



Promoting Conflict Reappraisal in Parenting Couples: A Feasibility Study and Preliminary Evaluation of a Brief Writing Intervention

Heather Prime^{1,2} · Amy Muise¹ · Alexandra Markwell^{1,2} · Lehana Thabane^{3,4,5} · Mark Wade⁶

Accepted: 21 July 2023

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2023

Abstract

Parenting couples with young children are at risk for relationship problems, which was exacerbated during the pandemic. The current study examines the use of a brief, low-intensity writing intervention that promotes conflict reappraisal strategies to enhance relationship quality. We examine feasibility metrics (i.e., recruitment, eligibility criteria, demographics, retention, adherence, uptake, and acceptability) and pre-post change in couple and family outcomes, with the goal of informing future program iterations. Fifteen couples ($n = 30$), at elevated risk for relationship difficulties due to their developmental stage (i.e., couples with children <6 years old) and the context (i.e., COVID-19 pandemic), took part in a single-arm, pre-test/post-test study in August – October 2021. Following the completion of baseline surveys, couples independently took part in three conflict reappraisal writing sessions over the course of five weeks. Subsequently, they completed post-test surveys. The sample was diverse: 60.0% of participants identified as being part of a racially minoritized group; 40.0% reported being born outside of Canada; and 13.3% self-identified as LGBTQIA2S+. Adherence, retention, and uptake were good, as was intervention acceptability. Positive change was evident in couple outcomes (relationship quality and responsiveness), in expected directions, with less support for change in family outcomes (parenting and parent mental health). Findings justify a future evaluative randomized controlled trial. In the future, we will aim to increase recruitment efforts and expand participant diversity, with some planned program changes. Clinicaltrials.gov Registration (retroactive): NCT05143437.

Keywords Couple conflict · Coparenting · Family systems · Writing intervention · Single-arm feasibility study.

Highlights

- Relationships of couples with young children are at risk due to stress following the transition to parenthood and disruptions caused by the pandemic
- We examined the feasibility and preliminary effectiveness of an intervention that promotes conflict reappraisal for parenting couples
- Feasibility captured our ability to recruit and retain diverse couples from the community, though higher recruitment rates are needed for a larger randomized controlled trial
- A diverse group of participants found the intervention to be acceptable and reported positive changes in couple outcomes
- Next steps include an evaluative randomized controlled trial to assess effectiveness, with efforts targeted towards increasing recruitment rates and minor program adaptations

✉ Heather Prime
hprime@yorku.ca

¹ Department of Psychology, York University, 4700 Keele St, Toronto, ON M3J 1P3, Canada

² The LaMarsh Centre for Child and Youth Research, York University, Toronto, ON, Canada

³ Health Research Methods, Evidence & Impact, McMaster University, 1280 Main St W, Hamilton, ON L8S 4L8, Canada

⁴ Biostatistics Unit, St Joseph's Healthcare Hamilton, Hamilton, ON, Canada

⁵ Faculty of Health Sciences, University of Johannesburg, Johannesburg, South Africa

⁶ Applied Psychology & Human Development, University of Toronto, 252 Bloor St. West, Toronto, ON M5S1V6, Canada

The interparental relationship is a multidimensional construct represented by global relationship quality (e.g., positive adjustment or satisfaction) and facets of conflict including conflict frequency, hostility, disengagement, constructive behaviour, and child-related conflict (van Eldik et al., 2020). We refer to ‘parenting couples,’ ‘couples,’ and ‘parents’ throughout the paper to reflect this relationship. The relational health of parenting couples is central to the family system (McHale & Irace, 2011), and has been robustly linked to adult mental health, parenting behaviour, and children’s adjustment (Ran et al., 2021; van Eldik et al., 2020). Couples with young children are vulnerable to relationship problems due to the stressors of the transition to parenthood and the years following (Kluwer, 2010; Madigan et al., 2017). As such, there is a need for evidence-based interventions that can support couples with young children.

At the time of study design and data collection in August – October 2021, during the height of the pandemic in Canada, couples with young children were at particular risk for relationship problems. Compared to non-parents, parents experienced higher levels of pandemic-related stress (Gadermann et al., 2021; Park et al., 2020; Pierce et al., 2020; Wamser-Nanney et al., 2021), which posed additional threats to couples’ interactions, relationship quality, and stability (Pietromonaco & Overall, 2021). Indeed, there was a decline in couples’ relationship quality from before to during the pandemic (Schmid et al., 2020). Importantly, not all couple relationships deteriorated during the pandemic; some maintained relational health or even improved their modes of communication and connection (Weber et al., 2021; Williamson, 2020). Furthermore, couples that preserved healthy dyadic processes (e.g., cooperative coparenting; partner support and responsiveness) served to protect their families from the harmful effects of the pandemic (Balzarini et al., 2023; McRae et al., 2021). Thus, though couples’ relationships were taxed during the pandemic, a united couple unit also represented a potential beacon of hope for families to “bounce forward” from the pandemic (Walsh, 2015; 2020, pg. 910). For many couples, their intrinsic capacity for sustained or improved relationship quality amidst stress may be best realized through the provision of skill-building programs.

A well-documented phenomenon in dissatisfied couples involves negative affect reciprocity during conflict interactions, wherein negative affect communicated by one partner in a couple leads to greater negative affect in the other. Once this chain of retaliatory negativity has been initiated, repair attempts may go unnoticed or eclipsed by the negative state within the couple – making this “a state that is difficult to exit once entered” (Gottman (1998), p. 179). Most approaches to couple therapy address affect regulation to promote constructive conflict, and support couples to see how negative sequences can wear down connection (Lebow

& Snyder, 2022). Relationship education programs – used to prevent relationship deterioration in well-functioning or vulnerable couples – also integrate elements of constructive conflict and address negative affect reciprocity (Bodenmann & Shantinath, 2004; Markman et al., 1993). However, both preventive and treatment programs for couples are time-consuming and resource laden.

From a public health perspective, it is important to deliver effective programs to large numbers of couples (Bradbury & Bodenmann, 2020). Introducing brief, online, self-directed interventions can help to mitigate challenges related to participant reach and retention, while also minimizing costs (Kanter & Schramm, 2018). Critical to scaling up brief interventions is a theory-driven approach using a rigorous randomized controlled trial (RCT) design on a smaller scale (Wilson & Juarez, 2015). One such theory-driven approach is the “Marriage Hack” (Finkel et al., 2013), a brief intervention that specifically targets negative affect reciprocity within conflict interactions. Over the course of three 7-minute writing sessions, couples participating in the Marriage Hack were encouraged to reappraise their conflicts from a neutral, third-party perspective who wants the best for all involved. In an RCT design with low-risk couples, this intervention was shown to reduce conflict-related negativity and buffered against normative declines in marital quality over time, in line with the theoretical model (Finkel et al., 2013). The promotion of a self-distanced psychological perspective and third-party visual perspective may thwart negative affect reciprocity in conflict interactions (Finkel et al., 2013).

More recently, in a series of studies, Rodriguez and colleagues (2019; 2020; 2021) implemented a single-session writing intervention drawing on the same conflict reappraisal techniques as the Marriage Hack (Finkel et al., 2013). Undergraduate students who participated in the conflict appraisal condition, involving an interpersonal conflict with friends, family members, or romantic partners, reported more access to emotion regulation strategies and fewer drinking problems two weeks later, as compared to the control condition (Rodriguez et al., 2019; 2020). In a sample of adults in cohabiting relationships during the COVID-19 lockdown period, those who participated in the single conflict reappraisal writing session reported fewer disagreements, fewer relationship aggression events, and less relentless conflict with their romantic partners than at least one of the control conditions two weeks later (Rodriguez et al., 2021). The Marriage Hack, which is brief and delivered fully online, has the potential for scale-up among couples with young children. By narrowly focusing on conflict reappraisal, we may be able to promote emotion regulation in conflict interactions, with potential snowballing effects on broader dimensions of relational and family functioning (Carr, 2015; Kanter & Schramm, 2018; Walton, 2014).

Current Study

The current study reports on a feasibility study and preliminary evaluation of a program designed to reduce harmful dyadic processes and enhance promotive features amongst parenting couples, with the goal of preventing relationship deterioration. This study was developed in response to widespread stressors resulting from the pandemic. However, the findings are broadly applicable to the study of relationship programs in the context of family stress. The current study is the first in a series of studies examining an adapted version of the Marriage Hack, called *Love Together, Parent Together (L2P2)*. This research program will investigate the feasibility, acceptability, and preliminary evaluation of the L2P2 program in couples with young children (current study), and will subsequently include an evaluative RCT to scale up and establish the effectiveness of the program. A published protocol of the current study (Prime et al., 2022) describes the goals of the overarching research program, the rationale for conducting a feasibility study, and adaptations made to the intervention for use with parenting couples amid the pandemic.

The current intervention resembles the original intervention in all major aspects, except for the timing and duration of the intervention—specifically, the program has been adapted from three sessions over 12 months to three sessions over five weeks to reach more participants and enhance retention (Prime et al., 2022). Furthermore, we consider our study population to be higher risk than the original sample based on their current developmental stage (i.e., couples with young children) and context (i.e., COVID-19 pandemic characterized by high stress and disruption). A final unique characteristic of the current research program is the inclusion of measurement on multiple family subsystems, including the couple (as in the original study) as well as parent mental health and parent-child relationships.

In the current paper, we report on a non-randomised, single-arm feasibility study, the goals of which are to assess feasibility, identify and rectify problems, and increase the success of a future evaluative RCT. Specific aims, elaborated in Prime et al., (2022), include assessing feasibility objectives (i.e., recruitment rates; appropriateness of eligibility criteria; sample demographics; program retention, adherence, and uptake; intervention acceptability) and pre-post change in couple and family outcomes.

Methods

The methods of the current study are described in the published protocol (Prime et al., 2022). The current report follows the CONSORT extension to pilot and feasibility

trials (Eldridge et al., 2016), with adaptations for a single-arm, non-randomised design. The study was retroactively registered on clinicaltrials.gov (registration # NCT05143437). Ethics approval was granted by York University and the University of Toronto.

Study Design

We utilized a single-arm, pre-post design. Couples were recruited through community-based partners who distributed study flyers with a direct link to study registration via Qualtrics. Enrollment remained open from August 26, 2021 to October 15, 2021, with participants enrolled consecutively. After online consent was obtained from each partner in a couple, separately, couples were enrolled and sent baseline surveys. The entirety of the study was delivered online using Qualtrics. All communications and surveys were sent to participant emails with links to the corresponding surveys/writing sessions. Baseline surveys of self-reported questionnaires asked about demographics, COVID-related stress, couples' relationship quality, responsiveness, and insensitivity, parent-child relations, and parent mental health. Our original protocol (Prime et al., 2022) indicates our intent to assess child mental health outcomes. However, due to measurement issues we were unable to address this study aim. Post-intervention surveys included all baseline measures except for demographics and COVID-related stress, and included an acceptability survey. The writing intervention included three writing sessions, biweekly over five weeks. Each writing session included a brief survey asking about recent conflicts, conflict-related negativity, and use of strategies taught within the writing program between sessions.

Participants

Participants included partners >18 years old endorsing being in a relationship with one another, residing in the same home, with one or more children <6 years old in the home. In line with a secondary preventative intervention (as opposed to treatment), individuals were excluded if they endorsed current plans or a history of separation or divorce. Participants included 15 couples ($n = 30$ individuals). Couples were in a relationship for a mean of 13.44 years ($SD = 4.45$), with a mean range of household income of \$100,000 – 124,999. Most participants had a university degree ($n = 14$, 46.7%) or higher (e.g., Master's, professional, or doctorate; $n = 12$, 40%), with four participants (13.3%) having less than a university degree (i.e., college, high school, or GED certification).

Half of the participants ($n = 15$; 50%) were born inside of Canada, with twelve born outside of Canada (40%), and three not reported. Of those born outside of Canada, the

median years since arriving in Canada was 7.00 ($IQR = 3.00\text{--}27.50$). About one third of participants self-identified as White ($n = 11$, 36.7%), with the remaining participants identifying as South Asian, Latin American, Black, Chinese, and of mixed origin. The majority of participants reported speaking English most often at home ($n = 19$, 63.3%), with seven participants (23.3%) reporting speaking English and another language equally at home, and one participant reporting speaking a language other than English most often at home. Data on language spoken at home were missing for three participants.

Participants reported their gender as man ($n = 14$), woman ($n = 14$), or gender diverse (e.g., trans, non-binary; $n = 2$) and sexual orientation as straight ($n = 26$) or diverse (e.g., asexual, bisexual, queer; $n = 4$).

Couples reported on a target child in the home, closest in age to 6 years, for the purposes of reporting on parent-child relations. Nine target children (60%) were male and six (40.0%) were female. The mean child age was 4.01 years ($SD = 1.77$). Couples reported having one child ($n = 6$, 40.0%), two children, ($n = 8$; 53.3%), or three children ($n = 1$, 6.7%) residing in the home.

In line with a secondary prevention program, the goal of recruitment was to obtain at-risk couples, rather than clinically-distressed couples, based on dyadic adjustment and COVID-19 family stressors. Eleven participants (36.7%) reported clinically-elevated levels of dyadic distress (score <12), with 19 participants (63.3%) in the mild-moderate dyadic distress range. In terms of COVID-19 family stressors, 14 participants (46.7%) reported high levels of stress (score >29), with the remainder ($n = 16$, 53.3%) reporting under this cut-off.

Intervention

The L2P2 writing intervention is adapted from Finkel's et al. (2013) brief writing intervention, with adaptations described in Prime and colleagues (2022). In brief, participants engaged in three online (i.e., computer or mobile-delivered) writing sessions, biweekly over five weeks (with links to surveys/writing sessions and reminders sent directly to participant emails). There were three parts to each intervention session. First, participants were prompted to write about a recent disagreement they had with their partner, focusing on facts and not emotions. Second, participants were prompted to reappraise the conflict from the perspective of a neutral, third-party perspective who wanted the best for all involved. Finally, participants were prompted to write about barriers they anticipated to taking the third-party perspective during disagreements, as well as a plan for implementing the strategy over the subsequent weeks. In total, participants were asked to reappraise their conflicts through writing

for nine minutes. Participants were not explicitly taught how to complete the writing tasks, nor were they given feedback on their writing samples. In between writing sessions, participants received email reminders to encourage their use of the cognitive reappraisal strategy in their daily lives.

Measures

Feasibility outcomes

Table 1 presents feasibility objectives, including how feasibility outcomes were assessed, and the criteria used to evaluate metrics as 'successful'. An additional objective outlined in the published protocol was to develop a primary outcome measure of well-being, which is not reported here. In addition to feasibility metrics reported in Table 1, the following measures were used to examine sample risk (at baseline) and participant acceptability of the intervention (post-intervention):

COVID-19 family stressor scale Pandemic-related stressors were assessed at baseline using a 16-item scale (Prime et al., 2021), which indexes financial stress (5 items; e.g., significant decrease in income; financial debt; job disruption; government assistance), family stress (7 items; e.g., family altercations, emotional withdrawal, difficulties with child management; partner conflict), and pandemic-specific stress (4 items; e.g., difficulties accessing essential supplies, stressed by crowded public spaces, anxiety about danger to self/loved ones). Parents were asked to respond to the prompt "Since the COVID-19 disruption, have any of the following changes occurred in your household?", and rate each item on a 3-point Likert scale of *Not True* (1), *Somewhat True* (2), and *Very True* (3). Items were summed, with higher scores representing more pandemic-related stress ($\alpha = 0.78$ at pre-test). The COVID-19 Family Stressor scale has been shown to have good concurrent validity (correlations with expected outcomes in the small to large range) and internal consistency ($\alpha = 0.83$; Prime et al., 2021).

Brief dyadic adjustment scale (DAS-4) The DAS-4 (Sabourin et al., 2005) was used to assess couples' distress at baseline. This scale includes three items related to considering divorce, confiding in one another, and getting along on a 6-point scale from "All the time" (0) to "Never" (5). A fourth item asks couples to rate their degree of happiness on a 7-point scale of "Extremely Unhappy" (0) to "Perfect" (6). Items were reverse coded, when applicable, and a sum was computed, with lower scores representing poorer couples' adjustment ($\alpha = 0.88$ at pre-test). The DAS-4 has been shown to have strong psychometric

Table 1 Feasibility Metrics

Primary Objective: Feasibility	Outcome	Criteria for 'success' of feasibility /hypothesis	Method of analysis	Results
Recruitment ^a	Number of participants <i>Accessed</i> (I.e., initiate registration) per week	10 couples per week over the course of 4 weeks who access our registration site	Descriptive statistics	Successful.
	Number of participants <i>Enrolled</i> per week, stratified by recruitment source	5 couples per week over the course of 4 weeks who enroll in the study		Not successful.
Eligibility criteria ^a	% interested participants that meet <i>Inclusion Criteria</i> (with reasons for exclusion)	<50% of participants are excluded for any one criterion.		Successful.
Range in income/ education ^b	% participants income <= regional median ^e , < college degree	>30% of our sample has 1+ indicator.		Not successful.
Sample diversity (race/ ethnicity/ immigration) ^b	% participants from a racially minoritized group	>30% of our sample has 1+ indicator.		Successful.
	% not Canadian born			
Sample diversity (sexual orientation/ gender) ^b	% participants LGBTQIA2S+	>4% of our sample has 1+ indicator. ^f		Successful.
Mild-moderate risk for relationship distress ^b	% participants scoring 'clinically distressed' (<12) on the Brief Dyadic Adjustment Scale (Sabourin et al., 2005)	<50% of eligible participants.		Successful.
Mild-moderate COVID-19 disruption ^b	% participants scoring 'high' (>29) on the COVID-19 Family Stressor Scale (Prime et al., 2021)	<50% of eligible participants.		Successful.
Participant adherence ^c	% participants who complete 2/3 intervention sessions	>90% of participants		Successful.
Participant uptake ^c	% participants reporting some use of conflict reappraisal outside of sessions	>80% of participants		Successful.
Participant retention ^d	% participants who remain in study until end of post-intervention assessment	>90% of participants		Not successful.
Acceptability ^d	% of participants reporting at least 'agree' indicators of acceptability on the Implementation Acceptability Scale (Lee et al., 2022; Sekhon et al., 2017).	>80% of participants for each item		Successful for positive attitude, values, comprehension, and opportunity costs. Not successful for burden, perceived effectiveness, and self-efficacy.

^aEnrollment.^bBaseline Survey.^cWriting Sessions.^dPost-Intervention Survey.^emedian total income for couple families (with or without children), total all ages, in 2019 was \$98,690 (Statistics Canada, 2021a).^fIn the published protocol, this cut-off was >30%, however it has been adjusted in line with Statistics Canada (Statistics Canada, 2021b) data.

properties; it predicted couple dissolution in a 3-year longitudinal study (for women, Odds Ratio = 0.79, $p < 0.01$; for men, OR = 0.79, $p < 0.01$), and it showed temporal stability (for women, $r = 0.83$; for men, $r = 0.87$), with stability estimates generally invariant across sex (Sabourin et al., 2005).

Implementation acceptability scale Participants reported on seven items related to attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness, and self-efficacy (Lee et al., 2022). Participants reported on items using a scale of “*Strongly Disagree*” (1) to “*Strongly Agree*” (5). Items were examined

independently using means (SDs) and percentages, in addition to a total score ($\alpha = 0.84$ at post-test). This scale was developed to draw on aspects of the theoretical framework of acceptability (Sekhon et al., 2017) and has been previously used to examine the acceptability of an adaptation of cognitive behavior therapy for autistic children during the pandemic (Lee et al., 2022). However, it has not been previously validated.

Pre-post outcomes

We examined pre-post change in couple and family outcomes to be used in a future RCT. The intervention was hypothesized to improve outcomes from baseline to post-intervention surveys. The following measures were collected by parent-report at pre- and post-test.

Couples' relationship quality Participants reported on their relationship quality using the Perceived Relationship Quality Components (PRQC) Inventory (Fletcher et al., 2000), which consists of 18 items indexing satisfaction, love, intimacy, trust, passion, and commitment, rated on a scale of "Not at all" (1) to "Extremely" (7). A mean was taken, with higher levels reflecting higher levels of relationship quality ($\alpha = 0.95$ at pre-test; $\alpha = 0.93$ at post-test). The PRQC has strong psychometric properties including face validity and internal consistency (range from $\alpha = 0.74$ to 0.94 on individual scales; Fletcher et al., 2000).

Perceived partner responsiveness-insensitivity Two four-item scales (Crasta et al., 2021) assessed participants' perceptions of their partners' responsiveness (e.g., "My partner really listened to me") and insensitivity (e.g., "My partner ignored my side of the story"), on a scale of "Not at all" (0) to "Completely" (5). Four items related to perceived partner responsiveness were averaged ($\alpha = 0.93$ at pre-test; $\alpha = 0.87$ at post-test), as were four items related to perceived partner insensitivity ($\alpha = 0.93$ at pre-test; $\alpha = 0.88$ at post-test). The PRI scales show strong convergent validity with existing measures of perceived partner responsiveness (correlations in the moderate to large range), in both men and women, as well as internal consistency ($\alpha > 0.90$; Crasta et al., 2021). Scales also show strong incremental validity over global satisfaction, ability to detect meaningful change over time, and sensitivity to partners' behaviours in the relationship (Crasta et al., 2021).

Self-reported responsiveness-insensitivity Participants reported on their own responsiveness (e.g., "I really listened to my partner") and insensitivity (e.g., "I ignored my partner's side of the story"), by flipping items in the above scale (Crasta et al., 2021). Two 4-item means were computed for self-reported responsiveness ($\alpha = 0.92$ at pre-test; $\alpha = 0.94$ at post-test) and

self-reported insensitivity ($\alpha = 0.93$ at pre-test; $\alpha = 0.83$ at post-test), respectively.

Parent mental health The Kessler Psychological Distress Scale (K10; Kessler et al., 2002) is a widely utilized, 10-item scale assessing the frequency of feelings related to depression and anxiety as experienced in the past 30 days, with response options ranging from "None of the time" (1) to "All of the time" (5). Responses yield a global score of distress ($\alpha = 0.95$ at pre-test; $\alpha = 0.92$ at post-test). The K10 has strong psychometric properties across major sociodemographic subsamples, including internal consistency ($\alpha = 0.93$; Kessler et al., 2002).

Parent-child relations Parent-child relations were assessed using positivity and negativity scales from the Ontario Child Health Study (OCHS; Boyle et al., 2019). Participants reported on the frequency of five positive parenting practices (e.g., 'I give [child] a lot of care and attention'; 'I listen to [child's] ideas and opinions') and six negative parenting practices (e.g., 'I nag [child] about the little things'; 'I say mean things to make [child] feel bad...') in the past month on a five-point scale ranging from "Never" (1) to "Always" (5). A mean was computed for each of parent positivity ($\alpha = 0.74$ at pre-test; $\alpha = 0.77$ at post-test) and parent negativity ($\alpha = 0.72$ at pre-test; $\alpha = 0.81$ at post-test). The OCHS scales were made up of selected or adapted individual items from the National Longitudinal Survey of Children and Youth and the child report of the Parent Behaviour Inventory (Lovejoy et al., 1999) after conducting an empirical item reduction using secondary data (Ontario Child Health Study Team (2014)). Psychometric properties are not publically available.

Sample Size

Our goal was to recruit 20 couples. We enrolled 17 couples, though only 15 couples had complete baseline data on both members of a couple. Our final sample was therefore 15 couples ($n = 30$). Recruitment was stopped to preserve resources because this was considered sufficient to examine feasibility and pre-post change objectives. The current study did not include stopping or discontinuing guidelines.

Statistical Methods

Feasibility metrics

Criteria for success of feasibility and methods of analyses, when applicable, are presented in Table 1. Feasibility outcomes are reported descriptively using descriptive statistics, means (SD) and frequencies (%). Acceptability scores at post-intervention were examined as a function of baseline

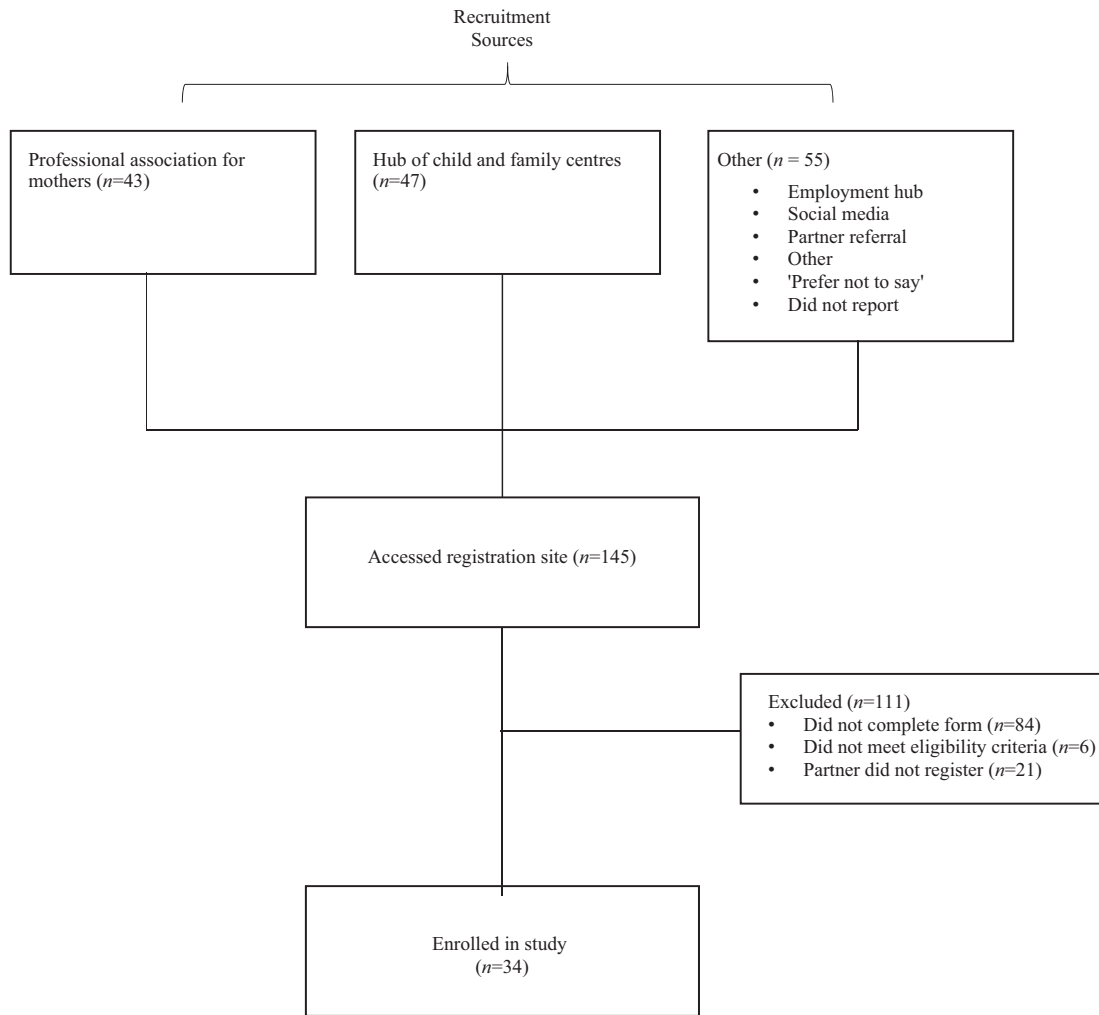


Fig. 1 Flow Chart of Participant Enrollment

sociodemographic factors (i.e., men/women, individuals identifying as part of a racially minoritized group vs. White, and those born within/outside of Canada), and baseline couples' distress (i.e., COVID-related stressors and dyadic adjustment) using two-level multilevel models, accounting for clustering of participants within couples. Multilevel modelling in MPlus version 8 was used with Bayes estimation, which produces more robust parameter estimates with small samples than alternative estimators such as maximum likelihood (Hox et al., 2012). Each model includes four Markov Chain Monte Carlo (MCMC) chains with a potential scale reduction factor of 0.05 (with a minimum of 5000 iterations) for convergence. In using Bayes estimation, interpretation is different than with a standard one-tailed p -value in that 95% credibility intervals are interpreted as the interval that contains the population parameter with 95% probability (Hox et al., 2012). In other words, results are interpreted as the probability that an effect is positive or negative (rather than a traditional approach

wherein a two-tailed test that is used to determine the existence of any effect against a null hypothesis of no effect). For example, a one-tailed Bayes p -value of 0.20 means that there is about a one in five chance that the effect is zero/of the opposite direction, given the data, whereas a one-tailed p -value of 0.10 is equivalent to a one-in-ten chance of this scenario. The Bayes one-tailed p -value is more diagnostic than a test for existence of any effect against a null hypothesis of no effect. A one-tailed p -value < 0.05 was used as a cut-off to interpret the probability that an effect was positive or negative (i.e., a one-in-twenty chance that there were no differences between sociodemographic groups or a difference in the opposite direction).

Pre-post change

Pre-post change was examined descriptively by looking at sample median percent change scores. We hypothesized

positive change for positive functioning (i.e., relationship quality, self-reported/perceived partner responsiveness, positive parenting), and negative change for family dysfunction (i.e., self-reported/perceived partner insensitivity, parent negativity, and self-reported mental health difficulties). We expected greater change in constructs more proximal to the intervention—that is, couples outcomes (i.e., relationship quality, self/perceived partner responsiveness and insensitivity), as compared to distal outcomes (i.e., parent-child relations and parent mental health).

In addition, we conducted analyses to examine pre-post change using 3-level multilevel models using Bayes' estimation, as described above, accounting for clustering of multiple assessments (baseline/post) within participants, and the clustering of participants within couples. We ran individual multilevel models on all eight outcomes reported above, with dummy variables to estimate the change from baseline (0) to post (1). All participants who completed baseline assessments were included in the analyses. We used a one-tailed p -value of <0.05 as a cut-off when interpreting the probability that an effect was positive or negative (that is, a one-in-twenty chance that the pre-post change was zero or in the unexpected direction).

Missing data

Twenty-five participants completed baseline and post-test surveys, whereas five participants completed baseline surveys, only. For the above-described multilevel analyses, missing data was handled using Bayesian estimation – which is comparable to full-information maximum likelihood estimation – for analyses over time (i.e., pre-post change in scores). We use listwise deletion when a single timepoint was used (i.e., analyses examining acceptability scores as a function of sociodemographic indicators).

Results

In reference to feasibility metrics, criteria for “success” are presented in Table 1.

Enrollment Characteristics

Enrollment characteristics are visually displayed in Fig. 1. Over the course of five weeks, 145 individuals accessed the registration site (average of 29 individuals per week). Most individuals came from one of two recruitment sources: 47 from a hub of child and family centres providing free programming to families with young children, and 43 from community members of a professional association for

working mothers. As for the remaining individuals, 23 did not report their recruitment source, nine came from social media (which could have been one of the primary two recruitment sources), and 14 from other sources. An additional 13 individuals visited the registration site based on an email sent to them from our research team after their partner provided their contact information. Following accessing the registration form, 84 individuals did not complete the form (e.g., screening questions, Letter of Information, consent, contact information), six individuals did not meet eligibility criteria, and 21 individuals registered for the study but were excluded because their partners did not subsequently enroll. The remaining individuals were enrolled in the study. Seventeen couples were enrolled over the course of five weeks (average of 3.4 couples per week). Specifically, five enrolled in week one, one in week two, three in week three, six in week four, and two in week five.

Sample Characteristics

Sample descriptive statistics are reported in the Methods section (see ‘Participants’). Regarding feasibility metrics (Table 1), two couples (13.3%) had a household income \leq the regional median, and one participant had less than a college degree. Eighteen participants (60.0%) identified as being part of a racially minoritized group, twelve (40.0%) were born outside of Canada, and four (13.3%) identified as LGBTQIA2S+. The sample was primarily of mild-moderate risk, with $<50\%$ of participants reporting high levels of dyadic adjustment problems (36.7%) and COVID-19-related distress (46.7%).

Adherence, Uptake, and Retention

With respect to intervention adherence, 21 participants (70.0%) completed all three writing sessions, with six (20%) completing two sessions, and three (10%) completing one session only. Thus, our adherence criterion of 90% completing at least 2/3 intervention sessions was successful. Although 90.0% and 96.7% of participants completed sessions one and two, respectively, only 73.3% of participants completed writing session three, indicative of drop-off over time. In terms of participant retention, most participants ($n = 25$; 83.0%) completed the post-intervention survey.

With respect to intervention uptake, when asked how often they took the third-party perspective during disagreements with their partner (ranging from “*Not very often*” (1) to “*Very often*” (7)), the mean scores were 3.48 ($SD = 1.57$) and 4.59 ($SD = 1.50$) at the second and third writing sessions, respectively. Based on a mean across sessions, 24 participants (80.0%) reported some use of conflict reappraisal strategies outside of writing sessions (mean score ≥ 3).

Table 2 Acceptability Ratings at Post-Test

Construct	Sample Size	Mean (SD)	β	Lower 2.5% CI	Upper 2.5% CI	1-Tailed <i>P</i> -value
Gender			-0.307	-0.602	0.09	0.065
Men	11	3.82 (0.31)				
Women	13	4.11 (0.53)				
Race			0.221	-0.226	0.617	0.181
Racially minoritized	14	4.12 (0.42)				
White	10	3.96 (0.54)				
Immigrant status			0.064	-0.349	0.474	0.391
Canadian Born	14	4.03 (0.58)				
Born Outside Canada	11	4.00 (0.39)				
Dyadic Distress ^a			0.055	-0.357	0.495	0.410
Mild-Moderate	16	4.00 (0.46)				
Clinical (score < 12)	9	4.03 (0.59)				
COVID Stress ^a			0.321	-0.065	0.678	0.061
Mild-Moderate	13	3.89 (0.38)				
High (score > 29)	12	4.15 (0.59)				

All analyses were run in separate models for each predictor.

^aMeans by group are presented in the table; however, multilevel analyses were conducted with continuous measure.

Table 3 Preliminary Effectiveness

Construct	Mean (SD) _{pre}	Mean (SD) _{post}	Median (IQR) _{% change}	β	Lower 2.5% CI	Upper 2.5% CI	1-Tailed <i>P</i> -value
PRQ	5.01 (1.09)	5.36 (0.87)	2.22 (-2.67 - 10.45)	0.265	-0.007	0.489	0.028
SR Responsive	2.78 (0.98)	3.09 (0.74)	10.00 (-6.67 - 41.67)	0.251	-0.02	0.482	0.035
PP Responsive	2.72 (1.13)	3.20 (0.75)	12.50 (-6.90 - 47.22)	0.259	-0.007	0.478	0.027
SR Insensitive	1.18 (0.83)	0.96 (0.57)	-33.33 (-62.50 - 50.00)	-0.187	-0.425	0.09	0.092
PP Insensitive	1.40 (1.07)	1.19 (0.72)	-25.00 (-58.33 - 28.57)	-0.123	-0.37	0.148	0.188
PC Positivity	4.39 (0.44)	4.43 (0.47)	0.000 (-2.38 - 4.45)	0.046	-0.22	0.306	0.374
PC Negativity	2.11 (0.58)	2.00 (0.58)	0.000 (-13.39 - 5.75)	-0.218	-0.45	0.063	0.068
Parent MH	2.17 (0.90)	2.00 (0.64)	-7.69 (-25.40 - 13.26)	-0.221	-0.458	0.064	0.068

All analyses were run in separate models for each outcome.

PRQ perceived relationship quality, SR self-report, PP perceived partner, PC parent-child relations, MH mental health.

Acceptability

High acceptability was defined as 80% or more of the sample rating 4+ on individual scales ranging from *Strongly Disagree* (1) to *Strongly Agree* (5). Of the 25 participants who completed the post-intervention survey, there were high levels of acceptability related to positive attitude ($M = 3.92$, $SD = 0.81$; 80% of participants with 4+ ratings), alignment with values ($M = 4.20$, $SD = 0.50$; 96.0%), comprehension of program ($M = 4.24$, $SD = 0.60$; 92.0%), and opportunity costs ($M = 0.36$, $SD = 0.76$; 92.0%). Acceptability ratings were lower than our pre-determined cut-off with respect to perceived burden ($M = 4.00$, $SD = 0.71$; 76.0%), perceived effectiveness ($M = 3.68$, $SD = 0.63$; 60.0%) and self-efficacy ($M = 3.72$, $SD = 0.79$; 60.0%).

A series of two-level multilevel models (participants nested within couples) were conducted at post-intervention

using a total acceptability score as the outcome and various sociodemographic variables as the predictors (Table 2). Overall, acceptability ratings did not differ across participants as a function of examined predictors.

Preliminary Effectiveness

Results pertaining to pre-post change in relevant outcomes are presented in Table 3. Based on median percent change scores, most constructs showed improvements consistent with expectations, with relationship quality and self and perceived partner responsiveness showing signs of positive change, and evidence for reductions in self and perceived partner insensitivity and parent mental health symptoms.

Descriptive findings were partially corroborated by multilevel analyses (Table 3): there was evidence for change in expected directions for relationship quality and self-reported and perceived partner responsiveness, but not

self- and perceived partner insensitivity, parenting, or parent mental health symptoms.

There were no reported harms or unintended consequences of the intervention, to our knowledge.

Discussion

The current study reports on the feasibility, acceptability, and preliminary effectiveness of the L2P2 program for parenting couples with young children recruited during the COVID-19 pandemic. Fifteen couples completed baseline assessments and were included in the current study. Feasibility metrics were deemed largely successful, including the appropriateness of eligibility criteria, many indicators of sample diversity, participant adherence and uptake, and several scales of acceptability. Adaptations to study design and/or protocol are needed to increase enrollment rates, expand diversity in socioeconomic resources amongst participants, and improve acceptability based on some rating scales. Modelling of pre-post scores indicated evidence for change in couple outcomes, but not broader family functioning.

Regarding recruitment metrics, despite meeting goals for traffic to the registration site, we enrolled 3.4 couples per week, which did not meet study feasibility goals. Due to this slow rate of enrollment and need to preserve resources (time and funds) for a planned subsequent study, we were only able to enroll 17 couples, which was short of our goal of 20 couples. Slow enrollment was not due to strict eligibility criteria screening out potential participants (i.e., those who completed screening were for the most part eligible). High traffic to the website without accompanying enrolment may reflect individuals seeking more information and deciding not to participate, individuals signing up without their accompanying partner (and thus being ineligible), or individuals accessing the site on multiple occasions. To address this in a future RCT, we will give more information about the nature of the study in our recruitment flyers to increase the likelihood that those who access the registration site are better informed. Additionally, to increase enrollment rates, we will increase recruitment flyer distribution within existing recruitment partners, and forge collaborations with additional recruitment partners to increase traffic to the registration site and, ultimately, enrollment rates. Finally, it will be important to collaborate with community partners as we continue to develop the intervention, to enhance our ability to offer a program that is needed and culturally relevant to diverse communities.

We were successful in obtaining a diverse sample with respect to many sociocultural identity factors (i.e., race/ethnicity, place of birth, and sexual orientation/gender). Our sample showed a low-moderate level of distress (dyadic

adjustment and pandemic-related), indicative of the population we hope to obtain for a future evaluative RCT. However, our goal of enrolling participants with a range of socioeconomic resources was not successful; our sample was characterized by high levels of education and household income. This may be due to our recruitment strategy and sources, and better integration of recruitment efforts into lower-resourced communities may help to address this issue. Alternatively, there may be a poor fit of the nature of the intervention—an expressive writing program—to individuals with a range of education backgrounds, creating a barrier to participation that is inherent to the design of the intervention. Future efforts will rely on community-based partnerships to help us to tailor our intervention design and respond to the needs of potential users.

Regarding participant adherence, we saw a trend wherein there were high levels of participation in writing sessions one and two, but less than three-quarters (73.3%) of participants completing the final writing session. This, in combination with qualitative feedback we received regarding the spacing of sessions, will inform future adjustments to study design—specifically, we may space our writing sessions from two to four weeks to reduce redundancy in task demands, and extend time allotted to complete writing sessions (from three to seven days) to allow flexibility in participant responding. It is also possible that this is an issue related to dose; that is, some couples may have gotten what they needed out of the intervention after two sessions. Questions related to dosing will be addressed in a future main RCT with a larger sample size. Relatedly, our participant retention of 83% who completed the post-test survey fell short of our goal of 90% retention. Though this is an acceptable retention rate, we may consider a variable compensation schedule in a future study (with more compensation later in the study).

Participants reported feeling positively about the program, the program aligning with their values, understanding the program and how it works, and not needing to give up personal time and resources to participate in the program. Lower, though moderate, scores were given with respect to effort required, perceived effectiveness of the program, and perceived ability to use the skills learned in the program. Notably, the latter two reports contrast with findings in participant-reported uptake of intervention strategies and in pre-post change in couple outcomes. Nonetheless, this feedback is useful for driving changes in future versions of the program designed to promote perceived effectiveness and self-efficacy, such as inclusion of didactics, examples of how to complete writing tasks, and self-evaluative processes. These changes will be made in the development and implementation of an evaluative RCT. Acceptability ratings did not differ as a function of several sociocultural indicators, providing initial support

for its relevance and appropriateness for the diverse groups that our study accessed.

Finally, a preliminary evaluation of couple and family outcomes indicated evidence for positive change in couple relationship quality and self-reported and perceived partner responsiveness, but not self-reported and perceived insensitivity, parenting, or parent mental health symptoms. The intervention directly targets conflict reappraisal within couple interactions. There is likely to be a stronger effect on couple outcomes (more proximal to the intervention target) than outcomes in other domains of family wellness and relationships (more distal to the intervention target; i.e., parent mental health and parenting). In addition, two constructs may have been less likely to change due to floor and ceiling effects – insensitivity and parent positivity, respectively. That is, participants generally saw themselves and their partners as not very insensitive and they reported high frequency of positive parenting practices. Nonetheless, findings justify the design and implementation of a larger main RCT to evaluate effectiveness. With a larger sample, it may be more likely to detect small knock down effects on entire family functioning.

One important consideration is that this program was implemented in the summer/fall of 2021, during the height of the pandemic in Canada. The program was developed as a response to the stressors faced by parents during the pandemic. Despite this, the content of the program is not specific to the pandemic; rather, it is focused on teaching couples a strategy to reduce their conflict-related distress, a ubiquitous phenomenon that is relevant during a pandemic or otherwise. As such, we do not think adaptations are required during post-pandemic recovery, nor do we think findings will change as the pandemic and its aftermath fully resolve. It will be important to examine the applicability of the L2P2 to various forms of contextual and family stress.

Study limitations include a small sample size and single-arm design, which do *not* allow conclusions about the effectiveness of the program. Given that the primary goal of the study was to assess feasibility of conducting a future evaluative RCT, the selected study design optimized scientific utility while also minimizing participant and research resources that can be used in the future. Another limitation relating to sample size is that 20 couples are the recommended cluster size for accurate Bayesian estimation in the context of multi-level modelling (Hox et al., 2012). Unfortunately, our sample slightly fell short of this. Relatedly, we used a liberal cut-off (one-tailed $p < 0.05$) when considering the probability that an effect was positive or negative, given the preliminary nature of the study. Future studies with larger sample sizes will use a more stringent cut-off such as a one-tailed $p < 0.025$. Finally, we used an unvalidated scale to examine participant acceptability of the

L2P2 program. Internal consistency in the current sample, as assessed by Cronbach's Alpha, was acceptable.

Another limitation is that we relied solely on participant self-reporting and lacked an objective assessment of couple and family outcomes. Future work will analyze text collected in writing samples as a method for analyzing change in how participants engage in a conflict reappraisal task over the course of the study. In addition, future studies will consider use of behavioural observations, which were prohibited in the current study due to resource restraints and pandemic-related restrictions. Taken together, findings should be interpreted with caution.

Conclusion

Overall, the current feasibility study provides important information for designing a future evaluative RCT and provides some initial support for the utility of using the L2P2 program to address the conflict dynamics of couples with young children in the home. The L2P2 program has the potential to address strain within parenting couples with young children, with broad applications to a variety of stressful contexts that undermine healthy dyadic processes. By promoting conflict reappraisal and reducing harmful dyadic processes, the L2P2 program may have positive cascading effects from couples' functioning to whole family health and individual well-being. The L2P2 program is a promising line of inquiry to meet a pressing need for a scalable program to prevent the sequelae of family stress on couples, children, and families, and in planning mitigation efforts for adverse circumstances that threaten the integrity and well-being of families.

Acknowledgements Thank you to Drs. Dillon Browne, Karen Fergus, and Eli Finkel and community recruitment partners, for their consultation on study design. Thank you to study participants for your time dedicated to the study and for your feedback.

Author Contributions H.P.: study conceptualization and design, oversight of the development of the study protocol, survey development, recruitment, data collection, data analysis, and initial draft/revisions of the manuscript. A.Mu.: study conceptualization and design, critical review and revision of the manuscript. A.Ma.: coordination of the study, data management and analysis, critical review and revision of the manuscript. L.T.: study conceptualization and design and critical review of the manuscript. M.W.: study conceptualization and design, data analysis consultation, and critical review and revision of the manuscript. All authors have approved the submitted final version of the manuscript and have agreed to be personally accountable for their contributions.

Funding In-Kind support provided by York University, Faculty of Health, with generic funds provided to the Principal Investigator (H. Prime).

Compliance with Ethical Standards

Conflict of interest The authors declare no competing interests.

Ethics approval and consent to participate Ethics approval has been granted by the Office of Research Ethics at York University.

References

- Balzarini, R., Muise, A., Zoppolat, G., Di Bartolomeo, A., Rodrigues, D., Alonso-Ferres, M., Urganci, B., Debrot, A., Bock P. N., Dharma, C. Karremans, J., Chi, P., Schoebi, D., Slatcler, R. (2023). Love in the time of COVID: Perceived partner responsiveness buffers people from lower relationship quality associated with COVID-related stressors. *Social Psychological and Personality Sciences*.
- Bodenmann, G., & Shantinath, S. D. (2004). The couples coping enhancement training (CCET): a new approach to prevention of marital distress based upon stress and coping. *Family Relations*, 53(5), 477–484.
- Boyle, M. H., Georgiades, K., Duncan, L., Comeau, J., & Wang, L., 2014 Ontario Child Health Study Team. (2019). The 2014 Ontario child health study—methodology. *The Canadian Journal of Psychiatry*, 64(4), 237–245. <https://doi.org/10.1177/0706743719833675>.
- Bradbury, T. N., & Bodenmann, G. (2020). Interventions for couples. *Annual Review of Clinical Psychology*, 16, 99–123. <https://doi.org/10.1146/annurev-clinpsy-071519-020546>.
- Carr, A. (2015). The evolution of systems theory. *Handbook of family therapy (1st ed)*, pp. 13–29. Routledge.
- Crasta, D., Rogge, R. D., Maniaci, M. R., & Reis, H. T. (2021). Toward an optimized measure of perceived partner responsiveness: development and validation of the perceived responsiveness and insensitivity scale. *Psychological Assessment*, 33(4), 338–355. <https://doi.org/10.1037/pas0000986>.
- Eldridge, S. M., Chan, C. L., Campbell, M. J., Bond, C. M., Hopewell, S., Thabane, L., & Lancaster G. A. (2016). Consort 2010 statement: extension to randomised pilot and feasibility trials. *BMJ*, 355. <https://doi.org/10.1136/bmj.i5239>.
- Finkel, E. J., Slotter, E. B., Luchies, L. B., Walton, G. M., & Gross, J. J. (2013). A brief intervention to promote conflict reappraisal preserves marital quality over time. *Psychological Science*, 24(8), 1595–1601. <https://doi.org/10.1177/0956797612474938>.
- Fletcher, G. J., Simpson, J. A., & Thomas, G. (2000). The measurement of perceived relationship quality components: a confirmatory factor analytic approach. *Personality and Social Psychology Bulletin*, 26(3), 340–354. <https://doi.org/10.1177/0146167200265007>.
- Gademann, A. C., Thomson, K. C., Richardson, C. G., Gagné, M., McAuliffe, C., Hirani, S., & Jenkins, E. (2021). Examining the impacts of the COVID-19 pandemic on family mental health in Canada: Findings from a national cross-sectional study. *BMJ Open*, 11(1), e042871 <https://doi.org/10.1136/bmjopen-2020-042871>.
- Gottman, J. M. (1998). Psychology and the study of marital processes. *Annual Review of Psychology*, 49(1), 169–197. <https://doi.org/10.1146/annurev.psych.49.1.169>.
- Hox, J. J., van de Schoot, R., & Matthijsse, S. (2012). How few countries will do? Comparative survey analysis from a Bayesian perspective. *Survey Research Methods*, 6(2), 87–93. <https://doi.org/10.18148/srm/2012.v6i2.5033>.
- Kanter, J. B., & Schramm, D. G. (2018). Brief interventions for couples: an integrative review. *Family Relations*, 67(2), 211–226. <https://doi.org/10.1111/fare.12298>.
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S.-L. T., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, 32(6), 959 <https://doi.org/10.1017/s0033291702006074>.
- Kluwer, E. S. (2010). From partnership to parenthood: a review of marital change across the transition to parenthood. *Journal of Family Theory & Review*, 2(2), 105–125. <https://doi.org/10.1111/j.1756-2589.2010.00045.x>.
- Lebow, J., & Snyder, D. K. (2022). Couple therapy in the 2020s: current status and emerging developments. *Family Process*, 61(4), 1359–1385.
- Lee, V., Roudbarani, F., Tablon Modica, P., Pouyandeh, A., & Weiss, J. A. (2022). Adaptation of cognitive behavior therapy for autistic children during the pandemic: a mixed-methods program evaluation. *Evidence-Based Practice in Child and Adolescent Mental Health*, 7(1), 76–93. <https://doi.org/10.1080/23794925.2021.1941432>.
- Lovejoy, M. C., Weis, R., O'Hare, E., & Rubin, E. C. (1999). Development and initial validation of the parent behavior inventory. *Psychological Assessment*, 11(4), 534.
- Madigan, S., Plamondon, A., & Jenkins, J. M. (2017). Marital conflict trajectories and associations with children's disruptive behavior. *Journal of Marriage and Family*, 79(2), 437–450. <https://doi.org/10.1111/jomf.12356>.
- Markman, H. J., Renick, M. J., Floyd, F. J., Stanley, S. M., & Clements, M. (1993). Preventing marital distress through communication and conflict management training: a 4-and 5-year follow-up. *Journal of Consulting and Clinical Psychology*, 61(1), 70.
- McHale, J. P. & Irace, K. (2011). Coparenting in diverse family systems. In J. P. McHale & K.M. Lindahl (Eds.), *Coparenting: A conceptual and clinical examination of family systems*. (pp.15–37). Washington, DC: American Psychological Association. <https://doi.org/10.1037/12328-000>.
- McRae, C. S., Overall, N. C., Henderson, A. M., Low, R. S. T., & Chang, V. T. (2021). Parents' distress and poor parenting during COVID-19: the buffering effects of partner support and cooperative coparenting. *Developmental Psychology*, 57(10), 1623 <https://doi.org/10.1037/dev0001207>.
- Ontario Child Health Study Team. (2014). *Ontario Child Health Study (OCHS) Derived Scales Documentation*. Retrieved from: https://ontariochildhealthstudy.s3.amazonaws.com/uploads/2014-OCHS-Derived-Scales-Documentation_ZeroCount.pdf.
- Park, C. L., Russell, B. S., Fendrich, M., Finkelstein-Fox, L., Hutchison, M., & Becker, J. (2020). Americans' COVID-19 stress, coping, and adherence to CDC guidelines. *Journal of General Internal Medicine*, 35(8), 2296–2303. <https://doi.org/10.1007/s11606-020-05898-9>.
- Pierce, M., Hope, H., Ford, T., Hatch, S., Hotopf, M., John, A., Kontopantelis, E., Webb, R., Wessely, S., McManus, S., & Abel, K. M. (2020). Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. *The Lancet Psychiatry*, 7(10), 883–892. [https://doi.org/10.1016/S2215-0366\(20\)30308-4](https://doi.org/10.1016/S2215-0366(20)30308-4).
- Pietromonaco, P. R., & Overall, N. C. (2021). Applying relationship science to evaluate how the COVID-19 pandemic may impact couples' relationships. *American Psychologist*, 76(3), 438 <https://doi.org/10.1037/amp0000714>.
- Prime, H., Muise, A., Benyamin, V., Thabane, L., & Wade, M. (2022). Love Together, Parent Together (L2P2): a protocol for a feasibility study of a conflict reappraisal writing intervention for interparental couples with young children. *Pilot and feasibility studies*, 8(1), 170.
- Prime, H., Wade, M., May, S. S., Jenkins, J. M., & Browne, D. T. (2021). The COVID-19 family stressor scale: validation and measurement invariance in female and male caregivers. *Frontiers in Psychiatry*, 716. <https://doi.org/10.3389/fpsy.2021.669106>.

- Ran, G., Niu, X., Zhang, Q., Li, S., Liu, J., Chen, X., & Wu, J. (2021). The association between interparental conflict and youth anxiety: a three-level meta analysis. *Journal of Youth and Adolescence*, 50(4), 599–612. <https://doi.org/10.1007/s10964-020-01388-7>.
- Rodriguez, L. M., Stewart, S. H., & Neighbors, C. (2021). Effects of a brief web-based interpersonal conflict cognitive reappraisal expressive-writing intervention on changes in romantic conflict during COVID-19 quarantine. *Couple and Family Psychology: Research and Practice*, 10(3), 212.
- Rodriguez, L. M., Dell, J. B., Lee, K. D., & Onufrak, J. (2019). Effects of a brief cognitive reappraisal intervention on reductions in alcohol consumption and related problems. *Psychology of Addictive Behaviors*, 33(7), 637.
- Rodriguez, L. M., Lee, K. D., Onufrak, J., Dell, J. B., Quist, M., Drake, H. P., & Bryan, J. (2020). Effects of a brief interpersonal conflict cognitive reappraisal intervention on improvements in access to emotion regulation strategies and depressive symptoms in college students. *Psychology & Health*, 35(10), 1207–1227.
- Sabourin, S., Valois, P., & Lussier, Y. (2005). Development and validation of a brief version of the dyadic adjustment scale with a nonparametric item analysis model. *Psychological Assessment*, 17(1), 15. <https://doi.org/10.1037/1040-3590.17.1.15>.
- Schmid, L., Wörn, J., Hank, K., Sawatzki, B., & Walper, S. (2020). Changes in employment and relationship satisfaction in times of the COVID-19 pandemic: evidence from the German family panel. *European Societies*, 23. <https://doi.org/10.1080/14616696.2020.1836385>.
- Sekhon, M., Cartwright, M., & Francis, J. J. (2017). Acceptability of healthcare interventions: an overview of reviews and development of a theoretical framework. *BMC Health Services Research*, 17(1), 1–13. <https://doi.org/10.1186/s12913-017-2031-8>.
- Statistics Canada. (2021a). *A statistical portrait of Canada's diverse LGBTQ2+ communities*. <https://www150.statcan.gc.ca/n1/daily-quotidien/210615/dq210615a-eng.htm>.
- Statistics Canada. (2021b). *Distribution of total income by census family type and age of older partner, parent or individual*. <https://www150.statcan.gc.ca/t1/tb11/en/tv.action?pid=1110001201>.
- van Eldik, W. M., de Haan, A. D., Parry, L. Q., Davies, P. T., Luijk, M. P., Arends, L. R., & Prinzie, P. (2020). The interparental relationship: meta-analytic associations with children's maladjustment and responses to interparental conflict. *Psychological Bulletin*, 146(7), 553–594. <https://doi.org/10.1037/bul0000233>.
- Walsh, F. (2020). Loss and resilience in the time of COVID-19: meaning making, hope, and transcendence. *Family Process*, 59(3), 898–911. <https://doi.org/10.1111/famp.12588>.
- Walsh, F. (2015). *Strengthening family resilience*. Guilford Publications.
- Walton, G. M. (2014). The new science of wise psychological interventions. *Current Directions in Psychological Science*, 23(1), 73–82. <https://doi.org/10.1177/0963721413512856>.
- Wamser-Nanney, R., Nguyen-Feng, V., Lotzin, A., & Zhou, X. (2021). Parenting amidst COVID-19: Pandemic-related stressors, inequities, and treatment utilization and perceptions. *Couple and Family Psychology: Research and Practice*. <https://doi.org/10.1037/cfp0000189>.
- Weber, D. M., Wojda, A. K., Carrino, E. A., & Baucom, D. H. (2021). Love in the time of COVID-19: a brief report on relationship and individual functioning among committed couples in the United States while under shelter-in-place orders. *Family Process*, 60(4), 1381–1388. <https://doi.org/10.1111/famp.12700>.
- Williamson, H. C. (2020). Early effects of the COVID-19 pandemic on relationship satisfaction and attributions. *Psychological Science*, 31(12), 1479–1487. <https://doi.org/10.1177/0956797620972688>.
- Wilson, T. D., & Juarez, L. P. (2015). Intuition is not evidence: prescriptions for behavioral interventions from social psychology. *Behavioral Science & Policy*, 1(1), 13–20. <https://doi.org/10.1353/bsp.2015.0006>.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.