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Parent Psychopathology and Parent-Child Conflict Interact to Predict Children's Anxiety but Not Depression

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ABSTRACT

Correlates of child psychology have been studied for decades (Ollendick & Herson, 1989). Research has shown that parental psychopathology can influence child psychopathology through a combination of familial and environmental factors (Biedel & Turner, 1997; Burstein et al., 2010). Parent-child interactions have also been found to relate to child psychopathology (Donenberg & Weisz, 1997). A possible explanation for these relations is that the behavior of parents experiencing psychopathology symptoms differs from parents not facing these difficulties, like displaying more hostile behavior towards their offspring (Burstein et al., 2010). The present study examines the interaction of parent psychopathology and parent-child conflict during a stressful task to see if conflict moderated the relation between parents' and children's psychopathology. We studied whether the relation between parent and child symptoms would be stronger for dyads characterized by conflict. 184 children aged 3 to 11 (91 boys and 93 girls) visited the lab. Parents completed questionnaires to measure their depression and anxiety symptoms, as well as the child's anxiety and depressive symptoms. The parent and the child also participated in a Lego task where instances of child conflict were observed. Results showed that parent anxiety interacted with parent-child conflict to predict children's anxiety symptoms, such that parents' anxiety predicted children's anxiety only among dyads characterized by high levels of conflict. The same was not true for depressive symptoms. The current study expands research about moderators by showing that the link between parent and child psychopathology is qualified by other aspects of the family environment.

Keywords: Psychopathology, Parent-Child Conflict, Anxiety Symptoms, Depressive Symptoms, Internalizing Disorders

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Valerie Gomez is a third year Psychology major. She is a Research Assistant in the Emotion Regulation lab under Dr. Elizabeth Davis, assisting on a research project that studies the relation between thinking processes and emotion regulation in Hispanic children under the mentorship of Laura Quiñones-Camacho. She is interested in studying parental influences on the development of child psychopathology and believes in bettering mental health for children and adolescents. In the future, she hopes to become a child psychologist.

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Dr. Elizabeth Davis is an Assistant Professor in the Psychology Department at UC Riverside. She earned her PhD in Developmental Psychology from the University of California, Irvine in 2009. Research in the Emotion Regulation Lab focuses on understanding how emotion regulation relates to adaptive outcomes (e.g., learning) and maladaptive outcomes (e.g., anxiety) in childhood. Emotion regulation can be broadly defined as the set of processes by which people influence the timing, expression, and experience of their emotions. The lab's work to date has aimed to identify regulatory strategies that children can use to effectively alleviate negative emotion, and to identify individual differences in children's biology and social experiences that determine whether they can regulate emotion effectively. This research also focuses on identifying mechanisms responsible for effective emotion regulation (e.g., attentional focus) to explain why certain emotion regulation strategies attenuate negative emotion and distress. Ultimately, this program of research can be viewed as providing an empirical basis for interventions aimed at improving children's emotion regulation abilities and mitigating risk for maladaptive outcomes.

INTRODUCTION

Parents are one of the greatest influences on a child's life. Children's development is heavily influenced by both biological and psycho-social aspects of parenting (Ollendick & Herson, 1989). Thus, it is not surprising that parents and children display similar symptoms of psychopathology. A reason why we see this relation between parents' and children's psychopathology may be that children learn, mimic, and internalize their parents' disordered behaviors. Children are at the greatest risk for developing the type of psychopathology demonstrated by their parents because of environmental factors such as parent modeling (Burstein et al., 2010). This is important as the internalization of these behaviors might be a mechanism through which child psychopathology emerges and is maintained throughout the lifespan. Looking at specific factors such as parent psychopathology and parent-child conflict are important when assessing which children are at a higher risk for developing psychopathology. With more research being done on this subject, we are able to minimize the risk factors that increase the likelihood of child psychopathology. Additionally, research on these relations can help create early intervention and prevention measures for child anxiety and depression.

A great amount of research has shown parents' influence on child psychopathology; factors that have been studied vary from parent psychopathology (Biedel & Turner, 1997; Burstein et al., 2010), parent-child interactions (Donenberg & Weisz, 1997; Caron et al., 2006), style of parenting (Van Der Bruggen et al., 2008), and more. First and foremost, parent psychopathology has been found to be a strong predictor for child psychopathology. Researchers have found that children of parents with anxiety disorders and depressive disorders were more likely to have a diagnosable disorder than children of parents that did not have these disorders (Biedel & Turner, 1997). According to this research, the chances of a child having a disorder ranged from 5.05 to 6.25 times higher if the parent had anxiety, depression, or both (Beidel & Turner, 1997). There is a strong link between children's depression and anxiety, and their parent's psychopathology. Therefore, having a parent with a history of psychopathology can affect a child in a multitude of ways.

Parent-child interactions have a strong association with symptoms of depression and anxiety in children (Marmorstein & Iacono, 2004), suggesting that there might be other factors of the parent-child relationship that could account for the emergence of psychopathology in children. One study found that there was an association between child anxiety and parental control (Van Der Bruggen et al., 2008). Interestingly, previous research has associated adult depression/anxiety with reports of over-controlling and dominant behavior (Donenberg & Weisz, 1997). These interactions could lead to parents having more conflict with their children, which in turn can be correlated with symptoms of depression and anxiety. It has been shown that high parent-child conflict was associated with major depression in adolescence (Marmorstein & Iacono, 2004). In this study, we examined instances of parent-child conflict during a stressful task to see if the way parents act in situations like these predicts child symptoms of depression and anxiety when also considering parents' symptoms. Considering these two aspects of a child's environment together is important, as symptoms may be especially pronounced for children who have both a parent with psychopathology and a relationship characterized by conflict with their parents.

Current Study

In the current study, we looked at parent depression and anxiety along with parent-child conflict to see if conflict between parents and their children during a stressful task moderated the effects of parent psychopathology on children's depression and/or anxiety. Based on past work done on the link between parent and child psychopathology, we hypothesized that parent depression and anxiety would be positively correlated with child depression and anxiety. We also hypothesized that parent-child conflict would be positively associated with child psychopathology. Moreover, we were interested in exploring parent-child conflict as a moderator of the link between parent psychopathology and child psychopathology. We expected parent-child conflict to moderate the effect of parent depression on child depression and the effect of parent anxiety on child anxiety, such that parent psychopathology would be a particularly important predictor of child psychopathology for children experiencing high conflict.

METHOD
Participants

Our study included a sample of a total of 184 children, ages 3 to 11 ($M = 7.67$, $SD = 2.30$). This sample included 91 boys and 93 girls. In terms of ethnicity, children were reported by parents as Caucasian (18.2%), African American (10.7%), Hispanic (29.4%), Asian American (2.1%), Other (2.1%), and More than one race (35.3%). Of the caregivers that came in, 153 were mothers and 28 were fathers. Mothers' formal schooling ranged from grade school (1.6%) to a Doctoral degree (2.7%) with the mean formal education level of a trade, technical, or vocational degree ($M = 4.96$, $SD = 1.34$). Fathers' formal schooling ranged from Grade School (1.6%) to a Doctoral degree (3.6%) with the mean also being closer to having a trade, technical, or vocational degree level ($M = 4.77$, $SD = 1.42$). Family income ranged from $15,000 or less (15.5%) to above $100,000 (11.8%) with the mean income being in the $41,000 to $50,000 bracket ($M = 5.10$, $SD = 3.35$).

Procedure

Families came to the Emotion Regulation lab for one visit. Before any study procedures began, informed consent was obtained from the parents, and assent (verbal and written) was obtained from the children. While children completed a series of engaging tasks (not considered here), parents completed questionnaires about themselves and their child (e.g., demographics, child psychopathology symptoms, and their own symptoms). About half-way through the study, parents were invited to join their child for a series of tasks. Of importance for this study is a frustrating Lego task that they worked on together. Our measure of parent-child conflict was coded from behavior in this task (described below). At the end of the study, families received a small honorarium for their participation and children chose a toy to take home as a thank-you gift. All procedures were done in English.

Stimuli and Measures

Parent-Child conflict. The child and their parent were asked to work on completing a difficult Lego structure together. During the first 5 minutes of the task (Phase 1), parents were given the instruction manual on how to complete the Lego but were asked to only provide verbal help. For the second part of the task (also 5 minutes; Phase

2) parents could physically help their child if they wanted. The Lego structure was a highly complex structure too difficult to complete in 10 minutes even for an adult, thus, the task was designed to elicit frustration for both parent and child. Parent-child conflict was globally coded from this task using a 5-point Likert scale (1 = *low conflict*; 5 = *high conflict*), based on the intensity and duration of child and parents' distress-related or conflict-related behaviors and verbalizations. This could include verbalizations such as "Hey, don't get mad at dad!" or non-verbal behaviors such as throwing Lego pieces, crossing arms, and frowning. Two separate codes were assigned (one for each Phase) but we used the average conflict observed in the two Phases for analyses. Both frequency and intensity of these behaviors and verbalizations were used to assign a level of conflict. Inter-rater reliability was excellent (93% agreement).

Parent psychopathology. For depression, we used the *Center for Epidemiological Studies-Depression* questionnaire (CES-D; Radloff, 1975). The CES-D is a 20-item measure that asks parents how often in the past week have they had various symptoms associated with depression (e.g., restless sleep, poor appetite, feeling lonely). Responses range from 0 to 3 for each question (0 = *Rarely or None of the Time;* 3 = *Most or Almost All the Time*). Higher scores indicate greater depressive symptoms. The internal consistency of this questionnaire in our sample was very good ($\alpha = .90$).

To evaluate anxiety symptomatology, we used The Penn State Worry Questionnaire, which is a 16-item measure that uses a 5-point Likert scale (PSWQ; Meyer et al., 1990). The questionnaire measures worry and general anxiety disorder. The scale ranges from 1 to 5 for each question (1 = *Not at all typical of me*; 5 = *Very typical of me*). The total score is calculated by summing the first 11 items and the reverse-scores of the other 5 items. Higher PSWQ scores reflect greater levels of pathological worry. The internal consistency for our sample was also very good ($\alpha = .91$).

Child psychopathology. We used the MacArthur Health and Behavior Questionnaire (version 1.0), on which parents provided information about their children's functioning (HBQ; Essex et al., 2002). The HBQ has multiple scales (e.g., depression, externalizing symptoms,

conduct disorders, attention-deficit/hyperactivity disorder symptoms, etc.) For this study, we focused on the depression subscale only. Responses on the HBQ ranged from 0 to 2 (0 = *Never or not true; 2 = Often or very true*). The depression subscale is calculated as the mean of all the items on the subscales. Reliability for the subscale in our sample was adequate ($\alpha = .69$).

We used the Screen for *Child Anxiety Related Disorders* (SCARED; Birmaher et al., 1999) to assess anxiety. The SCARED is a 41-item inventory that uses a 3-point Likert scale (0 = *Not True or Hardly Ever True; 2 = Very True or Often True*) that screens for symptoms of anxiety disorders in children. We used the version of this questionnaire in which parents report on their child's symptoms. We focused on the general score that is calculated by summing up all items. A score higher than 25 on this scale may indicate the presence of an anxiety disorder. Reliability was excellent ($\alpha = .90$).

RESULTS

Gender Differences. There were no gender differences for any of our variables of interest (i.e., parent-child conflict, parent anxiety, parent depression, child anxiety, and child depression), at all $ts < 1.888$, $ps > .061$.

Correlations. As expected, there was a positive significant correlation between parent anxiety and child anxiety, $r(170) = 0.324$, $p < .001$. Additionally, there was a positive significant correlation between parent depression and child depression, $r(173) = 0.412$, $p < .001$. A positive significant correlation between parent depression and child anxiety was also present, $r(174) = 0.319$, $p < .001$. There was also a significant positive correlation between parent anxiety and child depression, $r(170) = 0.299$, $p < .001$. Parents with psychopathology, either depression or anxiety, were linked to child psychopathology of either depression or anxiety. Therefore, parental anxiety was not specifically correlated to only child anxiety. These correlations show that the presence of parent psychopathology is correlated to their child having psychopathology even though the symptoms may not be the same as their parents. However, there were no significant associations between parent-child conflict and child anxiety, $r(172) = 0.015$, $p = .841$, or between parent-child conflict and child depression, $r(173) = -0.008$,

$p = .915$. Age was significantly correlated only with child depression, $r(183) = .191$, $p = .009$.

Regression model for child depression. Given the correlation of age with child depressive symptoms, at the first step of this model we entered children's age as a covariate. This step was significant $F(1, 164) = 5.308$, $p = .022$, $R^2 = .031$ and age was a significant covariate ($b = .023$, $t = 2.304$, $p = .022$). At the second step, we entered parents' depressive symptoms and parent-child conflict. This step was significant $F\Delta (2, 162) = 14.803$, $p < .001$, $R^2\Delta = .150$. As expected, parents' depressive symptoms predicted child depressive symptoms ($b = .010$, $t = 5.433$, $p < .001$), but parent-child conflict did not predict child depressive symptoms ($b = -.011$, $t = -.489$, $p = .626$). At the third step, we added the interaction between parents' symptoms and parent-child conflict, but this step of the model was not significant, $F\Delta (1, 161) = 14.803$, $p < .001$, $R^2\Delta = .013$, suggesting parent-child conflict did not directly relate to children's depressive symptoms, nor did it moderate the effect of parent depressive symptoms on child depressive symptoms.

Regression model for child anxiety. At the first step of this model, we entered parents' anxiety symptoms and parent-child conflict $F(2, 160) = 9.668$, $p < .001$, $R^2 = .108$. This first step was significant. As expected, parents' anxiety symptoms predicted child anxiety symptoms ($b = .231$, $t = 4.395$, $p < .001$), but parent-child conflict did not predict child anxiety symptoms ($b = -.212$, $t = -.289$, $p = .773$). At the second step, we added the interaction between parents' symptoms and parent-child conflict. This step was significant $F\Delta (1, 159) = 6.667$, $p = .011$, $R^2\Delta = .036$. The interaction of parents' anxiety symptoms and parent-child conflict was significant ($b = .131$, $t = 2.582$, $p = .011$). A closer look at the interaction *(Figure 1)* revealed that higher parent anxiety was associated with more child anxiety, but only for children who experienced high parent-child conflict ($b = .354$, $t = 4.669$, $p < .001$). For children who experienced low parent-child conflict during the task, parents' anxiety did not relate to children's anxiety ($b = .092$, $t = 1.157$, $p = .249$).

DISCUSSION

The current study was conducted to examine whether

conflict moderated the relation between parental psychopathology and child psychopathology. We hypothesized that parent depression and anxiety would be related to child depression and anxiety, respectively, and that parent-child conflict would moderate both associations. Specifically, we expected parent psychopathology to be a particularly important predictor of child psychopathology for children experiencing high parent-child conflict. As expected, both parents' anxiety and parents' depressive symptoms were related to children's anxiety and depressive symptoms. However, we found the expected moderating effect of parent-child conflict only for anxiety and not for depressive symptoms. Thus, the results only partly support our hypotheses.

The interaction pattern for anxiety showed that there was no relation between parent and child anxiety for low-conflict dyads, but a positive association between parents' and children's anxious symptoms among high-conflict dyads, as shown in *figure 1*. High parent-child conflict coupled with parent anxiety related to symptoms of anxiety in children, an additional risk factor that children who experienced low conflict did not have. Conflict may be particularly important for anxiety, because high levels of

stress within the dyad are likely linked with other aspects of difficult parenting, such as high levels of parental control, which has been found to increase the chance that particular types of anxiety symptoms and disorders will develop among children (Wood, 2006). For example, it has been shown that mothers were more involved and intrusive in a difficult and stressful situation (Hudson & Rapee, 2000). In the context of high conflict interactions, parents are likely engaging in behaviors that put too much pressure on the child, generating anxiety over the inadequacy to handle the stressful situation (Van Der Bruggen et al., 2008). In addition, we believe that high conflict situations with a parent may serve as an additional stressor to children, who will may already not feel capable to handle these types of situations because they are used to their parents taking control. This increased stress can be an additional possible mechanism through which child anxiety symptoms become worse through childhood.

We found the moderating effect for anxiety but not depression, perhaps because parents' anxiety symptoms are more likely to prompt parents to want to be in control of the situation and dominate their children more so than would parents' depressive symptoms. In turn, this greater
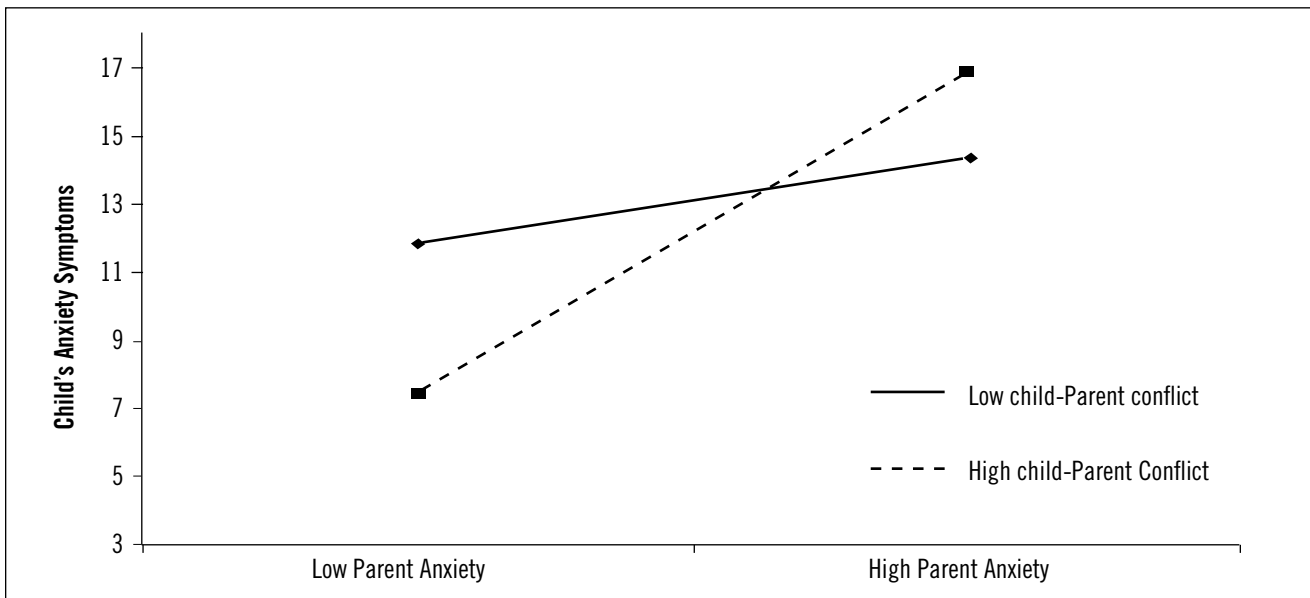

Figure 1. *Interaction between parents' anxiety symptoms and parent-child conflict predicting child's anxiety symptoms.*
Low child-parent conflict: b = .092, t = 1.157, p = .249
High child-parent conflict: b = .354, t = 4.669, p < .001

need to be in control of the child's behavior likely leads to high conflict within the dyad, and in turn, more anxiety symptoms for the child. Evidence supports the idea that parents' anxiety level influences parental control behaviors as a mechanism through which parents aim to avoid having their child encounter threatening situations (Van Der Bruggen et al., 2008). In this case, parents' anxiety is associated with them controlling the stressful situation, which can create conflict with their children as they put pressure on children to behave in certain ways. It is possible we also found this effect because of the behaviors associated with each of these types of psychopathological symptoms. For example, a depressed parent may not express interest in the activity with their child, resulting in fewer attempts at controlling the situation, and in turn, less conflict within the dyad. On the other hand, anxious parent may be overly interested and over involved in the activity, increasing the likelihood of conflict happening during the task.

Like any other study, there were limitations that should be acknowledged. For one, parents' and children's psychopathology symptoms were both provided by the parent, so there may have been some reporter bias. For example, anxious parents could have rated their child as being more anxious than they really are. In addition, the environment could have also played a role when it came to the conflict observation we used. Doing the task in a lab setting could have made parents or children more anxious and could have led to more frustration and conflict, or it could have led to parents interacting with their children in a more socially acceptable way. For one, parents could have acted more kindly when interacting with their children,

because they were aware that they were being watched. Hence, there was a possible chance of observer effect as subjects could have changed their behavior because they know they are being studied.

It would be valuable to do further research on other types of parent and child interactions that may additionally moderate symptoms of child psychopathology. For example, parents' socialization of emotional responses might also moderate the relation between parent and child symptoms. Also, it would be useful to study why parents with psychopathology display some behaviors more often than parents not experiencing symptoms of psychopathology. These behaviors can shed light on why these parents have different interactions and relationships with their children. Future studies should also aim to study parent-child interactions in more naturalistic settings to better assess their behaviors during an interaction. By doing the observation in the family's household instead of a lab, the participants may act the way they usually would, without pressure of having to act in a more socially desirable manner.

CONCLUSION

The current study expands our knowledge of the link between parent and child psychopathology by highlighting parent-child conflict as an important moderator of child anxiety but not depressive symptoms. This is important to note when attempting to reduce risk factors in children's lives that can lead to psychopathology and has clear implications for clinical work as clinicians must be aware of the myriad factors that play a role in child psychopathology.

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