacher-reported greater Negativity/Lability on the Emotion Regulation Checklist.
5. Have greater emotional difficulties as indicated by child-reported greater inhibition on the Children's Emotion Management Scales, greater expressive reluctance on the

Emotion Expression Scale for Children, and higher levels of negative affect on the Positive and Negative Affect Scale for Children.

6. Have greater impairment as indicated by overall clinician severity rating (CSR) on the Anxiety Disorders Interview Schedule-Child and Parent Versions and Clinical Global Impression of Severity based on child- and parent-report.

Method

Participants

The sample included 92 youth aged 6 to 13 years (M = 8.93, SD = 1.64). All participants had a primary anxiety diagnosis of either generalized anxiety disorder, social phobia, and/or separation anxiety disorder based on clinical impression of severity garnered from child and/or parent report on the ADIS-IV-C/P. This is commonly referred to as the "or" rule and takes into account diagnoses levied as impairing by either the parent and/or the child with agreement from the clinician. Children were categorized as school reluctant (SR) if they answered yes to the following questions on the school refusal module of the ADIS-IV-C/P: "Do you get very nervous or scared about having to go to school?" or their parent answered yes to "Does your child get very nervous or scared about having to go to school?" Approximately half of the sample (44%) was classified as school reluctant. The remainder of the sample was classified as non-school reluctant (NSR).

Importantly, none of the children in the sample met criteria for school refusal. School refusal status has been designated a variety of ways in the literature. For instance, Bernstein et al. (2000) defined school refusal as missing greater than 20% of days of school in a given school year. In contrast, others have required that a child miss greater than 50% of school days to classify as school refusing (Hughes et al., 2010; Wu et al., 2013). Regardless, whether the more

liberal or conservative criteria are used, no children in the current sample met criteria for school refusal. Based on the question, "How many days of school did your child miss last year because of anxiety concerns?" children missed an average of 2.01 days in the past year (range 0 to 30). One child was excluded from analyses, as this child missed greater than 20% of days in the given school year due to hospitalization for a diagnosed medical illness.

Exclusionary criteria were as follows: enrollment in concurrent psychotherapy, currently taking a psychotropic medication other than stimulants for AD/HD, active suicidal ideation and/or intent, currently experiencing psychotic symptoms, or a primary diagnosis other than the above-listed anxiety disorders. Overall, 85.7% of the sample was Caucasian (N = 78), with the remainder of the sample as follows: 6.6% African-American (N = 6), 3.3% identifying as other (N = 3), 3.3% Hispanic (N = 3), and 1.1% Asian (N = 1). The sample consisted of 57.1% males (N = 52) and 42.9% females (N = 39). The majority of the sample consisted of parents who were married (71.4%), college graduates (34.1%) or had completed graduate school training (29.7%), and had an income over $80,000 (45.1%).

Procedure

A university-based Institutional Review Board approved all study procedures. Parents provided written consent and permission and children provided written assent prior to study participation and enrollment. Participants were recruited from flyers posted throughout the community, as well as through local schools. The initial assessment lasted approximately two hours, where trained graduate student diagnosticians independently interviewed the parent and child participants, and both the child and parent completed self-report measures. Reading assistance was available for younger children who were unable to read the items on the self-report questionnaires. In addition to the aforementioned interviews and self-report measures,

teacher-completed forms were sent home with the family with instructions for the teacher to mail the measures directly back to the study investigators. Following the assessment, the child was given a small token of appreciation (e.g., a small toy less than five dollars in value) for participation.

Measures

Demographics. A demographic form was completed by parents and assessed multiple domains including age, ethnicity, income, education, and marital status, among other socio-demographic variables.

Social Functioning and Somatic Complaints

Child Behavior Checklist (CBCL; Achenbach & Edlelbrock, 1983). The CBCL is a 113-item parent-report measure that assesses a multitude of behavioral, anxiety, and mood problems in children and adolescents. Reporters rate items on a three point likert scale ranging from "not true" to "very true or often true." To assess social and somatic functioning, this study used the Social Problems and Somatic Problems subscales, respectively. The CBCL is psychometrically sound for use in both clinical and non-clinical populations (Achenbach & Rescorla, 2001). Cronbach's alpha for the Social Problems and Somatic Problems subscales in the present study was .69 and .72, respectively. Eight percent of NSR children and 20 percent of SR children fell in the clinical range (T-score $\geq$ 70) on the Social Problems subscale. Approximately 13 percent of NSR children and 36 percent of SR children fell in the clinical range on the Somatic Problems subscale.

Teacher Report Form (TRF; Achenbach & Edlelbrock, 1986). The TRF is a measure completed by the child's teacher that assesses child behavioral and emotional problems and parallels the CBCL described above. This study also used the Social Problems and Somatic

Problems subscales. Reliability in the present study for the Social Problems and Somatic Problems subscales was acceptable to good with Cronbach's alpha equal to .68 and .87, respectively. Concerning clinical levels, no children in either group achieved clinically significant scores on the Social Problems or Somatic Problems subscales. Two percent of NSR children scored in the borderline range (T-score $\geq$ 65) on the Social Problems and Somatic Problems subscales. Fifteen percent of SR children achieved borderline scores on the Social Problems and Somatic Problems subscales.

Multidimensional Anxiety Scale for Children (MASC; March, Parker, Sullivan, Stallings, & Conners, 1997). A 39 item measure utilizing a four point likert scale ranging from "never" to "often," the MASC measures current anxiety symptoms. The MASC is completed by the child and includes four subscales: (1) Physical Symptoms, (2) Harm Avoidance, (3) Social Anxiety, and (4) Separation Anxiety that combine to yield a total score. This study used the Physical Symptoms subscale of the MASC to assess current levels of somatic problems. Regarding psychometric properties, the MASC exhibits a stable factor structure (Baldwin & Dadds, 2007), good internal consistency (α = .70-.90; Baldwin & Dadds, 2007), and good to excellent test-retest reliability (ICC = .71-.92; March, Sullivan, & Parker, 1999). Reliability for the current study was good (with α = .82 for the Physical Symptoms subscale). Ten percent of NSR children and 20 percent of SR children fell within the clinical range (T-score > 65) on the Physical Symptoms subscale.

Asher Loneliness Scale (ALS; Asher, Hymel, & Renshaw, 1984). The ALS is a 16 item child-report measure assessing loneliness experienced by the child. The ALS is rated on a five point likert scale ranging from "not at all true" to "always true." This study used the total score of the ALS, a sum of all items, to assess current levels of loneliness. Cronbach's alpha for the

total score in the present study was .86. The ALS exhibits convergent validity with depressive symptoms, as well as both positive and negative peer experiences (Asher & Wheeler, 1985; Bagner, Storch, & Roberti, 2004).

Social Experience Questionnaire – Self Report (SEQ-SR; Crick & Grotpeter, 1996). A 15 item child-report measure assessing social functioning, the SEQ-SR consists of three domains: the receipt of pro-social behavior, overt victimization, and relational victimization. This measure is rated on a five point likert scale ranging from "never" to "always." All three subscales of the SEQ-SR were used to assess current social experiences. Higher scores on the victimization scales of the SEQ-SR indicate higher levels of difficulties in these domains, whereas higher scores on the Pro-social Support subscale indicate greater frequency of receipt of pro-social behavior from peers. The internal consistency of the SEQ-SR is good (α = .77-.80), and there is support for test-retest reliability, concurrent validity, and a stable factor structure for the SEQ-SR (Storch, Crisp, Roberti, Bagner, & Masia-Warner, 2005; Crick & Bigbee, 1998). Cronbach's alpha for the Overt Victimization, Relational Victimization, and Pro-social subscales in the present study was .81, .81, and .75, respectively.

Emotional Functioning

Positive and Negative Affect Scale for Children (PANAS-C; Laurent et al., 1999). The PANAS-C is a 30-item child-report measure that is rated on a five point likert scale ranging from "very slightly" to "extremely." The PANAS-C yields two subscales indicating the frequency and intensity of positive and negative affect. This study used the Negative Affect subscale. The PANAS-C exhibits good convergent validity (Laurent et al., 1999; Hughes & Kendall, 2009) and reliability for the current study was good (Negative Affect subscale; with α = .89).

Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997). Rated on a four point likert scale from "never" to "always" the ERC includes 24 items that assess parent's or teacher's perceptions of a child's ability to manage emotional experiences. This study used the Lability/Negativity subscale of the ERC to assess absence of flexibility and dysregulated negative affect. The ERC has strong psychometric properties (α = .96; Shields & Cicchetti, 1997) and in this study Cronbach's alpha for parent- and teacher-report on the Lability/Negativity subscale was .85 and .87, respectively.

Emotion Expression Scale for Children (EESC; Penza-Clyve & Zeman, 2002). The EESC is a 16 item child-report measure of emotion expression. Rated on a five point likert scale ranging from "not at all true" to "extremely true," the EESC consists of two subscales: Poor Awareness and Expressive Reluctance. This study used the Expressive Reluctance subscale of the EESC to assess current difficulties related to emotion expression. Higher scores on this scale indicate greater expressive reluctance. Initial validation of the EESC yielded good psychometric properties (α = .81-83; Penza-Clyve & Zeman, 2002). Internal consistency for the Expressive Reluctance subscale in the present study was acceptable with α = .69.

Children's Emotion Management Scales (CEMS; Zeman, Shipman, & Penza-Clyve, 2001; Zeman, Cassano, Suveg, & Shipman, 2010). The CEMS is a group of three scales measuring management of anger, sadness, and worry. The scales consist of 11, 12, and 13 items, respectively, and are rated on a three point likert scale ranging from "hardly ever" to "often." Each emotion management scale consists of three subscales: Inhibition, Dysregulation, and Coping. This study used the overall Inhibition subscale of the CEMS to assess current levels of emotional suppression. The anger and sadness scales have acceptable to good internal consistency (α = .62-.77) and test-retest reliability (.61-.80; Zeman et al., 2001, Zeman, Shipman,

& Suveg, 2002). The worry scale has acceptable to good internal consistency (α = .69-.74), as well as convergent and discriminant validity (Zeman et al., 2010). Cronbach's alpha for the overall Inhibition subscale in the present study was .80.

Diagnoses and Impairment

Anxiety Disorders Interview Schedule: Child and Parent Versions (ADIS-IV-C/P; Silverman & Albano, 1996). The ADIS-IV-C/P are semi-structured diagnostic interviews administered separately to parents and children as a diagnostic measure of presence and severity of anxiety, mood, and externalizing disorder symptoms. Trained diagnosticians supervised by a licensed clinical child psychologist conducted the ADIS-IV-C/P interviews. Diagnoses were made if either the child or parent endorsed significant symptoms as well as interference, and if the diagnostician rated the severity of the diagnosis as a four or greater on the clinician severity rating. This study used the ADIS-IV-C/P summary primary diagnosis to confirm the presence of an anxiety disorder and the clinician severity rating (CSR) as a measure of impairment related to anxiety. Higher scores on the CSR indicate higher levels of impairment. The ADIS-IV-C/P has exhibited good to excellent test-retest reliability, as well as good concurrent validity between the multidimensional anxiety scale for children and the corresponding ADIS-IV-C/P anxiety diagnoses with the exception of generalized anxiety disorder (Silverman, Saavedra, & Pina, 2001; Wood, Piacentini, Bergman, McCracken, & Barrios, 2002).

Clinical Global Impression of Severity (CGI-S; NIMH, 1985). Rated on a seven point likert scale ranging from "no illness" to "extremely severe illness" the CGI-S assesses severity of psychopathology from the view of the clinician. The interviewing clinician completed the CGI-S based on information garnered from the ADIS-IV-C/P. A separate CGI-S is completed based on child-report and parent-report. The CGI-S was used in this study to measure anxiety severity

based on child- and parent-report with higher scores on this scale indicating higher levels of anxiety severity. Convergent validity with self- and clinician-report measures has been demonstrated for the CGI-S (Zaider, Heimberg, Fresco, Schneier, & Liebowitz, 2003; Storch, Lewin, De Nadai, & Murphy, 2010).

Analytic Plan

Analyses were conducted using SPSS version 21.0. Boxplots were created to detect outliers in the dataset. In addition, the Shapiro-Wilk test and Q-Q plots were utilized to determine normality of the data. Homogeneity of variance was checked as well when conducting tests of assumptions. Independent-sample *t*-tests and chi-square tests of independence were utilized to assess differences on demographic variables between youth with and without school reluctance. Five MANOVAs were used to test for differences in the variables of interest, all of which contained school reluctance status as the fixed factor. Cohen's *d* was calculated to determine effect size.

1. The first MANOVA examined somatic problems in children with and without school reluctance using the Physical Symptoms subscale of the MASC and the Somatic Problems subscale of the CBCL and TRF as the dependent variables.
2. The second MANOVA analyzed differences in social functioning utilizing parent- and teacher-report on the Social Problems subscale of the CBCL and TRF.
3. Differences in social functioning were examined in a third MANOVA with child-report on the Overt Victimization, Relational Victimization, and Receipt of Pro-social Support subscales of the SEQ-SR acting as dependent variables along with the total score of the ALS.

4. A fourth MANOVA analyzed the differences in emotional functioning between the two groups, including the Lability/Negativity subscale of the ERC, the overall Inhibition subscale of the CEMS, the Negative Affect subscale of the PANAS-C, and the Expressive Reluctance subscale of the EESC as proxies for emotional functioning.
5. Finally, the fifth MANOVA examined differences in impairment via the clinical severity rating for the primary diagnosis on the ADIS-IV-C/P and child- and parent-report of anxiety severity on the CGI-S between youth displaying or not displaying school reluctance.

Three separate logistic regressions were performed to examine predictors of school reluctance status utilizing multiple reporters, thus allowing for examination of which reporter accounted for the most variance in the regression equation. Variables entered into the regression equation were determined based on significance related to school reluctance status at the bivariate level. All variables were entered simultaneously for each logistic regression.

1. The first regression examined social functioning as a predictor of school reluctance status. Teacher- and child-report of social functioning included the Social Problems subscale of the TRF and the total score of the ALS as predictor variables.
2. The second regression examined emotional functioning as a predictor of school reluctance status. Child-reports of emotional functioning included the Negative Affect subscale of the PANAS-C and the Expressive Reluctance subscale of the EESC as predictors of school reluctance status.

3. The final regression examined clinical severity related to the anxiety disorder diagnosis as a predictor of school reluctance status. The CGI-S based on child-report and the overall CSR for the primary diagnosis on the ADIS-IV-C/P were used as predictors of school reluctance status.

Missing Data

Regarding missing data, for three families, only the father was present at the pre-assessment and completed the ERC and CBCL. Given that for the vast majority of participants mothers completed the ERC and CBCL, the data from the father-completed ERCs and CBCLs was not utilized in the analyses. One additional mother did not complete the CBCL at the pre-assessment bringing the total CBCLs not included in the analyses to four. No missing data was identified for the following child-reported measures: MASC, PANAS-C, ALS, EESC, and CEMS. Additionally, no items were missing for any of the measures completed by the clinician based on parent- or child-report (i.e., ADIS-IV-C/P CSR and CGI-S). One item for one participant was missing for the SEQ-SR. Twenty-four percent of teacher-data (n=22) was missing because the forms were not returned as instructed.

Results

Assumptions

Box plots identified one extreme outlier that was removed prior to conducting initial analyses. Further, the variables of interest were examined for normality using the Shapiro-Wilk test and Q-Q plots. Given that the sample was a clinical population, non-normality is expected and the *F*-test is robust to non-normality particularly when non-normal distributions are the result of skewness rather than outliers (Tiku, 1971). After the removal of extreme outliers and

examination of histograms, it was determined that the non-normal distribution was in fact due to skewness.

Demographic and Diagnostic Differences

Independent-samples chi-square tests revealed non-significant differences between the two groups on demographic variables (i.e., race, sex, income, marital status of parents). Further, an independent samples *t*-test did not reveal group differences on age between the two groups. In addition to demographic variables, differences in comorbidity were examined between the two groups through independent samples *t*-tests. No significant group differences were found for any comorbid diagnosis examined (i.e. anxiety, OCD, depression, ADHD, PTSD, and ODD).

Primary Analyses

Two groups were created based on school reluctance status, with one group consisting of children with an anxiety disorder and co-occurring school reluctance and the second group consisting of children with an anxiety disorder who were not exhibiting school reluctance. See Table 1 for descriptive statistics. To explore group differences on somatic problems, impairment, social functioning, emotional functioning, and impairment, five between groups one-way multivariate analysis of variance tests (MANOVAs) were performed. The first MANOVA examined differences between the two groups on somatic problems and was not significant at the multivariate level, Wilks' $\lambda = .89$, $F(3,63) = 2.66$, $p = .06$; however, the SR group had greater parent-reported somatic problems than the NSR group, $F(1,65) = 6.85$, $p = .01$. No significant univariate effects were found for child- or teacher-report. Of note, the univariate effects should be interpreted with caution given the multivariate main effect was not significant.

Examining differences between the two groups based on teacher- and parent-reported social functioning, the second MANOVA did not reveal a significant multivariate main effect for

school reluctance status, Wilks' $\lambda = .93$, $F(2,66) = 2.44$, $p = .10$; however, results at the univariate level support greater social problems based on teacher-report for the SR group in comparison to the NSR group, $F(1,67) = 4.39$, $p < .05$. No significant group differences were found based on parent-reported social functioning. Of note, the significant univariate effect should be interpreted with caution given that the overall multivariate main effect was not significant.

The third MANOVA examined differences based on child-reported social functioning and revealed a significant multivariate main effect for school reluctance status, Wilks' $\lambda = .88$, $F(4,85) = 3.04$, $p < .05$. Greater loneliness was found for the SR group [$F(1,88) = 6.31$, $p < .05$, $d = 0.52$] in comparison to the NSR group at the univariate level. No significant differences were found for receipt of pro-social support, overt victimization, or relational victimization.

Seeking to examine differences between the two groups on emotional functioning, the fourth MANOVA indicated a significant multivariate main effect, Wilks' $\lambda = .79$, $F(5,63) = 3.32$, $p = .01$. Results supported significantly greater child-reported negative affect in the SR group compared to the NSR group, $F(1,67) = 11.36$, $p < .01$, $d = 0.81$. No differences were found for parent- or teacher-reported negativity and lability, child-reported expressive reluctance, or child-reported inhibition.

Results of the final MANOVA examining differences in impairment were significant, Wilks' $\lambda = .90$, $F(3,87) = 3.09$, $p < .05$. The SR group had more impairment than the NSR group based on the on the clinical severity rating (CSR) for the primary diagnosis on the ADIS-IV-C/P [$F(1,89) = 4.13$, $p < .05$, $d = 046.$], and child-report of anxiety severity on the CGI-S [$F(1,89) = 6.51$, $p < .05$, $d = 0.46$]. No differences were found for parent-reported impairment.

Secondary Analyses

Item level analyses were conducted to examine the frequency with which the SR group experienced various somatic problems. Parent-report suggests that gastrointestinal symptoms are the most frequent with stomachaches as the most common somatic problem experienced (72.5%), followed by nausea and headaches (60.0%). Though children experiencing gastrointestinal distress appear to be common, relatively few children are experiencing significant vomiting due to this gastrointestinal distress (17.5%).

Exploratory Analyses

Pearson bivariate correlations were conducted to examine relations between the variables of interest for each proposed logistic regression prior to conducting these analyses (see Table 2-4). Binary logistic regressions were then conducted using variables that were significant at the bivariate level to examine predictors of school reluctance status utilizing multiple reporters (see Table 5), thus allowing for examination of which reporter accounted for the most variance in the regression equation. The first logistic regression equation included child- (ALS total score) and teacher-report (TRF Social Problems) of social functioning as covariates. The overall logistic regression model was statistically significant, $\chi^2(2) = 5.89$, $p = .05$, suggesting that the predictors as a set reliably differentiated SR and NSR children. The model explained 10 percent (Nagelkerke R^2) of the variance in school reluctance and correctly classified 64.4% of cases. At the variable level, neither child- (Wald = 1.75, $p = .19$) or teacher-report (Wald = 2.06, $p = .15$) significantly distinguished the SR group from the NSR group.

To examine emotional functioning as a predictor of school reluctance status by reporter, a second logistic regression was run which included expressive reluctance as measured by the EESC and negative affect as measured by the PANAS-C as the variables of interest. Of note,

both of these measures are child-report measures and no parent- or teacher-report measures were significant at the bivariate level. The logistic regression overall model was statistically significant, $\chi^2(2) = 12.36$, $p < .01$. Seventeen percent (Nagelkerke R^2) of the variance in school reluctance was explained by the overall model which correctly classified 68.1% of cases. Negative affect significantly distinguished the SR from the NSR group (Wald = 5.68, $p < .05$); for every unit increase in negative affect, the odds of being in the SR group increased by 5%. Expressive reluctance did not make a significant contribution to the prediction (Wald = 1.38, $p = .24$).

The final logistic regression examined impairment as a predictor in distinguishing the two groups utilizing the CSR of the combined primary diagnosis on the ADIS-IV-C/P and child-reported anxiety severity as variables of interest. The logistic regression model was statistically significant, $\chi^2(2) = 6.48$, $p < .05$. The model explained nine percent (Nagelkerke R^2) of the variance in school reluctance and correctly classified 65.9% of cases; however, neither CSR (Wald = 1.59, $p = .21$) nor child-reported anxiety severity (Wald = 1.70, $p = .19$) significantly differentiated the SR group from the NSR group.

Discussion

There has been much research examining school refusal in anxious youth; however, none of the previous literature specifically investigated school reluctance in anxious children. It is evident from prior literature (e.g., Epstein & Sheldon, 2002; Hibbett & Fogelman, 1990) that school refusal is associated with harmful outcomes, such as school dropout and poor peer relationships. Given that youth with school reluctance may make up even a greater percentage of children with anxiety disorders than do those children who are school refusing, it is important to consider emotional and social functioning, as well as impairment in youth with school

reluctance. Thus, this study examined differences in emotional, social, and somatic functioning, as well as impairment between SR children and NSR children.

Results of this study revealed that SR children experienced greater somatic symptoms compared with NSR children based on parent-report. It is common for children with anxiety disorders to experience somatic symptoms, such as headaches and stomachaches as a result of anxiety-provoking situations or chronic worry (Beidel et al., 1991; Ginsburg et al., 2006). Given that SR children would like to avoid school, these children may complain of somatic symptoms such as stomachaches and headaches prior to leaving for school in an effort to stay home (Fremont, 2003). Though NSR children may also experience greater somatic symptoms on days where there will likely be an anxiety-provoking situation at school (e.g., test day; Dufton, Dunn, & Compas, 2009), the frequency of somatic symptoms in this group may be lower given that there are days when school is not anxiety-provoking for them. Previous literature suggests that children with school refusal often experience gastrointestinal distress as a primary somatic symptom (Bernstein et al., 1997). Analyses in the current study revealed that children in the SR group experienced more gastrointestinal difficulties than any other somatic symptom and though SR children were likely to experience stomachaches and nausea, a relatively low percentage actually experienced vomiting. The absence of vomiting suggests that although SR children are experiencing gastrointestinal discomfort, this discomfort does not often escalate beyond stomachaches and mild nausea.

This study found that SR children experienced greater social difficulties based on teacher- and child-report, but not parent-report. This finding is consistent with previous literature indicating that children with anxiety disorders and/or school refusal often experience poor peer relationships (Egger, Costello, & Angold, 2003). One possible explanation for

reporter differences is that parents and teachers see children in different contexts (school vs. home settings). Multiple contexts may be associated with different situational cues and responses by the child. Diverse responses in unique contexts may lead to different interpretations or awareness of the child's social functioning (Achenbach, McConaughy, & Howell, 1987). For example, teachers often see children in differing social situations than their parents, such as the ability to work in a group, comfort in asking questions in front of peers, or ease of which the child can negotiate a difficult social interaction. In the same way, child report is equally integral when considering internalizing constructs (e.g. loneliness, perception of social acceptance; DiBartolo & Grills, 2006). Finally parents see children in other unique situations teachers are often not privy to, such as birthday parties and extracurricular activities.

SR children may be much less anxious in social situations outside of school than when in school, which may limit the amount of anxiety or difficulties in social functioning seen by parents. Given the finding that SR children are more apt to experience a greater degree of loneliness than NSR children, in combination with the extant literature that finds that children may be more reliable reporters of their internalizing symptoms, parents may be unaware of the social difficulties experienced by SR children (DiBartolo & Grills, 2006; Suveg et al., 2014). Further, SR children did not report greater overt or relational victimization than their NSR peers. SR children experience greater levels of loneliness, likely as a result of feeling neglected by their peers (i.e., not experiencing prosocial support or victimization; Parkhurst & Asher, 1992). Additionally, the lack of realization of social isolation by parents may contribute to feelings of loneliness in SR children (Mesman & Koot, 2000). Collectively, the findings from the current study and those from the extant literature paint a picture of school reluctant children flying below the radar of their parents regarding social functioning.

When considering emotional functioning, neither parent- nor teacher-report of emotional functioning suggested that SR children experience greater emotion regulation difficulties than NSR children, though SR children reported experiencing greater levels of negative affect than their NSR peers. Greater negative affect is associated with poorer peer relationships (Jacob, Suveg, & Whitehead, 2014) and the heightened level of negative affect in SR children may in part explain the lessened desirability to socialize by their peers.

Clinicians and children reported greater impairment related to anxiety for the SR group relative to the NSR group; however, this finding was not supported by parent-report. The absence of greater impairment by parent-report echoes the above interpretation that parents are not fully aware of the difficulties SR children experience in relation to social and emotional functioning, as well as impairment. One explanation for greater impairment in the SR group compared to the NSR group is the presence of school as an anxiety-provoking environment. Children spend approximately half of their waking hours at school during the week, increasing the amount of time SR children are in a potentially aversive environment compared to NSR children. Exposure is an important part of the treatment of anxiety disorders (Kendall, Robin, Hedtke, Suveg, Flannery-Schroeder, & Gosch, 2006) and although the presence of SR children in school exposes them to the general environment they fear, SR children likely continue to avoid greater anxiety-provoking situations in that environment (e.g., talking to peers, using school restrooms, answering questions in class; Hannesdottir & Ollendick, 2007). The likely avoidance of anxiety-provoking situations at school not only reinforces negative associations with anxiety-provoking situations, but also the environment in which these situations occur (i.e., school; Ohman, 2010).

Possible clinical implications for this research are the inclusion of parents and teachers in the treatment of anxiety disorders in SR children. There is some support for an added benefit of including parents in the treatment for children with anxiety disorders (Barrett, Dadds, & Rapee, 1996; Wood, Piacentini, Southam-Gerow, Chu, & Sigman, 2006); however, other research suggests that children with anxiety disorders do not fair significantly better by having parents incorporated into sessions (Kendall, Hudson, Gosch, Flannery-Shroeder, & Suveg, 2008). The literature suggests that there are benefits to family-based approaches to treatment in school refusal, particularly when the child refuses school due to separation anxiety or there is poor family communication (Kearney & Bates, 2005). Additionally, systemic approaches involving parents and teachers are recommended in treating school refusal (Kearney & Bates, 2005). Research has yet to examine the benefits of including parents or teachers in the treatment of anxiety disorders when school reluctance is a main concern. Future research should examine the role of parents and teachers in treatment for this sub-group as their inclusion in treatment may be more beneficial for SR than NSR children, given SR children's reluctance to attend school. It may be beneficial for parents, teachers, and other relevant individuals to discuss strategies for making school a more positive environment for SR children. Individualized education plans may be one way that parents, teachers, and clinicians can come together to meet the child's needs. Given that teachers are not often trained in psychological intervention and many school systems vary in the degree of resources available, it may be beneficial for teachers to receive education and training related to anxiety, school reluctance, and treatment for this population. The need for children to keep attending school with the help of appropriate coping skills (e.g., coping thoughts, diaphragmatic breathing, and progressive muscle relaxation) is emphasized, as

allowing the child to avoid school acts to reinforce the child's anxiety related to the school environment.

Regarding the prediction of group status, only child-reported negative affect was a significant predictor. These results suggest that despite greater levels of loneliness and impairment, these variables are not sufficient in and of themselves to predict school reluctance status. Although the findings from this study begin to paint the picture of the school reluctant child, they do not illuminate much of what leads school to be an aversive environment for these children. Negative affect is a broad indicator of psychopathology and poor outcomes in general (Joiner, Catanzaro, & Laurent, 1996; Lonigan, Phillips, & Hooe, 2003) and future studies should seek to identify more specific predictors of school reluctance.

Limitations of this study should be noted. First, this study is cross-sectional in nature and as a result causal links cannot be drawn. Future research should examine the etiology and consequences of school reluctance using longitudinal design. Additionally, the sample is primarily Caucasian and from a high socio-economic status (SES) background. These sample characteristics limit the generalizability of these findings to other populations. Additional studies with more racial and SES diversity should be conducted to enhance generalizability of findings. Given that this study is the first of its kind specifically to examine school reluctance, future studies are needed to replicate these findings. There is not a gold standard measure of school reluctance and as such future studies should seek to develop an accurate assessment of SR and operationalize SR consistently for comparison across studies. No individuals in this study were school refusing. As a result, comparisons could not be made between individuals with school refusal and school reluctance in the current study. The literature would benefit from a direct comparison of these two populations to assess whether there are distinct differences in

psychosocial functioning between school reluctant and school refusing children. Despite the limitations of the current study, it is the first of its kind specifically to examine the construct of school reluctance and provides initial support for greater emotional and social difficulties, as well as impairment for SR children compared to their NSR peers.

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Table 1.
Descriptive Statistics

	Group				
	SR		NSR		
	N	M (SD)	N	M (SD)	Cohen's *d*
CBCL Somatic Problems	32	65.63 (9.88)	35	59.60 (8.97)	0.64*
TRF Somatic Problems	32	53.94 (6.84)	35	51.91 (4.60)	*ns*
MASC Physical Symptoms	32	14.91 (7.64)	35	12.51 (6.56)	*ns*
TRF Social Problems	33	55.88 (6.25)	36	53.06 (4.92)	0.50*
CBCL Social Problems	33	61.76 (8.05)	36	58.94 (8.19)	*ns*
ALS Total	39	38.87 (13.17)	51	33.06 (8.74)	0.52*
SEQ-SR Prosocial	39	18.72 (4.53)	51	18.92 (3.77)	*ns*
SEQ-SR Overt	39	8.26 (4.50)	51	7.90 (3.80)	*ns*
SEQ-SR Relational	39	8.49 (4.45)	51	9.31 (4.51)	*ns*
PANAS-C Negative Affect	34	42.29 (13.36)	35	32.60 (10.39)	0.81**
Mother ERC Negativity	34	30.74 (6.28)	35	31.06 (6.71)	*ns*
Teacher ERC Negativity	34	24.29 (5.81)	35	23.69 (6.92)	*ns*
EESC Expressive Reluctance	34	23.72 (6.62)	35	21.74 (5.39)	*ns*
CEMS Inhibition	34	2.09 (0.43)	35	1.96 (0.41)	*ns*
ADIS-IV-C/P CSR	40	5.90 (0.93)	51	5.47 (0.95)	0.46*
Child CGI-S	40	4.23 (1.21)	51	3.69 (1.14)	0.46*
Parent CGI-S	40	4.78 (0.80)	51	4.78 (0.70)	*ns*

Note. SR = School Reluctant; NSR = Non-school Reluctant; MASC = Mutlidimensional Anxiety Scale for Children; TRF = Teacher Report Form; CBCL = Child Behavior Checklist; SEQ-SR = Social Experiences Questionnaire-Self Report Version; ALS = Asher Loneliness Scale; PANAS-C = Positive and Negative Affect Scale for Children; CEMS = Children's Emotion Management Scales; ERC = Emotion Regulation Checklist; EESC = Emotion Expression Scale for Children; ADIS-IV-C/P CSR = Anxiety Disorders Interview Schedule-Child and Parent Versions Clinician Severity Rating; CGI-S = Clinical Global Impression-Severity; *ns* = not significant

Table 2.

Intercorrelations among School Reluctance and Social Functioning Variables

Variable	1	2	3	4	5	6	7
1. School Reluctance Status	__	.235*	.116	.272**	-.036	.055	-.092
2. TRF Social Problems		__	.376**	.351**	-.100	.172	.093
3. CBCL Social Problems			__	.146	-.037	.254*	.277**
4. ALS Total				__	-.456**	.354**	.306**
5. SEQ-SR Prosocial					__	.097	.043
6. SEQ-SR Overt						__	.723**
7. SEQ-SR Relational							__

Note. ** $p < 0.01$. * $p < 0.05$; CBCL = Child Behavior Checklist; TRF = Teacher Report Form; SEQ-SR = Social Experiences Questionnaire-Self Report Version; ALS = Asher Loneliness Scale

Table 3.

Intercorrelations among School Reluctance and Emotional Functioning Variables

Variable	1	2	3	4	5	6
1. School Reluctance Status	__	.340**	-.073	.039	.255*	.159
2. PANAS-C Negative Affect		__	.133	.018	.422**	-.038
3. Mother ERC Negativity			__	.312**	.125	.189
4. Teacher ERC Negativity				__	.095	-.158
5. EESC Expressive Reluctance					__	.357**
6. CEMS Inhibition						__

Note. ** $p < 0.01$. * $p < 0.05$; PANAS-C = Positive and Negative Affect Scale for Children; CEMS = Children's Emotion Management Scales; ERC = Emotion Regulation Checklist; EESC = Emotion Expression Scale for Children

Table 4.

Intercorrelations among School Reluctance and Impairment Variables

Variable	1	2	3	4
1. School Reluctance Status	__	.224*	.225*	-.006
2. ADIS-IV C/P CSR		__	.472**	.550**
3. Child CGI-S			__	.319**
4. Parent CGI-S				__

Note. ** $p < 0.01$. * $p < 0.05$; ADIS-IV C/P CSR = Anxiety Disorders Interview Schedule-Child and Parent Versions Clinician Severity Rating; CGI-S = Clinical Global Impression-Severity

Table 5.

Predictors of School Reluctance Status

Domain	Predictor Variable	Odds Ratio	95% CI
Social Functioning	ALS Total	1.03	0.99-1.08
	TRF Social Problems	1.07	0.98-1.17
Emotional Functioning	PANAS-C Negative Affect	1.05*	1.01-1.09
	EESC Expressive Reluctance	1.05	0.97-1.14
Impairment	ADIS-IV C/P CSR	1.40	0.83-2.35
	Child CGI-S	1.34	0.86-2.06

Note. ** $p < 0.01$. * $p < 0.05$; ALS = Asher Loneliness Scale; TRF = Teacher Report Form; PANAS-C = Positive and Negative Affect Scale for Children; EESC = Emotion Expression Scale for Children; ADIS-IV C/P CSR = Anxiety Disorders Interview Schedule-Child and Parent Versions Clinician Severity Rating; CGI-S = Clinical Global Impression-Severity