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Parental Intrusiveness and Children's Separation Anxiety in a Clinical Sample

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Abstract In this article, a theoretical model of the role of parental intrusiveness in the development of childhood separation anxiety disorder is presented and tested. Parents who act intrusively tend to take over tasks that children are (or could be) performing independently, thereby limiting mastery experiences and inducing dependence on caregivers. Families of children diagnosed with an anxiety disorder, aged 6–13 years, participated ($N = 40$). Child anxiety was assessed with a diagnostic interview and rating scales. A novel measure of intrusiveness based on behavioral observations and self-reports was developed, following seven principles for enhancing the psychometric properties of parenting measures. There was initial evidence of strong psychometric properties for the intrusiveness measure, which was associated with children's separation anxiety symptoms, but as predicted, not with other types of anxiety symptoms. Parental intrusiveness appears to be specifically linked with separation anxiety among children with anxiety disorders.

Keywords Separation anxiety disorder · Parental intrusiveness · Middle childhood · Measure development · Observational methods

Introduction

According to recent models of anxiogenesis, certain parenting practices may increase the chance that particular types of anxiety symptoms and disorders will develop among children who already experience clinical levels of anxiety [1–4]. Specific parenting practices are not likely to be the primary *cause* of the development of anxiety in children

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[3, 5], which appears to be more related to genetic factors and the nonshared environment. However, it has been hypothesized that children who are *already* clinically anxious may exhibit symptoms of separation anxiety disorder if their parents are highly intrusive in their daily routines and private activities [4]. In this paper, the theory underlying this hypothesis is explicated and then tested in a sample of children with anxiety disorders who ranged widely in level of separation anxiety symptomatology.

Separation situations often elicit negative affect in children, perhaps due to perceived danger related to being away from attachment figures as well as being confronted with novel, ambiguous stimuli (e.g., peers and teachers at school) [4]. Separation anxiety disorder (SAD) is characterized by debilitating anticipatory anxiety regarding separations from caregivers, avoidance of such separations, and irrational beliefs about the consequences of being away from loved ones [6].

The prevalence of child anxiety disorders in the general population (including SAD as well as social phobia, generalized anxiety disorder, etc.) is approximately 6–11%; the rate for SAD specifically is about 4% [7, 8]. Despite extensive comorbidity among the child anxiety disorders [9], there is substantial variability in the level of separation anxiety symptomatology in samples of children with anxiety disorders [10].

Definition of Parental Intrusiveness

Parents who act intrusively tend to take over tasks that children are (or could be) doing independently and impose an immature level of functioning on their children, restricting children's autonomy [11, 12]. Among school-aged children, parental intrusiveness can manifest in three domains of parental behavior: unnecessary assistance with children's daily self-help tasks, infantilizing behavior, and invasions of privacy [4]. Unlike young children, most 6- to 13-year-old children are able to perform self-help tasks such as dressing without parental assistance and regularly do so, as the published norms of adaptive behavior scales illustrate. Thus, among school-aged children, parental intrusiveness can take the form of unnecessary assistance with such daily self-help tasks [4]. Infantilizing behavior, such as use of baby words and excessive physical affection [13], is intrusive because it obligates children to function at an immature level when relating to parents, preventing children from engaging in age-appropriate roles and activities. Similarly, invasions of privacy place children in a passive, immature role not commensurate with their age and capacity for independent action (cf. the similar concept of ''boundary violations'' [14]). Validated measures of parental intrusiveness have not been developed for school-aged children, and general measures of parenting used in studies of childhood anxiety generally have been hindered by poor convergent validity [4]. Hence, a novel measure was developed and pilot-tested in this study reflecting each of these aspects of intrusiveness, with the explicit goal of achieving robust psychometric properties.

Theoretical Model Linking Separation Anxiety with Parental Intrusiveness

Parental intrusiveness has been posited to be a *specific* risk factor for separation anxiety—but not necessarily other types of anxiety—among school-aged children [4]. When separated from their parents, children who have a history of intrusive parenting experiences are faced with a novel, ambiguous situation. That is, such children have little experience with being away from their parents (who tend to ''assist'' with activities that most children engage in independently). If such children are also genetically/temperamentally vulnerable to anxiety disorders [1] (i.e., predisposed to experience high levels of anxiety), they are

prone to misperceive such novel and ambiguous situations as *threatening*, and thus are likely to react fearfully to separations. When separated, they also frequently find themselves obliged to engage independently in daily routines that their parents have normally performed for them. High anxiety levels disable these children in the face of such novel tasks, hampering skill acquisition due to impairing levels of distress. For instance, a child of parents who act intrusively may be confronted with a variety of unfamiliar tasks at school, ranging from tying shoes to washing hands to working independently to joining in peer interactions, which have usually been performed or scaffolded by his/her parents. Because children with anxiety disorders (of parents who act intrusively) have had few experiences with independent action in these kinds of situations, there is also little basis for feelings of mastery, control, and self-efficacy [4, 15]. And due to such children's vulnerability to anxiety, negative affect is more easily elicited by the demands of these situations.

The combination of anxiety-proneness, low self-efficacy, and novelty in these situations tend to lead to increased state anxiety when children of parents who act intrusively are confronted with separations from their caregivers [1, 4, 16]. However, the state anxiety can be immediately reduced if a child engineers a reunion with trusted caregivers (e.g., by crying or pleading), who decrease the novelty of the situation (or remove the child from the situation) and negate the need for the child to act independently. Hence, anxiety-prone children of parents who act intrusively may become negatively reinforced to avoid separations and, instead, cling to caregivers (explaining some of the avoidance and anticipatory components of SAD). Furthermore, because separation situations have elicited negative affect in the past, a child with an anxiety disorder is liable to engage in ''emotional reasoning'' in an attempt to make sense of her/his emotions in these situations (e.g., I felt fearful when we were apart, so there must have been a danger) [17]. This faulty reasoning may underlie the anxious cognitions associated with SAD (e.g., something bad might happen to me or mom). According to this theoretical model, intrusiveness is expected to lay the groundwork for separation anxiety, but not necessarily other typical forms of childhood anxiety (e.g., social anxiety, generalized anxiety/worry). Hence, children who experience clinical levels of anxiety *and* are concurrently exposed to intrusive parenting may be especially likely to show signs of separation anxiety disorder.

A linkage between parental intrusiveness and SAD has not yet been documented empirically. Numerous studies have tested the more general hypothesis that child anxiety disorders, without regard to distinctions between *types* of anxiety disorders (e.g., separation vs. social), are associated with variations in parental ''control'' and ''autonomy-granting''—with some studies supporting this linkage [18, 19]. However, intrusiveness is a distinct and more specific parenting construct than autonomy-granting or control [4]. Intrusiveness per se has not been assessed in these studies (and while one of these measures might have assessed intrusiveness [18], construct validity data were not provided). Although exploratory in nature, Hirshfeld et al. [20] found a possible linkage between SAD and ''emotional overinvolvement'' (EOI) (but this was based on just three cases of SAD in the high-EOI group). These studies also do not resolve questions about specific parenting patterns that may be linked with particular manifestations of anxiety among children who are *already* clinically anxious. The present study thus began with a sample of children with a primary anxiety disorder (SAD, social phobia, or generalized anxiety disorder) and tested for linkages between intrusiveness and separation anxiety *within* this group. This research design ''controls for'' the presence of an anxiety disorder and permits the discrimination of parenting patterns linked with *particular manifestations* of anxiety syndromes.

Parental anxiety is another factor that may be associated with intrusiveness. Recent studies have shown that certain types of parent–child interaction patterns are linked with maternal anxiety disorder status [19]. Some researchers have also described an ''anxious rearing style'' wherein parents may model anxiety to children by disclosing their own fears and catastrophic cognitions; this rearing style may be linked with children's separation anxiety [21]. With regard to intrusiveness, it is possible that parental anxiety could also play a role. For example, parents prone to anxiety may experience intolerable negative affect when observing their children struggle with new tasks—in effect, having a ''pathologically sympathetic'' reaction to their children's difficulties—and may therefore take over the task, inadvertently interfering with children's trial-and-error learning [22]. Parents who are using medication for anxiety or mood disorders may still possess underlying psychological traits associated with anxiety disorders (e.g., misinterpretations of ambiguous stimuli) that could affect parenting practices in a similar manner to parents with an untreated anxiety disorder. As a result, the potential role of parental anxiety and/or medication use in intrusive parenting was examined in this study.

The first aim of this study was the development of a valid and reliable measure of intrusiveness for school-age children. The second aim was the use of this measure to test the hypothesis that intrusiveness is specifically linked with separation anxiety, but not other types of anxiety, among children with clinical anxiety. For exploratory purposes, interrelations among parental anxiety status and intrusiveness were also examined.

Method

Participants

The sample included 40 children with anxiety disorders aged 6–13 years (M = 9.85, SD = 2.19) living in a major metropolitan area of the western United States, and their primary parents (defined as the parent who was primarily responsible for overseeing the child's daily activities). These children were recruited for participation in a randomized, controlled trial of psychotherapy. All subjects were offered (and subsequently began) cognitive behavioral therapy following participation in the present study. In this study, the focus is on pretreatment measures.

Children were referred by school psychologists, principals, and an affiliated medical center. Participants met the following inclusion criteria: (a) The child met *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* [6] criteria for at least one major child anxiety disorder (i.e., SAD; generalized anxiety disorder [GAD]; or social phobia) diagnosed by an independent evaluator using a structured diagnostic instrument (see below); (b) the child was not taking any psychiatric medication at the initial assessment *or* was taking a stable dose of psychiatric medication (i.e., at least 1 month at a stable dose prior to the baseline assessment); and (c) the child and family were not in concurrent psychosocial treatment. This study was approved by a university-based IRB. Parents gave written informed consent and children gave written assent to participation in the study.

Measures

Symptom and Diagnostic Measures

Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-C/P) [23] The ADIS-C/P is a semistructured interview schedule of childhood *DSM-IV*

disorders with favorable psychometric properties [10]. The ADIS-C/P is administered by independent evaluators blind to study hypotheses, and yields diagnostic severity scores on the 0–8 clinical rating scale (CRS; 0 = *not at all*, 4 = *some*, 8 = *very, very much*) for each anxiety disorder. Both parents and children are interviewed, and symptom reports from each are combined (the *or* rule) in making severity ratings; details of the interviewing procedures and evidence of the reliability of these procedures for a subsample of the children who participated in this study are provided elsewhere [10]. Each child was assigned a ADIS-C/P CRS score from 0 to 8 for every disorder, based on the number of symptoms present and the distress or interference that they caused. For the purposes of the present study, children's CRS scores for SAD, GAD, and social phobia were used, each ranging from 0 to 6 (note, in the ADIS-C/P scoring system, scores of 7 or 8 are reserved for children in acute crisis who may, e.g., require hospitalization).

Multidimensional anxiety scale for children (MASC) [24] The child-report MASC is a 39-item, 4-point Likert-type scale with strong reliability and validity coefficients. A sample item is: ''I try to stay near my mom or dad.'' A parent-report version of the MASC [10] was also administered. Both versions of the MASC are comprised of four subscales. Two of these have been found to be predictive of clinical separation anxiety disorder (the Separation Anxiety scale and the Harm Avoidance scale) [10]. However, the Harm Avoidance scale does not have good face validity as a measure of separation anxiety, so it was not used in this study. The other two MASC subscales (Physical Symptoms and Social Anxiety) are unrelated to separation anxiety and were included in the present study as a further test of concurrent validity (since it was hypothesized that intrusiveness would *not* be linked with these other types of anxiety). Standardized T-scores are not available for the parent MASC; thus, raw scores are reported for both the parent and child MASC. Cronbach's alphas for the MASC scales ranged from 0.66 to 0.87 in this sample. To check the reliability of the MASC for the younger children in this sample, alphas were calculated separately for 6- and 7-year-olds; they ranged from 0.74 to 0.90, suggesting good internal consistency irrespective of age-group.

Anxiety disorders interview schedule-IV (ADIS-IV) [25] The *primary parent's* diagnostic status and psychiatric medication use was assessed using the ADIS-IV, which is a semi-structured interview providing differential diagnoses among the adult anxiety disorders. Details of the ADIS-IV procedures and evidence of interrater reliability of these procedures for a subsample of the parents who participated in this study are provided elsewhere [19].

Parental Intrusiveness Composite Measure

Seven recommendations have been made to facilitate development of psychometrically sound measures of parenting, which historically have had negligible construct validity: (1) aggregate multiple measures of the same parenting behavior from different informants into a single composite measure, (2) focus on a short time-frame (e.g., a specified number of days or weeks rather than an unspecified period of time), (3) use behaviorally specific anchors (e.g., ''at least twice a week'' rather than ''often''), (4) focus on specific behaviors (e.g., ''mom enters my room without knocking'') rather than vague concepts (e.g., ''mom invades my privacy''), (5) specify the context of the parenting behavior (e.g., occurring at

home vs. in public; at what time of day; etc.) when possible, (6) use items that are relevant to the specific age-group being studied, and (7) use observational methods as part of the assessment battery [26–29]. These recommendations were followed in the development of the intrusiveness measure.

A *composite* intrusiveness measure based on four measured variables was developed, including an observational laboratory procedure rated by independent evaluators, child- and parent-report measures of intrusiveness (two separate indicators), and a parent-report measure of assistance with children's self-help routines. The development of each component measure, as well as the psychometric properties of the overall composite scale, is now described.

Belt-buckling Task A laboratory-based observational measure of intrusiveness was developed in consultation with L.A. Sroufe (personal communication) [30]. During the assessment, children were told that a heart-rate (HR) monitor would be attached to a belt worn around the waist (HR was monitored during a subsequent parent–child interaction task, but the HR and interaction data are not related to the research questions addressed in this study and thus are not presented here). An adjustable belt with a small case attached to it containing a 10-ounce metal weight was given to the child. Children were told, ''In a few minutes, I'm going to put a little plastic sensor on your finger that will measure how fast your heart is beating. It won't hurt. But first, could you put this belt over your shirt while I go and get the other stuff? It doesn't have to be tight. You can probably do it by yourself.'' Parents were then told, ''But, Mr./Mrs. ___, you can help ___ (child) if she/he needs it.'' Parent–child interactions during the belt-buckling process were videotaped and observed remotely by the research assistant. When the dyad completed the task, the research assistant returned to attach the heart-rate monitoring equipment. Pilot testing suggested that this task was difficult for most 6–13 year old children and tended to elicit varying degrees of parental assistance.

Trained observers blind to intervention condition watched the entire belt-buckling episode in its entirety two times. On the second viewing, observers recorded the total number of seconds the parent spent engaging in *intrusive physical help or touch*, such as wrapping their arms around the child to help put the belt on, sitting the child on their lap while wrapping the belt around the child, picking the child up to put her/him in an optimal position to attach the belt, or initiating moderate or intense physical affection (e.g., kiss, caress face) before completing the task (which was intrusive and distracting in a task requiring children's full attention) [14]. Raw scores were the total number of seconds of intrusive physical help or touch.

To examine whether high scores reflected parental intrusiveness or helpful responsiveness to children's struggles or requests for assistance, children were grouped according to those who struggled or requested help at the pretreatment assessment ($n = 7$) and those who did not ($n = 32$). There were no statistically significant differences between these groups in the amount of intrusive physical help or touch, suggesting that parents were not merely scaffolding by providing help for their children when they struggled. Rather, the physical help provided may have reflected the parents' typical approach to assisting with novel self-help tasks, irrespective of the child's demonstrated or stated difficulty. Two observers rated all tapes independently, and interrater reliability was acceptable (mean ICC = 0.73).

Parent–Child Interaction Questionnaire (PCIQ) The second and third components of the composite intrusiveness measure involved 8-item parent- and child-report forms (the

PCIQ) developed for this study. The PCIQ addresses concrete, observable parent–child interactions that have occurred during a 1-week timeframe using a rating scale based on the frequency of each behavior: 1 (*This never or almost never occurred [0–1 days this week]*), 2 (*This sometimes occurred [2–5 days this week]*), or 3 (*This almost always occurred [6–7 days this week]*). Items focus on parental help with children's private daily routines that most school-age youth are capable of performing independently (e.g., dressing, bathing), intrusions on children's personal space (lying with child on child's bed at night), and infantilizing behavior (e.g., using baby words). This scale was developed by reviewing previous self-report measures of ''dependency induction,'' ''overprotection,'' and related constructs [13, 31]; selecting previous items from the literature and writing new ones; reviewing the item pool with parenting experts to determine which had the best face and content validity for our conceptualization of ''intrusiveness;'' and selecting 12 items for preliminary evaluation.

This scale was initially administered to a convenience sample of 87 families of typically developing elementary school children (grades K through 5) [32]. Item analyses across parent- and child-report versions of the scale suggested that eight items showed strong intercorrelations whereas four did not. Parent–child agreement was good in the convenience sample, providing initial evidence of convergent validity; furthermore, both child- and parent-reports of intrusiveness were related to children's separation anxiety scores, providing evidence of concurrent validity in the typically developing sample [32].

In the present sample, Cronbach's alpha was 0.71 for parent-report and 0.73 for child-report, and parent–child agreement was high (ICC = 0.73). Thus, in the measure development of this scale, there has been evidence of internal consistency reliability, convergent validity, and concurrent validity.

Skills of Daily Living Checklist (SDLC) The SDLC is an 11-item parent-report questionnaire adapted from a checklist [33] developed to measure caregivers' level of assistance in specific child self-care routines such as threading belts, zipping zippers, etc. Each item describes a single self-care task (e.g., ''pulls zipper up/down''). These items were not included on the PCIQ (above) due to that scale's focus on a *variety* of intrusive behaviors (e.g., invasions of privacy, infantilizing behavior, etc.) in an effort to avoid skewing the PCIQ with primarily self-care related items. The 3-point response scale of the SDLC—3 (*My child needs ''help'' with this skill*), 2 (*My child needs ''supervision'' with this skill*), and 1 (*My child does this skill without help or supervision*)—defined ''help'' as the parent actually providing assistance with performing the skill (like helping the child wash hands), and ''supervision'' as the parent staying in the same room with the child to provide reminders or feedback (but not actually helping the child perform the skill). The SDLC was administered to parents only due to a concern that children would not be able to understand the response scale. In the typically developing sample described above, the SDLC had good internal consistency and correlated with both the child and parent PCIQ scores (range: 0.46–0.49) [32], providing initial evidence of convergent validity. Cronbach's alpha was 0.86 in the present sample (intercorrelations with other intrusiveness component measures are presented below).

The Composite Intrusiveness Scale The four components of the intrusiveness composite measure were tested for convergence. The average Pearson correlation between these four measures was 0.49 (range: 0.22–0.65; 5 of 6 Ps < 0.05). When the measures were standardized and combined into a four-component scale, Cronbach's alpha was 0.79. Each

of the four measures was highly correlated with the composite scale score (*r*s ranged from 0.66 to 0.87). These data are suggestive of a moderate level of overlap between measures, which is notable due to the typical lack of convergence among different informants or methods of assessing parenting practices. These data provide initial evidence of convergent validity for each of the four intrusiveness indicators. In the interest of data reduction and following the recommendations of Schwarz et al. [29] to aggregate measures of parenting when possible to yield more robust measures, we used the composite intrusiveness score—averaging across all four standardized indicators—as the primary measure of intrusiveness in this study. Exploratory analyses were also conducted, focusing on the individual components of the intrusiveness measure, when significant results were obtained.

Procedure

During the assessment, families completed interviews, parent–child interaction tasks, and self-report forms. Families were offered $20 for participating.

Results

Recruitment began 3/2000 and ended 12/2002; all assessments were conducted during this time period. Table 1 presents diagnostic and demographic information for participating families. Four children (10%) were on a stable dose of a selective serotonin reuptake inhibitor (SSRI; e.g., paroxetine). Children had an average of 1.60 (SD = 0.68) anxiety disorder diagnoses. Secondary, comorbid diagnoses (not reported in Table 1) included SAD (n = 8; 20%), social phobia (n = 4; 10%), generalized anxiety disorder (n = 6; 15%), obsessive compulsive disorder (n = 2; 5%), specific phobia (n = 3; 7.5%), attention deficit/hyperactivity disorder (n = 5; 12.5%), dysthymia or major depressive disorder (n = 4; 10%), and selective mutism (n = 3; 7.5%).

Preliminary Analyses

The relationship between demographic variables (e.g., child gender, ethnicity) and the anxiety and intrusiveness variables was tested using independent sample *t*-tests. None of

Table 1 Demographics and child diagnoses

Variable	*n* (%)
Child sex (male)	24 (60)
Parent sex (female)	35 (88)
Parent graduated college	26 (65)
Parent married/remarried	35 (88)
Child ethnic background	
Caucasian	24 (60)
Latino/Latina	4 (10)
African-American	1 (2.5)
Asian/Pacific Islander	1 (2.5)
Mixed/other	10 (25)
Child's primary DSM-IV diagnosis	
Separation anxiety disorder	19 (48)
Social phobia	16 (40)
Generalized anxiety disorder	5 (13)
Child's use of SSRI medication	4 (10)

the demographic variables were significantly linked with intrusiveness or anxiety except for child age (more intrusiveness in families of younger [ages 6–9] than older [ages 10–13] children, $P < 0.05$). Primary analyses were conducted with and without child age as a covariate to determine if controlling for age affected the results.

Primary Analyses

Table 2 presents means and standard deviations for all measured variables. The results are organized around three main research questions: (a) is intrusiveness related to children's separation anxiety, (b) is intrusiveness related to other types of child anxiety, and (c) is intrusiveness related to parental anxiety or medication use?

Is Intrusiveness Related to Separation Anxiety?

There was a statistically significant correlation between the composite intrusiveness measure and both the ADIS-C/P separation anxiety score ($r = 0.44$, $P < 0.01$) and the parent MASC separation anxiety scale ($r = 0.41$, $P < 0.01$). The correlation with the child MASC Separation Anxiety scale approached significance ($r = 0.31$, $P < 0.06$). Controlling for child age in partial correlation analyses did not alter these findings; both significant effects remained significant (Prs = 0.34 and 0.34, $P < 0.05$), while the child MASC correlation remained nonsignificant ($Pr = 0.20$). A multiple correlation model was tested in which all three measures of separation anxiety were related with the composite intrusiveness score. The overall model was significant ($F = 3.29$, $P < 0.05$), with an R^2 of 0.24. These results are consistent with the hypothesis that parental intrusiveness is associated with children's separation anxiety.

Is Intrusiveness Related to Other Types of Anxiety Symptoms?

To determine the specificity of the linkage between intrusiveness and SAD symptoms, correlations between intrusiveness and the non-separation anxiety-related ADIS-C/P scores (GAD and social phobia) and MASC scales (Social Anxiety and Physical Symptoms) were computed. Based on the a priori model guiding this study, it was hypothesized that

Table 2 Descriptive statistics for measures of intrusiveness and child anxiety*Note.* SAD = separation anxiety disorder. GAD = generalized anxiety disorder. MASC-C is the child-report MASC; MASC-P is the parent-report MASC.

Domain/measure	*M*	SD	Range
Intrusiveness			
Composite score	−0.01	0.79	−0.91–2.50
PCIQ-parent report	12.74	3.34	8–20
PCIQ-child report	12.28	3.06	8–19
SDLC	1.28	0.39	1–2.73
Observed intrusiveness	4.84	10.49	0–39
Child separation anxiety			
ADIS-C/P SAD score	3.05	2.21	0–6
MASC-C separation anxiety	10.05	5.07	1–20
MASC-P separation anxiety	15.90	5.54	0–25
Child ''other'' anxiety			
ADIS-C/P GAD score	1.58	2.10	0–6
ADIS-C/P social phobia score	2.43	2.42	0–6
MASC-C social anxiety	11.79	7.30	0–27
MASC-P social anxiety	17.18	6.12	7–27
MASC-C physical symptoms	12.75	5.98	0–23
MASC-P physical symptoms	11.69	5.51	1–23

correlations with intrusiveness would be low for these scales. For ADIS-C/P scores, correlations were trivial (0.07 for social phobia and −0.22 for GAD—in the latter case suggesting *lower* intrusiveness associated with higher GAD severity) and nonsignificant. For both the child and parent MASC, correlations were also low in magnitude (range: −0.12 to 0.14) and not statistically significant (*P*s > 0.40). These results suggest that there was a specific relationship between intrusiveness and separation anxiety that did not extend to other types of anxiety.

Exploratory Analyses

To further explore the significant effects obtained for the composite intrusiveness measure, correlations between each component measure of intrusiveness and the ADIS-C/P and parent MASC measures of separation anxiety were examined (see Table 3). These correlations do not represent independent tests of the primary hypothesis, but rather are used to explore and illustrate the key findings described above. Both the child- and parent-report versions of the PCIQ Intrusiveness scale were significantly correlated with ADIS-C/P separation anxiety scores as well the parent MASC Separation Anxiety scale. In addition, the observed intrusiveness measure was significantly correlated with the parent MASC scale. The SDLC scale was not significantly correlated with either measure of separation anxiety, although the correlations were in the expected direction.

Is Intrusiveness Related to Parental Anxiety or Medication Use?

A subsample of parents ($n = 32$) completed the ADIS-IV interview about their own anxiety disorders. It should be noted that this measure was added to the assessment battery after five families had already been evaluated; two additional families were lost to follow-up before this interview could be administered; and one parent did not agree to the interview. Of the group of parents who were interviewed, 14 (44%) met criteria for an anxiety disorder, 9 (28%) reported use of psychiatric medication, and 17 (53%) met criteria for an anxiety disorder *and/or* used medication. Independent sample *t*-tests were used to examine whether parents who met criteria for (a) anxiety, (b) medication use, or (c) either anxiety or medication use scored higher on the composite intrusiveness measure than parents who did not. However, no significant differences were obtained. Therefore, parental anxiety and medication use did not appear to be related to the level of parental intrusiveness in this sample. Hence, the only variable interrelated with intrusiveness in this study was children's separation anxiety.

Discussion

These results suggest that parental intrusiveness is specifically associated with children's separation anxiety disorder (SAD) symptoms. In this sample of children with various kinds

Table 3 Correlations between intrusiveness and separation anxiety measures

	Composite intrusiveness	PCIQ-parent report	PCIQ-child report	SDLC	Observed intrusiveness
ADIS-C/P SAD score	0.44**	0.49***	0.51***	0.17	0.21
MASC-P Sep. Anx.	0.41**	0.36*	0.33*	0.24	0.37*

Note. SAD = separation anxiety disorder. MASC-P is the parent-report MASC. ''Sep. Anx.'' = separation anxiety

*** $P \leq 0.001$; ** $P < 0.01$; * $P < 0.05$

of anxiety disorders, SAD symptomatology (but not other types of anxiety) was related to a newly developed measure of parental intrusiveness. The intrusiveness measure itself displayed strong psychometric properties in the initial validation study. The intrusiveness measure and three separation anxiety scales shared about 24% of their variance in common. Three of the four component measures of the composite intrusiveness scale—including independent evaluators' ratings of parental intrusiveness during a laboratory task, and parent- and child-reports on a rating scale of intrusiveness (the PCIQ)—were associated with children's separation anxiety. These results suggest that intrusiveness and separation anxiety are interrelated.

About half of the participating children had a primary diagnosis of SAD, and severity ratings for SAD had high variability in this sample. Parent- and child-report separation anxiety scores on the MASC were similarly well-distributed. Thus, while the sample was homogeneous to the extent that all participants had an anxiety diagnosis, it was heterogeneous with regard to the presence and severity of SAD symptoms. These two sample characteristics were ideal for examining the specificity of the linkage between intrusiveness and separation anxiety within a clinical sample by ''controlling for'' the presence of an anxiety disorder.

No single indicator of intrusiveness appeared to be driving the association with separation anxiety. In fact, the presence of several significant cross-informant correlations in the follow-up analyses (e.g., parent-reported separation anxiety correlated with child-reported intrusiveness *and* observed intrusiveness) suggests that factors other than method variance contributed to the obtained findings [34]. Even the SDLC, which did not yield a significant correlation with either the ADIS-C/P scale or the parent-MASC separation anxiety scale, still correlated strongly enough with those two scales (r ranged from 0.17 to 0.24) to merit further investigation with a larger sample to determine if the correlation might be modest but statistically significant. In contrast, associations between intrusiveness and measures of GAD, social anxiety, or psychosomatic symptoms were trivial and non-significant. This pattern of results supports the hypothesis that parental intrusiveness is specifically related to children's SAD symptomatology.

How might intrusiveness and separation anxiety be linked? When children with anxiety disorders are obliged to be away from parents who tend to perform even simple daily routines for them and comfort them excessively (i.e., act intrusively), they are faced with two challenges. First, they are separated from trusted caregivers, which, due to their parents' typical overinvolvement, is a relatively *unfamiliar situation* for them. In combination with their anxiety-proneness, this lack of familiarity with independence may predispose them to develop catastrophic misinterpretations about such situations [35]. Second, when away from parents who act intrusively, children are often confronted with tasks (e.g., social interactions, daily routines) that their caregivers have normally performed *for them*, compelling them to attempt activities with which they have had *little experience* with successful independent action [4]. Vulnerability to anxiety tends to make these unmastered activities highly stressful. And children with a history of intrusive parenting are likely to have low *self-efficacy* for performing these activities (e.g., unfamiliar daily routines at school), thereby increasing their anxiety [36, 37]. These reactions are directly triggered by facing unfamiliar situations when *unaccompanied* by a parent. In contrast, the presence of parents provides a cue of safety and success in such situations (potentiating reduced state anxiety); as a result, children are negatively reinforced to avoid separations. Hence, high parental intrusiveness may set the stage for children with high anxiety to react negatively to, and subsequently fear and steer clear of, situations requiring separations from their caregivers.

These findings echo the preliminary pattern of results reported by Hirshfeld et al. [20] in their exploratory analyses of a small sample of children with SAD. However, most previous cross-sectional studies have not found differences in parenting patterns among parents of children with anxiety disorders versus other types of psychopathology [4, 18]. In contrast, the present study suggests a specific linkage between one *type* of anxiety (SAD) and a particular parenting style—a seeming disparity between current and previous findings. However, as has been noted in the recent literature on parenting and child anxiety, previous measures of parenting have not focused on *specific* parenting practices that have a theoretical basis for affecting one type of anxiety syndrome versus another [4]. For example, parental ''control'' and ''autonomy-granting'' have been commonly studied in the extant literature on child anxiety, but are so vague and general in definition and application that it is often unclear what is meant by these terms. In turn, *measurement* of parenting constructs in the previous literature has been based on assessment procedures that lack evidence of convergent validity [4]. In contrast, the intrusiveness measure developed in the present study was developed based on a specific theory of children's separation anxiety; was precise in its definition of the parenting construct in question; and has promising initial evidence of convergent validity, among other psychometric properties. It remains to be seen whether the use of parenting measures with such favorable characteristics might help identify particular parenting patterns specific to other childhood mental disorders as well (should theory justify such hypotheses). Nonetheless, these characteristics significantly differentiate the present findings from previous studies and may help explain why a specific linkage was found in this study even though earlier efforts have generally not identified a diagnosis-specific parenting style.

With regard to the specifics of the psychometric properties of the intrusiveness measure, the component parent- and child-report scales demonstrated good internal consistency, and the observational coding system yielded high interrater reliability. More significantly, the convergent validity of the components of the composite intrusiveness scale was evidenced by the magnitude of the intercorrelations among the four component measures, a good internal consistency of the composite scale including all four component measures ($\alpha = 0.79$), and high correlations between each component measure and the total composite scale score. Parent–child convergence on PCIQ ratings was exceptionally high (ICC = 0.73). This may reflect the success of the measure development approach that was employed [26]. The significant improvement in convergent validity using this measurement approach over commonly used measures of parenting [26, 29] suggests that researchers in the parenting field should consider adapting this measure development approach for assessing other parenting constructs of interest (e.g., warmth).

Limitations and Future Directions

As with most studies of rare clinical populations, a convenience sample was used in this investigation, which may limit the generalizability of the results. As a result, replication is essential with a sample of sufficient size to test for consistency of effects. Nonetheless, the sample had a number of strengths including equal representation of boys and girls, racial diversity, and multiple informants allowing for cross-informant validity analyses. Cross-sectional research of the kind reported in this study cannot address causal links among variables. However, the plausibility of causal models can be established by demonstrating significant cross-sectional associations, which may then merit longitudinal or experimental follow-up research to test for the direction of effects.

Cultural variations in parenting may affect the significance of parental intrusiveness to children's outcomes. Patterns of caregiving vary widely among cultures, and parenting behavior must be viewed through a cultural lens [38]. The implications of culture for the relationship between intrusiveness and separation anxiety are as yet unclear; cross-cultural research would be useful to address this question.

From the perspective of developmental psychopathology, particular risk factors may influence children's manifestations of anxiety differently over the course of childhood and adolescence [39]. The prevalence of anxiety disorders appears to shift during development, with some disorders that are relatively common in earlier childhood becoming rarer in adolescence (e.g., SAD) and others that are less frequent in the early years becoming more prevalent in the teen years (e.g., social phobia) [39]. But does intrusive parenting continue to be a specific risk factor for SAD among adolescents, or do developmental parameters shift the impact of such parenting such that other forms of anxiety are elicited or maintained? As an example, the adolescent tendency to view oneself as being constantly scrutinized by others [40] might cause adolescents to feel intense embarrassment regarding the ''immature'' interactions they have with their parents who act intrusively; social avoidance and fear of humiliation (at least in situations where parents are present) could be an expectable reaction to intrusiveness for many adolescents who are prone to anxiety. In the present study, the focus was on elementary school and middle school students aged 6–13; it would be of considerable interest to determine whether intrusive parenting (in whatever form it takes in families of adolescents) remains specific to SAD, or whether it may also become linked with social (or other) anxiety symptoms among older adolescents.

Although psychometrically strong, the index of parental intrusiveness that was developed in this study requires relatively time-intensive coding by expert judges (for the observational component) to derive individual scores. Fortunately, the psychometric analyses suggest that there may be a reasonably quick alternative to the full 4-component assessment for researchers who may not be able to fit an observational measure into their assessment battery: both the parent- and child-report PCIQ scales had good psychometric properties, including high correlations with the composite scale (0.78 and 0.82, respectively) and high parent–child agreement (ICC = 0.73). Therefore, the parent- and child-PCIQ measures might serve as reasonable proxies of the full composite intrusiveness measure for some research applications.

Parental anxiety and psychiatric medication use were not related to parental intrusiveness in this sample, suggesting that the psychiatric status of the parent cannot explain the relationship between intrusiveness and separation anxiety. However, these findings were based on a subsample of families (80%) and the possible role of parental anxiety therefore deserves further attention in future studies.

Summary

Parents who act intrusively tend to provide unnecessary assistance during children's daily self-help tasks; engage in infantilizing behavior; and invade children's privacy, thereby limiting mastery experiences and inducing dependence on parents. In this study, intrusiveness was linked with separation anxiety symptoms among children who already had an anxiety disorder, supporting our theoretical model. According to the model, when anxiety-prone children grow dependent on parents who perform their daily routines, engage in excessive age-inappropriate affection, and accompany them even in private activities, such children will find facing novel situations without their parents to be highly stressful.

Henceforth, they will develop anxious cognitions about separating from parents, and will thus avoid separations. The results of this study are of particular interest because they were based on a newly developed measure of parenting with strong initial signs of convergent validity, and because multiple informants were used, yielding robust cross-informant concurrent validity coefficients. Parental intrusiveness appears to be specifically linked with separation anxiety among children with anxiety disorders. Further investigation of parental intrusiveness could advance research on the development of childhood anxiety disorders. Now that a viable measure of intrusiveness has been developed and identified as a risk factor for separation anxiety in a cross-sectional study, testing intrusiveness as a change mechanism in prospective studies or clinical trials of family interventions are potential next steps for the field [4, 41].

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