UNPACKING PARENTAL ACCOMMODATION: RELATIONSHIP TO PARENT DISTRESS TOLERANCE AND PARENT-CHILD CO-RUMINATION

A Dissertation
Submitted to
the Temple University Graduate Board

In Partial Fulfillment
of the Requirements for the Degree
DOCTOR OF PHILOSOPHY

by
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August 2023

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ABSTRACT
Accommodation, or changes to parent behaviors or routines to avoid or alleviate child distress related to psychopathology, is one maladaptive parent response that is common in anxiety disorders and associated with poor youth outcomes. Little is known about the processes in parents that contribute to accommodation. Thus, the current study examined how accommodation relates to parent distress tolerance and cognitive styles. The present study utilized data from 295 parents (289 female) of children ages 4-10 who were recruited for a randomized trial of an internet-based single-session intervention targeting parent accommodation (NCT04453865). Results indicate a positive relationship between parent rumination and worry and accommodation, highlighting the influence of parent cognitive processes on their tendency to accommodate. In addition, results suggest a positive relationship between reduced parent distress tolerance and greater accommodation, and this relationship may be influenced by other factors, such as parent cognitive styles. Future research that uses multiple methods of assessment will add to effective interventions for parent accommodation that can be used to improve youth outcomes.
This thesis is dedicated in honor and loving memory of my mother, 
Cathy Marie Birk, without whose love and encouragement I would not be where I am 
today, and to my daughter, Addison Cathy, may you always unapologetically pursue your 
dreams and remember all the strong and resilient women who came before us.
ACKNOWLEDGMENTS

I would first like to thank my advisor, Dr. Thomas Olino, for his guidance and mentorship throughout my time at Temple. Particularly during the challenges and losses that ensued from the COVID-19 pandemic, his support was unrelenting and helped me never miss a beat, for which I will always be grateful. Similarly, I would like to thank the members of my core committee, Dr. Richard Heimberg and Dr. Philip Kendall, for their invaluable mentorship on this project and several other projects and milestones, as well as the integral role they have played in my professional development throughout graduate school. I would also like to thank the rest of my dissertation committee—Dr. Lauren Alloy, Dr. Deborah Drabick, and Dr. Johanna Jarcho—for their guidance on this project and for their support in several capacities over the past five years. The mentorship, time, and support you have each provided has been instrumental and immensely appreciated.

To the staff and students of the Child and Adolescent Development of Emotion, Personality, and Psychopathology lab and the Child and Adolescent Anxiety Disorders Clinic at Temple, thank you for the incredible work and support throughout graduate school and the many iterations of my dissertation. To Dr. Jessica Schleider and the members of the Lab for Scalable Mental Health at Stony Brook University, thank you for generously allowing me to collaborate and access the data that permitted the completion of my dissertation and for providing valuable input on this project. Finally, I would like to thank my incredible support system, including my family, friends, cohort, and especially my husband, Jerry Yang, for providing unconditional love and support on this journey.
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CHAPTER 1
INTRODUCTION

Background

Parents play a critical role in youth emotional development and adjustment (Cole, Martin, Dennis, 2004; Eisenberg, 2000; Gross & Thompson, 2007; Jones & Prinz, 2005; Morris, Silk, Morris, Steinberg, Aucoin, & Keyes, 2011). Moreover, certain types of parenting and parent responses relate to increased risk for youth psychopathology and maintenance of symptoms (Berg-Nielsen, Vikan, & Dahl, 2002; Rose, Roman, Mwaba, & Ismail, 2018; Yap & Jorm, 2015; Yap, Pilkington, Ryan, & Jorm, 2014). One maladaptive parent response, especially common in anxiety disorders, is accommodation, or changes parents make to their behaviors or routines to help their child avoid or alleviate distress related to psychological symptoms. Unlike attentive and responsive parenting styles that involve supporting children and expressing confidence in their ability to cope, accommodation prohibits children from having the opportunity to cope (i.e., task demands lightened, removed from situation/stimuli that causes distress, or provided with excessive reassurance). Accommodation is associated with poorer youth clinical outcomes and quality of life (Flessner, Freeman, Sapyta, Garcia, Franklin, March, & Foa, 2011; Garcia et al., 2010; Lebowitz, Panza, & Bloch, 2016). Although extensive research has examined the negative effects of accommodation on youth, little is known about the function of accommodation for parents. Thus, the present study examined how several parent processes relate to accommodation of anxiety in their children to begin to explore the function it serves for anxious parents.

Although accommodation is intended to help reduce child distress and anxiety, it maintains youth anxiety and teaches children to believe that they cannot cope with their distress
independently. It is likely that, in addition to momentarily reducing child distress, accommodation is an effort to reduce parent distress in response to child distress, whether this is intentional or more of a reflex. In line with this theory, some research has explored the relationship between parent emotion regulation and parent accommodation of their children’s anxiety. For example, Kerns, Pincus, McLaughlin, and Comer (2017) found that higher maternal anxiety predicted less effective emotion regulation while listening to an audio recording of a distressed child, and this poorer regulation predicted greater parent-reported accommodation of child anxiety, which predicted higher child anxiety.

Importantly, other studies have not found links between parent’s own distress tolerance or emotion regulation and their accommodation behaviors, and instead highlighted links between parents’ views of their child’s anxiety (O’Connor, Holly, Chevalier, Pincus, & Langer, 2020) or child psychological symptoms (Zavrou, Rudy, Johnco, Storch, & Lewin, 2019) and accommodation. Specifically, parents who viewed their child as being more symptomatic (e.g., anxious, externalizing, and intolerant of uncertainty) accommodated more (O’Connor et al., 2020), and child internalizing and externalizing symptoms were positively associated with accommodation (Zavrou et al., 2019). Moreover, in a trial of childhood obsessive compulsive disorder treatment, wherein children were encouraged to approach (rather than avoid) anxiety-producing stimuli, greater reductions in children’s symptoms were linked with larger improvements in parent distress tolerance (Selles et al., 2018). Kagan, Frank, and Kendall (2017) outlined several other parent factors that relate to parent accommodation, such as parent psychopathology (e.g., anxiety and depression), family burden/distress, and parenting styles (e.g., overprotective or permissive parenting). In addition, degree of child distress (Settipani & Kendall, 2017), parental beliefs about how harmful anxiety is (Johnco et al., 2022; Settipani &
Kendall, 2017), and parent attachment insecurity (Johnco et al., 2022) relate to parent accommodation. With the exception of parent psychopathology and beliefs, these studies have not focused on the processes in parents that lead to accommodation of anxiety in their children. Given the known links between parent psychopathology and accommodation, the present study included parents who endorsed subclinical or clinical symptoms of anxiety (i.e., a score of >40 on the Penn State Worry Questionnaire [PSWQ]) and were, therefore, more likely to engage in accommodation. This, in turn, provides a better opportunity to explore the processes that may contribute to parent accommodation.

Existing research has not yet explored many of the psychological processes that may contribute to parent accommodation. Identifying psychological factors that relate to accommodation may allow for modifications to treatments to address accommodation. Accommodation may be associated with maladaptive parental behaviors and responses that emphasize repetitive thinking, disclosure, and reassurance between parents and children, such as parent rumination, parent worry, and parent-child co-rumination. Rumination and worry are forms of perseverative cognition that involve a repetitive focus on negative feelings associated with past events and possible negative outcomes of future events, respectively. Parent rumination and worry are associated with lower parent distress tolerance (Patel, Casline, Jensen-Doss, & Timpano, 2020). In addition, perceived overcontrolling parenting in childhood relates to greater rumination and worry, and rumination and worry relate to internalizing symptoms (Manfredi et al., 2011). Co-rumination is the interpersonal form of rumination, which can take place in dyads including parent-child dyads. Parent-child co-rumination, or extensively discussing and revisiting problems and focusing on negative feelings, is associated with parent and youth internalizing symptoms (Grimbos, Granic, & Pepler, 2013; Waller & Rose, 2010). Little is
known about how these maladaptive parent responses are associated with each other. It is possible that the repetitive focus on negative past events and outcomes could be related to accommodation, such as extensively answering reassurance-seeking questions. To date, no study has examined how parent accommodation and co-rumination are associated. Understanding how these constructs are associated will shed light on means of intervening on them towards enhancing treatment outcomes of youth anxiety. The present study takes an initial step towards addressing this gap by examining the relationship between perceived distress tolerance, rumination, worry, and co-rumination with parent accommodation.

Several treatment protocols for youth anxiety have begun directly targeting parent accommodation and have found that reductions in accommodation are associated with improvement in child anxiety symptoms (Lebowitz, 2013; Lebowitz, Omer, Hermes, & Scahill, 2014; Merlo, Lehmkuhl, Geffken, & Storch, 2009; Storch et al., 2010). In addition, in a review of intolerance of uncertainty and parent accommodation, Kendall, Norris, Rabner, Crane, and Rifkin (2020) highlight that anxiety interventions that attend to accommodation may enhance outcomes for youth whose parents engage in high levels of accommodation. Although efforts have been made to target parent accommodation, little is known about the function of these parental responses for parents, making it difficult to effectively address them in a standardized way across youth interventions. Understanding more about the underpinnings and psychological correlates of accommodation, as well as the function for parents, may provide additional insights for future work that aims to develop interventions to target these maladaptive parent responses or improve current interventions to reach more parents and families.

Current Study

This study addressed a gap in the literature by examining parent processes that may
contribute to accommodation to elucidate a potential function of these parent responses – to reduce parent distress in response to child distress or to address cognitive worries about their child. Specifically, the present study investigated (a) the relationship between parental accommodation and distress tolerance and perceived ability to cope with child’s negative emotions, (b) the relationship between parental accommodation and parent rumination, parent worry, and parent-child co-rumination, (c) the relationships between parent accommodation and parent distress tolerance, perceived ability to cope with child’s negative emotions, rumination, worry, and parent-child co-rumination to explore whether accommodation is related more to parent distress tolerance or cognitive worries and processes; given the associations between psychopathology and accommodation, these analyses were repeated controlling for parent psychopathology.

Specific Aims and Hypotheses

Aim 1: Examine the relationships between parental accommodation of child anxiety and parental distress tolerance and perceived ability to cope with their child’s negative emotions.

Hypothesis 1: Greater parental accommodation will be positively associated with lower parent distress tolerance and ability to cope with their child’s negative emotions.

Aim 2: Examine the relationship between parental accommodation and parent rumination, parent worry, and parent-child co-rumination.

Hypothesis 2: Greater parental accommodation will be positively associated with higher parent levels of rumination and worry, as well as parent-child engagement in co-rumination.

Aim 3 (Exploratory): Assess the relationships between parent accommodation and parent distress tolerance, perceived ability to cope with child’s negative emotions, rumination, worry, and parent-child co-rumination to elucidate whether accommodation is related more to parent distress
in response to their child’s distress or parent cognitive worries and processes, either intrapersonal (i.e., rumination and worry) or interpersonal (i.e., co-rumination). Examine these relationships when controlling for parent psychopathology, including depression and behavioral inhibition, as a near-related measure of anxiety, to understand the specificity of these associations. In other words, if accommodation remained related to parent factors after controlling for parent psychopathology, this would suggest that there may be additional underlying processes that contribute to accommodation behavior in parents, in addition to general psychopathology.
CHAPTER 2
METHODS

Participants

Three participants were consented but ultimately not eligible due to child age outside eligibility criteria (i.e., children older than 10 years of age) and were excluded from present analyses. Eligible participants included 298 parents (292 female; 67.8% White, 9.7% Asian, 9.4% other, 6.4% Hispanic or Latino/a, 2.3% American Indian and/or Alaska Native, 2.0% Multiracial, 1.7% Black/African American, and .7% Native Hawaiian or other Pacific Islander) of children ages 4-10 (Mean age = 6.69, SD = 1.86) recruited for a randomized trial of an internet-based single-session intervention (SSI) targeting parent accommodation run through Stony Brook University (NCT04453865). Eligibility criteria included: being the parent of a child ages 4-10, endorsing clinical or subclinical symptoms of anxiety (i.e., 40 or higher on the PSWQ), living in the United States, and speaking/understanding English enough to engage with the online intervention. Out of these 298 participants, 295 had complete responses on the measures of interest and were included in the present study.

Procedure

Online ads (e.g., through Facebook and Instagram) were used to recruit interested participants following established ethical guidelines for passive, social media–based study recruitment to complete an online screener. All eligible participants were directed to an online consent form inviting them to take part in the study. Participants completed a battery of questionnaires, including the measures listed below, and then were randomly assigned to one of the conditions (i.e., immediate access to online resources and referrals and the parent
accommodation SSI or access to the online resources and referrals and delayed SSI access). Two weeks later, all participants completed follow-up questionnaires, and the individuals in the delayed condition were invited to complete the parent accommodation SSI. Total duration of participation was approximately an hour and a half (two sets of online questionnaires ~30 minutes each; one online intervention lasting 25-30 minutes). Participants were entered into a lottery to win one of 12 $25 cash prizes. The present study focused on the initial battery of questionnaires completed before the SSI. All procedures were approved by the institutional review board of Stony Brook University, and informed consent was obtained from each participant via the internet prior to participation (Sung, Mumper, & Schleider, 2021).

Measures

*Family Accommodation*

Family accommodation was assessed using the Family Accommodation Scale – Anxiety (FASA; Lebowitz et al., 2013). The FASA is a 9-item self-report measure of parental accommodation of youth anxiety. Items are rated from 0 (never) to 4 (daily) and yield two subscales: participation and modification, as well as a total measure of accommodation. The FASA has demonstrated good internal consistency (α = .90) and convergent and divergent validity; accommodation correlated with anxious but not depressive symptoms (Lebowitz et al., 2013). The present study focused on the total measure of accommodation, and internal consistency was .87. Higher scores indicate greater levels of parent accommodation.

*Parent Distress Tolerance*

Parent distress tolerance was assessed using the Distress Tolerance Scale (DTS; Simons & Gaher, 2005). The DTS is a 16-item self-report measure of the respondents’ ability to experience and withstand an uncomfortable situation. Confirmatory factor analysis results
support the inclusion of 15 items to create four first-order factors: tolerance, absorption, appraisal, and regulation. Tolerance reflects how unbearable individuals perceive their distress to be and to what degree they feel they can handle being upset. Appraisal reflects an individual’s understanding of distress and the degree to which they reject, are ashamed of, or perceive their ability to cope with distress as inferior. Regulation refers to an individual’s efforts to avoid negative emotions and to what degree they utilize rapid means of alleviating negative emotions when experienced. Finally, absorption reflects how consumed an individual is by the experience of negative emotions and the disruption to their functioning from the experience of negative emotions (e.g., being consumed by the experience and feeling unable to focus on anything else). These four first-order factors are averaged to obtain the higher-order general distress factor, which was utilized in the present study. Responses are rated on a 5-point scale ranging from 1 (strongly agree) to 5 (strongly disagree). The DTS has demonstrated good internal consistency (α = .89) and convergent and divergent validity; distress tolerance was negatively associated with measures of affect dysregulation and substance use coping motives, positively associated with positive affectivity and general mood acceptance and regulation, and not related to substance use enhancement motives (e.g., drinking to have fun; Simons & Gaher, 2005). Internal consistencies for the first-order factors in the current study were .80, .84, .85, and .77 for tolerance, absorption, appraisal, and regulation, respectively and .93 for total distress tolerance. In the current study, items were scored such that higher scores represent greater difficulty with distress tolerance (i.e., poorer distress tolerance).

_Parent Coping with Child Emotions_

The degree to which parents perceive their ability to cope with their child’s negative emotions was assessed using the Coping with Children’s Negative Emotion’s Scale (CCNES;
Fabes, 1990). The CCNES is a 12-item self-report measure of parents’ reactive emotions to their child’s negative affect during stressful situations. Items are rated from 1 (very unlikely) to 7 (very likely) and yield six subscales; however, only the distress reactions subscale, which reflects parental distress in the context of child negative affect, was used. The CCNES has demonstrated good internal consistency ($\alpha = .69-.85$ for the subscales; .70 for the distress reactions subscale) and convergent and divergent validity; the distress reactions subscale was positively related to another measure of distress reactions and anger and not related to empathic concern or perspective taking (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). Internal consistency for the present study was .73. Higher scores represent greater perceived ability to cope with their child’s negative emotions.

*Parent-Child Co-rumination*

The degree to which parent-child dyads engage in co-rumination was assessed using the Modified Co-Rumination Questionnaire (MCRQ; Waller & Rose, 2010; Rose, 2002). The MCRQ is a 16-item self-report measure of the degree to which parents engage in co-rumination with their children. The first eight questions focus on child problems, whereas the latter eight focus on parent problems. The present study focused on co-rumination related to child problems. Parents indicate how true the responses are of them and their child on a scale from 1 (not at all true) to 5 (really true). Several studies have utilized versions of the CRQ with good to excellent internal consistency ($\alpha$s = .80-.98; Spendelow, Simonds, & Avery, 2017). Internal consistency in the present study was .88 for the child problems scale. Higher scores indicate greater parent-child co-rumination.

*Parent Rumination*

Parent levels of rumination were assessed using the Ruminative Response Scale (RRS;
Nolen-Hoeksema & Morrow, 1991). The RRS is a 22-item self-report measure of the degree to which individuals engage in rumination. Parents indicate what they generally do on a scale of 1 (almost never) to 4 (almost always). Previous research has supported brooding (5 items) and reflection (5 items) subscales, with brooding assessing the maladaptive component of rumination without depressive symptoms and reflection measuring the contemplative, problem-focused component (Treynor, Gonzalez, & Nolen-Hoeksema, 2003). The present study focused on the brooding subscale. The RRS has demonstrated good internal consistency ($\alpha = .90$) and convergent validity; brooding rumination was associated with depression both concurrently and in longitudinal analyses (Treynor et al., 2003). Internal consistency of the brooding subscale in the present study was .83. Higher scores indicate greater engagement in rumination.

**Parent Worry**

Parent engagement in worry was assessed using the Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990). The PSWQ is a 16-item self-report measure of the degree to which individuals engage in worry. Parents indicate what they generally do on a scale of 1 (not typical at all of me) to 4 (very typical of me). The PSWQ has demonstrated good internal consistency ($\alpha = .92-.95$) and convergent and divergent validity; for example, worry related to self-esteem and perfectionism and did not relate to experience-seeking or disinhibition (Meyer, Miller, Metzger, & Borkovec, 1990; Brown, Antony, & Barlow, 1992). In the present study, the PSWQ was used as a screener for symptoms of anxiety. Internal consistency was .89. Higher scores indicate greater engagement in worry.

**Parent Behavioral Inhibition**

Parent behavioral inhibition was assessed using the Adult Measure of Behavioral Inhibition (AMBI; Gladstone & Parker, 2005). The AMBI is 16-item self-report measure of
behavioral inhibition in adults. Items are rated from 0 (no/hardly ever) to 2 (yes/most of the
time). The AMBI total score has demonstrated good internal consistency (\(\alpha=.80\)) and convergent
and divergent validity; the total score correlated with introversion and measures of social anxiety
and avoidance personality and was able to differentiate between individuals with and without
lifetime anxiety versus depression (Gladstone & Parker, 2005). In the present study, the total
score was used to reflect a near-related measure to anxiety and fearfulness. Internal consistency
in the present study was .87. Higher scores indicate greater behavioral inhibition.

*Parent Depressive Symptoms*

Parent depressive symptoms were assessed using the Patient-Reported Outcomes
Measurement Information System-Depression Short Form (PROMIS-D-SF; Cella et al., 2007).
The PROMIS-D-SF is an 8-item self-report measure of depressive symptoms in adults.
Responses are rated on a scale from 1 (never) to 5 (always). The PROMIS-D-SF is comparable
with longer forms and has demonstrated good internal consistency (\(\alpha=.95\)) and convergent and
divergent validity; PROMIS-D-SF depression related to another measure of depression and did
not relate to anxiety (Pilkonis et al., 2011). Internal consistency in the present study was .95.
Higher scores indicate greater depressive symptoms.

*Data Analytic Plan*

All analyses were conducted in R (R Core Team, 2017). A series of regressions were
estimated to examine the relationships between parent perceived distress tolerance, perceived
ability to cope with negative emotions, rumination, worry, and parent-child co-rumination and
parent accommodation. The first model included parent perceived distress tolerance and ability
to cope with child’s negative emotions (Aim 1). The second model included parent rumination,
parent worry, and parent-child co-rumination (Aim 2). The third model included all these factors
to compare the relationships between accommodation and perceived distress tolerance (i.e.,
general perceived distress tolerance and perceived tolerance/ability to cope with child’s negative
emotions) and accommodation and cognitive (i.e., rumination, worry, and co-rumination)
processes (Aim 3). Finally, these analyses were repeated controlling for parent psychopathology,
including parent depression and behavioral inhibition, as a near-related measure to anxiety, to
understand the specificity of these associations. Missing data were checked using Little’s
Missing Completely at Random test in R (Little, 1988). Data were missing at random; thus, they
were handled using listwise deletion.

Sample Size and Power Analysis

G-power estimates indicated that power to detect relationships between parental
responses (accommodation, co-rumination, rumination, worry, perceived distress tolerance, and
perceived coping ability) for estimates of a small-to-medium effect size ($r = .20$) was .99 with
the proposed sample of 300 participants.
CHAPTER 3

RESULTS

Descriptive Statistics and Correlations

Descriptive statistics and bivariate correlations for all primary study variables are provided in Table 1. Distress tolerance, brooding rumination, worry, behavioral inhibition, and depressive symptoms were all positively associated with accommodation.
Table 1. Correlation matrix for self-report measures with mean and standard deviations

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<td>PROMIS</td>
<td>.32**</td>
<td>.54**</td>
<td>.52**</td>
<td>.47**</td>
<td>.38**</td>
<td>.43**</td>
<td>.20**</td>
<td>.57**</td>
<td>.30**</td>
<td>.12*</td>
<td>.28**</td>
<td></td>
</tr>
</tbody>
</table>

| M | 16.66 | 10.00 | 15.75 | 8.27 | 7.99 | 8.01 | 38.98 | 11.12 | 60.65 | 21.97 | 18.41 | 20.73 |
| SD| 8.09  | 3.38  | 5.94  | 3.42 | 3.04 | 3.21 | 10.01 | 3.71  | 9.83  | 7.11  | 6.51  | 7.65  |

*p < .05; **p < .01; M = Mean; SD = Standard Deviation; FASA tot = Family Accommodation Scale Anxiety, Total; DTS tot = Distress Tolerance Scale, higher-order total; DTS app = Distress Tolerance Scale, Appraisal subscale; DTS abs = Distress Tolerance Scale, Absorption subscale; DTS reg = Distress Tolerance Scale, Regulation subscale; DTS tol = Distress Tolerance Scale, Tolerance subscale; CCNES dis = Coping with Children’s Negative Emotion’s Scale, Distress subscale; RRS brood = Ruminative Response Styles, Brooding subscale; PSWQ = Penn State Worry Questionnaire Total; CRQ co-rum = Modified Co-rumination Questionnaire, Child-Focused Co-rumination subscale; AMBI = Adult Measure of Behavioral Inhibition Total; PROMIS = Patient-Reported Outcomes Measurement Information System-Depression Short Form Total
Regressions

A series of regression models estimated the relationship between the predictors and accommodation. Results are displayed in Table 2. In the first model (Aim 1), lower distress tolerance was positively associated with greater parent accommodation of child anxiety ($b = 0.37, SE = 0.14, t = 2.59, p = 0.01$), and perceived ability to cope with children’s negative emotions was not associated with accommodation ($p > .05$). In the second model (Aim 2), brooding rumination ($b = 0.45, SE = 0.13, t = 3.52, p < 0.001$) and worry ($b = 0.17, SE = 0.05, t = 3.53, p < 0.001$) were positively associated with accommodation of child anxiety, and parent-child co-rumination was not associated with accommodation over and above the variance explained by parents’ individual rumination levels ($p > .05$). In the third model (Aim 3), brooding rumination ($b = 0.53, SE = 0.16, t = 3.38, p < 0.001$) and worry ($b = 0.17, SE = 0.05, t = 3.49, p < 0.001$) remained positively associated with accommodation of child anxiety; however, distress tolerance was no longer associated with accommodation, and this estimate became negative, albeit non-significant ($b = -0.17, SE = 0.17, t = -0.94, p = .35$; Aim 3). In the final model, brooding rumination ($b = 0.33, SE = 0.17, t = 1.97, p = 0.049$), worry ($b = 0.15, SE = 0.05, t = 3.11, p = 0.02$), and depression symptoms ($b = 0.24, SE = 0.08, t = 3.18, p = 0.002$) were positively, independently associated with accommodation of child anxiety. Distress tolerance, perceived ability to cope with children’s negative emotions, parent-child co-rumination, and behavioral inhibition were not independently associated with accommodation ($p > .05$); the relationship between distress tolerance and accommodation remained negative and non-significant in this model ($b = -0.31, SE = 0.18, t = -1.76, p = 0.08$).

To unpack the relationship between distress tolerance, cognitive factors, and accommodation of child anxiety, exploratory analyses were conducted using the individual
distress tolerance subscales in the final model. In this model, worry \( (b = 0.17, SE = 0.05, t = 3.38, p < 0.001) \) and depressive symptoms \( (b = 0.24, SE = 0.08, t = 3.20, p = 0.002) \) remained positively associated with accommodation. Brooding rumination was no longer associated with accommodation \( (b = 0.32, SE = 0.17, t = 1.88, p = 0.061) \), and the distress tolerance subscales (tolerance, appraisal, absorption, and regulation), perceived ability to cope with child’s negative emotions, parent-child co-rumination, and behavioral inhibition were not associated with accommodation \( (ps > .05) \).
Table 2. Results of regression models

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<tr>
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<td></td>
<td></td>
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<tr>
<td>DTS tot</td>
<td>0.367*</td>
<td>-0.163</td>
<td>-0.310</td>
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<td>DTS tol</td>
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<td></td>
</tr>
<tr>
<td>DTS app</td>
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<td></td>
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<td>-0.033</td>
<td></td>
</tr>
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<td>DTS abs</td>
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<td>DTS reg</td>
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<td>0.326*</td>
<td>0.316</td>
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<tr>
<td>PSWQ</td>
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<td>0.154**</td>
<td>0.169**</td>
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<tr>
<td>CRQ co-rum</td>
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<td>0.034</td>
<td>0.029</td>
<td>0.009</td>
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</tr>
<tr>
<td>AMBI</td>
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<td></td>
<td>0.059</td>
<td>0.054</td>
<td></td>
</tr>
<tr>
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<td></td>
<td>0.239**</td>
<td>0.240**</td>
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<tr>
<td>Constant</td>
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<td>-1.646</td>
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<td>R²</td>
<td>0.030</td>
<td>0.119</td>
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<td>0.157</td>
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<tr>
<td>Adjusted R²</td>
<td>0.024</td>
<td>0.111</td>
<td>0.108</td>
<td>0.136</td>
<td>0.141</td>
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<tr>
<td>F Statistic</td>
<td>4.565** (df = 2; 292)</td>
<td>13.114** (df = 3; 291)</td>
<td>8.091** (df = 5; 289)</td>
<td>7.607** (df = 7; 287)</td>
<td>5.831** (df = 10; 284)</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; FASA tot = Family Accommodation Scale Anxiety, Total; DTS tot = Distress Tolerance Scale, higher-order total; DTS app = Distress Tolerance Scale, Appraisal subscale; DTS abs = Distress Tolerance Scale, Absorption subscale; DTS reg = Distress Tolerance Scale, Regulation subscale; DTS tol = Distress Tolerance Scale, Tolerance subscale; CCNES dis = Coping with Children’s Negative Emotion’s Scale, Distress subscale; RRS brood = Ruminative Response Styles, Brooding subscale; PSWQ = Penn State Worry Questionnaire Total; CRQ co-rum = Modified Co-rumination Questionnaire, Child-Focused Co-rumination subscale; AMBI = Adult Measure of Behavioral Inhibition Total; PROMIS = Patient-Reported Outcomes Measurement Information System-Depression Short Form Total
Parents play an important role in youth development (Cole et al., 2004; Eisenberg, 2000; Gross & Thompson, 2007; Jones & Prinz, 2005; Morris et al., 2011) and can inadvertently contribute to the maintenance of youth psychopathology and other negative outcomes through responses such as accommodation (Berg-Nielsen et al., 2002; Flessner et al., 2011; Garcia et al., 2010; Lebowitz et al., 2016; Rose et al., 2018; Yap & Jorm, 2015; Yap et al., 2014). Although several treatment protocols have been developed to directly target parent accommodation (Lebowitz, 2013; Lebowitz et al., 2014; Merlo et al., 2009; Storch et al., 2010), little is known about the function of accommodation for parents. Thus, the current study explored potential psychological processes that contribute to parent accommodation, including perceived distress tolerance and cognitive styles in parents. Results indicated that parent cognitive styles (e.g., worry and rumination) related to accommodation, even when controlling for parent psychopathology. In addition, parent distress tolerance related to accommodation, although this relationship did not hold when parent cognitive factors were added into the model. Parent-child co-rumination and parents’ perceived ability to cope with their child’s negative emotions were not related to accommodation.

The first model, which explored parents’ perceived ability to cope with general and child-related distress as predictors of accommodation, suggested a positive relationship between perceived parent distress tolerance and accommodation and no relationship between parents’ perceived ability to cope with their child’s negative emotions and accommodation. In other words, parents who endorsed greater difficulty tolerating distress in general also reported
engaging in accommodation more. This is consistent with some research that has identified relationships between parent emotion regulation and distress tolerance and accommodation (Kerns et al., 2017). However, this relationship changed in the models that included other parent processes and became non-significant.

The second model, which explored cognitive processes as predictors of parent accommodation, pointed to a positive relationship between parent rumination and worry and accommodation and no relationship between parent-child co-rumination and accommodation. Existing research has not explored the relationship between parent rumination, worry, and co-rumination with parent accommodation, despite the relationship between these parent factors and parent and youth psychopathology (Grimbos et al., 2013; Waller & Rose, 2010). In addition, co-worry, or extensively focusing on and discussing possible negative outcomes of events that may occur in the future, is broadly associated with anxiety and negative mood (Parkinson & Simons, 2012), but has not yet been explored in parent-child dyads. We found that parent cognitive processes are associated with accommodation of their child’s distress, and additional research in this area will be important to clarify the directionality of this relationship. It is possible that parents who tend to engage in repetitive negative thinking activate similar cognitive processes when their child is in distress, resulting in accommodation.

Another possible outcome was that parent rumination and worry would relate to greater parent-child co-rumination, which could contribute to parents providing excessive reassurance. In this study, parent-child co-rumination was not related to accommodation, and the associations between parent rumination and worry and parent-child co-rumination were small (rs = .18-.20). Although additional research in this area is needed, when parents see their child in distress, they may become distressed, both emotionally and physiologically, and repetitive negative thinking
and accommodation may be two maladaptive coping strategies that are employed. Alternatively, greater perseverative cognition may contribute to poorer distress tolerance (or vice versa), which could contribute to greater physiological and emotional reactivity to seeing their child in distress and accommodation as an attempt to reduce associated distress. In line with these theories, some research has highlighted a positive relationship between parent rumination and worry and distress intolerance (Patel et al., 2020) and a positive relationship between perceived parental overcontrol during childhood and rumination and worry (Manfredi et al., 2011).

The third model included both parents’ perception of their ability to tolerate distress and cognitive predictors to begin to explore the interplay between these factors. In this model, rumination and worry remained positively associated with accommodation, and co-rumination and parents’ perceived ability to cope with their child’s negative emotions were not related to accommodation. Parent distress tolerance was no longer associated with accommodation, and this estimate became negative, albeit non-significant. These findings further highlight the relationship between parent cognitive processes and accommodation. In addition, the change in direction of the relationship between distress tolerance and accommodation may point to some interaction or overlap between rumination, worry, and distress tolerance.

Given the known links between parent accommodation and parent psychopathology and parenting styles (Kagan et al., 2017), the third model also included parent depressive symptoms and behavioral inhibition, as a near-related measure of anxiety, to examine the specificity of the relationships between perceived distress tolerance and cognitive factors and parent accommodation. Rumination and worry remained positively associated with accommodation in this model, and depression was positively associated with accommodation as well. Behavioral inhibition, perceived ability to cope with their child’s negative emotions, co-rumination, and
distress tolerance were not related to accommodation, and the distress tolerance estimate remained negative and non-significant. These findings are consistent with previous work suggesting a relationship between parent psychopathology and accommodation (Kagan et al., 2017) and add to existing literature by highlighting two additional factors (i.e., rumination and worry) that relate to parent accommodation, even after controlling for parent psychopathology, and are important to consider during intervention.

Although distress tolerance was no longer a significant predictor in the models that included cognitive and perceived distress tolerance predictors together, as well as parent psychopathology, the change in direction of the relationship between parent accommodation and distress tolerance suggested a potential effect of other predictors on this relationship. To better understand the relationship between distress tolerance and accommodation and other predictors, an additional model was estimated that used the four distress tolerance subscales, instead of the higher-order total, which include tolerance, appraisal, regulation, and absorption. When all four subscales were included in the model, worry and depression remained positively associated with accommodation, and rumination was no longer associated with accommodation. In addition, none of the distress tolerance subscales were related to accommodation, and the estimates for tolerance, appraisal, and absorption were negative, whereas the estimate for regulation was positive. Conceptually, there may be some overlap between the repetitive negative thinking and distress tolerance subscales; for example, rumination and absorption both reflect a tendency to get stuck in negative emotions. This may be missed when examining the relationship between global distress tolerance and accommodation. In the context of child anxiety, it makes sense that worry, which reflects perseverating on fears about the future, would relate to accommodation; parents who worry often may be more likely to accommodate in an effort to prevent child or
associated parent distress or potential negative outcomes. Future research that uses additional analytic techniques, such as commonality analysis, will be important to disentangle the relationships between parent perceived distress tolerance, cognitive factors, and accommodation.

It is also possible that there are factors that were not measured in the current study that may interact with perceived distress tolerance and cognitive factors and contribute to the degree of, or change the relationship with, accommodation. For example, degree of child distress (Settipani & Kendall, 2017), parental beliefs about how harmful anxiety is (Johnco et al., 2022; Settipani & Kendall, 2017), and parent attachment insecurity (Johnco et al., 2022) all have been found to relate to parent accommodation. It is plausible that parents who hold negative beliefs about their child’s anxiety tend to accommodate, even if they have greater distress tolerance globally. In addition, it is also possible that a parent’s perception of their ability to tolerate distress is not reflective of their biological response to seeing their child in distress and that their biological reactivity contributes to accommodation. Some existing research has highlighted parents’ biological response to viewing their child (Ho et al., 2014) or another child (Kerns et al., 2017) in distress. Importantly, however, existing research in this area is scarce and findings are mixed, with some studies suggesting that poor regulation and distress tolerance relate to greater accommodation (Kerns et al., 2017; Lebowitz et al., 2016) and other studies finding no relationship between parent distress tolerance or regulation and accommodation (O’Connor et al., 2020; Selles et al., 2018; Zavrou et al., 2019). Thus, we may be missing some important contributing factors to accommodation. Future research in this area, particularly research that utilizes multiple measures of distress tolerance and emotion regulation, including biological (e.g., measures of physiological and neural reactivity) and self-report measures, will be important to understand how cognitive styles and regulatory processes may reinforce accommodation and
other maladaptive coping strategies in both parents and their children.

Strengths of the present study include the focus on the various psychological processes in parents that may contribute to accommodation. Although efforts have been made to target parent accommodation (e.g., Lebowitz, 2013) and there is recognition of the benefits of attending to accommodation in youth interventions (Kendall et al., 2020), there is limited research on the function of accommodation for parents, making it difficult to address in a standardized way across youth interventions. The current findings point to a relationship between parent cognitive processes (e.g., rumination and worry) and accommodation, highlighting an additional avenue for intervention. For example, intervention that targets emotional awareness in parents and bolsters problem-solving skills may help decrease engagement in perseverative cognition and reduce accommodation. In addition, findings suggest that poor perceived parent distress tolerance may also contribute to accommodation, and additional research in this area using multiple methods of assessment will be important. If parents demonstrate biological reactivity to their child’s distress, as initial research suggests (e.g., Lebowitz et al., 2016), awareness of this physical response and mindfulness training, particularly in the context of child distress, may be additional important targets of intervention.

A limitation of the present study is the reliance on self-report. Given the known relationship between parent psychopathology and accommodation, future research that uses multiple measures, including clinical interviews to clarify parent psychological symptoms, will be important. Similarly, although there is a benefit to self-report of distress tolerance (i.e., it reflects parents’ own perception of how well they tolerate distress, which likely influences how they cope with stress), future research would benefit from also including a biological assessment of parent distress in response to their child’s distress to inform both preventative efforts and
interventions. Moreover, although there is a benefit to studying accommodation in anxious parents (measured by engagement in worry in the current study), this may limit the generalizability of the current results. Additionally, the current sample was racially/ethnically homogenous and included mostly moms, which further limits the generalizability of these results. Moreover, it is likely that all parents tend to accommodate to a degree, regardless of the presence of psychopathology, and research that includes a diverse sample of parents/primary caregivers with varying degrees of psychological symptoms can be helpful in clarifying when accommodation may be developmentally appropriate versus when it becomes more harmful.

The present study fills an important gap in the literature by focusing on the processes in parents that may contribute to accommodation. Findings highlight a relationship between parent cognitive styles and accommodation and point to the need for additional research in this area to inform interventions for parent accommodation. Effectively targeting parent accommodation and other maladaptive responses has the potential to improve youth outcomes at large.
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