A Randomized, Controlled Trial of the Impact of the Couple CARE for Parents of Newborns Program on the Prevention of Intimate Partner Violence and Relationship Problems

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Data Analysis Supplement

Below we describe in detail the three statistical methods used to model intervention effects: (a) Intent to Treat (ITT) assuming missing data were missing at random (MAR; Rubin, 1976), (b) Complier Average Causal Effect (CACE) assuming MAR, and (c) CACE assuming latent ignorability (LI; Frangakis & Rubin, 1999).

ITT. The ITT approach follows the "analyze as you randomize" maxim. This method addressed the effects of merely assigning participants to the intervention versus control conditions. We assumed missing values were MAR. Thus, the results are valid if the probabilities of observing missing values depend on observed data but not on missing data (Schafer & Graham, 2002).

CACE. The CACE approach extends the ITT approach by taking into account participant noncompliance with treatment (Jo & Muthén, 2001). This approach is particularly relevant in prevention research, in which both missing outcome data and noncompliance with the intervention often occur (Jo, Ginexi, & Ialongo, 2010). CACE estimation is recommended in addition to ITT for the study of family-based prevention programs (Huang et al., 2014).

In CACE models, compliance status is treated as a partially observable dichotomous variable. The CACE approach divides the entire sample into "compliers" (i.e., couples who

either did comply with the intervention [when in the intervention group] or would have complied if given the opportunity [when in the control group]) versus "never started" (i.e., couples who either did *not* comply with the intervention [when in the intervention group] or would not have complied if given the opportunity [when in the control group]). As couples in the control condition did not have access to CCP, other types of noncompliance (i.e., "defiers" and "always-takers"; Jo et al., 2010) were not possible in the current study. Compliance in the intervention group was defined as having attended at least the first four intervention sessions (54.0% of intervention group participants) because (a) it marks having attended more than half of the sessions and (b) it includes all the segments on couple communication and conflict management. Compliance status was directly observable in the CCP intervention group but was, by definition, not observable in the control group.

We conducted two series of CACE analyses, one assuming MAR (Jo & Muthén, 2001) and one assuming LI (Jo et al., 2010). The approach under the MAR assumption is described above in the ITT section. Specifically, in the control group, the response rates (i.e., provision of outcome data) were assumed to be equal for the complier and never started couples. Given that the mechanism of missing data in an intervention trial is unknown and responses rates among the compliers in the intervention group (range = 78% - 85% at post-program, range = 64% - 84% at follow-up assessment) are much higher than those among the never started in the intervention group (21% at post-program, range = 12% - 35% at follow-up assessments), we further conducted analyses assuming LI. This was based on the possibility that the missing values in the study were not related to the observed responses (i.e., missing at random), but might be related to unobserved responses (i.e., missing not at random). Under LI, we assumed that the probabilities of observing missing values depend on the observed and the latent compliance class indicator

and that the response rates of the compliers in the intervention and the control groups were equal. Running analyses under various missing assumption would allow us to have a better sense of how robust the estimated intervention effects were under differing types of missing data assumptions.

Table 1
Primary Prevention; *Lifetime Rates of Physical CS-IPV by Time and Condition*

	Post-Program		Follow-Ups			
	Mos. 8	*n*	Mos. 15	*n*	Mos. 24	*n*
♂→♀ CS-IPV						
CCP	6	98	8	81	6	107
Control	13	112	9	93	3	111
♀→♂ CS-IPV						
CCP	6	85	4	71	6	96
Control	8	88	3	71	6	85
Any CS-IPV (♂→♀ or ♀→♂)						
CCP	8	82	5	68	9	92
Control	12	94	5	75	7	94

Note. Fisher's exact tests of differences between rates of CS-IPV in CCP versus control couples were not significant. These data include only those couples who reported a *first occurrence* at a time point after completing the program (i.e., did not report CS-IPV in the baseline assessment, but did report CS-IPV at post-program or follow-up assessments). CS-IPV was scored as present based on either self-report of perpetration or partner report of victimization in either of the following: (1) injurious act: (a) any act of physical aggression on CTS2 AND (b) having a sprain, bruise, or small cut; passing out from being hit on the head; going to the doctor; needing to go to the doctor, but not doing so; having a broken bone; or feeling a physical pain that still hurt the next day; or (2) act with high potential for injury: burning or scalding on purpose; use of a knife or gun; choking; or beating up. A small but notable number of couples did not screen in with CS-IPV in the eligibility screening but reported it on the more extensive baseline questionnaire packet. Because they already were reporting CS-IPV, they were excluded from their respective primary prevention analyses: ♂→♀ CS-IPV (n = 21; 10 CCP and 11 control couples); ♀→♂ CS-IPV (n = 35; 17 CCP and 18 control couples); ♂→♀ or ♀→♂ CS-IPV (n = 41; 21 CCP and 20 control couples).

Table 2

Primary Prevention Effects of Couple CARE for Parents on Clinically Significant Intimate Partner Violence

	Intent to Treat (ITT)											
	MAR				MAR				LI			
Clinically Significant-IPV Outcome	*B*	*p*	OR	*95% CI*	*B*	*p*	OR	*95% CI*	*B*	*p*	OR	*95% CI*
Physical CS-IPV ♀ →♂ (*n* = 288)	-0.05	0.839	0.93	[0.46, 1.89]	0.12	0.844	1.22	[0.18, 8.23]	0.26	0.702	1.51	[0.18, 12.28]
Physical CS-IPV ♂→♀ (*n* = 301)	-0.07	0.749	0.90	[0.45, 1.76]	-0.29	0.354	0.63	[0.24, 1.67]	-0.19	0.515	0.73	[0.29, 1.86]

Note. *B* = unstandardized probit regression coefficient for the primary prevention effect (lower level IPV as reference group); *p* = p-value; OR = odds ratio; MAR = missing at random; LI = latent ignorability; IPV = intimate partner violence; ♂ = male; ♀ = female.

Table 3
Baseline Equivalence Tests for Continuous Variables – Male Report

	Control (n = 180)		CCP (n = 188)		CCP vs. Control	
Variable	*M*	*SD*	*M*	*SD*	*t*	*p*
Physical IPV perpetration	0.06	0.17	0.05	0.12	0.45	.867
Physical IPV victimization	0.10	0.25	0.09	0.21	0.36	.867
Psychological IPV perpetration	0.64	0.61	0.51	0.53	1.63	.867
Psychological IPV victimization	0.71	0.68	0.59	0.60	1.36	.867
Relationship satisfaction	126.02	23.77	125.86	22.58	0.05	.976
Dysfunctional attributions	2.66	0.86	2.68	0.91	-0.19	.892
Self-regulation	3.59	0.64	3.59	0.55	-0.01	.994
Collaboration (self)	2.53	0.34	2.50	0.34	0.62	.867
Stalemate (self)	0.86	0.52	0.83	0.50	0.49	.867
Avoidance-capitulation (self)	1.52	0.53	1.63	0.50	-1.55	.867
Child conflict exposure (self)	0.37	0.44	0.35	0.55	0.28	.867
Collaboration (partner)	2.28	0.51	2.32	0.46	-0.52	.867
Stalemate (partner)	1.15	0.59	1.06	0.56	1.21	.867
Avoidance-capitulation (partner)	1.35	0.45	1.41	0.50	-0.95	.867
Child conflict exposure (partner)	0.41	0.49	0.38	0.56	0.50	.867
Mother age	26.52	3.81	26.99	3.71	-1.21	.867
Father age	29.42	5.30	29.23	5.23	0.35	.867
Household size	4.37	1.61	4.45	1.61	-0.46	.867
Parent-infant bonding [a]	-0.27	1.04	-0.14	1.10	-0.93	.867
Infant distress to limitations [b]	3.59	0.87	3.37	0.88	1.79	.867
Infant recovery from reactivity [b]	4.52	0.88	4.44	0.84	0.68	.867
Child-related rigidity [c]	0.33	0.22	0.35	0.24	-0.87	.867
Cumulative risk	0.38	0.31	0.34	0.30	1.13	.867

Note. Independent samples *t*-tests with FDR-adjusted *p*-values; CCP = Couple CARE for Parents; IPV = intimate partner violence.

[a] The parent-infant bonding score was the mean standardized item average scores of Postpartum Bonding Questionnaire (PBQ; Brockington, Fraser, & Wilson, 2006), Parent-Infant Attachment Scale (PAS; Condon & Corkindale, 1998), and Mother to Infant Bonding Scale (IBS; Taylor, Atkins, Kumar, Adams, & Glover, 2005). Higher scores indicate worse parent-child bonding.

[b] Parent reports on infant temperament were measured with the Infant Distress to Limitations and Recovery from Reactivity subscales of the Revised Infant Behavior Questionnaire (Gartstein & Rothbart, 2003). Higher scores indicate more difficult temperament.

[c] Parent reports on child-related rigidity, measured with 14 rigidity items from the Child Abuse Potential Inventory (Milner, 1994), reflect developmentally unrealistic standards for child behavior. Higher scores indicate higher risk for abuse.

Table 4
Baseline Equivalence Tests for Continuous Variables – Female Report

	Control (n = 180)		CCP (n = 188)		CCP vs. Control	
Variable	*M*	*SD*	*M*	*SD*	*t*	*p*
Physical IPV perpetration	0.09	0.18	0.08	0.17	0.34	.867
Physical IPV victimization	0.05	0.13	0.04	0.10	0.95	.867
Psychological IPV perpetration	0.82	0.60	0.84	0.59	-0.32	.867
Psychological IPV victimization	0.77	0.64	0.75	0.58	0.36	.867
Relationship satisfaction	123.06	24.62	118.56	24.88	1.57	.867
Dysfunctional attributions	2.66	0.94	2.93	0.97	-2.45	.390
Self-regulation	3.61	0.56	3.59	0.58	0.31	.867
Collaboration (self)	2.50	0.32	2.52	0.30	-0.38	.867
Stalemate (self)	1.27	0.51	1.33	0.55	-0.98	.867
Avoidance-capitulation (self)	1.48	0.45	1.56	0.55	-1.27	.867
Child conflict exposure (self)	0.36	0.45	0.32	0.34	0.85	.867
Collaboration (partner)	2.31	0.43	2.25	0.49	1.15	.867
Stalemate (partner)	0.86	0.43	0.84	0.47	0.46	.867
Avoidance-capitulation (partner)	1.53	0.49	1.58	0.54	-0.91	.867
Child conflict exposure (partner)	0.35	0.42	0.33	0.38	0.47	.867
Mother age	26.52	3.81	26.99	3.71	-1.21	.867
Father age	29.42	5.30	29.23	5.23	0.35	.867
Household size	4.37	1.61	4.45	1.61	-0.46	.867
Parent-infant bonding [a]	0.16	0.71	0.13	0.62	0.42	.867
Infant distress to limitations [b]	3.35	0.87	3.63	1.00	-2.47	.390
Infant recovery from reactivity [b]	5.02	0.90	4.90	0.96	1.11	.867
Child-related rigidity [c]	0.28	0.22	0.29	0.22	-0.21	.892
Cumulative risk	0.33	0.26	0.30	0.26	0.99	.867

Note. Independent samples *t*-tests with FDR-adjusted *p*-values; CCP = Couple CARE for Parents; IPV = intimate partner violence;

[a] The parent-infant bonding score was the mean standardized item average scores of Postpartum Bonding Questionnaire (PBQ; Brockington, Fraser, & Wilson, 2006), Parent-Infant Attachment Scale (PAS; Condon & Corkindale, 1998), and Mother to Infant Bonding Scale (IBS; Taylor, Atkins, Kumar, Adams, & Glover, 2005). Higher scores indicate worse parent-child bonding.

[b] Parent reports on infant temperament were measured with the Infant Distress to Limitations and Recovery from Reactivity subscales of the Revised Infant Behavior Questionnaire (Gartstein & Rothbart, 2003). Higher scores indicate more difficult temperament.

[c] Parent reports on child-related rigidity, measured with 14 rigidity items from the Child Abuse Potential Inventory (Milner, 1994), reflect developmentally unrealistic standards for child behavior. Higher scores indicate higher risk for abuse.

Table 5
Baseline Equivalence Tests for Categorical Variables

				CCP vs. Control		
Variable	Category	Control (n = 180)	CCP (n = 188)	χ^2	*df*	*p*
Race/ethnicity - ♀	African-American (non-Latino)	14.7%	16.7%	1.24	3.00	.867
	Latino (any race)	20.7%	16.1%			
	White (non-Latino)	58.7%	58.8%			
	Multiracial/other (non-Latino)	7.1%	7.3%			
Race/ethnicity - ♂	African-American (non-Latino)	17.4%	19.8%	0.77	3.00	.892
	Latino (any race)	23.4%	21.9%			
	White (non-Latino)	55.1%	50.6%			
	Multiracial/other (non-Latino)	5.5%	6.3%			
Education - ♀	Some high school	10.8%	9.4%	5.70	5	.867
	High school grad/GED	19.0%	16.6%			
	Some college/vocational	36.2%	32.1%			
	College grad	13.5%	22.3%			
	Some grad school	5.3%	3.7%			
	Graduate degree received	16.2%	15.1%			
Education - ♂	Some high school	7.6%	9.4%	3.50	5	.867
	High school grad/GED	29.2%	26.4%			
	Some college/vocational	36.2%	33.7%			
	College grad	12.5%	13.9%			
	Some grad school	1.6%	4.1%			
	Grad degree received	14.1%	11.4%			
Marital status	Married	59.5%	59.5%	0.08	1	.867
	Living together	41.7%	39.3%			
Pregnancy	Unplanned	51.5%	47.2%	0.60	1	.867
	Planned		52.5%			

Note. ♂ = male; ♀ = female. Pearson χ^2 tests for independence with FDR-adjusted *p*-values; GED is general equivalency diploma.

Table 6
Descriptive Statistics for Selected Covariates at Baseline

	Control	CCP Non-Compliers	CCP Compliers
Variable	*M (SD)*	*M (SD)*	*M (SD)*
Age - ♀	26.52 (3.84)	26.57 (4.06)	27.25 (3.43)
Education - ♀	2.17 (1.44)	1.79 (1.17)	2.41 (1.54)
Education - ♂	2.34 (1.53)	2.01 (1.35)	2.68 (1.49)
Household size	4.31 (1.49)	4.66 (1.68)	4.24 (1.56)
Married (1 = yes)	0.41 (0.49)	0.55 (0.50)	0.29 (0.46)
Planned pregnancy (1 = yes)	0.49 (0.50)	0.47 (0.50)	0.60 (0.49)
Parent-infant bonding[a, b]	1.13 (0.20)	1.20 (0.30)	1.09 (0.18)
Infant distress to limitations[a]	3.36 (0.76)	3.28 (0.81)	3.65 (0.91)
Infant recovery from reactivity[a, c]	4.81 (0.83)	4.65 (0.78)	4.64 (0.89)
Child-related rigidity[a, d]	0.30 (0.19)	0.35 (0.20)	0.28 (0.20)
Dysfunctional relationship attributions[a]	2.51 (0.76)	2.56 (0.84)	2.75 (0.85)

Note. ♂ = male; ♀ = female. Covariates were selected based on $p < .10$ pairwise differences between compliers (couples who attended 4-8 sessions; $n = 102$), non-compliers (attended 0-3 sessions; $n = 86$), and controls ($n = 180$).
[a] Couple average score. [b] 1 = some high school, 2 = high school graduate/GED, 3 = some college/vocational school, 4 = college graduate, 5 = some graduate school, and 6 = graduate degree received. [c] The parent-infant bonding score was the mean standardized item average scores of Postpartum Bonding Questionnaire (PBQ; Brockington, Fraser, & Wilson, 2006), Parent-Infant Attachment Scale (PAS; Condon & Corkindale, 1998), and Mother to Infant Bonding Scale (IBS; Taylor, Atkins, Kumar, Adams, & Glover, 2005). Higher scores indicate worse parent-child bonding. [d] Parent reports on infant temperament were measured with the Infant Distress to Limitations and Recovery from Reactivity subscales of the Revised Infant Behavior Questionnaire (Gartstein & Rothbart, 2003). Higher scores indicate more difficult temperament. [e] Parent reports on child-related rigidity, measured with 14 rigidity items from the Child Abuse Potential Inventory (Milner, 1994), reflect developmentally unrealistic standards for child behavior. Higher scores indicate higher risk for abuse.

Table 7
Descriptive Statistics for Relationship Outcomes at Baseline, Post-Program, and Follow-Ups

	Baseline	Post-Program	Follow-Ups	
	Mos. 0-3 (*n* = 368)	Mos. 8 (*n* = 213)	Mos. 15 (*n* = 175)	Mos. 24 (*n* = 217)
Outcome/Group	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Physical IPV ♂→♀ [a]				
Control	0.14 (0.29)	0.15 (0.31)	0.11 (0.21)	0.11 (0.29)
CCP non-compliers	0.14 (0.26)	0.16 (0.21)	0.19 (0.48)	0.10 (0.18)
CCP compliers	0.13 (0.27)	0.14 (0.34)	0.11 (0.29)	0.11 (0.26)
Physical IPV ♀→♂ [a]				
Control	0.08 (0.19)	0.14 (0.33)	0.10 (0.23)	0.07 (0.18)
CCP non-compliers	0.09 (0.17)	0.16 (0.21)	0.24 (0.59)	0.07 (0.15)
CCP compliers	0.05 (0.15)	0.10 (0.25)	0.09 (0.27)	0.09 (0.21)
Psychological IPV ♂→♀ [a]				
Control	1.19 (0.89)	1.04 (0.77)	1.19 (0.84)	1.09 (0.85)
CCP non-compliers	1.05 (0.89)	0.79 (0.68)	1.05 (0.92)	0.80 (0.72)
CCP compliers	1.19 (0.81)	1.01 (0.95)	0.96 (0.92)	0.95 (0.89)
Psychological IPV ♀→♂ [a]				
Control	1.12 (0.95)	1.00 (0.83)	1.14 (0.93)	1.06 (0.89)
CCP non-compliers	0.95 (0.77)	0.66 (0.57)	1.42 (1.34)	0.92 (0.75)
CCP compliers	1.00 (0.83)	0.91 (0.91)	0.89 (0.90)	0.90 (0.96)
Relationship satisfaction ♂				
Control	126.51 (23.31)	125.45 (24.89)	125.95 (26.40)	124.16(30.39)
CCP non-compliers	126.24 (23.12)	129.88 (23.64)	117.63 (22.15)	124.47 (23.17)
CCP compliers	126.47 (21.52)	129.15 (27.45)	127.22 (30.63)	124.64 (32.61)
Relationship satisfaction ♀				
Control	123.72 (24.29)	123.62 (27.59)	123.28 (29.53)	120.95 (35.60)
CCP non-compliers	118.27 (24.59)	126.07 (25.90)	103.53 (32.58)	104.77 (39.98)
CCP compliers	120.34 (23.40)	122.71 (32.65)	123.16 (32.27)	119.92 (36.09)
Dysfunctional attributions ♂				
Control	2.61 (0.86)	2.59 (0.79)	2.51 (0.81)	2.50 (0.94)
CCP non-compliers	2.51 (0.86)	2.37 (1.08)	2.27 (0.78)	2.39 (0.73)
CCP compliers	2.79 (0.93)	2.60 (0.95)	2.57 (1.07)	2.51 (1.07)
Dysfunctional attributions ♀				
Control	2.61 (0.94)	2.87 (0.92)	2.63 (1.02)	2.75 (1.03)
CCP non-compliers	2.83 (0.94)	2.63 (0.96)	2.87 (1.23)	2.32 (0.97)
CCP compliers	2.91 (0.97)	2.99 (0.96)	2.78 (1.00)	2.69 (1.18)
Self-regulation ♂				
Control	3.56 (0.63)	3.47 (0.57)	3.52 (0.60)	3.61 (0.67)
CCP non-compliers	3.60 (0.59)	3.64 (0.53)	3.86 (0.53)	3.46 (0.67)
CCP compliers	3.49 (0.50)	3.39 (0.58)	3.47 (0.63)	3.48 (0.71)
Self-regulation ♀				

	Baseline	Post-Program	Follow-Ups	
	Mos. 0-3 (n = 368)	Mos. 8 (n = 213)	Mos. 15 (n = 175)	Mos. 24 (n = 217)
Outcome/Group	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Control	3.57 (0.57)	3.53 (0.56)	3.61 (0.61)	3.60 (0.60)
CCP non-compliers	3.51 (0.59)	3.53 (0.50)	3.45 (0.59)	3.45 (0.49)
CCP compliers	3.56 (0.58)	3.53 (0.55)	3.53 (0.60)	3.52 (0.74)
Collaboration ♂ [b]				
Control	2.35 (0.36)	2.32 (0.37)	2.34 (0.42)	2.34 (0.48)
CCP non-compliers	2.31 (0.44)	2.37 (0.29)	2.23 (0.52)	2.18 (0.55)
CCP compliers	2.27 (0.37)	2.27 (0.38)	2.24 (0.33)	2.29 (0.52)
Stalemate ♂ [b]				
Control	0.83 (0.43)	0.82 (0.44)	0.77 (0.41)	0.73 (0.43)
CCP non-compliers	0.86 (0.48)	0.76 (0.47)	0.88 (0.47)	0.77 (0.42)
CCP compliers	0.74 (0.40)	0.80 (0.43)	0.73 (0.45)	0.67 (0.51)
Avoidance-capitulation ♂ [b]				
Control	1.48 (0.43)	1.37 (0.43)	1.42 (0.43)	1.43 (0.47)
CCP non-compliers	1.60 (0.47)	1.50 (0.47)	1.31 (0.43)	1.46 (0.42)
CCP compliers	1.54 (0.48)	1.53 (0.45)	1.41 (0.43)	1.37 (0.50)
Child conflict exposure ♂ [b]				
Control	0.35 (0.38)	0.47 (0.40)	0.48 (0.36)	0.47 (0.37)
CCP non-compliers	0.32 (0.36)	0.35 (0.31)	0.48 (0.44)	0.40 (0.33)
CCP compliers	0.34 (0.39)	0.43 (0.39)	0.40 (0.36)	0.42 (0.46)
Collaboration ♀ [b]				
Control	2.40 (0.34)	2.36 (0.32)	2.34 (0.41)	2.28 (0.54)
CCP non-compliers	2.42 (0.34)	2.41 (0.31)	2.41 (0.29)	2.34 (0.43)
CCP compliers	2.38 (0.34)	2.31 (0.34)	2.31 (0.35)	2.27 (0.56)
Stalemate ♀ [b]				
Control	1.20 (0.47)	1.15 (0.49)	1.09 (0.44)	1.03 (0.52)
CCP non-compliers	1.22 (0.49)	1.01 (0.42)	1.20 (0.60)	1.08 (0.51)
CCP compliers	1.17 (0.50)	1.13 (0.50)	1.06 (0.57)	0.97 (0.56)
Avoidance-capitulation ♀ [b]				
Control	1.41 (0.39)	1.37 (0.42)	1.35 (0.38)	1.27 (0.43)
CCP non-compliers	1.49 (0.48)	1.31 (0.50)	1.26 (0.53)	1.27 (0.35)
CCP compliers	1.42 (0.50)	1.38 (0.42)	1.30 (0.45)	1.25 (0.53)
Child conflict exposure ♀ [b]				
Control	0.37 (0.40)	0.49 (0.39)	0.47 (0.34)	0.49 (0.39)
CCP non-compliers	0.33 (0.36)	0.38 (0.36)	0.49 (0.43)	0.40 (0.35)
CCP compliers	0.34 (0.38)	0.44 (0.41)	0.43 (0.39)	0.45 (0.50)

Note. Non-compliers attended 0-3 CCP sessions; compliers attended 4-8 CCP sessions; ♂ = male; ♀ = female; except where indicated, data are self-report; [a] maximum reported by either partner; [b] average of self- and partner-report.

Table 8
Effects of Couple CARE for Parents on Intimate Partner Violence

	Intent to Treat (ITT)										Complier Average Causal Estimation (CACE)									
	MAR										MAR					LI				
Outcome/Time	B	d/OR[a]	95% CI	p	FDR p	B	d	95% CI	p	FDR p	B	d/OR[a]	95% CI	p	FDR p	B	d/OR[a]	95% CI	p	FDR p
Physical IPV ♂→♀																				
Post-program (8 mos.)	-0.12	0.83	[0.47, 1.45]	.504	.504	-0.74	0.31	[0.10, 0.92]	.035	.105	-0.38	0.54	[0.20, 1.46]	.229	.391					
Follow-up (15 mos.)	-0.14	0.80	[0.42, 1.52]	.498	.504	-0.24	0.68	[0.21, 2.22]	.523	.523	-0.21	0.71	[0.34, 1.53]	.391	.391					
Follow-up (24 mos.)	0.14	1.25	[0.68, 2.29]	.482	.504	0.33	1.70	[0.46, 6.22]	.432	.523	0.22	1.42	[0.65, 3.12]	.383	.391					
Physical IPV ♀→♂																				
Post-program (8 mos.)	-0.13	0.81	[0.46, 1.43]	.473	.710	-0.35	0.57	[0.21, 1.59]	.286	.858	-0.23	0.69	[0.29, 1.65]	.408	.762					
Follow-up (15 mos.)	-0.18	0.75	[0.41, 1.38]	.349	.710	-0.15	0.79	[0.22, 2.74]	.704	.922	-0.16	0.77	[0.36, 1.65]	.508	.762					
Follow-up (24 mos.)	0.01	1.02	[0.57, 1.82]	.960	.960	-0.03	0.95	[0.32, 2.80]	.922	.922	-0.00	1.00	[0.43, 2.33]	.992	.992					
Psychological IPV ♂→♀																				
Post-program (8 mos.)	-0.09	-0.10	[-0.36, 0.16]	.279	.682	0.03	0.04	[-0.22, 0.30]	.763	.763	-0.01	-0.01	[-0.27, 0.25]	.906	.906					
Follow-up (15 mos.)	-0.09	-0.10	[-0.39, 0.19]	.455	.682	0.20	0.23	[-0.06, 0.52]	.112	.336	0.10	0.12	[-0.17, 0.41]	.441	.906					
Follow-up (24 mos.)	0.01	0.01	[-0.25, 0.27]	.934	.934	-0.08	-0.09	[-0.35, 0.17]	.633	.763	-0.03	-0.03	[-0.29, 0.23]	.822	.906					
Psychological IPV ♀→♂																				
Post-program (8 mos.)	-0.06	-0.07	[-0.33, 0.19]	.449	.449	-0.05	-0.05	[-0.31, 0.21]	.757	.834	-0.04	-0.04	[-0.3, 0.22]	.742	.742					
Follow-up (15 mos.)	-0.17	-0.19	[-0.48, 0.1]	.106	.318	0.03	0.04	[-0.25, 0.33]	.834	.834	-0.05	-0.06	[-0.35, 0.23]	.688	.742					
Follow-up (24 mos.)	-0.08	-0.09	[-0.35, 0.17]	.402	.449	-0.29	-0.32	[-0.58, -0.06]	.081	.243	-0.15	-0.17	[-0.43, 0.09]	.262	.742					

Notes. n = 368; IPV = intimate partner violence, as reported by either partner; ♂ = male; ♀ = female; B = regression coefficient for the intervention effect in ITT analysis, or regression coefficient for the intervention effect in the complier class in CACE analysis; d = Cohen's d (standardized difference between groups); FDR p = false discovery rate (Benjamini & Hochberg, 1995) technique-corrected p-value for the intervention effect; two-tailed; MAR = missing at random; LI = latent ignorability.
[a] Odds ratio reported for physical IPV, as d cannot be computed for physical IPV (an ordinal outcome).

Table 9
Effects of Couple CARE for Parents on Couple Relationship Outcomes)

	Intent to Treat (ITT)					Complier Average Causal Estimation (CACE)									
	MAR					MAR					LI				
Outcome/Time	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p
Main Effects of CCP Program															
Relationship satisfaction ♂															
Post-program (8 mos.)	1.49	0.06	[-0.21, 0.33]	.587	.880	5.55	0.24	[-0.03, 0.51]	.211	.211	-0.34	-0.01	[-0.28, 0.26]	.950	.950
Follow-up (15 mos.)	2.16	0.09	[-0.21, 0.39]	.509	.880	10.87	0.47	[0.17, 0.77]	.077	.211	7.43	0.32	[0.02, 0.62]	.220	.330
Follow-up (24 mos.)	-0.46	-0.02	[-0.29, 0.25]	.895	.895	-4.76	-0.21	[-0.48, 0.06]	.169	.211	-5.27	-0.23	[-0.50, 0.04]	.122	.330
Relationship satisfaction ♀															
Post-program (8 mos.)	0.91	0.04	[-0.23, 0.31]	.753	.753	7.57	0.31	[0.04, 0.58]	.064	.096	4.37	0.18	[-0.09, 0.45]	.244	.292
Follow-up (15 mos.)	-2.39	-0.10	[-0.39, 0.19]	.517	.753	-5.24	-0.22	[-0.51, 0.07]	.161	.161	-3.96	-0.16	[-0.45, 0.13]	.292	.292
Follow-up (24 mos.)	-3.08	-0.13	[-0.39, 0.13]	.453	.753	-7.96	-0.33	[-0.59, -0.07]	.024	.072	-7.07	-0.29	[-0.55, -0.03]	.051	.153
Dysfunctional attributions ♂															
Post-program (8 mos.)	-0.05	-0.06	[-0.33, 0.21]	.666	.908	-0.20	-0.23	[-0.50, 0.04]	.225	.675	-0.14	-0.16	[-0.43, 0.11]	.372	.802
Follow-up (15 mos.)	0.05	0.06	[-0.24, 0.36]	.730	.908	0.08	0.09	[-0.21, 0.39]	.696	.732	0.05	0.06	[-0.24, 0.36]	.724	.802
Follow-up (24 mos.)	0.01	0.01	[-0.27, 0.29]	.908	.908	-0.07	-0.08	[-0.36, 0.20]	.732	.732	-0.04	0.05	[-0.23, 0.33]	.802	.802
Dysfunctional attributions ♀															
Post-program (8 mos.)	0.00	0.00	[-0.27, 0.27]	.970	.970	-0.07	-0.07	[-0.34, 0.20]	.611	.611	-0.04	-0.04	[-0.31, 0.23]	.750	.750
Follow-up (15 mos.)	0.12	0.01	[-0.28, 0.30]	.377	.566	0.16	0.17	[-0.12, 0.46]	.225	.338	0.19	0.20	[-0.09, 0.49]	.148	.288
Follow-up (24 mos.)	-0.16	-0.17	[-0.44, 0.10]	.212	.566	-0.26	-0.27	[-0.54, 0.00]	.171	.338	-0.22	-0.23	[-0.50, 0.04]	.192	.288
Self-regulation ♂															
Post-program (8 mos.)	-0.08	-0.14	[-0.41, 0.13]	.198	.297	-0.19	-0.33	[-0.60, -0.06]	.161	.242	-0.14	-0.24	[-0.51, 0.03]	.164	.246
Follow-up (15 mos.)	-0.01	-0.01	[-0.31, 0.29]	.936	.936	-0.02	-0.03	[-0.33, 0.27]	.907	.907	0.00	0.00	[-0.30, 0.30]	>.99	>.99
Follow-up (24 mos.)	-0.13	-0.23	[-0.50, 0.04]	.087	.261	-0.17	-0.29	[-0.56, -0.02]	.103	.242	-0.14	-0.23	[-0.50, 0.04]	.134	.246
Self-regulation ♀															
Post-program (8 mos.)	-0.01	-0.02	[-0.29, 0.25]	.893	.893	0.06	0.11	[-0.16, 0.38]	.714	.714	0.05	0.09	[-0.18, 0.36]	.693	.693

	Intent to Treat (ITT)					Complier Average Causal Estimation (CACE)									
	MAR					MAR					LI				
Outcome/Time	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p
Follow-up (15 mos.)	-0.09	-0.15	[-0.44, 0.14]	.285	.428	-0.14	-0.25	[-0.54, 0.04]	.295	.442	-0.10	-0.17	[-0.46, 0.12]	.313	.470
Follow-up (24 mos.)	-0.12	-0.21	[-0.47, 0.05]	.118	.354	-0.17	-0.30	[-0.57, -0.03]	.138	.414	-0.12	-0.20	[-0.46, 0.06]	.248	.470
Collaboration ♂															
Post-program (8 mos.)	-0.02	-0.05	[-0.31, 0.21]	.607	.701	0.00	0.00	[-0.26, 0.26]	.994	.994	-0.01	-0.03	[-0.29, 0.23]	.828	.828
Follow-up (15 mos.)	-0.02	-0.05	[-0.34, 0.24]	.701	.701	-0.13	-0.33	[-0.62, -0.04]	.002	.006**	-0.10	-0.27	[-0.56, 0.02]	.017	.051
Follow-up (24 mos.)	-0.07	-0.18	[-0.44, 0.08]	.272	.701	-0.13	-0.34	[-0.60, -0.08]	.014	.021*	-0.11	-0.29	[-0.55, -0.03]	.050	.075
Stalemate ♂															
Post-program (8 mos.)	0.01	0.03	[-0.23, 0.29]	.746	.941	-0.02	-0.05	[-0.31, 0.21]	.838	.838	-0.01	-0.03	[-0.29, 0.23]	.854	.990
Follow-up (15 mos.)	-0.00	-0.01	[-0.30, 0.28]	.941	.941	0.02	0.04	[-0.25, 0.33]	.812	.838	-0.00	0.00	[-0.29, 0.29]	.990	.990
Follow-up (24 mos.)	-0.02	-0.05	[-0.31, 0.21]	.639	.941	-0.06	-0.14	[-0.40, 0.12]	.482	.838	-0.04	-0.09	[-0.35, 0.17]	.548	.990
Avoidance-capitulation ♂															
Post-program (8 mos.)	0.04	0.08	[-0.18, 0.34]	.439	.602	0.05	0.11	[-0.15, 0.37]	.425	.425	0.03	0.07	[-0.19, 0.33]	.543	.543
Follow-up (15 mos.)	-0.03	-0.06	[-0.35, 0.23]	.602	.602	-0.06	-0.12	[-0.41, 0.17]	.382	.425	-0.04	-0.09	[-0.38, 0.20]	.447	.543
Follow-up (24 mos.)	-0.06	-0.14	[-0.40, 0.12]	.254	.602	-0.09	-0.19	[-0.45, 0.07]	.320	.425	-0.09	-0.20	[-0.46, 0.06]	.200	.543
Child involvement in conflict ♂															
Post-program (8 mos.)	-0.05	-0.13	[-0.39, 0.13]	.271	.406	-0.16	-0.43	[-0.7, -0.16]	.027	.081	-0.12	-0.32	[-0.59, -0.05]	.074	.222
Follow-up (15 mos.)	-0.05	-0.14	[-0.43, 0.15]	.260	.406	-0.03	-0.08	[-0.37, 0.21]	.587	.587	-0.04	-0.10	[-0.39, 0.19]	.480	.480
Follow-up (24 mos.)	-0.03	-0.09	[-0.35, 0.17]	.486	.486	-0.10	-0.26	[-0.52, 0.00]	.356	.534	-0.07	-0.19	[-0.45, 0.07]	.283	.424
Collaboration ♀															
Post-program (8 mos.)	-0.03	-0.10	[-0.36, 0.16]	.368	.937	0.04	0.10	[-0.16, 0.36]	.689	.689	-0.01	-0.03	[-0.29, 0.23]	.893	.893
Follow-up (15 mos.)	-0.01	-0.03	[-0.32, 0.26]	.815	.937	-0.14	-0.40	[-0.69, -0.11]	.007	.021*	-0.11	-0.33	[-0.62, -0.04]	.024	.072
Follow-up (24 mos.)	0.00	0.01	[-0.25, 0.27]	.937	.937	0.17	0.50	[0.24, 0.76]	.173	.259	0.10	0.29	[0.03, 0.55]	.368	.552
Stalemate ♀															
Post-program (8 mos.)	-0.00	-0.01	[-0.27, 0.25]	.877	.991	-0.10	-0.21	[-0.47, 0.05]	.238	.714	-0.07	-0.14	[-0.40, 0.12]	.233	.699

	Intent to Treat (ITT)					Complier Average Causal Estimation (CACE)									
	MAR					MAR					LI				
Outcome/Time	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p
Follow-up (15 mos.)	0.00	0.00	[-0.29, 0.29]	.991	.991	-0.00	0.00	[-0.29, 0.29]	.993	.993	0.01	0.03	[-0.26, 0.32]	.853	.853
Follow-up (24 mos.)	-0.00	0.00	[-0.26, 0.26]	.978	.991	-0.02	-0.05	[-0.31, 0.21]	.823	.993	-0.04	-0.07	[-0.33, 0.19]	.622	.853
Avoidance-capitulation ♀															
Post-program (8 mos.)	0.03	0.07	[-0.19, 0.33]	.520	.662	0.00	0.01	[-0.25, 0.27]	.956	.956	0.01	0.02	[-0.24, 0.28]	.925	.925
Follow-up (15 mos.)	-0.05	-0.11	[-0.40, 0.18]	.354	.662	-0.12	-0.26	[-0.55, 0.03]	.121	.363	-0.07	-0.16	[-0.45, 0.13]	.364	.726
Follow-up (24 mos.)	-0.02	-0.05	[-0.31, 0.21]	.662	.662	-0.04	-0.10	[-0.36, 0.16]	.590	.885	-0.05	-0.11	[-0.37, 0.15]	.484	.726
Child involvement in conflict ♀															
Post-program (8 mos.)	-0.04	-0.10	[-0.36, 0.16]	.383	.798	-0.03	-0.08	[-0.34, 0.18]	.606	.606	-0.02	-0.05	[-0.31, 0.21]	.715	.715
Follow-up (15 mos.)	-0.01	-0.03	[-0.32, 0.26]	.798	.798	-0.04	-0.11	[-0.40, 0.18]	.492	.606	-0.04	-0.10	[-0.39, 0.19]	.464	.715
Follow-up (24 mos.)	-0.01	-0.04	[-0.30, 0.22]	.788	.798	-0.08	-0.22	[-0.48, 0.04]	.445	.606	-0.05	-0.13	[-0.39, 0.13]	.510	.715
	CCP × Cumulative Risk[a]														
Relationship satisfaction ♂															
Post-program (8 mos.)	-3.43	-	-	.216	.644	5.52	-	-	.529	.529	-6.48	-	-	.028	.055
Follow-up (15 mos.)	0.18	-	-	.968	.968	-6.63	-	-	.298	.529	-6.06	-	-	.328	.328
Follow-up (24 mos.)	-3.31	-	-	.429	.644	5.59	-	-	.435	.529	-9.92	-	-	.037	.055
Relationship satisfaction ♀															
Post-program (8 mos.)	-1.15	-	-	.685	.685	7.22			.243	.243	2.05	-	-	.841	.841
Follow-up (15 mos.)	-3.96	-	-	.31	.685	-8.56			.029	.087	-7.38	-	-	.087	.261
Follow-up (24 mos.)	-2.03	-	-	.638	.685	-7.28			.159	.238	-5.35	-	-	.292	.438
Dysfunctional attributions ♂															
Post-program (8 mos.)	0.1	-	-	.432	.432	-0.02	-	-	.912	.912	0.03	-	-	.867	.867
Follow-up (15 mos.)	0.2	-	-	.236	.432	0.26	-	-	.339	.588	0.33	-	-	.103	.309
Follow-up (24 mos.)	0.12	-	-	.38	.432	0.21	-	-	.392	.588	0.23	-	-	.234	.351
Dysfunctional attributions ♀															

	Intent to Treat (ITT)					Complier Average Causal Estimation (CACE)									
	MAR					MAR					LI				
Outcome/Time	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p
Post-program (8 mos.)	-0.01	-	-	.958	.975	-0.13	-	-	.500	.531	-0.1	-	-	.463	.541
Follow-up (15 mos.)	0.01	-	-	.975	.975	-0.14	-	-	.531	.531	-0.11	-	-	.465	.541
Follow-up (24 mos.)	0.12	-	-	.343	.975	0.16	-	-	.436	.531	0.11	-	-	.541	.541
Self-regulation ♂															
Post-program (8 mos.)	0.05	-	-	.456	.684	-0.14	-	-	.369	.708	-0.03	-	-	.854	.999
Follow-up (15 mos.)	0.09	-	-	.305	.684	-0.11	-	-	.540	.708	0	-	-	.999	.999
Follow-up (24 mos.)	0.03	-	-	.791	.791	0.05	-	-	.708	.708	0.08	-	-	.552	.999
Self-regulation ♀															
Post-program (8 mos.)	-0.04	-	-	.538	.948	0.05	-	-	.773	.905	0.02	-	-	.921	.975
Follow-up (15 mos.)	-0.01	-	-	.948	.948	-0.03	-	-	.905	.905	0	-	-	.975	.975
Follow-up (24 mos.)	-0.02	-	-	.796	.948	0.03	-	-	.813	.905	0.03	-	-	.799	.975
Collaboration ♂															
Post-program (8 mos.)	0.07	-	-	.111	.333	0.01	-	-	.937	.993	0.05	-	-	.356	.534
Follow-up (15 mos.)	-0.01	-	-	.810	.810	0.03	-	-	.675	.993	0.05	-	-	.337	.534
Follow-up (24 mos.)	-0.02	-	-	.810	.810	0.02	-	-	.993	.993	0.03	-	-	.738	.738
Stalemate ♂															
Post-program (8 mos.)	0.02	-	-	.616	.616	-0.06	-	-	.575	.575	-0.01	-	-	.830	.926
Follow-up (15 mos.)	0.09	-	-	.078	.234	0.13	-	-	.176	.528	0.10	-	-	.081	.243
Follow-up (24 mos.)	0.03	-	-	.583	.616	0.06	-	-	.443	.575	0.01	-	-	.926	.926
Avoidance-capitulation ♂															
Post-program (8 mos.)	-0.01	-	-	.904	.904	-0.01	-	-	.958	.958	-0.02	-	-	.839	.84
Follow-up (15 mos.)	0.02	-	-	.659	.904	-0.03	-	-	.712	.958	-0.01	-	-	.840	.84
Follow-up (24 mos.)	-0.04	-	-	.466	.904	-0.11	-	-	.174	.522	-0.12	-	-	.090	.27
Child involvement in conflict ♂															
Post-program (8 mos.)	-0.01	-	-	.921	.921	0.06	-	-	.489	.489	-0.04	-	-	.759	.759

	Intent to Treat (ITT)					Complier Average Causal Estimation (CACE)									
	MAR					MAR					LI				
Outcome/Time	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p	B	d	95% CI	p	FDR p
Follow-up (15 mos.)	0.11	-	-	.035	.068	0.08	-	-	.205	.362	0.08	-	-	.204	.306
Follow-up (24 mos.)	0.08	-	-	.045	.068	0.1	-	-	.241	.362	0.07	-	-	.170	.306
Child involvement in conflict ♀															
Post-program (8 mos.)	-0.04	-	-	.342	.816	0.07	-	-	.430	.574	-0.07	-	-	.328	.982
Follow-up (15 mos.)	0.01	-	-	.816	.816	-0.05	-	-	.574	.574	-0.02	-	-	.698	.982
Follow-up (24 mos.)	-0.04	-	-	.596	.816	0.13	-	-	.508	.574	0.01	-	-	.982	.982
Stalemate ♀															
Post-program (8 mos.)	0	-	-	.989	.989	-0.12	-	-	.099	.149	-0.05	-	-	.473	.71
Follow-up (15 mos.)	0.11	-	-	.071	.213	0.14	-	-	.088	.149	0.13	-	-	.088	.264
Follow-up (24 mos.)	0.01	-	-	.825	.989	0.03	-	-	.840	.840	-0.02	-	-	.833	.833
Avoidance-capitulation ♀															
Post-program (8 mos.)	-0.01	-	-	.821	.821	-0.23	-	-	.039	.117	-0.10	-	-	.312	.621
Follow-up (15 mos.)	0.05	-	-	.405	.821	-0.11	-	-	.327	.491	0.03	-	-	.740	.74
Follow-up (24 mos.)	-0.02	-	-	.778	.821	-0.05	-	-	.530	.503	-0.06	-	-	.414	.621
Child involvement in conflict ♀															
Post-program (8 mos.)	-0.02	-	-	.712	.712	0.02	-	-	.765	.765	0.02	-	-	.692	.692
Follow-up (15 mos.)	0.15	-	-	.002	.006**	0.15	-	-	.068	.204	0.15	-	-	.019	.057
Follow-up (24 mos.)	0.11	-	-	.042	.063	0.12	-	-	.206	.309	0.11	-	-	.114	.171

Notes. $n = 368$; *B* is regression coefficient for the intervention effect in ITT analysis, or it is regression coefficient for the intervention effect in the complier class in CACE analysis; *d* is Cohen's *d* (standardized difference between groups); *p* is *p*-value for intervention effect; FDR *p* is the false discovery rate-corrected (Benjamini & Hochberg, 1995) *p*-value for the intervention effect; two-tailed; *d* cannot be computed for ordinal outcomes; MAR = missing at random; LI = latent ignorability. ♂ = male; ♀ = female.

[a] Effect sizes from interaction effects are not shown because their calculation in CACE models is not well developed.

* FDR $p < .05$; ** FDR $p < .01$

Table 10
Cumulative Risk as a Moderator of Effects of Couple CARE for Parents on Intimate Partner Violence[a]

	Intent to Treat (ITT)			Complier Average Causal Estimation (CACE)					
	MAR			MAR			LI		
Outcome	*B*	*p*	FDR *p*	*B*	*p*	FDR *p*	*B*	*p*	FDR *p*
Physical IPV ♂→♀									
Post-program (8 mos.)	0.31	.137	.327	1.38	.033	.099	1.16	.009	.027*
Follow-up (15 mos.)	0.25	.218	.327	0.57	.149	.223	0.39	.129	.194
Follow-up (24 mos.)	-0.13	.480	.480	-0.26	.880	.880	-0.08	.801	.801
Physical IPV ♀→♂									
Post-program (8 mos.)	0.17	.372	.953	0.11	.694	.995	0.21	.435	.766
Follow-up (15 mos.)	0.01	.953	.953	-0.06	.875	.995	0.08	.730	.766
Follow-up (24 mos.)	0.07	.694	.953	-0.00	.995	.995	0.07	.766	.766
Psychological IPV ♂→♀									
Post-program (8 mos.)	-0.19	.037	.111	0.06	.736	.736	-0.27	.057	.171
Follow-up (15 mos.)	0.11	.419	.419	0.21	.150	.450	0.14	.225	.338
Follow-up (24 mos.)	0.07	.401	.419	0.11	.463	.694	0.09	.460	.460
Psychological IPV ♀→♂									
Post-program (8 mos.)	0.01	.905	.905	-0.13	.294	.441	-0.04	.810	.810
Follow-up (15 mos.)	0.04	.692	.905	0.19	.201	.441	0.07	.575	.810
Follow-up (24 mos.)	0.07	.451	.905	0.01	.936	.936	0.11	.377	.810

Notes. $n = 368$; IPV = intimate partner violence, as reported by either partner; ♂ = male; ♀ = female; *B* = regression coefficient for the intervention effect in ITT analysis, or regression coefficient for the intervention effect in the complier class in CACE analysis; FDR *p* = false discovery rate (Benjamini & Hochberg, 1995) technique-corrected *p*-value for the intervention effect; two-tailed; MAR = missing at random; LI = latent ignorability.
[a] Effect sizes from interaction effects are not shown because their calculation in CACE models is not well developed.

Table 11
Intervention × Risk Factor Interactions for Male-to-Female Physical IPV at Post-Program (8 Mos.)[a]

	Intent to Treat (ITT)		Complier Average Causal Estimation (CACE)			
	MAR		MAR		LI	
Predictor	*B*	*p*	*B*	*p*	*B*	*p*
Physical IPV (baseline)	1.06	.054	-0.12	.941	-0.8	.621
Low education	0.45	.238	1.06	.230	0.54	.215
Parent-infant bonding [b]	0.55	.196	-0.05	.979	0.33	.535
Poverty	-0.15	.723	-1.84	.319	-0.023	.958
Unplanned pregnancy	1.14	.004**	3.18	.005**	1.12	.009**

Notes. $n = 368$; IPV = intimate partner violence, as reported by either partner; *B* = regression coefficient for the moderated intervention effect in ITT analysis, or regression coefficient for the moderated intervention effect in the complier class in CACE analysis; MAR = missing at random; LI = latent ignorability.
[a] Effect sizes from interaction effects are not shown because their calculation in CACE models is not well developed. [b] The parent-infant bonding score was the mean standardized item average scores of Postpartum Bonding Questionnaire (PBQ; Brockington, Fraser, & Wilson, 2006), Parent-Infant Attachment Scale (PAS; Condon & Corkindale, 1998), and Mother to Infant Bonding Scale (IBS; Taylor, Atkins, Kumar, Adams, & Glover, 2005). Higher scores indicate worse parent-child bonding.
** $p < .01$.

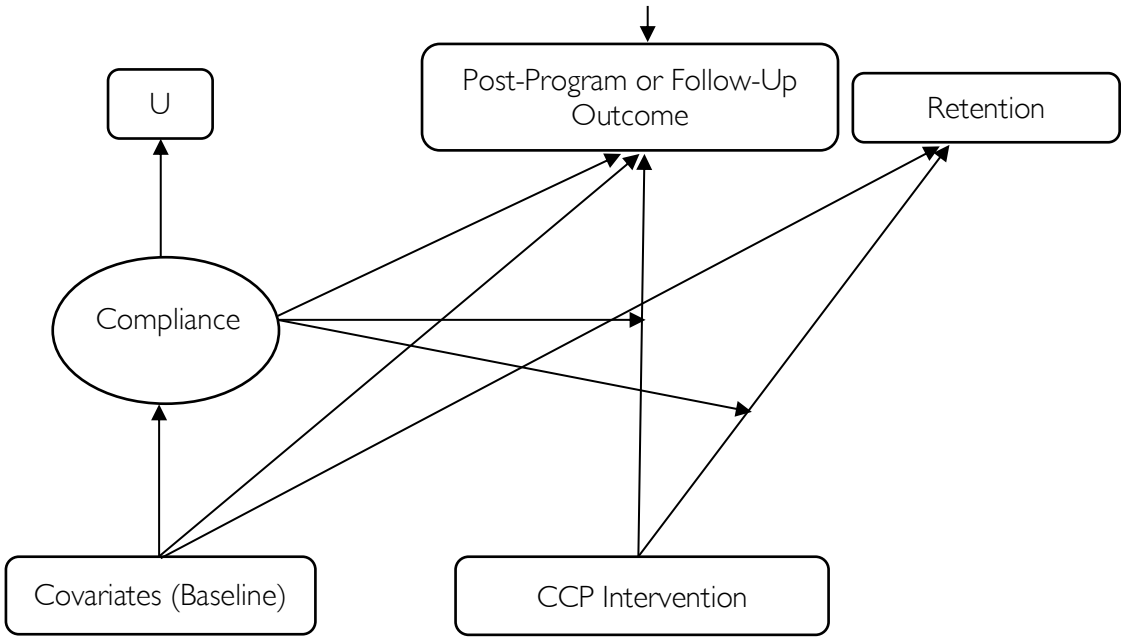

Figure 2. A path diagram of CACE analysis. U = observed compliance status (0 = noncompliance, 1 = compliance); Compliance = latent compliance status; Covariates (Baseline) = baseline measures; CCP Intervention = CCP intervention assignment (0 = control, 1 = intervention); Retention = retention status at post-program or follow-up assessment (0 = absent, 1 = present); Post-Program or Follow-Up Outcome= single outcome measured at post-program, 6-mos. follow-up, or 16-mos. follow-up.

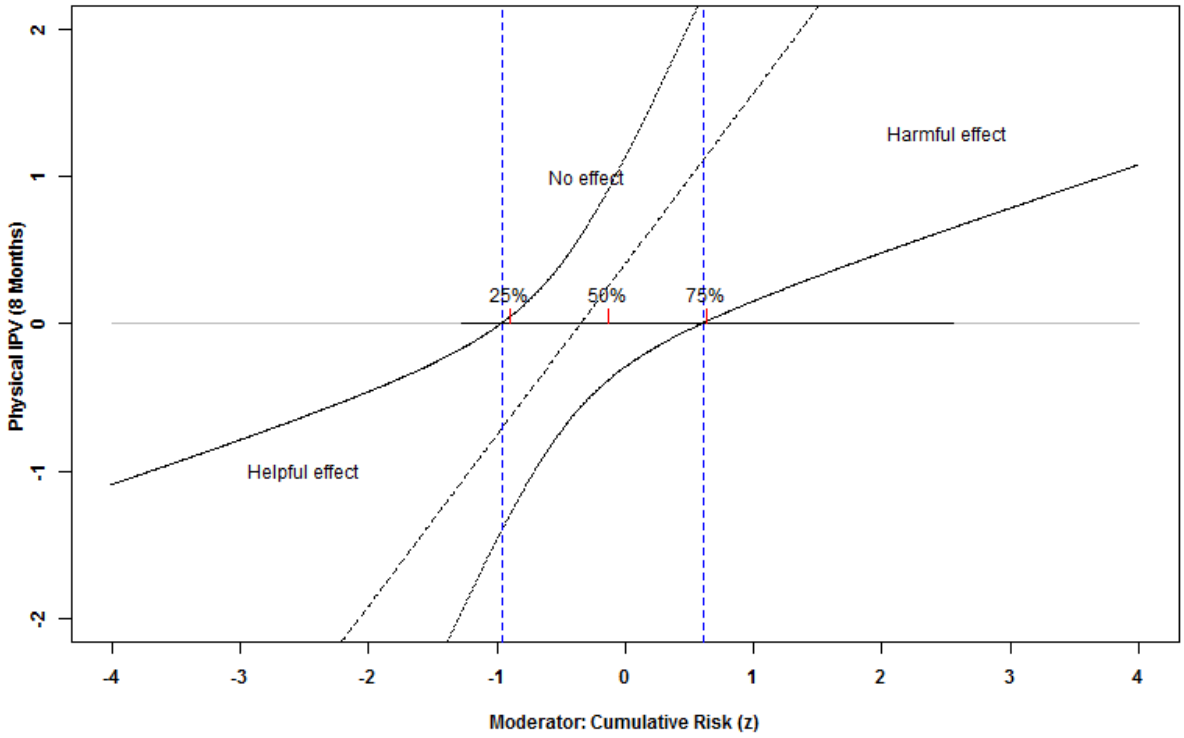

Figure 3. Intervention effect on males' physical IPV (post-program) as a function of cumulative risk. J-N Regions of significance and confidence bands (the curved black lines) for conditional relation (the tilted dashed line) between males' physical IPV and cumulative risk as a function of CCP at post-program. Black horizontal line: the range of observed cumulative risk values with 25%, 50% 75% percentiles marked. Dotted vertical lines: J-N regions of significance (-0.955, 0.612).

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