

Supplementary Online Content

Deneault AA, Plamondon A, Neville RD, et al. Perceived parental technofence and mental health among emerging adolescents. *JAMA Netw Open*. 2024;7(8):e2428261.
doi:10.1001/jamanetworkopen.2024.28261

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Model Fit and χ^2 Difference Tests

| | RMSEA | SRMR | CFI | TLI | χ^2 | df | p | $\Delta\chi^2$ | df | p |
|---|-------|------|------|------|----------|----|--------|----------------|----|--------|
| Parental technoference \leftrightarrow Anxiety | | | | | | | | | | |
| RI-CLPM (<i>final fitted model</i>) | .03 | .01 | .999 | .991 | 2.15 | 1 | .142 | – | – | – |
| RI-CLPM (<i>constrained</i>) | .02 | .02 | .998 | .995 | 7.84 | 5 | .166 | 5.68 | 4 | .224 |
| CLPM (<i>traditional</i>) | .09 | .03 | .977 | .913 | 46.35 | 4 | < .001 | 44.20 | 3 | < .001 |
| Parental technoference \leftrightarrow Depression | | | | | | | | | | |
| RI-CLPM (<i>final fitted model</i>) ^a | – | – | – | – | – | – | – | – | – | – |
| RI-CLPM (<i>constrained</i>) | .07 | .05 | .975 | .947 | 45.89 | 7 | < .001 | – | – | – |
| CLPM (<i>traditional</i>) | .08 | .04 | .966 | .914 | 60.35 | 6 | < .001 | – | – | – |
| Parental technoference \leftrightarrow Attention difficulties | | | | | | | | | | |
| RI-CLPM (<i>final fitted model</i>) | .01 | .01 | 1.00 | .998 | 1.19 | 1 | .275 | – | – | – |
| RI-CLPM (<i>constrained</i>) | .03 | .02 | .997 | .992 | 9.60 | 5 | .088 | 8.41 | 4 | .078 |
| CLPM (<i>traditional</i>) | .12 | .04 | .958 | .843 | 77.49 | 4 | < .001 | 76.30 | 3 | < .001 |
| Parental technoference \leftrightarrow Hyperactivity | | | | | | | | | | |
| RI-CLPM (<i>final fitted model</i>) | .03 | .01 | .999 | .991 | 2.08 | 1 | .149 | – | – | – |
| RI-CLPM (<i>constrained</i>) | .02 | .02 | .999 | .997 | 6.84 | 5 | .233 | 4.75 | 4 | .314 |
| CLPM (<i>traditional</i>) | .12 | .04 | .957 | .840 | 78.71 | 4 | < .001 | 76.63 | 3 | < .001 |

Note. ^a This model could not be estimated due to negative variances.

eTable 2. Unstandardized Parameters for the RI-CLPM Anxiety Model With Subgroup Analysis by Gender

| Associations | Girls | | Boys | |
|---|-------|-----------------|-------|----------------|
| | ES | 95% CI | ES | 95% CI |
| Unstandardized random intercept variance | | | | |
| Tech | 0.71 | [0.27, 1.15] | 0.83 | [0.55, 1.22] |
| MH | 65.62 | [26.74, 104.51] | 60.93 | [41.99, 79.87] |
| Within-person autoregressive paths^a | | | | |
| Tech _{T1} → Tech _{T2} | 0.24 | [0.01, 0.48] | 0.22 | [0.03, 0.41] |
| Tech _{T2} → Tech _{T3} | 0.35 | [0.17, 0.54] | 0.30 | [0.12, 0.50] |
| MH _{T1} → MH _{T2} | 0.49 | [0.05, 0.93] | 0.26 | [0.03, 0.50] |
| MH _{T2} → MH _{T3} | 0.61 | [0.42, 0.80] | 0.32 | [0.09, 0.56] |
| Between-person association^a | | | | |
| Tech ↔ MH | 0.25 | [-0.12, 0.63] | 0.30 | [0.08, 0.52] |
| Within-person cross-sectional associations^a | | | | |
| Tech _{T1} ↔ MH _{T1} | 0.34 | [0.06, 0.62] | 0.13 | [-0.06, 0.33] |
| Tech _{T2} ↔ MH _{T2} | 0.26 | [0.11, 0.40] | 0.29 | [0.13, 0.46] |
| Tech _{T3} ↔ MH _{T3} | 0.35 | [0.24, 0.46] | 0.21 | [0.08, 0.34] |
| Within-person cross-lagged effects^a | | | | |
| <i>Tech driven effects</i> | | | | |
| Tech _{T1} → MH _{T2} | -0.03 | [-0.22, 0.16] | 0.06 | [-0.12, 0.24] |
| Tech _{T2} → MH _{T3} | -0.01 | [-0.13, 0.12] | 0.08 | [-0.09, 0.25] |
| <i>MH driven effects</i> | | | | |
| MH _{T1} → tech _{T2} | 0.38 | [-0.00, 0.76] | 0.27 | [0.04, 0.50] |
| MH _{T2} → tech _{T3} | 0.50 | [0.32, 0.68] | 0.31 | [0.08, 0.54] |

Note. CI = confidence interval; ES = Effect sizes; MH = mental health; Tech = technofence. ^a Standardized values.

eTable 3. Unstandardized Parameters for the RI-CLPM Depression Model With Subgroup Analysis by Gender

| Associations | Girls | | Boys | |
|---|-------|----------------|-------|----------------|
| | ES | 95% CI | ES | 95% CI |
| Unstandardized random intercept variance | | | | |
| Tech | 0.59 | [0.19, 0.99] | 0.92 | [0.63, 1.21] |
| MH | 54.81 | [37.44, 72.17] | 49.28 | [16.65, 81.91] |
| Within-person autoregressive paths^a | | | | |
| Tech _{T1} → Tech _{T2} | 0.33 | [0.10, 0.57] | 0.20 | [0.03, 0.37] |
| Tech _{T2} → Tech _{T3} | 0.41 | [0.25, 0.56] | 0.25 | [0.07, 0.42] |
| MH _{T1} → MH _{T2} | -0.22 | [-0.68, 0.23] | 0.24 | [-0.16, 0.64] |
| MH _{T2} → MH _{T3} | 0.38 | [0.26, 0.51] | 0.45 | [0.24, 0.67] |
| Between-person association^b | | | | |
| Tech ↔ MH | 0.32 | [0.01, 0.62] | 0.27 | [0.00, 0.53] |
| Within-person cross-sectional associations^b | | | | |
| Tech _{T1} ↔ MH _{T1} | 0.53 | [0.30, 0.76] | 0.28 | [0.07, 0.48] |
| Tech _{T2} ↔ MH _{T2} | 0.29 | [0.09, 0.50] | 0.40 | [0.24, 0.56] |
| Tech _{T3} ↔ MH _{T3} | 0.30 | [0.21, 0.39] | 0.21 | [0.09, 0.33] |
| Within-person cross-lagged effects^a | | | | |
| <i>Tech driven effects</i> | | | | |
| Tech _{T1} → MH _{T2} | 0.37 | [-0.01, 0.74] | 0.10 | [-0.09, 0.30] |
| Tech _{T2} → MH _{T3} | -0.05 | [-0.18, 0.09] | -0.05 | [-0.17, 0.08] |
| <i>MH driven effects</i> | | | | |
| MH _{T1} → tech _{T2} | 0.02 | [-0.25, 0.29] | 0.07 | [-0.14, 0.28] |
| MH _{T2} → tech _{T3} | 0.14 | [0.01, 0.27] | 0.12 | [-0.08, 0.31] |

Note. CI = confidence interval; ES = Effect sizes; MH = mental health; Tech = technoference. ^a Standardized values.

eTable 4. Unstandardized Parameters for the RI-CLPM Attention Difficulties Model With Subgroup Analysis by Gender

| Associations | Girls | | Boys | |
|---|-------|----------------|-------|-----------------|
| | ES | 95% CI | ES | 95% CI |
| Unstandardized random intercept variance | | | | |
| Tech | 0.67 | [0.26, 1.09] | 0.92 | [0.58, 1.25] |
| MH | 67.59 | [51.71, 83.47] | 84.17 | [68.03, 100.30] |
| Within-person autoregressive paths^a | | | | |
| Tech _{T1} → Tech _{T2} | 0.31 | [0.08, 0.53] | 0.21 | [0.02, 0.40] |
| Tech _{T2} → Tech _{T3} | 0.42 | [0.24, 0.60] | 0.28 | [0.10, 0.47] |
| MH _{T1} → MH _{T2} | -0.12 | [-0.62, 0.37] | 0.08 | [-0.22, 0.38] |
| MH _{T2} → MH _{T3} | 0.24 | [0.06, 0.43] | 0.06 | [-0.19, 0.32] |
| Between-person association^b | | | | |
| Tech ↔ MH | 0.39 | [0.14, 0.63] | 0.14 | [-0.05, 0.32] |
| Within-person cross-sectional associations^b | | | | |
| Tech _{T1} ↔ MH _{T1} | 0.10 | [-0.19, 0.39] | 0.06 | [-0.14, 0.27] |
| Tech _{T2} ↔ MH _{T2} | 0.09 | [-0.18, 0.35] | 0.25 | [0.03, 0.48] |
| Tech _{T3} ↔ MH _{T3} | 0.26 | [0.15, 0.38] | 0.14 | [-0.01, 0.28] |
| Within-person cross-lagged effects^a | | | | |
| <i>Tech driven effects</i> | | | | |
| Tech _{T1} → MH _{T2} | -0.03 | [-0.32, 0.26] | 0.09 | [-0.12, 0.30] |
| Tech _{T2} → MH _{T3} | 0.00 | [-0.16, 0.16] | 0.25 | [0.04, 0.46] |
| <i>MH driven effects</i> | | | | |
| MH _{T1} → tech _{T2} | -0.06 | [-0.34, 0.21] | 0.06 | [-0.16, 0.29] |
| MH _{T2} → tech _{T3} | 0.03 | [-0.11, 0.17] | 0.06 | [-0.11, 0.24] |

Note. CI = confidence interval; ES = Effect sizes; MH = mental health; Tech = technoference. ^a Standardized values.

eTable 5. Unstandardized Parameters for the RI-CLPM Hyperactivity Model With Subgroup Analysis by Gender

| Associations | Girls | | Boys | |
|---|-------|----------------|-------|----------------|
| | ES | 95% CI | ES | 95% CI |
| Unstandardized random intercept variance | | | | |
| Tech | 0.67 | [0.26, 1.08] | 0.88 | [0.54, 1.22] |
| MH | 57.96 | [45.94, 69.98] | 58.13 | [43.55, 72.70] |
| Within-person autoregressive paths^a | | | | |
| Tech _{T1} → Tech _{T2} | 0.32 | [0.10, 0.54] | 0.22 | [0.04, 0.41] |
| Tech _{T2} → Tech _{T3} | 0.42 | [0.23, 0.60] | 0.25 | [0.05, 0.44] |
| MH _{T1} → MH _{T2} | 0.03 | [-0.29, 0.36] | 0.17 | [-0.08, 0.42] |
| MH _{T2} → MH _{T3} | 0.14 | [-0.09, 0.38] | 0.13 | [-0.11, 0.38] |
| Between-person association^b | | | | |
| Tech ↔ MH | 0.50 | [0.24, 0.75] | 0.08 | [-0.15, 0.30] |
| Within-person cross-sectional associations^b | | | | |
| Tech _{T1} ↔ MH _{T1} | 0.09 | [-0.14, 0.32] | 0.13 | [-0.07, 0.33] |
| Tech _{T2} ↔ MH _{T2} | -0.02 | [-0.28, 0.24] | 0.39 | [0.21, 0.57] |
| Tech _{T3} ↔ MH _{T3} | 0.25 | [0.12, 0.37] | 0.24 | [0.10, 0.39] |
| Within-person cross-lagged effects^a | | | | |
| <i>Tech driven effects</i> | | | | |
| Tech _{T1} → MH _{T2} | -0.11 | [-0.35, 0.13] | 0.16 | [-0.03, 0.34] |
| Tech _{T2} → MH _{T3} | -0.07 | [-0.27, 0.13] | 0.20 | [-0.01, 0.40] |
| <i>MH driven effects</i> | | | | |
| MH _{T1} → tech _{T2} | -0.17 | [-0.40, 0.06] | 0.10 | [-0.10, 0.30] |
| MH _{T2} → tech _{T3} | -0.03 | [-0.19, 0.12] | 0.17 | [-0.02, 0.36] |

Note. CI = confidence interval; ES = Effect sizes; MH = mental health; Tech = technoference. ^a Standardized values.