**Supplementary Material**

Table of Contents

[1. Distribution of Continuous Variables: 2](#_Toc162889892)

[2. COVID-19 Stressor Domain Items 4](#_Toc162889893)

[3. Types of Traumatic Events Endorsed by Adolescents 6](#_Toc162889894)

[4. Frequencies of COVID-19 Stressors Experiences by Adolescents 7](#_Toc162889895)

[5. Income-to-needs Calculation 7](#_Toc162889896)

[6. Model Outputs for Trauma Exposure (Binary) by COVID-19 Stressor Interaction Models 8](#_Toc162889897)

[7. Model Outputs for Trauma Exposure (Binary) by COVID-19 Stressor by Protective Factor Interaction Models 10](#_Toc162889898)

[7.1. Physical Activity by Trauma by COVID-19 Stressor Models 10](#_Toc162889899)

[7.2. Family Relationship by Trauma by COVID-19 Stressor Models 12](#_Toc162889900)

[7.3. Peer/Friend Relationship by Trauma by COVID-19 Stressor Models 15](#_Toc162889901)

[7.4. Parental Support/Assistance by Trauma by COVID-19 Stressor Models 18](#_Toc162889902)

[8. Model Outputs for Trauma Exposure (Binary) by Protective Factor Interaction Models 20](#_Toc162889903)

[8.1. Physical Activity by Trauma Exposure (Binary) Models](#_Toc162889904)

[8.2. Family Relationship by Trauma Exposure (Binary) Models 22](#_Toc162889905)

[8.3. Peer Relationship by Trauma Exposure (Binary) Models 24](#_Toc162889906)

[8.4. Parental Support by Trauma Exposure (Binary) Models 26](#_Toc162889907)

[9. Model Outputs for COVID-19 Stressor by Protective Factor Interaction Models 28](#_Toc162889908)

[9.1. Physical Activity by COVID-19 Stressor Models 28](#_Toc162889909)

[9.2. Family Relationship by COVID-19 Stressor Models 30](#_Toc162889910)

[9.3. Peer Relationship by COVID-19 Stressor Models 32](#_Toc162889911)

[9.4. Parental Support by COVID-19 Stressor Models 34](#_Toc162889912)

[10. Correlations Between All Numeric Variables 37](#_Toc162889913)

[11. Model Outputs for Total Trauma (Continuous) Models 38](#_Toc162889914)

[11.1. Total Trauma by COVID-19 Stressor Interaction Models 38](#_Toc162889915)

[11.2. Total Trauma by COVID-19 Stressor by Protective Factor Interaction Models 40](#_Toc162889916)

[11.2.1. Physical Activity Models 40](#_Toc162889917)

[11.2.2. Family Relationship Models 42](#_Toc162889918)

[11.2.3. Peer Relationship Models 45](#_Toc162889919)

[11.2.4. Parental Support Models 47](#_Toc162889920)

[11.3. Three-way Interaction of COVID-19 Stressor, Total Trauma, and Parental Support (for Schoolwork) in Association with Positive Affect 51](#_Toc162889921)

[Figure 10. 51](#_Toc162889922)

[*Interaction Plot for the Three-way Interaction of COVID-19 Stressor, Total Trauma, and Parental Support (for Schoolwork) in Association with Positive Affect* 51](#_Toc162889923)

[12. Model Outputs for Primary Analyses Models Covarying for Pre-COVID Total Mental Health Problems 52](#_Toc162889924)

[12.1. Trauma Exposure by COVID-19 Stressor Interaction Models 52](#_Toc162889925)

[12.2. Trauma Exposure by COVID-19 Stressor by Protective Factor Interaction Models 54](#_Toc162889926)

[12.2.1. Physical Activity Models 54](#_Toc162889927)

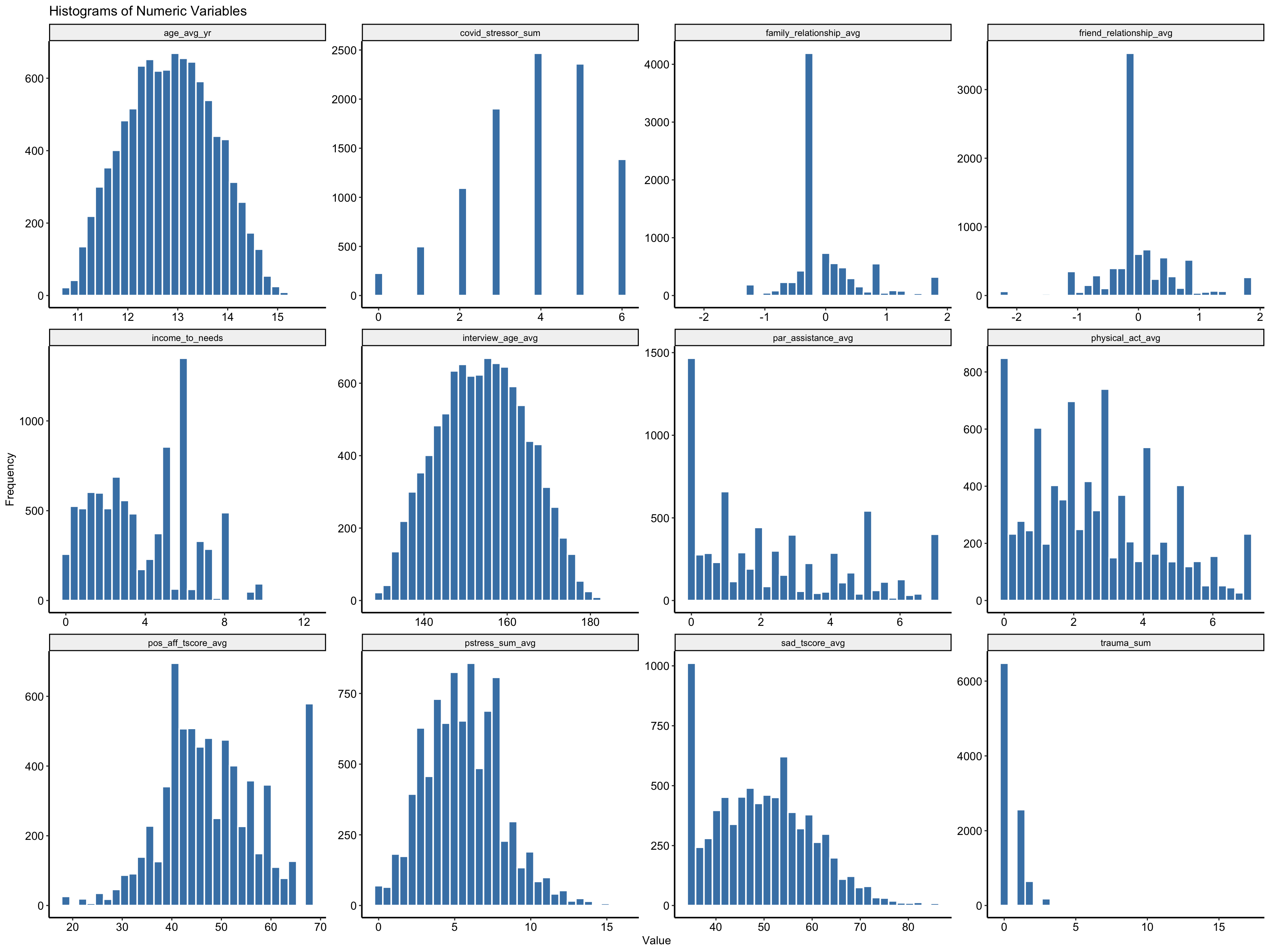
[12.2.2. Family Relationship Models 57](#_Toc162889928)

[12.2.3. Peer Relationship Models 59](#_Toc162889929)

[12.2.4. Parental Support Models 62](#_Toc162889930)

## Distribution of Continuous Variables:

**Figure 1.**



Additional repeated measures ANOVA models were run to examine differences in mental health symptoms between waves (see Table S1 for means at each wave). Significant differences between waves were observed for perceived stress (*F*[6, 28539] = 80.42, *p* < .001), sadness (*F*[3, 13398] = 112.97, *p* < .001), and positive affect (*F*[2, 8280.70] = 27.35, p < .001). Post-hoc paired samples t-test revealed no clear pattern in the change in mental health symptoms between assessment waves (see Table S2-4 for detailed results).

**Table S1.**

*Mean of protective factors and mental health outcomes by wave*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Wave | Physical Activity | Family Relationship | Peer Relationship | Parental Support | Perceived Stress | Sadness | | Positive Affect |
| 1 | 2.87 | 3.24 | 3.06 | NA | 5.51 | | 14.82 | NA |
| 2 | 2.69 | 3.21 | 3.09 | NA | 5.24 | | NA | 34.30 |
| 3 | 2.69 | 3.19 | 3.10 | NA | 5.00 | | 14.25 | NA |
| 4 | 2.68 | 3.16 | 3.17 | 2.64 | 5.56 | | NA | 33.55 |
| 5 | 2.29 | 3.15 | 3.13 | 2.41 | 5.69 | | 15.60 | NA |
| 6 | 2.67 | 3.14 | 3.17 | 2.16 | 5.63 | | NA | 33.01 |
| 7 | 2.71 | 3.13 | 3.22 | 1.89 | 5.47 | | 15.50 | NA |

Table S2

Post-hoc tests results for difference in perceived stress between waves

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Wave | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 0.27, *p* < .001\* | - | - | - | - | - |
| 3 | 0.51, *p* < .001\* | 0.24, *p* < .001\* | - | - | - | - |
| 4 | -0.05, *p* = .999 | -0.32, *p* < .001\* | -0.56, *p* < .001\* | - | - | - |
| 5 | -0.18; *p* = .079 | -0.45, *p* < .001\* | -0.69, *p* < .001\* | -0.13, *p* = .664 | - | - |
| 6 | -0.12, *p* = .999 | -0.39,  *p* < .001\* | -0.63, *p* < .001\* | -0.07, *p* = .999 | 0.06, *p* = .999 | - |
| 7 | 0.04, *p* = .999 | -0.23, *p* = .001\* | -0.47, *p* < .001\* | 0.09, *p* = .999 | 0.22, *p* = .011\* | 0.16, *p* = .240 |

Note. Values represents mean difference (column group – row group) followed by corresponding p-value. \* indicates significant difference.

Table S3

Post-hoc tests results for difference in sadness between waves

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Wave | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | - | - | - | - | - | - |
| 3 | 0.57, *p* < .001\* | - | - | - | - | - |
| 4 | - | - | - | - | - | - |
| 5 | -0.78, *p* < .001\* | - | -1.35, *p* < .001\* | - | - | - |
| 6 | - | - | - | - | - | - |
| 7 | -0.68, *p* < .001\* | - | -1.25, *p* < .001\* | - | -0.10, *p* = .999 | - |

Note. Values represents mean difference (column group – row group) followed by corresponding p-value. \* indicates significant difference. Assessment of sadness was not administered at wave 2, 4, and 6, as such no result is available for these waves.

Table S4

Post-hoc tests results for difference in positive affect between waves

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Wave | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | - | - | - | - | - | - |
| 3 | - | - | - | - | - | - |
| 4 | - | 0.75, p < .001\* | - | - | - | - |
| 5 | - | - | - | - | - | - |
| 6 | - | 1.29, p < .001\* | - | 0.54, p < .001\* | - | - |
| 7 | - | - | - | - | - | - |

Note. Values represents mean difference (column group – row group) followed by corresponding p-value. \* indicates significant difference. Assessment of positive affect was not administered at wave 1, 3, 5, and 7, as such no result is available for these waves.

Given the nominal and/or discrete nature of the other variables (i.e., physical activity, family relationship, peer relationship, and parental support), we conducted non-parametric repeated measure ANOVA. The Friedman test showed significant differences across waves for physical activity, *χ*2(6) = 157.7, *p* < .001; family relationship, *χ*2(6) = 87.769, *p* < .001; peer relationship, *χ*2(6) = 241.67, *p* < .001; and parental support, *χ*2(6) = 278.9, *p* < .001. Follow-up post-hoc tests were conducted using the Wilcoxon Rank Sum Test. The results showed family relationship quality and parental support decreased over time, whereas peer relationship quality increased over time. No clear pattern of change was observed for physical activity. For detailed results see Table S5 – S8.

Table S5

*Post-hoc tests results for difference in physical activity between waves*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Wave | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 0.18, *p* < .001\* | - | - | - | - | - |
| 3 | 0.18, *p* < .001\* | 0.00, *p* = .933 | - | - | - | - |
| 4 | 0.19, *p* = .001\* | 0.01, *p* = .925 | 0.01, *p* = .933 | - | - | - |
| 5 | 0.58, *p* < .001\* | 0.40, *p* < .001\* | 0.40, *p* < .001\* | 0.39, *p* < .001\* | - | - |
| 6 | 0.20, *p* < .001\* | 0.02, *p* = .933 | 0.02, *p* = .933 | 0.01, *p* = .933 | -0.38, *p* < .001\* | - |
| 7 | 0.16, *p* = .024\* | -0.02, *p* = .334 | -0.02, *p* = .404 | -0.03, *p* = .448 | -0.42, *p* < .001\* | -0.04, *p* = .404 |

Note. Values represents mean difference (column group – row group) followed by corresponding p-value. \* indicates significant difference.

Table S6

*Post-hoc tests results for difference in family relationship between waves*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Wave | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 0.03, *p* = .025\* | - | - | - | - | - |
| 3 | 0.05, *p* < .001\* | 0.02, *p* = .195 | - | - | - | - |
| 4 | 0.08, *p* = .001\* | 0.05, *p* = .001\* | 0.03, *p* = .074 | - | - | - |
| 5 | 0.09, *p* < .001\* | 0.06, *p* < .001\* | 0.04, *p* = .038\* | 0.01, *p* = .759 | - | - |
| 6 | 0.10, *p* < .001\* | 0.07, *p* < .001\* | 0.05, *p* = .002\* | 0.02, *p* = .223 | 0.01, *p* = .374 | - |
| 7 | 0.11, *p* < .001\* | 0.08, *p* < .001\* | 0.06, *p* = .002\* | 0.03, *p* = .246 | 0.02, *p* = .405 | 0.01, *p* = .917 |

Note. Values represents mean difference (column group – row group) followed by corresponding p-value. \* indicates significant difference.

Table S7

*Post-hoc tests results for difference in peer relationship between waves*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Wave | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | -0.03, *p* = .004\* | - | - | - | - | - |
| 3 | -0.04, *p* < .001\* | -0.01, *p* = .313 | - | - | - | - |
| 4 | -0.11, *p* < .001\* | -0.08, *p* < .001\* | -0.07, *p* < .001\* | - | - | - |
| 5 | -0.07, *p* < .001\* | -0.04, *p* = .001\* | -0.03, *p* = .019\* | 0.04, *p* = .002\* | - | - |
| 6 | -0.11, *p* < .001\* | -0.08, *p* < .001\* | -0.07, *p* < .001\* | 0.00, *p* = .848 | -0.04, *p* = .001\* | - |
| 7 | -0.16, *p* < .001\* | -0.11, *p* < .001\* | -0.12, *p* < .001\* | -0.05, *p* = .001\* | -0.09, *p* < .001\* | -0.05, *p* = .001\* |

Note. Values represents mean difference (column group – row group) followed by corresponding p-value. \* indicates significant difference.

Table S8

*Post-hoc tests results for difference in parental support between waves*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Wave | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | - | - | - | - | - | - |
| 3 | - | - | - | - | - | - |
| 4 | - | - | - | - | - | - |
| 5 | - | - | - | 0.23, *p* < .001\* | - | - |
| 6 | - | - | - | 0.48, *p* < .001\* | 0.25, *p* < .001\* | - |
| 7 | - | - | - | 0.75, *p* < .001\* | 0.52, *p* < .001\* | 0.27, *p* < .001\* |

Note. Values represents mean difference (column group – row group) followed by corresponding p-value. \* indicates significant difference. Assessment of parental support was not administered prior to wave 4, as such no result is available for waves 1-3.

## COVID-19 Stressor Domain Items

The following items from the ABCD Rapid Response Research (RRR) Survey were used to measure domains of COVID-19 stressors:

*COVID-19 Disease Burden:*

* Was anyone in your household at increased risk for COVID-19 due to work in healthcare or other essential jobs (such as grocery store, factory, gig economy) or use of public transit?
  + A yes response was coded as 1.
* Number of immediate family members (same household) diagnosed with coronavirus.
  + A response of 1 or more was coded as 1.

*Interpersonal Disruptions:*

* Separated from close family member: Is this due to the coronavirus situation?
  + A yes response was coded as 1.
* Over the past week: I experienced racism or discrimination in relation to coronavirus (0-4)
  + A response of 1 or more was coded as 1.
* Please rate how much the coronavirus pandemic has changed your family's life in each of the following ways. Access to family and close non-family social contacts (such as friends, neighbors, members of a social or religious group you belong to).
  + Responses ranged from 0 = No change; 1 = Mild: continued visits with social distancing and/or regular phone calls and/or televideo or social media contacts; 2 = Moderate: loss of in person and remote contact with a few people  but not all supports; 3 = Severe: loss of in person and remote contact with all supports.
  + A response of 2 or more was coded as 1.

*Financial Difficulties:*

* Since January 2020 has anyone in your household lost wages sales or work due to the impact of coronavirus on employment business or the economy?
* Needed food but couldn't afford to buy it or couldn't afford to get out to get it?
* Were without telephone service because you could not afford it?
* Didn't pay the full amount of the rent or mortgage because you could not afford it?
* Were evicted from your home for not paying the rent or mortgage?
* Had services turned off by the gas or electric company or the oil company wouldn't deliver oil because payments were not made?
  + A yes response was coded as 1 for any of the above items. All items were parent reported.

*Academic Challenges:*

* How easy or difficult was it for your child to complete school work remotely?
  + Responses ranged from 1 = no problem; 2 = just some minor problems; 3 = each day was different ; 4 = hard; 5 = very hard ; 999 = Don't know ; 6 = Not applicable
  + Responses that ranged from 3 – 4 were coded as yes, and 1, 2, and 6 as 0.

*Access to Medical Needs:*

* Please rate how much the coronavirus pandemic has changed your family's life in each of the following ways.
  + Medical health care access
  + Mental health treatment access
    - Responses ranged from 0 = No change ; 1 = Mild: appointments moved to telehealth ; 2 = Moderate: delays or cancellations in appointments and/or delays in getting prescriptions; changes have minimal impact on health; 3 = Severe: unable to access needed care.
    - A response of 2 or more was coded as 1.

*COVID-related Family Conflict*

* I have noticed increased conflict in our family since our area started worrying about coronavirus.
  + A yes response was coded as 1.
* Please rate how much the coronavirus pandemic has changed your family's life in each of the following ways. Stress and discord in the family:
  + Responses ranged from 0 = None: family members are showing no or very little signs of irritation or being short-tempered with one another; 1 = Mild: family members occasionally irritable or short-tempered with one another, may occasionally shout at one another; 2 = Moderate: family members frequently irritable and short-tempered with one another; and/or children in the home are throwing things, knocking over furniture, or showing signs of moderate stress; 3 = Severe: family members are constantly irritable and short-tempered with one another, shouting frequently; children and adults in the home throwing things at one another, and/or knocking over furniture, or showing signs of severe stress
  + A response of 1 or more was coded as 1.

## Types of Traumatic Events Endorsed by Adolescents

**Figure 2.**

*Frequency plot of type of traumatic events endorsed by adolescents in the sample*

A graph of blue rectangular bars

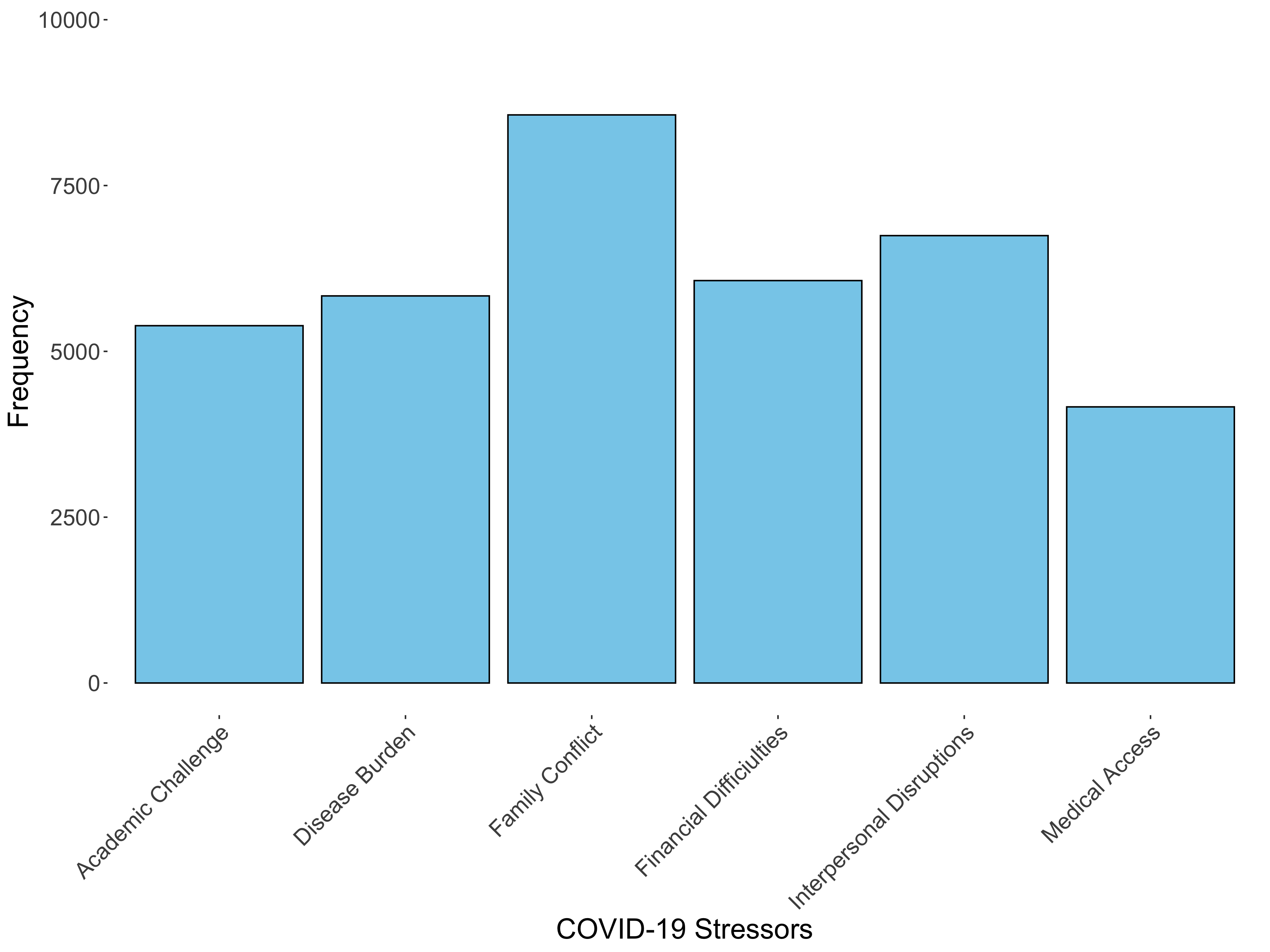
Description automatically generated with medium confidence

*Note.* 1 = Car accident, 2 = other accident, 3 = fire incident, 4 = other natural disaster, 5 = terror attack, 6 = war, 7 = witnessed significant injury of another person, 8 = physical attack by non-family member, 9 = physical attack by family member, 10 = physical abuse by family member, 11 = death threat from non-family member, 12 = death threat from family member, 13 = physical conflicts between family members, 14 = sexual abuse by family member, 15 = sexual abuse by non-family member, 16 = sexual abuse by peer, 17 = death of someone close.

## Frequencies of COVID-19 Stressors Experiences by Adolescents

**Figure 3.**

*Frequency Plot of COVID-19 Stressors Experienced by Adolescents by Type*

****

## Income-to-needs Calculation

Income-to-needs ratio was calculated based on parent reported combined household annual income bracket from the ABCD demographics survey at baseline, and the U.S federal poverty threshold obtained from: https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines/prior-hhs-poverty-guidelines-federal-register-references. Income brackets from ABCD baseline survey included: 0 – 5000, 5000 – 11,999, 12,000 - 15,999, 16,000 - 24,999, 25,000 - 34,999, 35,000 - 49,999, 50,000 - 74,999, 75,000 - 99,999, 100,000 - 199,999, and >200,000.

Household income was then derived by using the median value of the income brackets (e.g., 2500 for the bracket of 0 – 5000). Income-to-needs was then calculated by dividing the median household income by the relevant poverty threshold based on family size and year of interview.

## Model Outputs for Trauma Exposure (Binary) by COVID-19 Stressor Interaction Models

**Table 6.1.**

*Perceived stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.25 | 0.41 | 2.45 – 4.06 | 7.91 | **<0.001** |
| trauma binary [1] | 0.15 | 0.06 | 0.03 – 0.26 | 2.50 | **0.013** |
| covid stressor sum | 0.22 | 0.03 | 0.17 – 0.27 | 8.43 | **<0.001** |
| sex [M] | -0.79 | 0.06 | -0.90 – -0.68 | -14.38 | **<0.001** |
| age avg yr | 0.23 | 0.03 | 0.17 – 0.29 | 7.40 | **<0.001** |
| income to needs | -0.07 | 0.01 | -0.10 – -0.05 | -5.95 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.07 | 0.04 | -0.02 – 0.15 | 1.54 | 0.122 |
| **Random Effects** | | | | | |
| σ2 | 3.85 | | | | |
| τ00 family\_id | 1.94 | | | | |
| τ00 site\_id | 0.08 | | | | |
| ICC | 0.34 | | | | |
| N family\_id | 6621 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7792 | | | | |
| Marginal R2 / Conditional R2 | 0.057 / 0.381 | | | | |

**Table 6.2**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 8.83 | 1.08 | 6.71 – 10.96 | 8.17 | **<0.001** |
| trauma binary [1] | 0.37 | 0.16 | 0.06 – 0.68 | 2.36 | **0.018** |
| covid stressor sum | 0.42 | 0.07 | 0.28 – 0.55 | 6.05 | **<0.001** |
| sex [M] | -2.89 | 0.14 | -3.17 – -2.60 | -19.92 | **<0.001** |
| age avg yr | 0.59 | 0.08 | 0.42 – 0.75 | 7.07 | **<0.001** |
| income to needs | 0.02 | 0.03 | -0.04 – 0.08 | 0.60 | 0.547 |
| trauma binary [1] × covid stressor sum | 0.36 | 0.11 | 0.13 – 0.58 | 3.13 | **0.002** |
| **Random Effects** | | | | | |
| σ2 | 25.55 | | | | |
| τ00 family\_id | 10.89 | | | | |
| τ00 site\_id | 0.39 | | | | |
| ICC | 0.31 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.074 / 0.357 | | | | |

**Table 6.3**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 40.97 | 1.47 | 38.09 – 43.85 | 27.88 | **<0.001** |
| trauma binary [1] | 0.02 | 0.21 | -0.40 – 0.44 | 0.10 | 0.920 |
| covid stressor sum | -0.55 | 0.09 | -0.73 – -0.36 | -5.78 | **<0.001** |
| sex [M] | 1.26 | 0.19 | 0.88 – 1.64 | 6.47 | **<0.001** |
| age avg yr | -0.62 | 0.11 | -0.84 – -0.40 | -5.51 | **<0.001** |
| income to needs | -0.04 | 0.04 | -0.12 – 0.05 | -0.89 | 0.372 |
| trauma binary [1] × covid stressor sum | -0.05 | 0.16 | -0.36 – 0.26 | -0.33 | 0.740 |
| **Random Effects** | | | | | |
| σ2 | 43.05 | | | | |
| τ00 family\_id | 14.27 | | | | |
| τ00 site\_id | 0.55 | | | | |
| ICC | 0.26 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.019 / 0.271 | | | | |

## Model Outputs for Trauma Exposure (Binary) by COVID-19 Stressor by Protective Factor Interaction Models

### Physical Activity by Trauma by COVID-19 Stressor Models

**Table 7.1.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.20 | 0.41 | 2.39 – 4.00 | 7.81 | **<0.001** |
| trauma binary [1] | 0.13 | 0.06 | 0.02 – 0.25 | 2.24 | **0.025** |
| covid stressor sum | 0.21 | 0.03 | 0.16 – 0.26 | 8.23 | **<0.001** |
| physical act avg | -0.18 | 0.02 | -0.22 – -0.15 | -9.51 | **<0.001** |
| sex [M] | -0.74 | 0.05 | -0.85 – -0.63 | -13.42 | **<0.001** |
| age avg yr | 0.22 | 0.03 | 0.16 – 0.29 | 7.17 | **<0.001** |
| income to needs | -0.05 | 0.01 | -0.07 – -0.02 | -3.71 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.07 | 0.04 | -0.01 – 0.16 | 1.68 | 0.093 |
| trauma binary [1] × physical act avg | 0.01 | 0.03 | -0.05 – 0.08 | 0.48 | 0.633 |
| covid stressor sum × physical act avg | -0.01 | 0.01 | -0.03 – 0.02 | -0.47 | 0.641 |
| (trauma binary [1] × covid stressor sum) × physical act avg | -0.03 | 0.02 | -0.07 – 0.01 | -1.36 | 0.174 |
| **Random Effects** | | | | | |
| σ2 | 3.87 | | | | |
| τ00 family\_id | 1.76 | | | | |
| τ00 site\_id | 0.07 | | | | |
| ICC | 0.32 | | | | |
| N family\_id | 6512 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7664 | | | | |
| Marginal R2 / Conditional R2 | 0.075 / 0.371 | | | | |

**Table 7.1.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 9.08 | 1.08 | 6.96 – 11.20 | 8.40 | **<0.001** |
| trauma binary [1] | 0.39 | 0.16 | 0.08 – 0.70 | 2.46 | **0.014** |
| covid stressor sum | 0.41 | 0.07 | 0.27 – 0.54 | 5.90 | **<0.001** |
| physical act avg | -0.34 | 0.05 | -0.44 – -0.24 | -6.53 | **<0.001** |
| sex [M] | -2.78 | 0.15 | -3.06 – -2.49 | -19.14 | **<0.001** |
| age avg yr | 0.55 | 0.08 | 0.38 – 0.71 | 6.59 | **<0.001** |
| income to needs | 0.07 | 0.03 | 0.00 – 0.13 | 2.08 | **0.037** |
| trauma binary [1] × covid stressor sum | 0.35 | 0.12 | 0.12 – 0.58 | 3.04 | **0.002** |
| trauma binary [1] × physical act avg | 0.03 | 0.08 | -0.14 – 0.20 | 0.35 | 0.723 |
| covid stressor sum × physical act avg | 0.01 | 0.04 | -0.06 – 0.09 | 0.41 | 0.679 |
| (trauma binary [1] × covid stressor sum) × physical act avg | -0.10 | 0.06 | -0.22 – 0.02 | -1.64 | 0.100 |
| **Random Effects** | | | | | |
| σ2 | 25.49 | | | | |
| τ00 family\_id | 10.37 | | | | |
| τ00 site\_id | 0.36 | | | | |
| ICC | 0.30 | | | | |
| N family\_id | 5974 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7011 | | | | |
| Marginal R2 / Conditional R2 | 0.082 / 0.354 | | | | |

**Table 7.1.3**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 41.24 | 1.45 | 38.40 – 44.08 | 28.44 | **<0.001** |
| trauma binary [1] | 0.09 | 0.21 | -0.33 – 0.50 | 0.42 | 0.677 |
| covid stressor sum | -0.51 | 0.09 | -0.69 – -0.33 | -5.45 | **<0.001** |
| physical act avg | 0.77 | 0.07 | 0.64 – 0.91 | 11.11 | **<0.001** |
| sex [M] | 1.02 | 0.19 | 0.65 – 1.40 | 5.32 | **<0.001** |
| age avg yr | -0.60 | 0.11 | -0.82 – -0.38 | -5.35 | **<0.001** |
| income to needs | -0.16 | 0.04 | -0.25 – -0.07 | -3.64 | **<0.001** |
| trauma binary [1] × covid stressor sum | -0.05 | 0.16 | -0.36 – 0.25 | -0.34 | 0.730 |
| trauma binary [1] × physical act avg | -0.00 | 0.12 | -0.23 – 0.23 | -0.02 | 0.984 |
| covid stressor sum × physical act avg | 0.02 | 0.05 | -0.08 – 0.12 | 0.39 | 0.697 |
| (trauma binary [1] × covid stressor sum) × physical act avg | 0.13 | 0.09 | -0.04 – 0.30 | 1.50 | 0.133 |
| **Random Effects** | | | | | |
| σ2 | 43.33 | | | | |
| τ00 family\_id | 12.11 | | | | |
| τ00 site\_id | 0.47 | | | | |
| ICC | 0.23 | | | | |
| N family\_id | 5326 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6162 | | | | |
| Marginal R2 / Conditional R2 | 0.051 / 0.264 | | | | |

### Family Relationship by Trauma by COVID-19 Stressor Models

**Table 7.2.1**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.76 | 0.40 | 2.97 – 4.55 | 9.29 | **<0.001** |
| trauma binary [1] | 0.14 | 0.06 | 0.03 – 0.26 | 2.48 | **0.013** |
| covid stressor sum | 0.20 | 0.03 | 0.15 – 0.25 | 7.94 | **<0.001** |
| family relationship avg | -0.88 | 0.06 | -1.00 – -0.76 | -14.25 | **<0.001** |
| sex [M] | -0.77 | 0.05 | -0.87 – -0.66 | -14.21 | **<0.001** |
| age avg yr | 0.20 | 0.03 | 0.14 – 0.26 | 6.46 | **<0.001** |
| income to needs | -0.10 | 0.01 | -0.12 – -0.08 | -8.13 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.05 | 0.04 | -0.03 – 0.13 | 1.15 | 0.249 |
| trauma binary [1] × family relationship avg | -0.05 | 0.10 | -0.25 – 0.14 | -0.52 | 0.603 |
| covid stressor sum × family relationship avg | -0.12 | 0.04 | -0.21 – -0.04 | -2.84 | **0.005** |
| (trauma binary [1] × covid stressor sum) × family relationship avg | 0.01 | 0.07 | -0.13 – 0.14 | 0.12 | 0.905 |
| **Random Effects** | | | | | |
| σ2 | 3.75 | | | | |
| τ00 family\_id | 1.78 | | | | |
| τ00 site\_id | 0.09 | | | | |
| ICC | 0.33 | | | | |
| N family\_id | 6621 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7792 | | | | |
| Marginal R2 / Conditional R2 | 0.096 / 0.398 | | | | |

**Table 7.2.2**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 10.35 | 1.05 | 8.28 – 12.42 | 9.81 | **<0.001** |
| trauma binary [1] | 0.36 | 0.15 | 0.06 – 0.66 | 2.37 | **0.018** |
| covid stressor sum | 0.37 | 0.07 | 0.23 – 0.50 | 5.47 | **<0.001** |
| family relationship avg | -2.82 | 0.17 | -3.15 – -2.48 | -16.64 | **<0.001** |
| sex [M] | -2.80 | 0.14 | -3.08 – -2.52 | -19.91 | **<0.001** |
| age avg yr | 0.48 | 0.08 | 0.33 – 0.64 | 5.98 | **<0.001** |
| income to needs | -0.06 | 0.03 | -0.12 – 0.01 | -1.77 | 0.077 |
| trauma binary [1] × covid stressor sum | 0.31 | 0.11 | 0.09 – 0.53 | 2.80 | **0.005** |
| trauma binary [1] × family relationship avg | 0.18 | 0.28 | -0.36 – 0.72 | 0.65 | 0.515 |
| covid stressor sum × family relationship avg | -0.31 | 0.12 | -0.55 – -0.08 | -2.60 | **0.009** |
| (trauma binary [1] × covid stressor sum) × family relationship avg | -0.03 | 0.19 | -0.40 – 0.35 | -0.14 | 0.891 |
| **Random Effects** | | | | | |
| σ2 | 25.06 | | | | |
| τ00 family\_id | 9.21 | | | | |
| τ00 site\_id | 0.37 | | | | |
| ICC | 0.28 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.127 / 0.368 | | | | |

**Table 7.2.3**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 38.75 | 1.43 | 35.95 – 41.54 | 27.14 | **<0.001** |
| trauma binary [1] | 0.02 | 0.21 | -0.38 – 0.43 | 0.11 | 0.915 |
| covid stressor sum | -0.46 | 0.09 | -0.64 – -0.28 | -4.99 | **<0.001** |
| family relationship avg | 3.99 | 0.24 | 3.51 – 4.46 | 16.51 | **<0.001** |
| sex [M] | 1.17 | 0.19 | 0.80 – 1.54 | 6.23 | **<0.001** |
| age avg yr | -0.47 | 0.11 | -0.69 – -0.26 | -4.30 | **<0.001** |
| income to needs | 0.07 | 0.04 | -0.02 – 0.15 | 1.57 | 0.116 |
| trauma binary [1] × covid stressor sum | 0.00 | 0.15 | -0.30 – 0.31 | 0.02 | 0.981 |
| trauma binary [1] × family relationship avg | -0.06 | 0.39 | -0.83 – 0.71 | -0.16 | 0.877 |
| covid stressor sum × family relationship avg | 0.36 | 0.18 | -0.00 – 0.71 | 1.96 | 0.050 |
| (trauma binary [1] × covid stressor sum) × family relationship avg | -0.04 | 0.28 | -0.60 – 0.51 | -0.15 | 0.879 |
| **Random Effects** | | | | | |
| σ2 | 41.76 | | | | |
| τ00 family\_id | 11.60 | | | | |
| τ00 site\_id | 0.63 | | | | |
| ICC | 0.23 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.086 / 0.293 | | | | |

### Peer/Friend Relationship by Trauma by COVID-19 Stressor Models

**Table 7.3.1**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.28 | 0.41 | 2.48 – 4.07 | 8.08 | **<0.001** |
| trauma binary [1] | 0.16 | 0.06 | 0.04 – 0.27 | 2.68 | **0.007** |
| covid stressor sum | 0.20 | 0.03 | 0.15 – 0.25 | 7.97 | **<0.001** |
| friend relationship avg | -0.66 | 0.06 | -0.77 – -0.55 | -11.54 | **<0.001** |
| sex [M] | -0.77 | 0.05 | -0.87 – -0.66 | -14.11 | **<0.001** |
| age avg yr | 0.23 | 0.03 | 0.17 – 0.29 | 7.39 | **<0.001** |
| income to needs | -0.07 | 0.01 | -0.10 – -0.05 | -6.07 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.06 | 0.04 | -0.02 – 0.15 | 1.48 | 0.138 |
| trauma binary [1] × friend relationship avg | 0.00 | 0.09 | -0.18 – 0.18 | 0.01 | 0.995 |
| covid stressor sum × friend relationship avg | -0.16 | 0.04 | -0.24 – -0.08 | -4.05 | **<0.001** |
| (trauma binary [1] × covid stressor sum) × friend relationship avg | 0.05 | 0.06 | -0.08 – 0.17 | 0.73 | 0.467 |
| **Random Effects** | | | | | |
| σ2 | 3.74 | | | | |
| τ00 family\_id | 1.89 | | | | |
| τ00 site\_id | 0.08 | | | | |
| ICC | 0.35 | | | | |
| N family\_id | 6621 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7792 | | | | |
| Marginal R2 / Conditional R2 | 0.083 / 0.400 | | | | |

**Table 7.3.2**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 8.85 | 1.06 | 6.78 – 10.93 | 8.35 | **<0.001** |
| trauma binary [1] | 0.38 | 0.15 | 0.08 – 0.68 | 2.45 | **0.014** |
| covid stressor sum | 0.37 | 0.07 | 0.24 – 0.50 | 5.45 | **<0.001** |
| friend relationship avg | -2.11 | 0.16 | -2.42 – -1.80 | -13.48 | **<0.001** |
| sex [M] | -2.81 | 0.14 | -3.09 – -2.53 | -19.78 | **<0.001** |
| age avg yr | 0.58 | 0.08 | 0.42 – 0.74 | 7.13 | **<0.001** |
| income to needs | 0.02 | 0.03 | -0.05 – 0.08 | 0.49 | 0.627 |
| trauma binary [1] × covid stressor sum | 0.36 | 0.11 | 0.14 – 0.58 | 3.20 | **0.001** |
| trauma binary [1] × friend relationship avg | 0.20 | 0.26 | -0.30 – 0.71 | 0.79 | 0.429 |
| covid stressor sum × friend relationship avg | -0.38 | 0.11 | -0.59 – -0.16 | -3.47 | **0.001** |
| (trauma binary [1] × covid stressor sum) × friend relationship avg | -0.19 | 0.18 | -0.54 – 0.17 | -1.04 | 0.297 |
| **Random Effects** | | | | | |
| σ2 | 24.92 | | | | |
| τ00 family\_id | 10.00 | | | | |
| τ00 site\_id | 0.36 | | | | |
| ICC | 0.29 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.111 / 0.372 | | | | |

**Table 7.3.3**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 40.71 | 1.42 | 37.91 – 43.50 | 28.57 | **<0.001** |
| trauma binary [1] | -0.05 | 0.21 | -0.46 – 0.35 | -0.26 | 0.796 |
| covid stressor sum | -0.49 | 0.09 | -0.67 – -0.31 | -5.31 | **<0.001** |
| friend relationship avg | 3.54 | 0.22 | 3.10 – 3.98 | 15.81 | **<0.001** |
| sex [M] | 1.12 | 0.19 | 0.75 – 1.49 | 5.95 | **<0.001** |
| age avg yr | -0.59 | 0.11 | -0.81 – -0.38 | -5.41 | **<0.001** |
| income to needs | -0.03 | 0.04 | -0.12 – 0.05 | -0.80 | 0.423 |
| trauma binary [1] × covid stressor sum | -0.03 | 0.15 | -0.34 – 0.27 | -0.22 | 0.826 |
| trauma binary [1] × friend relationship avg | -0.47 | 0.36 | -1.18 – 0.25 | -1.29 | 0.198 |
| covid stressor sum × friend relationship avg | 0.25 | 0.17 | -0.08 – 0.58 | 1.48 | 0.140 |
| (trauma binary [1] × covid stressor sum) × friend relationship avg | 0.21 | 0.27 | -0.31 – 0.74 | 0.80 | 0.426 |
| **Random Effects** | | | | | |
| σ2 | 41.65 | | | | |
| τ00 family\_id | 12.15 | | | | |
| τ00 site\_id | 0.49 | | | | |
| ICC | 0.23 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.079 / 0.293 | | | | |

### Parental Support/Assistance by Trauma by COVID-19 Stressor Models

**Table 7.4.1**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.04 | 0.45 | 2.17 – 3.92 | 6.81 | **<0.001** |
| trauma binary [1] | 0.19 | 0.07 | 0.06 – 0.31 | 2.85 | **0.004** |
| covid stressor sum | 0.25 | 0.03 | 0.20 – 0.31 | 8.82 | **<0.001** |
| par assistance avg | -0.03 | 0.02 | -0.07 – 0.00 | -1.88 | 0.060 |
| sex [M] | -0.80 | 0.06 | -0.91 – -0.68 | -13.58 | **<0.001** |
| age avg yr | 0.24 | 0.03 | 0.18 – 0.31 | 7.10 | **<0.001** |
| income to needs | -0.07 | 0.01 | -0.10 – -0.04 | -5.14 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.02 | 0.05 | -0.07 – 0.12 | 0.50 | 0.616 |
| trauma binary [1] × par assistance avg | -0.03 | 0.03 | -0.09 – 0.03 | -1.11 | 0.267 |
| covid stressor sum × par assistance avg | 0.01 | 0.01 | -0.02 – 0.03 | 0.41 | 0.682 |
| (trauma binary [1] × covid stressor sum) × par assistance avg | 0.01 | 0.02 | -0.04 – 0.05 | 0.23 | 0.817 |
| **Random Effects** | | | | | |
| σ2 | 3.45 | | | | |
| τ00 family\_id | 1.95 | | | | |
| τ00 site\_id | 0.09 | | | | |
| ICC | 0.37 | | | | |
| N family\_id | 5463 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6387 | | | | |
| Marginal R2 / Conditional R2 | 0.063 / 0.411 | | | | |

**Table 7.4.2**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 9.00 | 1.18 | 6.69 – 11.30 | 7.65 | **<0.001** |
| trauma binary [1] | 0.48 | 0.17 | 0.14 – 0.82 | 2.77 | **0.006** |
| covid stressor sum | 0.48 | 0.08 | 0.34 – 0.63 | 6.38 | **<0.001** |
| par assistance avg | -0.21 | 0.05 | -0.31 – -0.12 | -4.59 | **<0.001** |
| sex [M] | -2.91 | 0.15 | -3.21 – -2.60 | -18.77 | **<0.001** |
| age avg yr | 0.56 | 0.09 | 0.39 – 0.74 | 6.27 | **<0.001** |
| income to needs | 0.01 | 0.04 | -0.06 – 0.07 | 0.15 | 0.877 |
| trauma binary [1] × covid stressor sum | 0.29 | 0.13 | 0.04 – 0.55 | 2.29 | **0.022** |
| trauma binary [1] × par assistance avg | -0.04 | 0.08 | -0.19 – 0.12 | -0.43 | 0.664 |
| covid stressor sum × par assistance avg | 0.03 | 0.03 | -0.04 – 0.10 | 0.83 | 0.409 |
| (trauma binary [1] × covid stressor sum) × par assistance avg | 0.01 | 0.06 | -0.11 – 0.13 | 0.15 | 0.881 |
| **Random Effects** | | | | | |
| σ2 | 23.85 | | | | |
| τ00 family\_id | 10.98 | | | | |
| τ00 site\_id | 0.38 | | | | |
| ICC | 0.32 | | | | |
| N family\_id | 5101 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5942 | | | | |
| Marginal R2 / Conditional R2 | 0.083 / 0.379 | | | | |

**Table 7.4.3**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 39.18 | 1.56 | 36.11 – 42.24 | 25.09 | **<0.001** |
| trauma binary [1] | -0.05 | 0.23 | -0.49 – 0.40 | -0.20 | 0.838 |
| covid stressor sum | -0.60 | 0.10 | -0.79 – -0.40 | -5.93 | **<0.001** |
| par assistance avg | 0.34 | 0.06 | 0.22 – 0.46 | 5.49 | **<0.001** |
| sex [M] | 1.10 | 0.20 | 0.70 – 1.50 | 5.42 | **<0.001** |
| age avg yr | -0.49 | 0.12 | -0.72 – -0.25 | -4.06 | **<0.001** |
| income to needs | 0.00 | 0.05 | -0.09 – 0.10 | 0.11 | 0.915 |
| trauma binary [1] × covid stressor sum | -0.01 | 0.17 | -0.35 – 0.32 | -0.07 | 0.946 |
| trauma binary [1] × par assistance avg | 0.05 | 0.11 | -0.16 – 0.26 | 0.49 | 0.626 |
| covid stressor sum × par assistance avg | 0.08 | 0.05 | -0.01 – 0.17 | 1.65 | 0.099 |
| (trauma binary [1] × covid stressor sum) × par assistance avg | -0.13 | 0.08 | -0.29 – 0.02 | -1.65 | 0.098 |
| **Random Effects** | | | | | |
| σ2 | 43.02 | | | | |
| τ00 family\_id | 12.98 | | | | |
| τ00 site\_id | 0.59 | | | | |
| ICC | 0.24 | | | | |
| N family\_id | 4834 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5589 | | | | |
| Marginal R2 / Conditional R2 | 0.028 / 0.261 | | | | |

## Model Outputs for Trauma Exposure (Binary) by Protective Factor Interaction Models

### Physical Activity by Trauma Exposure (Binary) Models

**Table 8.1.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.32 | 0.41 | 2.51 – 4.12 | 8.08 | **<0.001** |
| trauma binary [1] | 0.22 | 0.06 | 0.10 – 0.33 | 3.70 | **<0.001** |
| physical act avg | -0.19 | 0.02 | -0.22 – -0.15 | -9.79 | **<0.001** |
| sex [M] | -0.72 | 0.06 | -0.83 – -0.61 | -13.07 | **<0.001** |
| age avg yr | 0.22 | 0.03 | 0.16 – 0.28 | 6.96 | **<0.001** |
| income to needs | -0.06 | 0.01 | -0.08 – -0.04 | -4.78 | **<0.001** |
| trauma binary [1] × physical act avg | 0.01 | 0.03 | -0.05 – 0.07 | 0.29 | 0.770 |
| **Random Effects** | | | | | |
| σ2 | 3.92 | | | | |
| τ00 family\_id | 1.86 | | | | |
| τ00 site\_id | 0.08 | | | | |
| ICC | 0.33 | | | | |
| N family\_id | 6632 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7840 | | | | |
| Marginal R2 / Conditional R2 | 0.057 / 0.370 | | | | |

**Table 8.1.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 9.09 | 1.08 | 6.97 – 11.21 | 8.41 | **<0.001** |
| trauma binary [1] | 0.61 | 0.15 | 0.30 – 0.91 | 3.92 | **<0.001** |
| physical act avg | -0.35 | 0.05 | -0.45 – -0.25 | -6.92 | **<0.001** |
| sex [M] | -2.74 | 0.15 | -3.03 – -2.46 | -18.89 | **<0.001** |
| age avg yr | 0.56 | 0.08 | 0.40 – 0.72 | 6.74 | **<0.001** |
| income to needs | 0.03 | 0.03 | -0.03 – 0.09 | 0.90 | 0.366 |
| trauma binary [1] × physical act avg | 0.02 | 0.08 | -0.15 – 0.18 | 0.20 | 0.844 |
| **Random Effects** | | | | | |
| σ2 | 25.58 | | | | |
| τ00 family\_id | 10.85 | | | | |
| τ00 site\_id | 0.41 | | | | |
| ICC | 0.31 | | | | |
| N family\_id | 6047 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7119 | | | | |
| Marginal R2 / Conditional R2 | 0.069 / 0.354 | | | | |

**Table 8.1.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 41.13 | 1.45 | 38.29 – 43.97 | 28.38 | **<0.001** |
| trauma binary [1] | -0.06 | 0.20 | -0.46 – 0.34 | -0.28 | 0.778 |
| physical act avg | 0.78 | 0.07 | 0.65 – 0.92 | 11.32 | **<0.001** |
| sex [M] | 1.03 | 0.19 | 0.65 – 1.41 | 5.36 | **<0.001** |
| age avg yr | -0.61 | 0.11 | -0.82 – -0.39 | -5.45 | **<0.001** |
| income to needs | -0.12 | 0.04 | -0.21 – -0.03 | -2.76 | **0.006** |
| trauma binary [1] × physical act avg | 0.04 | 0.11 | -0.19 – 0.26 | 0.32 | 0.751 |
| **Random Effects** | | | | | |
| σ2 | 43.35 | | | | |
| τ00 family\_id | 12.47 | | | | |
| τ00 site\_id | 0.58 | | | | |
| ICC | 0.23 | | | | |
| N family\_id | 5382 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6240 | | | | |
| Marginal R2 / Conditional R2 | 0.042 / 0.264 | | | | |

### Family Relationship by Trauma Exposure (Binary) Models

**Table 8.2.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.88 | 0.41 | 3.09 – 4.68 | 9.57 | **<0.001** |
| trauma binary [1] | 0.21 | 0.06 | 0.10 – 0.33 | 3.72 | **<0.001** |
| family relationship avg | -0.87 | 0.06 | -0.99 – -0.75 | -14.40 | **<0.001** |
| sex [M] | -0.74 | 0.05 | -0.85 – -0.64 | -13.77 | **<0.001** |
| age avg yr | 0.19 | 0.03 | 0.13 – 0.25 | 6.24 | **<0.001** |
| income to needs | -0.11 | 0.01 | -0.14 – -0.09 | -9.27 | **<0.001** |
| trauma binary [1] × family relationship avg | -0.12 | 0.10 | -0.32 – 0.07 | -1.27 | 0.202 |
| **Random Effects** | | | | | |
| σ2 | 3.86 | | | | |
| τ00 family\_id | 1.81 | | | | |
| τ00 site\_id | 0.11 | | | | |
| ICC | 0.33 | | | | |
| N family\_id | 6741 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7973 | | | | |
| Marginal R2 / Conditional R2 | 0.080 / 0.385 | | | | |

**Table 8.2.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 10.39 | 1.06 | 8.32 – 12.46 | 9.84 | **<0.001** |
| trauma binary [1] | 0.54 | 0.15 | 0.25 – 0.84 | 3.62 | **<0.001** |
| family relationship avg | -2.80 | 0.17 | -3.13 – -2.47 | -16.79 | **<0.001** |
| sex [M] | -2.76 | 0.14 | -3.04 – -2.48 | -19.63 | **<0.001** |
| age avg yr | 0.49 | 0.08 | 0.33 – 0.65 | 6.10 | **<0.001** |
| income to needs | -0.09 | 0.03 | -0.16 – -0.03 | -2.96 | **0.003** |
| trauma binary [1] × family relationship avg | 0.01 | 0.27 | -0.52 – 0.54 | 0.04 | 0.965 |
| **Random Effects** | | | | | |
| σ2 | 25.64 | | | | |
| τ00 family\_id | 9.19 | | | | |
| τ00 site\_id | 0.41 | | | | |
| ICC | 0.27 | | | | |
| N family\_id | 6115 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7204 | | | | |
| Marginal R2 / Conditional R2 | 0.114 / 0.355 | | | | |

**Table 8.2.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 38.64 | 1.42 | 35.85 – 41.44 | 27.12 | **<0.001** |
| trauma binary [1] | -0.08 | 0.20 | -0.47 – 0.31 | -0.39 | 0.700 |
| family relationship avg | 4.05 | 0.24 | 3.58 – 4.52 | 16.96 | **<0.001** |
| sex [M] | 1.16 | 0.19 | 0.79 – 1.53 | 6.20 | **<0.001** |
| age avg yr | -0.48 | 0.11 | -0.69 – -0.26 | -4.39 | **<0.001** |
| income to needs | 0.10 | 0.04 | 0.02 – 0.19 | 2.47 | **0.013** |
| trauma binary [1] × family relationship avg | 0.01 | 0.38 | -0.74 – 0.76 | 0.03 | 0.977 |
| **Random Effects** | | | | | |
| σ2 | 41.85 | | | | |
| τ00 family\_id | 11.82 | | | | |
| τ00 site\_id | 0.70 | | | | |
| ICC | 0.23 | | | | |
| N family\_id | 5411 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6271 | | | | |
| Marginal R2 / Conditional R2 | 0.079 / 0.291 | | | | |

### Peer Relationship by Trauma Exposure (Binary) Models

**Table 8.3.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.41 | 0.41 | 2.61 – 4.21 | 8.37 | **<0.001** |
| trauma binary [1] | 0.23 | 0.06 | 0.12 – 0.34 | 3.98 | **<0.001** |
| friend relationship avg | -0.65 | 0.06 | -0.76 – -0.54 | -11.46 | **<0.001** |
| sex [M] | -0.75 | 0.05 | -0.85 – -0.64 | -13.71 | **<0.001** |
| age avg yr | 0.22 | 0.03 | 0.16 – 0.28 | 7.17 | **<0.001** |
| income to needs | -0.09 | 0.01 | -0.11 – -0.07 | -7.33 | **<0.001** |
| trauma binary [1] × friend relationship avg | -0.08 | 0.09 | -0.25 – 0.10 | -0.83 | 0.407 |
| **Random Effects** | | | | | |
| σ2 | 3.85 | | | | |
| τ00 family\_id | 1.92 | | | | |
| τ00 site\_id | 0.10 | | | | |
| ICC | 0.34 | | | | |
| N family\_id | 6741 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7973 | | | | |
| Marginal R2 / Conditional R2 | 0.065 / 0.387 | | | | |

**Table 8.3.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 8.82 | 1.06 | 6.74 – 10.91 | 8.30 | **<0.001** |
| trauma binary [1] | 0.58 | 0.15 | 0.28 – 0.88 | 3.84 | **<0.001** |
| friend relationship avg | -2.14 | 0.15 | -2.44 – -1.84 | -13.84 | **<0.001** |
| sex [M] | -2.77 | 0.14 | -3.05 – -2.49 | -19.51 | **<0.001** |
| age avg yr | 0.60 | 0.08 | 0.44 – 0.76 | 7.33 | **<0.001** |
| income to needs | -0.03 | 0.03 | -0.09 – 0.03 | -0.88 | 0.378 |
| trauma binary [1] × friend relationship avg | 0.08 | 0.25 | -0.42 – 0.57 | 0.31 | 0.758 |
| **Random Effects** | | | | | |
| σ2 | 25.56 | | | | |
| τ00 family\_id | 10.00 | | | | |
| τ00 site\_id | 0.40 | | | | |
| ICC | 0.29 | | | | |
| N family\_id | 6115 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7204 | | | | |
| Marginal R2 / Conditional R2 | 0.096 / 0.358 | | | | |

**Table 8.3.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 40.62 | 1.42 | 37.83 – 43.41 | 28.53 | **<0.001** |
| trauma binary [1] | -0.18 | 0.20 | -0.57 – 0.21 | -0.90 | 0.368 |
| friend relationship avg | 3.58 | 0.22 | 3.15 – 4.01 | 16.32 | **<0.001** |
| sex [M] | 1.10 | 0.19 | 0.73 – 1.47 | 5.83 | **<0.001** |
| age avg yr | -0.60 | 0.11 | -0.82 – -0.39 | -5.52 | **<0.001** |
| income to needs | 0.01 | 0.04 | -0.07 – 0.09 | 0.22 | 0.827 |
| trauma binary [1] × friend relationship avg | -0.30 | 0.35 | -0.99 – 0.39 | -0.85 | 0.398 |
| **Random Effects** | | | | | |
| σ2 | 41.80 | | | | |
| τ00 family\_id | 12.35 | | | | |
| τ00 site\_id | 0.59 | | | | |
| ICC | 0.24 | | | | |
| N family\_id | 5411 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6271 | | | | |
| Marginal R2 / Conditional R2 | 0.071 / 0.290 | | | | |

### Parental Support by Trauma Exposure (Binary) Models

**Table 8.4.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.30 | 0.45 | 2.42 – 4.19 | 7.33 | **<0.001** |
| trauma binary [1] | 0.25 | 0.06 | 0.13 – 0.37 | 3.96 | **<0.001** |
| par assistance avg | -0.02 | 0.02 | -0.06 – 0.01 | -1.36 | 0.175 |
| sex [M] | -0.78 | 0.06 | -0.90 – -0.67 | -13.25 | **<0.001** |
| age avg yr | 0.23 | 0.03 | 0.16 – 0.30 | 6.71 | **<0.001** |
| income to needs | -0.09 | 0.01 | -0.11 – -0.06 | -6.37 | **<0.001** |
| trauma binary [1] × par assistance avg | -0.03 | 0.03 | -0.08 – 0.03 | -0.97 | 0.333 |
| **Random Effects** | | | | | |
| σ2 | 3.50 | | | | |
| τ00 family\_id | 2.03 | | | | |
| τ00 site\_id | 0.11 | | | | |
| ICC | 0.38 | | | | |
| N family\_id | 5518 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6461 | | | | |
| Marginal R2 / Conditional R2 | 0.043 / 0.407 | | | | |

**Table 8.4.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 9.44 | 1.18 | 7.12 – 11.76 | 7.98 | **<0.001** |
| trauma binary [1] | 0.72 | 0.17 | 0.40 – 1.05 | 4.35 | **<0.001** |
| par assistance avg | -0.20 | 0.05 | -0.29 – -0.11 | -4.24 | **<0.001** |
| sex [M] | -2.88 | 0.16 | -3.19 – -2.58 | -18.54 | **<0.001** |
| age avg yr | 0.55 | 0.09 | 0.38 – 0.73 | 6.11 | **<0.001** |
| income to needs | -0.04 | 0.04 | -0.11 – 0.03 | -1.24 | 0.215 |
| trauma binary [1] × par assistance avg | -0.00 | 0.08 | -0.15 – 0.15 | -0.02 | 0.981 |
| **Random Effects** | | | | | |
| σ2 | 24.06 | | | | |
| τ00 family\_id | 11.33 | | | | |
| τ00 site\_id | 0.44 | | | | |
| ICC | 0.33 | | | | |
| N family\_id | 5137 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5990 | | | | |
| Marginal R2 / Conditional R2 | 0.069 / 0.375 | | | | |

**Table 8.4.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 39.02 | 1.57 | 35.95 – 42.09 | 24.93 | **<0.001** |
| trauma binary [1] | -0.20 | 0.22 | -0.63 – 0.22 | -0.93 | 0.353 |
| par assistance avg | 0.32 | 0.06 | 0.20 – 0.44 | 5.22 | **<0.001** |
| sex [M] | 1.08 | 0.20 | 0.68 – 1.48 | 5.33 | **<0.001** |
| age avg yr | -0.50 | 0.12 | -0.73 – -0.26 | -4.14 | **<0.001** |
| income to needs | 0.05 | 0.05 | -0.04 – 0.14 | 1.13 | 0.257 |
| trauma binary [1] × par assistance avg | 0.01 | 0.10 | -0.19 – 0.21 | 0.09 | 0.926 |
| **Random Effects** | | | | | |
| σ2 | 43.05 | | | | |
| τ00 family\_id | 13.50 | | | | |
| τ00 site\_id | 0.68 | | | | |
| ICC | 0.25 | | | | |
| N family\_id | 4861 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5626 | | | | |
| Marginal R2 / Conditional R2 | 0.018 / 0.261 | | | | |

## Model Outputs for COVID-19 Stressor by Protective Factor Interaction Models

### Physical Activity by COVID-19 Stressor Models

**Table 9.1.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.32 | 0.40 | 2.52 – 4.11 | 8.21 | **<0.001** |
| covid stressor sum | 0.24 | 0.02 | 0.20 – 0.28 | 11.63 | **<0.001** |
| physical act avg | -0.18 | 0.02 | -0.21 – -0.15 | -11.39 | **<0.001** |
| sex [M] | -0.75 | 0.05 | -0.85 – -0.64 | -13.74 | **<0.001** |
| age avg yr | 0.22 | 0.03 | 0.16 – 0.28 | 7.16 | **<0.001** |
| income to needs | -0.05 | 0.01 | -0.08 – -0.03 | -4.14 | **<0.001** |
| covid stressor sum × physical act avg | -0.02 | 0.01 | -0.04 – 0.00 | -1.88 | 0.060 |
| **Random Effects** | | | | | |
| σ2 | 3.82 | | | | |
| τ00 family\_id | 1.84 | | | | |
| τ00 site\_id | 0.07 | | | | |
| ICC | 0.33 | | | | |
| N family\_id | 6650 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7846 | | | | |
| Marginal R2 / Conditional R2 | 0.073 / 0.381 | | | | |

**Table 9.1.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 9.26 | 1.08 | 7.14 – 11.38 | 8.57 | **<0.001** |
| covid stressor sum | 0.54 | 0.06 | 0.44 – 0.65 | 9.76 | **<0.001** |
| physical act avg | -0.33 | 0.04 | -0.42 – -0.25 | -7.93 | **<0.001** |
| sex [M] | -2.78 | 0.15 | -3.06 – -2.49 | -19.11 | **<0.001** |
| age avg yr | 0.55 | 0.08 | 0.39 – 0.71 | 6.60 | **<0.001** |
| income to needs | 0.06 | 0.03 | -0.01 – 0.12 | 1.79 | 0.074 |
| covid stressor sum × physical act avg | -0.02 | 0.03 | -0.08 – 0.03 | -0.85 | 0.397 |
| **Random Effects** | | | | | |
| σ2 | 25.50 | | | | |
| τ00 family\_id | 10.46 | | | | |
| τ00 site\_id | 0.37 | | | | |
| ICC | 0.30 | | | | |
| N family\_id | 5974 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7011 | | | | |
| Marginal R2 / Conditional R2 | 0.080 / 0.354 | | | | |

**Table 9.1.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 41.24 | 1.45 | 38.40 – 44.07 | 28.48 | **<0.001** |
| covid stressor sum | -0.53 | 0.08 | -0.68 – -0.38 | -7.00 | **<0.001** |
| physical act avg | 0.78 | 0.06 | 0.67 – 0.89 | 13.69 | **<0.001** |
| sex [M] | 1.02 | 0.19 | 0.64 – 1.40 | 5.29 | **<0.001** |
| age avg yr | -0.59 | 0.11 | -0.81 – -0.38 | -5.33 | **<0.001** |
| income to needs | -0.16 | 0.04 | -0.25 – -0.07 | -3.66 | **<0.001** |
| covid stressor sum × physical act avg | 0.07 | 0.04 | -0.01 – 0.15 | 1.62 | 0.104 |
| **Random Effects** | | | | | |
| σ2 | 43.35 | | | | |
| τ00 family\_id | 12.08 | | | | |
| τ00 site\_id | 0.47 | | | | |
| ICC | 0.22 | | | | |
| N family\_id | 5326 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6162 | | | | |
| Marginal R2 / Conditional R2 | 0.050 / 0.263 | | | | |

### Family Relationship by COVID-19 Stressor Models

**Table 9.2.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.90 | 0.40 | 3.12 – 4.68 | 9.77 | **<0.001** |
| covid stressor sum | 0.22 | 0.02 | 0.18 – 0.26 | 10.89 | **<0.001** |
| family relationship avg | -0.90 | 0.05 | -0.99 – -0.80 | -18.70 | **<0.001** |
| sex [M] | -0.78 | 0.05 | -0.88 – -0.67 | -14.55 | **<0.001** |
| age avg yr | 0.20 | 0.03 | 0.14 – 0.25 | 6.40 | **<0.001** |
| income to needs | -0.10 | 0.01 | -0.13 – -0.08 | -8.58 | **<0.001** |
| covid stressor sum × family relationship avg | -0.11 | 0.03 | -0.18 – -0.05 | -3.45 | **0.001** |
| **Random Effects** | | | | | |
| σ2 | 3.72 | | | | |
| τ00 family\_id | 1.83 | | | | |
| τ00 site\_id | 0.09 | | | | |
| ICC | 0.34 | | | | |
| N family\_id | 6762 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7979 | | | | |
| Marginal R2 / Conditional R2 | 0.095 / 0.403 | | | | |

**Table 9.2.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 10.53 | 1.05 | 8.46 – 12.59 | 9.99 | **<0.001** |
| covid stressor sum | 0.49 | 0.05 | 0.38 – 0.59 | 8.96 | **<0.001** |
| family relationship avg | -2.76 | 0.13 | -3.03 – -2.50 | -20.56 | **<0.001** |
| sex [M] | -2.80 | 0.14 | -3.08 – -2.53 | -19.91 | **<0.001** |
| age avg yr | 0.48 | 0.08 | 0.33 – 0.64 | 5.99 | **<0.001** |
| income to needs | -0.07 | 0.03 | -0.13 – -0.00 | -2.09 | **0.037** |
| covid stressor sum × family relationship avg | -0.32 | 0.09 | -0.50 – -0.13 | -3.39 | **0.001** |
| **Random Effects** | | | | | |
| σ2 | 25.02 | | | | |
| τ00 family\_id | 9.32 | | | | |
| τ00 site\_id | 0.38 | | | | |
| ICC | 0.28 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.125 / 0.369 | | | | |

**Table 9.2.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 38.75 | 1.42 | 35.96 – 41.55 | 27.20 | **<0.001** |
| covid stressor sum | -0.46 | 0.07 | -0.60 – -0.31 | -6.10 | **<0.001** |
| family relationship avg | 3.96 | 0.19 | 3.58 – 4.34 | 20.56 | **<0.001** |
| sex [M] | 1.17 | 0.19 | 0.80 – 1.54 | 6.23 | **<0.001** |
| age avg yr | -0.47 | 0.11 | -0.68 – -0.26 | -4.30 | **<0.001** |
| income to needs | 0.07 | 0.04 | -0.02 – 0.15 | 1.56 | 0.119 |
| covid stressor sum × family relationship avg | 0.34 | 0.14 | 0.06 – 0.61 | 2.42 | **0.016** |
| **Random Effects** | | | | | |
| σ2 | 41.74 | | | | |
| τ00 family\_id | 11.59 | | | | |
| τ00 site\_id | 0.63 | | | | |
| ICC | 0.23 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.086 / 0.293 | | | | |

### Peer Relationship by COVID-19 Stressor Models

**Table 9.3.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.44 | 0.40 | 2.66 – 4.22 | 8.60 | **<0.001** |
| covid stressor sum | 0.23 | 0.02 | 0.19 – 0.27 | 11.18 | **<0.001** |
| friend relationship avg | -0.65 | 0.04 | -0.74 – -0.57 | -14.76 | **<0.001** |
| sex [M] | -0.78 | 0.05 | -0.88 – -0.67 | -14.45 | **<0.001** |
| age avg yr | 0.22 | 0.03 | 0.16 – 0.28 | 7.30 | **<0.001** |
| income to needs | -0.08 | 0.01 | -0.10 – -0.06 | -6.57 | **<0.001** |
| covid stressor sum × friend relationship avg | -0.13 | 0.03 | -0.19 – -0.07 | -4.23 | **<0.001** |
| **Random Effects** | | | | | |
| σ2 | 3.70 | | | | |
| τ00 family\_id | 1.95 | | | | |
| τ00 site\_id | 0.08 | | | | |
| ICC | 0.35 | | | | |
| N family\_id | 6762 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7979 | | | | |
| Marginal R2 / Conditional R2 | 0.082 / 0.407 | | | | |

**Table 9.3.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 9.03 | 1.06 | 6.96 – 11.11 | 8.53 | **<0.001** |
| covid stressor sum | 0.51 | 0.05 | 0.40 – 0.61 | 9.23 | **<0.001** |
| friend relationship avg | -2.05 | 0.12 | -2.29 – -1.80 | -16.50 | **<0.001** |
| sex [M] | -2.81 | 0.14 | -3.09 – -2.53 | -19.77 | **<0.001** |
| age avg yr | 0.58 | 0.08 | 0.42 – 0.74 | 7.14 | **<0.001** |
| income to needs | 0.01 | 0.03 | -0.06 – 0.07 | 0.16 | 0.872 |
| covid stressor sum × friend relationship avg | -0.44 | 0.09 | -0.61 – -0.27 | -5.04 | **<0.001** |
| **Random Effects** | | | | | |
| σ2 | 24.89 | | | | |
| τ00 family\_id | 10.12 | | | | |
| τ00 site\_id | 0.37 | | | | |
| ICC | 0.30 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.108 / 0.373 | | | | |

**Table 9.3.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 40.71 | 1.42 | 37.92 – 43.50 | 28.62 | **<0.001** |
| covid stressor sum | -0.50 | 0.07 | -0.65 – -0.35 | -6.67 | **<0.001** |
| friend relationship avg | 3.37 | 0.18 | 3.02 – 3.71 | 19.00 | **<0.001** |
| sex [M] | 1.12 | 0.19 | 0.75 – 1.49 | 5.94 | **<0.001** |
| age avg yr | -0.60 | 0.11 | -0.81 – -0.38 | -5.44 | **<0.001** |
| income to needs | -0.03 | 0.04 | -0.11 – 0.05 | -0.76 | 0.445 |
| covid stressor sum × friend relationship avg | 0.33 | 0.13 | 0.07 – 0.58 | 2.49 | **0.013** |
| **Random Effects** | | | | | |
| σ2 | 41.52 | | | | |
| τ00 family\_id | 12.27 | | | | |
| τ00 site\_id | 0.50 | | | | |
| ICC | 0.24 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.078 / 0.295 | | | | |

### Parental Support by COVID-19 Stressor Models

**Table 9.4.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.17 | 0.44 | 2.31 – 4.04 | 7.19 | **<0.001** |
| covid stressor sum | 0.27 | 0.02 | 0.22 – 0.31 | 11.48 | **<0.001** |
| par assistance avg | -0.04 | 0.01 | -0.07 – -0.01 | -2.87 | **0.004** |
| sex [M] | -0.81 | 0.06 | -0.92 – -0.70 | -13.91 | **<0.001** |
| age avg yr | 0.24 | 0.03 | 0.17 – 0.31 | 7.10 | **<0.001** |
| income to needs | -0.07 | 0.01 | -0.10 – -0.05 | -5.53 | **<0.001** |
| covid stressor sum × par assistance avg | 0.01 | 0.01 | -0.01 – 0.03 | 0.61 | 0.543 |
| **Random Effects** | | | | | |
| σ2 | 3.42 | | | | |
| τ00 family\_id | 2.02 | | | | |
| τ00 site\_id | 0.09 | | | | |
| ICC | 0.38 | | | | |
| N family\_id | 5583 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6545 | | | | |
| Marginal R2 / Conditional R2 | 0.061 / 0.419 | | | | |

**Table 9.4.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 9.18 | 1.18 | 6.88 – 11.49 | 7.81 | **<0.001** |
| covid stressor sum | 0.60 | 0.06 | 0.48 – 0.72 | 9.67 | **<0.001** |
| par assistance avg | -0.22 | 0.04 | -0.30 – -0.15 | -5.72 | **<0.001** |
| sex [M] | -2.91 | 0.15 | -3.22 – -2.61 | -18.82 | **<0.001** |
| age avg yr | 0.57 | 0.09 | 0.39 – 0.75 | 6.31 | **<0.001** |
| income to needs | -0.01 | 0.04 | -0.08 – 0.06 | -0.21 | 0.833 |
| covid stressor sum × par assistance avg | 0.03 | 0.03 | -0.02 – 0.09 | 1.19 | 0.234 |
| **Random Effects** | | | | | |
| σ2 | 23.86 | | | | |
| τ00 family\_id | 11.06 | | | | |
| τ00 site\_id | 0.39 | | | | |
| ICC | 0.32 | | | | |
| N family\_id | 5101 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5942 | | | | |
| Marginal R2 / Conditional R2 | 0.080 / 0.378 | | | | |

**Table 9.4.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 39.11 | 1.56 | 36.05 – 42.16 | 25.07 | **<0.001** |
| covid stressor sum | -0.60 | 0.08 | -0.76 – -0.44 | -7.35 | **<0.001** |
| par assistance avg | 0.35 | 0.05 | 0.25 – 0.45 | 6.82 | **<0.001** |
| sex [M] | 1.10 | 0.20 | 0.71 – 1.50 | 5.44 | **<0.001** |
| age avg yr | -0.48 | 0.12 | -0.72 – -0.25 | -4.03 | **<0.001** |
| income to needs | 0.01 | 0.05 | -0.08 – 0.10 | 0.13 | 0.893 |
| covid stressor sum × par assistance avg | 0.03 | 0.04 | -0.04 – 0.11 | 0.86 | 0.391 |
| **Random Effects** | | | | | |
| σ2 | 43.02 | | | | |
| τ00 family\_id | 12.97 | | | | |
| τ00 site\_id | 0.59 | | | | |
| ICC | 0.24 | | | | |
| N family\_id | 4834 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5589 | | | | |
| Marginal R2 / Conditional R2 | 0.027 / 0.260 | | | | |

## Correlations Between All Numeric Variables

**Table 10**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Age | Income to needs | Trauma sum | Covid stressor | Physical activity | Family relationship | Peer relationship | Parent Support | Perceived Stress | Positive Affect | Sadness |
| Age | 1.00 | 0.06 | -0.01 | -0.04 | 0.00 | -0.08 | -0.01 | -0.18 | 0.07 | -0.04 | 0.07 |
| Income to needs | 0.06 | 1.00 | -0.12 | -0.17 | 0.22 | -0.14 | -0.01 | -0.15 | -0.08 | 0.00 | 0.02 |
| Trauma sum | -0.01 | -0.12 | 1.00 | 0.11 | -0.04 | 0.02 | 0.04 | 0.05 | 0.07 | -0.01 | 0.05 |
| Covid stressor | -0.04 | -0.17 | 0.11 | 1.00 | -0.07 | -0.01 | -0.03 | 0.10 | 0.17 | -0.10 | 0.11 |
| Physical activity | 0.00 | 0.22 | -0.04 | -0.07 | 1.00 | 0.04 | 0.10 | 0.03 | -0.17 | 0.20 | -0.11 |
| Family relationship | -0.08 | -0.14 | 0.02 | -0.01 | 0.04 | 1.00 | 0.44 | 0.16 | -0.23 | 0.27 | -0.27 |
| Peer relationship | -0.01 | -0.01 | 0.04 | -0.03 | 0.10 | 0.44 | 1.00 | 0.06 | -0.18 | 0.24 | -0.21 |
| Parrent suppot | -0.18 | -0.15 | 0.05 | 0.10 | 0.03 | 0.16 | 0.06 | 1.00 | -0.03 | 0.11 | -0.09 |
| Perceived stress | 0.07 | -0.08 | 0.07 | 0.17 | -0.17 | -0.23 | -0.18 | -0.03 | 1.00 | -0.56 | 0.74 |
| Positive affect | -0.04 | 0.00 | -0.01 | -0.10 | 0.20 | 0.27 | 0.24 | 0.11 | -0.56 | 1.00 | -0.48 |
| Sadness | 0.07 | 0.02 | 0.05 | 0.11 | -0.11 | -0.27 | -0.21 | -0.09 | 0.74 | -0.48 | 1.00 |

## Model Outputs for Total Trauma (Continuous) Models

### Total Trauma by COVID-19 Stressor Interaction Models

**Table 11.1.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.24 | 0.41 | 2.43 – 4.04 | 7.88 | **<0.001** |
| trauma sum | 0.11 | 0.03 | 0.05 – 0.17 | 3.43 | **0.001** |
| covid stressor sum | 0.22 | 0.02 | 0.18 – 0.27 | 9.51 | **<0.001** |
| sex [M] | -0.80 | 0.06 | -0.90 – -0.69 | -14.45 | **<0.001** |
| age avg yr | 0.23 | 0.03 | 0.17 – 0.30 | 7.43 | **<0.001** |
| income to needs | -0.07 | 0.01 | -0.10 – -0.05 | -5.81 | **<0.001** |
| trauma sum × covid stressor sum | 0.03 | 0.02 | -0.01 – 0.08 | 1.56 | 0.118 |
| **Random Effects** | | | | | |
| σ2 | 3.84 | | | | |
| τ00 family\_id | 1.94 | | | | |
| τ00 site\_id | 0.08 | | | | |
| ICC | 0.34 | | | | |
| N family\_id | 6621 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7792 | | | | |
| Marginal R2 / Conditional R2 | 0.058 / 0.382 | | | | |

**Table 11.1.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 8.74 | 1.08 | 6.62 – 10.85 | 8.08 | **<0.001** |
| trauma sum | 0.30 | 0.08 | 0.13 – 0.46 | 3.57 | **<0.001** |
| covid stressor sum | 0.44 | 0.06 | 0.32 – 0.57 | 7.06 | **<0.001** |
| sex [M] | -2.89 | 0.14 | -3.18 – -2.61 | -20.00 | **<0.001** |
| age avg yr | 0.59 | 0.08 | 0.43 – 0.75 | 7.14 | **<0.001** |
| income to needs | 0.03 | 0.03 | -0.04 – 0.09 | 0.79 | 0.432 |
| trauma sum × covid stressor sum | 0.19 | 0.06 | 0.08 – 0.31 | 3.25 | **0.001** |
| **Random Effects** | | | | | |
| σ2 | 25.47 | | | | |
| τ00 family\_id | 10.91 | | | | |
| τ00 site\_id | 0.39 | | | | |
| ICC | 0.31 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.075 / 0.359 | | | | |

**Table 11.1.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 41.02 | 1.47 | 38.14 – 43.90 | 27.92 | **<0.001** |
| trauma sum | -0.03 | 0.13 | -0.29 – 0.22 | -0.25 | 0.806 |
| covid stressor sum | -0.53 | 0.09 | -0.71 – -0.36 | -5.97 | **<0.001** |
| sex [M] | 1.26 | 0.19 | 0.88 – 1.64 | 6.47 | **<0.001** |
| age avg yr | -0.62 | 0.11 | -0.84 – -0.40 | -5.51 | **<0.001** |
| income to needs | -0.04 | 0.04 | -0.13 – 0.04 | -0.95 | 0.343 |
| trauma sum × covid stressor sum | -0.07 | 0.10 | -0.26 – 0.13 | -0.66 | 0.511 |
| **Random Effects** | | | | | |
| σ2 | 43.01 | | | | |
| τ00 family\_id | 14.31 | | | | |
| τ00 site\_id | 0.55 | | | | |
| ICC | 0.26 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.020 / 0.271 | | | | |

### Total Trauma by COVID-19 Stressor by Protective Factor Interaction Models

### Physical Activity Models

**Table 11.2.1.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.18 | 0.41 | 2.37 – 3.98 | 7.77 | **<0.001** |
| trauma sum | 0.10 | 0.03 | 0.04 – 0.16 | 3.14 | **0.002** |
| covid stressor sum | 0.22 | 0.02 | 0.17 – 0.26 | 9.20 | **<0.001** |
| physical act avg | -0.19 | 0.02 | -0.22 – -0.15 | -10.70 | **<0.001** |
| sex [M] | -0.74 | 0.05 | -0.85 – -0.63 | -13.47 | **<0.001** |
| age avg yr | 0.23 | 0.03 | 0.16 – 0.29 | 7.20 | **<0.001** |
| income to needs | -0.04 | 0.01 | -0.07 – -0.02 | -3.56 | **<0.001** |
| trauma sum × covid stressor sum | 0.04 | 0.02 | 0.00 – 0.09 | 1.99 | **0.047** |
| trauma sum × physical act avg | 0.02 | 0.02 | -0.02 – 0.05 | 1.07 | 0.286 |
| covid stressor sum × physical act avg | -0.02 | 0.01 | -0.04 – 0.01 | -1.42 | 0.155 |
| (trauma sum × covid stressor sum) × physical act avg | -0.00 | 0.01 | -0.02 – 0.02 | -0.01 | 0.990 |
| **Random Effects** | | | | | |
| σ2 | 3.87 | | | | |
| τ00 family\_id | 1.75 | | | | |
| τ00 site\_id | 0.07 | | | | |
| ICC | 0.32 | | | | |
| N family\_id | 6512 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7664 | | | | |
| Marginal R2 / Conditional R2 | 0.076 / 0.371 | | | | |

**Table 11.2.1.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 8.99 | 1.08 | 6.88 – 11.11 | 8.33 | **<0.001** |
| trauma sum | 0.30 | 0.08 | 0.13 – 0.46 | 3.56 | **<0.001** |
| covid stressor sum | 0.43 | 0.06 | 0.30 – 0.55 | 6.76 | **<0.001** |
| physical act avg | -0.34 | 0.05 | -0.43 – -0.25 | -7.15 | **<0.001** |
| sex [M] | -2.78 | 0.15 | -3.07 – -2.50 | -19.20 | **<0.001** |
| age avg yr | 0.55 | 0.08 | 0.39 – 0.71 | 6.65 | **<0.001** |
| income to needs | 0.08 | 0.03 | 0.01 – 0.14 | 2.27 | **0.023** |
| trauma sum × covid stressor sum | 0.20 | 0.06 | 0.08 – 0.32 | 3.31 | **0.001** |
| trauma sum × physical act avg | 0.02 | 0.05 | -0.07 – 0.12 | 0.51 | 0.612 |
| covid stressor sum × physical act avg | -0.00 | 0.03 | -0.07 – 0.06 | -0.10 | 0.918 |
| (trauma sum × covid stressor sum) × physical act avg | -0.04 | 0.04 | -0.11 – 0.03 | -1.00 | 0.317 |
| **Random Effects** | | | | | |
| σ2 | 25.44 | | | | |
| τ00 family\_id | 10.37 | | | | |
| τ00 site\_id | 0.36 | | | | |
| ICC | 0.30 | | | | |
| N family\_id | 5974 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7011 | | | | |
| Marginal R2 / Conditional R2 | 0.084 / 0.356 | | | | |

**Table 11.2.1.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 41.28 | 1.45 | 38.44 – 44.12 | 28.47 | **<0.001** |
| trauma sum | -0.03 | 0.13 | -0.28 – 0.23 | -0.20 | 0.842 |
| covid stressor sum | -0.50 | 0.09 | -0.67 – -0.33 | -5.67 | **<0.001** |
| physical act avg | 0.80 | 0.07 | 0.67 – 0.93 | 12.20 | **<0.001** |
| sex [M] | 1.02 | 0.19 | 0.65 – 1.40 | 5.31 | **<0.001** |
| age avg yr | -0.60 | 0.11 | -0.81 – -0.38 | -5.34 | **<0.001** |
| income to needs | -0.16 | 0.04 | -0.25 – -0.08 | -3.69 | **<0.001** |
| trauma sum × covid stressor sum | -0.06 | 0.10 | -0.25 – 0.14 | -0.58 | 0.564 |
| trauma sum × physical act avg | -0.06 | 0.08 | -0.21 – 0.09 | -0.83 | 0.406 |
| covid stressor sum × physical act avg | 0.04 | 0.05 | -0.06 – 0.13 | 0.81 | 0.418 |
| (trauma sum × covid stressor sum) × physical act avg | 0.06 | 0.06 | -0.05 – 0.17 | 1.11 | 0.266 |
| **Random Effects** | | | | | |
| σ2 | 43.35 | | | | |
| τ00 family\_id | 12.09 | | | | |
| τ00 site\_id | 0.47 | | | | |
| ICC | 0.22 | | | | |
| N family\_id | 5326 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6162 | | | | |
| Marginal R2 / Conditional R2 | 0.051 / 0.264 | | | | |

### Family Relationship Models

**Table 11.2.2.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.73 | 0.40 | 2.94 – 4.53 | 9.24 | **<0.001** |
| trauma sum | 0.11 | 0.03 | 0.05 – 0.18 | 3.71 | **<0.001** |
| covid stressor sum | 0.20 | 0.02 | 0.16 – 0.25 | 8.72 | **<0.001** |
| family relationship avg | -0.88 | 0.05 | -0.98 – -0.77 | -16.03 | **<0.001** |
| sex [M] | -0.77 | 0.05 | -0.87 – -0.66 | -14.24 | **<0.001** |
| age avg yr | 0.20 | 0.03 | 0.14 – 0.26 | 6.49 | **<0.001** |
| income to needs | -0.10 | 0.01 | -0.12 – -0.07 | -7.93 | **<0.001** |
| trauma sum × covid stressor sum | 0.03 | 0.02 | -0.01 – 0.07 | 1.51 | 0.131 |
| trauma sum × family relationship avg | -0.03 | 0.05 | -0.12 – 0.06 | -0.67 | 0.502 |
| covid stressor sum × family relationship avg | -0.11 | 0.04 | -0.19 – -0.03 | -2.85 | **0.004** |
| (trauma sum × covid stressor sum) × family relationship avg | -0.02 | 0.03 | -0.08 – 0.05 | -0.49 | 0.621 |
| **Random Effects** | | | | | |
| σ2 | 3.74 | | | | |
| τ00 family\_id | 1.78 | | | | |
| τ00 site\_id | 0.09 | | | | |
| ICC | 0.33 | | | | |
| N family\_id | 6621 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7792 | | | | |
| Marginal R2 / Conditional R2 | 0.097 / 0.399 | | | | |

**Table 11.2.2.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 10.24 | 1.05 | 8.18 – 12.30 | 9.73 | **<0.001** |
| trauma sum | 0.31 | 0.08 | 0.15 – 0.47 | 3.86 | **<0.001** |
| covid stressor sum | 0.38 | 0.06 | 0.26 – 0.50 | 6.27 | **<0.001** |
| family relationship avg | -2.68 | 0.15 | -2.97 – -2.39 | -17.86 | **<0.001** |
| sex [M] | -2.80 | 0.14 | -3.08 – -2.52 | -19.92 | **<0.001** |
| age avg yr | 0.49 | 0.08 | 0.33 – 0.65 | 6.04 | **<0.001** |
| income to needs | -0.05 | 0.03 | -0.11 – 0.01 | -1.50 | 0.133 |
| trauma sum × covid stressor sum | 0.18 | 0.06 | 0.06 – 0.29 | 3.10 | **0.002** |
| trauma sum × family relationship avg | -0.10 | 0.12 | -0.34 – 0.14 | -0.82 | 0.413 |
| covid stressor sum × family relationship avg | -0.25 | 0.11 | -0.46 – -0.04 | -2.29 | **0.022** |
| (trauma sum × covid stressor sum) × family relationship avg | -0.10 | 0.09 | -0.28 – 0.09 | -1.03 | 0.303 |
| **Random Effects** | | | | | |
| σ2 | 24.98 | | | | |
| τ00 family\_id | 9.22 | | | | |
| τ00 site\_id | 0.37 | | | | |
| ICC | 0.28 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.128 / 0.370 | | | | |

**Table 11.2.2.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 38.78 | 1.43 | 35.98 – 41.58 | 27.18 | **<0.001** |
| trauma sum | -0.03 | 0.13 | -0.28 – 0.21 | -0.27 | 0.784 |
| covid stressor sum | -0.44 | 0.09 | -0.61 – -0.27 | -5.08 | **<0.001** |
| family relationship avg | 4.04 | 0.22 | 3.61 – 4.47 | 18.48 | **<0.001** |
| sex [M] | 1.18 | 0.19 | 0.81 – 1.54 | 6.25 | **<0.001** |
| age avg yr | -0.47 | 0.11 | -0.69 – -0.26 | -4.30 | **<0.001** |
| income to needs | 0.06 | 0.04 | -0.02 – 0.15 | 1.52 | 0.128 |
| trauma sum × covid stressor sum | -0.03 | 0.10 | -0.22 – 0.16 | -0.34 | 0.734 |
| trauma sum × family relationship avg | -0.15 | 0.22 | -0.57 – 0.28 | -0.68 | 0.496 |
| covid stressor sum × family relationship avg | 0.36 | 0.16 | 0.04 – 0.69 | 2.22 | **0.027** |
| (trauma sum × covid stressor sum) × family relationship avg | -0.02 | 0.16 | -0.34 – 0.29 | -0.15 | 0.885 |
| **Random Effects** | | | | | |
| σ2 | 41.72 | | | | |
| τ00 family\_id | 11.63 | | | | |
| τ00 site\_id | 0.63 | | | | |
| ICC | 0.23 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.086 / 0.293 | | | | |

### Peer Relationship Models

**Table 11.2.3.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.25 | 0.40 | 2.45 – 4.04 | 8.02 | **<0.001** |
| trauma sum | 0.12 | 0.03 | 0.06 – 0.19 | 3.90 | **<0.001** |
| covid stressor sum | 0.21 | 0.02 | 0.16 – 0.25 | 8.88 | **<0.001** |
| friend relationship avg | -0.64 | 0.05 | -0.74 – -0.54 | -12.54 | **<0.001** |
| sex [M] | -0.77 | 0.05 | -0.88 – -0.66 | -14.17 | **<0.001** |
| age avg yr | 0.23 | 0.03 | 0.17 – 0.29 | 7.43 | **<0.001** |
| income to needs | -0.07 | 0.01 | -0.10 – -0.05 | -5.88 | **<0.001** |
| trauma sum × covid stressor sum | 0.03 | 0.02 | -0.01 – 0.08 | 1.57 | 0.116 |
| trauma sum × friend relationship avg | -0.05 | 0.05 | -0.14 – 0.05 | -1.00 | 0.318 |
| covid stressor sum × friend relationship avg | -0.16 | 0.04 | -0.23 – -0.09 | -4.56 | **<0.001** |
| (trauma sum × covid stressor sum) × friend relationship avg | 0.04 | 0.03 | -0.03 – 0.10 | 1.13 | 0.257 |
| **Random Effects** | | | | | |
| σ2 | 3.72 | | | | |
| τ00 family\_id | 1.89 | | | | |
| τ00 site\_id | 0.08 | | | | |
| ICC | 0.35 | | | | |
| N family\_id | 6621 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7792 | | | | |
| Marginal R2 / Conditional R2 | 0.085 / 0.402 | | | | |

**Table 11.2.3.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 8.70 | 1.06 | 6.63 – 10.78 | 8.22 | **<0.001** |
| trauma sum | 0.36 | 0.08 | 0.19 – 0.52 | 4.26 | **<0.001** |
| covid stressor sum | 0.39 | 0.06 | 0.27 – 0.51 | 6.28 | **<0.001** |
| friend relationship avg | -2.01 | 0.14 | -2.29 – -1.74 | -14.33 | **<0.001** |
| sex [M] | -2.81 | 0.14 | -3.09 – -2.53 | -19.82 | **<0.001** |
| age avg yr | 0.59 | 0.08 | 0.43 – 0.75 | 7.21 | **<0.001** |
| income to needs | 0.02 | 0.03 | -0.04 – 0.09 | 0.77 | 0.440 |
| trauma sum × covid stressor sum | 0.20 | 0.06 | 0.09 – 0.32 | 3.52 | **<0.001** |
| trauma sum × friend relationship avg | -0.08 | 0.13 | -0.33 – 0.18 | -0.61 | 0.544 |
| covid stressor sum × friend relationship avg | -0.40 | 0.10 | -0.60 – -0.21 | -4.03 | **<0.001** |
| (trauma sum × covid stressor sum) × friend relationship avg | -0.07 | 0.10 | -0.26 – 0.12 | -0.69 | 0.487 |
| **Random Effects** | | | | | |
| σ2 | 24.82 | | | | |
| τ00 family\_id | 10.01 | | | | |
| τ00 site\_id | 0.36 | | | | |
| ICC | 0.29 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.113 / 0.375 | | | | |

**Table 11.2.3.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 40.72 | 1.42 | 37.93 – 43.51 | 28.60 | **<0.001** |
| trauma sum | -0.07 | 0.13 | -0.32 – 0.19 | -0.50 | 0.615 |
| covid stressor sum | -0.47 | 0.09 | -0.64 – -0.30 | -5.41 | **<0.001** |
| friend relationship avg | 3.57 | 0.20 | 3.17 – 3.97 | 17.60 | **<0.001** |
| sex [M] | 1.12 | 0.19 | 0.75 – 1.49 | 5.95 | **<0.001** |
| age avg yr | -0.59 | 0.11 | -0.81 – -0.38 | -5.40 | **<0.001** |
| income to needs | -0.04 | 0.04 | -0.12 – 0.05 | -0.88 | 0.377 |
| trauma sum × covid stressor sum | -0.06 | 0.10 | -0.25 – 0.13 | -0.66 | 0.512 |
| trauma sum × friend relationship avg | -0.42 | 0.20 | -0.82 – -0.03 | -2.11 | **0.035** |
| covid stressor sum × friend relationship avg | 0.21 | 0.16 | -0.09 – 0.52 | 1.36 | 0.173 |
| (trauma sum × covid stressor sum) × friend relationship avg | 0.25 | 0.16 | -0.05 – 0.56 | 1.62 | 0.105 |
| **Random Effects** | | | | | |
| σ2 | 41.57 | | | | |
| τ00 family\_id | 12.20 | | | | |
| τ00 site\_id | 0.49 | | | | |
| ICC | 0.23 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.079 / 0.295 | | | | |

### Parental Support Models

**Table 11.2.4.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.05 | 0.45 | 2.18 – 3.93 | 6.83 | **<0.001** |
| trauma sum | 0.09 | 0.04 | 0.02 – 0.16 | 2.39 | **0.017** |
| covid stressor sum | 0.24 | 0.03 | 0.19 – 0.30 | 9.35 | **<0.001** |
| par assistance avg | -0.03 | 0.02 | -0.07 – -0.00 | -2.06 | **0.039** |
| sex [M] | -0.80 | 0.06 | -0.92 – -0.69 | -13.68 | **<0.001** |
| age avg yr | 0.24 | 0.03 | 0.18 – 0.31 | 7.14 | **<0.001** |
| income to needs | -0.07 | 0.01 | -0.10 – -0.04 | -5.10 | **<0.001** |
| trauma sum × covid stressor sum | 0.04 | 0.02 | -0.01 – 0.09 | 1.55 | 0.122 |
| trauma sum × par assistance avg | -0.02 | 0.02 | -0.06 – 0.02 | -1.12 | 0.263 |
| covid stressor sum × par assistance avg | 0.01 | 0.01 | -0.02 – 0.03 | 0.63 | 0.527 |
| (trauma sum × covid stressor sum) × par assistance avg | -0.00 | 0.01 | -0.03 – 0.02 | -0.19 | 0.851 |
| **Random Effects** | | | | | |
| σ2 | 3.45 | | | | |
| τ00 family\_id | 1.96 | | | | |
| τ00 site\_id | 0.09 | | | | |
| ICC | 0.37 | | | | |
| N family\_id | 5463 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6387 | | | | |
| Marginal R2 / Conditional R2 | 0.063 / 0.413 | | | | |

**Table 11.2.4.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 8.97 | 1.17 | 6.66 – 11.27 | 7.63 | **<0.001** |
| trauma sum | 0.25 | 0.10 | 0.06 – 0.43 | 2.60 | **0.009** |
| covid stressor sum | 0.49 | 0.07 | 0.36 – 0.63 | 7.06 | **<0.001** |
| par assistance avg | -0.20 | 0.04 | -0.28 – -0.11 | -4.46 | **<0.001** |
| sex [M] | -2.92 | 0.15 | -3.22 – -2.61 | -18.85 | **<0.001** |
| age avg yr | 0.57 | 0.09 | 0.39 – 0.75 | 6.33 | **<0.001** |
| income to needs | 0.01 | 0.04 | -0.06 – 0.08 | 0.25 | 0.804 |
| trauma sum × covid stressor sum | 0.20 | 0.07 | 0.07 – 0.33 | 2.94 | **0.003** |
| trauma sum × par assistance avg | -0.07 | 0.05 | -0.17 – 0.03 | -1.43 | 0.154 |
| covid stressor sum × par assistance avg | 0.03 | 0.03 | -0.04 – 0.09 | 0.80 | 0.424 |
| (trauma sum × covid stressor sum) × par assistance avg | 0.02 | 0.04 | -0.06 – 0.09 | 0.44 | 0.662 |
| **Random Effects** | | | | | |
| σ2 | 23.80 | | | | |
| τ00 family\_id | 10.99 | | | | |
| τ00 site\_id | 0.38 | | | | |
| ICC | 0.32 | | | | |
| N family\_id | 5101 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5942 | | | | |
| Marginal R2 / Conditional R2 | 0.084 / 0.380 | | | | |

**Table 11.2.4.3.**

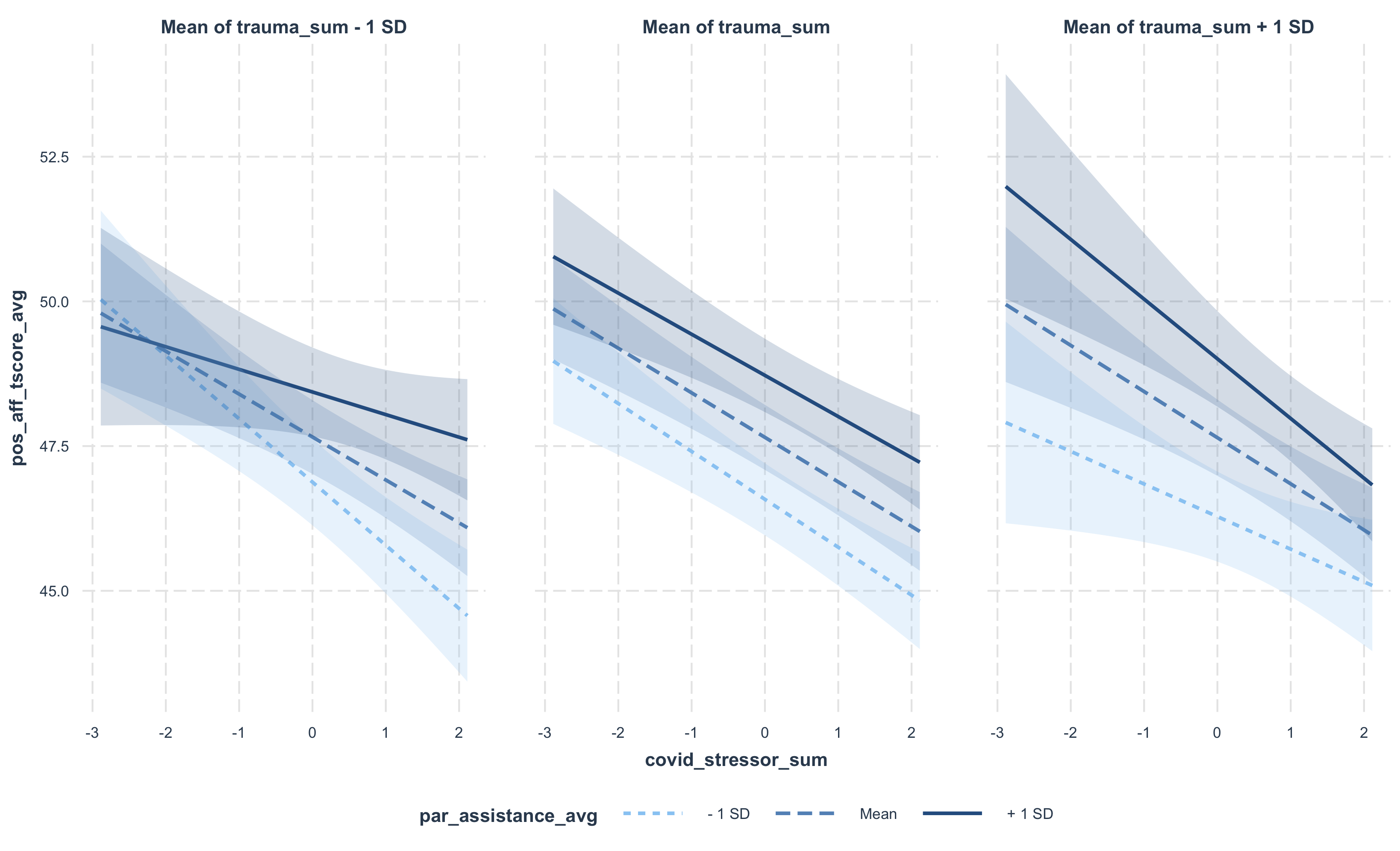
*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 39.20 | 1.56 | 36.14 – 42.26 | 25.12 | **<0.001** |
| trauma sum | -0.02 | 0.14 | -0.30 – 0.25 | -0.16 | 0.874 |
| covid stressor sum | -0.58 | 0.09 | -0.76 – -0.39 | -6.10 | **<0.001** |
| par assistance avg | 0.32 | 0.06 | 0.20 – 0.43 | 5.43 | **<0.001** |
| sex [M] | 1.10 | 0.20 | 0.70 – 1.50 | 5.42 | **<0.001** |
| age avg yr | -0.49 | 0.12 | -0.72 – -0.25 | -4.07 | **<0.001** |
| income to needs | 0.00 | 0.05 | -0.09 – 0.09 | 0.06 | 0.950 |
| trauma sum × covid stressor sum | -0.04 | 0.11 | -0.25 – 0.17 | -0.37 | 0.713 |
| trauma sum × par assistance avg | 0.11 | 0.07 | -0.02 – 0.24 | 1.61 | 0.108 |
| covid stressor sum × par assistance avg | 0.09 | 0.04 | 0.00 – 0.18 | 1.98 | **0.047** |
| (trauma sum × covid stressor sum) × par assistance avg | -0.13 | 0.05 | -0.23 – -0.03 | -2.50 | **0.012** |
| **Random Effects** | | | | | |
| σ2 | 42.98 | | | | |
| τ00 family\_id | 12.98 | | | | |
| τ00 site\_id | 0.59 | | | | |
| ICC | 0.24 | | | | |
| N family\_id | 4834 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5589 | | | | |
| Marginal R2 / Conditional R2 | 0.029 / 0.262 | | | | |

### Three-way Interaction of COVID-19 Stressor, Total Trauma, and Parental Support (for Schoolwork) in Association with Positive Affect

### Figure 4.

### *Interaction Plot for the Three-way Interaction of COVID-19 Stressor, Total Trauma, and Parental Support (for Schoolwork) in Association with Positive Affect*

****

*Note.* Par\_assistance\_avg refers to parental support average.

This figure demonstrates that in adolescents with low traumatic experiences, higher parental support was associated with higher levels of positive affect at a high number of COVID-19 stressors, demonstrating a buffering effect of parental support for schoolwork on COVID-19 stressor effects. However, in adolescents with high traumatic experiences, higher parental support was associated with high levels of positive affect only when COVID-19 stressor experience was low. This suggests that parental support for schoolwork may be an effective protective factor if adolescents have had traumatic experiences or high COVID-19 stressor exposure, but not both. That is, it cannot mitigate the joint negative effect of high levels of traumatic experiences and COVID-19 stressor exposure.

All other findings remain consistent with the main analyses using trauma exposure as a binary variable.

## Model Outputs for Primary Analyses Models Covarying for Pre-COVID Total Mental Health Problems

### Trauma Exposure by COVID-19 Stressor Interaction Models

**Table 12.1.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.26 | 0.40 | 2.47 – 4.05 | 8.06 | **<0.001** |
| trauma binary [1] | 0.00 | 0.06 | -0.11 – 0.12 | 0.08 | 0.936 |
| covid stressor sum | 0.19 | 0.03 | 0.14 – 0.24 | 7.33 | **<0.001** |
| sex [M] | -0.88 | 0.05 | -0.99 – -0.78 | -16.18 | **<0.001** |
| age avg yr | 0.24 | 0.03 | 0.17 – 0.30 | 7.59 | **<0.001** |
| income to needs | -0.05 | 0.01 | -0.08 – -0.03 | -4.41 | **<0.001** |
| cbcl totalmh centred | 0.03 | 0.00 | 0.02 – 0.03 | 15.45 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.05 | 0.04 | -0.04 – 0.13 | 1.11 | 0.266 |
| **Random Effects** | | | | | |
| σ2 | 3.81 | | | | |
| τ00 family\_id | 1.80 | | | | |
| τ00 site\_id | 0.07 | | | | |
| ICC | 0.33 | | | | |
| N family\_id | 6621 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7792 | | | | |
| Marginal R2 / Conditional R2 | 0.085 / 0.386 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 12.1.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 8.85 | 1.06 | 6.76 – 10.93 | 8.32 | **<0.001** |
| trauma binary [1] | 0.03 | 0.16 | -0.28 – 0.34 | 0.19 | 0.850 |
| covid stressor sum | 0.33 | 0.07 | 0.20 – 0.47 | 4.90 | **<0.001** |
| sex [M] | -3.09 | 0.14 | -3.37 – -2.81 | -21.56 | **<0.001** |
| age avg yr | 0.59 | 0.08 | 0.43 – 0.76 | 7.27 | **<0.001** |
| income to needs | 0.07 | 0.03 | 0.00 – 0.13 | 2.05 | **0.041** |
| cbcl totalmh centred | 0.06 | 0.00 | 0.06 – 0.07 | 14.47 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.31 | 0.11 | 0.09 – 0.53 | 2.76 | **0.006** |
| **Random Effects** | | | | | |
| σ2 | 25.25 | | | | |
| τ00 family\_id | 10.13 | | | | |
| τ00 site\_id | 0.28 | | | | |
| ICC | 0.29 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.100 / 0.363 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 10.1.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 41.04 | 1.46 | 38.19 – 43.89 | 28.20 | **<0.001** |
| trauma binary [1] | 0.37 | 0.21 | -0.05 – 0.79 | 1.72 | 0.085 |
| covid stressor sum | -0.46 | 0.09 | -0.65 – -0.28 | -4.95 | **<0.001** |
| sex [M] | 1.49 | 0.19 | 1.11 – 1.87 | 7.68 | **<0.001** |
| age avg yr | -0.64 | 0.11 | -0.86 – -0.42 | -5.73 | **<0.001** |
| income to needs | -0.08 | 0.04 | -0.17 – 0.00 | -1.90 | 0.057 |
| cbcl totalmh centred | -0.07 | 0.01 | -0.08 – -0.06 | -11.23 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.02 | 0.16 | -0.29 – 0.33 | 0.10 | 0.916 |
| **Random Effects** | | | | | |
| σ2 | 42.81 | | | | |
| τ00 family\_id | 13.32 | | | | |
| τ00 site\_id | 0.54 | | | | |
| ICC | 0.24 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.039 / 0.274 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

### Trauma Exposure by COVID-19 Stressor by Protective Factor Interaction Models

### Physical Activity Models

**Table 12.2.1.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.19 | 0.40 | 2.40 – 3.98 | 7.92 | **<0.001** |
| trauma binary [1] | -0.00 | 0.06 | -0.12 – 0.11 | -0.05 | 0.962 |
| covid stressor sum | 0.18 | 0.03 | 0.13 – 0.23 | 7.18 | **<0.001** |
| physical act avg | -0.17 | 0.02 | -0.21 – -0.14 | -9.12 | **<0.001** |
| sex [M] | -0.83 | 0.05 | -0.94 – -0.72 | -15.23 | **<0.001** |
| age avg yr | 0.23 | 0.03 | 0.17 – 0.29 | 7.41 | **<0.001** |
| cbcl totalmh centred | 0.02 | 0.00 | 0.02 – 0.03 | 14.80 | **<0.001** |
| income to needs | -0.03 | 0.01 | -0.05 – -0.01 | -2.39 | **0.017** |
| trauma binary [1] × covid stressor sum | 0.05 | 0.04 | -0.03 – 0.13 | 1.21 | 0.225 |
| trauma binary [1] × physical act avg | 0.02 | 0.03 | -0.04 – 0.08 | 0.78 | 0.436 |
| covid stressor sum × physical act avg | -0.00 | 0.01 | -0.03 – 0.02 | -0.30 | 0.766 |
| (trauma binary [1] × covid stressor sum) × physical act avg | -0.03 | 0.02 | -0.08 – 0.01 | -1.50 | 0.134 |
| **Random Effects** | | | | | |
| σ2 | 3.83 | | | | |
| τ00 family\_id | 1.64 | | | | |
| τ00 site\_id | 0.06 | | | | |
| ICC | 0.31 | | | | |
| N family\_id | 6512 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7664 | | | | |
| Marginal R2 / Conditional R2 | 0.101 / 0.377 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 12.2.1.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 9.09 | 1.06 | 7.00 – 11.17 | 8.54 | **<0.001** |
| trauma binary [1] | 0.06 | 0.16 | -0.24 – 0.37 | 0.41 | 0.682 |
| covid stressor sum | 0.33 | 0.07 | 0.19 – 0.46 | 4.79 | **<0.001** |
| physical act avg | -0.31 | 0.05 | -0.41 – -0.21 | -6.05 | **<0.001** |
| sex [M] | -2.99 | 0.14 | -3.28 – -2.71 | -20.79 | **<0.001** |
| age avg yr | 0.56 | 0.08 | 0.40 – 0.72 | 6.82 | **<0.001** |
| cbcl totalmh centred | 0.06 | 0.00 | 0.05 – 0.07 | 13.90 | **<0.001** |
| income to needs | 0.11 | 0.03 | 0.04 – 0.17 | 3.28 | **0.001** |
| trauma binary [1] × covid stressor sum | 0.30 | 0.11 | 0.08 – 0.52 | 2.63 | **0.009** |
| trauma binary [1] × physical act avg | 0.05 | 0.08 | -0.11 – 0.22 | 0.62 | 0.533 |
| covid stressor sum × physical act avg | 0.02 | 0.04 | -0.05 – 0.09 | 0.55 | 0.583 |
| (trauma binary [1] × covid stressor sum) × physical act avg | -0.10 | 0.06 | -0.22 – 0.02 | -1.69 | 0.091 |
| **Random Effects** | | | | | |
| σ2 | 25.20 | | | | |
| τ00 family\_id | 9.69 | | | | |
| τ00 site\_id | 0.26 | | | | |
| ICC | 0.28 | | | | |
| N family\_id | 5974 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7011 | | | | |
| Marginal R2 / Conditional R2 | 0.107 / 0.360 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 12.2.1.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 41.32 | 1.44 | 38.50 – 44.14 | 28.75 | **<0.001** |
| trauma binary [1] | 0.41 | 0.21 | -0.00 – 0.82 | 1.94 | 0.052 |
| covid stressor sum | -0.43 | 0.09 | -0.62 – -0.25 | -4.66 | **<0.001** |
| physical act avg | 0.74 | 0.07 | 0.60 – 0.87 | 10.72 | **<0.001** |
| sex [M] | 1.25 | 0.19 | 0.88 – 1.63 | 6.52 | **<0.001** |
| age avg yr | -0.62 | 0.11 | -0.83 – -0.40 | -5.59 | **<0.001** |
| cbcl totalmh centred | -0.06 | 0.01 | -0.07 – -0.05 | -10.55 | **<0.001** |
| income to needs | -0.20 | 0.04 | -0.28 – -0.11 | -4.48 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.01 | 0.16 | -0.30 – 0.31 | 0.04 | 0.966 |
| trauma binary [1] × physical act avg | -0.02 | 0.12 | -0.25 – 0.20 | -0.19 | 0.845 |
| covid stressor sum × physical act avg | 0.01 | 0.05 | -0.08 – 0.11 | 0.28 | 0.779 |
| (trauma binary [1] × covid stressor sum) × physical act avg | 0.14 | 0.09 | -0.03 – 0.31 | 1.62 | 0.106 |
| **Random Effects** | | | | | |
| σ2 | 43.12 | | | | |
| τ00 family\_id | 11.31 | | | | |
| τ00 site\_id | 0.47 | | | | |
| ICC | 0.21 | | | | |
| N family\_id | 5326 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6162 | | | | |
| Marginal R2 / Conditional R2 | 0.067 / 0.267 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

### Family Relationship Models

**Table 12.2.2.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.76 | 0.40 | 2.98 – 4.54 | 9.44 | **<0.001** |
| trauma binary [1] | 0.00 | 0.06 | -0.11 – 0.12 | 0.09 | 0.932 |
| covid stressor sum | 0.17 | 0.03 | 0.12 – 0.22 | 6.87 | **<0.001** |
| family relationship avg | -0.85 | 0.06 | -0.97 – -0.73 | -13.99 | **<0.001** |
| sex [M] | -0.85 | 0.05 | -0.96 – -0.75 | -15.98 | **<0.001** |
| age avg yr | 0.20 | 0.03 | 0.14 – 0.26 | 6.66 | **<0.001** |
| cbcl totalmh centred | 0.02 | 0.00 | 0.02 – 0.03 | 15.27 | **<0.001** |
| income to needs | -0.08 | 0.01 | -0.10 – -0.06 | -6.61 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.03 | 0.04 | -0.05 – 0.11 | 0.72 | 0.472 |
| trauma binary [1] × family relationship avg | -0.07 | 0.10 | -0.26 – 0.12 | -0.74 | 0.462 |
| covid stressor sum × family relationship avg | -0.11 | 0.04 | -0.20 – -0.03 | -2.62 | **0.009** |
| (trauma binary [1] × covid stressor sum) × family relationship avg | -0.00 | 0.07 | -0.14 – 0.13 | -0.04 | 0.964 |
| **Random Effects** | | | | | |
| σ2 | 3.71 | | | | |
| τ00 family\_id | 1.66 | | | | |
| τ00 site\_id | 0.08 | | | | |
| ICC | 0.32 | | | | |
| N family\_id | 6621 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7792 | | | | |
| Marginal R2 / Conditional R2 | 0.122 / 0.403 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 12.2.2.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadnesss** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 10.33 | 1.04 | 8.29 – 12.36 | 9.96 | **<0.001** |
| trauma binary [1] | 0.04 | 0.15 | -0.26 – 0.34 | 0.25 | 0.805 |
| covid stressor sum | 0.29 | 0.07 | 0.16 – 0.42 | 4.37 | **<0.001** |
| family relationship avg | -2.73 | 0.17 | -3.06 – -2.40 | -16.34 | **<0.001** |
| sex [M] | -3.00 | 0.14 | -3.27 – -2.73 | -21.51 | **<0.001** |
| age avg yr | 0.49 | 0.08 | 0.34 – 0.65 | 6.20 | **<0.001** |
| cbcl totalmh centred | 0.06 | 0.00 | 0.05 – 0.07 | 14.12 | **<0.001** |
| income to needs | -0.01 | 0.03 | -0.07 – 0.05 | -0.36 | 0.721 |
| trauma binary [1] × covid stressor sum | 0.27 | 0.11 | 0.05 – 0.48 | 2.43 | **0.015** |
| trauma binary [1] × family relationship avg | 0.12 | 0.27 | -0.41 – 0.66 | 0.45 | 0.650 |
| covid stressor sum × family relationship avg | -0.28 | 0.12 | -0.51 – -0.05 | -2.38 | **0.017** |
| (trauma binary [1] × covid stressor sum) × family relationship avg | -0.05 | 0.19 | -0.42 – 0.32 | -0.25 | 0.802 |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 12.2.2.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 38.83 | 1.41 | 36.06 – 41.60 | 27.47 | **<0.001** |
| trauma binary [1] | 0.35 | 0.21 | -0.05 – 0.76 | 1.72 | 0.086 |
| covid stressor sum | -0.38 | 0.09 | -0.56 – -0.20 | -4.18 | **<0.001** |
| family relationship avg | 3.92 | 0.24 | 3.46 – 4.39 | 16.40 | **<0.001** |
| sex [M] | 1.39 | 0.19 | 1.02 – 1.76 | 7.43 | **<0.001** |
| age avg yr | -0.49 | 0.11 | -0.70 – -0.28 | -4.52 | **<0.001** |
| cbcl totalmh centred | -0.06 | 0.01 | -0.08 – -0.05 | -11.09 | **<0.001** |
| income to needs | 0.02 | 0.04 | -0.06 – 0.11 | 0.57 | 0.567 |
| trauma binary [1] × covid stressor sum | 0.07 | 0.15 | -0.23 – 0.37 | 0.46 | 0.649 |
| trauma binary [1] × family relationship avg | -0.03 | 0.39 | -0.80 – 0.73 | -0.09 | 0.931 |
| covid stressor sum × family relationship avg | 0.34 | 0.18 | -0.02 – 0.69 | 1.87 | 0.061 |
| (trauma binary [1] × covid stressor sum) × family relationship avg | -0.02 | 0.28 | -0.57 – 0.53 | -0.07 | 0.944 |
| **Random Effects** | | | | | |
| σ2 | 41.56 | | | | |
| τ00 family\_id | 10.73 | | | | |
| τ00 site\_id | 0.61 | | | | |
| ICC | 0.21 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.103 / 0.295 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

### Peer Relationship Models

**Table 12.2.3.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.29 | 0.40 | 2.50 – 4.07 | 8.24 | **<0.001** |
| trauma binary [1] | 0.02 | 0.06 | -0.10 – 0.13 | 0.27 | 0.787 |
| covid stressor sum | 0.17 | 0.03 | 0.12 – 0.22 | 6.89 | **<0.001** |
| friend relationship avg | -0.65 | 0.06 | -0.76 – -0.54 | -11.45 | **<0.001** |
| sex [M] | -0.86 | 0.05 | -0.96 – -0.75 | -15.90 | **<0.001** |
| age avg yr | 0.23 | 0.03 | 0.17 – 0.29 | 7.58 | **<0.001** |
| cbcl totalmh centred | 0.03 | 0.00 | 0.02 – 0.03 | 15.42 | **<0.001** |
| income to needs | -0.06 | 0.01 | -0.08 – -0.03 | -4.55 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.04 | 0.04 | -0.04 – 0.13 | 1.04 | 0.298 |
| trauma binary [1] × friend relationship avg | -0.01 | 0.09 | -0.19 – 0.16 | -0.15 | 0.880 |
| covid stressor sum × friend relationship avg | -0.15 | 0.04 | -0.23 – -0.07 | -3.84 | **<0.001** |
| (trauma binary [1] × covid stressor sum) × friend relationship avg | 0.04 | 0.06 | -0.08 – 0.16 | 0.63 | 0.527 |
| **Random Effects** | | | | | |
| σ2 | 3.69 | | | | |
| τ00 family\_id | 1.76 | | | | |
| τ00 site\_id | 0.07 | | | | |
| ICC | 0.33 | | | | |
| N family\_id | 6621 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7792 | | | | |
| Marginal R2 / Conditional R2 | 0.111 / 0.406 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 12.2.3.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 8.87 | 1.04 | 6.83 – 10.91 | 8.51 | **<0.001** |
| trauma binary [1] | 0.04 | 0.15 | -0.26 – 0.35 | 0.29 | 0.770 |
| covid stressor sum | 0.29 | 0.07 | 0.16 – 0.42 | 4.33 | **<0.001** |
| friend relationship avg | -2.06 | 0.15 | -2.36 – -1.75 | -13.32 | **<0.001** |
| sex [M] | -3.01 | 0.14 | -3.29 – -2.74 | -21.41 | **<0.001** |
| age avg yr | 0.59 | 0.08 | 0.43 – 0.74 | 7.34 | **<0.001** |
| cbcl totalmh centred | 0.06 | 0.00 | 0.05 – 0.07 | 14.35 | **<0.001** |
| income to needs | 0.06 | 0.03 | -0.00 – 0.12 | 1.92 | 0.055 |
| trauma binary [1] × covid stressor sum | 0.31 | 0.11 | 0.10 – 0.53 | 2.82 | **0.005** |
| trauma binary [1] × friend relationship avg | 0.16 | 0.25 | -0.33 – 0.66 | 0.64 | 0.521 |
| covid stressor sum × friend relationship avg | -0.36 | 0.11 | -0.57 – -0.15 | -3.33 | **0.001** |
| (trauma binary [1] × covid stressor sum) × friend relationship avg | -0.20 | 0.18 | -0.55 – 0.15 | -1.14 | 0.255 |
| **Random Effects** | | | | | |
| σ2 | 24.59 | | | | |
| τ00 family\_id | 9.33 | | | | |
| τ00 site\_id | 0.26 | | | | |
| ICC | 0.28 | | | | |
| N family\_id | 6041 | | | | |
| N site\_id | 22 | | | | |
| Observations | 7092 | | | | |
| Marginal R2 / Conditional R2 | 0.136 / 0.378 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 12.2.3.3.**

*Positive Affect*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 40.78 | 1.41 | 38.01 – 43.54 | 28.91 | **<0.001** |
| trauma binary [1] | 0.28 | 0.21 | -0.13 – 0.69 | 1.35 | 0.176 |
| covid stressor sum | -0.41 | 0.09 | -0.59 – -0.23 | -4.49 | **<0.001** |
| friend relationship avg | 3.51 | 0.22 | 3.08 – 3.95 | 15.85 | **<0.001** |
| sex [M] | 1.35 | 0.19 | 0.98 – 1.71 | 7.16 | **<0.001** |
| age avg yr | -0.61 | 0.11 | -0.82 – -0.40 | -5.64 | **<0.001** |
| cbcl totalmh centred | -0.06 | 0.01 | -0.08 – -0.05 | -11.14 | **<0.001** |
| income to needs | -0.08 | 0.04 | -0.16 – 0.01 | -1.80 | 0.072 |
| trauma binary [1] × covid stressor sum | 0.03 | 0.15 | -0.27 – 0.33 | 0.22 | 0.829 |
| trauma binary [1] × friend relationship avg | -0.48 | 0.36 | -1.19 – 0.23 | -1.33 | 0.185 |
| covid stressor sum × friend relationship avg | 0.21 | 0.17 | -0.12 – 0.54 | 1.28 | 0.202 |
| (trauma binary [1] × covid stressor sum) × friend relationship avg | 0.21 | 0.26 | -0.30 – 0.73 | 0.81 | 0.416 |
| **Random Effects** | | | | | |
| σ2 | 41.40 | | | | |
| τ00 family\_id | 11.31 | | | | |
| τ00 site\_id | 0.48 | | | | |
| ICC | 0.22 | | | | |
| N family\_id | 5355 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6192 | | | | |
| Marginal R2 / Conditional R2 | 0.097 / 0.297 | | | | |
|  |  | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

### Parental Support Models

**Table 12.2.4.1.**

*Perceived Stress*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Perceived Stress** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 3.12 | 0.44 | 2.26 – 3.98 | 7.11 | **<0.001** |
| trauma binary [1] | 0.04 | 0.06 | -0.09 – 0.17 | 0.63 | 0.529 |
| covid stressor sum | 0.22 | 0.03 | 0.16 – 0.27 | 7.64 | **<0.001** |
| par assistance avg | -0.04 | 0.02 | -0.07 – -0.01 | -2.29 | **0.022** |
| sex [M] | -0.89 | 0.06 | -1.00 – -0.78 | -15.30 | **<0.001** |
| age avg yr | 0.24 | 0.03 | 0.18 – 0.31 | 7.19 | **<0.001** |
| cbcl totalmh centred | 0.03 | 0.00 | 0.02 – 0.03 | 14.72 | **<0.001** |
| income to needs | -0.05 | 0.01 | -0.08 – -0.03 | -3.92 | **<0.001** |
| trauma binary [1] × covid stressor sum | 0.01 | 0.05 | -0.09 – 0.10 | 0.12 | 0.903 |
| trauma binary [1] × par assistance avg | -0.04 | 0.03 | -0.10 – 0.02 | -1.32 | 0.186 |
| covid stressor sum × par assistance avg | 0.00 | 0.01 | -0.02 – 0.03 | 0.17 | 0.865 |
| (trauma binary [1] × covid stressor sum) × par assistance avg | 0.00 | 0.02 | -0.04 – 0.04 | 0.08 | 0.934 |
| **Random Effects** | | | | | |
| σ2 | 3.41 | | | | |
| τ00 family\_id | 1.82 | | | | |
| τ00 site\_id | 0.08 | | | | |
| ICC | 0.36 | | | | |
| N family\_id | 5463 | | | | |
| N site\_id | 22 | | | | |
| Observations | 6387 | | | | |
| Marginal R2 / Conditional R2 | 0.093 / 0.418 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 12.2.4.2.**

*Sadness*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sadness** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 9.19 | 1.15 | 6.93 – 11.46 | 7.96 | **<0.001** |
| trauma binary [1] | 0.14 | 0.17 | -0.20 – 0.47 | 0.79 | 0.431 |
| covid stressor sum | 0.39 | 0.07 | 0.24 – 0.53 | 5.17 | **<0.001** |
| par assistance avg | -0.23 | 0.05 | -0.32 – -0.14 | -5.08 | **<0.001** |
| sex [M] | -3.12 | 0.15 | -3.42 – -2.82 | -20.38 | **<0.001** |
| age avg yr | 0.56 | 0.09 | 0.39 – 0.74 | 6.35 | **<0.001** |
| cbcl totalmh centred | 0.07 | 0.00 | 0.06 – 0.08 | 13.80 | **<0.001** |
| income to needs | 0.05 | 0.03 | -0.02 – 0.11 | 1.35 | 0.177 |
| trauma binary [1] × covid stressor sum | 0.25 | 0.13 | -0.00 – 0.50 | 1.95 | 0.051 |
| trauma binary [1] × par assistance avg | -0.05 | 0.08 | -0.20 – 0.11 | -0.59 | 0.555 |
| covid stressor sum × par assistance avg | 0.02 | 0.03 | -0.05 – 0.09 | 0.57 | 0.571 |
| (trauma binary [1] × covid stressor sum) × par assistance avg | 0.00 | 0.06 | -0.12 – 0.12 | 0.01 | 0.992 |
| **Random Effects** | | | | | |
| σ2 | 23.63 | | | | |
| τ00 family\_id | 10.10 | | | | |
| τ00 site\_id | 0.26 | | | | |
| ICC | 0.30 | | | | |
| N family\_id | 5101 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5942 | | | | |
| Marginal R2 / Conditional R2 | 0.111 / 0.382 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.

**Table 12.2.4.3.**

*Positive Affect*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Positive Affect** | | | | |
| *Predictors* | *B* | *SE* | *95% CI* | *t* | *p* |
| (Intercept) | 38.96 | 1.54 | 35.93 – 41.99 | 25.24 | **<0.001** |
| trauma binary [1] | 0.33 | 0.23 | -0.11 – 0.77 | 1.47 | 0.142 |
| covid stressor sum | -0.49 | 0.10 | -0.69 – -0.30 | -4.94 | **<0.001** |
| par assistance avg | 0.36 | 0.06 | 0.24 – 0.48 | 5.93 | **<0.001** |
| sex [M] | 1.35 | 0.20 | 0.96 – 1.75 | 6.71 | **<0.001** |
| age avg yr | -0.49 | 0.12 | -0.72 – -0.26 | -4.12 | **<0.001** |
| cbcl totalmh centred | -0.08 | 0.01 | -0.09 – -0.06 | -11.82 | **<0.001** |
| income to needs | -0.04 | 0.05 | -0.13 – 0.05 | -0.81 | 0.416 |
| trauma binary [1] × covid stressor sum | 0.06 | 0.17 | -0.27 – 0.39 | 0.35 | 0.727 |
| trauma binary [1] × par assistance avg | 0.06 | 0.11 | -0.15 – 0.27 | 0.56 | 0.578 |
| covid stressor sum × par assistance avg | 0.08 | 0.05 | -0.01 – 0.18 | 1.83 | 0.067 |
| (trauma binary [1] × covid stressor sum) × par assistance avg | -0.11 | 0.08 | -0.27 – 0.04 | -1.41 | 0.159 |
| **Random Effects** | | | | | |
| σ2 | 42.58 | | | | |
| τ00 family\_id | 12.02 | | | | |
| τ00 site\_id | 0.59 | | | | |
| ICC | 0.23 | | | | |
| N family\_id | 4834 | | | | |
| N site\_id | 22 | | | | |
| Observations | 5589 | | | | |
| Marginal R2 / Conditional R2 | 0.052 / 0.268 | | | | |

*Note.* Trauma binary [1] refers to trauma-exposed.