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Dispositional Mindfulness is Cross-Sectionally Predicted by Interactions between Interparental Conflict and Parent-Child Relationships

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Abstract

Theory emphasizes the importance of the family environment for the development of dispositional mindfulness, but past research has focused exclusively on parent-child attachment relationships as family-level predictors of mindfulness. Our goal was to examine unique and joint associations of both interparental conflict and parent-child relationship quality with dispositional mindfulness. Participants were 150 youth (14–21 yrs) who reported the warmth and support in their relationships with mothers and fathers separately, as well as their appraisals of the properties of their parents' conflict, how threatening that conflict is, and how responsible for it they feel, in addition to dispositional mindfulness. Results indicated consistent interactions between conflict properties and mother-child relationship quality in relation to dispositional mindfulness. Dispositional mindfulness was lowest for youth who reported low levels of frequent/intense interparental conflict and poor-quality relationships with mothers. In contrast, either self-blame/threat or poor-quality relationships with mothers predicted lower levels of dispositional mindfulness. Implications for theory and practice are discussed.

Keywords

dispositional mindfulness; interparental conflict; parent-child relationships

1. Introduction

Dispositional mindfulness refers to a pattern of processing environmental and internal sensory information with non-judgmental awareness of the present moment. More mindful individuals also experience greater well-being, self-regulation, healthy eating, and positive emotional states, as well as reduced depression and anxiety (e.g., Brown & Ryan, 2003; Pepping et al., 2013). However, the factors that contribute to the development of dispositional mindfulness remain relatively unexplored. Theoretically, the quality of family relationships is likely to shape the ways that youth process sensory information, including dispositional mindfulness (Ryan et al., 2007; Shaver et al., 2007). Empirical tests of this proposition have focused on parent-child attachment relationships (e.g.,

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Pepping & Duvenage, 2016; Ryan et al., 2007). However, family systems theory (Cox & Paley, 2003) highlights the importance of considering the joint, coordinated influence of multiple family relationships. The goal of this study is to provide the first investigation of the associations between interparental conflict, parent-child relationship quality, and dispositional mindfulness.

1.1 Roots of Dispositional Mindfulness

Theoretically, the development of mindful attention and awareness has roots in early caregiver-child relationships, “facilitated by providers who can be attuned to, mirror, and resonate with the [child’s] experience” (Ryan et al., 2007, p. 180). Because providers who are sensitive and attuned are more likely to have securely attached children, initial work in the environmental origins of dispositional mindfulness focused on attachment security. Indeed, individuals with a secure attachment style also report higher levels of mindfulness (e.g., Pepping et al., 2015; Shaver et al., 2007; Walsh et al., 2009). In addition, there are indirect effects of parental rejection and insensitivity from parents on dispositional mindfulness through attachment anxiety and avoidance (Pepping & Duvenage, 2016).

1.2 Moving Beyond Attachment Security

Key to family systems theory is that understanding the effects of family relationships requires a focus on not just multiple but also coordinated family relationships (Cox & Paley, 1997). Therefore, it is critical to explore other family relationships beyond parent-child attachment. Interparental conflict is an additional characteristic of family relationships that is important to investigate. Conflict between parents that is frequent, intense, hostile, and/or poorly resolved is stressful for parents and children. Interparental conflict drains parents of emotional resources that are necessary for sensitive parenting, decreasing emotional availability and parental acceptance as well as increasing hostility towards and conflict with children (e.g., Gonzales et al., 2000; Sturge-Apple et al., 2006). As the effects of family relationships are often not isolated, and instead need to be considered in conjunction with each other (Cox & Paley, 2003; Lucas-Thompson & Granger, 2014), the goal of the current study was to investigate interactive links of both interparental conflict and parent-child relationship quality with dispositional mindfulness.

1.3 Family Relationships and Mind/lessness

Mindful attention is characterized by patterns that reflect maintaining attention that is a) present-focused, b) intentional, and c) non-judgmental (Brown & Ryan, 2003). In contrast, then, mind/lessness is characterized by attention that is routinely focused on the future or the past, is poorly regulated or controlled, and is judgmental of the self. There is an extensive body of literature documenting that interparental conflict and parent-child relationships predict outcomes similar to mindlessness. For instance, a pattern of attention that is focused on the past often manifests as perseverative cognition (e.g., rumination) (Brosschot et al., 2006). Interparental conflict is often appraised as threatening to children and their family (Grych & Fincham, 1993), which can create long-lasting concerns about the effects of the conflict (Davies & Cummings, 1994), and is linked with more positive beliefs about rumination (Chow & Lo, 2017). Less-positive parenting practices also contribute to problems with rumination (Hilt, Armstrong, & Essex, 2012). Similarly, both interparental

conflict and negative parent-child relationships predict prolonged stress recovery (Albers et al., 2008), likely in part because of greater rumination (Brosschot et al., 2006). Another pattern of mindlessness is thinking focused on the future, which often manifests as anxiety. Children exposed to interparental conflict as well as poor-quality parenting have more symptoms of anxiety (Ablow et al., 2009; Manassis & Bradley, 1994).

An additional element of mindfulness is attention that is intentional, in that individuals are able to direct and maintain their attentional focus. The chronic stress of exposure to these negative family relationships can disrupt regulation in a variety of domains. For instance, interparental conflict is associated with patterns of an attention bias towards negative emotional stimuli (Lucas-Thompson et al., 2017; Lucas-Thompson et al., 2020). In addition, children with insecure attachments often struggle with self-regulation (Repetti et al., 2002). There also is mixed evidence that attachment security is related to attention allocation (Belsky et al., 1996; Olson et al., 1990). Finally, mindful attention is non-judgmental. Greater levels of self-esteem are reported by adolescents who perceive their parents' conflict as less threatening (Bickham & Fiese, 1997) or who experience parenting marked by balanced warmth and discipline (Milevsky et al., 2007). Although there is little direct empirical evidence documenting reduced dispositional mindfulness among youth exposed to interparental conflict and poor-quality parent-child relationships, this theoretical and empirical work provides strong reasons to expect just such an association. The goal of this study is to provide the first empirical test of both of these pathways.

1.4 Unique or Interactive Effects

Again, it is important not just to consider multiple family relationships, but also consider the important ways that they work together to shape important developmental outcomes (Cox & Paley, 1997). It is challenging for parents to maintain positive relationships with children in the context of negative interparental conflict. However, parents who are better able to maintain warm and supportive relationships with their children in the face of conflict with their partners may protect their children from the negative effects of conflict exposure (Grych & Fincham, 1990; Lucas-Thompson & Granger, 2014). It is also possible that negative relationships with parents may compound the effects of interparental conflict on regulatory and adjustment outcomes, including mindfulness. Although some studies suggest unique but not interactive effects of parenting and interparental conflict (Grych et al., 2004), there is compelling evidence for the joint, coordinated influence of these important family relationships on health, adjustment, and physiology, namely for the buffering effects of positive relationships with parents (Hibel et al., 2011; Katz & Gottman, 1997; Lucas-Thompson & Granger, 2014). Therefore, in the current study, our goal is to investigate if interparental conflict and parent-child relationship quality have interactive associations in relation to dispositional mindfulness.

1.5 The Current Study

This study will provide the first empirical investigation of the unique and/or joint associations of conflict and parenting in relation to mindfulness. These associations are examined in youth aged 14–21, a critical period for the development of self-regulatory abilities (Steinberg, 2015). Although there is mixed evidence about sex differences in parent-

child relationship quality (e.g., Neighbors et al., 1997; Starrels, 1994), because several studies suggest that relationships with fathers and mothers are uniquely associated with youth outcomes (e.g., Lucas-Thompson, 2014), we examined relationships with mothers and fathers separately. We hypothesized that more-negative appraisals of interparental conflict and poorer-quality relationships are uniquely predictive of lower levels of dispositional mindfulness. We also expected that these unique effects would be qualified by significant interactions between conflict appraisals and parent-child relationship quality, such that higher-quality relationships with parents buffer the effects of negative interparental conflict appraisals on mindfulness.

2. Method

2.1 Participants

One hundred fifty youth (14–21 years old, $M = 17.86$, $SD = 2.14$; 59% female) were recruited from undergraduate courses at a university ($n = 95$, 64%) and from the community ($n = 53$, 36%). We selected this sample size to be consistent with past studies that were adequately powered to detect interactions (Mathieu et al., 2012; Ohly et al., 2010). The primary inclusion criteria in addition to age was that participants had two caregivers living in the home. Participants were 72% non-Hispanic Caucasian, 7% Hispanic, 3% Asian or Pacific Islander, 2% African American, 1% American Indian, and 16% other or multiple ethnicities; 1.3% did not report ethnicity. There were no differences in sex, ethnicity, or key study variables, $ps > .36$, based on whether participants were youth from the community or university. Parents of most youth (78.5%) had been married or cohabitating for their entire lives, and all parents had been married or cohabitating for at least two years (length of relationship $M = 22.00$, $SD = 6.57$). Yearly family income was diverse ($Range = \$35,000$ to $\$150,000$, $Median = \$124,999$, $SD = \$36,480.93$). The majority of mothers (37%) and fathers (31%) had a four-year college degree, but a variety of levels of parental education were also represented.

2.3 Procedures

Informed consent/assent was provided by college students and community youth as well as their parents. The current procedures were part of a larger study on family relationships and health (see Lucas-Thompson et al., 2021 for more details). For this study, at two visits to the laboratory separated by a week, participants answered questionnaires on a computer.

2.4 Measures

2.4.1 Interparental conflict.—The Children’s Perceptions of Interparental Conflict Scale (CPIC) (Grych et al., 1992), is an internally consistent, reliable, and valid measure of interparental conflict appraisals (Grych et al., 1992). The CPIC has been validated for use in childhood, adolescence, and emerging adulthood (e.g., Bickham & Fiese, 1997). Youth responded to 49 items with the options “true,” “sort of true,” or “false”. High scores on *conflict properties* indicate conflict that is more frequent, more hostile, more poorly resolved, has stable causes, and puts the youth in the middle (28 items; Cronbach’s $\alpha = .94$, $M(SD) = 1.53(43)$). High scores on *threat* indicate conflict that youth interpret as threatening and have trouble coping with (12 items; Cronbach’s $\alpha = .78$, $M(SD) = 1.41(.32)$). High scores

on *self-blame* indicate conflict for which the youth blames him/herself and perceives to be about him/herself (9 items; Cronbach's $\alpha=.89$, $M(SD)=1.23(.38)$). Evidence suggests that each dimension of conflict appraisals is unique and important (Bickham & Fiese, 1997; Lucas-Thompson & George, 2017), including in relation to youth outcomes; therefore, we examined them separately.

2.4.2 Parent-child relationship quality.—Youth completed the Parental Warmth, Support, & Hostility Scale (Conger et al., 2002), a 13 item scale about mother-youth and father-youth relationships, separately (Cronbach's α , mothers=.92, $M(SD)=2.47(.51)$, fathers=.88, $M(SD)=2.40(.44)$) on a scale from 0 ('never') to 3 ('usually').

2.4.3 Mindfulness.—Youth completed the Mindful Attention and Awareness Scale – Adolescent version (MAAS-A), a reliable and valid measure of dispositional mindfulness (Brown et al., 2011). This scale consists of 15 items (Cronbach's $\alpha=.78$ $M(SD)=3.95(.64)$) answered on a scale from 1 ('almost always') to 6 ('almost never'); higher scores indicate greater mindfulness.

2.4.4 Control variables.—Participants reported sex, age, maternal education, and ethnicity (White vs. non-White) and whether they currently lived at home with their parents (37% lived at home; 61% did not).

2.5 Data Analysis

The dimensions of conflict appraisals and parent-child relationship quality were all significantly skewed; therefore, log-transformed variables were used in analyses. There were very low levels of missing data (.7%, for all variables except 1.3%, for sex, age, and living status, and 5.3% for maternal education). We used listwise deletion to handle missing data, because the percent of missing data was much lower than 15%, and because it is robust to violations of missing at random assumptions for predictor variables (Allison, 2014, n.d.). Main effects of conflict appraisals and parent-child relationship quality in relation to mindfulness were tested using regression analyses. Next, multiplicative interaction terms were calculated, after centering, and interaction models were tested and interpreted using Aiken & West's (1991) recommendations. Analyses were conducted using Mplus7.4 (Muthén & Muthén, 1998–2012) and online calculation tools for establishing simple slopes (Preacher et al., 2006). These models controlled for lower-order terms, and all multivariate analyses controlled for participant sex, age, ethnicity, maternal education, and living status.¹ In addition, we used the false discovery rate (fdr) alpha adjustment (Benjamini & Hochberg, 1995), and indicate in the results which analyses were significant controlling for the fdr. Standardized coefficients are presented to estimate effect size; coefficients of .1, .3, and .5 correspond to roughly small, moderate, and large effects, respectively. A post-hoc power analysis conducted with GPower (Faul & Erdfelder, 1992) indicated excellent power to detect small-to-moderate effects or larger ($1-\beta>.93$), but less than adequate power to detect small effects (.41).

¹Exploratory analyses examined whether key analyses were moderated by age or living status; none were significant.

3. Results

3.1 Main Effects

Bivariate correlations between study variables are presented in supplementary Table 1. Regression analyses examined main effects, controlling for sex, age, education, race, and living location (see supplementary Table 2). Threat and conflict property appraisals were both significantly related to dispositional mindfulness, whereas self-blame was not; the main effects of threat appraisals was significant controlling for the *fdr*, whereas the main effects of conflict property appraisals were not. Both associations were small to moderate in size. Threat appraisals were negatively associated with mindfulness; in contrast, there was a significant and *positive* association between conflict property appraisals and dispositional mindfulness. In addition, neither mother-child nor father-child relationship quality was significantly associated with dispositional mindfulness in the multivariate models.

3.3 Interactive Effects

Father-child relationship quality did not moderate associations between conflict appraisals and mindfulness ($p>.75$). In contrast, mother-child relationship quality significantly moderated associations of both conflict property ($p=0.015$, significant controlling for *fdr*) and self-blame appraisals with dispositional mindfulness ($p=.012$, significant controlling for *fdr*), and was a trend-level ($p=.06$, non-significant controlling for *fdr*) moderator of the association between threat appraisals and dispositional mindfulness (see Figure 1). All of these interaction effects were small to moderate in size.

In terms of conflict properties, examination of the simple slopes indicated that there was no significant association between conflict property appraisals and dispositional mindfulness for youth who had higher-quality relationships with their mothers. In contrast, youth with lower-quality relationships with their mothers demonstrated a significant and positive association between conflict property appraisals and dispositional mindfulness. Alternatively, there was no significant association between parent-child relationship quality and dispositional mindfulness at higher levels of conflict property appraisals. At lower levels of conflict property appraisals, there was a significant, positive association between mother-child relationship quality and dispositional mindfulness. This pattern of results suggests significantly lower levels of dispositional mindfulness for youth with both lower-quality relationships with mothers *and* higher levels of conflict property appraisals than other youth, who all had statistically similar levels of dispositional mindfulness.

In terms of self-blame, evaluation of the simple slopes indicated that there was a significant and negative association between self-blame appraisals and dispositional mindfulness for youth who had higher-quality relationships with their mothers. Youth with lower-quality relationships with their mothers, in contrast, demonstrated no significant association between self-blame appraisals and dispositional mindfulness. In addition, there was no significant association between parent-child relationship quality and dispositional mindfulness at higher levels of self-blame appraisals; at lower levels of self-blame appraisals, there was a significant, positive association between mother-child relationship quality and dispositional mindfulness. These results suggest that youth with both higher-

quality relationships with their mothers and lower levels of self-blame reported significantly higher levels of dispositional mindfulness than other youth, who reported statistically similar levels of dispositional mindfulness. The pattern of the trend-level interaction between threat appraisals and mother-child relationship quality in relation to dispositional mindfulness was identical to that for self-blame appraisals.

4. Discussion

Our goal was to examine unique and interactive associations of interparental conflict appraisals and parent-child relationship quality with dispositional mindfulness. Past studies have focused exclusively on parent-child attachment relationships as family-level predictors of dispositional mindfulness. Results consistently suggest that conflict appraisals and mother-child relationship quality work together to predict dispositional mindfulness. In terms of conflict property appraisals (i.e., evaluations of the frequency and hostility of interparental conflict), lower levels of dispositional mindfulness were only reported by youth who had *both* lower levels of conflict property appraisals *and* lower-quality relationships with their mothers. In contrast, in terms of threat and self-blame, the presence of *either* more-negative conflict appraisals *or* lower-quality relationships with mothers predicted significantly lower levels of mindfulness.

This pattern is consistent with a larger body of literature about the differential effects of appraisal dimensions. Conflict property appraisals are more-objective assessments of the features of interparental conflict. In contrast, self-blame and threat appraisals reflect perceptions of responsibility for and/or serious consequences of the conflict. Along these lines, conflict property appraisals are typically more strongly associated with parents' self-reported or observed behavior during conflict than are self-blame or threat appraisals, which are sometimes not related to these "objective" indicators of interparental conflict (Grych & Fincham, 1990; Grych et al., 1992; Lucas-Thompson & George, 2017). In addition, conflict property appraisals are the only dimension of these appraisals that are statistically similar among siblings; self-blame and threat appraisals are actually statistically independent between siblings (Lucas-Thompson & George, 2017). Relative to conflict property appraisals, appraisals of self-blame and threat are much more powerful predictors of adjustment problems (Gerard et al., 2005; Lucas-Thompson et al., 2015). Our results are consistent with this past evidence that conflict property appraisals are a less serious risk factor for developing problems with regulation. In contrast, feeling self-blame for and threat in interparental conflict is a robust enough risk factor that maintaining high-quality parental relationships is not sufficient to protect against lower levels of dispositional mindfulness. Surprisingly, the lowest levels of mindfulness were reported by youth who reported low levels of frequent and intense interparental conflict as well as low quality relationships with mothers. Particularly given robust evidence for spillover from interparental conflict to parent-child relationships (Erel & Burman, 1995), there may be unique characteristics of youth who have poor-quality parent-child relationships but whose parents engage in little conflict. For instance, in this case, low levels of dispositional mindfulness may reflect adjustment or behavioral challenges that create difficulties in interpersonal relationships such as with parents, but are not reflected in levels of conflict between parents.

Across the board, though, the current study supports a model consistent with family systems theory (Cox & Paley, 1997) that family relationships work in coordination to shape important developmental outcomes. Our results are consistent with past research documenting the importance of parent-child attachment security for the development of dispositional mindfulness (Pepping & Duvenage, 2016; Pepping et al., 2015; Shaver et al., 2007; Walsh et al., 2009). However, they also provide important extensions of this work, providing the first evidence that interparental conflict and parent-child relationships interactively predict dispositional mindfulness. This pattern is also in keeping with a larger body of literature documenting that associations between interparental conflict and regulatory outcomes (i.e., how children modulate physiological and emotional responses) are moderated by parent-child relationship quality (Katz & Gottman, 1997; Lucas-Thompson & Granger, 2014).

Interestingly, it was relationships with mothers and not fathers that interacted with interparental conflict appraisals to predict dispositional mindfulness. Attachment theory may provide one explanation for this pattern, as children often develop a primary attachment to one caregiver, and the mother is often that primary attachment figure (Shaver et al., 2007). This mother-child attachment relationship then provides unique information about how one should develop internal working models and regulatory skills (Shaver et al., 2007). However, other arguments have been made that relationships with fathers are particularly predictive of mental health problems (Neighbors et al., 1997). Developmentally, across adolescence, there are larger reductions in adolescent conflict with mothers than with fathers (Laursen et al., 1998), with arguments that “the brunt of parent-adolescent reorganization falls upon mothers and children” (Laursen et al., 1998, p. 829). As a result, relationships with mothers, which may be more dynamic during adolescence than relationships with fathers, may be a particularly important context in which mindful attention develops.

There are several notable limitations of this study. First, the cross-sectional nature precludes causal conclusions about how family relationships predict the development of dispositional mindfulness over time. Evidence supports the importance of interparental conflict (Lucas-Thompson, 2012; Turner & Kopiec, 2006), parent-child relationship quality (Holahan et al., 1994; Laursen et al., 1998), and mindfulness (Roeser & Pinela, 2014) across adolescence and emerging adulthood. However, there are different developmental challenges experienced by youth across the age range represented in this study, such as developments in executive functions that support mindfulness (Best & Miller, 2010), as well as changes in autonomy from parents (Arnett, 2000). Therefore, it is important for future research to explore developmental differences in the nature of these associations. Second, the measure of mindfulness used in the current study emphasizes the measurement of mindful attention, relative to the non-judgmental elements of mindfulness. Third, this study utilized only youth self-reported measures; therefore, it may be subject to social desirability bias as well as bias from using only one informant. Finally, although there was economic and educational diversity in the sample, it was still predominately middle class, and was also relatively homogenous in terms of race/ethnicity, which raises important questions about generalizability.

5. Conclusions

In conclusion, the results of the current study support theoretical arguments that dispositional mindfulness may be at least in part shaped by family relationships and experiences (Ryan et al., 2007). In keeping with evidence that dispositional mindfulness is promoted by secure parent-child attachments (Pepping & Duvenage, 2016; Pepping et al., 2015; Shaver et al., 2007; Walsh et al., 2009), results of this study indicate that mother-child relationship quality works interactively with interparental conflict appraisals to predict dispositional mindfulness. The presence of either lower-quality relationships with mothers or appraisals of higher self-blame for or threat in interparental conflict is related to lower levels of dispositional mindfulness: either alone is a sufficient risk factor to predict lower levels of mindful attention. Given the importance of dispositional mindfulness for a variety of adjustment and well-being outcomes (Brown & Ryan, 2003; Pepping et al., 2013), as well as the feasibility of increasing mindfulness through training and practice (Grossman et al., 2004), the results of the current study suggest that youth exposed to poor quality family relationships may be a particularly important target for mindfulness interventions.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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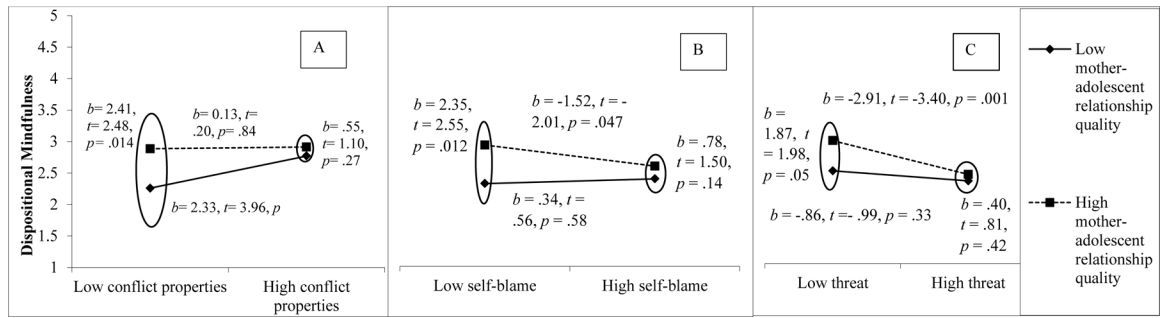


Figure 1. Mother-adolescent relationship quality moderates links between dispositional mindfulness and appraisals of A) conflict properties, $b = -8.43$, $SE = 3.44$, $p = .015$, B) self-blame, $b = -7.15$, $SE = 2.80$, $p = .012$, and C) threat, $b = -7.87$, $SE = 4.18$, $p = .062$. b s, t s, and p s represent the simple slope of the association for high and low levels of relationship quality (1 SD +/- the mean).