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Does Coparenting Improve During the OurRelationship Program? Explorations Within a Low-Income Sample During the COVID-19 Pandemic

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Abstract

Low-income couples are at an increased risk for relationship instability and divorce, which can have residual impacts on coparenting between the two partners. Growing evidence suggests that brief online relationship education programs can be an effective tool for alleviating relationship distress among low-income couples. However, findings remain mixed when it comes to whether benefits from relationship-focused programs not explicitly addressing coparenting spillover to coparenting among those with children. This pre-registered study sought to investigate whether couples participating in an evidence-based online relationship-focused intervention, the OurRelationship program, experienced improvements in coparenting during the COVID-19 pandemic. To expand on the existing literature, coparenting outcomes assessed included partners' gatekeeping behaviors in addition to coparenting satisfaction given their important implications for partner involvement in parenting. We also examined the extent to which changes in coparenting were moderated by pre-post gains in relationship satisfaction, child gender, division of childcare, and pandemic disruptions. In a sample of 136 low-income couples ($N = 272$ individuals) and a one group/pre-post design, we found medium-sized gains in relationship satisfaction (Cohen's $d = .76$) and small-sized improvements in all coparenting aspects assessed ($|d|s = .29 - .39$). Couples with greater gains in relationship satisfaction experienced greater improvements in coparenting; further, coparenting changes were robust to other moderators. Taken together, findings suggested that brief online relationship education programs, such as the OurRelationship program, may be a promising option to improve coparenting among relationally distressed low-income couples with children during a global health crisis.

Keywords

OurRelationship; Low-Income; Couples; COVID-19; Coparenting

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Study aims, hypotheses, and analyses for this study (except for Aim 2) were preregistered and available on the Open Science Framework (<https://osf.io/yebnk/>). Aim 2 was added in the review process in response to reviewer comments and was thus not pre-registered. Data and study materials are available upon request.

Family system theory posits that all parts of the family systems are interconnected (Minuchin, 1988). Thus, in two-parent families, it is expected that couples' relationship quality will have implications for their relationship as coparents and vice versa. Indeed, this theorized within-couple bidirectional link was supported in basic research of two-parent families (e.g., Le et al., 2016). Thus, programs focusing exclusively on improving couples' romantic relationship are expected to subsequently lead to improvements in coparenting. To our knowledge, only two studies have tested this hypothesis in the general population – both found supporting evidence (Doss et al., 2014; Doss, Roddy, et al., 2020). Specifically, in a randomized controlled trial (RCT) with a transition to parenthood sample, mothers in a relationship-focused intervention, relative to the control condition, reported greater increases in parenting alliance (Doss et al., 2014). A different study with a nationally representative sample found significantly greater decreases in coparenting conflict among couples participating in a relationship-focused intervention relative to control couples (Doss, Roddy, et al., 2020).

However, it is still unclear whether the same conclusion applies to low-income couples who are at higher risk of relationship problems and instability (Karney, 2021). A recent meta-analysis concluded that relationship education for low-income couples has negligible effects on coparenting ($d = 0.03$, $p > 0.05$) in studies with a control group and yet a significant and small-sized effect in studies with one-group/pre-post design ($d = 0.25$, $p < .001$; Hawkins & Erickson, 2015). It is worth noting though that RCTs that contributed to this meta-analysis are dominated by the two government-funded, large-scale, multisite studies: one evaluating the Building Strong Families (BSF) program for unmarried, lower income couples at or near the birth of their child (Wood et al., 2014) and one evaluating the Supporting Health Marriage (SHM) program for low-income married couples (Lundquist et al., 2015). Program effects on the couple relationship were nonsignificant in BSF-site studies (Wood et al., 2014) and significant but very small in SHM-site studies (Lundquist et al., 2015). Thus, the limited effect on couple relationships in BSF and SHM may not be large enough to “spillover” to partners' coparenting. Relatedly, a more recent government funded large scale study on low-income couples, Parents and Children Together Healthy Marriage (Moore et al., 2018), found significant program effects on partners' coparenting relative to a control group, though effects were also very small ($d = .10$). Moreover, curricula in these studies have devoted some time on coparenting, making it less clear whether focusing exclusively on the romantic relationship can yield improvements in coparenting.

To further address this issue, Le et al. (2021) evaluated the spillover effects of two online relationship-focused programs on partners' coparenting in a low-income sample, namely ePREP and OurRelationship (OR). Both programs have demonstrated notable impacts on various aspects of low-income couples' romantic relationships in two independent low-income samples (Doss, Knopp, et al., 2020; Hatch, Knopp, et al., 2021). The OR program has also been shown to reduce coparenting conflict in a nationally representative sample (Doss, Knopp, et al., 2020). However, program effects on coparenting were not found in Le et al. (2021) when comparing intervention couples to couples in a waitlist control group. This may suggest that addressing couples' romantic relationship distress is not sufficient for low-income couples to improve their coparenting. However, in their study, coparenting was assessed with a single item asking partners' global perception of how they work together

as parents, which may not be sensitive to more immediate changes in specific aspects of the coparenting domain. Thus, more work is needed before concluding that alleviating relationship distress does not improve coparenting for low-income couples. Further, previous intervention work with this population has not examined whether improvements in coparenting is associated with improvements in couples' relationship distress, which can provide further evidence to support the theorized spillover effect.

Another gap in the literature is that past studies investigating the effects of couple relationship programs on coparenting tend to focus on alliance or conflict (see Doss, Roddy, et al., 2020; Lundquist et al., 2015; Wood et al., 2014). Another important dimension to consider is parental gatekeeping, which is beliefs or behaviors of one parent that regulate the other parent's relationship with the child (Allen & Hawkins, 1999; Schoppe-Sullivan & Altenburger, 2019). Gatekeeping is conceptualized to operate on two dimensions: beliefs or behaviors that *inhibit* (gateclosing) or *facilitate* (gateopening) the other parent's relationship with the child. Existing research on gatekeeping has focused predominantly on maternal gatekeeping given that mothers tend to take on the primary caregiver role in the family – especially with young children (Schoppe-Sullivan & Altenburger, 2019). Maternal gatekeeping has important influence on father engagement with their children (Allen & Hawkins, 1999; Altenburger et al., 2018; Fagan & Cherson, 2017; Schoppe-Sullivan et al., 2008), which plays an important role in child development (Jeynes, 2015; Zhang et al., 2019). Basic research suggests that one factor that may contribute to maternal gatekeeping is the romantic relationship with fathers. Mothers with more marital problems reported greater increases in gatekeeping attitudes which may restrict, limit, or exclude father involvement (Stevenson et al., 2014). Further, mothers tend to gate close on fathers when they perceive their romantic relationship to be less stable (Schoppe-Sullivan et al., 2015). Thus, it is important to know whether relationship programs that alleviate relationship distress also lead to decreases in maternal gatekeeping. Although only minimal prior research has examined paternal gatekeeping, gatekeeping is not limited by the biological sex of the parent. It is also possible for fathers to gate open or gate close on mothers – especially in families with older children for which the scope of parenting goes beyond caregiving (Adamsons, 2010; Schoppe-Sullivan & Altenburger, 2019). For this reason, in the current study, we also examined changes in paternal gatekeeping in addition to maternal gatekeeping.

Finally, little is known about moderators of programs' spillover effects on coparenting. Investigating potential moderators helps us understand whether program effects are robust or works better for certain couples. Given the focus on parental gatekeeping, two moderators are important to investigate – child gender and division of childcare. Previous work has shown that fathers with sons are more engaged with their children than those with daughters (Lundberg, 2005). As a result, program effects on fathers' gatekeeping may be greater for those with sons than those with daughters as they are likely more involved in parenting and thus have more opportunities to open/close gate on mothers. Relatedly, existing work on gatekeeping has focused predominantly on maternal gatekeeping partly because mothers tend to take on the primary caregiver role in the family when children are young. However, this may not be the case for all families, especially for those with older children. Thus, it is important to consider the moderating role of division of childcare as program effects on gatekeeping may be greater for those who take on more childcare

responsibilities. Additionally, we also examined whether program effects differ across couples experiencing different levels of disruptions caused by the COVID-19 pandemic as data collection occurred during the pandemic. Previous work has documented medium-to-large sized negative impacts of the pandemic on parent, child, and family functioning (Feinberg et al., 2021). For couples who are more severely impacted by the pandemic, they may be too overwhelmed to reap any benefits from the program. Conversely, it is possible that the program provided help in times of need so that they benefited more.

Taken together, the current study has three aims. First, we investigate whether couples attending an online relationship-focused program during the COVID-19 pandemic experience improvements in relationship satisfaction and coparenting – measured by overall coparenting satisfaction and gatekeeping – in a low-income sample. Previous work has alluded to the potential difference between individuals' report of their own gatekeeping and their partner's perception of their gatekeeping (Adamsons, 2010; Fagan & Cherson, 2017); therefore, partners were asked to report on both their own gatekeeping as well as their perception of partners' gatekeeping. Second, we further test the spillover hypothesis by examining whether improvements in coparenting are predicted by relationship satisfaction gains. Third, we explore whether improvements in coparenting differ as a function of child gender, division of childcare, and disruptions caused by the COVID-19 pandemic.

Method

Study procedures were approved by the Institutional Review Board prior to recruitment. Study aims, hypotheses, and analyses for this study were preregistered with the Open Science Framework (<https://osf.io/yebnk/>).¹ Data and other study materials are available upon request.

Participants

Couples ($N = 314$) participated in the OurRelationship (OR) program between February and August 2020, with all couples completing at least a portion of the program after the World Health Organization declared the COVID-19 outbreak a global pandemic. A coparent subsample ($N = 136$; 272 individuals) was selected for the current study if they had one or more children under 21-years-old and their youngest child was a shared biological child with their romantic partner participating in the program (see Table S1 for sample characteristics and relevant differences with the subsample). At baseline, participants were on average 33.35 ($SD = 6.36$) years old, had been together for an average of 9.19 ($SD = 5.49$) years. All couples were in mixed gender relationships, most were married (78.3%), with fewer engaged (12.5%) or cohabiting (9.2%). The youngest child was on average 3.64 ($SD = 3.21$, range = 0 – 15) years old, with half male and half female. Most identified themselves as non-Hispanic White (65.4%), with fewer Black (15.8%), White Hispanic (4.8%), multiracial (4.8%) or other. In total, 9.6% identified as Hispanic/Latino(a). Educational attainment was missing for 11% of the sample. For the remaining, 6.6% reported no degree attainment, 13.6% had a GED, 19.4% had a high school diploma, 11.6% had vocational training,

¹Aim 2 was added in the review process in response to reviewer comments and was thus not pre-registered.

21.5% had some college, 10.7% had an associate's degree, 12.8% had a bachelor's degree, and 3.7% had a master's or advanced degree. A little less than half were working full time (42.6%), 36.8% were unemployed, with fewer working part time (7.7%), variable employment (6.6%), or seasonal work (6.3%). Annual income was missing for 3.3% of the sample. The remaining sample reported making less than \$5,000 (24.3%), \$5,000 – 11,999 (13.3%), \$12,000 – 15,999 (7.2%), \$16,000 – 24,999 (11%), \$25,000 – 34,999 (20.2%), \$35,000 – 49,999 (18.6%), and \$50,000 and more (5.4%) in the past 12 months.

Procedure

Participants were recruited through paid advertisements on Google and Facebook, organic search, and word of mouth. Couples were eligible if they were married, engaged, or cohabiting with their partner for at least 6 months; between 18 and 64 years old; lived in the United States; had a household income within 200% of the federal poverty line; were able to read and write fluently in English; had access to high-speed internet; agreed to forgo other couple treatment in the next 6 months; and had not previously participated in the OR program. Couples were excluded if either partner endorsed severe intimate partner violence in the past six months which included choking, repeated punching or beating up, being threatened or having used a gun or knife, being physically forced to have sex, or if they reported feeling “quite afraid,” “very afraid,” or “extremely afraid” that the other partner would physically hurt him/her during an argument (456 couples were excluded due to domestic violence concerns).

Eligible couples learned about the study protocol and provided verbal informed consent during the first call with their coach before participating the program. The OR program is an evidence-based online relationship program adapted from integrative behavioral couple therapy (Doss et al., 2013). Couples identified one or two of the biggest relationship problem(s) to focus on during the program. Previous work showed that communication, emotional intimacy, and spousal-specific issues (e.g., alcohol, personality) are the three most common problems among couples seeking relationship help online (Roddy et al., 2018). The program consists of 6–8 hours of self-directed online content accompanied by four 20-minute telephone or video calls with a paraprofessional coach (see Doss et al., 2013 for more details). There is no program content that directly addresses coparenting. Most of the activities were completed individually except for the conjoint activity where couples were instructed to come together for structured conversations. As part of internal quality improvement efforts, couples were randomly instructed to complete the conjoint activity before ($N = 76$) or during the coach call ($N = 60$). Differential program effects due to differences in whether the conjoint activity was completed during the coach call were not expected. Its main effect and moderating effect were explored in the initial analyses, no reliable effects were found, and they were not retained (stats available upon request). Couples were assessed prior to program participation (baseline) and shortly after program completion or dropout (post; $M = 5.89$ weeks after baseline).

Measures

Relationship satisfaction was assessed using the four-item version of the Couples Satisfaction Index (Funk & Rogge, 2007; $\alpha = .93$). *Coparenting satisfaction* was assessed

using three items developed for the current study. An example item is “*I’m happy with how my partner and I parent together.*” Items were rated on a 4-point scale (1 = *strongly agree*, 4 = *strongly disagree*), and were reverse coded and summed. Higher scores indicate higher coparenting satisfaction ($\alpha_s = .88 - .92$). *One’s own gateopening* and *gateclosing behaviors* were each assessed with three items based on Lee et al. (2019) and consultation with Sarah Schoppe-Sullivan and Jin-kyung Lee (personal communication, October 31, 2019). An example for gateopening behaviors is “*How often do you let your partner know you are grateful for his/her contributions?*”; an example item for gateclosing behaviors is “*When your partner does something that you don’t approve of regarding childcare or with your child, how often do you take over and do it your own way?*” These items were also reworded to assess *one’s perception of partner’s gateopening* and *gateclosing behaviors*. Items were rated on a 6-point scale (1 = *never*, 6 = *several times*) and summed. Higher scores indicate more gateopening/gateclosing behaviors from oneself or ones’ partner. Across parent gender and assessments, Cronbach alphas ranged from .83 to .93 for gateopening behaviors, and .70 to .89 for gateclosing behaviors. All coparenting questions reference the respondent’s current romantic partner.

Three *a priori* moderators were tested at baseline. First, parents reported the gender of their youngest shared child (0 = *Male*, 1 = *Female*). Second, division of childcare was measured on a five-point scale (0 = *My partner is the primary caregiver*, 2 = *We share caregiver responsibilities equally*, 4 = *I am the primary caregiver*). Lastly, items were created for the study asking participants how they were affected by the COVID-19 pandemic across 18 domains (e.g., psychological, financial, social, etc.). They were not asked to indicate whether these effects were negative or positive. The sum of each yes-or-no question was computed and treated as a continuous measure of cumulative risk capturing COVID-19 disruptions.

Data Analysis

Analyses were conducted using two-level multilevel models with assessments nested within couples. All models were estimated using Bayesian estimation via the *brms* package in *R* (Bürkner, 2017). Bayesian estimation has several advantages over traditional methods, including a deemphasis on statistical significance derived from *p*-values and more approachable interpretations of credible intervals (Cis) compared to frequentist confidence intervals (e.g., “the probability the true effect lies within this CI is .95”). Models were estimated using four simultaneous chains with 1,000 warm up iterations and 5,000 total iterations each (Bürkner, 2017). Models were evaluated for convergence based on \hat{R} values, with aggregate \hat{R} s exceeding 1.05 indicative of possible non-convergence (Vehtari et al., 2019). Coefficients were considered reliable and meaningful if the 95% CI did not include 0.

For Aim 1, within-person changes in satisfaction and coparenting were examined by modeling the main effect of time (0 = *baseline*, 1 = *post*) as well as random effects in the intercept and the effect of time and the covariance between the two. To evaluate effect sizes, Cohen’s *d* was calculated by dividing the regression coefficient of time by the baseline standard deviation of the corresponding outcome. Spillover effects were tested by examining pre-post satisfaction gains as a moderator (Aim 2). For Aims 2 and 3, moderation was

examined by adding the main effect of the moderator (centered) and its interaction with time to models tested for Aim 1. To reduce model complexity, moderation by each of the four moderators was examined in separate models, which resulted in a total of five models per outcome. Questions on COVID-19 disruption were added in mid-April resulting in 65% of the coparent subsample being asked these questions at baseline. Thus, the subsample was used when examining COVID disruption as the moderator. There were no sample differences except for ethnicity, proportion of two specific income categories, and baseline relationship satisfaction between those who received the COVID-19 questions and those who did not (see Table S2). Sensitivity analyses were conducted accounting for these variables. The pattern of results for COVID-19 disruption as the moderator remained the same (stats available on the Open Science Framework).

Seventy percent of couples completed the program. Intention-to-treat principles were adopted such that individuals were included in analyses regardless of program completion. There were no missing data at baseline and 20% missing data at post for outcome variables. Missing data were handled using Blimp – a multilevel imputation program (Enders et al., 2018, 2020; Keller & Enders, 2019). Specifically, we explored whether variables including program completion, demographic information, and baseline relationship and individual functioning were related to both study variables and missingness. Baseline relationship satisfaction, parent gender, and harsh parenting were identified and included in the imputation model and 30 imputed datasets were created and used for analysis.

Results

Descriptive statistics across assessments for outcome variables were provided in Supplementary Table S3. At baseline, 40% participants reported sharing caregiver responsibilities equally, with less reporting as the primary caregiver themselves (10%) or for the most time (14%), or their partner as the primary caregiver (16%) or for the most time (20%); the level of pandemic disruption ranged from 0 to 13 (*Median* = 3, *SD* = 3.18). No model demonstrated concerning degrees of non-convergence (see Tables S4–S5 for full model results).

Overall, there were evidence of reliable improvements in relationship satisfaction and coparenting from baseline to post-test. Results indicated increases in relationship satisfaction ($d = .76$, 95% CI = [.64, .88]), coparenting satisfaction ($d = .39$, 95% CI = [.26, .52]), and one's own and perception of partner's *gate opening* behaviors ($d_{\text{Self}} = .26$, 95% CI = [.11, .40]; $d_{\text{Partner}} = .35$, 95% CI = [.21, .49]), and decreases in one's own and perceptions of partner's *gate closing* behaviors ($d_{\text{Self}} = .31$, 95% CI = [.16, .47]; $d_{\text{Partner}} = 0.29$, 95% CI = [.14, .44]). Further, these improvements were reliably greater among couples with greater gains in relationship satisfaction, but did not differ across child gender, division of childcare, or the pandemic disruption.

Discussion

The current study examined whether low-income couples participating in an evidence-based relationship education program during the COVID-19 pandemic experienced pre-

post improvements in relationship satisfaction and coparenting and the extent to which improvements in coparenting vary based on relationship satisfaction gains, child gender, division of childcare, and disruption caused by the pandemic. As hypothesized, there were medium-sized gains in relationship satisfaction and small-sized improvements in all coparenting aspects assessed. Further, improvements in coparenting were greater among those with greater satisfaction gains, but did not differ reliably across child gender, division of childcare, or pandemic disruption.

Small-sized improvements in coparenting found in the current study are in line with the recent meta-analysis that found significant and small-sized effects of relationship education on coparenting among low-income couples in studies with a one-group/pre-post design (Hawkins & Erickson, 2015). Moreover, couples with greater gains in relationship satisfaction also reported greater improvements in coparenting, further supporting the theorized spillover effect within a couple. It is also worth noting that the program was delivered during the pandemic, representing an early effort to help disadvantaged couples in times of need.

The current study also adds to the existing literature by expanding the coparenting outcomes beyond alliance and conflict to include gatekeeping behaviors from both partners. Although prior work has suggested that gatekeeping behaviors reported by oneself may differ from what was perceived by the partner (Adamsons, 2010; Fagan & Cherson, 2017), improvements in gatekeeping behaviors were consistent across both partners' reports – likely reflecting meaningful changes in partners' actual behaviors. However, in Le et al. (2021), pre-post improvements in cooperative coparenting were also found for couples in the control condition. Given the lack of a control group in the current study, we remain cautious of causal conclusions and call for future studies to replicate these findings with a RCT.

Additionally, improvements in coparenting were not moderated by child gender, division of childcare, or disruptions caused by the pandemic. In the current sample, child gender was equally split between male and female, division of childcare was also normally distributed, and pandemic disruption had a wide range (0–13). Thus, these results likely suggest that couples with varying levels of these factors experienced similar improvements in coparenting. This is consistent with past studies that showed that the OR program is equally beneficial for couples regardless of their sexual orientation, income, motivation, emotion regulation, relationship status, and military status (Georgia Salivar et al., 2020; Hatch, Knopp, et al., 2021; Hatch, Rothman, et al., 2021; Rothman et al., 2021; Salivar et al., 2018).

However, the current study also has limitations. First, the pre-post design without a waitlist control group left us unable to make causal conclusions. Waitlist couples in Le et al. (2021) reported significant gains in coparenting during the first two months, which is about the time intervention couples typically take to complete the OR program. Thus, if a control group was included, it is possible that they would also experience some levels of improvements in coparenting. However, the study period largely overlapped with the COVID-19 pandemic and previous work has shown medium-sized deterioration in coparenting from before to the early months of the pandemic (Feinberg et al., 2021).

Thus, we do not expect the magnitude of these improvements to be comparable to those participating in the program. Second, although there was evidence supporting the spillover hypothesis, it was not possible to conduct a formal test of mediation because couples were not randomly assigned to an intervention or control group. Therefore, it is possible that improvements in these domains were driven through other variables such as reductions in conflict communication or nonspecific effects (e.g., both partners agreeing to work together to improve the relationship). Third, COVID-19 disruption may yield positive effects on family relationships (e.g., Gadassi, 2021). However, we did not differentiate disruptions that yield negative versus positive effects, which may make it difficult to detect its moderating effect. Fourth, we were not able to compare to a sample of low-income couples who did not experience the pandemic. Improvements observed may be one successful effort that has helped couples during trying times “get more of the better and less of the worse out of such a time” (p. 938; Stanley & Markman, 2020). Thus, these findings may not be generalizable to low-income couples participating in the program during non-crisis times. Fifth, follow-up data is lacking, leaving us unable to examine whether pre-post gains were maintained post intervention and for how long or whether there were continuous gains. Lastly, the current study relied on self-report data. Although these data are easier to gather, these perceptions may not map on perfectly to coparenting behaviors. Future research should try to replicate these findings with a RCT, collect observational data on coparenting, and collect follow-up data post intervention.

Despite these limitations, the current study is an early effort to help disadvantaged couples during trying times. Findings suggested that low-income couples participating in the OR program during the COVID-19 pandemic experienced gains in coparenting in addition to relationship satisfaction and that improvements in coparenting were similar across child gender, division of childcare, or pandemic disruptions.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Dr. Brian Doss is a co-inventor of the intellectual property used in this study and an equity owner in OurRelationship LLC.

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