A Within-Family Examination of Interparental Conflict, Cognitive Appraisals, and Adolescent Mood and Well-Being

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Abstract

Interparental conflict (IPC) is a well-established risk factor across child and adolescent development. This study disentangled situational (within-family) and global (between-family) appraisal processes to better map hypothesized processes to adolescents' experiences in the family. This 21-day daily diary study sampled 151 caregivers and their adolescents (61.5% female). Using multilevel mediation analyses indicated that, on days when IPC was elevated, adolescents experienced more threat and self-blame. In turn, when adolescents experienced more threat appraisals, they experienced diminished positive well-being; whereas days when adolescents felt more self-blame, they experienced increased negative mood and diminished positive well-being. Statistically significant indirect effects were found for threat as a mediator of IPC and positive outcomes. Daily blame appraisals mediated IPC and adolescent angry mood.

Adolescents' subjective evaluations of interparental conflict (IPC) provide a window into what their exposure to conflict means to them, and offers insight into their risk for poor psychological adjustment. The cognitive-contextual framework identifies two key appraisals, threat and self-blame, that are implicated in adolescent psychological maladjustment. *Threat appraisals* refer to the belief that parental conflicts pose a risk to their well-being or that of the family, and are reflected in worries that IPC might escalate, lead to divorce, or be re-routed to the adolescent (Atkinson, Dadds, Chipuer, & Dawe, 2009; Fosco, DeBoard, & Grych, 2007; Grych & Fincham, 1990). *Self-blaming attributions* reflect adolescents' beliefs that they are responsible for causing or resolving interparental conflict (Fosco et al., 2007; Grych & Fincham, 1990). Across cross-sectional, meta-analytic, and prospective longitudinal studies, evidence supports both threat appraisals and self-blaming attributions as risk factors for child and adolescent maladjustment (Davies et al., 2002; Fosco & Feinberg, 2015; Grych, Harold, & Miles, 2003; Rhoades, 2008). This risk is evident in early childhood (McDonald & Grych, 2006), middle childhood (Fosco & Grych, 2008; Gerard, Buehler, Franck, & Anderson, 2005; Grych et al., 2003), adolescence (Fosco & Feinberg, 2015; Grych, Raynor, & Fosco, 2004) and young adulthood (Cusimano & Riggs, 2013). However, longitudinal studies focusing on *change* in youth outcomes seem to converge around threat appraisals as most consistently predicting increases in internalizing problems (Fosco & Feinberg, 2015; Grych et al., 2003), while self-blame is associated with increases in externalizing problems over time (Davies et al., 2002; Grych et al., 2003).

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Distinguishing between Global and Situational Appraisals: Developmental Implications for Psychological Adjustment

Developmental science recognizes that change occurs at different timescales; a distinction has been made between two types of change (Nesselroade, 1991). Intraindividual change involves relatively enduring change that occurs on a macro timescale (e.g., years), whereas intraindividual variability involves short-term changes that occur on a relatively shorter timescale (e.g. days). Research evaluating the cognitive contextual framework largely fits within an intraindividual change perspective and has characterized change in appraisals across a macro timescale (e.g., years). However, the distinction between intraindividual change and intraindividual variability underscores the importance of distinguishing between the general beliefs held by adolescents and fluctuations in the ways that adolescents process information about the interparental relationship against the backdrop of their general beliefs. Thus, we propose that a distinction might be made between global appraisals and situational appraisals of IPC.

Global appraisals refer to the general beliefs held by adolescents about IPC. Adolescents who live in a family context characterized by chronic, intense, and poorly resolved IPC are more likely to have high levels of global threat or self-blame (Fosco & Grych, 2008; Gerard et al., 2005; Grych & Fincham, 1993). Prospective, longitudinal studies document greater relative increases in global appraisals of self-blame and threat over time in youth who are exposed to high levels of IPC relative to youth who live in families with lower levels of IPC (Fosco & Feinberg, 2015; Goeke-Morey, Papp, & Cummings, 2013; Grych et al., 2003). Complimentary findings document within-family change across annual assessments: when IPC increases within a family, youth appraisals of threat and blame also change across annual assessments (Goeke-Morey, Papp, & Cummings, 2013). Taken together, this work tells a developmental story in which IPC is related to incremental change in global appraisals over time; and that these global beliefs confer elevated risk for psychopathology.

A key premise of the cognitive-contextual framework is appraisals occur in the context of specific conflict interactions (Fosco et al., 2007); yet, little is known about the processes by which adolescents experience and evaluate IPC on a day-to-day timescale. To help distinguish this approach from the extant literature, we conceptualize *situational appraisals* as a within-person process in which adolescents evaluate the implications of specific interparental conflicts, or changes in the quality of interparental interactions. Grych and Fincham (1990) theorized that when adolescents perceive parental conflicts, they assess the risk inherent in that situation (i.e., threat appraisals) and attempt to understand why it is happening (e.g., self-blame). Consistent with this view, we would expect that, when there are day-to-day changes in interparental functioning, such as experiencing an argument or becoming angry with each other, adolescents would experience increases situational threat and self-blame as they evaluate the implications of the interparental discord and attempt to understand its cause. These changes in threat and self-blame in response to IPC should signal risk for greater negative mood, less positive mood, and a diminished sense of well-being. Because the vast majority of work on IPC and adolescent appraisals has relied on the measurement of global appraisals taken either cross-sectionally or across lengthy

measurement (e.g., 1-year) intervals, we know virtually nothing about these situational, within-person appraisal processes. Thus, key propositions of the cognitive-contextual framework related to adolescents' real-time evaluations of the meaning and implications of IPC remain untested. At this time, we must first evaluate whether adolescents experience fluctuations in their threat and self-blame, whether these fluctuations are tied to fluctuations in IPC, and whether fluctuations in threat appraisals and self-blaming attributions impact their mood and well-being. However, to evaluate these research questions, it is necessary to enlist different research methods than those traditionally used.

Applying Daily Diary Methods to Adolescent Appraisals of IPC

Given the focus of this current study on situational appraisals – fluctuations in appraisals in response to variations in IPC – it was necessary to use intensive longitudinal designs that can capture day-to-day fluctuations in the behaviors of interest (Molenaar, 2004a; Ram & Gerstorf, 2009). Daily diary designs employ repeated assessments of individuals, *in situ*, to capture life "as it is lived" (Bolger, Davis, & Rafaeli, 2003; Laurenceau & Bolger, 2005; Shiffman, Stone, & Hufford, 2008). The temporal proximity of the measurement to events of interest reduces retrospective biases often introduced in questionnaires that ask participants to recall and aggregate information about longer periods of time (e.g., previous 30 days; Schwarz, 2007). It is a common tendency for memories of events to be colored by more intense or "peak" moments, and thus, daily diary methods are better suited for capturing less intense experiences and minor changes over time (Smyth & Heron, 2014). Assessments that are completed in the context of interest (e.g., the home) allow for greater ecological validity than methods that draw participants out of their homes and the immediate experiences we wish to study (Shiffman et al., 2008). Finally, use of intensive measurement avoids potential third variable problems by using the person as their own comparison over time, rather than traditional approaches of comparisons between families (Curran & Bauer, 2011).

Once collected, data from daily diary studies that draw on repeated measurement occasions can be examined using analytic frameworks that appropriately disentangle within-person and between-person variation in phenomena (Bolger & Laurenceau, 2013). Disentangling within-person and between-person variance is an integral step towards distinguishing situational appraisals and global appraisals and their associations with well-being. Global appraisals would be represented by between-person effects, similar to trait-like differences in their general evaluations of IPC. The within-person effect, in contrast, examines systematic fluctuations of daily ratings of appraisals above and below each adolescent's average level of appraisals. This methodological distinction is mirrored in the different conceptual information offered by between- and within-family components. Between-person analyses (such as those examining global appraisals) ask "are adolescents who perceive conflict as threatening at higher risk for internalizing psychopathology?", whereas within-person analyses (such as those examining situational appraisals) ask "on days when adolescents experience more threat than usual, do they experience increases in anxious mood?" (Reis, Sheldon, Gable, & Ryan, 2000).

As well as being conceptually and statistically independent, work drawing on between-person methods has demonstrated the limited generalizability of between-person to within-

person findings. Strict criteria must be met to accurately make an inference from between-person to within-person findings, criteria that are rarely met (e.g., ergodicity; Molenaar, 2004). In some cases, between-person and within-person findings reflect inverted processes. For example, some evidence suggests that individuals who exercise more tend to drink less alcohol (between-person association); however, on days when individuals exercise more, they tend to drink more (within-person association) (Conroy et al., 2015). Thus, assumptions that knowledge from between-persons studies can be applied to within-person phenomena warrant empirical evaluation.

Daily Diary Studies of IPC

To date, the propositions of the cognitive-contextual framework have not been subjected to tests of situational appraisal processes; thus, little is known about a) whether daily fluctuations in IPC elicit changes in adolescents' situational threat or blame, and b) whether situational threat and blame appraisals account for changes in their daily mood and well-being. However, a handful of studies now exist that set the stage for this work by illuminating the link between daily IPC and adolescent mood and well-being. In one study using a 14-day daily diary design, on days when adolescents reported interparental conflicts, they were more likely to have higher levels of emotional distress (Chung, Flook, & Fuligni, 2009). Other work, using an event-contingent daily diary design, found that various IPC behavior (e.g., verbal hostility, marital withdrawal, defensiveness) were consistently associated with children's negative affect generally, and anger, sadness, and fear responses, as well as reduced happiness (Cummings, Goeke-Morey, & Papp, 2003). Another study drawing from the same sample reported that parents' negative emotionality during IPC events was associated with children's negative emotional reactions (Cummings, Goeke-Morey, Papp, & Dukewich, 2002). These studies showcase the possibility of capturing meaningful variation in IPC and adolescent affect using daily diary methods, and capitalize on the strengths of such methods – namely the ecological validity and reduced retrospective bias. Moreover, they set the foundation to disentangle within- and between-person processes that are simultaneously contained within the repeated measures of a daily diary design (Curran & Bauer, 2011). By linking daily IPC and adolescent mood and well-being, these have laid the foundation for an examination of the mechanisms underlying this risk process, namely how a) adolescent appraisals fluctuate in response to changes in IPC and b) fluctuations in appraisals predict changes in daily mood and well-being.

The Current Study

Using 21-day daily diary methods, this study was designed to disentangle between-person and within-person associations among IPC, appraisals, and adolescent mood and well-being. As a preliminary step, it was necessary to establish whether there was reliable and meaningful within-family variation in IPC, and adolescents' threat appraisals and self-blaming attributions. Then, we would proceed with a test of within-person mediation in which links between within-family variation in IPC, adolescents' situational appraisals, and adolescent daily mood and well-being were simultaneously tested. In doing so, the following hypotheses were tested:

H₁: Within-family variation in IPC would be related to adolescents' situational threat and blame appraisals.

Specifically, we hypothesized that, on days when IPC was higher than usual, adolescents would experience increases in threat and blame situational appraisals. We tested these hypotheses in two sets of analyses: once using adolescents' reports of IPC, and again with parents' reports of IPC.

H₂: Within-family variation in situational appraisals would predict variation in adolescents' daily mood and well-being.

Prior work, using between-persons methods have found that global threat appraisals are most robustly linked with internalizing problems, and global blame appraisals are linked most consistently with externalizing problems. However, to our knowledge, no within-person analyses have been conducted on this association (at any timescale). Thus, we examined these associations, open to the possibility that findings may be different than prior studies.

H₃: Between-family differences in global appraisals would be associated with negative average levels of adolescent daily mood and well-being.

While testing within-family variation in situational appraisals, we also examined how global appraisals predicted adolescent outcomes. Of particular novelty to this study is the inclusion of positive mood, life satisfaction, and meaning and purpose in life, which historically has been understudied (Fosco & Feinberg, 2015). Evidence suggests that adolescents who are low in positive well-being, despite also being low in psychopathology, are still at risk for adverse outcomes (Antaramian, Scott Huebner, Hills, & Valois, 2010). By understanding factors that diminish positive indicators of well-being, it is possible to gain a more complete understanding of risk processes set in motion by IPC in families.

H₄: Situational appraisals will mediate the association between daily variation in IPC and adolescents' daily mood and well-being.

Finally, we examined whether the association between within-family variation in IPC on adolescents' mood and well-being was mediated through variation in threat and self-blame. Assuming findings from H1 and H2, we tested for statistically significant indirect effects of IPC on mood and well-being, via situational appraisals.

Method

Data for the current study come from the Penn State Family Life Optimizing Well-being (FLOW) study, a daily diary study wherein parents and their adolescents completed up to 21 daily reports about family functioning, their feelings, and well-being. This portion of the study was conducted between August 2015 and November, 2016.

Participants

Participants were 151 families of 9th and 10th grade adolescents recruited through high schools in Pennsylvania and through family referrals, to take part in a multiple timescale experience sampling study of family relationships, mood, and well-being. Families were

eligible for participation if they met six criteria: (1) two-caregiver family status, (2) adolescents lived in one household continuously, (3) internet access and means to complete daily surveys at home, (4) English fluency, (5) the participating adolescent was in 9th or 10th grade, and (6) both parent and adolescent agreed to participate (via consent, assent, respectively). Participating families had adolescents (93 female, 58 male) that were between the ages of 13 and 16 years (M_{Age} = 14.60, SD_{Age} = 0.83) and who were identified (via parent report) as White (83.4%), African American/Black (4.6%), Native American/ American Indian (0.7%), Asian (4.6%), Hispanic/Latino (0.7%), Multiracial (5.3%), missing information (0.7%). Participating caregivers (144 female, 7 male) who were between the ages of 30 and 61 years (M_{Age} = 43.4, SD_{Age} = 6.9), identified as their adolescent's mother (92.72%, stepmother (1.30%), aunt (0.7%), foster mother (0.7), or father (4.6%); and as White (90.1%), African American/Black (2.6%), Asian (3.3%), Native American/American Indian (0.7%), Hispanic/Latino (0.7%), Multiracial (2.0%), and missing information (0.7%). The majority reported being married (n = 134), living with a significant other (n = 9), while some indicated being single (n = 6) or separated (n = 1) but were living with another caregiving adult. Parents reported living together for an average of 18 years (SD = 7.2) Parents' education spanned graduate or professional training (23.2%), college degree (27.8%), associate's degree or > one year college (30.5%), and high school degree or similar (15.2%), less than a high school degree (2.7%), or missing information (0.7%), with family income that ranged from '$20,000-29,999' to '$125,000 and over' ($Median_{Income}$ = '$70,000 – $79,999').

Procedure

Families were recruited through emails sent to parents from school Principals. Interested parents accessed a study web page where they obtained detailed information about the purpose and design of the study, and provided consent to participate and contact information. After review by the research staff and determination that the family met all inclusion criteria, adolescents were contacted with a description of the study and an opportunity to assent or decline participation. If the adolescent assented, he/she completed a baseline questionnaire, and parents were emailed a link to complete their own baseline questionnaire. Upon receipt of both baseline surveys, person-specific links to daily questionnaires were prepared and the 21-day daily diary protocol initiated. Links to daily questionnaires were emailed separately to parent and adolescent at 7:00 PM each night, followed by a reminder (text message or phone call) to let them know that their survey links had been sent to them. Parents and adolescents were instructed to complete the daily survey before going to bed, although access links remained open until 9:00 AM the next morning. In cases where participants completed surveys the following morning, they were instructed to report on the prior day. Daily questionnaires took approximately 5 minutes to complete each night and included items related to family-level relationships (e.g., cohesion), inter-parental and parent-child relationship quality (e.g., conflict, warmth), parenting practices (parent report only), daily emotion regulation, daily mood, and daily well-being. The N = 151 families analyzed here provided daily reports on between 10 to 21 days (M_{Parent} = 20.27 (96.52%), SD_{Parent} = 1.28; $M_{Adolescent}$ = 19.00 (90.48%), $SD_{Adolescent}$ = 2.52). Parents and adolescents were compensated with gift cards to Amazon.com or Wal-Mart (based on preference) at each stage: $25 each after completing the baseline assessment; $2.50 for the

first 4 daily surveys of each week, and $5 for the last 3 surveys of each week. For this portion of the study, family compensation for completing all surveys was up to $200.

Measures

Our empirical analysis makes use of parents' and adolescents' daily reports about *interparental conflict* and adolescents' daily reports of *threat appraisals and self-blaming attributions, daily mood, and psychological well-being.*

Interparental Conflict.—As part of each evening's web-based questionnaire, parents and adolescents each rated that day's level of conflict between caregivers, using a slider scaled 0 ("Not at All") to 10 ("A Lot) in 0.1 increments. Parents responded to two items, "My partner and I were ANGRY or MAD AT EACH OTHER today", "My partner and I DISAGREEED WITH EACH OTHER today". Adolescents responded to two items: "My [parent 1] and [parent 2] were angry or mad at each other TODAY" and "There was tension between my [parent 1] and [parent 2] TODAY". Daily *interparental conflict* scores, calculated separately for parent and adolescent as the average of items, ranged from 0 to 10 ($M = 1.02$, $SD = 1.96$) for parents, and 0 to 10 ($M = 0.97$, $SD = 2.01$) for adolescents.

Situational Threat and Blame Appraisals.—To capture within-person variation, adolescents were asked to rate how much they felt about their parents' relationship that day, compared to how they usually feel. Thus, items were rated using a slider from −5 (Less than Usual) to 5 (More than Usual), with the slider anchored at 0 (Neither More nor Less than Usual). Adolescents were administered six items each day, with the stem: "Compared to Usual…" Daily variations in threat appraisals were assessed with three items: "…how WORRIED were you about their RELATIONSHIP today?", "…how much did you WORRY SOMETHING BAD WOULD HAPPEN in their relationship today?", and "…how much did you believe THEY COULD SOLVE THEIR PROBLEMS today?" Daily variation in self-blame was assessed with three items: "…how much did your [parent 1] and [parent 2] BLAME YOU FOR THEIR DISAGREEMENTS today?", "…how much did your [parent 1] and [parent 2] DISAGREE BECAUSE OF YOU today?", and "… how much did your parents seem UPSET ABOUT YOU or SOMETHING YOU DID?". Daily *threat appraisal and self-blame* scores were calculated as the average of the three items. Threat scores ranged from −5 to 5 ($M = -1.68$, $SD = 2.05$) and self-blame scores ranged from −5 to 5 ($M = -2.13$, $SD = 2.36$).

Global Threat and Blame Appraisals.—To capture adolescents' global appraisals of threat and self-blame, they completed items from the Children's Perceptions of Interparental Conflict scale (CPIC; Grych, Seid, & Fincham, 1992). Items were rated on a 5-point scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). The six-item self-blame scale included items that captured beliefs that parental disagreements were related to their behavior (e.g., "My parents usually argue or disagree because of things that I do"), and beliefs that they are to blame (e.g., "Even if they don't say it, I know I'm to blame when my parents argue"). Threat was assessed with 8 items tapping into perceived threat (e.g., "When my parents argue, I worry that something bad will happen") and their coping efficacy (e.g., "When my

parents argue or disagree, there is nothing I can do to make myself feel better"). Threat (α = .87) and blame (α = .85) scales yielded good reliability.

Adolescent Daily Mood.—Adolescent daily depressed, anxious, angry, and positive mood was assessed with 8 items selected from the Profile of Mood States-Adolescent version (POMS-A; Curran, Andrykowski, & Studts, 1995). Two items were selected for each mood scale, so that both items had high factor loadings on their particular construct (Terry, Lane, & Fogarty, 2003) and so that one item reflected a high-intensity emotion and one item reflected a low-intensity item. Adolescents reported on their depressed mood (i.e., DEPRESSED, SAD or BLUE), anxious mood (i.e., WORRIED, SCARED), angry mood (i.e., ANGRY, ANNOYED), and positive mood (i.e., HAPPY, CONTENT). Adolescents rated how much they felt each emotion that day, using a slider scaled 0 to 10 (in 0.1 increments). The two items were averaged to create a single indicator for angry mood (M = 1.65, SD = 2.22), depressed mood (M = 1.14, SD = 2.17), anxious mood (M = 1.25, SD = 2.19), and positive mood (M = 8.09, SD = 2.27).

Daily Well-Being.—Adolescents also completed two items to tap into psychological well-being. The first item, tapping *life satisfaction*, was adapted from the Satisfaction With Life Survey (Diener, Emmons, Larsen, & Griffin, 1985) for daily use: "All things considered, I was SATISFIED WITH MY LIFE today" (M = 8.24, SD = 2.42). The second item, "I led a PURPOSEFUL and MEANINGFUL life today" (M = 8.07, SD = 2.65) was adapted from the Flourishing Scale for daily use (Diener et al., 2010). Adolescents rated items on a slider scaled from 0 ("Not at All") to 10 ("A Lot) in 0.1 increments.

RESULTS

Descriptive statistics of the variables used are presented in Table 1. As a preliminary step, we assessed whether there was meaningful within-family variation in IPC, threat, self-blame, mood, and well-being on a daily timescale. To assess this, we computed a reliability score (R_c) designed for intensive longitudinal measures to evaluate whether scales can reliably assess within-person change (Bolger & Laurenceau, 2013). Calculated R_c scores in this sample indicated that IPC evidenced reliable within-family change by parent (.82) and adolescent (.83) report. Likewise, both threat (.82) and blame (.81) indicated meaningful change within-person across days. Finally, R_c scores for the daily mood revealed that depressed mood (.81), anxious mood (.75), angry mood (.72), and positive mood (.80) all exhibited meaningful within-person variation. R_c scores could not be calculated for single-item scales (life satisfaction and meaning/purpose).

In addition, we also calculated a between-person reliability estimate (R_{1F}; Cranford et al., 2006) on the daily measures of IPC, mood, and well-being to determine if the measures reliably captured between-person differences in addition to within-person differences. Indeed, R_{1f} values indicated that there were reliable between-family differences in IPC by parent (.81) and adolescent (.89) report, as well as adolescent reports of situational threat (.96) and blame (.95). Adolescent reports of depressed mood (.89), angry mood (.82), anxious mood (.87), and positive mood (.89) also indicated good reliability. R_{1F} scores were not computed for life satisfaction and meaning and purpose scales as these were single item

scales. Taken together, both R_c and R_{1F} estimates indicated it was appropriate to proceed with further analysis of within-family and between-family processes.

Associations among IPC, threat and self-blame appraisals, and mood/well-being

The goal of this study was to test hypotheses of within-person mediation in which days of higher than usual IPC would be related to increases in adolescents' threat and self-blame . In turn, on days when threat or blame appraisals were elevated, adolescents were expected to experience more negative mood (depression, anxiety, anger), and less positive mood, life satisfaction, and meaning/purpose in life. A mediation analytic framework best fit the hypothesized associations among IPC, appraisals, and adolescent mood/well-being as described in the introduction. To capture the focus on within-family variation in IPC and situational appraisals, we utilized a *multilevel* mediation framework that captured both within-person and between-person associations (Bauer et al., 2006).

We illustrate this approach in Figure 1, using the example of IPC (youth report), adolescents' situational blame (i.e., day's blame), and angry mood. This model allowed a test of the effect of day's IPC on day's appraisals (path *a*), as well as a test of the effects of day's appraisals on adolescent mood/well-being (path *b*) above and beyond the effect of day's IPC on day's adolescent mood/well-being (path *c´*). While the focus of the present manuscript was on situational appraisals (hence the focus on within-person mediation in Figure 1), the analytic framework also allowed simultaneous consideration of the role of between-family questions, related to the average IPC (referred to as "usual" IPC) and global appraisals on usual mood/well-being. In order to examine both within-family and between-family associations among IPC and angry mood, the IPC variable was parameterized to separate within-family and between-family associations by creating time-invariant (between-family) and time-varying (within-family) versions of the IPC variable (see Bolger & Laurenceau, 2013). The between-family IPC variable was calculated as the grand-mean centered individual mean score of IPC across 21 days to capture between-family differences in usual IPC throughout the study. Participants with positive values on this between-family, usual IPC variable had higher than sample-average levels of IPC over the 21 days; participants with negative values on this variable had lower than usual levels of IPC. A time-varying, within-family variable, "day's IPC" was calculated as deviations from these between-family means and, thus, zero on this within-family variable indicated a day of usual levels of IPC, negative values indicated a day of lower than usual IPC, and positive values indicated a day of more IPC than usual for each family. The scale used for blame (and threat) was a person-centered scale by design, anchored at 0 ("Neither More or Less than Usual") and ranging from −5 ("Less than Usual") and +5 ("More than Usual"). Therefore, the scale did not require within-person centering. In order to capture associations between global appraisals and well-being, the global appraisals measure was sample-mean centered and was included in the model in addition to the measure of situational appraisals.

After these data preparations, we conducted a multilevel mediation model in accordance with recommendations of Bauer and colleagues (2006). The model was structured as two regression equations, one equation where the mediator $M_{it}=SituationalBlame_{it}$, was regressed on the causal variable, $X_{it}=IPC_{it,}$

$$Situational\,Blame_{it} = d_{Mi} + a_i\,Day's\,IPC_{it} + \beta_{1i}Time_{it} + e_{Mit}$$

and one equation where the outcome variable, Y_{it}=*AngryMood*, was regressed on the causal variable, X_{it},

$$AngryMood_{it} = d_{Yi} + b_i\,Situational\,Blame_{it} + c'_i\,Day's\,IPC_{it} + \beta_{2i}Time_{it} + e_{Yit}$$

where a_i, b_i, and c'_i are person-specific regression coefficients indicating unique within-person associations, and d_{Mi} and d_{Yi} are person-specific intercepts for *situational blame* and *angry mood*, respectively. β_{1i} and β_{2i} were included to account for time in the study.

The person-specific coefficients were modeled at Level 2 as a function of covariates. Specifically,

$$
\begin{aligned}
d_{Mi} &= \gamma_{dM0} + u_{dMi} \\
d_{Yi} &= \gamma_{dY0} + \gamma_{dY1}Usuall\,PC_i + \gamma_{dM2}Global\,Blame_i + u_{dYi} \\
a_i &= \gamma_{a0} + u_{ai} \\
b_i &= \gamma_{b0} + u_{bi} \\
c'_i &= \gamma_{c'0} + u_{c'i} \\
\beta_{1i} &= \gamma_{10} \\
\beta_{2i} &= \gamma_{20}
\end{aligned}
$$

where γ_{a0}, γ_{b0}, and $\gamma_{c'0}$ indicate the prototypical within-person associations among *Day's IPC*, *Situational Blame*, and *Angry Mood*; the us are residual between-person differences that were assumed to be normally distributed with zero means and a full covariance structure, $\sim N(0,\Sigma_G)$. Notably, the second level accounted for between-family differences in usual IPC and global blame. The within-person residuals (e_{Mit} and e_{Yit}) were allowed to differ across dependent variables (i.e., *blame* and *angry mood*) and were autocorrelated.

As well as testing associations among IPC, appraisals, and mood/well-being, specifying a multilevel mediation model allowed an examination of whether situational appraisals significantly mediated the association between day's IPC and day's mood and well-being. In multilevel mediation, the average indirect effect is given as

$$E(a_i b_i) = ab + \sigma_{ai,\,bi}$$

where *a* is the average effect of X (*Day's IPC*) on M (*Situational Blame*), *b* is the average effect of M (*Situational Blame*) on Y (*Day's Angry Mood*), and $\sigma_{ai,bi}$ is the covariance between the two random effects (Kenney et al., 2003). The average total effect can be expressed as

$$E(a_i b_i + c'_i) = ab + \sigma_{ai,\,bi} + c'$$

where c' is the unmediated portion of the *X* (*Day's IPC*) to *Y* (*Day's Angry Mood*) association for the typical participant. Estimates of the average indirect effect and average total effect were estimated using the IndTest macro (http://www.quantpsy.org/medn.htm).

This multilevel mediation approach was applied to each of the 6 outcomes while using threat appraisals, and again using self-blame. These models were first tested using adolescent reports of daily IPC (Table 2), and repeated using parent reports of daily IPC (Table 3). A separate model was estimated for each outcome and a second set of models was estimated using parent-report of IPC instead of adolescent-report of IPC. Further, the mediating role of blame and threat were tested separately. Statistical significance was evaluated at $a = .05$; however, we also signify(^) cut-offs for adjusted levels that took the number of outcomes into account (i.e., .05/6 = .008). However, our overall goal was to examine patterns of statistical significance across tests. All models were estimated using SAS 9.3 PROC MIXED (Littel et al., 1997).

Our first hypothesis posited that within-family variation in IPC would be related to changes in adolescent situational threat and blame appraisals. As shown in Tables 2 and 3, a consistent within-family association existed for IPC and threat appraisals (γ_{a0}), for youth and parent reports of IPC. On days when IPC was higher than usual, adolescents felt more threat to their well-being or that of the family. Likewise, results for blame also mirrored these findings across adolescent and parent reports of IPC. Specifically, on days when IPC was higher than usual, adolescents felt more responsible for causing or resolving the disagreements. Although all 6 statistical tests were statistically significant in the parent model, they were of smaller magnitude. Thus questions related to Hypotheses 1 and 2 indicated that there is a meaningful within-family association between IPC and adolescents' threat, and self-blame, respectively.

Our second hypothesis focused on whether variation in adolescents' situational appraisals would account for changes in their mood and well-being. The first set of analyses included adolescents' perceptions of IPC (Table 2). On days when adolescents experienced elevated threat (γ_{b0}), they experienced decreased positive mood, life satisfaction, and meaning/purpose; however, there were no within-family links between threat and negative mood. In these same models IPC still predicted outcomes (c' path), indicating that on days when IPC was higher, adolescents felt more depressed, anxious, and angry, and less positive mood life satisfaction, and meaning/purpose in life. The second set of analyses included parents' perceptions of IPC (Table 3). These findings also indicated that on days when adolescents experienced more threat, they had decreased positive mood, life satisfaction, and meaning/purpose in life. However, two other findings emerged, suggesting that on days when adolescents experienced more threat, they felt more depressed and more angry. In this model, within-family associations between parent-reported IPC and changes in adolescent mood and well-being were not statistically significant, except for angry mood.

Adolescent self-blame was also examined as a predictor of adolescent mood and well-being. Accounting for adolescents' perceptions of day's IPC (Table 2), situational blame was associated with increases in adolescent depressed, anxious, and angry mood. In addition, situational blame also was associated with decreased positive mood, life satisfaction, and

meaning/purpose in life. In these same models, our findings indicated that on days when adolescents perceived more IPC than usual, they felt more depressed, anxious, and angry, and less positive mood, life satisfaction, and meaning/purpose in life. In the second set of analyses that used parent report of IPC, adolescents' situational blame exhibited the same pattern of association with all six outcomes. On days when adolescents experienced more self-blame, they also had higher than usual depressed, anxious, and angry mood; and lower than usual positive mood, life satisfaction, and meaning/purpose in life. However, within-family variation in IPC was only associated with adolescent angry mood.

Our third hypothesis focused on global threat and blame appraisals and adolescent mood and well-being outcomes. Adolescents who reported higher levels of global threat appraisals tended to experience more depressed, anxious, and angry mood than the average adolescent. Similarly, they experienced less positive mood, life satisfaction, and meaning/purpose in life. These findings were consistent across models with adolescent- and parent-report of IPC. Findings for global self-blame were different. In models that included adolescent-report of IPC, global self-blame was only associated with negative mood, but was not correlated with positive mood or well-being. However, in the models that included parent-report of IPC, global blame appraisals were correlated with higher negative mood and lower positive mood and well-being.

Our fourth hypothesis focused on tests of the indirect effects of within-family variation in IPC on adolescent mood and well-being, via situational threat or blame. As shown in Tables 2 and 3, situational threat mediated positive mood and well-being in 5 of 6 statistical tests, but did not mediate negative affect in any of the six tests. On the other hand, situational blame appraisals were a significant mediator of IPC and anger in both models; and also mediated depressed mood and life satisfaction when parent report of IPC was modeled.

Discussion

Although the cognitive-contextual framework has been evaluated for nearly three decades now, the current study offers a first look into disentangling situational and global appraisals of IPC. We proposed that this conceptual distinction may capture within-family processes that occur when adolescents witness conflicts or experience threat and self-blame that have under-explored implications for their psychopathology risk and their positive well-being. In a series of tests, we find compelling support for the value of examining situational appraisals alongside global appraisals.

As a first step, we evaluated whether there was reliable variability to be captured at a daily timescale for the constructs of interest. Indeed, IPC, threat, and self-blame did exhibit meaningful variation from day to day. Both adolescent and caregiver reports of IPC, as well as adolescent reports of threat and self-blame, exhibited reliable within-family variance over 21 days. Regarding IPC, our findings converge with prior work (Chung et al., 2009; Cummings et al., 2002) indicating that IPC occurs frequently enough to evaluate in a relatively brief period of time (21 day period). In fact, as indicated by reliability estimates (R_c), levels of IPC are quite variable within families over time, raising questions about the nature of IPC as it is experienced by adolescents and their parents. Consistent with the idea

that IPC is episodic, our data indicate there are many "peaks" in the data series, suggesting that there are days when IPC heightens returning to low levels by the next days. However, other families seemed to experience interparental discord that persisted beyond one day. Adolescent threat and self-blame also exhibited meaningful fluctuation across days, also largely episodic in nature, but with some examples of persistent elevations over time. More work is needed to chart the timeframe in which IPC unfolds over time, with consideration to questions of resolution and recovery processes in families. Individual differences in families, with regard to the timescale of conflicts, appraisals and their resolution and recovery, may provide important insights into our ability to intervene and prevent long-term problems for adolescents.

Implications of Within-Family Associations between IPC and Appraisals

We then subjected postulates of the cognitive-contextual framework to within-family analyses of IPC, situational appraisals, and adolescent mood and well-being as captured at a daily timescale. This work builds on foundational studies that document an association between daily variation in IPC and adolescent mood and well-being (e.g., Cheung et al., 2009; Cummings et al., 2002) and extends them by incorporating adolescents' situational appraisals into this literature. In addition, this study included a broader assessment of positive well-being indicators, life satisfaction and meaning and purpose, to further contribute to the literature. Adding to the existing, between-family literature, adolescents in families with higher levels of usual IPC tend to experience more negative affect (depressed, anxious, and angry mood), and less positive mood, life satisfaction, and meaning and purpose in life. In addition, on days when adolescents perceived IPC as higher than usual, they experienced decreased well-being across all six indicators. These findings were largely replicated when we used parents' reports of IPC (4 of 6 outcomes). These findings that within-family variation in IPC was related to internalizing and externalizing symptoms run contrary to some findings that did not support a link between IPC and parent-reported youth internalizing and externalizing problems (e.g., Knopp et al., 2017); however, this may be due to the statistical power afforded by the greater density of measurement occasions or the daily timescale used in the current study. Nonetheless, the current study indicates that IPC is a robust risk factor for indicators of psychopathology as well as positive well-being.

Of central importance to the current study, we evaluated mediational processes proposed by the cognitive-contextual framework. As a first question, we tested whether daily variation in IPC covaried with adolescents' daily (situational) threat and self-blame. Across parent and youth reports of IPC, on days when IPC was higher, adolescents reported feeling more threat and self-blame. This robust, within-family association is consistent with the view that adolescents monitor their family environment for discord in the interparental relationship and attempt to understand a) whether conflict reflects problems for the family and b) who is responsible for the disagreement (Fosco et al., 2007; Grych & Fincham, 2001). Although prior work has documented that adolescents who live in more conflictual families also tend to experience higher levels of threat and self-blame (Grych et al., 2004; Grych & Fincham, 1993), the current study underscores that adolescents' cognitions about IPC are *responsive* to changes in the family (Goeke-Morey et al., 2013). This finding is particularly noteworthy when considering that the assessment of IPC was global, rather than specific to child-related

conflicts that have been found to be more strongly related to appraisals (Grych & Fincham, 1993). Drawing on the advantages of intensive longitudinal methods, these within-family findings rule out alternative interpretations (e.g., trait differences in adolescents) that linger as potential third-variable concerns in variable-centered approaches (Bolger & Laurenceau, 2013; Shiffman et al., 2008). Effectively, these daily dairy methods offer a within-person comparison of adolescents' cognitions on days when IPC is high and days when IPC is low; a natural experiment that would not be possible within ethical constraints present in laboratory-based studies.

The second question related to mediation was evaluated through tests of the links between situational appraisals and adolescents' daily mood and well-being. Although we did not test the relative contributions of situational threat and blame, our findings indicate there were unique implications of each. Specifically, threat appraisals appeared to have particular implications for changes in positive well-being. That is, on days when adolescents experienced higher levels of threat, they experienced decreases in positive affect, life satisfaction, and meaning and purpose in life. In the model using parent-reported IPC, additional results emerged for depressed mood and angry mood. On the other hand, when adolescents experienced more self-blame, they experienced more depression and anger, and less positive affect, life satisfaction, and meaning and purpose in life (across parent-reported IPC and adolescent-reported IPC models). These findings highlight the broad impact that self-blame has on adolescents' daily mood.

As a final step, we tested the indirect effects of IPC on daily mood and well-being via adolescent situational appraisals. In these analyses, across parent- and adolescent-reports of IPC, threat appraisals mediated effects on positive outcomes consistently, particularly for positive mood and life satisfaction, with meaning and purpose in life only mediated in the adolescent-reported model. As can happen when moving from between-family to within-family models (Molenaar, 2004), these findings diverge from the established literature documenting threat appraisals as a risk factor for internalizing problems. Here, it seems that adolescents' experienced diminished positive quality of life on a daily timescale. Future work should seek to map these micro-level processes onto macro-level changes in global appraisals to see if it is this erosion of positive well-being that ultimately drives the link between global threat and internalizing problems.

Tests of situational blame, on the other hand, indicated that it is a mediator of angry mood across both models, with additional mediation evidence found for depressed mood and life satisfaction in the parent-reported IPC models. Thus, self-blame most robustly mediated angry mood, which is consistent with the between-family literature indicating self-blame is associated with externalizing problems more consistently than internalizing problems (Fosco & Grych, 2008; Grych et al., 2003).

With regard to global threat and blame, our findings were generally consistent with prior publications of between-family analyses. Adolescents who found parental conflicts more threatening were at higher risk for depression and anxiety, but findings were possibly less reliable for anger (p-value exceeded .008 adjusted cut-off), over the 21-day period, consistent with prior studies, particularly those emphasizing longitudinal change processes

in outcomes (Fosco & Feinberg, 2015; Grych et al., 2003). Global threat, but not self-blame, also was associated with lower average levels of positive affect, life satisfaction, and meaning and purpose in life. These findings add to prior work examining subjective well-being outcomes for adolescent threat appraisals (Fosco & Feinberg, 2015), and suggest that threat may have unique implications for adolescent positive well-being. This is particularly interesting in light of Cummings and colleagues (2003) findings that daily positive mood was more strongly associated with global assessments of psychopathology outcomes than daily negative mood. Future work is needed to explore adolescent appraisals and positive well-being, accounting for long-term change over time.

Global self-blame was most consistently correlated with the three indicators of negative mood; with some evidence in the parent-reported IPC models for correlations between blame and positive mood and well-being. To our knowledge, these analyses are the first test of associations between self-blame and positive well-being. As the current findings suggest, differences in situational and global self-blaming attributions may be important for understanding how the *experience* of self-blame (i.e., situational appraisals) impact adolescents' daily negative mood and positive well-being; whereas the *tendency* to blame ones' self for IPC may map uniquely on to psychopathology risk, rather than aspects of positive well-being (e.g., life satisfaction). It is valuable to note that these nuances would not be evident without testing within- and between-family processes.

Limitations

The findings of the current study should be considered within their limitations. Although we drew on caregiver and adolescent reports, future work that can draw on multiple caregivers in the family would provide a more rigorous test of these processes. Moreover, this sample was primarily White, affluent, and comprised largely of married couple families. Future work that can examine these processes and account for possible differences in diverse family forms will offer a more broadly generalizable set of results. Finally, our study relied on internet-deployed surveys to be completed at home. Because we do not have information about the full population sampled from, it is not possible to rule out the possibility that there may be selection effects at work in this study.

Mediation analyses indicted some evidence for the role of appraisals as mediators between daily IPC and adolescent mood and well-being. However, as the mediation models are limited in their ability to evaluate temporal precedence, they document associations among all three variables at the same day. Future work, drawing on multiple occasions (3 or more) each day would provide a more stringent test of mediation.

Conclusion and Future Directions

This study provides the first foray into a within- and between-family distinction in adolescent appraisals of IPC, and implications for adolescent mood and positive well-being. Important distinctions emerged by disentangling these processes, and call for continued research. Although there are many directions this work may go, we offer a few suggestions for future research further evaluating the cognitive-contextual framework. First, long-term follow-up assessments are needed to better understand the implications of these daily

processes for adolescent developmental outcomes. Second, work is needed to explicate how daily experiences generalize to global threat and self-blame tendencies. Work that examines how within-family appraisals predict long-term global appraisals might be a fruitful direction for seeking to understand how these micro-family processes accumulate to shape adolescents global appraisals, and bridge the literatures operating at a within- and between-person space. Third, intensive longitudinal methods can also help examine contextual processes that might shape the nature of within-person associations (Fosco et al., 2007; Grych & Fincham, 1990). Studies might build on prior work that has identified the emotional climate (Fosco & Grych, 2007), parent-adolescent relationships (DeBoard-Lucas, Fosco, Raynor, & Grych, 2010; Lucas-Thompson & George, In Press), gender (Davies & Lindsay, 2004), and exposure to violence (DeBoard-Lucas & Grych, 2011; Grych, 1998) as important contextual factors that may shape individual differences in how adolescents evaluate IPC. In addition, work that seeks to differentiate between situational and global appraisals might also look at trait-like factors in adolescents, such as self-regulatory capacity (El-Sheikh & Erath, 2011), or individual differences in temperament (Davies, Hentges, & Sturge-Apple, 2015) as well as broader contextual factors such as neighborhood characteristics (Kelley et al., 2016) and cultural systems and values (Fosco et al., 2007; Li, Cheung, & Cummings, 2015; Tyrell & Wheeler, 2014) that might help understand the contexts in which the stress of IPC is accentuated or attenuated for adolescents.

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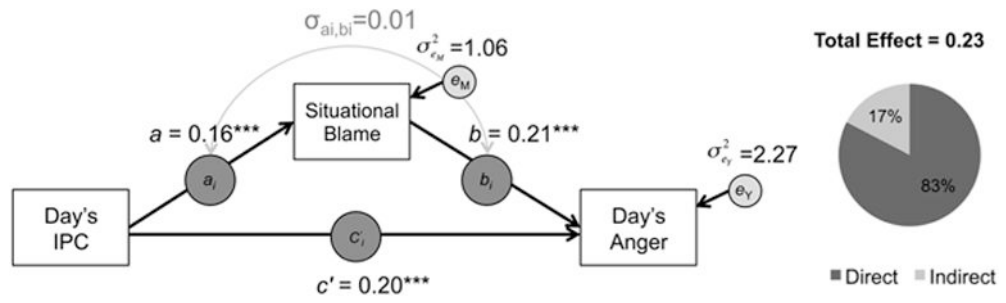
Figure 1. Results of the Mediation Model for Day's IPC, Situational Blame, and Day's Anger.
Note *** p<.001

Table 1.

Descriptive statistics of Interparental Conflict, Appraisals, and Adolescent Mood and Well-Being

	Mean	Standard Deviation	Min - Max
IPC (Adolescent Report)	0.97	2.01	0.00 – 10.00
IPC (Parent Report)	1.02	1.97	0.00 – 10.00
Situational Threat	−1.67	2.05	−5.00 – 4.10
Global Threat	1.98	0.81	1.00 – 4.86
Situational Blame	−2.12	2.36	−5.00 – 4.97
Global Blame	1.58	0.63	1.00 – 3.83
Depressed Mood	1.14	2.18	0.00 – 10.00
Anxious Mood	1.24	2.19	0.00 – 10.00
Angry Mood	1.63	2.21	0.00 – 10.00
Positive Mood	8.08	2.28	0.00 – 10.00
Life Satisfaction	8.24	2.41	0.00 – 10.00
Meaning and Purpose	8.08	2.64	0.00 – 10.00

IPC = interparental conflict; Min – Max = observed minimum and maximum values

Table 2.

Results from the Multilevel Mediation Model Using Adolescent Report of IPC

Models 1-6: IPC and Threat	Depressed Mood	Anxious Mood	Angry Mood	Positive Mood	Life Satisfaction	Meaning and Purpose
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Threat Intercept (γ_{dM0})	−1.68^^(.14)	−1.68^^(.14)	−1.69^^(.14)	−1.69^^(.14)	−1.68^^(.14)	−1.68^^(.14)
Day's IPC → Threat γ_{d0}	.17^^(.03)	.18^^(.03)	.17^^(.03)	.17^^(.03)	.17^^(.03)	.17^^(.03)
Time → Threat (γ_{10})	.02^^(.004)	.02^^(.004)	.02^^(.004)	.02^^(.004)	.02^^(.004)	.02^^(.004)
Mood/Well-Being Intercept (γ_{dY0})	−.01(.31)	−.04(.35)	1.38^^(.28)	9.15^^(.32)	9.35^^(.38)	9.41^^(.42)
Global Threat → Mood/Well-Being (γ_{dM2})	.63^^(.14)	.72^^(.16)	.25*(.13)	−.65^^(.15)	−.65^^(.18)	−.78^^(.19)
Usual IPC → Mood/Well-Being (γ_{dM1})	.50^^(.14)	.35^^(.09)	.69^^(.07)	−.42^^(.08)	−.40^^(.10)	−.46^^(.11)
Situat. Threat → Mood/Well-Being (γ_{b0})	.04(.03)	.03(.04)	.04(.03)	−.07*(.02)	−.08^^(.02)	−.08^^(.03)
Day's IPC → Mood/Well-Being ($\gamma_{c'0}$)	.11^^(.03)	.09^(.03)	.21^^(.03)	.11^^(.03)	−.08^^(.03)	−.06*(.03)
Time → Mood/Well-Being (γ_{20})	−.01*(.01)	−.02^^(.01)	−.03^^(.01)	.01(.01)	−.01(.01)	−.003(.01)
Covariance ($\sigma_{a i,b i}$)	.01(.01)	.02(.01)	.01(.01)	−.02*(.01)	−.02**(.01)	−.02**(.01)
Average Indirect Effect	.01(.01)	.02(.01)	.02(.01)	−.03^^(.01)	−.04^^(.01)	−.03^^(.01)
Average Total Effect	.12^^(.03)	.11^^(.03)	.23^^(.03)	−.14^^(.03)	−.12^^(.03)	−.10**(.03)
Percent Mediation	8.33	18.18	8.70	21.43	33.33	30.00

Models 1-6: IPC and Blame	Depressed Mood	Anxious Mood	Angry Mood	Positive Mood	Life Satisfaction	Meaning and Purpose
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Blame Intercept (γ_{dM0})	−2.14^^(.17)	−2.14^^(.17)	−2.14^^(.17)	−2.14^^(.17)	−2.14^^(.17)	−2.14^^(.17)
Day's IPC → Blame (γ_{d0})	.15^^(.03)	.16^^(.03)	.16^^(.04)	.16^^(.03)	.15^^(.03)	.16^^(.03)
Time → Blame (γ_{10})	.01^^(.004)	.01^^(.004)	.01^^(.004)	.01^^(.004)	.01^^(.004)	.01^^(.004)
Mood/Well-Being Intercept (γ_{dY0})	.83*(.36)	.74(.38)	1.78^^(.30)	8.03^^(.37)	8.51^^(.42)	8.11^^(.47)
Global Blame → Mood/Well-Being (γ_{dM2})	.44*(.21)	.59^(.21)	.37*(.17)	−.32(.21)	−.38(.25)	−.22(.27)
Usual IPC → Mood/Well-Being (γ_{dM1})	.55^^(.09)	.40^^(.09)	.69^^(.07)	−.56^^(.09)	−.53^^(.11)	−.66^^(.12)
Situat. Blame → Mood/Well-Being (γ_{b0})	.10^^(.03)	.09*(.04)	.21^^(.03)	−.12^^(.03)	−.10^(.03)	−.11^^(.03)
Day's IPC → Mood/Well-Being ($\gamma_{c'0}$)	.11^^(.03)	.10^^(.02)	.20^^(.03)	−.13^^(.03)	−.10^(.03)	−.09^(.03)
Time → Mood/Well-Being (γ_{20})	−.01(.01)	−.02^^(.01)	−.03^^(.01)	.01(.01)	−.005(.01)	−.003(.01)

Models 1-6: IPC and Threat	Depressed Mood	Anxious Mood	Angry Mood	Positive Mood	Life Satisfaction	Meaning and Purpose
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Covariance ($\sigma_{ai,bi}$)	.01(.01)	.01(.01)	.01(.01)	.004(.01)	−.004(.01)	.01(.01)
Average Indirect Effect	.02(.01)	.02(.01)	.04**(.01)	−.01(.01)	−.02(.01)	−.01(.01)
Average Total Effect	.13^^(.03)	.12^^(.03)	.23^^(.03)	−.15^^(.03)	−.12^^(.03)	−.10**(.03)
Percent Mediation	15.38	16.67	17.39	6.67	16.67	10.00

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$p < .001$

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$p < .008$

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$p < .01$

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$p < .05$; Shaded rows indicate mediation statistics; bolded rows indicate paths a,b, and c'.

Situat. = Situational

Table 3.

Multilevel mediation model: Parent-report of IPC

Models 1-6: IPC and Threat	Depressed Mood B (SE)	Anxious Mood B (SE)	Angry Mood B (SE)	Positive Mood B (SE)	Life Satisfaction B (SE)	Meaning and Purpose B (SE)
Threat Intercept (γ_{DM0})	-1.69^^(.14)	-1.69^^(.14)	-1.69^^(.14)	-1.69^^(.14)	-1.69^^(.14)	-1.69^^(.14)
Day's IPC → Threat (γ_{a0})	.07^^(.02)	.07^^(.02)	.07^^(.02)	.07^^(.02)	.07^^(.02)	.07^^(.02)
Time → Threat (γ_{10})	.02^^(.004)	.02^^(.004)	.02^^(.004)	.02^^(.003)	.02^^(.004)	.02^^(.004)
Mood/Well-Being Intercept (γ_{DY0})	-.20(.33)	-.25(.35)	.84**(.33)	9.44^^(.35)	9.68^^(.40)	9.89^^(.44)
Global Threat → Mood/Well-Being (γ_{DM2})	.75^^(.15)	.83^^(.16)	.56^^(.15)	-.81^^(.16)	-.79^^(.18)	-1.00^^(.20)
Usual IPC → Mood/Well-Being (γ_{DM1})	.26*(.11)	.28*(.12)	.29^(.11)	-.21(.12)	-.18(.14)	-.18(.20)
Situat. Threat → Mood/Well-Being (γ_{b0})	.07^(.03)	.05(.04)	.07^(.03)	-.10^^(.02)	-.11^^(.03)	-.10^^(.03)
Day's IPC → Mood/Well-Being ($\gamma_{c'0}$)	.04(.02)	.0004(.02)	.08^^(.02)	-.03(.02)	-.02(.02)	-.03(.02)
Time → Mood/Well-Being (γ_{20})	-.01*(.01)	-.02^(.01)	-.03^(.01)	.01^^(.004)	-.003(.01)	-.002(.01)
Covariance ($\sigma_{ai,bi}$)	.01(.01)	.003(.01)	.01(.01)	-.01(.01)	-.01(.01)	-.001(.01)
Average Indirect Effect	.01(.01)	.01(.01)	.01(.01)	-.01*(.01)	-.02*(.01)	-.01(.01)
Average Total Effect	.05*(.02)	.01(.02)	.09^^(.03)	-.05*(.02)	-.04*(.02)	-.04(.02)
Percent Mediation	20.00	100.00	11.11	20.00	50.00	25.00

Models 1-6: IPC and Blame	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Blame Intercept (γ_{DM0})	-2.14^^(.17)	-2.14^^(.17)	-2.14^^(.17)	-2.14^^(.17)	-2.14^^(.17)	-2.14^^(.17)
Day's IPC → Blame (γ_{a0})	.04*(.02)	.04*(.02)	.04*(.02)	.04*(.02)	.04*(.02)	.04*(.02)
Time → Blame (γ_{10})	.01^(.004)	.01^(.004)	.01^(.004)	.01^(.004)	.01^(.004)	.01^(.004)
Mood/Well-Being Intercept (γ_{DY0})	.38(.36)	.36(.37)	.96^(.34)	8.70^^(.37)	9.13^^(.42)	8.99^^(.47)
Global Blame → Mood/Well-Being (γ_{DM2})	.77^^(.20)	.87^^(.20)	.97^^(.19)	-.76^^(.21)	-.80^^(.24)	-.79^(.27)
Usual IPC → Mood/Well-Being (γ_{DM1})	.44^^(.11)	.36^(.12)	.44^^(.11)	-.36^(.12)	-.34^(.14)	-.38*(.15)
Situat. Blame → Mood/Well-Being (γ_{b0})	.11^(.04)	.12^(.04)	.24^^(.04)	-.14^^(.03)	-.13^^(.03)	-.14^^(.03)
Day's IPC → Mood/Well-Being ($\gamma_{c'0}$)	.04(.02)	.003(.02)	.08^^(.02)	-.04(.02)	-.03(.02)	-.03(.02)
Time → Mood/Well-Being (γ_{20})	-.01(.01)	-.02^^(.02)	-.03^^(.01)	.01(.01)	-.01(.01)	-.003(.01)

Models 1-6: IPC and Threat	Depressed Mood B (SE)	Anxious Mood B (SE)	Angry Mood B (SE)	Positive Mood B (SE)	Life Satisfaction B (SE)	Meaning and Purpose B (SE)
Covariance ($\sigma_{ai,bi}$)	.01(.01)	.003(.01)	.01(.01)	−.01(.01)	−.01*(.01)	−.01(.01)
Average Indirect Effect	.01*(.01)	.01(.01)	.02*(.01)	−.01(.01)	−.02*(.01)	−.01(.01)
Average Total Effect	.05*(.02)	.01(.02)	.10^^(.03)	−.05*(.02)	−.05*(.02)	−.04(.02)
Percent Mediation	20.00	100.00	20.00	20.00	40.00	25.00

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$p < .001$

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$p < .008$

**
$p < .01$

*
$p < .05$. Shaded rows indicate mediation statistics. Bolded rows indicate paths a,b, and c'.

Situat. = Situational