

Relations of Anxiety Sensitivity, Control Beliefs, and Maternal Over-Control to Fears in Clinic-Referred Children with Specific Phobia

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Abstract The relations of fear to anxiety sensitivity, control beliefs, and maternal overprotection were examined in 126 7–13-year-old clinically referred children with specific phobias. Results indicated that anxiety sensitivity and control beliefs were significant predictors of children's fear levels, accounting for approximately 48 % of the total variance. Unexpectedly, age, gender, and maternal overprotection did not emerge as significant predictors of fear in the overall sample. In subsequent analyses, anxiety sensitivity was found to be a consistent, significant predictor for both girls and boys, for both younger and older children, and for children with and without an additional anxiety disorder diagnosis. Control beliefs were only a significant predictor for girls, younger children, and children with an additional anxiety diagnosis. Maternal overprotection was not a significant predictor for any group. Children with an additional anxiety disorder diagnosis had higher levels of fear, anxiety sensitivity, and maternal overprotection, as well as lower levels of control beliefs than the non-additional anxiety disorder subgroup. Future directions and clinical implications are explored.

Keywords Children · Adolescents · Fear · Specific phobias · Anxiety sensitivity · Control beliefs

Introduction

Fear is a normal response to real and perceived threats (Marks 1969) and is common in children (Ollendick 1979). Throughout children's development, normative fears vary in frequency, intensity, and duration, as they reflect children's increasing cognitive development and physical maturity (Ollendick et al. 2002). As children become more able to recognize potential dangers in their environments, fears may arise because the children are not yet able to fully understand or control these perceived threats or dangers (Chorpita and Barlow 1998; Jones and Jones 1928; Weems and Costa 2005). Specific fears in children are thought to change over time due in part due to this emerging cognitive capacity to perceive and understand potential dangers (Ollendick et al. 2002). At younger ages the nature of fears are immediate and tangible; however, as children age, fears become more anticipatory and less concrete (Scherer and Nakamura 1968). Fears are also thought to be adaptive as they are defensive responses to stimuli that a child may not understand or have the ability to control. However, normal fears and anxiety evolve into anxiety disorders when they persist over time and impair a young person's functioning (Craske 1997).

Childhood anxiety disorders do not have a single etiological pathway. Past researchers have proposed that fears are multiply determined and arise from a variety of factors including child and parent characteristics (see Ollendick et al. 2002). As such, age and gender should be comparatively examined when considering child characteristics that affect the etiology, maintenance, and outcome of fear in children. Overall, regarding age and gender, younger children and girls have been found to report higher levels of fear than boys or older children (Ollendick et al. 2002, 2004). It has been suggested that the reasons behind these

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age differences are the developing cognitive capacities discussed above and the inability of young children to fully understand and exert control over these fearful situations (Chorpita and Barlow 1998). The gender difference is thought to arise because girls and boys are socialized differently in our society. Children are taught from a young age about gender roles and what behaviors and emotions are acceptable. In addition, fearfulness is more associated with female gender roles, which include relational traits and acceptance of emotional expression (e.g., Bem 1981; Golombok and Fivush 1994). Society's greater tolerance for fear in girls additionally may make them more willing to report fear. On the contrary, boys are less likely to express fear as they are expected to withhold their emotions and convey feelings such as self-confidence and "bravery" in the face of fear (e.g., Bem 1981; Golombok and Fivush 1994). Low levels of masculinity and the accompanying instrumental traits (e.g., competitiveness, self-confidence, assertiveness) may put children at risk for developing distressing fears linked to anxiety disorders (Ginsburg and Silverman 2000).

An additional child characteristic that is associated with higher levels of fear in children is anxiety sensitivity. Anxiety sensitivity or "fear of fear" refers to the belief that the sensations related to anxiety are harmful and consequential in and of themselves (Reiss 1991). There has been a focus in research on determining if anxiety sensitivity, while related to fearfulness and anxiety, is an independent construct with predictive validity of fear. Many of the past studies have found that while similar, anxiety sensitivity is indeed a unique construct (Chorpita et al. 1996; Mattis and Ollendick 1997; Silverman and Ollendick 2005; Weems et al. 1998) and predicts fear levels above and beyond anxiety itself.

Control beliefs, or the perceived ability to control fear when in anxious situations, may also play a role in the manifestation of children's fear. It is the lack of perceived control over external and internal events that makes anxiety pathological (Weems et al. 2003). A perception of lack of control results in anxiety by reinforcing cognitive biases, which are characterized by exaggerated and negative anticipation of external threats to one's overall well-being (Wood et al. 2003). A study carried out by Weems et al. (2003) used Rapee et al. (1996) Anxiety Control Questionnaire (ACQ) to explore how control beliefs affect childhood anxiety disorders. In the study, clinically anxious children (SAD, GAD, Specific Phobia, and Social Phobia) were compared to non-clinical children. They found that perceived control over feared events was significantly and negatively correlated with self-reported anxiety symptoms for both groups of children. However, children with anxiety disorders reported significantly less perceived control than their non-clinical counterparts.

Subsequent analyses indicated that perceived control over anxiety-related events predicted anxiety disorder status, after controlling for other variables. This study failed to find age as a significant moderator between anxiety and cognitive beliefs (Weems et al. 2003, 2007).

In addition to child characteristics, parenting styles have been associated with the acquisition and maintenance of fear in children. In particular, parental overprotection has been linked to heightened levels of child fear. Excessive parental control has been seen to increase children's dependence on their parents, simultaneously reducing their autonomy and giving children a decreased sense of control over their environment. As previously discussed, a perceived lack of control can evoke anxiety and negative anticipation of real or perceived threats (Wood et al. 2003). Past research has found that parents of children with anxiety and phobic disorders tend to grant less autonomy and exert more control on their children than parents of children who are not anxious (Ginsburg et al. 2006; Hudson and Rapee 2001; Siqueland et al. 1996; Whaley et al. 1999). It is important to note the reciprocal relationship between parenting behaviors and child fear; that is, not only can parental levels of control exacerbate their child's anxiety, but a child's high level of anxiety can also evoke excessive parental control. This cyclic relationship has been supported in several studies observing parent-child interactions (see Hudson and Rapee 2001). Effects of parental overprotection have also been found to be stronger in children versus adolescents (Hudson and Rapee 2001; Wood et al. 2003).

The purpose of the current study was to explore these relations in children with specific-phobias. The current study was modeled after that of Ollendick and Horsch (2007), which examined relations among maternal overprotection, child anxiety sensitivity, and child fear levels in a diverse sample of clinically referred children. Overall, results of Ollendick and Horsch indicated that age, gender, anxiety sensitivity, and mother reports of overprotection were significant predictors of fear levels. More specifically, higher levels of fear were found to be associated with being a girl, being younger, having higher levels of child anxiety sensitivity, and having a parent with high levels of overprotection. Additionally, anxiety sensitivity was found to be a significant predictor of fear levels for older and younger children, boys and girls, and children with and without an anxiety disorder. However, maternal overprotection was found to be significant only for younger children and girls. Unlike Ollendick and Horsch's study, the children and adolescents in the current sample of clinically referred children were all diagnosed with a specific phobia. Control beliefs, not examined in the Ollendick and Horsch study, were also examined in the present study, due to evidence suggesting the importance of control beliefs in the

development of clinical anxiety (Weems et al. 2003). Measures of fear in the present study were analyzed in relation to youth reports of control beliefs and anxiety sensitivity, as well as maternal reports of overprotection. Effect of child characteristics such as gender, age, and presence of additional anxiety diagnoses were also examined.

Based on the extant literature, it was hypothesized that anxiety sensitivity, control beliefs, maternal overprotection, gender, and age would all be predictors of fear in the current sample of children with a specific phobia. Specifically, heightened levels of fear would be associated with higher levels of maternal overprotection, higher levels of anxiety sensitivity, being younger, and being a girl. It was also predicted that levels of fear would be inversely related to control beliefs. Moreover, it was expected that these same effects would hold true across age, gender, and additional anxiety diagnosis subgroup analyses.

Method

Participants

The data analyzed in this study were obtained in the Augmented Phobia Project undertaken at the Child Study Center (CSC), Virginia Tech (Ollendick et al., in press). This National Institute of Mental Health study examined the effectiveness of two different treatments for 134 children with specific phobias. A few participants were eliminated from the original sample of 134 children due to missing data on one or more of the study variables: 126 of the 134 children comprised the current sample. 48.41 % of the sample was male ($n = 61$) with a mean age of 8.88 ($SD = 1.80$) and 51.60 % of the sample was female ($n = 65$) with a mean age of 8.91 ($SD = 1.62$). The participants' ages ranged from 7 to 13 years ($M = 8.90$, $SD = 1.70$). Approximately 88 % of the participants were Caucasian and 79 % were from middle to upper class, 2-parent families.

Materials

Revised Fear Survey Schedule for Children (FSSC-R; Ollendick 1983). The FSSC-R is a child self-report questionnaire, which provides information on subjective fear levels. Children are given 80 specific fearful situations and asked to indicate how much fear they feel toward each situation. Children rate their fear on a 3-point scale (1 = none, 2 = some, or 3 = a lot). The sum of the items comprises the total score; higher scores indicate more fear. Internal consistency of the total score was excellent ($\alpha = .97$) in the present study.

Childhood Anxiety Sensitivity Index (CASI; Silverman et al. 1991). The CASI is child-reported questionnaire designed to assess anxiety sensitivity, or fear of different symptoms of anxiety. Children rate each of the 18 items related to consequences of elicited anxiety on a 3-point scale (1 = none, 2 = some, or 3 = a lot). For the current study, the sum of the 18 items was used for analyses. Internal consistency was good ($\alpha = .89$).

Anxiety Control Questionnaire for Children-Short form (ACQ-C; Weems et al. 2003). The child version of the ACQ was adapted from Rapee et al.'s (1996) Anxiety Control Questionnaire by Weems et al. (2003). The ACQ-C is designed to measure an individual's perception of control over anxiety-related events. The measure assesses youth in terms of their control over emotional reactions and fearful events. Children rate their agreement with each item which represents a fear generating situation on a 5 point rating scale: 0 (none), 1 (a little), 2 (some), 3 (a lot), or 4 (very, very much). The short form, used in this study, consists of 10 items selected from the full ACQ-C on the basis of which 10 items had the highest item to total correlations and were seen as most representative of the full measure. The sum of the items provides the total control belief score (Weems 2005). Internal consistency was satisfactory ($\alpha = .82$) in the present study.

Parental Bonding Inventory (PBI; Parker et al. 1979). The current study used the mother's self-report of her own parenting behavior toward her child with a specific phobia. The questionnaire contains 25 questions designed to assess two dimensions: overprotection and care. Only the mother's report of her own overprotective behaviors (PBI self, 12 items) was used in the current study. For each item, mothers report the degree to which each parenting behavior or attitude applies to how they parent their child; mothers rate each item as always = 4, often = 3, sometimes = 2, or never = 1. According to the PBI manual an overprotection score over 13.5 is considered a risk factor for some types of psychopathology (Wilhelm et al. 2005). Internal consistency was acceptable ($\alpha = .78$).

Anxiety disorders interview schedule for DSM-IV, child and parent versions (ADIS-C/P; Silverman and Albano 1996). The ADIS is a semi-structured interview that is used to assess the majority of psychiatric disorders prevalent in childhood and adolescence. Clinicians evaluate frequency, intensity, and interference ratings for a child's symptoms. The findings are used to determine a clinician's severity rating (CSR) from 0 to 8. The clinicians assess the child and parents separately and then hold a consensus meeting to arrive at a consensus score. A CSR of 4 or above is considered a clinical diagnosis. Trained-to-criterion clinicians conducted diagnostic interviews. Training consisted of a 3-h workshop on the ADIS-C/P, two practice interviews with the trainer, two live observations of

Table 1 Mean and standard deviations for the study sample

Variable	Overall sample		Males		Females	
	Mean	SD	Mean	SD	Mean	SD
Child fear	128.44	30.88	128.25	33.00	128.62	29.00
Age	8.90	1.70	8.88	1.80	8.92	1.62
Maternal overprotection	14.85	4.24	15.64	4.44	14.11	3.94
Child anxiety	47.22	13.20	48.64	14.20	45.89	12.15
Control beliefs	20.04	8.85	20.15	9.30	19.94	8.47
Anxiety sensitivity	8.98	7.02	9.28	7.79	8.71	6.26

Variable	Ages 6–9		Ages 10–13		Add AD		No add AD	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Child fear	131.72	32.17	121.10	26.73	135.04	30.96	117.34	27.66
Age	7.79	.95	10.96	1.07	8.89	1.72	8.91	1.68
Maternal overprotection	15.00	4.43	14.51	3.82	15.27	4.61	14.15	3.48
Control beliefs	19.48	9.01	21.28	8.44	19.19	9.16	21.47	8.18
Anxiety sensitivity	9.36	7.72	8.15	5.13	10.32	7.59	6.74	5.29

$n = 126$ for overall sample; $n = 61$ for males; $n = 65$ for girls; $n = 87$ for ages 6–9; $n = 39$ for ages 10–13; $n = 79$ for additional anxiety disorder; $n = 47$ for no additional anxiety disorder

administration of the ADIS-C/P with a previously trained clinician, and two interviews conducted with the trainer in the session with the trainee. Additionally, all interviews were videotaped, and 25 % of the diagnostic interviews were reviewed by a second clinician to compute inter-rater reliabilities. ICCs for the CSRs ranged from .48 to .96, revealing fair to acceptable levels of reliability. Further, test–retest reliability coefficients for the ADIS in other studies have been found to range from .65 to 1.00, depending on the disorder (Silverman et al. 2001). Additionally, acceptable inter-rater agreement has been established for the ADIS-C/P in other studies (Grills and Ollendick 2003; Silverman and Ollendick 2005).

The current study used the diagnostic data to determine first, if a child had a specific phobia and second, if a child had an additional anxiety disorder diagnosis. In order to meet criteria for an additional anxiety disorder in the current study, the child had to have a secondary diagnosis of General Anxiety Disorder (GAD, $n = 39$, 30.1 %), Separation Anxiety Disorder (SAD, $n = 14$, 11.1 %) and/or Social Anxiety Disorder (SoP, $n = 26$, 20.6 %).

Procedure

All of the children in the parent study received treatment for their specific phobia (Ollendick et al., in press). Measures used in the present study were completed during the child's first and second sessions and were obtained prior to treatment. As indicated above, this study included the following variables: FSSC-R total score, PBI mother's report of overprotection for her child, ACQ total score,

CASI total score, age, and gender. Pearson's correlations were performed to determine relationships among the variables. A regression analysis was then performed with the FSSC-R total score as the dependent variable and the remaining five variables as the independent predictor variables.

In order to further explore child and parent characteristics, additional regression analyses were undertaken. First, children were split on the basis of gender. Second, they were split into two age groups. The age groups were meaningfully divided according to evidence suggesting that while the age of puberty onset varies between males and females, the generally accepted puberty onset age range is 10–16 years old (Marceau et al. 2011; Ollendick et al., in press). One group consisted of younger children ages 7–9 ($n = 87$; 50.57 % female) and the other was composed of older children ages 10–13 ($n = 39$; 53.85 % female). Lastly, the children were categorized as possessing an additional anxiety disorder diagnosis (GAD, SAD, Social Anxiety) ($n = 79$; 48.10 % female) or not ($n = 47$; 57.45 % female). Descriptive statistics, Pearson's correlations, and regressions were obtained for each of the six subgroups. Subsequently, Independent samples *t* tests were run to test for statistically significant differences across various subgroups.

Results

Independent-samples *t* tests were conducted comparing child fear within the three subgroups of gender, age, and

Table 2 Correlations among variables for the overall sample

Variable	1	2	3	4	5
1. Gender	–				
2. Age	.01	–			
3. Overprotection	–.18*	–.03	–		
4. Control beliefs	–.01	.03	–.12	–	
5. Anxiety sensitivity	–.04	–.25**	.09	–.19*	–
6. Fear level	.01	–.25**	.17	–.32**	.65**

Gender coded as 1 = male, 2 = female

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

presence of an additional anxiety disorder. Unexpectedly, there was not a significant difference in the mean fear scores between boys ($n = 61$, $M = 128.25$, $SD = 33.00$) and girls ($n = 65$, $M = 128.62$, $SD = 29.00$) [$t(124) < 1$]. Although a trend for age of the child was evident, there was neither a significant difference between the younger children ages 6–9 ($n = 87$, $M = 131.72$, $SD = 32.17$) and the older children ages 10–13 ($n = 39$, $M = 121.12$, $SD = 26.73$) [$t(124) = 1.80$, $p = .08$]. However, there was a significant difference between the mean fear scores for children with an additional anxiety disorder diagnosis ($n = 79$, $M = 135.04$, $SD = 30.96$) and the children without an additional anxiety disorder diagnosis ($n = 47$, $M = 117.34$, $SD = 30.96$) [$t(124) = 3.23$, $p = .002$]. Means and standard deviations for the total sample, for each gender, for younger and older children, and for children with and without additional anxiety disorders are presented in Table 1.

Table 2 contains the correlations among the variables in the overall sample. As expected, child fear was significantly and positively related to anxiety sensitivity. Also in line with the hypotheses, increasing child age and control beliefs were significantly and negatively related to child fear. Contrary to hypotheses, overprotection was only marginally related to fear levels ($p < .06$) while gender did not show a significant relation to fear in the overall sample.

A series of regression analyses were next performed for the overall sample and then separately for age, gender, and presence of an additional anxiety disorder. The regressions were carried out to determine the amount of variance in child fear that each of the variables explained. In the overall sample, control belief and anxiety sensitivity were significant predictors of fear level. The overall model accounted for approximately 48 % of the variance in child fear scores [$R^2 = .48$; $F(5, 120) = 22.47$, $p < .001$; see Table 3].

In the separate gender analyses, anxiety control beliefs and anxiety sensitivity were significant predictors for girls' fear ratings. However, only anxiety sensitivity was a significant predictor for boys. Age was not a significant

Table 3 Regression analyses

Variable	B	SE B	β	t	p
Overall sample					
Gender	2.937	4.110	.048	.714	.476
Age	–1.735	1.229	–.096	–1.412	.161
Maternal overprotection	.768	.490	.105	1.566	.120
Child control belief	–.667	.235	–.191	–2.840	.005
Child anxiety sensitivity	2.569	.304	.584	8.451	.000
Males					
Age	–.898	1.783	–.049	–.504	.616
Maternal overprotection	.465	.712	.063	.654	.516
Child control belief	–.521	.352	–.147	–1.481	.144
Child anxiety sensitivity	2.689	.427	.634	6.301	.000
Females					
Age	–2.878	1.738	–.161	–1.656	.103
Maternal overprotection	1.232	.697	.167	1.768	.082
Child control belief	–.832	.322	–.243	–2.583	.012
Child anxiety sensitivity	2.408	.454	.520	5.302	.000
6–9 year-olds					
Gender	4.606	5.373	.072	.857	.394
Maternal overprotection	.824	.613	.114	1.346	.182
Child control belief	–.746	.299	–.209	–2.499	.014
Child anxiety sensitivity	2.420	.348	.580	6.962	.000
10–13 year-olds					
Gender	.779	5.471	.015	.142	.888
Maternal overprotection	.807	.728	.115	1.109	.275
Child control belief	.089	.362	.028	.246	.807
Child anxiety sensitivity	4.253	.591	.817	7.200	.000
Additional anxiety-disorder					
Gender	2.189	5.081	.036	.431	.668
Age	–1.082	1.528	–.006	–.708	.481
Maternal overprotection	.616	.553	.092	1.112	.270
Child control belief	–.954	.281	–.282	–3.401	.001
Child anxiety sensitivity	2.367	.349	.580	6.778	.000
No additional anxiety-disorder					
Gender	9.318	8.125	.168	1.147	.258
Age	–4.161	2.198	–.253	–1.893	.065
Maternal overprotection	1.758	1.156	.221	1.520	.136
Child control belief	.105	.424	.031	.247	.806
Child anxiety sensitivity	2.818	.672	.539	4.191	.000

predictor for either gender. The predictive variables accounted for approximately 48 % [$R^2 = .48$; $F(4, 60) = 13.60$, $p < .001$] of the variance in fear scores for girls and 47 % of the variance in fear scores for boys [$R^2 = .47$; $F(4, 56) = 14.24$, $p < .001$; see Table 3].

In the age group analysis, anxiety sensitivity was found to be a significant predictor for both younger and older children. Additionally, control beliefs were a significant, negative predictor for younger children's fear level but not for older children. Gender and mother overprotection were not significant predictors for either age group. In the model, the predictive variables accounted for approximately 44 % of the variance in fear for younger children [$R^2 = .44$; $F(4, 82) = 16.16$, $p < .001$] and 66 % of the variance in fear for older children [$R^2 = .66$; $F(4, 34) = 16.73$, $p < .001$; see Table 3].

Lastly, the analysis conducted in the children with an additional anxiety disorder group revealed that control beliefs and anxiety sensitivity were significant predictors of fear. For children without an additional anxiety diagnosis, only anxiety sensitivity was a significant predictor of fear. Unexpectedly, age, gender, and mother overprotection were not significant predictors for either of these subgroups. The predictor variables accounted for approximately 52 % of the variance in fear for children with an additional anxiety disorder [$R^2 = .52$; $F(5, 73) = 15.65$, $p < .001$] and 40 % of the variance in fear for children without an additional anxiety disorder [$R^2 = .40$; $F(5, 41) = 5.51$, $p < .001$; see Table 3].

Discussion

Partial support of our hypotheses was obtained in the current study. In the overall regression analysis, child control beliefs and child anxiety sensitivity were significant predictors of fear as was hypothesized. Specifically, heightened levels of fear were significantly related to higher levels of anxiety sensitivity and lower perceived control. However, contrary to our hypotheses, age, gender, and maternal overprotection were not significant predictors of fear. In correlation analyses, fear was significantly related to being younger and marginally significantly related to increased mother overprotection; however, neither of these variables remained significant when entered simultaneously into the regression analysis with the remainder of the predictors. As hypothesized, the subgroup of children who possessed an additional anxiety disorder reported the highest levels for childhood fear, mother overprotection, and anxiety sensitivity. Conversely, the subgroup of children without an additional anxiety disorder reported the lowest levels of childhood fear and child anxiety sensitivity. Additionally, this subgroup had the highest average score for perceived control, while the children with an additional anxiety disorder had the lowest average score for perceived control. These findings demonstrate that children who have an additional, more pervasive anxiety disorder are in fact different from children with a specific phobia diagnosis only.

The current results are not concordant with several other studies that have reported heightened fear levels associated with being a girl and being younger in age (Ollendick et al. 2004, 2002; Ollendick and Horsch 2007). Previous findings suggest that age differences in fear levels may be attributed to younger children's inability to fully understand and exhibit control over fearful situations (Chorpita and Barlow 1998; Jones and Jones 1928; Weems and Costa 2005). While this notion appears to hold true for samples of non-referred, non-clinical youth, the current study examined a sample composed entirely of clinically referred children that met criteria for a specific phobia diagnosis. In a sample of already phobic children, age may not significantly moderate the relationship with increased fear levels. Ollendick and Horsch (2007) examined children and adolescents with a mean age of 10.67, while the present study looked at younger and older children with a mean age of 8.90. In the current sample, the lack of older adolescents and the lower mean age could explain the nonappearance of age as a significant predictor. Additionally, boys and girls in the current sample had nearly the same mean total fear score, which is not typical in community or clinically referred samples of children with various other disorders. In concordance with our findings, there has been previous evidence of a lack of gender differences in anxiety-disordered samples of children (Last et al. 1992; Muris et al. 2005; Strauss and Last 1993). As noted in regard to age, the lack of gender difference may be because our sample consisted entirely of children with anxiety and phobic diagnoses.

Previous studies did not find age to be a significant moderator for the relationship between child fear levels and control beliefs (Weems et al. 2003, 2007). However in the present study, control beliefs were a significant predictor for the younger children, but not the older ones. Lower perceived control was significantly related to heightened fear levels in older children, but did not remain significant in the presence of other predictors in the regression analysis. Although unexpected, the more significant relationship between the younger children's fear levels and control beliefs reflect the idea that younger children may have less developed cognitive capacities that do not allow them to completely grasp scary situations or perceive control over such events. Additionally, control beliefs were a significant predictor for girls, but not boys. These findings are in opposition with Weems et al. (2003) who did not find gender to moderate the relationship between control beliefs and fear levels. As previously discussed in regard to fear levels, girls and boys are socialized differently in society. Boys are taught that they should be able to manage and suppress their fears, encouraging them to express control over anxiety inducing events. Boys' tendency to over report control beliefs could explain why control was not a significant predictor of fear for boys in the current sample.

It was also found that lower perceived control in anxiety-related situations was significantly predictive of heightened levels of fear in children with an additional anxiety disorder. However, control beliefs were not a significant predictor of fear levels in children without an additional anxiety diagnosis. A hallmark feature of anxiety is the perceived lack of control over external threats (Weems et al. 2003). Thus it would be expected for children with an additional anxiety diagnosis to indicate lower feelings of control in day-to-day life. It is important to note that the ACQ measures control beliefs surrounding broad emotional reactions and generic frightening events, not directed to any specific fear-producing situation. Children with more pervasive anxiety are more likely to perceive less control in external situations, which could account for the differences in reported control beliefs between the two groups.

Several studies indicate that heightened levels of fears in children are associated with mothers who display more overprotective and controlling parenting styles (Siqueland et al. 1996; Ginsburg et al. 2006; Hudson and Rapee 2001; Whaley et al. 1999; Wood et al. 2003) and that these patterns are more evident in children than adolescents (see Wood et al. 2003). The current findings regarding maternal overprotection were partially in line with previous research, as the relationship approached, but did not reach significance in the overall sample. However, discrepant from Ollendick and Horsch and other past studies, mother overprotection was not found to be significant for either younger or older children in this study. As stated above, the younger average age and absence of older adolescents in the current sample might account for these differences. Additionally, because the older children in this sample were all youth with a specific phobia, mothers of older children may be just as overprotective in fearful situations as mothers of younger children. These reasons could help explain the lack of difference between age groups, but they do not capture why there was a lack of significance in the overall sample. It would be assumed that in a sample with a younger average age, overprotection would be more significant.

Several limitations of the current study should be noted. First, all of the measures used were self-report measures. Children may be biased to their own fears, anxiety and thoughts. As well, mothers may be biased in reporting their own “overprotective” parenting skills. In future studies, parent (mother and father) and teacher reports would be beneficial additions to the child characteristic measures, allowing for multiple perspectives in different areas of children’s lives. Additionally, children’s perceptions of their mothers’ overprotection may be just as, if not more important than mothers’ reports on their own parenting. A third limitation was that the sample was homogenous in

race, socioeconomic status, and family structure. A more diverse sample could be crucial in determining the generalizability of our findings to other cultures and life experiences.

On the other hand, an advantage of the current study was that it expanded on past research by exclusively analyzing children with specific phobias and by including a measure of anxiety control beliefs. These additional factors provide additional insight for investigating the developmental pathway of childhood fears and their subsequent treatment.

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