**Supplementary Material for the Article:**

Cigarette use trajectories in young adults: analyses of predictors across system levels

**This material supplements, but does not replace, the peer-reviewed paper in**

***Drug and Alcohol Dependence.***

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**Supplementary Table 1. GMM Fit Indicators and Average Posterior Probabilities**

| Number of classes | AIC | BIC | Entropy | Average posterior probabilities | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | **1** | **2** | **3** | **4** | **5** | **6** |
| 1 w/ 40 starts | 7281.60 | 7311.58 | | | | | | | |
| 2 w/40 starts | 7264.90 | 7312.86 | 0.776 | 93.21 | 6.79 | | | | |
| 3 w/ 80 starts | 7263.57 | 7329.52 | 0.650 | 8.20 | 85.59 | 6.22 | | | |
| 4 w/ 40 starts | 7264.06 | 7348.00 | 0.814 | 90.08 | 1.81 | 4.76 | 3.34 | | |
| 5 w/ 80 starts | 7263.36 | 7365.28 | 0.698 | 4.31 | 3.78 | 3.67 | 83.25 | 4.99 | |
| 6 w/ 80 starts | 7262.95 | 7382.86 | 0.683 | 1.40 | 6.52 | 4.55 | 80.28 | 24.48 | 4.81 |

Note: Models with 7 and 8 classes did not converge after more than 15 hours runtime.