**SUPPLEMENTARY MATERIALS**

**In the pandemic from the womb. Prenatal exposure, maternal psychological stress and mental health in association with infant negative affect at 6 months of life**

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**Table S1.** Demographic characteristics of the participants lost to follow up and comparison with the sample of the study

**Table S2.** Descriptive analysis of the variables of the study for the study sample vs participants who did not complete the study

**Table S3.** Parameters of the Structural Equation Model

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**Figure 1S.** Phases of the study

**Figure 2S.** Confirmatory Factor Analysis (CFA) for the Pandemic Psychological Stress at *t0*.

**Figure 3S.** Results of separate structural equation models for each scale of maternal mental health

**Table S1.** Demographic characteristics of the participants lost to follow up and comparison with the sample of the study

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Sample of the study** | |  | **Lost to follow-up** | |  |  |
| **Age** | M = 32.65; SD = 4.27 | |  | M = 32.26; SD = 4.89 | |  | t(1267.58) = -1.92, *p* = .06 |
|  |  | |  |  | |  |  |
| **Education** | N = 642 | |  | N = 1725 | |  |  |
| Elementary school | 0 | (0.0 %) |  | 3 | (0.2 %) |  |  |
| Lower secondary school | 14 | (2.2 %) |  | 109 | (6.3 %) |  |  |
| Higher secondary school | 207 | (32.2 %) |  | 753 | (43.7 %) |  |  |
| Bachelor's degree | 167 | (26.0 %) |  | 337 | (19.5 %) |  |  |
| Master's degree | 199 | (31.0 %) |  | 455 | (26.4 %) |  |  |
| Doctoral degree | 55 | (8.6 %) |  | 68 | (3.9 %) |  | Χ2(5) = 63.64, *p* < .001 |
|  |  |  |  |  |  |  |  |
| **Marital Status** | N = 633 | |  | N = 1689 | |  |  |
| Other | 1 | (0.2 %) |  | 10 | (0.6 %) |  |  |
| Live-in partner | 222 | (35.1 %) |  | 627 | (37.1 %) |  |  |
| Single | 36 | (5.7 %) |  | 148 | (8.8 %) |  |  |
| Married | 374 | (59.1 %) |  | 904 | (53.5 %) |  | Χ2 (3) = 10.44, p < .02 |
|  |  |  |  |  |  |  |  |
| **Previous pregnanci**es | N = 643 | |  | N = 1737 | |  |  |
| No | 432 | (67.2 %) |  | 1055 | (60.7 %) |  |  |
| Yes | 211 | (32.8 %) |  | 682 | (39.3 %) |  | Χ2 (1) = 8.05, *p* < .01 |
|  |  |  |  |  |  |  |  |
| **Previous Children** | N = 640 | |  | N = 1813 | |  |  |
| None | 484 | (75.6 %) |  | 1186 | (69.4 %) |  |  |
| One or more | 156 | (24.4 %) |  | 522 | (30.6 %) |  | Χ2 (1) =8.38, *p* < .01 |
|  |  |  |  |  |  |  |  |
| **Nationality** | N = 642 | |  | N = 1715 | |  |  |
| Italian | 628 | (97.8 %) |  | 1649 | (96.2 %) |  |  |
| Other | 14 | (2.2 %) |  | 66 | (3.8 %) |  | Χ2 (1) = 3.47, *p* = .06 |
|  |  |  |  |  |  |  |  |
| **Income Class** | N = 639 | |  | N = 1693 | |  |  |
| Low (below 12,000 € per year) | 40 | (6.3 %) |  | 208 | (12.3 %) |  |  |
| Medium-Low (below 25,000 € per year) | 152 | (23.8 %) |  | 529 | (31.2 %) |  |  |
| Medium (below 50,000 € per year) | 362 | (56.7 %) |  | 796 | (47.0 %) |  |  |
| Medium-high (below 75,000 € per year) | 68 | (10.6 %) |  | 125 | (7.4 %) |  |  |
| High (over 75,000 € per year) | 17 | (2.7 %) |  | 35 | (2.1 %) |  | Χ2 (4) = 40.03, *p* < .001 |
|  |  |  |  |  |  |  |  |
| **Pregnancy stage at *t0* assessment** | N = 643 | |  | N = 1683 | |  |  |
| First Trimester | 61 | (9.5 %) |  | 231 | (13.7 %) |  |  |
| Second trimester | 225 | (35.0 %) |  | 567 | (33.7 %) |  |  |
| Third trimester | 357 | (55.5 %) |  | 885 | (52.6 %) |  | Χ2 (3) = 7.64, *p* = .02 |
|  |  |  |  |  |  |  |  |
| **Gestational week at *t0* assessment** | M = 25.42; SD = 8.95 | |  | M = 24.44; SD = 9.61 | |  | t(1235.22) = -2.32, p = 0.02 |
|  |  |  |  |  |  |  |  |
| **Type of birth** | N = 643 | |  |  | N = 137 |  |  |
| Vaginal delivery | 475 | (73.9 %) |  | 109 | (79.6 %) |  |  |
| Programmed Cesarean Section | 77 | (12.0 %) |  | 11 | (8.0 %) |  |  |
| Non programmed Cesarean Section | 91 | (14.2 %) |  | 17 | (12.4 %) |  | Χ2 (3) = 2.29, *p* < .32 |
|  |  |  |  |  |  |  |  |
| **Child’s sex** | N = 643 | |  |  | N = 118 |  |  |
| Male | 333 | (51.8 %) |  | 54 | (45.8 %) |  |  |
| Female | 310 | (48.2 %) |  | 64 | (54.2 %) |  | Χ2 (3) = 1.22, *p* = .27 |
|  |  |  |  |  |  |  |  |
| **Child’s gestational age at birtha** | M = 39.60; SD = 1.80 | |  | M = 39.71; SD = 1.43 | |  | t(238.99) = -0.77, p = 0.44 |
|  |  | |  |  |  |  |  |
|  | N = 642 | |  |  | N = 133 |  |  |
| Extremely preterm (-28 weeks) | 0 | (0 %) |  | 0 | (0 %) |  |  |
| Very preterm (28-32 weeks) | 2 | (0.3 %) |  | 0 | (0 %) |  |  |
| Preterm (32-27 weeks) | 14 | (2.2 %) |  | 2 | (1.5 %) |  |  |
| Early Term (37-38 weeks) | 153 | (23.8 %) |  | 30 | (22.6 %) |  |  |
| Full Term (39-40 weeks) | 340 | (53.0 %) |  | 75 | (56.4 %) |  |  |
| Late Term (41-41 weeks) | 122 | (19.0 %) |  | 23 | (17.3 %) |  |  |
| Postterm (42- weeks) | 11 | (1.7 %) |  | 3 | (2.3 %) |  | Χ2 (5) =1.32, *p* = .93 |
|  |  |  |  |  |  |  |  |
| **Child’s weight at birth** | M = 3312.62; SD = 470.13 | |  | M = 3257.48; SD = 455.29 | |  | t(225.28) = -1.32, p = 0.19 |
|  |  | |  |  |  |  |  |
|  | N = 640 | |  |  | N = 118 |  |  |
| < 1500 g | 2 | (0.3 %) |  | 0 | (0 %) |  |  |
| > 1500 < 2500 | 26 | (4.1 %) |  | 6 | (5.1 %) |  |  |
| > 2500 < 3500 | 398 | (62.0 %) |  | 81 | (68.6 %) |  |  |
| > 3500 < 4500 | 209 | (32.6 %) |  | 31 | (26.3 %) |  |  |
| > 4500 | 5 | (0.8 %) |  | 0 | (0 %) |  | Χ2 (4) = 3.48, *p* = .48 |
|  |  |  |  |  |  |  |  |
| **Child’s age at *t1* assessment** (Days) | M = 198.21; SD = 27.41 | |  | M = 207.24; SD = 34.32 | |  | t(242.92) = 3.23, p = 0.0014 |

**Table S2.** Descriptive analysis of the variables of the study for the study sample vs participants who did not complete the study.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Final Sample** | | |  | **Lost to follow up** | | |  |
|  |  | N | M | SD |  | N | M | SD | t test |
| **Assessment at *t0*** |  |  |  |  |  |  |  |  |  |
| Gestational Age at *t0* |  | 643 | 25.42 | 8.95 |  | 1683 | 24.44 | 9.61 | *t*(1240) = 2.3, *p* = .021 |
| *t0\_*Worry for own Health |  | 643 | 4.13 | 1.75 |  | 1362 | 4.27 | 1.84 | *t*(1314.9) = -1.69, *p* = .091 |
| *t0\_*Worry for others’ Health |  | 643 | 5.23 | 1.63 |  | 1360 | 5.34 | 1.69 | *t*(1300.46) = -1.44, *p* = .149 |
| *t0\_*Fear of the virus for the self |  | 643 | 2.95 | 1.76 |  | 1362 | 3.10 | 1.91 | *t*(1354.68) = -1.66, *p* = .097 |
| *t0\_*Fear of the virus for others |  | 643 | 4.27 | 2.06 |  | 1361 | 4.32 | 2.11 | *t*(1287.05) = -0.55, *p* = .580 |
| EPDS *t0* |  | 643 | 7.53 | 5.09 |  | 1461 | 8.32 | 5.30 | *t*(1273.98) = -3.25, *p* = .001 |
| STAI-YS *t0* |  | 643 | 40.78 | 10.96 |  | 1436 | 42.29 | 11.10 | *t*(1249.73) = -2.91, *p* = .004 |
| PCL-5 *t0* |  | 643 | 17.92 | 13.27 |  | 1361 | 19.15 | 13.82 | *t*(1306.57) = -1.9, *p* = .057 |
| **Assessment at *t1*** |  |  |  |  |  |  |  |  |  |
| MSPSS |  | 643 | 4.75 | 1.09 |  | 1737 | 0.07 | 0.55 | *t*(766.05) = 103.68, *p* <.001 |
| *t1\_*Worry for own Health |  | 643 | 3.24 | 1.84 |  | 110 | 3.17 | 1.91 | *t*(146.05) = 0.37, *p* = .716 |
| *t1\_*Worry for others’ Health |  | 643 | 4.52 | 1.84 |  | 105 | 4.53 | 1.93 | *t*(136.62) = -0.07, *p* = .945 |
| *t1\_*Fear of the virus for the self |  | 643 | 2.73 | 1.79 |  | 105 | 2.92 | 1.77 | *t*(141.01) = -1.01, *p* = .312 |
| *t1\_*Fear of the virus for others |  | 643 | 3.57 | 2.00 |  | 106 | 3.80 | 1.90 | *t*(146.15) = -1.16, *p* = .248 |
| EPDS *t1* |  | 643 | 9.58 | 5.45 |  | 102 | 10.41 | 5.58 | *t*(133.4) = -1.41, *p* = .162 |
| STAI-YS *t1* |  | 643 | 42.85 | 11.18 |  | 94 | 41.95 | 9.72 | *t*(131.79) = 0.82, *p* = .411 |
| PCL-5 *t1* |  | 643 | 19.58 | 14.58 |  | 66 | 17.71 | 13.37 | *t*(81.73) = 1.07, *p* = .288 |
| Gestational Age at birth |  | 643 | 39.71 | 1.43 |  | 133 | 39.79 | 1.27 | *t*(207.63) = -0.64, *p* = .520 |
| IBQ Negative Affect |  | 643 | 40.75 | 11.98 |  | 20 | 38.45 | 10.55 | *t*(20.55) = 0.96, *p* = .351 |
| Note: EPDS =Edinburgh Postnatal Depression Scale, STAI-YS = State-Trait Anxiety Inventory- State form; PCL-5 = Posttraumatic Stress Disorder Checklist-5; MSPSS = Multidimensional Scale for Perceived Social Support; IBQ = Infant Behavior Questionnaire – Revised Short Form | | | | | | | | | |

**Table S3.** Parameters of the Structural Equation Model

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **b** | **SE** | **z** | ***p*** | **R2** |
| Factor Loadings | |  |  |  |  |  |
|  | Pandemic Psychological Stress *t0* | |  |  |  |  |
|  | *t0*\_Worry for own Health | 1.00+ |  |  |  | 0.57 |
|  | *t0*\_Worry for others’ Health | 1.19 | 0.06 | 19.22 | .000 | 0.82 |
|  | *t0*\_Fear of the virus for the self | 0.71 | 0.05 | 14.92 | .000 | 0.28 |
|  | *t0*\_Fear of the virus for others | 0.87 | 0.05 | 16.27 | .000 | 0.44 |
|  | Maternal Mental Health *t0* | |  |  |  |  |
|  | EPDS *t0* | 1.00+ |  |  |  | 0.76 |
|  | STAI-YS *t0* | 1.01 | 0.04 | 28.14 | .000 | 0.79 |
|  | PCL-5 *t0* | 0.91 | 0.04 | 24.38 | .000 | 0.63 |
|  | Pandemic Psychological Stress *t1* | |  |  |  |  |
|  | *t1*\_Worry for own Health | 1.00+ |  |  |  | 0.60 |
|  | *t1*\_Worry for others’ Health | 1.09 | 0.06 | 17.41 | .000 | 0.71 |
|  | *t1*\_Fear of the virus for the self | 0.90 | 0.06 | 14.00 | .000 | 0.48 |
|  | *t1*\_Fear of the virus for others | 0.94 | 0.06 | 15.91 | .000 | 0.53 |
|  | Maternal Mental Health *t1* | |  |  |  |  |
|  | EPDS *t1* | 1.00+ |  |  |  | 0.71 |
|  | STAI-YS *t1* | 1.04 | 0.04 | 26.65 | .000 | 0.78 |
|  | PCL-5 *t1* | 0.99 | 0.04 | 25.03 | .000 | 0.70 |
| Regression Slopes | |  |  |  |  |  |
|  | Pandemic Psychological Stress *t1* | |  |  |  |  |
|  | COVID-19 Stressful Events in Pregnancy | -0.11 | 0.09 | -1.13 | .257 |  |
|  | Gestational Age at *t0* | 0.07 | 0.03 | 2.47 | .014 |  |
|  | COVID-19 Stressful Events in Postpartum | 0.14 | 0.04 | 3.73 | .000 |  |
|  | Pandemic Psychological Stress *t0* | 0.46 | 0.05 | 9.07 | .000 |  |
|  | Maternal Mental Health *t0* | 0.05 | 0.04 | 1.17 | .240 |  |
|  | MSPSS | 0.03 | 0.03 | 1.01 | .312 |  |
|  | MSPSS\* COVID-19 Stressful Events Postpartum | 0.02 | 0.03 | 0.77 | .444 |  |
|  | MSPSS\* COVID-19 Stressful Events Pregnancy | -0.06 | 0.02 | -2.28 | .023 |  |
|  | SES | -0.08 | 0.04 | -2.20 | .028 |  |
|  | Mother's Age | 0.01 | 0.01 | 1.06 | .290 |  |
|  | Maternal Mental Health *t1* | |  |  |  |  |
|  | COVID-19 Stressful Events in Pregnancy | -0.11 | 0.09 | -1.29 | .198 |  |
|  | Gestational Age at *t0* | -0.02 | 0.03 | -0.55 | .580 |  |
|  | COVID-19 Stressful Events in Postpartum | 0.11 | 0.04 | 3.14 | .002 |  |
|  | Pandemic Psychological Stress *t0* | 0.09 | 0.04 | 2.00 | .045 |  |
|  | Maternal Mental Health *t0* | 0.61 | 0.04 | 14.75 | .000 |  |
|  | MSPSS | -0.10 | 0.03 | -3.77 | .000 |  |
|  | MSPSS\* COVID-19 Stressful Events Postpartum | -0.01 | 0.03 | -0.42 | .678 |  |
|  | MSPSS\* COVID-19 Stressful Events Pregnancy | 0.04 | 0.02 | 1.83 | .068 |  |
|  | SES | -0.03 | 0.04 | -0.99 | .323 |  |
|  | Mother's Age | -0.00 | 0.01 | -0.47 | .637 |  |
|  | IBQ Negative Affect | |  |  |  |  |
|  | COVID-19 Stressful Events in Pregnancy | -2.07 | 1.45 | -1.43 | .154 |  |
|  | COVID-19 Stressful Events in Postpartum | 0.88 | 0.60 | 1.46 | .144 |  |
|  | Maternal Mental Health *t1* | 3.02 | 0.94 | 3.20 | .001 |  |
|  | Pandemic Psychological Stress *t0* | -0.71 | 0.82 | -0.87 | .384 |  |
|  | Maternal Mental Health *t0* | 1.09 | 0.86 | 1.27 | .203 |  |
|  | MSPSS | 0.65 | 0.48 | 1.36 | .174 |  |
|  | MSPSS\* COVID-19 Stressful Events in Postpartum | 0.17 | 0.43 | 0.39 | .693 |  |
|  | MSPSS\* COVID-19 Stressful Events in Pregnancy | 0.88 | 0.39 | 2.29 | .022 |  |
|  | Pandemic Psychological Stress *t1* | -0.33 | 0.83 | -0.40 | .690 |  |
|  | Gestational Age at *t0* | 0.33 | 0.46 | 0.71 | .477 |  |
|  | Child Sex | -1.12 | 0.92 | -1.22 | .221 |  |
|  | SES | 0.50 | 0.59 | 0.84 | .400 |  |
|  | Mother's Age | 0.05 | 0.11 | 0.46 | .643 |  |
|  | Gestational Age at birth | -0.07 | 0.32 | -0.23 | .821 |  |
| Residual Variances | |  |  |  |  |  |
|  | *t0*\_Worry for own Health | 0.43 | 0.03 | 13.07 | .000 |  |
|  | *t0*\_Worry for others’ Health | 0.18 | 0.03 | 5.62 | .000 |  |
|  | *t0*\_Fear of the virus for the self | 0.73 | 0.04 | 17.36 | .000 |  |
|  | *t0*\_Fear of the virus for others | 0.56 | 0.04 | 15.48 | .000 |  |
|  | EPDS *t0* | 0.24 | 0.02 | 11.07 | .000 |  |
|  | STAI-YS *t0* | 0.21 | 0.02 | 10.29 | .000 |  |
|  | PCL-5 *t0* | 0.37 | 0.03 | 14.45 | .000 |  |
|  | *t1*\_Worry for own Health | 0.40 | 0.04 | 11.50 | .000 |  |
|  | *t1*\_Worry for others’ Health | 0.29 | 0.04 | 8.33 | .000 |  |
|  | *t1*\_Fear of the virus for the self | 0.52 | 0.04 | 11.75 | .000 |  |
|  | *t1*\_Fear of the virus for others | 0.47 | 0.04 | 11.73 | .000 |  |
|  | EPDS *t1* | 0.28 | 0.02 | 12.81 | .000 |  |
|  | STAI-YS *t1* | 0.22 | 0.02 | 10.74 | .000 |  |
|  | PCL-5 *t1* | 0.29 | 0.02 | 13.09 | .000 |  |
|  | IBQ Negative Affect | 131.57 | 7.39 | 17.80 | .000 |  |
| Note: EPDS =Edinburgh Postnatal Depression Scale, STAI-YS = State-Trait Anxiety Inventory- State form; PCL-5 = Posttraumatic Stress Disorder Checklist for DSM 5th Edition; MSPSS = Multidimensional Scale for Perceived Social Support; SES = socio-economic status; IBQ = Infant Behavior Questionnaire – Revised Short Form | | | | | | |

**Table S4.** Correlations among the variables of the study

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| **Assessment at *t0*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Gestational Age at *t0* | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. *t0\_*Worry for own Health | -.01 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. *t0\_*Worry for others’ Health | .03 | .69\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. *t0\_*Fear of the virus for the self | .09\* | .57\*\* | .48\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. *t0\_*Fear of the virus for others | .06 | .46\*\* | .61\*\* | .64\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6. EPDS *t0* | .07 | .28\*\* | .29\*\* | .26\*\* | .30\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7. STAI-YS *t0* | .07 | .32\*\* | .29\*\* | .22\*\* | .27\*\* | .78\*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| 8. PCL-5 *t0* | .01 | .24\*\* | .19\*\* | .18\*\* | .19\*\* | .70\*\* | .70\*\* |  |  |  |  |  |  |  |  |  |  |  |
| **Assessment at *t1*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9. MSPSS | -.03 | -.10\* | -.00 | -.09\* | -.06 | -.19\*\* | -.23\*\* | -.25\*\* |  |  |  |  |  |  |  |  |  |  |
| 10. *t1\_*Worry for own Health | .09\* | .32\*\* | .28\*\* | .24\*\* | .22\*\* | .18\*\* | .16\*\* | .14\*\* | -.08\* |  |  |  |  |  |  |  |  |  |
| 11. *t1\_*Worry for others’ Health | .08 | .30\*\* | .39\*\* | .27\*\* | .27\*\* | .14\*\* | .15\*\* | .14\*\* | .02 | .65\*\* |  |  |  |  |  |  |  |  |
| 12. *t1\_*Fear of the virus for the self | .09\* | .28\*\* | .24\*\* | .30\*\* | .27\*\* | .16\*\* | .14\*\* | .15\*\* | -.01 | .54\*\* | .48\*\* |  |  |  |  |  |  |  |
| 13. *t1\_*Fear of the virus for others | .11\*\* | .25\*\* | .31\*\* | .28\*\* | .31\*\* | .17\*\* | .14\*\* | .17\*\* | -.01 | .47\*\* | .61\*\* | .72\*\* |  |  |  |  |  |  |
| 14. EPDS *t1* | .02 | .21\*\* | .25\*\* | .18\*\* | .20\*\* | .53\*\* | .47\*\* | .46\*\* | -.25\*\* | .28\*\* | .28\*\* | .22\*\* | .24\*\* |  |  |  |  |  |
| 15. STAI-YS *t1* | .01 | .19\*\* | .25\*\* | .15\*\* | .20\*\* | .50\*\* | .57\*\* | .50\*\* | -.23\*\* | .26\*\* | .26\*\* | .20\*\* | .22\*\* | .75\*\* |  |  |  |  |
| 16. PCL-5 *t1* | .03 | .19\*\* | .20\*\* | .15\*\* | .19\*\* | .46\*\* | .47\*\* | .57\*\* | -.21\*\* | .29\*\* | .28\*\* | .23\*\* | .24\*\* | .71\*\* | .74\*\* |  |  |  |
| 17. Gestational Age at Birth | .09\* | -.12\*\* | -.05 | -.01 | .01 | -.04 | -.06 | -.06 | .03 | -.02 | .02 | -.02 | .01 | -.09\* | -.08 | -.04 |  |  |
| 18. IBQ Negative affect | .03 | .00 | .02 | .03 | .03 | .15\*\* | .16\*\* | .15\*\* | -.01 | .01 | .04 | .06 | .06 | .17\*\* | .20\*\* | .23\*\* | -.03 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mean | 25.42 | 4.13 | 5.23 | 2.96 | 4.27 | 7.53 | 40.78 | 17.92 | 4.75 | 3.24 | 4.52 | 2.73 | 3.57 | 9.58 | 42.85 | 19.58 | 39.71 | 40.75 |
| SD | 8.95 | 1.75 | 1.63 | 1.77 | 2.06 | 5.09 | 10.96 | 13.27 | 1.09 | 1.84 | 1.84 | 1.80 | 2.01 | 5.45 | 11.18 | 14.58 | 1.43 | 11.98 |
| Median | 26 | 4 | 5 | 3 | 4 | 7 | 39 | 16 | 5 | 3 | 5 | 2 | 3 | 9 | 41 | 17 | 40 | 41 |
| Min | 5 | 1 | 1 | 1 | 1 | 0 | 20 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 20 | 0 | 31.286 | 6 |
| Max | 41 | 7 | 7 | 7 | 7 | 27 | 72 | 72 | 6 | 7 | 7 | 7 | 7 | 29 | 76 | 75 | 42.286 | 74 |
| Participants exceeding cut-off scores† N (%) |  |  |  |  |  | 117 (18) | 325 (51) | 121 (19) |  |  |  |  |  | 190 (30) | 373 (58) | 134 (21) |  |  |
| Note: IBQ = Infant Behavior Questionnaire – Revised Short Form, MSPSS = Multidimensional Scale for Perceived Social Support; EPDS =Edinburgh Postnatal Depression Scale, STAI-YS = State-Trait Anxiety Inventory- State form; PCL-5 = Posttraumatic Stress Disorder Checklist for DSM 5th Edition  \* indicates p < .05. \*\* indicates p < .01  † cut-off: EPDS score ≥13; STAI- S score ≥ 39; PCL-5 score ≥ 31 | | | | | | | | | | | | | | | | | |  |

**Figure 1S.** Phases of the study

Table

Description automatically generated

**Figure 2S.** Confirmatory Factor Analysis (CFA) for the Pandemic Psychological Stress at t0.

Diagram

Description automatically generated

**Figure 3S.** Results of separate structural equation models for each scale of maternal mental health

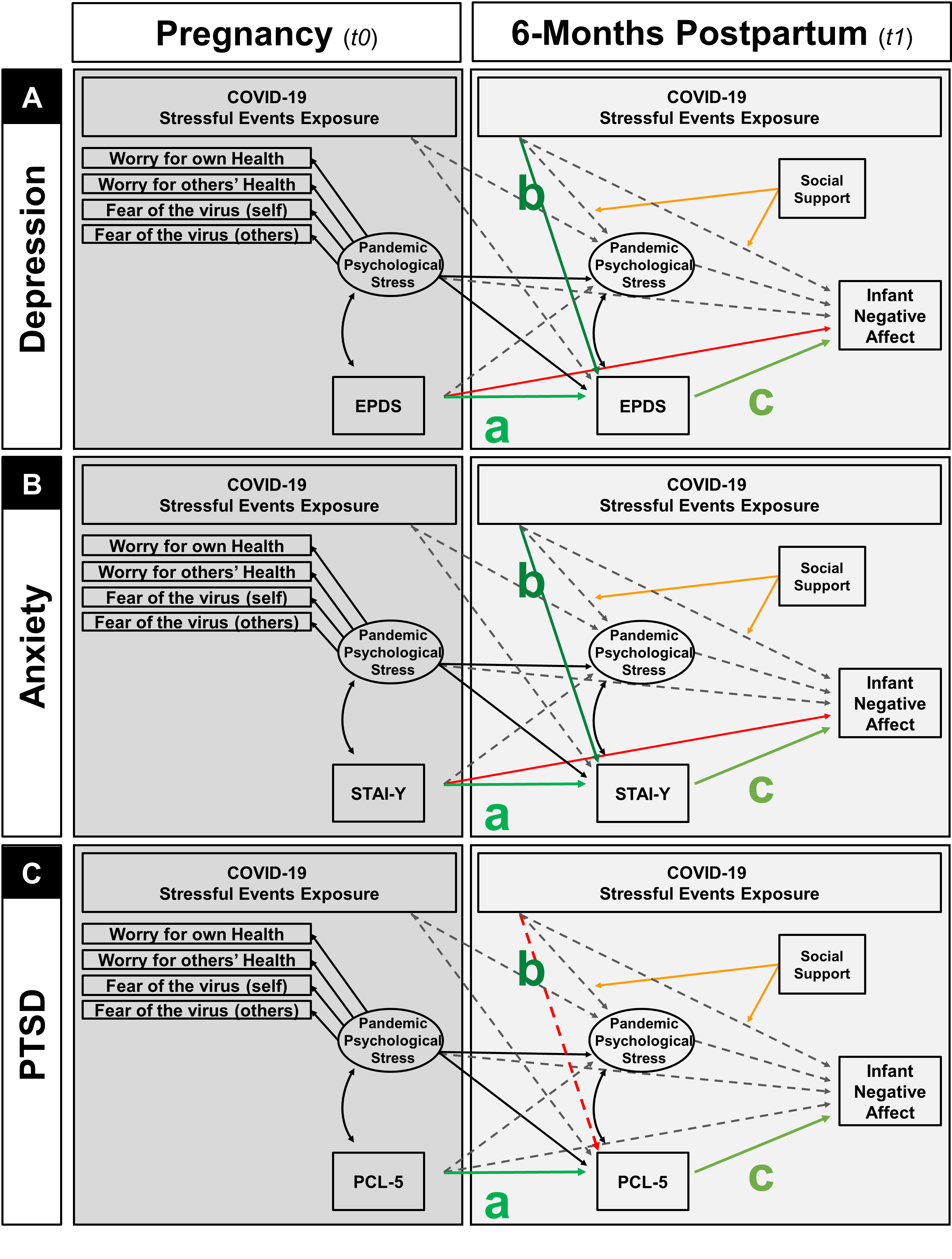


Figure 3S LEGEND:The three panels present the three different models. Continuous lines represent significant direct paths, dotted lines represent nonsignificant paths. Red lines represent the differences between each model and the original model with a latent mental health variable. Specifically, there is 1) a direct significant path from depression and anxiety at *t0* to infant negative affect at *t1* in panels A and B; 2) a non-significant path from COVID-19 stressful events exposure postpartum to PTSD symptomatology at *t1* in panel C. The green lines indicate the paths implicated in the mediation effects tested in the study. Specifically, a\*c and b\*c represent the mediation effects of each maternal mental health variable at *t1* in the associations between each maternal mental health variable at *t0* and infant negative affect as well as between COVID-19 stressful events exposure at *t1* and infant negative affect. The orange lines indicate the significant paths implicated in the moderation effects of social support.

For sake of readability, only the observed variables that constitutes the latent variables at *t0* (i.e., pandemic psychological stress and mental health) have been represented. The same variables measured at *t1* are regressed on the latent variables pandemic psychological stress and mental health at *t1*. For the same reason of readability, the significant direct effect of social support on each mental health variable and the following nonsignificant paths have not been represented: the association between COVID-19 stressful events exposure at *t0* and infant negative affect and the moderating effect of social support; the moderating effect of social support on the association between COVID-19 stressful events exposure (at *t0* and *t1*) on each mental health at *t1*.

Each regression is controlled for the confounding effects of: gestational age at *t0*, maternal age and family SES (e.g., family income); regression on the infant negative affect also controlled for child’s sex.

The fit indexes of the three models are the following:

Panel A (Depression): Χ2(116) = 265.13, p < .001, CFI = 0.95, TLI = 0.93, RMSEA = 0.045, *p* = .89, 90% CI [0.04, 0.05], SRMR = 0.04.

Panel B (Anxiety): Χ2(116) = 266.04, p < .001, CFI = 0.95, TLI = 0.93, RMSEA = 0.045, *p* = .88, 90% CI [0.04, 0.05], SRMR = 0.04.

Panel C (PTSD): Χ2(116) = 260.84, p < .001, CFI = 0.95, TLI = 0.93, RMSEA = 0.04, *p* = .91, 90% CI [0.04, 0.05], SRMR = 0.04