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The impact of psychological flexibility on family dynamics amidst the COVID-19 pandemic: A longitudinal perspective

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ABSTRACT

Background: Health risks associated with contracting COVID-19, stay-at-home orders, and pandemic-related economic and social hardships created unique challenges for individuals throughout the pandemic, and in particular for families whose daily routines were disrupted at the start of the pandemic. This study applied a contextual behavioral science lens to Family Systems Theory to examine the impact of COVID-19 stressors on family and individual functioning.

Methods: A sample of 742 coparents (86% married/engaged; 84% Caucasian; 71% female; $M = 40.7$ years old, $SD = 8.1$; $M_{income} = \$82{,}435$, $SD_{income} = \$27{,}604$) of school-aged children (5–18 years old) completed a baseline survey from late March to late April 2020. Of the initial sample, 556 coparents completed weekly diaries for 8 weeks.

Results: Mediation models were tested within a multilevel path modeling framework to evaluate both the stable, between-family differences (i.e., at level 2) and the within-family changes from week to week (i.e., at level 1). Across both levels of the model, parent psychological inflexibility was robustly linked to poorer functioning across all levels of the family system, showing direct links to a majority of the processes assessed. The results further supported a top-down spillover cascade in which parent inflexibility was proximally linked to greater COVID-19 related stress and parent depressive symptoms, which were proximally linked to poorer romantic functioning (greater negative conflict, lower satisfaction), which were proximally linked to poorer family functioning (greater coparent discord and family chaos), which were proximally linked to poorer parenting (greater angry/reactive parenting), which was proximally linked to greater child distress. Multi-group models suggested that the results were largely stable across (1) parent race (white vs non-white), (2) family size (1 child vs 2 or more), (3) child age (less than 10 years old vs 10 or older), (4) parent age (under 40 vs. 40 or older), (5) perceived COVID-19 risk, (6) parent gender (mothers vs fathers), (7) household income groups (less than $100k vs $100k or more), and (8) perceived economic stress/uncertainty (low vs high). However, a handful of moderated effects emerged from those multi-group models suggesting that fathers might be slightly more prone to negative spillover effects across the family systems and that wealthier families might have experienced the stress of new demands (e.g., homeschooling, remote working) as more disruptive.

Conclusions: Results highlight the crucial role parental psychological flexibility and inflexibility play in families managing the stress of COVID-19, as well as key mechanisms for how those stressors may either reverberate or become dampened throughout the family system.

As we mourn the millions of deaths world-wide that have occurred as a result of the COVID-19 pandemic and await its official end, it is important to take stock of how the pandemic has potentially shaped us since it was declared a national health emergency in the United States in March of 2020. Perhaps some of the strongest impacts of the pandemic have been on families (Masten, 2021; Peltz et al., 2021; Prime et al., 2020). Specifically, at the outset of the pandemic, families across the U. S. experienced many sudden and unexpected stressors, which included emergent financial stressors, added parenting burdens, and the fear of contracting this new virus (Low & Mounts, 2022; Mertens et al., 2020; Spinelli et al., 2020). One critical concern with such stressors is the potential downstream effects they might have on parents' and children's

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functioning as well as the overall well-being of the family. Research on previous epidemics, such as the severe acute respiratory syndrome (SARS), suggests that these sudden health emergencies can have extensive sequelae, especially on parents who must consider not only their own physical and mental health, but also the health and well-being of their children and other loved ones (e.g., Lau et al., 2005; Wong et al., 2004). Accordingly, the COVID-19 pandemic might pose a similar challenge to parents and families due the increased likelihood of family members' experiencing psychological distress, parenting problems, children's psychosocial distress, in addition to higher overall levels of family chaos (Chi et al., 2015; Marchetti et al., 2020; Moore et al., 2015; Park et al., 2021). Given the emergent challenges families faced at the outset of the pandemic, the current study sought to integrate a Contextual Behavioral Science perspective with more family-oriented frameworks (i.e., Family Systems Theory and Transactional Family Systems Theory; Broderick, 1993; Minuchin, 1985; Schermerhorn & Cummings, 2008) in order to examine the potential impact of the COVID-19 pandemic on individuals and families in the United States across the initial stages of this global health crisis.

1. Conceptualizing psychological functioning within a family system

1.1. Psychological flexibility

Growing out of Relational Frame Theory (RFT; Hayes et al., 2001) and grounded in the exercises and targets of Acceptance and Commitment Therapy (ACT; Hayes et al., 2006; Hayes et al., 2011), psychological flexibility is characterized as a set skills individuals can employ to respond to challenging and difficult cognitions, feelings, and experiences (i.e., acceptance, present moment awareness, self-*as*-context, cognitive defusion, maintaining contact with values, and committed action). In contrast, psychological inflexibility is conceptualized by dysfunctional reactive responses to difficult or challenging experiences that serve to enhance emotional distress (Hayes et al., 2011; i.e., experiential avoidance, lack of present moment awareness, self-*as*-content, cognitive fusion, lack of contact with values, and inaction). ACT makes use of metaphors and exercises to help clients decrease their use of psychologically inflexible responses and instead promoting their increased use of psychologically flexible responses when confronted with difficult thoughts, feelings, and experiences (Hayes et al., 2011).

Consistent with that approach, studies of ACT treatment mechanisms (e.g., Fledderus et al., 2013; Forman et al., 2007; Waters et al., 2018) and experiments manipulating individual flexibility processes (see Levin et al., 2012 for a review) have highlighted the different components of psychological flexibility as essential skills toward developing and supporting well-being (for a review, see Kashdan & Rottenberg, 2010). Extending those findings, a recent meta-analysis of 174 studies highlighted that higher levels of various forms of parental *flexibility* were linked to: higher family cohesion, lower family conflict, greater romantic relationship satisfaction, more cooperative co-parenting relationships, lower parental stress, more frequent use of authoritative parenting strategies, lower use of permissive and harsh parenting strategies, and lower child internalizing and externalizing symptoms (Daks & Rogge, 2020). In contrast, various forms of parental *inflexibility* were linked to less adaptive family and relationship dynamics, and correspondingly greater maladaptive behavior in the children of those families.

1.2. Family dynamics

To integrate a contextual behavioral science perspective within a family systems framework (e.g., Broderick, 1993), the current study drew on two related theories of family functioning: Family Systems Theory (Minuchin, 1985) and Transactional Family Dynamics (Schermerhorn & Cummings, 2008). As Minuchin (1985) articulated in Family Systems Theory, families are complex entities that are comprised of subsystems (e.g., coparents, parent-child, and individuals) and that maintain interdependent relationships amongst these subsystems. Accordingly, influences on one subsystem of the family have the potential to impact other subsystems as well as the family as a whole (Cox & Paley, 1997; Peltz et al., 2018). Family Systems Theory also posits that perturbations to the family system can disrupt family functioning, thereby upsetting the homeostatic patterns within the family (Minuchin, 1985). Transactional Family Dynamics builds on this theoretical conceptualization by suggesting that family dynamics unfold across multiple timeframes, which necessitates longitudinal assessments of the family (Schermerhorn & Cummings, 2008). In this light, extensive research has demonstrated robust links between environmental stressors and family dysfunction (for reviews, see Allen et al., 2000; Pedersen & Revenson, 2005), family functioning and parenting (for a review, see Krishnakumar & Buehler, 2000), and parenting with children's functioning (e.g., Bayer et al., 2006; Brassell et al., 2016; Buehler et al., 2006). One limitation to this body of literature, however, has been its relative reliance on cross-sectional designs (e.g., Daks et al., 2020).

1.3. Spillover hypothesis

Supported by the interdependent nature of subsystems within the family, the spillover hypothesis suggests that negative affect within one subsystem can spill over and influence behavior within another family subsystem (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). Building on the dynamics of spillover within the family, the Family Stress Model (Conger et al., 1992, 2000) suggests that external stressors, such as financial stress, can indirectly and negatively impact children by exacerbating parental mental health problems, coparental conflict, parent-child conflict, and ineffective parenting (e.g., increasing parental hostility). Research within this framework has demonstrated that external pressures can upset family dynamics in a cascading manner in which disruptions to the larger family system (e.g., whole-family dynamics, coparenting) can impact parenting, which, in turn, can lead to children's behavioral problems (e.g., Conger et al., 1994; Conger et al., 2002).

1.4. A CBS perspective on family systems theory

Given the strong associations between psychological flexibility and individual, romantic, and family functioning (e.g., Daks & Rogge, 2020; Kashdan & Rottenberg, 2010), the current study sought to model parent psychological flexibility as a set of foundational processes within the Family Systems framework (Fig. 1). Thus, the study posited that psychological flexibility could not only shape parents' abilities to adaptively respond to external stressors like a pandemic (Fig. 1A), but could also shape a diverse range of family processes at various levels of family functioning (Fig. 1B). Consistent with previous (largely cross-sectional) findings, the current study posited that psychological flexibility would promote better family functioning (e.g., MacDonald et al., 2010; Wong et al., 2016), greater use of effective parenting practices (e.g., McCaffrey et al., 2017; Moreira & Canavarro, 2017), and better psychosocial outcomes for both children (e.g., Henrichs et al., 2019) and parents (e.g., Neff & Faso, 2015). Consistent with the spillover hypothesis, the study posited a top-down, cascading effect of external stressors adversely impacting parent functioning, impacting relationship functioning, impacting family functioning, impacting parenting behavior, and thereby impacting child outcomes (Fig. 1C).

Consistent with this conceptual model, cross-sectional results in data taken from 742 coparents near the start of the COVID-19 pandemic highlighted the importance of parent psychological flexibility and offered preliminary support for a top-down model in which families with parents that engaged in inflexible and rigid responses to difficult experiences (e.g., lack of present moment awareness) also exhibited lower child functioning primarily as a result of greater COVID-related stress,

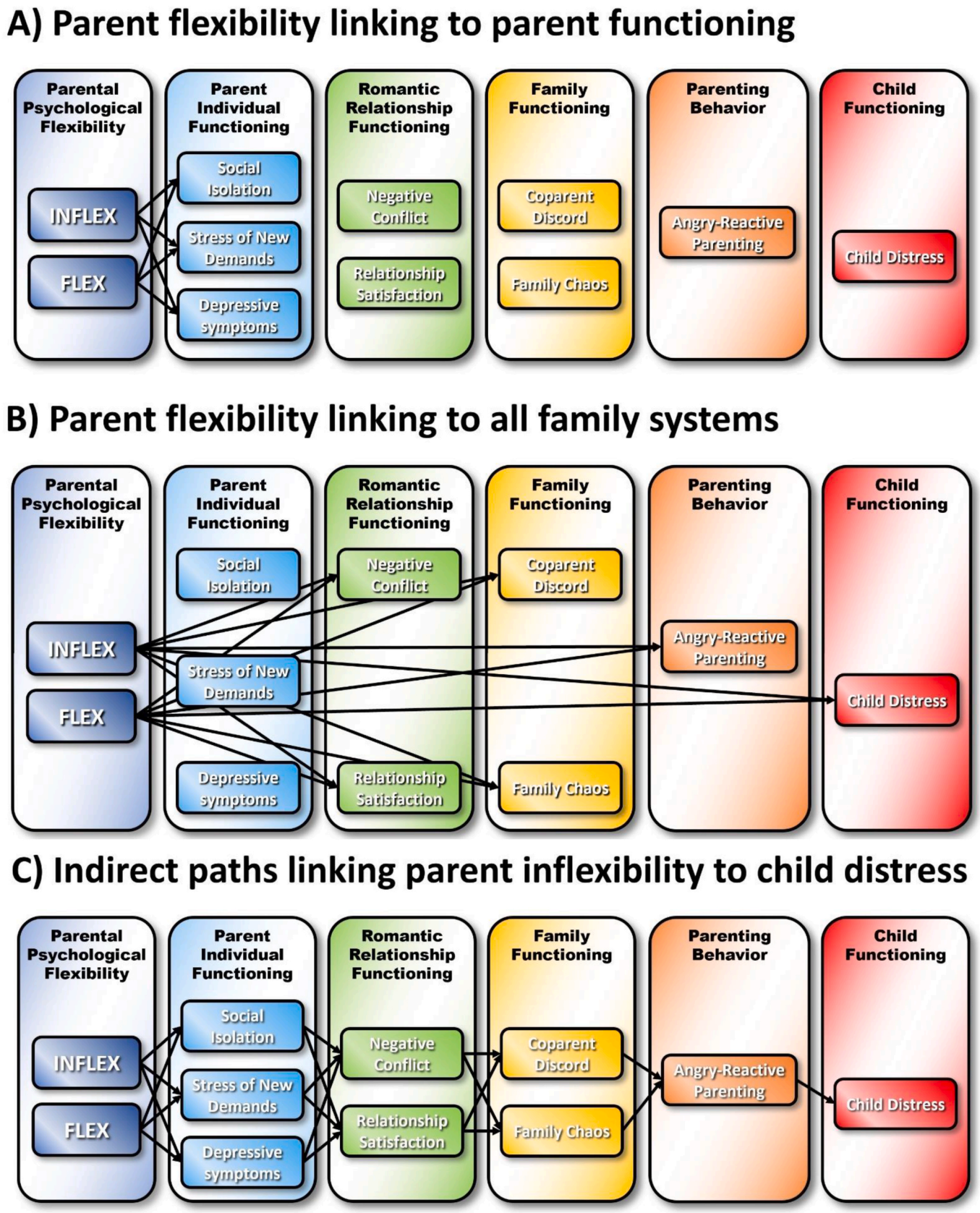

Fig. 1. *Conceptual Model to be Tested.*

more family conflict, and greater use of more harsh and hostile parenting strategies (Daks et al., 2020). Similarly, other cross-sectional studies have shown that COVID-19 has placed new, stressful demands on parents' time and energy while they are forced to juggle working from home, childcare, homeschooling, and day-to-day household responsibilities (e.g., Adams et al., 2021; Craig & Churchill, 2021). These new demands tended to create tension in the family, which often spilled over to other aspects of family functioning, thereby predicting greater levels of parenting stress, harsher and more hostile parenting, and greater dysfunction within the parent-child relationship (e.g., Chung et al., 2020; Spinelli et al., 2020). Extending this work, longitudinal analyses in a sample of 204 parents demonstrated that drops in family functioning and increases in family conflict and harsh disciplinary responses over the first couple months of the pandemic predicted subsequent increases in child maladjustment (Fosco et al., 2021). Similarly, multilevel longitudinal analyses of families early in the pandemic highlighted robust associations between COVID-related stress, coparental conflict, and lower family cohesion in both the week-to-week within-family shifts in functioning and at the level of more stable between-family differences (Peltz et al., 2021).

2. The current study

Given the emerging research on families during the COVID-19 pandemic, the current study sought to apply a CBS-informed Family Systems model of family functioning (Fig. 1) in order to understand the potential impact of COVID-related stressors on families during the initial weeks of the pandemic. We posited that parental psychological flexibility might serve as a key critical protective factor within families by enabling parents to adopt a more open and accepting approach to the upheaval in their lives, which might ultimately support healthier and more adaptive family functioning. In turn, we also expected that parent psychological inflexibility might serve as a source of risk by potentially exacerbating the adverse effects of pandemic-related stress. Building on largely cross-sectional work, the current study ran multilevel path models in nine waves of weekly data collected from 742 coparents at the onset of the pandemic when lock-downs became more prevalent in the US. Accordingly, we hypothesized that parents' psychological flexibility would predict lower levels of subjective stress associated with the COVID-19 pandemic (Hypothesis 1; Fig. 1A). We further expected that parent psychological flexibility would promote more adaptive family functioning across a range of processes spanning multiple subsystems within the family (Hypothesis 2; Fig. 1B). Finally, consistent with both the spillover hypothesis and more specifically with the Family Stress Model (Conger et al., 1992), we hypothesized that COVID-related stress might influence the family system in a hierarchical manner starting from parents' individual functioning and spilling over to related subsystems (e.g., parents' relationship functioning, parenting) to an eventual impact on children's functioning (Hypothesis 3; Fig. 1C). To ensure the stability of the model, we ran additional models with demographic controls, ensuring the model was robust to the influence of those variables on family functioning. We also ran a series of multi-group models examining the stability of the model across race, family size, child age, parent age, perceived COVID-19 risk, parent gender, income and perceived economic stress groups.

3. Methods

3.1. Procedures

The study materials and procedures were evaluated and approved by a university IRB which found the study to be of minimal risk to subjects. The study was conducted in complete compliance with current ethical guidelines. Parents in the study completed a baseline survey (35–45min) and up to 8 weekly follow-up surveys (8–10min) all of which were hosted online using the Alchemer survey platform. Informed consent was obtained on the first webpage of the baseline survey by presenting subjects with an information sheet. Eligibility was screened on the second webpage of the baseline survey. To be eligible to participate, subjects were required to: (1) be at least 18 years old (and therefore able to give consent for their own participation) (2) have at least one school-aged child (i.e., 5–18 years old), living in the home (thereby enabling us to examine the extra challenges of home schooling immediately following the widespread school closures at the start of the pandemic), and (3) have another adult living in the home and serving as a coparent (thereby allowing us to model the dynamics between adults in the home as another family subsystem). Eligible parents were asked to provide email addresses near the beginning of the baseline survey so that they could be sent links to the weekly follow-up surveys.

3.2. Participants

3.2.1. Recruitment

To help defray the impact of any one recruitment source on the resulting demographics of the sample, multiple recruitment methods were used. Thus, participants were recruited via: (1) the ResearchMatch platform (an NIH funded participant registry developed across 11 US universities that tends to select for individuals of slightly higher SES; 51%), (2) various social media platforms linked to professional accounts of the authors (e.g., Facebook, Reddit, Twitter; sources that tend to skew toward younger participants; 21%), (3) emails sent to listservs and parenting groups (yielding fairly diverse demographics; 17%), and (4) Cloud Research (a service offering researchers an innovative interface for collecting subjects from the Mechanical Turk platform that tends to select for a markedly more diverse range of SES; 11%). To highlight the content of the survey and its relevance to the pandemic, it was presented to subjects as "The Social Distancing and Family Dynamics Study" with the recruitment materials emphasizing that is was entirely online, completely voluntary, and offered individualized feedback on family functioning as the primary recruitment incentive.

3.2.2. Sample

Our recruitment efforts yielded a sample of 742 coparents living in the United States that completed the baseline survey near the start of the COVID-19 pandemic in the US (i.e., primarily March and April of 2020). Although 71% of the participants were mothers, the sample included data from 215 fathers. Subjects were generally in their thirties and forties (M = 41, SD = 8.1) and were largely white (84%), with smaller proportions of Latinx (4%), Asian or Pacific Islanders (2%), Native Americans (2%), Black individuals (5%), and biracial individuals or individuals of other racial/ethnic identities (3%). Respondents were also largely middle class with incomes typically ranging from $55,000 to $110,000 ($M$ = $82,435, SD = $27,604) and with 75% of parents having a bachelor's degree or higher. See Supplemental Table 1 for more details on the sample.

3.2.3. Attrition

Of the 658 (89%) respondents providing email addresses, 556 (84%) participated in at least 1 weekly diary, with participants completing an average of 4.7 weekly diaries (SD = 2.6; for a total of 2607 completed diaries), yielding a total of 3163 distinct waves of assessment within the 556 respondents providing follow-up data. ANOVA and χ^2 analyses, which contrasted participants completing weekly diaries from those that did not, failed to uncover any significant differences on family size (i.e., number of children living in the home, $F(1,736) = 1.0$, $p = .315$, $\eta^2 = 0.001$), parental flexibility ($F(1,733) = 1.2$, $p = .273$, $\eta^2 = 0.002$), or levels of perceived stress from the new demands placed on parents by the COVID-19 pandemic ($F(1,732) = 1.3$, $p = .259$, $\eta^2 = 0.002$). However, these analyses suggested that parents completing weekly diaries were more likely to be female ($\chi^2(1) = 64.8$, $p \leq .001$) and white ($\chi^2(1) = 27.8$, $p \leq .001$) and tended to be slightly older ($F(1,740) = 10.5$, $p \leq .001$, $\eta^2 = 0.014$) with slightly higher levels of income ($F(1,731) = 45.5$,

$p \leq .001$, $\eta^2 = 0.059$) and education ($F(1,738) = 11.7$, $p \leq .001$, $\eta^2 = 0.016$), and with slightly lower levels of parental inflexibility ($F(1,735) = 26.9$, $p \leq .001$, $\eta^2 = 0.035$) and lower perceived risk of contracting COVID-19 ($F(1,734) = 7.2$, $p \leq .008$, $\eta^2 = 0.010$). Taken as a set, the attrition analyses suggested low to moderate differences in the parents completing weekly diaries and those not completing diaries.

3.3. Measures

To minimize participant burden across the 9 waves of assessment (during a markedly hectic and chaotic time in the lives of these families), we drew small sets of 1–3 internally consistent items with prototypical content from existing scales to assess our constructs (see Table 1). The baseline assessment contained complete versions of the previously validated scales in the study. This allowed us to select subsets of items from existing scales by running item level analyses (e.g., corrected item-to-total correlations and exploratory factor analyses) to identify the 1–3 items that were maximally representative of the larger scale, maximally internally consistent, and that contained prototypical item content. For all items except those from the Patient Health Questionnaire for depression (PHQ-9; Kroenke et al., 2001), the survey questions were: (1) written in the past tense, (2) focused on the last week, (3) answered on a common 6-point Likert scale (e.g., "never" to "always; " "strongly disagree" to "strongly agree"; see Table 1 note), and (4) scores were created by averaging responses so that higher scores reflected greater amounts of the construct being assessed. The items of the PHQ-9 used the stem, "Over the last 2 weeks how often have you been bothered by any of the following," and the original 4-point scale (i.e., "not at all," "several days," "more than half the days," and "nearly every day." The assessments of these constructs were identical across all 9 waves of assessment with the exception that the stress from new demands was only assessed at baseline (as it seemed most relevant at baseline, asking parents to note shifts from pre-COVID at the start of the study).

3.4. Data analysis

3.4.1. Multilevel path model

To appropriately model the nested nature of the data, we tested the mediation model (Fig. 1) within a multilevel path modeling framework (see Preacher et al., 2010) using Mplus 7.2 (Muthén & Muthén, 2012). Repeated observations across time (i.e., weekly diary data for 8 weeks) at level 1 were nested within individual participants at level 2. Thus, stable levels of each construct across the 8 weeks of the study were modeled as latent variables (represented by ovals) at level 2, representing between-person trait-like differences (the top halves of Fig. 2A and B), while within-person fluctuations across time (i.e., residual shifts in each construct within specific weeks of assessment, representing state-like fluctuations of the variables in a given week of the weekly diary period) were modeled as observed variables (represented by rectangles; the bottom halves of Fig. 2A and B) at level 1. This analytic framework also aligned with our expectations that stress within a specific week would likely demonstrate its most pronounced effects on family dynamics and processes within that same week (i.e., within a fairly tight timeframe of action) in comparison to impacting family dynamics one or more weeks later. Variables within each stage of the model were allowed to correlate with one another (e.g., COVID-19 stressor variables correlating with one another), thereby focusing the model on the paths linking different stages of the model (i.e., at different levels within the family). The final model was fully saturated, yielding perfect fit. Given the complexity of the model and the size of the sample, only path coefficients significant at $p \leq .001$ were interpreted so as to reduce experiment-wide alpha error and focus the results narrative on the effects most likely to replicate in future samples. Full Information Maximum Likelihood (FIML) was used to handle missing data. To test the indirect paths suggested by the multi-level path models, we used the Rmediation online tool (https://amplab.shinyapps.io/MEDCI/) to

Table 1
Measures Used in the Current Study.

CATEGORY (measure) Subscales/item content (measure)	# items	alpha	All items used
FLEXIBILITY/INFLEXIBILITY (MPFI-24)			
Psychological Flexibility	12	.91	*"I was attentive and aware of my emotions"*
Psychological Inflexibility	12	.90	*"I tried to distract myself when I felt unpleasant emotions"*
PARENT FUNCTIONING			
COVID-19 Risk	3	.73	*How much did you feel that YOU were at risk for contracting COVID-19," "How much did you feel that YOUR CHILD(REN) were at risk for contracting COVID-19," "How much did you feel that YOUR FRIENDS & FAMILY were at risk for contracting COVID-1."*
Stress from New Demands during COVID-19	3	.72	*"How much were you worried or stressed about adjusting to new working conditions (telecommuting, working from home)," "How much were you worried or stressed about ongoing work demands," "How much were you worried or stressed about new parenting demands (home schooling, lack of childcare)."*
Economic Stress during	2	.77	*"How much were you worried or stressed about finances/bills," "How much were you worried or stressed about the stability of your own job (or your partner's/coparent's job)"*
Social Isolation	1		*"How much were you worried or stressed about social isolation (missing friends/family)"*
Parent depressive symptoms (PHQ-9)	3	.89	*"How often have you been bothered by the following problems:" "… feeling down, depressed, or hopeless;" "… little interest or pleasure in doing things;" "… thoughts that you would be better off dead or of hurting yourself in some way."*
ROMANTIC RELATIONSHIP FUNCTIONING			
Relationship satisfaction (CSI)	1		*"What was your degree of happiness, all things considered, in your relationship with your partner/co-parent?"*
Negative relationship conflict behavior	2	.88	*"When there was a disagreement in your relationship, how often did you:" "purposefully insult your partner;" "mock your partner"*
FAMILLY FUNCTIONING			
Family Chaos (CHAOS)	2	.57	*"You couldn't hear yourself think in our home;" "Our home was a good place to relax"*
Coparenting Discord (CIS & CQ items)*	5*	.86	
Coparenting conflict items from the CIS	2		*"When you and your coparent discussed parenting issues:" "… how often did an argument result;" "… how often was the underlying atmosphere one of hostility or anger?"*
Coparenting triangulation items from the CQ	2		*"My coparent:" "… used our child (ren) to get back at me;" "… tried to aggravate me through our child(ren)."*
Coparenting conflict item from the CQ	1		*"My coparent and I were divided in our approaches to parenting"*
PARENTING BEHAVIOR			
Angry/Reactive Parenting (PPQ)	2	.81	*"I yelled or shouted when our child (ren) misbehaved;" "I lost my temper with our child(ren)."*
CHILD FUNCTIONING			
Child Distress (CBCL subscales)*	6*	.83	
Anxious/depressed items	2		

(continued on next page)

Table 1 (*continued*)

CATEGORY (measure)			
Subscales/item content (measure)	# items	alpha	All items used
			"My child(ren) was:" "… too fearful or anxious;" "… nervous, highstrung, or tense."
Attention problems items	2		*"My child(ren):" "… couldn't concentrate, couldn't pay attention for long;" "… couldn't sit still, restless, or hyperactive."*
Aggressive behavior items	2		*"My child(ren):" "… got in many fights;" "… screamed a lot."*

NOTE. This table presents the exact items used to assess the constructs across each wave. The items were focused on the last week and used common 6-point Likert scales. All Cronbach alpha coefficients presented were calculated in the current sample. * These composites were made up of items from strongly correlated (sub)scales. The exact items are shown in the following rows. MPFI-24 = the 24-item Multidimensional Psychological Flexibility Inventory (Rolffs et al., 2018) using "never true" to "always true"; PHQ-9 = the Patient Health Questionnaire (Kroenke et al., 2001) using "not at all" to "nearly every day"; CSI = the Couples Satisfaction Index (Funk & Rogge, 2007) using "not at all" to "completely"; CHAOS = the Confusion, Hubbub, and Order Scale (Matheny et al., 1995) using "strongly disagree" to "strongly agree"; CIS = the Coparental Interaction Scale (Ahrons, 1981) using "never" to "always"; CQ = the Co-parenting Questionnaire (Margolin, 1992; Margolin et al., 2001) using "never" to "always"; PPQ = the Parenting Practices Questionnaire (Robinson et al., 1995) using "never" to "always"; CBCL = the Child Behavior Checklist (Achenbach & Rescorla, 2001) using "not true" to "always true".

estimate the asymmetric confidence intervals of those indirect effects (Tofighi & MacKinnon, 2011).

4. Results

4.1. Description of sample

4.1.1. Basic demographics

As detailed in Table 2, the sample of parents spanned the United States and were typically 2 parent families (97%) raising 1–2 children of elementary school or middle school ages. Although at least one of the coparents was the biological parent of the target child for 92% of the families, the families represented in the sample were quite blended as only 47% of coparents were both the biological parents. The parents were predominantly *cis*-gendered (98%), partnered (97%) in long-term relationships (M = 14.5 years), white (85%), and primarily in their 30s or 40s. Although they spanned a range of education levels, 75% of the parents had a bachelor's or graduate degree suggesting a fairly well-educated sample. Consistent with this, 47% of the parents reported household incomes of $100,000 or higher. A majority of the parents reported working from home due to stay-at-home orders at the start of the study, and also reported a marked increase in childcare and home-schooling demands due to school and daycare closures, reporting a shift from an average of 25.3 h of childcare per week prior to the pandemic to 3.5 h per week at baseline (within the first month of the pandemic).

4.1.2. Levels of functioning

At baseline (near the start of the pandemic in the US), 29% of the parents knew someone who had contracted COVID-19, but only 6% knew someone who had passed away from COVID-19, as one might expect that early in the pandemic. Roughly 39% of parents perceived themselves and their family members at a fairly high risk (i.e., answering quite a bit, very much, or completely) for contracting COVID-19 and another 39% reported high levels of economic stress and uncertainty at the start of the pandemic. As seen in the means and standard deviations presented in Table 3, the parents in the sample reported fairly high levels of psychological flexibility across the waves of assessment, with a mean of 4.08 on a 1 to 6 scale, suggesting they "often" engaged in flexible responses to difficult or challenging experiences. However, the parents also reported notable levels of psychological inflexibility, with a mean of 2.54 suggesting they "rarely" to "occasionally" engaged in more rigid and inflexible responses to difficult thoughts, feelings, and experiences. The standard deviations for those two measures further suggested that parents differed quite a bit on their levels of psychological flexibility across the two months of the study. Turning to parent individual functioning, on average parents reported "somewhat" to "quite a bit" of stress from new demands and from being cut off from contact with friends and family at baseline. Consistent with this, on average parents reported experiencing one or two depressive symptoms for "several days" each week across the 9 weekly assessments. Moreover, at baseline, parents' PHQ-9 total scores suggested that near the start of the pandemic, although 38.8% of parents reported only minimal depressive symptoms, 28.6% reported mild, 17.1% reported moderate, and 15.4% reported moderately severe to severe depressive symptoms, highlighting a broad range of parent functioning. Parents reported on average being "happy" to "very happy" with quite a bit of variability across all parents and all weeks of the study. However, their baseline CSI-4 scores suggested that near the start of the pandemic, roughly 47% of the parents were notably dissatisfied in their romantic relationships, further highlighting the stress of the initial lockdown procedures. On average, the parents also reported moderate amounts of family chaos (i.e., distracting commotion) and more infrequent rates of angry parenting (shouting & yelling at children, losing their tempers), and child distress (anxiety symptoms, depressive symptoms, attention difficulties, and aggression). Taken together, the findings in Tables 2 and 3 suggest that although our sample was made up of somewhat higher socioeconomic status 2-parent, 2-kid families, those young families had a wide range of experiences during the first two months of the pandemic, including parents, families, and children that struggled to cope.

4.1.3. Correlations among the constructs

As seen in Table 3, parent psychological flexibility and inflexibility demonstrated only a moderate negative correlation with each other across all waves. Consistent with this, they demonstrated distinct patterns of association with the remaining variables in the model in the expected directions, differing in both direction and strength of associations. Taken as a set, the correlations among the constructs were fairly modest in magnitude, demonstrating discriminant validity among our constructs and modest levels of collinearity appropriate for the planned multivariate models.

5. Change across time

5.1. Amount of within-person change

A series of fully unconditional models (i.e., models with no predictors) quantified the amounts of level 2 (i.e., stable between-person differences across the entire study) and level 1 (i.e., within-person fluctuations within specific waves of assessment) variance for the constructs assessed across time. Although the constructs examined showed fairly high levels of stability across the 8 weeks of the study (accounting for 64–79% of the variance of each construct; see Table 4), they also demonstrated meaningful levels of within-person change across weeks, supporting the planned multilevel analyses.

5.2. Average direction of linear change

A subsequent series of slope-intercept models (allowing time to predict linear change in each of the constructs) suggested slight drops in parental inflexibility, with corresponding drops in COVID-19 related stressors, parental depressive symptoms, increases in romantic relationship quality, drops in co-parenting discord and family chaos, and drops in angry/reactive parenting (see Table 4). These results begin to

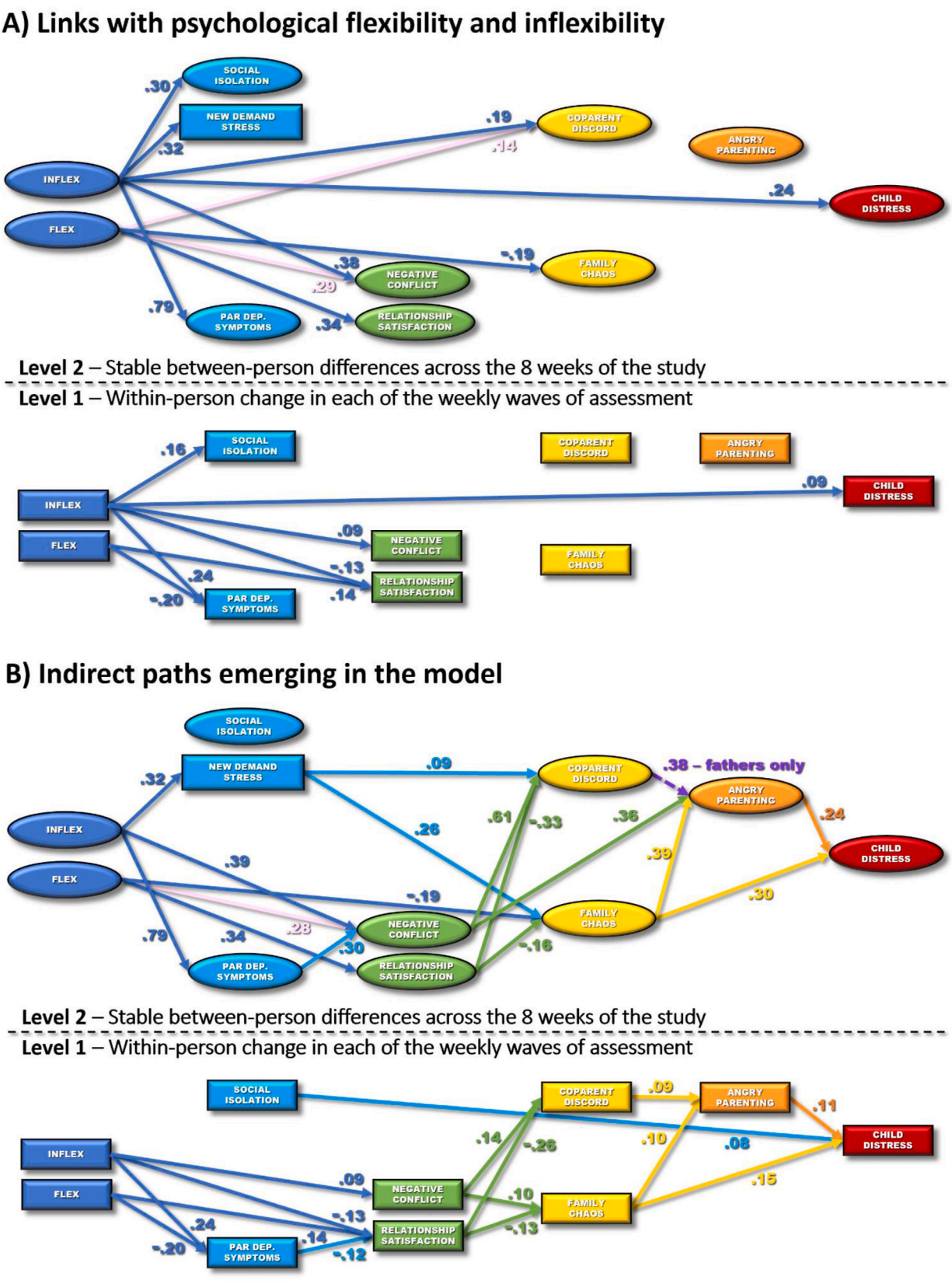

Fig. 2. *Results of the Multilevel path models. Note: Ovals refer to latent variables representing participants' stable levels of each variable across the study (level 2). Rectangles refer to specific weekly assessments of each variable within the study (level 1). The rectangle for new demand stress refers to an assessment taken at baseline only. Only paths significant at ≤ 0.001 are shown, focusing on the robust effects most likely to replicate in future work and accounting for more predictive variance. To facilitate interpretation, paths demonstrating suppressor effects are shown in pink.*

Table 2
Demographics of the Families Represented in the Sample at Baseline.

Broader class of variables -Specific demographic category – -Group or statistics —Subgroup	% or M (SD)	Broader class of variables -Specific demographic category –Group or statistics —Subgroup	% or M (SD)
Parent demographics		Coparent Relationships	
Parent Gender		-Parent Relationship Length	
Cis-female	71%	–Together M & (SD)	14.5yrs (7.7yrs)
Cis-male	27%	–Married M & (SD)	12.8yrs (7yrs)
Transgender	1%	-Type of coparents*	
Other	1%	–Romantic partner	96%
Parent Age		–Other adult in the home (own parent, sibling, friend, ex-partner, other)	11%
Mean and (SD)	40.7yrs (8.1yrs)	–Did not specify type of coparent	1%
22-29yo	7%	Family demographics	
30-39yo	41%	-Number of Children	
40-49yo	38%	– – M & (SD)	1.9 (1.1)
50-85yo	14%	—One child	38%
Parent Race/Ethnicity		—Two children	40%
White	84%	—Three children	14%
Black/African-American	5%	—Four or more	8%
Latino-Hispanic	4%	– Genders of children	
Asian-Pacific Islander	2%	–Male	50%
Other	5%	–Female	50%
Parent Education Level		-Ages of children	
High School or less	4%	–M & (SD)	9.4yrs (5yrs)
Some college/ trade school	21%	-Children's relations to respondent*	
Bachelor's degree	32%	–Biological child of at least 1 coparent	92%
Graduate degree	43%	—Parent's own biological child	84%
Parent Income		—Coparent's biological child	55%
Mean and (SD)	$82,435 ($27,604)	– – Biological child of both coparents	47%
0 to $20k	3%	– – Own biological relative (nephew, grandchild)	3%
$20k to $60k	20%	– – Own adopted child	3%
$60k to $100k	30%	– – Foster child	1%
over $100k	47%	Child Care	
Coparent Relationships		– Routinely use child care	28%
Parent Relationship Status		– – Typical hours per week of childcare beyond school (among parents reporting childcare use)	
In a relationship	97%	– – – M & (SD)	25.3 h s (16.2 h s)
Married/Engaged	86%	– – Hours of childcare in last week	
Committed relationship	11%	– – – M & (SD)	3.5 h s (10.7 h s)
Single/Dating	3%		

NOTE: * These are not mutually exclusive categories and therefore the percentages add up to a number greater than 100%.

suggest that by recruiting parents of school-aged children within the first few weeks of school closures at the start of the pandemic in the US, the study seems to have captured a sample of parents under acute stress at baseline who then slowly began to adapt and recover over the following 8 weeks. However, these analyses indicated an average increase of 0.11 standard deviations in child distress across the study, suggesting gradual increases in adverse effects of the pandemic on children.

6. Testing the model

6.1. Examining model stability

Before examining the results of our multilevel model in the full sample, we ran a series of multi-group, multilevel path models to evaluate the stability of the model results across demographic groups. As seen in Table 5, our model demonstrated exceedingly high levels of statistical fit even in multigroup models in which the model was constrained to be identical across race (white vs non-white), family size (1 child vs 2 or more), child age (less than 10 years old vs 10 or older), parent age (under 40 vs. 40 or older), perceived COVID-19 risk (low vs high), parent gender (mothers vs fathers), household income groups (less than $100k vs $100k or more), and perceived economic stress groups (low vs high) suggesting that the results generalized across those groups quite well. Following the guidelines of Chen (2007), we took increases in RMSEA (from the unconstrained to the constrained models) larger than 0.015 and drops in CFI larger than −0.010 as additional indicators of potentially worsened fit. Although the results with these indices across race, family size, child age, parent age, and perceived COVID-19 risk continued to suggest that the results generalized extremely well across those groups, the multigroup analyses constraining across parent gender, income, and perceived economic stress groups yielded shifts just over those thresholds suggesting a slight worsening of fit in comparison to the perfect fit of the unconstrained models. This lack of fit emerged within the level 2 effects as the level 1 effects were robustly stable across all groups tested. Despite the slight worsening of fit, as seen in the third models presented for those three groups, those slight deviations in fit could largely be corrected by simply allowing 3–5 level 2 effects to vary freely across those groups. Thus, taken as a set the model invariance analyses suggested that the vast majority of the effects (94–97% of the 90 substantive paths examined across both levels of the model) were stable and consistent across the groups tested.

6.2. Demographic controls

To ensure that demographic variables would not unduly influence the results, we also ran secondary analyses in which we included baseline assessments of parent race (white vs non-white), age, income, years of education, length of romantic relationship (as a continuous measure of relationship stage), number of children in the home, and child age as controls at level 2. Although a few predictive effects emerged for those

Table 3
Bivariate Associations among the Variables across All Waves of Assessment.

Descriptive Statistics						Correlations among Variables									
Class of Variables		Possible Range		M	SD	FLEX INFLEX		Parent Individual Functioning			Romantic Functioning		Family Functioning		Angry Parenting
	Specific Variable	MIN	MAX			1	2	3	4	5	6	7	8	9	10
Psychological Flexibility/Inflexibility															
1	Flexibility	1	6	4.08	0.84										
2	Inflexibility	1	6	2.54	0.80	**−.52**									
Parent Individual Functioning															
3	Social isolation	1	6	3.27	1.46	−.10	**.22**								
4	Stress of new work/childcare demands	1	6	3.24	1.35	−.09	**.21**	**.29**							
5	Parent depressive symptoms (total)	0	9	1.62	1.87	**−.43**	**.65**	**.28**	.19						
Romantic Relationship Functioning															
6	Negative conflict behavior	1	6	1.28	0.62	−.10	**.29**	.10	.11	**.28**					
7	Relationship satisfaction	1	7	4.61	1.23	**.31**	**−.25**	−.10	−.07	**−.27**	−.18				
Family Functioning															
8	Co-parenting discord	1	6	1.89	0.82	−.19	**.35**	.13	**.21**	**.33**	**.51**	**−.45**			
9	Family chaos	1	6	3.09	1.39	**−.27**	**.23**	.16	**.25**	**.21**	.12	**−.25**	**.27**		
Parenting Behavior															
10	Angry/reactive parenting	1	6	2.10	0.89	−.17	**.28**	.13	.19	**.24**	**.32**	−.17	**.36**	**.42**	
Child Functioning															
11	Child distress	1	6	2.18	0.86	−.20	**.39**	**.24**	**.29**	**.36**	**.27**	−.15	**.35**	**.45**	**.44**

NOTE: Kid Dist = Kid Distress. Correlations with absolute values ≥ 0.04 were significant at $p < .05$. All correlations with absolute values ≥ 0.20 have been bolded for ease of interpretation. Subscales sharing a similar focus with strong correlations/collinearity were averaged to represent an overall construct. Thus, Co-parenting discord is a composite of coparent conflict, coparent triangulation, and coparenting disagreement. Child distress is a composite of anxiety/depressive symptoms, attention problems, and aggressive behavior.

Table 4
Preliminary Multilevel Models Estimating Within-person Variance, Between-person Variance, and Linear Change on the Constructs Assessed across Time.

Results from Fully Unconditional Models							Results from Slope-Intercept Models			
Class of Variables	L1: Within-Person Change over Time		L2: Stable Between-Person Differences		Proportions of Variance		Intercept		Slope	
Specific Variable	Est	p	Est	p	L1: within	L2: between	coeff	p	coeff	p
Parent Psychological Flexibility/Inflexibility										
Flexibility	.185	<.001	.492	<.001	27%	73%	4.028	<.001	0.089	.017
Inflexibility	.148	<.001	.562	<.001	21%	79%	2.683	<.001	−0.142	<.001
Parent Individual Functioning										
Social isolation	.750	<.001	1.373	<.001	34%	66%	3.434	<.001	−0.152	.029
Parent depressive symptoms	.981	<.001	3.253	<.001	23%	77%	4.917	<.001	−0.194	.009
Romantic functioning										
Negative conflict behavior	.241	<.001	1.893	<.001	11%	89%	1.479	<.001	−0.069	.001
Relationship satisfaction	.412	<.001	.646	<.001	39%	61%	4.459	<.001	0.3	.000
Family functioning										
Co-parenting discord	.215	<.001	.632	<.001	25%	75%	2.086	<.001	−0.107	.002
Family chaos	.654	<.001	1.273	<.001	34%	66%	3.196	<.001	−0.157	.007
Parenting behavior										
Angry/reactive parenting	.263	<.001	.671	<.001	28%	72%	2.259	<.001	−0.201	<.001
Individual functioning										
Child distress	.222	<.001	.600	<.001	27%	73%	2.186	<.001	0.113	0.001

NOTE: Fully unconditional and slope-intercept multilevel path models run in Mplus 7.2 to examine the proportions of between-person and within-person variance and the average linear change of the constructs assessed across the 9 weekly waves of the study. The variable representing time in the slope-intercept models was coded so that 0 represented baseline and 1.0 represented 57 days (the typical time period separating baseline from the final 8-week assessment). Thus, the slopes presented represent the average change (in standard deviation units) over 8 weeks for the construct being examined in each row.

variables (e.g., having more children and younger children were predictive of slightly greater family chaos, parents with higher education experienced slightly greater stress from new demands at the start of the pandemic), the remaining effects (i.e., those presented in our tables & figures and interpreted for our hypotheses) remained largely unchanged by the addition of those controls. Thus, in the interest of parsimony, we present the model estimated in the full sample without controls throughout the rest of the manuscript.

6.3. Links with parent psychological flexibility & inflexibility

As seen in Table 6 and Fig. 2A, stable levels of parental psychological flexibility and inflexibility over the 8 weeks of the study (i.e., the level 2 latent variables represented by ovals in the figures) showed significant associations with stable levels of various aspects of parent functioning, romantic relationship functioning, family functioning and child functioning. Consistent with Hypothesis 1, stable levels of parent inflexibility were associated with stably poorer parent functioning (i.e., greater stress from social isolation, stress from new demands, and depressive symptoms). Consistent with Hypothesis 2, stable levels of parent inflexibility were also linked to stably higher levels of negative conflict, coparent discord, and child distress across the 8 weeks of the study. In contrast, stable levels of parent flexibility were linked to greater relationship satisfaction and to lower family chaos. As seen in Table 7 and

Table 5
Model Invariance of Main Model across Demographic Groups.

Groups examined		df	χ^2	CFI	TLI	SRMR		RMSEA	Change from unconstrained model	
Model #	Model description					Within	Between		ΔRMSEA	ΔCFI
Testing MI across Race [non-white vs. white]										
1	Unconstrained	0	0	1.000	1.000	.000	.000	.000		
2	Constrained	90	103.95	.997	.992	.043	.060	.007	.007	−.003
Testing MI across Family Size [1 kid vs. 2+ kids]										
1	Unconstrained	0	0	1.000	1.000	.000	.000	.000		
2	Constrained	90	103.121	.997	.993	.019	.043	.007	.007	−.003
Testing MI across Child Age [<10 yrs vs. 10 + yrs]										
1	Unconstrained	0	0	1.000	1.000	.000	.000	.000		
2	Constrained	90	127.729	.990	.978	.017	.052	.011	.011	−.010
Testing MI across Parent Age [<40 yrs. vs. 40+ yrs.]										
1	Unconstrained	0	0	1.000	1.000	.000	.000	.000		
2	Constrained	90	107.887	.996	.990	.017	.039	.008	.008	−.004
Testing MI across Perceived COVID risk groups										
1	Unconstrained	0	0	1.000	1.000	.000	.000	.000		
2	Constrained	90	126.633	.991	.979	.019	.059	.011	.011	−.009
Testing MI across Parent Gender [male vs not male]										
1	Unconstrained	0	0	1.000	1.000	.000	.000	.000		
2	Constrained	90	162.499	.982	.960	.041	.054	.016	**.016**	**−.018**
3	Constrained - allowing 5 paths to vary	85	135.809	.987	.970	.041	.034	.013	.013	**−.013**
Testing MI across Income Groups [<$100k vs $100k and up]										
1	Unconstrained	0	0	1.000	1.000	.000	.000	.000		
2	Constrained	90	205.132	.971	.935	.024	.069	.020	**.020**	**−.029**
3	Constrained - allowing 4 paths to vary	86	121.563	.991	.979	.024	.031	.011	.011	−.009
Testing MI across Perceived Economic Stress groups										
1	Unconstrained	0	0	1.000	1.000	.000	.000	.000		
2	Constrained	90	200.528	.971	.936	.025	.075	.019	**.019**	**−.029**
3	Constrained - allowing 3 paths to vary	87	120.336	.991	.980	.025	.036	.011	.011	−.009

NOTE: Before examining the results of our primary model, we ran multi-group, multilevel path models to ensure the stability of our results across meaningful demographic groups. The unconstrained multigroup models were fully saturated and therefore gave perfect fit. The constrained models continued to demonstrate excellent fit, suggesting that the models represented the data well even when constrained to be identical across the demographic groups tested. Following the guidelines of Chen (2007), we took increases in RMSEA from the unconstrained to the constrained models greater than .015 and drops in CFI greater than −0.010 as additional indicators of potentially worsened fit, thereby highlighting slightly worsened fit when the model was constrained across mothers and fathers, when the model was constrained across income groups, and when the model was constrained across low vs high economic stress/uncertainty groups (see bolded values in the final columns). Notably, the fit for both of those multigroup models was improved by simply allowing a handful of level 2 effects to vary across those groups, suggesting that the vast majority of the effects in the model were relatively stable and consistent across the groups tested.

Fig. 2B, after controlling for the level 2 effects, shifts in parent psychological flexibility and inflexibility from week to week (i.e., the level 1 time-varying covariates represented by rectangles in the figures) were associated with corresponding shifts in parent functioning, romantic functioning, and child functioning. Consistent with Hypotheses 1 and 2, elevations in parent inflexibility on specific weeks were linked to corresponding drops in relationship satisfaction and elevations in social isolation stress, parent depressive symptoms, negative conflict, and child distress on those same weeks. Similarly, elevations in parent flexibility on specific weeks were linked to corresponding drops in parent depressive symptoms and elevations in relationship satisfaction on those same weeks.

Taken together, these results highlight the central nature of flexibility and inflexibility in the lives of families, particularly in the midst of the COVID-19 pandemic. Parents engaging rigid and inflexible responses in the face of difficult experiences would seem to have further exacerbated the stressors they faced during the initial months of the pandemic, adversely impacting their own well-being, and creating a more chaotic and contentious family environment. In contrast, parents engaging more psychologically flexible responses to difficult and challenging situations was not only linked to fewer depressive symptoms and stronger romantic relationships but also to less chaotic family environments, potentially serving as a source of resilience.

After controlling for those robust and hypothesis-consistent associations, two unexpected associations emerged in which greater stable levels of parental flexibility were linked to slightly higher stable levels of coparent discord and to greater stable levels of negative conflict in the parent's romantic relationship. As those multivariate findings are in the opposite direction of the bivariate correlations in Table 2, these represent suppressor effects and should therefore be interpreted with caution as they could be less likely to replicate in future samples and models.

6.4. Top-down cascade

As seen in Tables 6 and 7, and in Fig. 2B, the remaining paths that emerged as significant were generally supportive of the proposed top-down cascade of spillover effects. Thus, parent flexibility and inflexibility were most proximally linked to parent individual functioning, which was in turn proximally linked to romantic functioning and family functioning, which were linked to parenting behavior (i.e., angry parenting), and ultimately child functioning. Although constructs in each stage of the model were given the opportunity to predict all downstream constructs in the model, it was primarily parent flexibility and inflexibility that displayed such widespread predictive associations (Fig. 2A, Hypothesis 1). Thus, a majority of the predictive associations that emerged as significant across the remaining stages of the model involved predicting the next one or two stages in the cascade, supporting the top-down cascade proposed in Hypothesis 3 (Fig. 1C; Fig. 2B). This was true both in the level 2 results (i.e., associations between more stable levels of the constructs across the 8 weeks) and in the level 1 results (i.e., associations between weekly fluctuations in the constructs). The one exception to this was the finding that elevations in parent stress from social isolation within specific weeks were associated with corresponding elevations in child distress in those same weeks, suggesting a more direct link between parent and child functioning from week to week. Further supporting the top-down cascade suggested by family systems theory, 17 indirect paths across stages of the model emerged as significant at level 2 and another 14 indirect paths emerged as significant at level 1 (Table 8) as assessed by their asymmetric confidence intervals (Tofighi & MacKinnon, 2011). Taken as a set, the paths that

Table 6
Level 2 (Between-Person) Results of the Final Multilevel Path Model Run in the Full Sample.

STAGE OF THE MODEL BEING PREDICTED Variable being predicted Type of predictor variables Specific predictors	Standardized Path Coefficients *b*	*SE*	*p*
PARENT INDIVIDUAL FUNCTIONING			
Predicting depressive symptoms			
With parent psych flexibility			
Psychological flexibility	-.01	.034	.673
Psychological inflexibility	**.79**	.026	.000
Predicting social isolation			
With parent psych flexibility			
Psychological flexibility	.08	.048	.102
Psychological inflexibility	**.30**	.044	.000
Predicting stress of new demands			
With parent psych flexibility			
Psychological flexibility	.07	.042	.125
Psychological inflexibility	**.32**	.038	.000
ROMANTIC RELATIONSHIP FUNCTIONING			
Predicting relationship satisfaction			
With parent individual functioning			
Parent depressive symptoms	-.23	.091	.011
Parent social isolation	-.06	.051	.205
Parent stress of new demands	-.01	.043	.778
With parent psych flexibility			
Psychological flexibility	**.34**	.049	.000
Psychological inflexibility	.18	.090	.046
Predicting negative conflict behavior			
With parent individual functioning			
Parent depressive symptoms	**.30**	.088	.001
Parent social isolation	.01	.040	.809
Parent stress of new demands	.04	.032	.171
With parent psych flexibility			
Psychological flexibility	**.28**	.046	.000
Psychological inflexibility	**.39**	.092	.000
FAMILY FUNCTIONING			
Predicting coparenting discord			
With romantic relationship functioning			
Relationship satisfaction	**-.33**	.036	.000
Negative conflict behavior	**.61**	.039	.000
With parent individual functioning			
Parent depressive symptoms	.05	.053	.309
Parent social isolation	-.01	.030	.811
Parent stress of new demands	**.09**	.027	.000
With parent psych flexibility			
Psychological flexibility	**.14**	.037	.000
Psychological inflexibility	**.19**	.059	.001
FAMILY FUNCTIONING CONTINUED			
Predicting family chaos			
With romantic relationship functioning			
Relationship satisfaction	**-.16**	.046	.001
Negative conflict behavior	.03	.044	.443
With parent individual functioning			
Parent depressive symptoms	.02	.079	.850
Parent social isolation	.05	.046	.237
Parent stress of new demands	**.26**	.042	.000
With parent psych flexibility			
Psychological flexibility	**-.19**	.050	.000
Psychological inflexibility	.06	.077	.441
PARENTING BEHAVIOR			
Predicting angry/reactive parenting			
With family functioning			
Coparenting discord	.18	.077	.022
Family chaos	**.39**	.038	.000
With romantic relationship functioning			
Relationship satisfaction	.08	.047	.094
Negative conflict behavior	**.36**	.067	.000
With parent individual functioning			
Parent depressive symptoms	-.01	.064	.851
Parent social isolation	-.01	.038	.723
Parent stress of new demands	.00	.034	.935
With parent psych flexibility			
Psychological flexibility	.07	.045	.138
Psychological inflexibility	.15	.064	.019
CHILD FUNCTIONING			
Predicting child distress			
With parenting behavior			
Angry / reactive parenting	**.24**	.052	.000
With family functioning			
Coparenting discord	.12	.076	.117
Family chaos	**.30**	.041	.000
With romantic relationship functioning			
Relationship satisfaction	.08	.037	.026
Negative conflict behavior	.03	.066	.646
With parent individual functioning			
Parent depressive symptoms	.15	.057	.011
Parent social isolation	.03	.035	.333
Parent stress of new demands	.06	.033	.053
With parent psych flexibility			
Psychological flexibility	.11	.039	.004
Psychological inflexibility	**.24**	.059	.000

NOTE. These level 2 findings from the final model represent the predictive links among stable levels of the constructs across the 8 weeks of the study (i.e., stable between-person differences or stable levels of each construct for each participant across the study). Path coefficients significant at $\leq .001$ have been bolded to highlight the robust effects most likely to replicate in future work.

emerged from the model suggest that parents responding to difficult and challenging situations in rigid and inflexible manners (e.g., engaging in experiential avoidance, self-*as*-content, fusion, inaction) not only serves to directly sour the interpersonal dynamic of the family at many levels, but might also produce a cascade in which parent inflexibility exacerbates parents' stress and distress, eroding the quality of their romantic relationships, thereby promoting more discord and chaos within their families and more hostile and reactive parenting, thereby triggering greater distress in their children.

7. Moderation

The model invariance analyses suggested that all of the level 1 effects and the majority of the level 2 effects of our model were consistent across the demographic groups that could be examined in multigroup analyses. Given that relative stability, we focused a majority of the results narrative on those common findings. However, a handful of effects emerged from those invariance analyses as meaningfully different across demographic groups. Although those effects were discovered in an exploratory and post-hoc manner, this final section of results presents those moderation findings to inform future research in this area and to further clarify the generalizability of the current findings.

7.1. Moderation by parent gender

The model invariance analyses uncovered a handful of level 2 effects (among stable levels of the variables across the study) that differed across mothers and fathers. Stable levels of fathers' psychological inflexibility were slightly stronger predictors of greater stable coparenting discord (in fathers $\beta = 0.261$, $SE = 0.069$; in mothers $\beta = 0.186$, $SE = 0.065$) and negative relationship conflict behavior (in fathers $\beta = 0.502$, $SE = 0.090$; in mothers $\beta = 0.326$, $SE = 0.099$). In addition, a new path emerged such that higher stable levels of coparenting discord were predictive of stably higher levels of angry parenting in fathers ($\beta = 0.384$, $SE = 0.088$, $p < .001$), but not significantly in mothers ($\beta = 0.149$, $SE = 0.075$, $p = .046$; using a threshold of $p \leq .001$). The remaining two paths allowed to vary across mothers and fathers failed to achieve significance at $p \leq .001$ in either group but improved the fit nonetheless.

Table 7
Level 1 (Within-Person) Results of the Final Multilevel Path Model Run in the Full Sample.

STAGE OF THE MODEL BEING PREDICTED Variable being predicted Type of predictor variables Specific predictors	Standardized Path Coefficients *b*	*SE*	*p*	STAGE OF THE MODEL BEING PREDICTED Variable being predicted Type of predictor variables Specific predictors	Standardized Path Coefficients *b*	*SE*	*p*
PARENT INDIVIDUAL FUNCTIONING				FAMILY FUNCTIONING CONTINUED			
Predicting depressive symptoms				Predicting family chaos			
With parent psych flexibility				With parent individual functioning			
Psychological flexibility	**-.20**	.024	<.001	Parent depressive symptoms	.05	.023	.024
Psychological inflexibility	**.24**	.025	<.001	Parent social isolation	.05	.020	.020
Predicting social isolation				With parent psych flexibility			
With parent psych flexibility				Psychological flexibility	-.07	.023	.002
Psychological flexibility	-.03	.025	.302	Psychological inflexibility	.06	.021	.009
Psychological inflexibility	**.16**	.027	<.001	PARENTING BEHAVIOR			
ROMANTIC RELATIONSHIP FUNCTIONING				Predicting angry/reactive parenting			
Predicting relationship satisfaction				With family functioning			
With parent individual functioning				Coparenting discord	**.09**	.023	<.001
Parent depressive symptoms	**-.12**	.025	<.001	Family chaos	**.10**	.022	<.001
Parent social isolation	-.03	.023	.253	With romantic relationship functioning			
With parent psych flexibility				Relationship satisfaction	-.06	.022	.004
Psychological flexibility	**.14**	.024	<.001	Negative conflict behavior	.01	.024	.564
Psychological inflexibility	**-.13**	.024	<.001	With parent individual functioning			
Predicting negative conflict behavior				Parent depressive symptoms	.04	.025	.103
With parent individual functioning				Parent social isolation	.01	.020	.595
Parent depressive symptoms	.02	.029	.491	With parent psych flexibility			
Parent social isolation	.00	.024	.908	Psychological flexibility	-.06	.023	.012
With parent psych flexibility				Psychological inflexibility	.07	.025	.007
Psychological flexibility	-.06	.025	.019	CHILD FUNCTIONING			
Psychological inflexibility	**.09**	.023	<.001	Predicting child distress			
FAMILY FUNCTIONING				With parenting behavior			
Predicting coparenting discord				Angry / reactive parenting	**.11**	.023	<.001
With romantic relationship functioning				With family functioning			
Relationship satisfaction	**-.26**	.024	<.001	Coparenting discord	.06	.024	.011
Negative conflict behavior	**.14**	.023	<.001	Family chaos	**.15**	.022	.000
With parent individual functioning				With romantic relationship functioning			
Parent depressive symptoms	.05	.023	.024	Relationship satisfaction	.05	.022	.037
Parent social isolation	.05	.020	.020	Negative conflict behavior	.05	.022	.032
With parent psych flexibility				With parent individual functioning			
Psychological flexibility	-.07	.023	.002	Parent depressive symptoms	.06	.025	.025
Psychological inflexibility	.06	.021	.009	Parent social isolation	**.08**	.023	<.001
Predicting family chaos				With parent psych flexibility			
With romantic relationship functioning				Psychological flexibility	.04	.023	.103
Relationship satisfaction	**-.13**	.024	<.001	Psychological inflexibility	**.09**	.023	<.001
Negative conflict behavior	**.10**	.023	<.001				

NOTE. These level 1 findings from the final model represent the predictive links among shifts in the constructs (above and below typical levels for each family) within specific weeks of the study. Path coefficients significant at ≤ .001 have been bolded to highlight the robust effects most likely to replicate in future work.

7.2. Moderation by household income and economic stress

The model invariance analyses also suggested that three of the level 2 effects predicting negative conflict in the full sample emerged as significant primarily in families with household incomes less than $100,000 and similar moderated effects emerged within parents reporting high economic stress. Specifically, higher stable levels of negative conflict were predicted by higher stable levels of inflexibility in households with more typical incomes (i.e., <$100k; $\beta = 0.424$, $SE = 0.112$, $p < .001$) and in parents reporting high economic stress ($\beta = 0.540$, $SE = 0.098$, $p < .0005$) but not significantly in households with high incomes (i.e., ≥$100k; $\beta = 0.152$, $SE = 0.135$, $p = .262$) or low economic stress ($\beta = -0.076$, $SE = 0.140$, $p = .584$). Similarly, stable levels of negative conflict were marginally predicted by higher levels of parent depressive symptoms in households with more typical incomes ($\beta = 0.330$, $SE = 0.111$, $p < .003$) but not in households with high incomes ($\beta = 0.075$, $SE = 0.107$, $p = .482$). In addition, the suppressor effect linking higher stable levels of parent flexibility to higher stable levels of negative conflict also emerged as significant only in the typical income group and in the group reporting high economic stress at baseline. Finally, the stress of new demands reported at baseline emerged as a predictor of family chaos in high income households ($\beta = .330$, $SE = 0.052$, $p < .0005$) and in families with low economic stress ($\beta = 0.344$, $SE = 0.045$, $p < .0005$) but only marginally predicted family chaos in families with typical household incomes ($\beta = 0.169$, $SE = 0.059$, $p = .004$) and failed to significantly predict family chaos in families with high economic stress ($\beta = 0.121$, $SE = 0.075$, $p = .106$).

8. Discussion

The current study sought to apply a contextual behavioral science lens to enhance our understanding of how the COVID-19 pandemic and the ensuing stay-at-home orders impacted the lives of US families raising school-aged children in the initial months of 2020. Drawing upon Family Systems Theory (Broderick, 1993; Minuchin, 1985) as well as conceptually related theories (e.g., Transactional Family Dynamics; Schermerhorn & Cummings, 2008), this was one of the first studies to collect 8 weeks of diary data from a robust and nationally representative sample of coparents raising school-aged children during the initial months of the pandemic using a comprehensive set of family dynamics and processes to directly quantify a set of spillover hypotheses. The results largely supported the proposed mediation model, suggesting that parental psychological flexibility and inflexibility (1) were linked to a variety of family processes, parent and child mental health outcomes, (2) played a key role in shaping responses to COVID-19 related stressors, and (3) shaped in a stepwise manner how families, parents and children responded to the acute stress arising during a global public health crisis. Notably, results generalized quite well across a number of demographic

Table 8
Indirect Effects Emerging withing the Main Model.

LEVEL of the model		Mediator		Outcome process	est	95% Confidence Intervals	
Predictor						LL	UL
LEVEL 2:							
Indirect associations among stable, between-person differences							
From psychological inflexibility							
Psych inflexibility	→	Stress of new demands	→	Coparent discord	.030	.013	.050
Psych inflexibility	→	Stress of new demands	→	Family chaos	.082	.051	.116
Psych inflexibility	→	Neg rel conflict	→	Coparent discord	.109	.002	.220
Psych inflexibility	→	Neg rel conflict	→	Angry parenting	.065	.001	.133
Psych inflexibility	→	Parent depressive sx	→	Neg rel conflict	.237	.100	.375
From psychological flexibility							
Psych flexibility	→	Rel Satisfaction	→	Coparent discord	-.110	-.152	-.073
Psych flexibility	→	Rel Satisfaction	→	Family chaos	-.054	-.091	-.022
Psych flexibility	→	Family chaos	→	Angry parenting	-.075	-.118	-.035
Psych flexibility	→	Family chaos	→	Child distress	-.056	-.092	-.026
From the stress of new demands							
Stress of new demands	→	Family chaos	→	Angry parent	.100	.065	.140
Stress of new demands	→	Family chaos	→	Child distress	.075	.046	.110
From depressive symptoms							
Parent depr sx	→	Neg rel conflict	→	Coparent discord	.183	.077	.294
Parent depr sx	→	Neg rel conflict	→	Angry parenting	.109	.042	.191
From negative relationship conflict							
Neg rel conflict	→	Angry parenting	→	Child distress	.087	.043	.141
From relationship satisfaction							
Rel satisfaction	→	Family chaos	→	Angry parent	-.063	-.102	-.027
Rel satisfaction	→	Family chaos	→	Child distress	-.047	-.079	-.020
From family chaos							
Family chaos	→	Angry parenting	→	Child distress	.094	.052	.140
LEVEL 1:							
Associations between weekly shifts in the constructs							
From psychological inflexibility							
Psych inflexibility	→	Parent depressive sx	→	Rel satisfaction	-.029	-.042	-.016
Psych inflexibility	→	Neg rel conflict	→	Coparent discord	.013	.006	.021
Psych inflexibility	→	Neg rel conflict	→	Family chaos	.009	.003	.015
Psych inflexibility	→	Rel satisfaction	→	Coparent discord	.033	.020	.047
Psych inflexibility	→	Rel satisfaction	→	Family chaos	.017	.009	.027
From psychological flexibility							
Psych flexibility	→	Parent depressive sx	→	Rel satisfaction	.024	.013	.036
Psych flexibility	→	Rel satisfaction	→	Coparent discord	-.036	-.050	-.023
Psych flexibility	→	Rel satisfaction	→	Family chaos	-.018	-.028	-.010
From negative relationship conflict							
Neg rel conflict	→	Coparent discord	→	Angry parenting	.013	.006	.021
Neg rel conflict	→	Family chaos	→	Angry parenting	.009	.004	.016
Neg rel conflict	→	Family chaos	→	Child distress	.014	.007	.022
From relationship satisfaction							
Rel satisfaction	→	Coparent discord	→	Angry parenting	-.024	-.037	-.012
Rel satisfaction	→	Family chaos	→	Angry parenting	-.013	-.021	-.006
Rel satisfaction	→	Family chaos	→	Child distress	-.019	-.029	-.011

NOTE: Asymmetric confidence intervals for the indirect effects were estimated using the Rmediation online tool (Tofigi & MacKinnon, 2011). est = estimate; LL = lower limit; UL = upper limit; Psych = psychological; sx = symptoms; Rel satisfaction = Romantic relationship satisfaction. Neg rel conflict = negative relationship conflict behavior.

subgroups, suggesting fairly robust findings.

8.1. Implications

8.1.1. Parental inflexibility impacts families at multiple levels

Results of the current study reveal that parental inflexibility shared links with constructs measuring family and individual functioning at each stage of the proposed mediational model at the level of stable, between-person differences and at almost every stage of the model at the level of week-to-week within-person fluctuations. These results are consistent with a growing literature of over 174 published studies linking parent mindfulness and flexibility to family dynamics (see Daks & Rogge, 2020 for a comprehensive, meta-analytic review). For example, higher levels of parent inflexibility have shown associations with higher levels of family discord (e.g., Corthorn & Milicic, 2016; Potharst et al., 2019), higher levels of harsh/reactive parenting behaviors (e.g., Brassell et al., 2016; Burke & Moore, 2015), higher levels of child distress (e.g, Cheron et al., 2009; Emerson et al., 2019), and lower levels of family cohesion (e.g., Jones et al., 2014; MacDonald et al., 2010) outside of the COVID-19 era, and higher levels of adult depressive symptoms (McCracken et al., 2021; Pakenham et al., 2020) during the pandemic. Building on this literature, the current findings serve to integrate previous work into a broader family systems framework by examining these associations simultaneously within a more comprehensive stepwise mediation model. Furthermore, these results offer support for the key role parental psychological flexibility plays in shaping family dynamics and individual well-being both at a stable, trait-level as well as within weekly, state-level fluctuations in these constructs.

8.1.2. Parental flexibility demonstrated mixed findings

Previous studies have shown that higher levels of parent psychological flexibility have been linked with parents reporting an overall more supportive and cohesive family environment (Burke & Moore, 2015; Wong et al., 2016), with parents' use of inductive parenting (Burke & Moore, 2015; Kim et al., 2019) and lower levels of perceived burdensome and chaotic family environments (Corthorn & Milicic, 2016; Potharst et al., 2017). However, after controlling for the robust

predictive links of parent inflexibility in the current study, parent flexibility displayed fewer significant predictive associations. Although many of the predictive associations for parent flexibility were in the expected directions, two unexpected associations emerged at the between-person, trait-like level of the model. After controlling for parent inflexibility, higher stable levels of parental psychological flexibility were predictive of slightly higher stable levels of negative conflict in their romantic relationships and coparenting discord across the 8 weeks of the study, suggesting that a parent being psychologically flexible was linked to slightly more disagreements, conflict, and triangulation with their coparent. Though somewhat counterintuitive, these results appear to approximate the bivariate associations found in Baker and McNulty's (2011) study in which newly married wives who rated themselves as having higher levels of flexibility also reported more severe marital issues at baseline. Consistent with this, the current findings may suggest that flexibility may aid in parents' attunement to the subtleties in the dynamics of their coparenting relationships.

8.1.3. Stress can strain parents and families

The current findings build on Cobham and colleagues' (2016) review, offering empirical support for the stepwise manner in which family functioning, parenting behaviors, child and adult well-being may fluctuate due to acute stressors such as a natural disaster, or in the case of the current study, a global health crisis. At a between-person, trait-level, results of the current model suggested that stress from new childcare and work demands at baseline predicted stably lower levels of adaptive functioning of the overall family environment, including more chaotic overall family dynamics and more conflictual interactions between parents, which in turn were linked to the use of harsher parenting tactics and greater child distress across those 8 weeks of the study. At a within-person level, elevations in parent inflexibility in a specific week predicted elevations in their own depressive symptoms and poorer romantic functioning (i.e., greater negative conflict and lower relationship satisfaction) within those same weeks, which in turn predicted spikes in family chaos and coparenting discord and corresponding spikes in angry parenting and child distress.

While the research on how COVID-19 stressors may have affected family and child functioning is still forthcoming, these findings align with a handful of studies which have also replicated the spillover effects of acute stressors on family functioning. For example, in cross-sectional samples, COVID-19 stressors were linked to both parenting strain/burden and family chaos, which were in turn linked to harsh/reactive parenting (Chung et al., 2020) and child distress (Spinelli et al., 2020). Taken as a set, the current findings extend this largely cross-sectional literature, demonstrating how acute stressors associated with the COVID-19 pandemic might have shaped family dynamics during the early stages of the lockdown in the United States.

8.1.4. Families can be resilient

Given their links to all levels of family functioning examined in the current study, parent flexibility and inflexibility emerged as potential sources of resilience and risk within the current findings. ACT interventions specifically target dimensions of inflexibility and seek to cultivate instead the use of flexible responses to difficult thoughts, feelings, and experiences in an effort to alleviate suffering (Hayes et al., 2011). With over 600 published randomized clinical trials (see Gloster et al., 2020), a robust literature supports the effectiveness of targeting inflexibility and flexibility as key sources of risk and resilience for individual functioning. The current results build on that work by demonstrating that parent inflexibility and flexibility are not only linked to family functioning in everyday life (e.g., Daks & Rogge, 2020), but that they might also have served as key sources of risk and resilience for family and child functioning during a global health crisis that shut down most of the world. The current findings extend family-centered models of risk and resilience in the aftermath of stressful life events (e.g., Cobham et al., 2016; Masten, 2018). Within this literature, family and parenting processes such as family support, cohesion, conflict and harsh parenting practices have emerged as key mechanisms linking the occurrence of an acute stressor (e.g., natural disaster) to both parent and child outcome trajectories (e.g., Brooks-Gunn et al., 2013; Felix et al., 2015; Hafstad et al., 2010). In one sample of 387 school-aged children affected by Hurricane Katrina, Kronenberg et al. (2010) found that although the majority of children's symptoms decreased over time, children who continued to experience symptoms differed from those whose symptoms mostly subsided on a number of key variables, including experiencing problems/conflict at home. Similarly, results in a sample of 433 U.S. parents highlighted that parents perceived stress from new demands and anxiety surrounding COVID-19 as having the strongest adverse impacts on their parenting during the pandemic (Adams et al., 2021).

8.1.5. A top-down cascade

Results of the current multilevel path model suggest that parents and children may have notably better outcomes in the face of major upheavals if parents (1) are able to respond less rigidly/inflexibly to challenging situations, thereby promoting (2) better parent functioning, (3) better romantic relationship functioning, (4) less conflictual and chaotic coparenting and family environments, and (4) less angry/reactive parenting practices. At both the stable, between-person level and at the level of within-person week-to-week fluctuations in the model, these results support prior research highlighting the key mediating role that coparental discord and angry/reactive parenting practices have in shaping children's sense of emotional security and mental health outcomes, suggesting that environments in which coparents adaptively resolve conflict and engage in lower rates of harsh parenting practices may help cultivate improved mental health and overall functioning for children in those families (e.g., Conger et al., 1994; Davies & Cummings, 1994).

8.1.6. Risk might vary across mothers and fathers, and across levels of economic security

The vast majority of the effects examined remained stable across the demographic groups that could be examined in multi-group models, suggesting a high level of generalizability. However, those multi-group analyses uncovered a handful of effects that seemed to meaningfully differ across groups. The results suggested that the processes being examined in the top-down cascade of spillover effects were more strongly linked in fathers than in mothers. As these analyses were exploratory, these results should be interpreted cautiously. With that caution in mind, these results begin to suggest that fathers might be slightly more susceptible to a cascade of negative spillover effects than mothers. A handful of additional exploratory effects suggested that the dynamics of romantic relationships between parents might be somewhat buffered from the potential adverse influences of psychological inflexibility and depressive symptoms in wealthier families with more resources. In contrast, the stress of new demands due to lockdowns and school closings might have been more disruptive in wealthy families with lower overall economic stress, possibly because their wealth suddenly could no longer secure childcare. Future work could seek to replicate and deepen our understanding of these tentative moderation results.

9. Limitations

9.1. Generalizability of the current findings

The multi-group models (Table 5) demonstrated that the results of the model seemed to generalize reasonably well across a series of demographic groups (e.g., smaller vs bigger families, younger vs older children, mothers vs fathers, low vs high COVID-19 risk). This suggests that the results remained fairly robust across a wide range of *cis*-gendered, 2-parent families. Although those results are promising, it is

worth noting that even those multi-group models were limited by the characteristics of the current sample. This is because demographic subgroups smaller than 150 could not be effectively tested within a multi-group analytic framework. Thus, the current sample prevented us from testing generalizability beyond the *cis*-gendered, 2-parent families that made up the vast majority of the current sample; Table 2). Furthermore, the study did not collect information on sexual orientation or gender of co-parent and so it remains unclear how well the findings might generalize to same-sex parenting dyads. The smaller proportions of non-white participants also prevented us from examining how our findings might generalize to specific racial and ethnic minority families. It is also possible that this sample drew from a unique sub-sample of parents and families who had the resources to allot additional time to completing these weekly assessments. These points are particularly relevant as racial minorities, particularly Black and Hispanic adults, were disproportionately impacted by the pandemic. Compared to whites, not only did Black and Hispanic adults experience higher prevalence rates of COVID-19, but they also demonstrated higher levels of COVID-related hospitalizations, mortality, as well as decreased access to care (Bassett et al., 2020; Magesh et al., 2021; Mude et al., 2021). These results were further exacerbated in these populations when they were from lower socio-economic backgrounds (Lieberman-Cribbin et al., 2020; Magesh et al., 2021). Unfortunately, in addition to these disproportionate impacts on racial/ethnic minorities, there were also disparities in the intent to vaccinate, with lower income non-Hispanic Black adults (ages 18–49) the least likely to vaccinate (Nguyen et al., 2022). Thus, future work could extend the current findings by examining similar models in more diverse samples, oversampling racial, ethnic, gender, and sexual minority parents to directly evaluate how well the current findings might generalize to those populations.

9.2. Directionality of effects remains unclear

Each of the level 1 paths (i.e., within-person) within the multilevel models represent the association between the shift in one process on a specific week and the corresponding shift in another process on that same week. Thus, those paths do not speak directly to directions of causality. For example, although the arrows in our models would suggest that parent inflexibility might have caused parents to experience greater social isolation, stress from new demands, coparent discord, and child distress, it is also possible if not likely that greater amounts of social isolation, stress from new demands, coparent discord, and child distress could have caused parents to react to challenging situations with greater psychological inflexibility. Similarly, although greater amounts of negative relationship conflict seemed to promote greater coparent discord and angry parenting in our model, it is also possible that greater amounts of coparent discord and angry parenting could have promoted greater negative relationship conflict behavior. Given the research highlighting the transactional nature of most family processes (Bell, 1968; Combs-Ronto et al., 2009; Neece et al., 2012) it is likely that a majority of the associations examined here will be bidirectional in nature when examined within daily diary studies collecting sufficient repeated waves of assessment to support more complex cross-lagged modeling. Finally, even though our model conceptually aligns with psychological flexibility and family systems theories, it is also possible that the major directions of causality underlying these effects might ultimately support a different ordering or configuration of constructs entirely. Thus, future multi-wave studies examining this model could test different configurations of the current model (i.e., alternative models) to ensure that the current model is indeed the most parsimonious, representing the dominant directions of causality.

9.3. Additional limitations

Several additional limitations in the current study should be acknowledged. First, responses in this study relied solely upon a individual parent's self-report data. Future studies could address concerns of lack of insight and reporting biases by collecting data from multiple family members (i.e., both parents and children) and by objectively coding observational data to gain a more comprehensive overview of family dynamics. Second, this study was conducted just as the effects of a worldwide health crisis were sweeping the U.S., potentially limiting the scope of the findings. Future studies could examine the proposed model outside of such extreme circumstances to evaluate the generalizability of the findings. Third, recruitment for this study began just weeks after the World Health Organization declared COVID-19 a global pandemic, and thus failed to include a pre-pandemic assessment of family, parent, and child functioning. Thus, the results do not speak to how family dynamics and individual functioning may have fluctuated prior to the global health crisis. Fourth, the current study utilized weekly diary assessments to quantify the predictive links between pairs of variables. Although this helped to minimize the sizable participant burdens that would have been associated with a 2-month daily diary study, it prevented the use of more complex cross-lagged models. Future work could therefore extend the current findings by recruiting a larger sample and using shorter timeframes between assessments as such methods would provide the complexity of data necessary to support cross-lagged path models and would allow for the examination of bidirectionality between the constructs measured. Finally, to minimize participant burden, the 8 weekly assessments made use of truncated versions of scales. Although those truncations were created carefully to maximize their representation of the original scales and were successful in demonstrating meaningful results, they were not validated prior to conducting the study. Thus, future work could seek to validate those truncated versions of the scales for use in future multi-wave studies or could use the longer validated forms of those scales in repeated waves of assessment to address this limitation.

10. Conclusion

Despite these limitations, the current results are among the first to comprehensively and longitudinally model the central role that parent psychological flexibility plays in shaping the dynamics of family functioning amidst the COVID-19 pandemic. With the use of weekly diary data and multilevel modeling techniques, results were able to distinguish between stable between-family differences and associations among weekly within-family fluctuations occurring within specific weeks. Thus, the results provided key insights into the role that parental flexibility and inflexibility have in shaping reactions to acute stressors, overall family dynamics and individual functioning. Additionally, focusing on key sources of risk and resilience for families facing acute stressors could hopefully inform future resources aimed at supporting families find more adaptive ways to cope with such stressors.

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Data availability

The study IRB materials, the exact survey questions, the SPSS syntax, and the Mplus syntax and output files will be made freely available an osf. io project on the third author's osf. io account. The authors will also make the SPSS and Mplus datasets available upon reasonable request within that same osf. io project.

Author contributions

RR designed the study (with key input from JD and JP), obtained IRB approval, and programmed the online survey. JD and RR recruited the

sample, cleaned the data, ran the analyses, and prepared the tables and figures. JD drafted the first draft of the manuscript and all three authors edited and approved the final manuscript. All three authors affirm the accuracy of the numeric results presented.

Declaration of competing interest

The authors have no financial interests associated with this study or manuscript.Given their role as an Editorial Board Member, the third author had no involvement in the peer-review of this article and had no access to information regarding its peer-review.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jcbs.2022.08.011.

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