**SUPPLEMENTAL MATERIAL**

**Table S1. Model Selection Criteria (BIC) for paternal and offspring Solutions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Father** | **Child** |  |  |
| Groups | BIC | BIC |  |  |
| 2 | -16119.83 | -6262.65 |  |  |
| 3 | -13418.89 | -4525.91 |  |  |
| 4 | -12159.55 | -4282.23 |  |  |
|  |  |  |  |  |

**Table S2. Model Diagnostics for Optimal Solutions**

Panel A: Model diagnostics for paternal trajectories

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   |   | 95% CI |   |   |   |
| Group | $$\hat{π}$$ | lower | upper | $$\hat{P}$$ | Ave PP | odds CC |
| Low | 0.631 | 0.573 | 0.690 | 0.593 | 0.999 | 420.0 |
| Moderate | 0.251 | 0.198 | 0.303 | 0.285 | 0.995 | 628.5 |
| High-Rising | 0.118 | 0.079 | 0.157 | 0.122 | 1.000 | 3252989.8 |

Panel B: Model diagnostics for childs’ trajectories

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   |   | 95% CI |   |   |   |
| Group | $$\hat{π}$$ | lower | upper | $$\hat{P}$$ | Ave PP | odds CC |
| Low | 0.674 | 0.617 | 0.732 | 0.677 | 0.994 | 83.3 |
| Moderate | 0.211 | 0.161 | 0.262 | 0.209 | 0.992 | 488.2 |
| High-Rising | 0.114 | 0.075 | 0.153 | 0.114 | 1.000 | 77663847.0 |

**Note:** $\hat{π}$: estimated mixture probability; $\hat{P}$: percent hard-classified; Ave PP: average posterior probability; odds CC: odds of correct classification

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| **Table S3. Distribution of Hard Classification for 4 Group Solution**  |
|  | **Fathers** | **Offsprings** |
| Group | N | % | N | % |
| 1 | 53 | 20.15 | 175 | 66.54 |
| 2 | 167 | 63.5 | 18 | 6.84 |
| 3 | 27 | 10.27 | 54 | 20.53 |
| 4 | 16 | 6.08 | 16 | 6.08 |
| Total | 263 |  | 263 |  |

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| **Table S4.** Lower and upper bounds of the effect of concurrent paternal marijuana use on the conditional log-odds of child's trajectory group (Low is comparison group) (n=263) |
| A. Paternal marijuana use during child's life, ages 7-17 |
|   |   | LOWER BOUND a | UPPER BOUND  |
|  | *Variable* | Coefficient (SE) | p-value | Coefficient (SE) | p-value |
| Child's Moderate Group |
|  | Paternal Marijuana Use | 0.662(0.343) | 0.054 | 0.672(0.345) | 0.051 |
| Child's High Group |
|  | Paternal Marijuana Use | 1.912(0.536) | 0.000 | 1.849(0.574) | 0.001 |
| B. Paternal marijuana use during child's childhood, ages 7-13 |
|   |   | LOWER BOUND  | UPPER BOUND |
|  | *Variable* | Coefficient (SE) | p-value | Coefficient (SE) | p-value |
| Child's Moderate Group |
|  | Paternal Marijuana Use | 0.746 (0.352) | 0.034 | 0.826 (0.349) | 0.018 |
| Child's High Group |
|  | Paternal Marijuana Use | 2.168 (0.543) | 0.000 | 2.160 (0.580) | 0.000 |
| C. Paternal marijuana use during child's adolescence, ages 14-17  |
|   |   | LOWER BOUND | UPPER BOUND |
|  | *Variable* | Coefficient (SE) | p-value | Coefficient (SE) | p-value |
| Child's Moderate Group |
|  | Paternal Marijuana Use | 0.521 (0.334) | 0.120 | 0.381 (0.324) | 0.240 |
| Child's High Group |
|   | Paternal Marijuana Use | -0.397 (0.465) | 0.394 | 0.222 (0.410) | 0.588 |

a Corresponds to original estimates reported in Table 3.

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| **Table S5.** Lower and upper bounds of the effect of concurrent maternal marijuana use on the conditional log-odds of child's trajectory group (Low is comparison group) (n=263) |
| A. Maternal marijuana use during child's life, ages 7-17 |
|   |   | LOWER BOUND a | UPPER BOUND  |
|   | *Variable* | Coefficient (SE) | p-value | Coefficient (SE) | p-value |
| Child's Moderate Group |
|  | Maternal Marijuana Use | 0.714(0.350) | 0.042 | 0.458(0.333) | 0.169 |
| Child's High Group |
|  | Maternal Marijuana Use | 0.782(0.438) | 0.074 | 0.762(0.411) | 0.064 |
| B. Maternal marijuana use during child's childhood, ages 7-13 |
|   |   | LOWER BOUND  | UPPER BOUND  |
|   | *Variable* | Coefficient (SE) | p-value | Coefficient (SE) | p-value |
| Child's Moderate Group |
|  | Maternal Marijuana Use | 0.437(0.371) | 0.239 | 0.499(0.334) | 0.135 |
| Child's High Group |
|  | Maternal Marijuana Use | 0.672(0.449) | 0.135 | 0.761(0.411) | 0.065 |
| C. Maternal marijuana use during child's adolescence, ages 14-17  |
|   |   | LOWER BOUND  | UPPER BOUND |
|   | *Variable* | Coefficient (SE) | p-value | Coefficient (SE) | p-value |
| Child's Moderate Group |
|  | Maternal Marijuana Use | 0.994(0.408) | 0.015 | 0.797(0.360) | 0.027 |
| Child's High Group |
|   | Maternal Marijuana Use | 1.008(0.505) | 0.046 | 1.100(0.437) | 0.012 |

a Corresponds to original estimates reported in Table 4.