

Supplemental Table 1*Descriptive Statistics for Sociodemographics and Main Outcome Variables*

| | Mothers <i>M ± SD or N (%)</i> | Partners <i>M ± SD or N (%)</i> |
|---|-----------------------------------|------------------------------------|
| <i>Age (years)[^]</i> | 30.04 ± 3.49 | 31.58 ± 4.51 |
| <i>Years of Education (since Grade 1)</i> | 17.33 ± 2.79 | 17.00 ± 3.07 |
| <i>Sex</i> | | |
| Female | 203 (100%) | 7 (3.4%) |
| Male | - | 196 (96.6%) |
| <i>Sexual Orientation</i> | | |
| Heterosexual | 182 (89.7%) | 194 (95.6%) |
| Lesbian/Gay | 6 (3.0%) | 4 (2.0%) |
| Bisexual | 12 (5.9%) | 3 (1.5%) |
| Other* | 3 (1.5%) | 2 (1.0%) |
| <i>Relationship Status</i> | | |
| Married/Engaged/Commonlaw | 186 (91.6%) | 185 (91.1%) |
| Living with/Dating one partner | 17 (8.4%) | 17 (8.4%) |
| Other | | 1 (0.5%) |
| <i>Relationship Length (months)</i> | 79.66 ± 43.24 | 79.66 ± 43.24 |
| <i>Country of Residence</i> | | |
| Canada | 145 (71.4%) | 145 (71.4%) |
| United States of America | 58 (28.6%) | 58 (28.6%) |
| <i>Race/Ethnicity</i> | | |
| Caucasian | 160 (78.8%) | 164 (80.8%) |
| Asian American/Asian | 19 (9.4%) | 10 (4.9%) |
| Biracial/Multiracial | 9 (4.4%) | 7 (3.4%) |

| | | |
|---------------------------------------|------------------|-------------|
| East Indian | 6 (3.0%) | 5 (2.5%) |
| Middle Eastern/Central or South Asian | 3 (1.5%) | 7 (3.4%) |
| Other ^{\$} | 6 (3.0%) | 10 (5.0%) |
| <i>Employment</i> | | |
| Full-time (inside + outside home) | 150 (73.9%) | 174 (85.7%) |
| Part-time (inside + outside home) | 35 (17.2%) | 23 (11.3%) |
| Student (full-time + part-time) | 17 (8.4%) | 24 (11.8%) |
| Other (unemployed, leave, casual) | 20 (10.0%) | 8 (4.0%) |
| <i>Annual Income[#]</i> | | |
| <\$60,000 | 39 (19.3%) | 39 (19.3%) |
| >\$60,000 | 163 (80.7%) | 163 (80.7%) |
| Main Outcome Variable | <i>M</i> (Range) | <i>SD</i> |
| Infant Sleep Quality | 8.03 (1-10) | 1.95 |
| Mother Sleep | 4.34 (1-7) | 1.11 |
| Partner Sleep | 4.48 (1-7) | 1.19 |
| Couples' Sexual Frequency | 3.36 (1-6) | 1.72 |
| Mother Sexual Desire | 5.04 (2-10) | 2.00 |
| Partner Sexual Desire | 6.77 (2-10) | 1.79 |

Note. ^ Age is based on data from 198 mothers and 195 partners due to missing data on this variable. * Other includes: pansexual, asexual, and between bisexual and lesbian. # Other includes: African American/Black, Aboriginal/Native American/First Nations, Hispanic/Latino/Latina, Hawaiian/Pacific Islander, Ashkenazi, or not specified. \$ Income is based on data from 202 couples due to missing data from one couple.

Supplemental Table 2*Within- and Between-Dyad Correlations between Main Outcome Variables and Covariates of Interest*

| | Infant Sleep | Mother Sleep | Partner Sleep | Sexual Frequency | Mother Desire | Partner Desire | Pain During Sex | Breast-feeding | Relationship Length | Mother Age | Partner Age |
|---------------------|--------------|--------------|---------------|------------------|---------------|----------------|-----------------|----------------|---------------------|------------|-------------|
| Infant Sleep | | .40*** | .31*** | .09 | .12 | .12 | .12 | -.16** | -.02 | -.05 | -.12 |
| Mother Sleep | .45*** | | .30*** | .12 | .10 | .16** | .17* | -.15** | -.010 | .07 | .05 |
| Partner Sleep | .33*** | .28*** | | .27*** | .10 | .33*** | .19*** | -.01 | -.22*** | -.13 | -.16** |
| Sexual Frequency | .05 | .13** | .12** | | .53*** | .29*** | .56*** | .03 | -.29*** | -.26*** | -.20*** |
| Mother Desire | .04 | .16*** | .16*** | .42*** | | .05 | .48*** | -.08 | -.13 | -.20*** | -.18** |
| Partner Desire | .07 | .07 | .09* | .17*** | .18*** | | .21*** | .07 | -.15** | -.08 | -.16** |
| Pain During Sex | .07 | .05 | .001 | .10* | -.03 | .04 | | -.01 | -.043 | -.15** | -.21*** |
| Breast-feeding | .07 | .03 | .003 | .10* | -.001 | .04 | .98*** | | .01 | .13 | -.01 |
| Relationship Length | .02 | .01 | .003 | .02 | -.05 | -.01 | .05 | .06 | | - | - |
| Mother Age | .02 | -.03 | .02 | -.04 | -.07 | .03 | .002 | .002 | - | | - |
| Partner Age | -.004 | .04 | .02 | -.05 | -.09 | -.02 | .03 | .03 | - | - | |

Note. Results in the shaded grey section are between-dyad effects (correlations of dyad averaged across all time points); results in the white section are within-dyad effects (repeated measures correlations for each dyad using rmcrrShiny); * = correlation is significant at the .05 level (2-tailed); ** = correlation is significant at the .01 level (2-tailed); *** = correlation is significant at the < .001 level; correlations were not calculated between relationship length and age.

Supplemental Table 3

Path Estimates from MLMED Analysis with Parental Sleep between Infant Sleep and Sexual Frequency

| Outcome | | <i>b</i> | <i>SE</i> | 95% CI | <i>df</i> | <i>t</i> | <i>p</i> |
|-------------------------|----------------|------------|------------|--------------------|---------------|--------------|------------------|
| Fixed Effects | | | | | | | |
| <i>Mother Sleep</i> | | | | | | | |
| | Within | .27 | .02 | [.22, .31] | 572.16 | 12.12 | < .001 |
| Infant Sleep | Between | .23 | .03 | [.16, .29] | 208.67 | 6.91 | < .001 |
| <i>Partner Sleep</i> | | | | | | | |
| | Within | .18 | .02 | [.14, .22] | 549.78 | 8.03 | < .001 |
| Infant Sleep | Between | .20 | .04 | [.12, .27] | 200.53 | 4.87 | < .001 |
| <i>Sexual Frequency</i> | | | | | | | |
| | Within | .05 | .02 | [.005, .09] | 507.75 | 2.18 | .030 |
| Mother Sleep | Between | .03 | .06 | [-.09, .15] | 202.40 | 0.48 | .632 |
| | Within | .03 | .02 | [-.01, .08] | 504.35 | 1.51 | .132 |
| Partner Sleep | Between | .20 | .05 | [.09, .30] | 198.48 | 3.66 | < .001 |
| | Within | -.0003 | .01 | [-.03, .03] | 516.07 | -0.02 | .981 |
| Infant Sleep | Between | -.01 | .03 | [-.08, .05] | 202.61 | -0.38 | .703 |

Note. Bolded text indicates significant result.

Supplemental Table 4

Covariate Analysis between Infant Sleep, Parental Sleep, and Sexual Frequency with Mother's Pain During Sex

| Outcome | | <i>b</i> | <i>SE</i> | <i>95% CI</i> | <i>Z</i> | <i>p</i> |
|---------------|----------------|------------|------------|--------------------|-------------|-------------|
| Mother Sleep | Within | .01 | .01 | [-.01, .02] | 1.01 | .310 |
| | Between | -.003 | .01 | [-.03, .02] | -0.25 | .801 |
| Partner Sleep | Within | .01 | .004 | [-.001, .01] | 1.64 | .101 |
| | Between | .02 | .01 | [.01, .04] | 2.32 | .020 |

Note. Bolded text indicates significant result.

Supplemental Table 5

Test of Indirect Pathways with Parental Sleep between Infant Sleep and Sexual Desire

| Outcome | | <i>b</i> | <i>SE</i> | 95% CI | <i>df</i> | <i>t</i> | <i>P</i> |
|-----------------------|----------------|------------|------------|--------------------|---------------|-------------|------------------|
| <i>Mother Desire</i> | | | | | | | |
| Mother Sleep | Within | .28 | .07 | [.13, .42] | 509.72 | 3.82 | < .001 |
| | Between | -.02 | .17 | [-.35, .31] | 201.97 | -0.13 | .896 |
| Partner Sleep | Within | .07 | .07 | [-.07, .21] | 505.12 | 1.01 | .314 |
| | Between | .06 | .14 | [-.23, .34] | 197.15 | 0.39 | .694 |
| Infant Sleep | Within | -.06 | .04 | [-.15, .03] | 520.53 | -1.38 | .168 |
| | Between | .16 | .09 | [-.02, .34] | 202.43 | 1.75 | .081 |
| <i>Partner Desire</i> | | | | | | | |
| Mother Sleep | Within | .06 | .06 | [-.06, .17] | 503.56 | 0.91 | .363 |
| | Between | .08 | .15 | [-.22, .38] | 200.35 | 0.55 | .582 |
| Partner Sleep | Within | .12 | .06 | [-.004, .23] | 499.25 | 1.90 | .058 |
| | Between | .58 | .13 | [.32, .83] | 195.42 | 4.45 | .000 |
| Infant Sleep | Within | .002 | .04 | [-.07, .08] | 514.19 | 0.06 | .956 |
| | Between | .01 | .08 | [-.16, .17] | 200.58 | 0.08 | .940 |

Note. Bolded text indicates significant result.

Supplemental Table 6

Covariate Analysis between Infant Sleep, Parental Sleep, and Sexual Desire with Pain During Sex

| Covariate | | <i>b</i> | <i>SE</i> | 95% CI | <i>Z</i> | <i>p</i> |
|---|----------------|------------|------------|--------------------|-------------|-------------|
| <i>Mother Desire</i> | | | | | | |
| | Within | .05 | .02 | [.02, .09] | 2.85 | .004 |
| Mother Sleep | Between | -.03 | .03 | [-.09, .04] | -0.77 | .444 |
| | Within | .01 | .01 | [-.01, .04] | 1.03 | .304 |
| Partner Sleep | Between | -.02 | .02 | [-.07, .03] | -0.76 | .447 |
| <i>Partner Desire</i> | | | | | | |
| | Within | .01 | .02 | [-.02, .04] | 0.48 | .632 |
| Mother Sleep | Between | .01 | .03 | [-.05, .08] | 0.34 | .733 |
| | Within | .02 | .01 | [-.001, .05] | 1.81 | .071 |
| Partner Sleep | Between | .09 | .03 | [.04, .16] | 2.90 | .004 |
| Monte Carlo CI Calculation for Significant Indirect Effects (95%) | | | | | | |
| <i>Mother Desire</i> | | | | | | |
| | Within | | | [.03, .11] | | |
| Mother Sleep | Between | | | [-.07, .05] | | |
| <i>Partner Desire</i> | | | | | | |
| | Within | | | [-.002, .02] | | |
| Partner Sleep | Between | | | [.05, .19] | | |

Note. Bolded text indicates significant result.

Supplemental Table 7

Path Estimates from MLMED Analysis with Mother Data between Infant Sleep, Parental Sleep, and Sexual Desire

| Outcome | | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>df</i> | <i>p</i> |
|----------------------|----------------|------------|------------|--------------------|--------------|---------------|------------------|
| Fixed Effects | | | | | | | |
| <i>Mother Sleep</i> | | | | | | | |
| | Within | .27 | .02 | [.22, .31] | 12.12 | 572.16 | < .001 |
| Infant Sleep | Between | .22 | .03 | [.16, .29] | 6.91 | 208.67 | < .001 |
| <i>Mother Desire</i> | | | | | | | |
| | Within | .28 | .07 | [.13, .42] | 3.81 | 508.38 | <.001 |
| Mother Sleep | Between | -.02 | .17 | [-.35, .31] | -0.10 | 202.13 | .917 |
| | Within | .07 | .07 | [-.07, .21] | 1.00 | 503.73 | .318 |
| Partner Sleep | Between | .05 | .14 | [-.23, .34] | 0.38 | 197.29 | .706 |
| | Within | -.06 | .04 | [-.15, .03] | -1.38 | 519.19 | .169 |
| Infant Sleep | Between | .16 | .09 | [-.02, .34] | 1.74 | 202.59 | .084 |

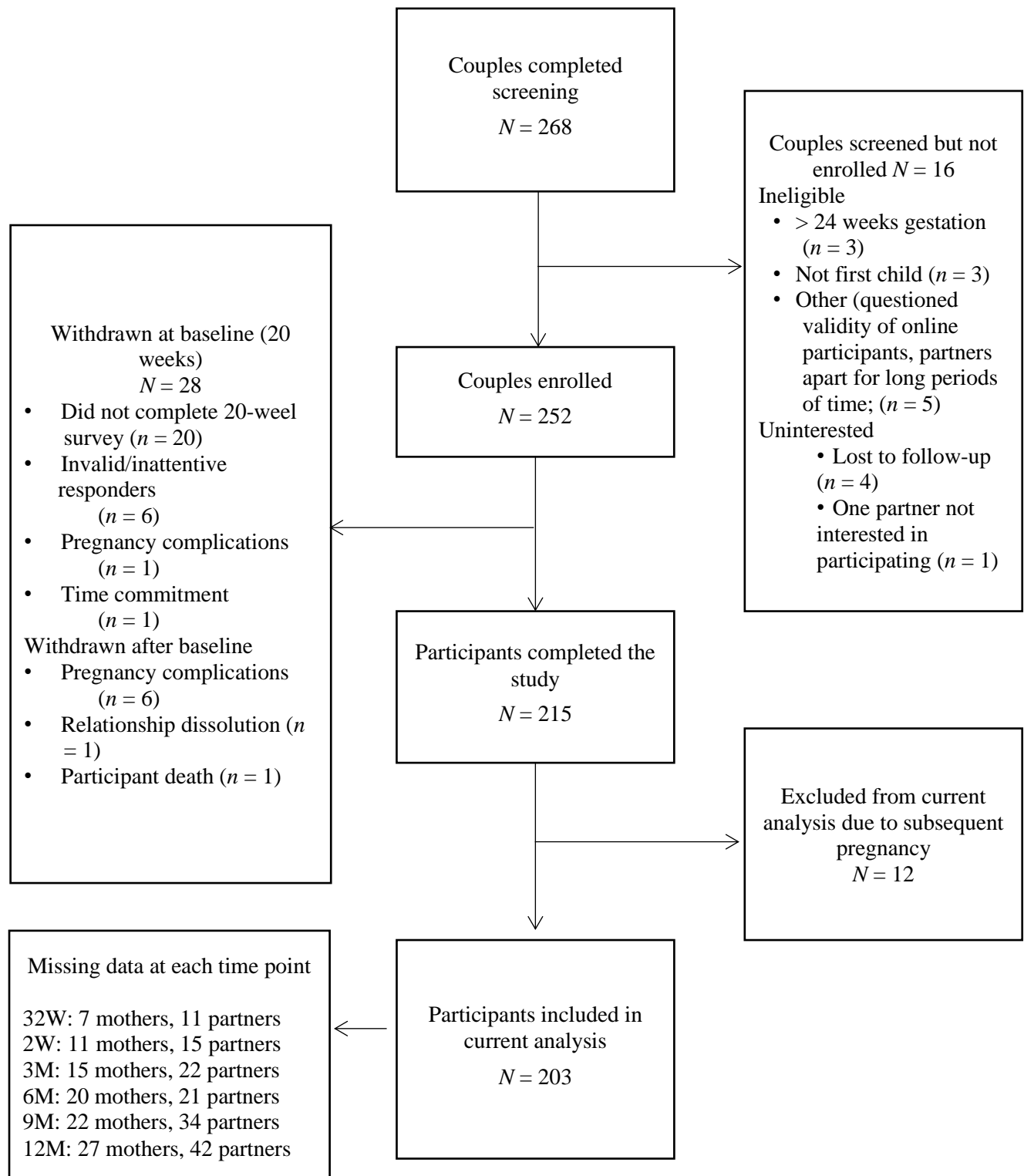
Note. Bolded text indicates significant result.

Supplemental Table 8

Path Estimates from MLMED Analysis with Partner Data between Infant Sleep, Parental Sleep, and Sexual Desire

| Outcome | | <i>b</i> | <i>SE</i> | 95% CI | <i>t</i> | <i>df</i> | <i>p</i> |
|-----------------------|----------------|------------|------------|-------------------|-------------|---------------|------------------|
| Fixed Effects | | | | | | | |
| <i>Partner Sleep</i> | | | | | | | |
| | Within | .18 | .02 | [.14, .22] | 8.03 | 549.78 | < .001 |
| Infant Sleep | Between | .20 | .04 | [.12, .27] | 4.87 | 200.53 | < .001 |
| <i>Partner Desire</i> | | | | | | | |
| | Within | .06 | .06 | [-.06, .18] | 0.92 | 504.86 | .360 |
| Mother Sleep | Between | .09 | .15 | [-.21, .38] | 0.57 | 200.48 | .572 |
| | Within | .11 | .06 | [-.005, .23] | 1.89 | 500.55 | .059 |
| Partner Sleep | Between | .58 | .13 | [.32, .83] | 4.44 | 195.53 | < .001 |
| | Within | .001 | .04 | [-.07, .07] | 0.03 | 515.30 | .973 |
| Infant Sleep | Between | .01 | .08 | [-.15, .17] | 0.09 | 200.71 | .927 |

Note. Bolded text indicates significant result.



Supplemental Figure 1. Flow chart of participant recruitment and enrollment.