Maternal Ambivalence about Overprotective Parenting during Early Childhood: Relations to Observed Parenting and Mother and Child Emotion-Based Characteristics

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Abstract

Overprotective parenting behavior warrants attention as a construct relevant to parents with young children. Little is known about parents' own evaluations of, or attitudes about, these behaviors. Ambivalent attitudes, reflecting a mix of positive and negative evaluations, may reflect different motivations than purely positive or negative attitudes for engaging in overprotective parenting. Understanding parent attitudes about overprotection in early childhood could augment theory on the development of overprotective parenting and the parent-child dynamics relevant to children's outcomes. In a sample of 140 mothers and their 2-year-old children (39% female), the current study used a person-centered approach to identify a group of mothers expressing ambivalence ($n = 72$) about overprotective parenting, as well as groups expressing uniformly positive ($n = 34$) and uniformly negative ($n = 19$) attitudes. Methods included a variety of observational, behavioral, and survey approaches. Mothers characterized by ambivalence about overprotective parenting demonstrated as much overprotective behavior as those with positive attitudes about protective parenting. The ambivalent group had toddlers showing the highest level of temperamental risk for anxiety, whereas the positive group showed some evidence of being highest on maternal anxiety. Maternal ambivalence about overprotective parenting has implications for both the development of and interventions for child anxiety, given its relevance to overprotective parenting and mother and child characteristics related to risk.

Keywords: anxiety; parenting; parental attitudes; temperament; emotion.

Introduction

Overprotective parenting has been defined as shielding or excessively warm behaviors that keep children from novel or challenging experiences (or the negative emotions that may arise from them), discourage children's autonomy, and prevent children from using and developing independent coping and emotion regulation skills (Bayer, Sanson, & Hemphill, 2006; Parker, 1983). In toddlerhood, examples of overprotection may include provision of comfort prior to the child's attempts at independent regulation in the presence of minor stress, completing tasks that the child could attempt independently, or facilitating avoidance of a novel but safe experience. As parents undergo their own developmental process of learning to navigate how to protect their children from threats, overprotection may arise when parents overestimate either the level of threat in the environment or the negative consequences of children's negative emotions in uncertain situations. Overprotection can be

differentiated from both appropriate protective behavior, when parents intervene to ensure children's safety from danger (physical attack or injury, abduction by strangers, ingestion of pathogens; Bakermans-Kranenburg & van IJzendoorn, 2017), and sensitive parenting, which is the observation of, accurate interpretation of, and appropriate response to children's cues in a manner that fosters children's adaptive development (Ainsworth, Blehar, Waters, &, Wall, 1978). Notably, responsivity and warmth align with overprotection, rather than sensitivity, when they prevent children's independent emotion regulation and therefore interfere with adaptive development. Additionally, overprotection is distinct from intrusiveness, which involves pushing children too quickly or forcefully into an uncertain situation (Kiel, Premo, & Buss, 2016) or imposing the parent's agenda in an overstimulating manner (Gaertner, Spinrad, & Eisenberg, 2008).

Overprotection, as a construct, may vary in its relevance across individuals with different backgrounds and identities. Although theory and empirical evidence support the roles of both maternal and paternal overprotection in children's negative outcomes (Bögels & Phares, 2008; Edwards, Rapee, & Kennedy, 2010; Stuart Parrigon & Kerns, 2016), behaviors similar to overprotection may be particularly problematic from mothers (Teetse, Ginsburg, & Drake, 2014), particularly in early childhood (Verhoeven, Bögels, & van der Bruggen, 2012). Overprotection has been theorized to arise from middle- to upper-class and westernized values, and has been found to be most relevant to children's negative outcomes in White/European American families and in low-risk environments (Carter, Sbrocco, Lewis & Friedman, 2001; Cooper-Vince, Chan, Pincus, & Comer, 2014). However, some studies provide evidence of overprotection's relevance across diverse cultures (Howard, Muris, Loxton, & Wege, 2017; Zhu et al., 2020) and lower socioeconomic environments (Mazza et al., 2017).

Overprotection warrants particular attention in toddlerhood. The developmental tasks of toddlers include gaining mastery of their environments and attaining independent emotion regulation skills. These competencies develop in situations that enact but do not overwhelm toddlers' regulatory systems (such as those that contain novelty and uncertainty but pose no physical danger), thereby prompting them to practice their skills. Sensitive responses to children in these situations involve the scaffolding of exploration and gentle encouragement to approach (Bakermans-Kranenburg & van IJzendoorn, 2017; Kiel et al., 2016). Conversely, parents' shielding and comforting behaviors are theorized to be overprotective in these low-stakes situations because they prevent toddlers from practicing autonomy (Chorpita & Barlow, 1998).

Indeed, overprotection in toddlerhood directly predicts and moderates trajectories of social withdrawal and anxiety in the preschool and early school years (Degnan, Henderson, Fox, & Rubin, 2008; Kiel & Buss, 2011, 2012), likely by preventing children from learning the skills and developing self-efficacy for managing challenges (Wood et al., 2003). Empirical studies with unique samples have found positive relations of observed overprotection with toddlers (i.e., physically shielding from a stimulus, high levels of physical comfort) to anxiety-spectrum outcomes of a medium effect size (Kiel & Buss, 2011, 2012). Moreover, overprotection has been targeted in preventative interventions with caregivers of anxious or anxiety-prone preschool and school-aged children (Chronis-Tuscano et al., 2015; Comer et al., 2012; Rapee & Coplan, 2010), which work with parents to decrease excessive shielding and comforting and increase sensitivity (i.e., mutual positivity and gentle encouragement) as children practice independent coping in anxiety-provoking (but not dangerous) situations.

Notably, parents' motivations for engaging in overprotection are not well understood, which presents barriers to the refinement of parenting theory and to the success of interventions. Thus, to better understand potential determinants of overprotection in toddlerhood, the purpose of the current study was to investigate maternal attitudes about overprotection.

Ambivalent Attitudes

Attitudes are affectively-laden evaluations of particular entities and have long been established as important motivators of behavior (Ajzen & Fishbein, 1977). It follows that parents' attitudes about parenting-relevant entities should be motivators of their behavior with their children. Recent evidence

suggests that when parents evaluate overprotection as benefitting their children and themselves, they endorse engaging in overprotection with their toddlers (Kiel, Wagers, & Luebbe, 2019). However, attitudes do not exist on a simple positive to negative continuum; individuals can have ambivalent attitudes as well. Ambivalent attitudes have been conceptualized as simultaneously feeling both positively and negatively toward a targeted behavior. Ambivalence is important to identify because attitudes characterized as ambivalent, as opposed to uniformly positive or negative, may be more easily changed by persuasion (Armitage & Conner, 2000). Thus, ambivalent attitudes are qualitatively different from, and not just on the continuum between, positive and negative attitudes. Individuals feeling ambivalence may engage in similar levels of maladaptive behavior but express more openness to change than those who feel more uniformly positive (Armitage & Conner, 2000). Clinical approaches such as motivational interviewing leverage this ambivalence towards therapeutic change (Hettema, Steele, & Miller, 2005; Westra & Norouzian, 2017). If ambivalence about overprotection exists, these complex attitudes should be addressed in parent-directed interventions and similarly leveraged toward change. Thus, the first major aim of the current study was to determine, using a person-centered approach, whether ambivalence about overprotection could be identified among mothers of toddlers. Because attitudes are shaped by experience, we also examined the relations of ambivalent (versus positive or negative) attitudes about overprotection to both parent and child characteristics that have been identified as correlates of overprotective parenting.

Parent Characteristics

Parental anxiety is a frequent correlate of overprotective parenting (Bayer et al., 2006; Wood et al., 2003). Dix (1991) posited that negative affect (characteristic of anxiety) in parents tends to constrain thinking and bias attention to handle the immediate situation. Therefore, anxious parents may feel more positively about overprotective behaviors that resolve the situation (i.e., by calming the child immediately) than autonomy-granting behaviors, which may assist with longer-term outcomes but require more time for the child to master the situation. Parents may also feel positively about overprotective behavior if it minimizes their own anxious feelings. In support of this, one study found that parental anxiety showed a small-to-medium sized relation to perceived effectiveness of overprotective parenting for dealing with parents' own distress and their children's future outcomes (Kiel et al., 2019). For these reasons, mothers higher in anxiety may have more positive attitudes about overprotection. Maternal anxiety also exhibits non-significant relations to overprotection and parenting more generally (Gar & Hudson, 2008; van der Bruggen, Stams, & Bögels, 2008). It may be the mechanisms underlying anxiety that more directly contribute to overprotective parenting. One such mechanism is emotion regulation.

Emotion regulation comprises individuals' capacities and strategies for managing their emotions (Gratz & Roemer, 2004; Gross, 1998), with emotion regulation difficulties referring to maladaptive responses to emotions (Gratz & Roemer, 2004). We examined three exemplar difficulties in emotion regulation: 1) *emotional nonacceptance,* or negative evaluations of emotions as bad or wrong (Gratz et al., 2007); 2) *distress intolerance,* or deficits in the willingness or ability to withstand emotional discomfort or engage in goal-directed behavior when experiencing distress (Lejuez et al., 2003; Linehan, 1993), and 3) *experiential avoidance,* or efforts to escape or prevent the occurrence of unwanted internal experiences (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). All of these difficulties in emotion regulation are thought to involve maladaptive responses to emotions that interfere with the functional information provided by emotions or paradoxically increase emotional suffering. Emotion regulation difficulties have been assessed through self-report surveys focused on both general (Bernstein, Marshall, & Zvolensky, 2011; Gratz & Roemer, 2004) and parenting-specific (Cheron, Ehrenreich, & Pincus, 2009) circumstances, as well as behavioral measures that do not require meta-cognition and insight (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Given evidence that variables from different methods may tap into different aspects of emotion regulation difficulties (Bernstein et

al., 2011; Lejuez, Kahler, & Brown, 2003; McHugh et al., 2011), we used a multi-method approach in the current study.

Mothers who lack the ability to accept or tolerate their own emotional experiences when their children engage in novel or challenging situations may consequently engage in overprotective behaviors to avoid feelings of uncertainty or negative affect (Suveg et al., 2008). Further, because emotion regulation difficulties (including emotional nonacceptance, distress intolerance, and experiential avoidance), like maternal anxiety, contribute to mothers' own emotional experiences during parenting situations, they may be expected to relate to positive attitudes about overprotective parenting behavior.

Child Characteristics

Children's fear, shyness, and early anxiety symptoms have been linked to maternal overprotection. Existing theories suggest that overprotective parenting may be elicited by children who have a temperamental vulnerability towards coping difficulties and anxiety in the form of inhibited temperament, also known as behavioral inhibition (Dadds & Roth, 2001; Kagan, Reznick, Clarke, Snidman, & Garcia-Coll, 1984; Rubin et al., 2009). A more recently derived observational measure of inhibited temperament that is uniquely predictive of anxiety outcomes is dysregulated fear, which is exhibited through distressed and shy responses in low-threat situations that most children find engaging (Buss, 2011). Dysregulated fear has been found to relate to observed overprotective parenting in toddlerhood (Kiel & Buss, 2014).

Inhibited temperament (in the form of dysregulated fear) and early anxiety symptoms in toddlers may relate to mothers' ambivalent attitudes about overprotective parenting. The anxious-coercive cycle theorized by Dadds and Roth (2001) delineated operant learning conditions that simultaneously maintain child anxiety-proneness and overprotective parenting. Specifically, whereas an anxiety-prone child may seek parental support or reassurance when faced with a new or challenging situation, the parent may want the child to deal with the situation independently and so refuse to respond. The parent's first inclination is not an overprotective response. The child, however, may escalate in their demands so that the parent eventually gives in, engaging in overprotection. In this way, children's expressions of distress, shyness, and anxiety serve as child-elicited effects on overprotective parenting. Avoidance of the feared situation negatively reinforces the child's reliance on the parent, and the decrease in the child's anxiety and demands negatively reinforces the parent's engagement in overprotection. Thus, the parent's fluctuation between trying to encourage autonomy and engaging in overprotection is dependent on the child's behavior and may represent competing attitudes (i.e., ambivalence) about the overprotective response. Certainly, mothers' own anxiety and/or emotion regulation difficulties may heighten mothers' distress, making them faster to acquiesce. However, this theory also suggests that non-anxious mothers may react with overprotective behavior as well – not as a response to their own anxiety or emotional distress but in an effort to decrease their children's emotional distress. Thus, we expected toddler dysregulated fear and toddlers' early anxiety symptoms to uniquely relate to mothers' ambivalence about overprotective.

The Current Study

Understanding mothers' attitudes about overprotection may help us better understand engagement in overprotective parenting. In particular, we examined maternal attitudes about and engagement in overprotective parenting during toddlerhood, when parenting is still developing and also appropriate for intervention. We used person-centered analysis to derive profiles of maternal attitudes about overprotection. We hypothesized that this analysis would reveal a group of mothers who endorsed at least moderate levels of both positive and negative (and thus, ambivalent) attitudes towards overprotective parenting, in addition to groups of mothers endorsing uniformly positive or uniformly negative attitudes. Second, we hypothesized that ambivalent and uniformly positive groups would engage in similar levels of overprotective behavior as one another, and more overprotective behavior than mothers endorsing uniformly negative attitudes. Given our expectation of qualitative, rather than quantitative, differences between groups (i.e., we did not expect attitudes to relate linearly to

overprotective behavior), the person-centered approach was more appropriate than a variable-centered approach. Finally, we hypothesized that maternal anxiety and emotion regulation difficulties (emotional nonacceptance, distress intolerance, and experiential avoidance) would relate to membership in the uniformly positive group, and that toddler dysregulated fear and anxiety symptoms would relate to membership in the ambivalent group.

Method

All procedures received ethics approval from the Institutional Reviewer Board at Miami University (protocol # 00248r).

Participants

One hundred and forty mothers (*mean* age = 32.57 years, *range* = 21.28 to 45.11 years) and their typically developing 2-year-old children (*mean* age = 26.85 months, *range* = 24.08 to 33.05 months; 39.3% female) were recruited from birth announcements; flyers posted in childcare centers, pediatrician offices, and other establishments; and a local Women, Infants, and Children program office. Most children were reported to be living with both biological parents (84.2%). Over half of the mothers had attained at least a college degree (57.7%), and over a quarter completed higher than a college degree (27.7%). Mothers reported a gross family annual income of $15,000 or less (9.6%), $16,000-$40,000 (26.4%), $41,000-$80,000 (32.8%), or $81,000 or more (31.2%). Mothers reported their own and their child's race/ethnicity, respectively, as follows: European American (93.2%/85.6%), African American (1.5%/1.5%), Asian American (3.0%/0.8%), Hispanic/Latinx (8%/1.5%), Native American (0.8%/ 0%), multiracial (0%/9.8%), and self-described (7.0%/0.8%).

Measures and Materials

Maternal attitudes about overprotective behavior

Mothers completed the Attitudes about Parenting Strategies for Anxiety (APSA; Kiel et al., 2019), which assesses mothers' evaluations of overprotective and intrusive parenting behaviors. This measure was shown to have adequate internal consistency and moderate stability across 1 year, in addition to construct validity in relation to self-reported behaviors (Kiel et al., 2019). Mothers read three vignettes in which they were asked to imagine their children displaying shyness or anxiety in response to an uncertain or novel situation (i.e., birthday party clown, conversation with an unfamiliar adult, petting zoo). For example, for the birthday party clown vignette, mothers read, "You and your child are attending the birthday party of another child in your neighborhood. A clown comes to the party and invites the children to help him make balloon animals. Your child looks at you with a scared look." The full measure is published (Kiel et al., 2019) and can be requested from the first author. Mothers rated items assessing their attitudes about specific parenting responses on a 1 (*none/not at all*) to 5 (*extremely*) scale. Items were developed in consultation with experts in early childhood development and anxiety-relevant parenting; evidence of their developmental appropriateness was derived from relations to other parenting attitude and behavior measures (Kiel et al., 2019). The current study focuses on two items from each vignette (six items total across the three vignettes) that assessed mothers' overall attitudes towards engaging in an overprotective response (e.g., shielding the child from the situation or its concomitant distress by allowing/encouraging withdrawal; overprotective because the situation is safe and provides an opportunity for the child to practice independent coping): a positive item ("Overall, how positively do you think about this response?") and a negative item ("Overall, how negatively do you think about this response?"). We focused on these six items, rather than the entire measure, to allow for person-centered analysis of both positive and negative attitudes (the broader scales of the measure do not allow such nuance). Including only two items per vignette maintains statistical power of a person-centered approach by keeping the number of indicators low relative to the sample size (Tein et al., 2013). These items correlated significantly (in 29 out of 30 correlations) in the expected direction (average $|r| = .41$) with the other attitude items comprising the published scales, so they appear to reflect the broader scales for which psychometric properties were established. We expected the positive and

negative attitude items of focus to be interrelated but also to show variability across the vignettes, which was confirmed by moderately sized correlations for both the positive items (rs = .35 to .48, all ps < .001) and negative items (rs = .36 to .43, all ps < .001). Given our person-centered approach, we did not compute internal consistency. Across the sample, the range of possible scores (1 to 5) was represented, and items appeared to be normally distributed (skew < |1.00|).

Overprotective parenting

Overprotection was scored as comforting and protective behaviors in two laboratory procedures: interaction with a friendly clown, and watching a puppet show (Buss, 2011). In the clown episode (4 min total), a second experimenter (E2, a female undergraduate or graduate research assistant) dressed in a clown costume, rainbow wig, and red nose entered the room and introduced herself to the toddler in a friendly manner. The clown blew bubbles with the child, played catch with beach balls, and played musical instruments (1 minute each). The clown engaged the toddler in picking up the toys and then said good-bye. In the puppet show episode, E2 acted as the puppeteer behind a wooden stage. Friendly lion and elephant puppets played catch with a small ball with the child, went fishing with a wooden pole and magnetic fish, and gave the child a sticker as a prize (1 min each). These episodes were designed to be novel with an element of uncertainty, but relatively low in subjective threat and generally engaging for most children (Buss, 2011).

Maternal comforting and protective behaviors – considered overprotective in these contexts - were scored each 10-second epoch of the puppet show and clown episodes according to a previously established coding scheme (Kiel & Buss, 2012). Past research supports the construct validity of these behaviors as overprotective, as evidenced by the relation between these behaviors and mothers' self-reported overprotection (Kiel & Buss, 2011), family accommodation for child anxiety (Kiel & Baumgartner, 2023), and children's anxiety-relevant outcomes (Kiel & Baumgartner, 2023; Kiel & Buss, 2012). Comforting behavior was coded as the mother's attempt to show affection or soothe the child on a 0 (*no comforting behavior*) to 3 (*caregiver hugs or embraces child with both arms and/or kisses the child*) scale. Protective behavior was coded as maternal behaviors that shield the child from the stimulus or activity (e.g., putting an arm in between the child and the stimulus, picking the child up and away from the stimulus). This was coded on a 0 (*no protective behavior*) to 3 (*obvious, higher intensity protective behavior or longer duration; caregiver physically prevents the child from approaching the stimulus or increases physical distance from the stimulus*) scale. Inter-rater reliability was found to be adequate (ICCs = .94 for comforting behavior and .90 for protective behavior). Scores were averaged across epochs for each episode, resulting in a weighted proportion score. Comforting and protection were related within clown (r = .47, p < .001) and puppet show (r = .20, p = .028) episodes; thus, in line with definitions of overprotective parenting as including both shielding and warm behaviors (Bayer et al., 2006; Parker, 1983) and previous investigations using this coding scheme (Kiel & Buss, 2011; Kiel & Buss, 2012), scores were averaged within episodes. Then, these composites (r = .24, p = .007) were averaged for the final measure. Examination of the distribution of this variable revealed adequate representation (n = 15; 11%) at relatively "high" values (≥ 1 SD above the mean).

Toddler dysregulated fear

Toddlers' observed dysregulated fear was measured as distress and shyness from the clown and puppet show episodes according to a coding scheme informed by Lab-TAB coding procedures (Buss & Goldsmith, 2000). Distress was coded as negative facial affect (e.g., sadness, fear) and/or negative vocalizations (e.g., crying, whimpering). Shyness was coded as displays of inhibition or withdrawal from stimuli (e.g., hiding their face, avoiding interaction). Both were scored on a 1 (*none*) to 5 (*extreme in intensity and/or duration*) scale as the overall level for each episode. Coders showed adequate inter-rater reliability (ICCs = .97 for clown distress, 1.00 for clown shyness; 1.00 for puppet show distress, and .94 for puppet show shyness). Due to the significant correlation of distress and shyness within clown (r = .35, p < .001) and puppet show (r = .41, p < .001) episodes, scores were averaged within

episodes, and then these composites ($r = .32$, $p < .001$) were averaged for the final measure of observed dysregulated fear.

Toddler anxiety symptoms

Mothers also reported on their toddlers' early anxiety symptoms using the Infant-Toddler Social Emotional Assessment – Revised (ITSEA; Carter & Briggs-Gowan, 2000), a well-established measure of socioemotional problems and competencies in 18- to 36-month-olds (Carter, Briggs-Gowan, Jones, & Little, 2003). Mothers rated how typically items characterized their toddlers over the previous month on a 0 (*not true or rarely true*) to 2 (*very true or often true*) scale. We used the General Anxiety (10 items, e.g., "Feels sick or nervous when upset"), Separation Distress (6 items, e.g., "Cries or hangs onto you when you try to leave"), and Inhibition to Novelty (5 items, e.g., "Takes a while to feel comfortable in new places") scales. A mean of all 21 items ($\alpha = .79$) yielded the final measure of mother-reported toddler anxiety symptoms. Using established cut-points (comparable to "Borderline" clinical significance; Carter & Briggs-Gowan, 2000), 49 toddlers (35%) scored at or above the 10th percentile on at least one of the subscales, indicating adequate representation of anxiety-prone toddlers. The continuous variable is used in all analyses.

Maternal anxiety

Mothers completed three survey measures of trait anxiety: the Depression, Anxiety, and Stress Scales (DASS-21; Lovibond & Lovibond, 1995), the Penn State Worry Questionnaire (PSWQ; Meyer et al., 1990), and the Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998). The DASS-21 consists of 21 items measuring separate symptoms of depression, anxiety, and stress. Mothers rated how much each statement applied to them over the past week on a 0 (*did not apply to me at all)* to 3 (*applied to me very much, or most of the time*) scale. The current study used the 7-item Anxiety subscale (e.g., "I felt I was close to panic"), which showed adequate internal consistency in the current study ($\alpha = .84$). The PSWQ comprises 16 items designed to capture intensity and uncontrollability of worry. Each item (e.g., "My worries overwhelm me") is rated from 1 (*not at all typical*) to 5 (*very typical*). The PSWQ has good internal consistency and modest test-retest reliability (Meyer et al., 1990). After reversing necessary items, an average of items was calculated ($\alpha = .94$). The SIAS is a 20-item measure used to measure general fears of social interactions (e.g., "I have difficulty talking with other people"). The SIAS has high internal consistency (Osman et al., 1998). Items are rated on a 0 (*not at all characteristic or true of me*) to 5 (*extremely characteristic or true of me*) scale. After reversing necessary items, an average of all items was calculated ($\alpha = .94$). These three measures were moderately intercorrelated (rs = .34 to .53, all ps < .001), so they were standardized and averaged for the final variable of maternal anxiety used for analyses. We also computed sums of each measure to determine that 38 mothers (27.1%) scored in the clinically significant range on at least one measure (≥ 15 [severe range] on the DASS [Lovibond & Lovibond, 1995]; ≥ 62 on the PSWQ [Salzer, Stiller, Tacke-Pook, Jacobi, & Leibing, 2009], or ≥ 34 on the SIAS [Brown et al., 1997]), suggesting that highly anxious mothers were adequately represented in the sample.

Maternal emotion regulation difficulties

Emotional nonacceptance was derived from the 36-item Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). Items are rated on a 1 (*almost never; 0-10%*) to 5 (*almost always; 91-100%*) scale. The DERS has high internal consistency and construct validity in relation to measures of emotion regulation and related difficulties (Fowler et al., 2014; Gratz & Roemer, 2004). The current study focused on the nonacceptance subscale (6 items; e.g., "When I'm upset, I feel guilty for feeling that way"). After performing necessary reversals, we averaged the items ($\alpha = .89$).

Experiential avoidance came from the Parental Acceptance and Action Questionnaire (PAAQ; Cheron et al, 2009) is a 15-item measure of parental experiential avoidance. Items (e.g., "It's OK for my child to feel depressed or anxious" [reverse-scored]) are rated on a 1 (*never true*) to 7 (*always true*) scale. Fair internal consistency and moderate temporal stability have been found for the PAAQ (Cheron

et al., 2009). After necessary reverse-scoring, the initial alpha value indicated inadequate internal consistency ($\alpha = .67$). Two items ("I am able to take action about my child's fears, worries, and feelings even if I am uncertain what the right thing is to do," "Despite my doubts, I feel as though I can set a plan for managing my child's feelings") were removed due to low inter-item correlations. The remaining 13 items reached adequate internal consistency ($\alpha = .70$). These two survey measures were correlated ($r = .36$, $p < .001$), so we standardized and averaged them to yield the variable of maternal self-reported emotion regulation difficulties.

Distress intolerance was measured behaviorally from the Paced Auditory Serial Addition Test – Computerized Version (PASAT-C; Lejuez, Kahler, & Brown, 2003; McHugh et al., 2011). During the PASAT-C, numbers are flashed sequentially on a computer screen and participants are instructed to sum the most recent number with the previous number (using the computer mouse to click on the answer). Participants must then ignore the sum and add the next number to the most recently presented number. Incorrect responses or failure to respond before the next number is presented result in an "explosion" sound and no points earned. The PASAT-C used here consisted of three levels with increasingly shorter latencies (from 3-s to 2-s to 1-s) between number presentations. Because the correct answer must be provided before the next number is presented, difficulty increases as latencies decrease. Following exposure to 1 min of the final level, mothers were given the opportunity to terminate the task at any time, although they were told that performing well on the task could earn their children a second prize (providing an incentive to perform well on the task). Distress tolerance is indexed as latency (in seconds) to task termination, so distress intolerance is represented as the reversed latency score (the difference between the maximum length of the task [i.e., 420 seconds] and the time they quit). If mothers did not quit the task, they were assigned a distress intolerance score of 0 seconds. Providing support for the validity of this task, the PASAT-C has been shown to induce emotional distress in the form of anxiety, anger, frustration, and irritability among clinical and nonclinical samples (e.g., Gratz et al., 2011; Lejuez et al., 2003), and to be significantly correlated with self-report measures of emotion regulation difficulties and the unwillingness to experience emotional distress (Gratz et al., 2006).

Procedure

The campus Institutional Review Board approved procedures. When a mother expressed interest in participation, laboratory staff scheduled a 2.5 hour laboratory visit and mailed her a packet containing a consent form and surveys. At the laboratory, a graduate-level primary experimenter (E1) greeted the mother-child dyad and provided a brief acclimation period. E1 provided an overview of the visit, including standardized procedures from the Laboratory Temperament Assessment Battery (Lab-TAB; Buss & Goldsmith, 2000) and other studies of toddler temperament (Buss, 2011). Mothers were instructed to interact naturally during *clown* (4 min) and *puppet show* (3 min) episodes to enable observation of maternal overprotective behaviors. Episodes were video recorded and coded offline for toddler and mother behaviors.

The mother completed the PASAT-C towards the end of the visit while the child played with a familiar female research assistant in a different room. Mothers received $50 for their time, and toddlers received a small toy (< $5) in appreciation for their participation.

Separate coders scored episodes for dysregulated fear and maternal protective behaviors. Coders were required to attain inter-rater reliability (intraclass correlation coefficient [ICC] = .80) with the master coder on 15-20 cases (on all relevant codes) before coding independently. The master coder double-scored approximately 20% of cases throughout coding and discussed discrepancies to prevent coder drift. Final reliability was calculated prior to consultation.

Data Analysis Plan

We first ran preliminary analyses to understand the distributions of our variables and assess bivariate relations. We examined relations between sociodemographic variables and overprotective parenting to identify covariates for primary analyses. We completed various missing data analyses to report the scope and likely pattern of missingness. We ran Little's Missing Completely at Random (MCAR) test,

including all primary variables and sociodemographic variables (maternal education, income, child sex, and number of siblings). We examined *t*-tests on sociodemographic and primary variables for participants having missing versus complete data on specific variables. We performed multiple imputation (20 imputations) to handle missing values. We included variables related to missingness in the imputation algorithm and as covariates in primary analyses, so the remaining missingness is likely consistent with the missing at random pattern. Analyses report pooled estimates, when available, and ranges across the datasets when they were not (e.g., for model information).

To address the first hypothesis (i.e., that some mothers would be characterized by ambivalent attitudes), we completed a latent profile analysis (LPA) of responses to attitude items from the APSA and derived profile membership groups. The LPA was performed using Full Information Maximum Likelihood in MPlus Version 7.3 (Muthén & Muthén, 1998-2014). We ran models specifying between 1 and 5 profiles and compared models based on commonly used metrics that have been found to accurately identify correct profile membership (Nylund, Asparouhov, & Muthén, 2007; Tein, Coxe, & Cham, 2013): sample size adjusted BIC and the Vuong-Lo-Mendell-Rubin (VLMR) likelihood ratio test. We also examined entropy, a metric ranging from 0 to 1, with higher scores indicating more certainty in classification, and values greater than .80 typically reflecting adequate certainty (Tein et al., 2013). We used one-way analyses of variance (ANOVA) to confirm omnibus differences among groups on attitude items. Tukey's wholly significant difference (WSD) tests were used to make post-hoc pairwise comparisons. The degree of separation among profiles on indicators (in our case, the six items), has been found to be the most relevant factor in determining statistical power to detect the true number of latent profiles (Tein et al., 2013). We examined the post-hoc comparisons between profiles on all items for evidence (Cohen's *d* > 1.25; Meehl & Yonce, 1996; Tein et al., 2013) of adequate separation. Given the non-normal distributions of resulting posterior probabilities, we examined profile assignment in subsequent analyses. Posterior probabilities yielded highly similar results and conclusions (further information on these analyses is available from the authors upon request).

Remaining aims were examined using both raw data and imputed data, with and without covariates, to provide robust tests of hypotheses. To test the second hypothesis (i.e., that mothers expressing ambivalent and positive attitudes would engage in more overprotective parenting than mothers expressing negative attitudes), we ran a one-way ANOVA and Tukey's WSD post-hoc pairwise comparisons on raw (unimputed) data, with profile membership as the independent variable and overprotective behavior as the dependent variable. We then used the imputed data and included relevant covariates in a hierarchical linear regression model with overprotection as the dependent variable. Step 1 included covariates (number of siblings, toddler sex, and maternal education); Step 2 included two dummy codes representing the three attitude profiles (ambivalent group served as the reference category).

To address the third hypothesis (i.e., that maternal anxiety and emotion regulation difficulties [emotional nonacceptance, distress intolerance, experiential avoidance] would relate to membership in the positive attitude profile and toddler dysregulated fear and anxiety symptoms would relate to membership in the ambivalent attitude profile), we tested one-way ANOVA and Tukey's WSD post-hoc pairwise comparisons. Then, with imputed data, we used multinomial logistic regression to test unique relations of profile membership (ambivalent group was the reference category) to both maternal (anxiety, emotion regulation difficulties) and toddler (dysregulated fear, anxiety symptoms) characteristics above and beyond relevant covariates.

Results

Preliminary Analyses and Handling of Missing Data

Descriptive statistics and bivariate correlations for primary study variables can be found in Table 1. All variables demonstrated reasonable adherence to a normal distribution (skew < |3.00|). Protective parenting related to the number of siblings of the participating child (*r* = .26, *p* = .004) and was

significantly different between male ($M = 0.07$, $SD = 0.11$) and female ($M = 0.04$, $SD = 0.06$; $t[124.74]$ $= 2.26$, $p = .026$; Cohen's $d = 0.34$) children. Thus, number of siblings and children's assigned sex at birth were included in models predicting protective parenting. Demographics did not relate to attitude profile membership.

Table 1. Descriptive Statistics and Bivariate Correlations for Dimensional Variables

Variable	n	*Mean* (*SD*)	*Range*	2	3	4	5	6
1. Overprotective parenting	131	0.07 (0.09)	0.00 – 0.49	.20*	.08	.26**	.21*	.54***
2. Maternal anxiety	136	0.00 (0.79)	-1.20 – 3.08	--	.02	.53***	.30**	.07
3. Latency to PASAT-C termination	122	322.52 (142.32)	0.00–413.00		--	.03	-.09	.03
4. Maternal self-reported ER difficulties	138	-0.02 (0.86)	-1.87 – 2.78			--	.24**	.04
5. Mother-reported toddler anxiety symptoms	129	0.76 (0.31)	0.06 – 1.64					.28**
6. Observed toddler dysregulated fear	131	1.81 (0.57)	1.00 – 4.00					--

Note. Descriptive statistics were computed prior to multiple imputation. Correlations were computed after imputation and represent pooled estimates. PASAT-C = Paced Auditory Serial Addition Task-Computerized Version. Latency to PASAT-C termination was revered in subsequent analyses to reflect distress intolerance. ER = emotion regulation.

*p < .05, **p < .01, ***p < .001.

Maternal anxiety and self-reported emotion regulation difficulties were correlated, but not so strongly as to suggest redundancy. Mother-reported toddler anxiety symptoms and observed dysregulated fear were also moderately correlated. Protective parenting related moderately to maternal anxiety, toddler anxiety symptoms, and dysregulated fear, but not so strongly as to suggest the latter variables may be confounded with maternal behavior.

Missing values occurred for parenting attitudes ($n = 15$), maternal report of child anxiety symptoms ($n = 11$), maternal anxiety ($n = 4$), self-reported emotion regulation difficulties ($n = 2$), distress intolerance ($n = 18$), and observed protective behavior and dysregulated fear ($n = 9$; either because of technical difficulties or because they only completed the survey battery through the mail). Overall, 31 participants had at least one missing data point (6.94% of all values missing). Little's MCAR test was

non-significant ($\chi2[144] = 142.67$, $p = .516$). Missingness did not relate to demographic variables with the exception that mothers with missing values reported lower education ($M = 13.71$ years, $SD = 2.40$ years) than mothers with complete data ($M = 15.79$ years, $SD = 2.97$ years; $t[128] = 3.85$, $p < .001$). We included maternal education in the imputation of missing values and as a covariate in appropriate analyses. Primary variables, maternal education, number of siblings, and children's sex were included in the multiple imputation algorithm.

Latent Profile Analysis

Model information for the LPA is reported in Table 2. Sample size adjusted BIC decreased across all models, and entropy was adequate for models with 2 to 5 profiles. However, according to the VLMR test, the model did not significantly improve beyond three profiles. Thus, the profiles derived from the three-profile solution were used for subsequent analyses. Average latent class probabilities for this solution were high, ranging from .934 to .955.

Table 2. Model Fit for Profile Solutions

Model	Profile ns (% of sample)	Adjusted BIC	Entropy	VLMR
One profile	125 (100.0)	2370.988	--	--
Two profiles	78 (62.4), 47 (37.6)	2242.599	.781	140.052**
Three profiles	72 (57.6), 34 (27.2), 19 (15.2)	2183.925	.861	70.336**
Four profiles	34 (27.2), 65 (52.0), 18 (14.4), 8 (6.4)	2160.666	.891	34.922
Five profiles	27 (21.6), 18 (14.4), 64 (51.2), 9 (7.2), 7 (5.6)	2138.441	.886	33.511

Note. The Adjusted BIC is the sample-size adjusted Bayesian information criterion, with smaller values indicating better fit. The VLMR is the Vuong-Lo-Mendell-Rubin Likelihood Test. Significant values of the VLMR indicate a significant improvement upon a model with one fewer profile. Entropy values range from 0 to 1, with higher values indicating higher classification certainty.
*$p < .05$, **$p < .01$.

Patterns of scores on the attitude items for the three-profile solution are displayed in Figure 1. The first profile, the "ambivalent" group ($n = 72$), showed moderate scores, in between the other groups, on both the positive and negative items. The second profile, the "positive" group ($n = 34$), scored the highest on the positive items and the lowest on the negative items. Finally, the third profile, the "negative" group ($n = 19$), scored the lowest on the positive items and the highest on the negative items. ANOVAs confirmed significant omnibus differences among profiles on all attitude items (Fs[df = 2, 121] > 19.00, all $ps < .001$, η_p^2s ≥ .246). Pairwise comparisons on items between profiles are presented in Table 3. Overall, the ambivalent group scored in the middle of the other two groups across the attitude items, with some resemblance to the positive group. The average Cohen's d value across the 18 pairwise comparisons between profiles (3 comparisons - ambivalent versus positive, ambivalent versus negative, positive versus negative - across 6 items) was 1.91, indicating a very large separation effect size (Tein et al., 2013), and the majority of individual values (72%) exceeded 1.25, which falls between a large and very large separation effect size. For each item, at least two of the three comparisons yielded Cohen's d values > 1.25.

Table 3. Item Descriptive Statistics across Profiles

Item	Ambivalent Profile ($n = 72$, 57.6%)		Positive Profile ($n = 34$, 27.2%)		Negative Profile ($n = 19$, 15.2%)	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*
Vignette 1 positive	3.27[a]	1.16	3.91[b]	1.03	1.74[c]	0.87
Vignette 2 positive	2.80[a]	0.94	3.26[a]	1.02	1.42[b]	0.61
Vignette 3 positive	1.99[a]	0.83	3.24[b]	1.07	1.26[c]	0.45
Vignette 1 negative	2.42[a]	1.10	1.88[a]	1.03	3.79[b]	0.98
Vignette 2 negative	2.90[a]	0.91	2.18[b]	0.97	4.58[c]	0.51
Vignette 3 negative	3.68[a]	0.63	1.56[b]	0.61	4.68[c]	0.48

Note. Omnibus tests were significant for all items (Fs > 19.80, ps < .001). Means with similar superscripts within items (looking across the row for a particular item) did not differ (p > .05) on that item according to Tukey's wholly significant difference pairwise comparisons.
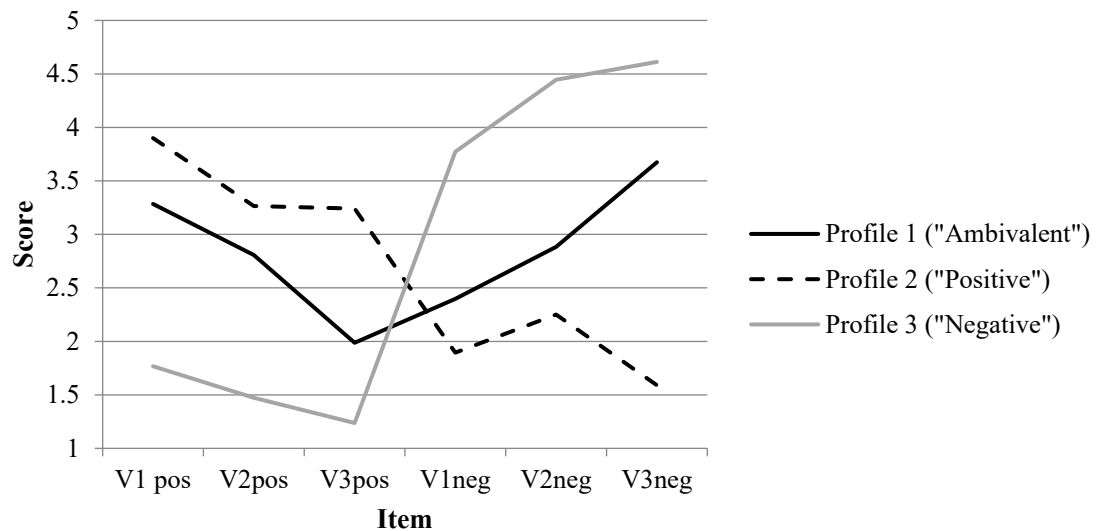
Figure 1. Profiles emerging from a Latent Profile Analysis of positive and negative attitudes about overprotective parenting behavior. Positive and negative attitudes were assessed by one item each across three vignettes ("V1," "V2," and "V3").

Relation of Attitude Group Membership to Observed Protective Parenting

The one-way ANOVA on the raw (unimputed) data revealed a significant omnibus test, $F(2, 113) = 3.55$, $p = .032$, $\eta_p^2 = .059$. Mothers in the ambivalent group showed the most protection ($M = 0.08$, $SE = 0.01$), followed by mothers in the uniformly positive group ($M = 0.05$, $SE = 0.02$), and then the uniformly negative group ($M = 0.02$, $SE = 0.01$). Tukey's WSD tests suggested that the ambivalent group was significantly higher than the negative group (Cohen's $d = 0.87$) and that the positive group did not differ significantly from either the ambivalent (Cohen's $d = -0.28$) or negative (Cohen's $d = 0.48$) group (Figure 2).
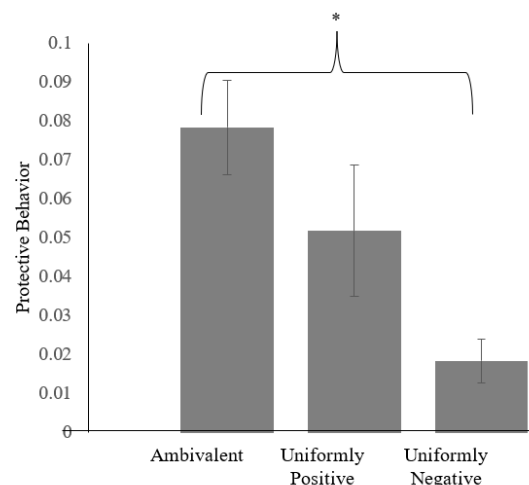

Figure 2. Average overprotective behavior shown by each attitude profile group. Based on Tukey's wholly significant difference post-hoc comparisons of a one-way ANOVA, the ambivalent group differed from the uniformly negative group, but the uniformly positive group did not differ from either of the other two groups.

*p < .05

The results of the multiple linear regression with imputed data can be found in Table 4. In Step 1, only number of siblings related to protective parenting. In Step 2, inspection of the individual coefficients revealed a similar pattern shown with the raw data. The ambivalent group showed significantly higher protective behavior than the negative group, as indicated by the negative coefficient. The ambivalent group was not significantly different from the positive group. Thus, in line with our hypothesis, mothers in the ambivalent group showed a similar level of protective behavior as the positive group and more protective behavior than the negative group, whether using raw or imputed data, and whether covariates were included or not.

Table 4. Hierarchical Regression Analysis Predicting Overprotective Parenting Behavior

	Step 1 $R^2 = .04$ to $.08$ $F(3, 136) = 1.98$ to 3.87, $ps = .011$ to $.120$				Step 2 $\Delta R^2 = .02$ to $.07$ $\Delta F(2, 134) = 1.72$ to 5.14, $ps = .007$ to $.183$			
Variable	b (SE)	t-value	p-value	sr^2	b (SE)	t-value	p-value	sr^2
Intercept	0.03 (0.05)	0.56	.575	--	0.05 (0.06)	0.83	.410	--
Toddler sex	-0.03 (0.02)	-1.69	.091	.022	-0.02 (0.02)	-1.48	.139	.016
Maternal Education	0.00 (0.00)	0.50	.615	.002	0.00 (0.00)	0.42	.673	.001
Number of siblings	0.01 (0.01)	2.07	.039	.036	0.02 (0.01)	2.35	.019	.043
Dummy code 1: positive vs ambivalent	--	--	--	--	-0.03 (0.02)	-1.35	.178	.014
Dummy code 2: negative vs ambivalent	--	--	--	--	-0.05 (0.02)	-2.24	.026	.024

Note. Coefficient statistics for individual predictors represent pooled estimates from a multiple imputation dataset. Model fit statistics are not provided pooled estimates, so the ranges observed across the 20 imputed datasets are provided. The attitudes profile groups (ambivalent, uniformly positive, and uniformly negative) were dummy coded such that the positive (for dummy code 1) or negative (for dummy code 2) group was coded 1 and the ambivalent group was coded 0.

Table 5. Multinomial Logistic Regression Predicting Attitude Group Membership

Variable	Positive versus Ambivalent Groups				Negative versus Ambivalent Groups			
	b (SE)	Wald χ^2	p-value	OR	b (SE)	Wald χ^2	p-value	OR
Intercept	-1.67 (2.00)	0.70	.405	--	2.20 (2.62)	0.70	.403	--
Maternal education	0.11 (0.10)	1.15	.286	1.11	-0.09 (0.12)	0.56	.458	0.92
Observed distress intolerance	-0.00 (0.00)	-0.22	.638	1.00	-0.00 (0.00)	-0.00	.959	1.00
Mothers' self-reported ER difficulties	0.01 (0.30)	0.00	.963	1.01	-0.41 (0.45)	0.83	.362	0.66
Maternal anxiety	0.42 (0.34)	1.58	.209	1.53	-0.28 (0.61)	0.21	.647	0.76
Mother reported toddler anxiety symptoms	0.92 (0.85)	1.17	.281	2.49	-0.30 (0.96)	0.10	.753	0.74
Observed dysregulated fear	-1.01 (0.50)	3.99	.047	0.37	-1.13 (0.65)	3.00	.086	0.32

Note. Chi-square values (df = 16) indicating model fit of the multinomial logistic model ranged from 14.94 to 33.12 (average $\chi2$ = 24.80, average p = .042) across imputations. Coefficient statistics for individual predictors represent pooled estimates from a multiple imputation dataset. ER = emotion regulation. OR = odds ratio.

Correlates of Attitude Group Membership

Using raw (unimputed) data, the omnibus test of the relevant ANOVA was not significant for maternal report of toddler anxiety symptoms ($F[2, 122] = 1.53$, $p = .220$, $\eta_p^2 = .024$), observed maternal distress intolerance ($F[2, 107] = 0.05$, $p = .952$; $\eta_p^2 = .0001$), or mothers' self-reported emotion regulation difficulties ($F[2, 121] = 2.34$, $p = .101$, $\eta_p^2 = .037$). A significant omnibus test emerged for maternal anxiety ($F[2, 121] = 4.37$, $p = .015$, $\eta_p^2 = .067$), with the positive group reporting the highest anxiety ($M = 0.26$, $SE = 0.16$), followed by the ambivalent group ($M = -0.04$, $SE = 0.07$), and finally the negative group ($M = -0.37$, $SE = 0.19$). Post-hoc pairwise comparisons revealed that the positive group was significantly higher than the negative group (Cohen's $d = 0.70$), but that the ambivalent group was not significantly different from either the positive (Cohen's $d = -0.37$) or negative (Cohen's $d = 0.48$) group (Figure 3, Panel A). A significant omnibus test also emerged for observed toddler dysregulated fear ($F[2, 113] = 3.68$, $p = .028$, $\eta_p^2 = .061$). In this case, toddlers were highest in dysregulated fear in the ambivalent group ($M = 1.96$, $SE = 0.08$), followed by the uniformly positive group ($M = 1.73$, $SE = 0.09$), and finally the uniformly negative group ($M = 1.62$, $SE = 0.10$). In pairwise comparisons, toddlers of mothers in the ambivalent group exhibited significantly higher dysregulated fear than toddlers of mothers in the negative group (Cohen's $d = 0.64$), but toddlers of mothers in the positive group did *not* differ from toddlers of mothers in the ambivalent (Cohen's $d = -0.42$) or negative (Cohen's $d = 0.23$) groups (Figure 3, Panel B).

The multinomial logistic regression model with imputed data is reported in Table 5. Toddler dysregulated fear significantly related to lower likelihood of membership in the positive group as compared to the ambivalent group. Thus, membership in the ambivalent group was uniquely related to toddler dysregulated fear.
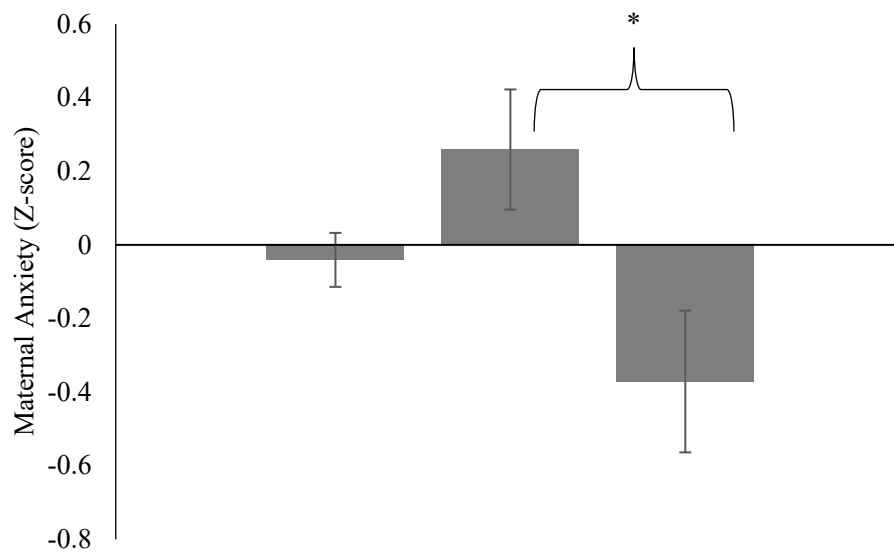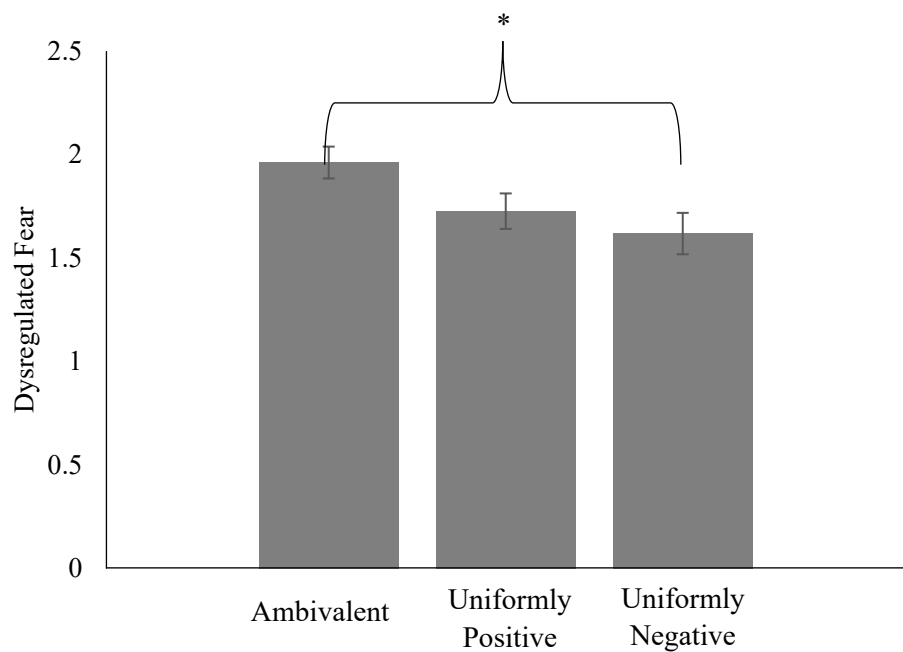
Panel A

Panel B

Figure 3. Attitude profile groups differed on maternal anxiety (Panel A) and toddler dysregulated fear (Panel B). Based on Tukey's wholly significant difference post-hoc pairwise comparisons of one-way ANOVAs, the uniformly positive group differed from the uniformly negative group on maternal anxiety, and the ambivalent group differed from the uniformly negative group on dysregulated fear.

*$p < .05$.

Discussion

The current study examined maternal attitudes about overprotective parenting. We used a person-centered approach to empirically derive three groups of mothers characterized, respectively, by uniformly positive attitudes, uniformly negative attitudes, and moderate levels of both positive and negative attitudes (which we interpreted as ambivalence). We observed mothers in the ambivalent group to engage in just as much overprotective behavior with their toddlers as mothers with uniformly positive attitudes about overprotection. Mothers reporting uniformly positive attitudes about overprotection may also perceive themselves to be more anxious, whereas mothers reporting ambivalent attitudes had toddlers demonstrating heightened dysregulated fear. The relation of maternal ambivalent attitudes about overprotection to toddler dysregulated fear has relevance to children's development, as dysregulated fear is a temperamental predictor of child anxiety problems (Buss, 2011) and, thus, may be involved in transactional parent-child interactions that predict trajectories towards risk.

Mothers in the ambivalent group did not differ from mothers in the positive group in observed overprotection, suggesting that positive attitudes about protective parenting do not have a linear relation to protective behavior. If they did, overprotective behavior would increase incrementally across the negative, ambivalent, and positive groups. The approximate similarity between the ambivalent and positive groups challenges the notion that positive attitudes lie on a unidimensional continuum. This is consistent with the conceptualization of ambivalence in the clinical literature as reflecting individual differences in attitudes, rather than behavior (Westra & Norouzian, 2017). That the ambivalent group represented the largest fraction of the sample (51%) also suggests that having at least some positive and some negative evaluations of protective behavior was common and not limited to an idiosyncratic subset of the population. This finding may reflect that most mothers are not set in their attitudes about overprotection, but rather take in information from multiple sources, including their developing child, to evaluate potential behavioral responses.

The correlates of membership differed between ambivalent and positive groups. Although our correlational and concurrent design prevents conclusions about causes or predictors of either attitudes or overprotection, these initial results suggest it is possible that different forces may drive engagement in overprotective behavior in the ambivalent versus positive groups. The most robust finding was that toddler dysregulated fear related to membership in the ambivalent group. Perhaps mothers in this group engage in overprotective parenting not (or not only) because of their own characteristics, but because they are responding to the demands of their fearful children. This finding is in line with theory of family dynamics surrounding anxiety development (Dadds & Roth, 2001), which acknowledges that anxiety-prone children place demands on parents for comfort and removal from stress. Our findings are also aligned with empirical studies finding that child, rather than maternal, anxiety relates to overinvolved/overprotective parenting (Gar & Hudson, 2008). The current study contributes to this growing literature by highlighting that ambivalent attitudes about overprotection may play a role in these relations. Longitudinal studies may elucidate the temporal unfolding of these constructs.

Although child temperamental risk may be biologically-based, intervention for anxiety is largely environmentally-based (Rubin et al., 2009). Given that the ambivalent group was the largest of the three and also related to toddlers' temperamental risk for anxiety, it is likely that ambivalent parents will be present in prevention and intervention contexts. Addressing child-directed effects on parenting may enhance interventions targeting overprotective behavior for ambivalent parents. For example, parents may require extra support when attempting to refrain from overprotective behavior when their children appear anxious. Acknowledging their ambivalence may be an important first step, and motivation enhancement techniques may be well-suited to help parents follow through with efforts to reduce overprotective behavior. Based on research on other interventions geared towards behavior change (Hettema, et al., 2005; Westra & Norouzian, 2017), ambivalent parents may be more open to change then parents with uniformly positive attitudes. This also suggests that the treatment of parental anxiety, although useful and necessary for some, may not target barriers to autonomy-granting for all parents.

Of important note, protective parenting in and of itself can be adaptive in dangerous situations and only crosses into overprotection in situations that are not developmentally appropriate for children to handle independently (Bakermans-Kranenburg & van IJzendoorn, 2017). Thus, interventions can both augment parents' responsive support while helping parents encourage their children's approach and autonomy. One salient example is the Coaching Approach behavior and Leading by Modeling (CALM) program (Comer et al., 2012), in which parent-child interaction therapy (PCIT) techniques (adapted for use with anxious preschool and school-aged children) aim not only to replace excessively warm or protective behaviors with encouragement of approach and autonomy in situations that can help children feel mastery over feared situations, but also to enhance parents' appropriate positive attention and responsiveness to their children.

Less robust were findings that maternal anxiety uniquely related to uniformly positive attitudes about overprotection. The positive group showed the highest level of anxiety in raw mean differences, but not significantly so in a model that handled missing values and included relevant covariates. Perhaps additional variables moderate this relation, such that maternal anxiety relates to positive attitudes about overprotection only when other factors are present. The relation between maternal anxiety and overprotective parenting, in general, is inconsistent in the broader literature (Bayer et al., 2006; Gar & Hudson, 2008; van der Bruggen, Stams, & Bögels, 2008), also suggesting moderators of this relation. The current study provides an initial step in understanding mothers with uniformly positive attitudes. If the relation between maternal anxiety and positive attitudes about overprotection indeed exists, this would highlight the potential utility of addressing parents' own anxiety as the first step in a parent-involved intervention for child anxiety for this particular subset of parents. Likewise, mothers with uniformly positive views of overprotective behaviors, compared to those who were ambivalent, may have recognized themselves as more anxious and, thus, used overprotection to assist their children with their fear and anxiety. Overprotective parenting and related behaviors have been found to mediate the relation between parent anxiety and child anxiety-relevant outcomes (Cooklin et al., 2013; Jones et al., 2015), supporting environmental mechanisms of parent-to-child anxiety transmission. Future studies should investigate what mothers are doing to reduce their children's anxiety.

This study had design- and methodology-related limitations. Our sample included only mothers and was primarily European American, representing populations typically characterized by more westernized values of independence. Although our study's demographics resemble those of populations theorized and empirically found to be most relevant to overprotective parenting (Carter et al., 2001; Cooper-Vince et al., 2014), understanding how results may generalize to groups or cultures who emphasize interdependence within the family context is important future work. For example, in more interdependent cultures that value familial responsibility above child autonomy, perhaps the anxious-coercive cycle may not interfere with child mastery over their environment and, ultimately, may not predict child anxiety risk (Rudy & Grusec, 2001). Of course, variability in parenting attitudes and behaviors would also be expected within European American families based on beliefs and values associated with various identities (e.g., number of generations since the family settled in the United States). Additionally, the current study's participants were mostly mothers in heterosexual relationships and two-parent households. Although research supports children born into families with same-sex parents do not differ in their ability to adjust to their environment, we do not yet know how whether results would translate to children with mothers in same-sex relationships (Wainright, Russell, & Patterson, 2004). Male toddlers were more heavily represented than female toddlers, which occurred randomly during recruitment. Uneven sex distribution may be a limitation as parenting attitudes and behaviors, as well as their downstream consequences, may differ by child sex. Our sample size may appear small for latent profile analysis. We chose to prioritize methodologies that resulted in rich observations of parents and their children, which are particularly important for elucidating early processes of risk but require intensive resources of time and personnel that become prohibitive with very large samples. Our sample size is consistent with (and exceeds) previous intensive studies of young children that have employed LPA techniques (e.g., Buss, 2011). Although the innovation of this study

warrants the LPA approach, we acknowledge that it should be replicated in larger samples. The concurrent design and use of a typically developing, community sample prevents conclusions about how constructs relate to each other over time or in treatment-seeking families.

Conclusion

Mothers differ on their attitudes about overprotective behavior, and the current study suggests that many mothers are ambivalent in these attitudes. Ambivalent mothers seem just as likely to display overprotective parenting as mothers who have more uniformly positive attitudes about overprotective parenting, and they may represent the group with children manifesting the highest temperamentally-based risk for anxiety. Assessing ambivalence and acknowledging child-directed effects on overprotective parenting may be important strategies for increasing the utility of parent involvement in the prevention and treatment of anxiety in young children.

Additional Information

Conflict of Interest

The authors declare no conflicts of interest.

Ethical approval

All procedures received ethics approval from the Institutional Reviewer Board at Miami University (protocol #00248r).

Data Availability

Data will be made available by the first author upon reasonable request.

Author CRediT Statement

Elizabeth J. Kiel: Conceptualization, Methodology, Formal Analysis, Resources, Data Curation, Writing – Original Draft, Writing – Review & Editing, Visualization, Supervision, Funding Acquisition. **Sydney M. Risley:** Investigation, Writing – Original Draft, Writing – Review & Editing, Project Administration. **Kim L. Gratz:** Conceptualization, Writing – Original Draft, Writing – Review & Editing.

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