



Children's Perceptions of Barriers to Session Attendance in School-Based Treatment for Anxiety

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Abstract

This study examined children's perceived barriers to attending school-based anxiety treatment. One hundred and twenty-two anxious youth (*mean* age = 11.03 years; 51.6% female; 46.7% non-white) were randomized to receive either a modular cognitive behavioral anxiety treatment or usual care. The frequencies of 13 child-reported perceived barriers were examined following randomization and during one of the first three treatment sessions. Correlates of perceived barriers were also examined using a multi-informant assessment including: (1) child/family demographics, (2) child clinical characteristics, and (3) parental/family factors. Results indicated that 87.7% of children reported at least one perceived barrier to attending treatment. The most common barriers were worries about missing classroom work (45.3%) and the stigma associated with receiving mental health services (37.7%). Several factors were correlated with greater perceived barriers including minority racial/ethnic background, low parental education, higher child anxiety, and higher teacher-reported child externalizing behavior in the classroom. A multiple regression model showed that the strongest association was between teacher-rated externalizing behavior and children's perceived barriers. Although school-based treatment removes logistical problems, children's perceived barriers are still common. Assessing and reducing these perceived barriers, particularly among racial minority families and families with parents who did not attend college, may be beneficial.

Keywords Perceived barriers · Child anxiety · School-based treatment · Treatment attendance

Introduction

Pediatric anxiety disorders are the most common psychiatric conditions and, if unidentified and untreated, are associated with impairments in family relations (e.g., diminished relationships with parents and siblings), social functioning (e.g., less peer acceptance, limited pro-social behaviors, more victimization), academic performance (e.g., negative attitude toward teachers and school in general), and quality of life (Costello, Egger, & Angold, 2005, 2006; Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Erath, Flanagan, & Bierman, 2007; Mendlowicz & Stein, 2000; Velting, Setzer, & Albano, 2002; Witteborg, Lowe, & Lee, 2009). Despite the

impairment anxious youth experience, they are less likely to receive mental health treatment than their peers with mood or externalizing disorders (Chavira & Stein, 2005).

Explanations for the low rates of mental health service utilization by anxious youth include those related to children's ideas about utilizing services (perceived barriers) and those related to structural constraints (Owens et al., 2002). A growing literature has explored barriers to service utilization, with the majority focusing on logistical and pragmatic barriers, such as lack of time for treatment (Daley & Zuckoff, 1999; Geffken, Keeley, Kellison, Storch, & Rodrigue, 2006; Stefl & Prospero, 1985), limited financial resources (Edlund et al., 2002), and lack of transportation and/or child-care (Laraque, McLean, Brown-Peterside, Ashton, & Diamond, 1997; Richardson, 2001; Taylor & Stansfield, 1984). Studies in outpatient settings have shown that demographic and child clinical factors are linked to a decreased likelihood of starting or staying in outpatient clinic-based treatment. For instance, males, children (compared to adolescents), racial minorities, and youth with more severe symptoms are less likely to start or stay in mental health treatment (Edlund

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et al., 2002; Furnham & Wong, 2007; Kreyenbuhl, Nossel, & Dixon, 2009; Pellerin, Costa, Weems, & Dalton, 2010; Rotheram-Borus et al., 1999).

One approach for reducing some of the logistical/pragmatic barriers to service utilization is to offer treatment within school settings. School-based mental health services may reduce logistical and financial barriers, since treatment takes place during school hours, is provided at no cost to families, and does not require transportation (Weist et al., 2017). Data examining treatment attendance in schools indicate that youth receive higher rates of school-based mental health treatment compared to services provided in outpatient treatment centers (Atkins et al., 2006).

Despite these positive data on enrollment in school-based treatment, session attendance even in school settings is sub-optimal (Werner-Seidler, Perry, Caelear, Newby, & Christensen, 2017). Moreover, a hallmark feature of anxiety disorders is avoidance, which in school manifests through excessive absenteeism and higher rates of school refusal (Ingul & Nordahl, 2013; Murray, Creswell, & Cooper, 2009) and may reduce session attendance. Identifying factors associated with poor session attendance for school-based treatment could improve treatment completion rates and result in better mental and academic outcomes for youth.

Toward that end, the current study assessed the factors that children perceive as barriers to engaging and completing school-based treatment. Research examining children's perceptions of barriers to mental health treatment has been conducted predominantly through qualitative methods (e.g., focus groups and interviews), with stigma being the most commonly reported barrier (Lindsey & Kalafat, 1998; Timlin-Scalera, Ponterotto, Blumberg, & Jackson, 2003; West, Kayser, Overton, & Saltmarsh, 1991). In outpatient settings, negative beliefs about treatment and perceived stigma have also been linked with low service utilization (Laraque et al., 1997; Richardson, 2001; Taylor & Stansfield, 1984). Stigma is defined as a mark of disgrace associated with a particular circumstance, quality or person, and perceived stigma is defined as one's personal feelings about their condition and experience of being stigmatized by others (Mickelson & Williams, 2008; Stigma, 2017).

To date, only one school-based study, conducted by Rapee et al. (2006), has examined youth reports of perceived barriers to attending school-based treatment. Specifically, researchers compared the perceptions of stigma among 532 adolescents participating in universal versus indicated prevention programs for depression. Stigma was operationalized through three items that assessed the degree to which youth believed that they would be: (1) embarrassed to do the program, (2) picked on or teased about the program, and/or (3) criticized at home due to program. The results showed that students in the indicated program reported significantly higher perceived stigma,

compared to adolescents in the universal intervention group. This study also examined the association between demographic (i.e., age, gender and whether the child was born in Australia), child clinical symptoms (i.e., depression, anxiety, and externalizing symptoms), and perceived stigma. Males and youth with higher externalizing symptoms, according to the Youth Self-Report externalizing scale (Achenbach & Rescorla, 2001), reported higher levels of perceived stigma. These findings are consistent with data from outpatient studies which indicate that demographic factors (e.g., male gender, minority status, low socioeconomic status, and single-parent household) and psychopathology (higher various internalizing, externalizing symptoms and more total problems) predict lower treatment attendance and higher dropout rates (de Haan, Boon, de Jong, Hoeve, & Vermeiren, 2013; Kendall & Sugarman, 1997; Kendall et al., 1997).

In addition to demographic and child clinical variables, accumulating data suggest that parental and family factors including parental psychopathology, depression, stress, and parenting styles are associated with higher levels of perceived treatment barriers (Kazdin & Wassell, 2000; Owens et al., 2002; Ryan, Jorm, Toumbourou, & Lubman, 2015; Yeh, McCabe, Hough, Dupuis, & Hazen, 2003). The dimensions of parenting style previously investigated in the barriers to treatment attendance literature include broad constructs that are not linked to specific disorders. For instance, Owens et al. (2002) investigated "monitoring, discipline and involvement" and found that overall parenting difficulties were related to higher levels of perceived barriers. However, several parenting styles, such as overprotection and anxious rearing styles, have been found to increase child anxiety and behavioral avoidance (Barrett, Rapee, Dadds, & Ryan, 1996; Chorpita, Albano, & Barlow, 1996) and may be more strongly related to perceived barriers in this populations.

Finally, parental use of mental health services may be linked to child perceptions of mental health services. Parents may model acceptance and value of mental health treatment, which in turn may lead their child to feel more comfortable and more open minded about attending treatment, although data on this are mixed (Staghezza-Jaramillo, Bird, Gould, & Canino, 1995; Wu et al., 1999; Zimmerman, 2005).

Given the importance of assessing children's perceived barriers to school-based treatment, and the absence of any studies examining these perceived barriers to school-based treatment for anxiety specifically, the current study aimed to extend this literature by examining anxious children's perceptions of barriers to treatment attendance in a school-based setting. Understanding child perceptions of barriers to treatment may allow school-based clinicians to identify children at risk for poor attendance and to address the concerns of children prior to beginning treatment. Thus, the study's specific aims were to examine:

1. The types and frequencies of perceived barriers to anxiety treatment in school-based settings.
2. The association between perceived barriers to anxiety treatment in school-based settings and demographic factors, child and parent clinical characteristics, parenting style, and parent service use history.

Methods

Participants

Participants were 122 youth between the ages of six and 18 years ($M = 11.03$; $SD = 3.379$) who were enrolled in the School-based Treatment for Anxiety Research Study (STARS). All children met criteria for a DSM-IV primary diagnosis of an anxiety disorder based on the Anxiety Disorders Interview Schedule for DSM-IV (ADIS; Silverman & Albano, 2004). Primary diagnoses included generalized anxiety disorder (60.7%), social phobia (22.1%), separation anxiety disorder (15.6%), and specific phobia (1.6%). Seventy-three percent had at least one comorbid disorder (59.8% another anxiety disorder). The sample was approximately half female (51.6%), non-white (50.9%; 2.7% Asian; 35.7% African-American; 8% Hispanic; 4.5% more than one race), from married households (54.1%) and had parents who completed a college degree (51.6%). Children were excluded if they: (1) had a medical or psychiatric condition contraindicating study treatment (e.g., suicidal intent), (2) were receiving psychosocial treatment for anxiety, (3) needed more immediate or alternative treatment, and/or (4) were a victim of previously undisclosed child abuse and require ongoing Department of Social Service supervision.

Procedures

School-based clinicians (e.g., social workers and school psychologists) were recruited in Baltimore City and nine districts in Connecticut to participate in STARS. All clinicians were provided detailed information about the study and signed informed consent. Clinicians were matched by personal (e.g., terminal degree and years of experience) and school characteristics and randomly assigned to deliver either Modular Cognitive Behavioral Therapy (M-CBT) or Usual Care (UC). Randomization occurred at a 1:1 (M-CBT:UC) ratio. Regarding families, the research team engaged in a number of recruitment strategies including conducting free educational seminars for teachers, nurses, parents, and clinicians about anxiety and also attending back to school nights and parent–teacher conferences. Families then contacted members of the research team and expressed interest in participating in the study. A brief phone screen was then conducted prior to scheduling the baseline evaluation.

Parents completed informed consent, and children were assented prior to completed baseline assessments. If it was determined that the child was eligible, they would begin seeing their school-based clinician for treatment. During the first three treatment sessions, children completed a modified version of the Barriers to Treatment Participation Session questionnaire (Kazdin, Holland, Crowley, & Breton, 1997). Children who were ineligible (or declined participation) received non-study-related treatment through the school-based clinic or were referred to outpatient care.

Measures

Barriers to Session Attendance, Child Version is an adaptation of the parent version of the Barriers to Treatment Participation Scale (Kazdin et al., 1997) and includes 13 items that assess the child's perceived barriers to session attendance in school. The measure was completed by the child with the school-based clinician present within the first three treatment sessions. Each question on the *Barriers to Session Attendance* was prompted with "How much do you think that any of the following might get in the way of us meeting?" Children rated each item using a 3-point scale: 1 (Not at All/Hardly Ever), 2 (Somewhat or Sometimes), and 3 (Often or Very much). A complete list of the items appears in Table 1. In this study, scores were dichotomized to 0 (Not at All/Hardly Ever) and 1 (Somewhat/Sometimes and Often/Very much). Scores were dichotomized as a result of the low frequency of Often/Very much responses (4%), compared to Somewhat/Sometimes (18%) and Not at all/Hardly Ever (78%). Possible total scores ranged from 0 to 13 with higher scores indicating greater perceived barriers to treatment session attendance. Cronbach's alpha coefficient for the *Barriers to Session Attendance* in this sample was .67.

Screen for Child Anxiety Related Emotional Disorders, Parent and Child Versions (SCARED; Birmaher et al., 1997, 1999) is a 41-item parent- and child report of anxiety symptoms. The parent- and child-rated items using a 3-point Likert-type scale: 0 (not true or hardly ever true) to 2 (very true or often true). The SCARED yields a total score and five subscale scores that correspond to the DSM-IV anxiety disorders: panic/somatic (13 items), generalized anxiety (9 items), separation anxiety (8 items), social anxiety (7 items), and school phobia (4 items). The total score ranges from 0 to 82, higher scores reflect higher levels of anxiety, with a total score of 25 suggesting the presence of clinically significant anxiety. For this study, all five parent and child SCARED subscales and total scores were used. These sample's Cronbach's alphas for the parent report panic/somatic, generalized anxiety, separation anxiety, social anxiety, school phobia, and total scores were, .83, .83, .91, .83, .74, and .94, respectively, and for child report .86, .85, .87, .78, .63,

Table 1 Frequency of children's perceived barriers to school-based treatment

Children's perceived barriers to school-based treatment	Sometimes/often <i>n</i> (%)
8. If I miss class because of session, I will not understand the class work	56 (45.3)
3. I do not want other kids to know that I am meeting with the school counselor	46 (37.7)
1. Other kids will ask me too many questions about where I am going	45 (36.9)
12. My teachers will not let me go to session because I need to stay in class	30 (24.6)
7. Sessions will not be fun	27 (22.1)
13. I have other school activities that are more important than counseling sessions	25 (20.5)
5. I do not understand the point of meeting with my school counselor	21 (17.2)
11. Meeting with a school counselor makes me nervous	21 (17.2)
4. Kids will tease me for meeting with a counselor	17 (13.9)
6. I will miss lunch or resource because of sessions	16 (13.1)
9. I do not think my school counselor will understand me	14 (11.5)
2. I think the school counselor will tell other people about my problems	10 (8.2)
10. My family does not think that I need to meet with the counselor	9 (7.4)
Number of children endorsing at least one barrier	107 (87.7)

and .87, respectively. The SCARED has been shown to have acceptable psychometric properties (Birmaher et al., 1999).

Child Behavioral Checklist (CBCL/6–18; Achenbach & Rescorla, 2001) is a widely used parent-reported measure of child psychopathology. The 113 behavioral/emotional items are rated on a 3-point scale from 0 (Not True) to 2 (Very True or Often True). For the current study, only the broadband internalizing and externalizing scales were used. The Cronbach's alphas for baseline internalizing and externalizing subscales were .88 and .92, respectively. Scores for the internalizing (e.g., "Self-conscious or easily embarrassed" or "Feels hurt when criticized") and externalizing (e.g., "Can't sit still, restless, or hyperactive" or "Demands a lot of attention") scales range from 0 to 58 and 0 to 70, respectively, with a higher score indicating more behavior problems. The CBCL has been shown to have excellent test-retest reliability (Achenbach & Rescorla, 2001).

The Teacher Report Form (TRF; Achenbach & Rescorla, 2001) is a widely used measure of child psychopathology. For the 113 problem items, teachers rated each item on a 3-point scale: 0 (Not True) to 2 (Very True or Often True). For the current study, only the internalizing and externalizing subscales were used. Scores for the internalizing and externalizing scales ranged from 0 to 64 and 0 to 66, respectively, with a higher score indicating more behavior problems. This measure is appropriate for youth ages 6–18 and has adequate reliability and validity (Achenbach & Rescorla, 2001). The Cronbach's alphas for baseline internalizing and externalizing subscales were .91 and .94, respectively.

Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983) is a 53-item measure of parental psychopathology (e.g., *feelings of worthlessness, being fearful, feeling easily annoyed, somatic symptoms*). Parents responded to items using a 5-point Likert-type scale describing the

degree of discomfort several problems have caused them (Not at all, A little bit, Moderately, Quite a bit, Extremely). Higher scores indicate greater distress. Both convergent and construct validity with other measures of psychopathology have been demonstrated for this scale (Boulet & Boss, 1991). Research on the BSI has been conducted with ethnically diverse samples and demonstrated acceptable reliability and validity (Hemmings, Reimann, Madrigal, & Velasquez, 1998). The Cronbach's alpha for baseline BSI Global Severity Index score was .97.

Egna Minnen Beträffande Uppfostran Anxious Rearing and Overcontrol subscales, Parent and Child Versions (EMBU; Muris, Meesters, & van Brakel, 2003; Perris, Jacobsson, Lindstrom, von Knorring, & Perris, 1980) was used to assess perceptions of specific anxiety-enhancing parental rearing behaviors. Each subscale includes 10 items. The overprotection/control (e.g., *I want to decide how my child should be dressed or how he/she should look*) and the anxious rearing (e.g., *I worry about what my child is doing after school, I worry about my child getting into trouble*) subscales are both rated on a 4-point Likert scale (1 = No, 2 = Yes, but seldom, 3 = Yes, often, 4 = Yes, most of the time). Each subscale scores range from 10 to 40, with a higher score indicating a stronger endorsement of that parenting style. The EMBU subscales have demonstrated adequate internal reliability across combined community and clinical samples (Bögles, van Oosten, Muris & Smulders, 2001; Young et al., 2013). The Cronbach's alphas for baseline overprotection and anxious rearing style were .67 and .75, respectively (parent report) and .65 and .86, respectively (child report).

Demographics and Parent Treatment History Measure was assessed via parent report: one yes/no item which

inquired whether the parent had ever received mental health services.

Data Analysis Plan

The frequency of perceived barriers was assessed using descriptive statistics. Group differences between the usual care and M-CBT conditions on children's perceptions of treatment attendance were examined using an independent-samples *t* test. The associations between demographic factors, child and parent clinical characteristics, parenting style, and parent service use history and perceived barriers were examined using *Pearson's r* and *Spearman's rho* correlations, as appropriate. A post hoc independent-samples *t* test was conducted to examine the difference between minority and non-minority youths on perceived barriers. Statistically significant correlates were entered into a post hoc multiple regression model simultaneously to evaluate the relative strength of these variables.

Results

Perceived Barrier Frequencies

The most commonly endorsed barrier reported reflected concerns about missed classwork, endorsed by 45.3% of youth in this sample. The second and third most commonly endorsed barriers were not wanting other children to know students were visiting the counselor (37.3%) and other children asking questions (36.9%). Table 1 shows the frequencies of each child-reported perceived barrier to school-based anxiety treatment. The *mean* number of perceived barriers reported by children was 2.76 (*SD* = 2.14; *range* 0–9).

Treatment Group Differences

No difference was found in the total number of perceived barriers between children in the M-CBT (*M* = 2.77, *SD* = 2.15) and the usual care (*M* = 2.97, *SD* = 2.12) groups; *t*(116) = .451, *p* = .653.

Child/Family Demographics and Barriers

As listed in Table 2, non-white racial minority status and lower parental education level were significantly associated with higher children's perceived barriers to school-based anxiety treatment. There was a significant effect for minority status, *t*(101) = 2.35, *p* < .05, with African-Americans (*m* = 3.45; *SD* = 2.47) reporting a higher number of barriers than Caucasians (*m* = 2.44; *SD* = 1.86).

Child Clinical Characteristics and Barriers

Higher SCARED total scores (child report) and higher teacher-reported externalizing symptoms were significantly associated with a higher number of children's perceived barriers, as listed in Table 2. Parent and child subscales of the SCARED were also investigated. According to parent report, only the school avoidance subscale (*r* = 0.195, *p* = .039) was significantly associated with higher children's perceived barriers. No other parent subscales were significantly associated with perceived barriers (*r* range – 0.037 to 0.131). According to child report, the somatic (*r* = 0.240, *p* = .015) and separation subscales (*r* = 0.247, *p* = .012) were significantly and positively correlated with children's perceived barriers. No other child-reported SCARED subscales were significantly correlated with children's perceived barriers (*r* range 0.124–0.173).

Parent and Family Factors and Barriers

Higher scores on the EMBU Anxious Rearing Style (parent and child report) were significantly associated with higher levels of children's perceived barriers. The Overcontrol subscale was not significantly associated with children's perceived barriers. Parental psychopathology (assessed using the BSI Global Severity Index) and parental treatment history were not associated with children's perceived barriers (see Table 2).

Factors Associated with Barriers

All variables that were significantly associated with children's perceived barriers, including minority status, parental education level, SCARED total score (child report), TRF Externalizing subscale and Anxious Rearing subscale (parent and child report), were entered into a post hoc multiple linear regression model simultaneously. Results indicated that only the TRF Externalizing subscale scores were significantly associated with children's perceived barriers to treatment (see Table 3).

Discussion

The current study examined the frequencies of 13 child-reported perceived barriers to attending school-based anxiety treatment and their association with demographic factors, child and parent clinical characteristics, parenting style, and parent service use history. Findings indicated that perceived barriers were common, and several demographic, child clinical and parenting styles were associated with higher levels of perceived barriers, particularly teacher reports of child externalizing behavior. These findings indicate that although

Table 2 Relationship between children's perceived barriers total and demographics, child and parent clinical characteristics, parenting style and service history

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Barriers total score	–	.01	.14	–.02	–.19*	–.28**	.24*	.10	.17	.14	–.11	.28**	.04	.03	.19*	.12	.30**	–.07
2. Child age	–	–	–.01	–.28**	–.25**	–.26**	.28**	–.07	.18	.15	–.16	–.13	.20*	.33**	.20*	–.18	.03	.07
3. Child gender	–	–	–	.17	–.00	–.02	–.16	–.11	–.01	.11	–.00	.30**	–.10	.05	–.01	.07	.18	.04
4. Parental marital status	–	–	–	–	.35**	.21*	–.03	–.09	–.18	–.18	.03	.10	–.31**	.01	–.22*	.05	–.00	–.10
5. Minority status	–	–	–	–	–	.44**	.02	–.00	–.10	–.13	–.11	–.20	–.10	–.09	–.25**	–.19	–.17	.05
6. Parent education level	–	–	–	–	–	–	–.22*	–.01	–.07	–.07	.02	–.17	–.24*	.01	–.27**	–.16	–.19	.10
7. SCARED total (child)	–	–	–	–	–	–	–	.28**	.25*	.14	–.09	.09	.17	–.08	–.01	.12	.33**	.14
8. SCARED total (parent)	–	–	–	–	–	–	–	–	.69**	.37**	.14	–.15	.37**	.29**	.39**	.17	.27**	.08
9. CBCL internalizing	–	–	–	–	–	–	–	–	–	.54**	.09	–.00	.39**	.14	.35**	.08	.17	.08
10. CBCL externalizing	–	–	–	–	–	–	–	–	–	–	.03	.25*	.44*	.21*	.48**	.19	.39**	.19
11. TRF-internalizing scale—BL	–	–	–	–	–	–	–	–	–	–	–	.21	.02	.21	–.14	.16	.14	–.16
12. TRF externalizing scale—BL	–	–	–	–	–	–	–	–	–	–	–	–	–.04	.19	–.01	.17	.29**	.04
13. BSI Global Severity Index	–	–	–	–	–	–	–	–	–	–	–	–	–	.18	.48**	.02	.12	.17
14. Overprotection subscale (parent)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	.40**	.37**	.15	.02
15. Anxious rearing subscale (parent)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	.25*	.30**	.08
16. Overprotection subscale (child)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	.59**	.08
17. Anxious rearing subscale (child)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–.02
18. Has parent received treatment?	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

* $p < .05$; ** $p < .01$

Table 3 A post hoc multiple regression model investigating the relative strength of factors significantly associated with children's total perceived barriers to school-based treatment

Children's total perceived barriers	<i>B</i>	<i>SE(B)</i>	<i>t</i>	β	<i>p</i>	95% CI
Constant	1.11	1.69	.66		.52	[− 2.27, 4.48]
Child minority status	− .05	.57	− .08	− .01	.93	[− 1.18, 1.08]
Parental education level	.04	.563	.07	.01	.95	[− 1.09, 1.17]
SCARED total (child report)	.002	.02	.10	.01	.92	[− .03, .04]
TRF externalizing (teacher report)	.07	.03	2.10	.27	.04	[.003, .14]
EMBU anxious rearing (parent report)	.01	.07	.02	.02	.88	[− .12, .14]
EMBU anxious rearing (child report)	.05	.05	1.20	.16	.25	[− .04, .14]

$R^2 = .13$

CI confidence interval

school-based interventions eliminate several logistical treatment barriers, most children still have some concerns about attending treatment.

As expected, the most commonly reported barrier was concern over missed schoolwork. Anxious youth typically experience preoccupying worries about falling behind in class and failing at school. For school-aged children with GAD, worries related to schoolwork are particularly prominent and may reduce treatment attendance. When treating children with GAD in schools, varying the treatment session times and not having sessions during specific class times may improve treatment attendance.

The second and third most commonly endorsed perceived barriers to school-based treatment reflected concerns regarding stigma related to receiving mental health services. Children's concern regarding stigma about receiving mental health services has been well documented in outpatient settings (Lindsey & Kalafat, 1998; Timlin-Scalera et al., 2003; West et al., 1991), and this paper suggests that they may extend to school services. Schools may reduce the stigma associated with seeing a school psychologist, social worker, or counselor by "normalizing" these services and highlighting the benefits/value of addressing mental health problems (or remaining mentally healthy).

A central aim of this study was to examine correlates of perceived barriers. Bivariate associations indicated that children from racial/ethnic minority backgrounds and children whose parents reported having no college degree endorsed a greater number of barriers. The finding related to racial/ethnic minority backgrounds is consistent with treatment attendance data in outpatient settings for anxiety (Gordon-Hollingsworth et al., 2014; Walkup et al., 2008). This finding is also in line with the literature, showing that African-Americans perceive mental illness as personal weakness, a lack of motivation, or lack of inner strength (Conner et al., 2010; Johnson, 2000; NMHA, 1998). Stigma about mental health treatment in African-American communities is prominent (Gary, 2005; Ward, Clark, & Heidrich, 2009) and may also partly explain the higher levels of child perceived barriers among African-Americans in the current study. Parents

who did not attend college appear to be less likely to value or understand the importance of mental health services. One explanation of this finding may be that the importance of mental health treatment is not stressed until individuals attend college (Bonell et al., 2014). Moving forward, schools may benefit from providing families with information about mental health services. Specifically, the families of children from racial/ethnic minority backgrounds and with parents who did not attend college could benefit from educational information about the normality of children receiving services and the possible benefits the services may provide.

Numerous studies in outpatient settings have demonstrated a link between child age, child gender, parental marital status and poor treatment attendance and an increased likelihood of dropout (Edlund et al., 2002; Furnham & Wong, 2007; Kreyenbuhl et al., 2009; Pellerin et al., 2010; Rotheram-Borus et al., 1999). In this study, however, these factors were unrelated to perceived barriers. Within a school-based setting, these factors may not be barriers to attendance as they are in outpatient settings.

Higher anxious (child report) and externalizing behaviors (teacher report) were related to more child-reported perceived barriers. Regarding child-reported anxiety, this finding is expected, as anxious children are more likely to avoid new or anxiety provoking situations, like a visit to a school clinician. In relation to teacher-reported externalizing behavior, it appears that children perceived as acting out in class are less likely to seek care given their heightened sense of being identified within the classroom context as non-compliant or disruptive. This is in line with findings by Rapee et al. (2006) which found that child externalizing behaviors predicted children's perceived barriers of attending school-based depression treatment. If schools are able to identify anxious children and discuss with teachers which students they perceive as externalizing, this information could be used to target those children and provide reassurance of the ease of access, normality and potential helpfulness of school-based services to them. In contrast, teacher and parent reports of their children's internalizing symptoms were unrelated to children's

perceived barriers to attending treatment sessions with the school-based clinician. A growing literature has demonstrated low agreement between parents, teachers, and children on children's internal states (Comer & Kendall, 2004) which may account for these discrepant findings.

As noted above, previous studies have linked problematic parenting styles and higher perceived barriers to mental health treatment (Owens et al., 2002). To extend this literature, we examined the relation between specific anxiety-enhancing parenting styles and perceived barriers and found that children whose parents used an anxious rearing style reported higher levels of barriers to school-based treatment. An anxious rearing style is characterized by parental worry over their children's actions and whereabouts. It is possible that these parents expressed concern over treatment and what it entails, consequently increasing children's perceived barriers. Providing parents and school-based clinicians with additional information to help establishing open communication between parents and school-based clinicians may help to relieve some parental worry and encourage parents to support their children receiving additional needed services.

Although Nock and Ferriter (2005) found that parental psychopathology is related to parental perception of barriers to treatment, in this study, parental psychopathology was not associated with children's perceived barriers to school-based treatment. Therefore, in addition to school-based treatment removing many logistical barriers to treatment, there may be additional benefits over outpatient treatment particularly when parents suffer from their own mental health problems.

Parental history of mental health service use was also unrelated to children's perceptions barriers to treatment. While one study has found an association between family history of service use and children accessing mental health services (Wu et al., 1999), many studies have not found this association (John, Offord, Boyle, & Racine, 1995; Verhulst & van der Ende, 1997; Zimmerman, 2005; Zwaanswijk, Van der Ende, Verhaak, Bensing, & Verhulst, 2005). The current study extends this to school-based treatment and suggests that history of parent mental health service use may not impact children's access to services in school, which is another potential benefit of school-based services.

The significant associations found between perceived barriers to school-based treatment for anxiety and demographic factors, child clinical characteristics, and parenting style need to be interpreted with caution, as the magnitude of the associations was small. This paper highlights the hesitations that students have about attending school-based treatment. The factors found to be associated with perceived barriers in this study suggest that other considerations (e.g., school connectedness, child treatment history, or treatment modality) may be related to children's hesitations to attending treatment.

Future research investigating the measurement of perceived barriers to school-based treatment is warranted. Perceived barriers to treatment attendance appear to be multi-dimensional and children's concerns fall into multiple categories (e.g., stigma, competing demands, and confidentiality). Improved measurement and understanding of perceived barriers could play an important role in improving treatment engagement and completion. Future studies should examine the longitudinal relationship between children's perceived barriers and children's actual attendance to sessions, engagement in sessions, and their treatment response.

Limitations

While interpreting the findings of this study, several limitations should be considered. The barriers to treatment questionnaire were completed during the first three sessions of treatment. This represents a limitation, as the sample only includes students willing to engage and attend initial treatment sessions; the perceived barriers of children who were unwilling to attend treatment were not assessed. Therefore, the sample is not representative of the population of anxious youth in school settings. The Children's Perceptions of Barriers questionnaire also had a low Cronbach's alpha score, indicating questionable reliability. Children's perceptions of barriers to treatment measure were also not used to assess treatment attendance or engagement. Simply because a child had concerns over attending treatment does not necessarily mean they had difficulties attending or utilizing the treatment strategies they might learn. Most of the correlations found also have a low–moderate effect size and were examined using the same dependent variable. Therefore, the chance of a type I error is fairly high.

Clinicians were instructed to complete the perceived barriers to treatment questionnaire with the child participant. However, several items on this measure contained information about children's perception of the school-based clinician (e.g., whether the clinician understands them). In front of the clinician, clinically anxious children may have felt uncomfortable answering the questions, and thus, these items may have been under endorsed. Future studies may also benefit from examining children's perceived barriers to treatment prior to starting treatment. This may reduce bias in the child report, as participants in this study had already begun treatment.

Only a limited range of barriers were assessed, and additional factors may influence children's perceptions of school-based treatment. For example, no items refer to concern over what will my friends think or that visiting the clinician means I'm in trouble.

Summary

The current study examined clinically anxious children's perceived barriers to school-based treatment. In addition to the frequency of perceived barriers, several correlates of these barriers (i.e., child and family demographics, child and parent clinical characteristics and parent service use history) were examined. Perceived barriers were common, and higher total barriers were significantly associated with racial/ethnic minority status, lower parental education level, higher child-reported anxiety and teacher-reported externalizing behavior and parents who use an overly anxious rearing style with their children. Although school-based treatment removes many of the logistical and pragmatic barriers to treatment attendance, children still have reservations about attending. This study identifies predictors of those perceived barriers to treatment and may allow school-based clinicians to identify children who are at risk for early treatment dropout.

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Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval This study was approved by the Institutional Review Board of UConn Health. All procedures performed in this study were in accordance with the 1964 Declaration of Helsinki and its later amendments.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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