**Supplementary Methods**

For the internalizing polygenic risk scores, some additional data cleaning steps were needed. Specifically, the summary statistic file from the original meta-genome-wide association study (GWAS) contained SNPs that had extreme and implausible effect size and standard error values, including betas of over +/-2,000.00 and SEs of exactly 962.8919. Further examination revealed that this problematic data is limited to those SNPs that were included only in a single GWAS (out of 3 considered in the meta-GWAS).

Because problematic data appeared to be limited to SNPs from only one GWAS and operating on the assumption that problematic values were limited to a relatively small number of SNPs rather than reflecting a pervasive error, we decided to use the greatest magnitude of effect size (positive or negative) observed for SNPs included in more than one GWAS as a threshold for screening out problematic SNPs.

The greatest magnitude of effect size among SNPs included in more than one GWAS was +/-.8593. The original internalizing meta-GWAS file contained a total of 2,821,734 SNPs. Of these, 315,109 were excluded because of effect sizes that fell outside the +/-.8593 threshold leaving a summary statistic file with a total of 2,506,625 SNPs. A large number of the excluded SNPs (312,586) also had a chromosome and position listed as ‘NA’, and these represented the vast majority of extreme/incorrect effect sizes and SEs (they also would have been excluded from our original scores), leaving a total of 2523 SNPs that had a valid chromosome and position but an effect size outside the threshold.

However, it should be noted that most of these would not have been included in our scores to begin with, due to either lack of overlap or having *p* values greater than .10. Screening out all values outside the +/-.8593 threshold results in the loss of 1,123 SNPs that both overlap with our data file and have *p* values equal to or lower than .10 (i.e., that would have otherwise been included in any polygenic risk score). Numbers for the internalizing polygenic risk scores are reported considering only the cleaned summary statistic file with potentially problematic SNPs removed.

Table S1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | BIC | adjusted BIC | BLRT | loglikelihood | entropy |
| # Groups | Primary Caregiver |
| 1  | 23719.85 | 23719.85 |  | -11822.02 |  |
| 2  | 22541.00 | 22480.67 | 1223.07, p<0.001 | -11210.49 | 0.90 |
| 3  | 22194.16 | 22111.62 | 391.07, p<0.001 | -11014.96 | 0.92 |
| 4  | 21981.05 | 21876.30 | 257.32, p<0.001 | -10886.30 | 0.93 |
| 5  | 21842.40 | 21715.42 | 182.87, p<0.001 | -10794.86 | 0.93 |
|  | Teacher |
| 1  | 19976.57 | 19938.48 |  | -9950.99 |  |
| 2  | 19231.48 | 19171.17 | 788.60, p<0.001 | -9556.70 | 0.88 |
| 3  | 18970.58 | 18888.05 | 304.40, p<0.001 | -9404.50 | 0.92 |
| 4  | 18822.20 | 18717.46 | 191.88, p<0.001 | -9308.56 | 0.90 |
| 5  | 18709.01 | 18582.04 | 156.70, p<0.001 | -9230.21 | 0.92 |

*Fit indices for one to five group latent profile model*

Table S2.

*Mean subscale T-scores for each group and by reporter*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Anxious/Depressed | Depressed/Withdrawn | Somatic Complaints | Rule-breaking | Aggression | Attentional Problems |
| Groups | Primary Caregiver |
| Low Problems | 52.06 | 53.78 | 53.41 | 52.44 | 52.43 | 54.15 |
| Internalizing ‘only’ | 67.09 | 67.65 | 64.68 | 57.60 | 60.69 | 63.75 |
| Externalizing ‘only’ | 56.01 | 59.56 | 56.95 | 64.40 | 68.28 | 64.93 |
| Co-occurring | 73.12 | 74.47 | 68.06 | 70.51 | 80.59 | 77.79 |
|  | Teacher |
| Low Problems | 52.66 | 54.09 | 51.68 | 52.47 | 52.22 | 51.51 |
| Internalizing ‘only’ | 60.63 | 67.75 | 60.92 | 57.08 | 56.71 | 58.01 |
| Externalizing ‘only’ | 55.93 | 56.02 | 54.53 | 64.46 | 64.36 | 56.24 |
| Co-occurring | 67.14 | 67.40 | 34.79  | 73.99 | 79.38 | 60.12 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. | 17. | 18. | 19. | 20. | 21. | 22. | 23. | 24. | 25. | 26. |
| 1. INT PRS | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. AGG PRS | 0.03 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. PC1 | 0.33\*\* | 0.05 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. PC2 | -0.02 | 0.18\*\* | 0.000 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Sex of child | -0.01 | -0.02 | 0.01 | -0.04 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6. Urbanicity | 0.09\* | 0.12\*\* | 0.17\*\* | 0.19\*\* | 0.01 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7. Parent Education | -0.02 | 0.02 | -0.04 | 0.28\*\* | -0.03 | 0.14\*\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8. BI (2) | 0.09\* | -0.16\*\* | -0.03 | -0.13\*\* | 0.09\* | -0.01 | -0.05 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9. NA (2) | -0.02 | 0.02 | -0.002 | 0.003 | -0.10\*\* | -0.01 | 0.02 | 0.07 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10. IC (2) | 0.02 | -0.08 | 0.07 | -0.06 | 0.12\*\* | 0.02 | 0.02 | -0.01 | -0.10\*\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11. BI (3) | 0.02 | 0.02 | -0.02 | -0.06 | 0.08 | 0.04 | -0.07 | 0.24\*\* | -0.08\* | 0.001 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12. NA (3) | -0.05 | 0.07 | 0.01 | -0.02 | -0.04 | -0.01 | 0.04 | 0.07 | 0.16\*\* | -0.05 | -0.01 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13. IC (3) | 0.03 | -0.10\* | -0.03 | -0.09\* | 0.14\*\* | -0.05 | 0.13\*\* | 0.03 | -0.05 | 0.51\*\* |  0.06 | -0.09\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 14. INT (2) | 0.07 | -0.01 | 0.10\* | -0.16\*\* | 0.04 | 0.01 | -0.19\*\* | 0.06 | 0.06 | -0.19\*\* |  0.05 | 0.08\* | -0.18\*\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 15. EXT (2) | -0.01 | 0.002 | -0.01 | 0.10\* | -0.06 | 0.08\* | -0.08\* | -0.03 | 0.08\* | -0.49\*\* | -0.01 | 0.04 | -0.42\*\* | 0.52\*\* | 1 |  |  |  |  |  |  |  |  |  |  |  |
| 16. P ANX  | -0.04 | 0.03 | -0.07 | 0.06 | 0.15\*\* | 0.02 | -0.02 | 0.07 | -0.003 | -0.11\* |  0.10\* | 0.11\* | -0.11\* | 0.03 | 0.02 | 1 |  |  |  |  |  |  |  |  |  |  |
| 17. P WITH | -0.01 | 0.03 | 0.01 | 0.05 | 0.03 | 0.05 | 0.01 | 0.09 | 0.02 | -0.11\* |  0.06 | 0.07 | -0.10\* | 0.04 | 0.04 | 0.64\*\* | 1 |  |  |  |  |  |  |  |  |  |
| 18. P SOM | -0.01 | 0.05 | -0.03 | 0.04 | 0.07 | 0.01 | 0.01 | 0.03 | 0.05 | 0.01 |  0.06 | 0.13\*\* |  0.01 | 0.004 | -0.01 | 0.58\*\* | 0.45\*\* | 1 |  |  |  |  |  |  |  |  |
| 19. P RULE | 0.001 | 0.03 | 0.03 | 0.12\* | -0.07 | 0.12\*\* | -0.06 | -0.04 | -0.04 | -0.19\*\* | -0.01 | 0.06 | -0.20\*\* | 0.02 | 0.04 | 0.45\*\* | 0.48\*\* | 0.34\*\* | 1 |  |  |  |  |  |  |  |
| 20. P AGG | -0.02 | 0.04 | 0.03 | 0.06 | -0.06 | 0.08 | -0.10\* | 0.01 | 0.01 | -0.18\*\* |  0.03 | 0.10\* | -0.24\*\* | 0.09\* | 0.12\*\* | 0.55\*\* | 0.53\*\* | 0.40\*\* | 0.78\*\* | 1 |  |  |  |  |  |  |
| 21. P ATT | -0.01 | 0.04 | 0.04 | 0.16\*\* | -0.01 | 0.02 | -0.03 | -0.04 | 0.02 | -0.21\*\* | -0.01 | 0.10\* | -0.31\*\* | -0.04 | -0.01 | 0.53\*\* | 0.53\*\* | 0.35\*\* | 0.60\*\* | 0.67\*\* | 1 |  |  |  |  |  |
| 22. T ANX  | -0.06 | 0.02 | 0.01 | 0.02 | 0.03 | -0.03 | -0.09\* | 0.03 | 0.003 | -0.10\* | -0.02 | 0.09 | -0.11\* | -0.10\* | -0.09 | 0.21\*\* | 0.18\*\* | 0.10\* | 0.15\*\* | 0.24\*\* | 0.24\*\* | 1 |  |  |  |  |
| 23. T WITH | -0.08 | 0.07 | -0.04 | 0.02 | 0.04 | 0.01 | 0.004 | 0.08 | -0.01 | -0.03 |  0.14\*\* | 0.08 |  0.01 | -0.09\* | -0.09\* | 0.15\*\* | 0.26\*\* | 0.16\*\* | 0.12\* |  0.18\*\* | 0.18\*\* | 0.47\*\* | 1 |  |  |  |
| 24. T SOM | -0.01 | 0.10\* | 0.06 | 0.07 | -0.001 | 0.08 | -0.04 | 0.06 | 0.02 | -0.03 |  0.02 | 0.07 | -0.09\* | -0.02 | -0.01 | 0.17\*\* | 0.16\*\* | 0.23\*\* | 0.22\*\* | 0.26\*\* | 0.25\*\* | 0.39\*\* | 0.38\*\* | 1 |  |  |
| 25. T RULE | 0.04 | 0.04 | 0.21\*\* | 0.05 | -0.02 | 0.11\* | -0.10\* | -0.02 | 0.02 | -0.04 |  0.02 | 0.08 | -0.12\*\* | 0.01 | 0.02 | 0.10\* | 0.12\*\* | 0.10\* | 0.43\*\* | 0.33\*\* | 0.26\*\* | 0.35\*\* | 0.29\*\* | 0.36\*\* | 1 |  |
| 26. T AGG | 0.05 | 0.08 | 0.21\*\* | 0.08 | -0.05 | 0.10\* | -0.07 | -0.08 | 0.01 | -0.09 |  0.01 | 0.08 | -0.15\*\* | -0.01 | 0.02 | 0.10\* | 0.11\* | 0.04 | 0.40\*\* | 0.41\*\* | 0.32\*\* | 0.46\*\* | 0.22\*\* | 0.38\*\* | 0.77\*\* | 1 |
| 27. T ATT | -0.01 | 0.004 | 0.12\* | 0.01 | 0.19\*\* | 0.04 | -0.02 | 0.05 | -0.03 | -0.03 |  0.07 | 0.09 | -0.15\*\* | -0.07 | -0.05 | 0.14\*\* | 0.17\*\* | 0.13\*\* | 0.23\*\* | 0.24\*\* | 0.32\*\* | 0.40\*\* | 0.43\*\* | 0.40\*\* | 0.54\*\* | 0.52\*\* |

Table S3.

*Zero-order Correlations*

\*\**p*<0.01. \**p*<0.05. INT: Internalizing. EXT: Externalizing. PRS: Polygenic Risk Score. PC: Principal Component. BI: Behavioral Inhibition. NA: Negative Affectivity. IC: Inhibitory Control. Sex: 0=male, 1=female. Urbanicity: 0=rural, 1=suburban, 2=urban. (2) or (3) indicates measurement at age 2 or 3. P: CBCL Subscales Anxious (ANX), Withdrawn (WITH), Somatization (SOM), Rule-breaking (RULE), Aggression (AGG), and Attentional Problems (ATT). T: TRF subscales.

Table S4.

|  |  |
| --- | --- |
|  | Primary Caregiver-Reported Outcomes  |
|  | General Psychopathology factor | Specific Externalizing factor  | Specific Internalizing factor  |
| Internalizing PRS | -0.02(0.05) | -0.05(0.06) | -0.02(0.06) |
| Aggression PRS | -0.01(0.05) | 0.07(0.06) | 0.08(0.06) |
| BI age 2 | 0.02(0.05) | 0.11(0.06)† | 0.12(0.06)† |
| NA age 2 | -0.07(0.05) | 0.004(0.06) | 0.01(0.06) |
| IC age 2 | -0.05(0.07) | 0.10(0.08) | 0.05(0.08) |
| BI age 3 | -0.04(0.05) | 0.07(0.06) | 0.07(0.06) |
| NA age 3 | 0.10(0.05)† | 0.02(0.07) | 0.02(0.06) |
| IC age 3 | -0.20(0.06)\* | 0.18(0.08)\* | 0.20(0.09)\* |
| Urbanicity | -0.04(0.05) | 0.10(0.07) | -0.001(0.06) |
| Parental Education | -0.02(0.05) | -0.08(0.06) | 0.05(0.06) |
| Intervention Status | -0.04(0.05) | -0.05(0.06) | -0.06(0.05) |
| Ancestry PC 1 | 0.04(0.05) | -0.03(0.06) | -0.15(0.06)\* |
| Ancestry PC 2 | 0.19(0.06)\* | -0.15(0.07)\* | -0.06(0.08) |
| Sex | -0.01(0.05) | -0.05(0.06) | 0.24(0.05)\*\* |
| Par Neg age 2 | 0.07(0.05) | -0.04(0.06) | -0.06(0.06) |
| Par Pos age 2 | 0.05(0.05) | -0.03(0.06) | 0.08(0.06) |
| Par Neg age 3 | 0.09(0.05) | -0.04(0.07) | 0.06(0.06) |
| Par Pos age 3 | -0.04(0.05) | -0.01(0.06) | 0.06(0.06) |
| Maternal Depression | 0.09(0.05)† | -0.03(0.06) | 0.08(0.06) |
| Internalizing age 2 | 0.07(0.06) | 0.09(0.07) | 0.23(0.07)\* |
| Externalizing age 2 | 0.15(0.08)† | 0.22(0.09)\* | 0.003(0.08) |

*Primary Caregiver-reporter Bifactor Model Results*

Notes. *N =* 515. \*\**p* < 0.001, \**p* < 0.05, †*p* < 0.10. Standardized Coefficients(Standard Errors) presented. PC: Principal Component. Par Neg: Observed parental negative affect. Par Pos: Observed parental positive affect. BI: Behavioral Inhibition. NA: Negative Affectivity. IC: Inhibitory Control. Sex of child: 0=male, 1=female. Urbanicity: 0=rural, 1=suburban, 2=urban. Intervention status: 0=control, 1=intervention.

Primary Caregiver T Scores

Teacher T Scores

Anxious

Depressed

Somatic

Rule-breaking

Aggression

Attention

Anxious

Depressed

Somatic

Rule-breaking

Aggression

Attention

Figure S1. Latent profiles by reporter.Primary caregiver latent profile: *n =* 554. Teacher latent profile: *n* = 500.

**Input and Output for Primary Caregiver-Reported Latent Profile Models**

***\*\*NOTES:***

 *Nominal variable: PAR4CLS*

 *Category 1 Internalizing only*

 *Category 2 Externalizing only*

 *Category 3 Low Problems*

 *Category 4 Co-occurring problems*

***In the Input/Output, lines starting with \*\*NOTE are not part of the actual input or output.***

***\*\*START INPUT/OUTPUT\*\****

DATA:

FILE IS "4-2-19 es FCU Outcome Genetics Mplus.dat";

VARIABLE:

NAMES ARE id int001 Par4Cls FCU TCGender ANCESTRY1 ANCESTRY2 urbanicity ParEduc CHILDNEG3 CHILDBI3 CHILDIC3 CHILDINTERNALIZING2 CHILDEXTERNALIZING2 CHILDNEG2 CHILDBI2 CHILDIC2 INTPRS AGGPRS PARPOS3 PARNEG3 PARNEG2 PARPOS2 MOMDEP2;

USEVARIABLES ARE

Par4Cls FCU TCGender ANCESTRY1 ANCESTRY2 urbanicity ParEduc

CHILDNEG3 CHILDBI3 CHILDIC3 CHILDINTERNALIZING2 CHILDEXTERNALIZING2 CHILDNEG2 CHILDBI2 CHILDIC2 INTPRS AGGPRS PARPOS3 PARNEG3 PARNEG2 PARPOS2 MOMDEP2;

MISSING ARE ALL (-99);

useobservations= int001 ge 0;

nominal=Par4Cls;

ANALYSIS:

integration=montecarlo;

MODEL:

CHILDNEG2 on INTPRS AGGPRS urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARNEG2 PARPOS2 MOMDEP2;

CHILDBI2 on INTPRS AGGPRS urbanicity ParEduc

 ANCESTRY1 ANCESTRY2 TCGender PARNEG2 PARPOS2 MOMDEP2;

CHILDIC2 on INTPRS AGGPRS urbanicity ParEduc

 ANCESTRY1 ANCESTRY2 TCGender PARNEG2 PARPOS2 MOMDEP2;

CHILDNEG2 with CHILDBI2 CHILDIC2 CHILDINTERNALIZING2 CHILDEXTERNALIZING2;

CHILDBI2 with CHILDIC2 CHILDINTERNALIZING2 CHILDEXTERNALIZING2;

CHILDIC2 with CHILDINTERNALIZING2 CHILDEXTERNALIZING2;

CHILDINTERNALIZING2 with CHILDEXTERNALIZING2;

CHILDNEG3 on FCU INTPRS AGGPRS urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARPOS3 PARNEG3 MOMDEP2 CHILDNEG2 CHILDBI2 CHILDIC2;

CHILDBI3 on FCU INTPRS AGGPRS urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARPOS3 PARNEG3 MOMDEP2 CHILDNEG CHILDBI2 CHILDIC2;

CHILDIC3 on FCU INTPRS AGGPRS urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARPOS3 PARNEG3 MOMDEP2 CHILDNEG2 CHILDBI2 CHILDIC2;

Par4Cls on FCU TCGender ANCESTRY1 ANCESTRY2 urbanicity ParEduc CHILDINTERNALIZING2 CHILDEXTERNALIZING2

INTPRS AGGPRS CHILDNEG2 CHILDBI2 CHILDIC2 CHILDNEG3 CHILDBI3 CHILDIC3

PARPOS3 PARNEG3 PARNEG2 PARPOS2 MOMDEP2;

CHILDNEG3 with CHILDBI3 CHILDIC3;

CHILDBI3 with CHILDIC3;

FCU; TCGender ;urbanicity ;CHILDINTERNALIZING2; CHILDEXTERNALIZING2;INTPRS; AGGPRS;ParEduc;

CHILDNEG3; CHILDBI3; CHILDIC3; PARPOS3; PARNEG3; MOMDEP2;ANCESTRY1;ANCESTRY2;

PARNEG2; PARPOS2; CHILDNEG2; ZWHB2OI; CHILDIC2;

output: stdyx modindices tech4 cinterval;

Estimator MLR

Information matrix OBSERVED

Optimization Specifications for the Quasi-Newton Algorithm for

Continuous Outcomes

Maximum number of iterations 100

Convergence criterion 0.100D-05

Optimization Specifications for the EM Algorithm

Maximum number of iterations 500

Convergence criteria

Loglikelihood change 0.100D-02

Relative loglikelihood change 0.100D-05

Derivative 0.100D-02

Optimization Specifications for the M step of the EM Algorithm for

Categorical Latent variables

 Number of M step iterations 1

 M step convergence criterion 0.100D-02

 Basis for M step termination ITERATION

Optimization Specifications for the M step of the EM Algorithm for

Censored, Binary or Ordered Categorical (Ordinal), Unordered

Categorical (Nominal) and Count Outcomes

 Number of M step iterations 1

 M step convergence criterion 0.100D-02

 Basis for M step termination ITERATION

 Maximum value for logit thresholds 15

 Minimum value for logit thresholds -15

 Minimum expected cell size for chi-square 0.100D-01

Maximum number of iterations for H1 2000

Convergence criterion for H1 0.100D-03

Optimization algorithm EMA

Integration Specifications

 Type MONTECARLO

 Number of integration points 325

 Dimensions of numerical integration 13

 Adaptive quadrature ON

 Monte Carlo integration seed 0

Cholesky OFF

Input data file(s)

 4-2-19 es FCU Outcome Genetics Mplus.dat

Input data format FREE

UNIVARIATE PROPORTIONS AND COUNTS FOR CATEGORICAL VARIABLES

 PAR4CLS

 Category 1 0.200 99.000

 Category 2 0.145 72.000

 Category 3 0.595 295.000

 Category 4 0.060 30.000

THE MODEL ESTIMATION TERMINATED NORMALLY

MODEL FIT INFORMATION

Number of Free Parameters 297

Loglikelihood

 H0 Value -13799.320

 H0 Scaling Correction Factor 1.3875

 for MLR

Information Criteria

 Akaike (AIC) 28192.640

 Bayesian (BIC) 29453.157

 Sample-Size Adjusted BIC 28510.426

 (n\* = (n + 2) / 24)

MODEL RESULTS

STANDARDIZED MODEL RESULTS

STDYX Standardization

 Two-Tailed

 Estimate S.E. Est./S.E. P-Value

 CHILDNEG2 ON

 INTPRS -0.025 0.044 -0.567 0.571

 AGGPRS 0.018 0.041 0.453 0.650

 URBANICITY -0.031 0.050 -0.624 0.532

 PAREDUC 0.005 0.048 0.112 0.911

 ANCESTRY1 -0.003 0.042 -0.080 0.936

 ANCESTRY2 -0.007 0.046 -0.162 0.871

 TCGENDER 0.027 0.043 0.625 0.532

 PARNEG2 0.276 0.053 5.195 0.000

 PARPOS2 0.151 0.098 1.546 0.122

 MOMDEP2 -0.035 0.043 -0.819 0.413

 CHILDBI2 ON

 INTPRS 0.105 0.042 2.511 0.012

 AGGPRS -0.129 0.042 -3.090 0.002

 URBANICITY -0.017 0.048 -0.363 0.716

 PAREDUC -0.029 0.050 -0.570 0.569

 ANCESTRY1 -0.055 0.047 -1.162 0.245

 ANCESTRY2 -0.098 0.055 -1.780 0.075

 TCGENDER -0.037 0.044 -0.831 0.406

 PARNEG2 0.017 0.046 0.370 0.711

 PARPOS2 0.107 0.056 1.908 0.056

 MOMDEP2 -0.024 0.041 -0.592 0.554

 CHILDIC2 ON

 INTPRS -0.008 0.045 -0.167 0.868

 AGGPRS -0.081 0.044 -1.857 0.063

 URBANICITY 0.024 0.048 0.493 0.622

 PAREDUC 0.035 0.041 0.854 0.393

 ANCESTRY1 0.081 0.050 1.616 0.106

 ANCESTRY2 -0.046 0.045 -1.025 0.305

 TCGENDER -0.011 0.044 -0.247 0.805

 PARNEG2 -0.049 0.033 -1.519 0.129

 PARPOS2 -0.021 0.044 -0.466 0.641

 MOMDEP2 -0.020 0.049 -0.396 0.692

 CHILDNEG3 ON

 FCU -0.023 0.044 -0.524 0.600

 INTPRS -0.037 0.041 -0.908 0.364

 AGGPRS 0.086 0.038 2.257 0.024

 URBANICITY -0.041 0.047 -0.863 0.388

 PAREDUC 0.057 0.041 1.393 0.164

 ANCESTRY1 0.030 0.044 0.668 0.504

 ANCESTRY2 -0.038 0.044 -0.851 0.395

 TCGENDER 0.040 0.044 0.916 0.359

 PARPOS3 0.114 0.045 2.533 0.011

 PARNEG3 0.356 0.142 2.509 0.012

 MOMDEP2 -0.035 0.038 -0.923 0.356

 CHILDNEG2 0.193 0.076 2.542 0.011

 CHILDBI2 0.047 0.043 1.084 0.279

 CHILDIC2 0.038 0.051 0.738 0.461

 CHILDBI3 ON

 FCU -0.007 0.046 -0.157 0.875

 INTPRS -0.003 0.045 -0.072 0.942

 AGGPRS 0.079 0.042 1.912 0.056

 URBANICITY 0.030 0.054 0.548 0.584

 PAREDUC -0.031 0.046 -0.687 0.492

 ANCESTRY1 -0.032 0.049 -0.659 0.510

 ANCESTRY2 -0.035 0.038 -0.913 0.361

 TCGENDER 0.027 0.046 0.588 0.557

 PARPOS3 0.069 0.046 1.508 0.131

 PARNEG3 0.040 0.041 0.961 0.336

 MOMDEP2 0.023 0.046 0.496 0.620

 CHILDNEG2 -0.088 0.076 -1.165 0.244

 CHILDBI2 0.269 0.056 4.801 0.000

 CHILDIC2 0.043 0.047 0.906 0.365

 CHILDIC3 ON

 FCU 0.063 0.039 1.608 0.108

 INTPRS 0.047 0.040 1.163 0.245

 AGGPRS -0.019 0.040 -0.480 0.631

 URBANICITY -0.052 0.042 -1.241 0.215

 PAREDUC 0.125 0.041 3.080 0.002

 ANCESTRY1 -0.057 0.042 -1.363 0.173

 ANCESTRY2 -0.073 0.036 -2.015 0.044

 TCGENDER 0.022 0.039 0.569 0.569

 PARPOS3 0.051 0.044 1.171 0.242

 PARNEG3 0.008 0.024 0.318 0.750

 MOMDEP2 -0.102 0.046 -2.214 0.027

 CHILDNEG2 -0.002 0.066 -0.031 0.975

 CHILDBI2 0.012 0.041 0.295 0.768

 CHILDIC2 0.490 0.039 12.622 0.000

***\*\*NOTE Co-occurring (reference) compared to Internalizing only\*\****

 PAR4CLS#1 ON

 FCU 0.120 0.090 1.343 0.179

 TCGENDER 0.007 0.104 0.071 0.943

 ANCESTRY1 -0.065 0.101 -0.644 0.519

 ANCESTRY2 -0.754 0.142 -5.297 0.000

 URBANICITY -0.137 0.099 -1.386 0.166

 PAREDUC 0.189 0.110 1.725 0.085

 CHILDINTERNALIZING2 -0.184 0.124 -1.482 0.138

 CHILDEXTERNALIZING2 -0.165 0.113 -1.464 0.143

 INTPRS -0.244 0.116 -2.108 0.035

 AGGPRS 0.032 0.101 0.318 0.751

 CHILDNEG2 0.139 0.098 1.425 0.154

 CHILDBI2 -0.174 0.098 -1.776 0.076

 CHILDIC2 -0.028 0.102 -0.272 0.786

 CHILDNEG3 -0.207 0.074 -2.805 0.005

 CHILDBI3 -0.040 0.102 -0.397 0.691

 CHILDIC3 0.106 0.101 1.053 0.292

 PARPOS3 0.132 0.120 1.100 0.272

 PARNEG3 0.079 0.052 1.536 0.124

 PARNEG2 -0.062 0.074 -0.847 0.397

 PARPOS2 0.021 0.086 0.241 0.810

 MOMDEP2 -0.245 0.110 -2.233 0.026

***\*\*NOTE Co-occurring (reference) compared to Externalizing only\*\****

 PAR4CLS#2 ON

 FCU 0.128 0.093 1.378 0.168

 TCGENDER -0.115 0.108 -1.066 0.286

 ANCESTRY1 -0.014 0.105 -0.133 0.894

 ANCESTRY2 -0.696 0.154 -4.516 0.000

 URBANICITY -0.139 0.102 -1.358 0.174

 PAREDUC -0.001 0.109 -0.008 0.994

 CHILDINTERNALIZING2 -0.329 0.118 -2.785 0.005

 CHILDEXTERNALIZING2 -0.039 0.103 -0.377 0.706

 INTPRS -0.260 0.121 -2.156 0.031

 AGGPRS 0.011 0.103 0.103 0.918

 CHILDNEG2 0.141 0.103 1.372 0.170

 CHILDBI2 -0.200 0.093 -2.149 0.032

 CHILDIC2 0.018 0.098 0.183 0.855

 CHILDNEG3 -0.245 0.088 -2.773 0.006

 CHILDBI3 -0.012 0.100 -0.120 0.904

 CHILDIC3 0.007 0.103 0.070 0.944

 PARPOS3 0.092 0.128 0.721 0.471

 PARNEG3 0.025 0.057 0.437 0.662

 PARNEG2 -0.014 0.064 -0.215 0.830

 PARPOS2 -0.169 0.097 -1.744 0.081

 MOMDEP2 -0.302 0.113 -2.667 0.008

***\*\*NOTE Co-occurring (reference) compared to Low Problems\*\****

 PAR4CLS#3 ON

 FCU 0.145 0.074 1.965 0.049

 TCGENDER -0.081 0.087 -0.928 0.354

 ANCESTRY1 -0.029 0.083 -0.349 0.727

 ANCESTRY2 -0.723 0.126 -5.731 0.000

 URBANICITY -0.096 0.080 -1.203 0.229

 PAREDUC 0.138 0.090 1.530 0.126

 CHILDINTERNALIZING2 -0.328 0.100 -3.296 0.001

 CHILDEXTERNALIZING2 -0.228 0.092 -2.472 0.013

 INTPRS -0.089 0.092 -0.974 0.330

 AGGPRS -0.021 0.086 -0.243 0.808

 CHILDNEG2 0.133 0.084 1.585 0.113

 CHILDBI2 -0.160 0.078 -2.053 0.040

 CHILDIC2 0.007 0.075 0.096 0.923

 CHILDNEG3 -0.180 0.061 -2.955 0.003

 CHILDBI3 -0.037 0.081 -0.452 0.651

 CHILDIC3 0.050 0.083 0.601 0.548

 PARPOS3 0.072 0.104 0.690 0.490

 PARNEG3 -0.049 0.069 -0.713 0.476

 PARNEG2 -0.044 0.049 -0.902 0.367

 PARPOS2 -0.064 0.070 -0.906 0.365

 MOMDEP2 -0.221 0.087 -2.522 0.012

 ZC9PNEG2 WITH

 CHILDBI2 0.039 0.058 0.670 0.503

 CHILDIC2 -0.087 0.046 -1.887 0.059

 CHILDINTERNALIZING2 0.081 0.041 1.986 0.047

 CHILDEXTERNALIZING2 0.083 0.055 1.487 0.137

 CHILDBI2 WITH

 CHILDIC2 0.004 0.045 0.088 0.930

 CHILDINTERNALIZING2 -0.006 0.046 -0.135 0.892

 CHILDEXTERNALIZING2 -0.039 0.049 -0.797 0.426

 ZPT0INH2 WITH

 CHILDINTERNALIZING2 -0.171 0.042 -4.061 0.000

 CHILDEXTERNALIZING2 -0.485 0.034 -14.089 0.000

 CHILDINTERNALIZING2 WITH

 CHILDEXTERNALIZING2 0.494 0.034 14.588 0.000

 FCU -0.016 0.044 -0.366 0.715

 TCGENDER 0.051 0.044 1.164 0.244

 ANCESTRY1 0.103 0.042 2.463 0.014

 ANCESTRY2 -0.162 0.039 -4.127 0.000

 URBANICITY 0.047 0.045 1.043 0.297

 PAREDUC -0.185 0.041 -4.552 0.000

 ZC9PNEG3 WITH

 CHILDBI3 0.007 0.035 0.192 0.848

 CHILDIC3 -0.035 0.046 -0.760 0.447

 CHILDBI3 WITH

 CHILDIC3 0.063 0.044 1.437 0.151

 TCGENDER WITH

 FCU 0.037 0.044 0.840 0.401

 ANCESTRY1 WITH

 FCU -0.028 0.044 -0.630 0.529

 TCGENDER 0.012 0.044 0.268 0.789

 ANCESTRY2 WITH

 FCU 0.000 0.044 0.001 0.999

 TCGENDER -0.039 0.044 -0.890 0.374

 ANCESTRY1 0.000 0.025 0.000 1.000

 URBANICITY WITH

 FCU 0.031 0.044 0.703 0.482

 TCGENDER -0.034 0.044 -0.767 0.443

 ANCESTRY1 0.171 0.047 3.678 0.000

 ANCESTRY2 0.193 0.032 6.020 0.000

 PAREDUC WITH

 FCU 0.011 0.044 0.249 0.804

 TCGENDER 0.013 0.044 0.288 0.773

 ANCESTRY1 -0.038 0.040 -0.961 0.336

 ANCESTRY2 0.279 0.050 5.601 0.000

 URBANICITY 0.119 0.041 2.890 0.004

 CHILDEXTERNALIZING2 WITH

 FCU -0.032 0.039 -0.828 0.407

 TCGENDER -0.092 0.044 -2.116 0.034

 ANCESTRY1 -0.014 0.045 -0.303 0.762

 ANCESTRY2 0.099 0.046 2.157 0.031

 URBANICITY 0.092 0.043 2.107 0.035

 PAREDUC -0.086 0.045 -1.918 0.055

 INTPRS WITH

 FCU -0.050 0.044 -1.144 0.253

 TCGENDER 0.000 0.044 0.000 1.000

 ANCESTRY1 0.327 0.039 8.400 0.000

 ANCESTRY2 -0.019 0.045 -0.420 0.674

 URBANICITY 0.088 0.045 1.944 0.052

 PAREDUC -0.021 0.045 -0.454 0.650

 CHILDINTERNALIZING2 0.067 0.045 1.472 0.141

 CHILDEXTERNALIZING2 -0.011 0.043 -0.263 0.793

 AGGPRS WITH

 FCU -0.044 0.044 -1.002 0.316

 TCGENDER 0.000 0.044 0.000 1.000

 ANCESTRY1 0.050 0.043 1.163 0.245

 ANCESTRY2 0.183 0.044 4.133 0.000

 URBANICITY 0.116 0.043 2.699 0.007

 PAREDUC 0.020 0.047 0.435 0.664

 CHILDINTERNALIZING2 -0.008 0.042 -0.184 0.854

 CHILDEXTERNALIZING2 -0.002 0.045 -0.037 0.970

 INTPRS 0.032 0.044 0.729 0.466

 PARPOS3 WITH

 FCU 0.147 0.043 3.438 0.001

 TCGENDER -0.085 0.046 -1.865 0.062

 ANCESTRY1 -0.095 0.046 -2.074 0.038

 ANCESTRY2 -0.003 0.052 -0.048 0.962

 URBANICITY 0.008 0.047 0.168 0.866

 PAREDUC 0.128 0.046 2.765 0.006

 CHILDINTERNALIZING2 -0.015 0.044 -0.337 0.736

 CHILDEXTERNALIZING2 -0.062 0.038 -1.634 0.102

 INTPRS -0.062 0.050 -1.254 0.210

 AGGPRS -0.051 0.046 -1.100 0.271

 PARNEG3 WITH

 FCU -0.007 0.047 -0.144 0.885

 TCGENDER -0.076 0.047 -1.638 0.101

 ANCESTRY1 0.046 0.049 0.928 0.353

 ANCESTRY2 0.013 0.023 0.545 0.585

 URBANICITY 0.074 0.037 1.973 0.049

 PAREDUC -0.018 0.037 -0.486 0.627

 CHILDINTERNALIZING2 0.037 0.024 1.555 0.120

 CHILDEXTERNALIZING2 0.106 0.029 3.697 0.000

 INTPRS -0.040 0.031 -1.278 0.201

 AGGPRS -0.005 0.033 -0.165 0.869

 PARPOS3 -0.060 0.029 -2.052 0.040

 PARNEG2 WITH

 FCU 0.006 0.043 0.135 0.892

 TCGENDER -0.089 0.035 -2.552 0.011

 ANCESTRY1 0.080 0.044 1.808 0.071

 ANCESTRY2 -0.001 0.031 -0.048 0.962

 URBANICITY 0.119 0.034 3.456 0.001

 PAREDUC 0.010 0.043 0.240 0.811

 CHILDINTERNALIZING2 -0.004 0.041 -0.107 0.915

 CHILDEXTERNALIZING2 0.129 0.042 3.089 0.002

 INTPRS 0.046 0.031 1.485 0.138

 AGGPRS 0.051 0.045 1.138 0.255

 PARPOS3 -0.003 0.046 -0.067 0.947

 PARNEG3 0.172 0.063 2.729 0.006

 PARPOS2 WITH

 FCU 0.039 0.044 0.888 0.374

 TCGENDER 0.009 0.044 0.208 0.835

 ANCESTRY1 -0.016 0.045 -0.345 0.730

 ANCESTRY2 0.057 0.037 1.557 0.119

 URBANICITY 0.030 0.047 0.631 0.528

 PAREDUC 0.098 0.043 2.275 0.023

 CHILDINTERNALIZING2 -0.023 0.041 -0.556 0.578

 CHILDEXTERNALIZING2 -0.009 0.044 -0.201 0.841

 INTPRS 0.015 0.044 0.335 0.738

 AGGPRS -0.010 0.046 -0.229 0.819

 PARPOS3 0.279 0.087 3.195 0.001

 PARNEG3 -0.067 0.030 -2.264 0.024

 PARNEG2 0.054 0.040 1.353 0.176

 MOMDEP2 WITH

 FCU 0.001 0.044 0.027 0.979

 TCGENDER -0.037 0.044 -0.828 0.408

 ANCESTRY1 0.064 0.045 1.410 0.158

 ANCESTRY2 0.080 0.040 2.000 0.045

 URBANICITY 0.148 0.042 3.561 0.000

 PAREDUC -0.063 0.047 -1.339 0.180

 CHILDINTERNALIZING2 0.228 0.043 5.351 0.000

 CHILDEXTERNALIZING2 0.157 0.048 3.235 0.001

 INTPRS -0.052 0.046 -1.140 0.254

 AGGPRS 0.016 0.046 0.343 0.732

 PARPOS3 0.054 0.054 1.004 0.315

 PARNEG3 0.029 0.036 0.811 0.417

 PARNEG2 -0.007 0.041 -0.161 0.872

 PARPOS2 0.165 0.051 3.232 0.001

 Means

 FCU 1.006 0.044 22.693 0.000

 TCGENDER 2.983 0.042 71.418 0.000

 ANCESTRY1 0.000 0.044 0.000 1.000

 ANCESTRY2 0.000 0.044 0.000 1.000

 URBANICITY 2.714 0.075 36.248 0.000

 PAREDUC 0.052 0.044 1.181 0.238

 CHILDINTERNALIZING2 -0.008 0.044 -0.179 0.858

 CHILDEXTERNALIZING2 0.005 0.044 0.123 0.902

 INTPRS 0.000 0.044 0.000 1.000

 AGGPRS 0.000 0.044 0.000 1.000

 PARPOS3 0.012 0.047 0.252 0.801

 PARNEG3 -0.019 0.049 -0.380 0.704

 PARNEG2 0.023 0.041 0.572 0.567

 PARPOS2 -0.020 0.045 -0.437 0.662

 MOMDEP2 0.031 0.044 0.717 0.474

 Intercepts

 CHILDNEG3 -0.013 0.202 -0.063 0.950

 CHILDBI3 -0.171 0.232 -0.738 0.460

 CHILDIC3 -0.010 0.166 -0.062 0.950

 CHILDNEG2 -0.015 0.215 -0.069 0.945

 CHILDBI2 0.122 0.200 0.611 0.542

 CHILDIC2 -0.001 0.184 -0.004 0.997

 PAR4CLS#1 1.325 0.433 3.064 0.002

 PAR4CLS#2 1.502 0.441 3.405 0.001

 PAR4CLS#3 1.713 0.385 4.452 0.000

 Variances

 FCU 1.000 0.000 999.000 999.000

 TCGENDER 1.000 0.000 999.000 999.000

 ANCESTRY1 1.000 0.000 999.000 999.000

 ANCESTRY2 1.000 0.000 999.000 999.000

 URBANICITY 1.000 0.000 999.000 999.000

 PAREDUC 1.000 0.000 999.000 999.000

 CHILDINTERNALIZING2 1.000 0.000 999.000 999.000

 CHILDEXTERNALIZING2 1.000 0.000 999.000 999.000

 INTPRS 1.000 0.000 999.000 999.000

 AGGPRS 1.000 0.000 999.000 999.000

 PARPOS3 1.000 0.000 999.000 999.000

 PARNEG3 1.000 0.000 999.000 999.000

 PARNEG2 1.000 0.000 999.000 999.000

 PARPOS2 1.000 0.000 999.000 999.000

 MOMDEP2 1.000 0.000 999.000 999.000

 Residual Variances

 CHILDNEG3 0.808 0.093 8.707 0.000

 CHILDBI3 0.909 0.028 32.410 0.000

 CHILDIC3 0.704 0.039 17.829 0.000

 CHILDNEG2 0.897 0.028 31.759 0.000

 CHILDBI2 0.942 0.022 42.034 0.000

 CHILDIC2 0.981 0.012 83.487 0.000

R-SQUARE

 Observed Two-Tailed

 Variable Estimate S.E. Est./S.E. P-Value

 ZC9PNEG3 0.192 0.093 2.070 0.038

 CHILDBI3 0.091 0.028 3.250 0.001

 ZPT0INH3 0.296 0.039 7.499 0.000

 ZC9PNEG2 0.103 0.028 3.636 0.000

 CHILDBI2 0.058 0.022 2.586 0.010

 ZPT0INH2 0.019 0.012 1.607 0.108

**Input and Output for Teacher-Reported Latent Profile Models**

***\*\*NOTES:***

 *Nominal variable: T4CLS14*

 *Category 1 Low Problems*

 *Category 2 Externalizing only*

 *Category 3 Internalizing only*

 *Category 4 Co-occurring Problems*

***In the Input/Output, lines starting with \*\*NOTE are not part of the actual input or output.***

***\*\*START INPUT/OUTPUT\*\****

DATA:

FILE IS "4-2-19 es FCU Outcome Genetics Mplus.dat";

VARIABLE:

NAMES ARE

Id T4Cls14 FCU TCGender ANCESTRY1 ANCESTRY2 Urbanicity ParEduc

CHILDNEG3 CHILDBI3 CHILDIC3 CHILDINTERNALIZING2 CHILDEXTERNALIZING2 CHILDNEG2 CHILDBI2 CHILDIC2

INTPRS AGGPRS PARPOS3 PARNEG3 PARNEG2 PARPOS2 MOMDEP2;

USEVARIABLES ARE

T4Cls14 FCU TCGender ANCESTRY1 ANCESTRY2 Urbanicity ParEduc

CHILDNEG3 CHILDBI3 CHILDIC3 CHILDINTERNALIZING2 CHILDEXTERNALIZING2 CHILDNEG2 CHILDBI2 CHILDIC2

INTPRS AGGPRS PARPOS3 PARNEG3 PARNEG2 PARPOS2 MOMDEP2;

MISSING ARE ALL (-99);

useobservations= int001 ge 0;

nominal=T4Cls14;

ANALYSIS:

integration=montecarlo;

MODEL:

CHILDNEG2 on INTPRS AGGPRS Urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARNEG2 PARPOS2 MOMDEP2;

CHILDBI2 on INTPRS AGGPRS Urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARNEG2 PARPOS2 MOMDEP2;

CHILDIC2 on INTPRS AGGPRS Urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARNEG2 PARPOS2 MOMDEP2;

CHILDNEG2 with CHILDBI2 CHILDIC2 CHILDINTERNALIZING2 CHILDEXTERNALIZING2;

CHILDBI2 with CHILDIC2 CHILDINTERNALIZING2 CHILDEXTERNALIZING2;

CHILDIC2 with CHILDINTERNALIZING2 CHILDEXTERNALIZING2;

CHILDINTERNALIZING2 with CHILDEXTERNALIZING2;

CHILDNEG3 on FCU INTPRS AGGPRS Urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARNEG3 PARPOS3 MOMDEP2 CHILDNEG2 CHILDBI2 CHILDIC2;

CHILDBI3 on FCU INTPRS AGGPRS Urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARNEG3 PARPOS3 MOMDEP2 CHILDNEG2 CHILDBI2 CHILDIC2;

CHILDIC3 on FCU INTPRS AGGPRS Urbanicity ParEduc

ANCESTRY1 ANCESTRY2 TCGender PARNEG3 PARPOS3 MOMDEP2 CHILDNEG2 CHILDBI2 CHILDIC2;

T4Cls14 on FCU TCGender ANCESTRY1 ANCESTRY2 Urbanicity ParEduc CHILDINTERNALIZING2 CHILDEXTERNALIZING2

INTPRS AGGPRS CHILDNEG2 CHILDBI2 CHILDIC2 CHILDNEG3 CHILDBI3 CHILDIC3

PARPOS3 PARNEG3 PARNEG2 PARPOS2 MOMDEP2;

CHILDNEG3 with CHILDBI3 CHILDIC3;

CHILDBI3 with CHILDIC3;

FCU; TCGender ;Urbanicity ;CHILDINTERNALIZING2; CHILDEXTERNALIZING2;INTPRS; AGGPRS;ParEduc;

CHILDNEG3; CHILDBI3; CHILDIC3; PARPOS3; PARNEG3;ANCESTRY1 ;ANCESTRY2;

PARNEG2; PARPOS2; CHILDNEG2; CHILDBI2; CHILDIC2;MOMDEP2;

output: stdyx modindices tech4 cinterval;

SUMMARY OF ANALYSIS

Number of FCUs 1

Number of observations 515

Number of dependent variables 7

Number of independent variables 15

Number of continuous latent variables 0

Observed dependent variables

 Continuous

 CHILDNEG3 CHILDBI3 CHILDIC3 CHILDNEG2 CHILDBI2 CHILDIC2

 Unordered categorical (nominal)

 T4CLS14

Observed independent variables

 FCU TCGENDER ANCESTRY1 ANCESTRY2 URBANICITY PAREDUC

 CHILDINTERNALIZING2 CHILDEXTERNALIZING2 INTPRS AGGPRS PARPOS3 PARNEG3

 PARNEG2 PARPOS2 MOMDEP2

Estimator MLR

Information matrix OBSERVED

Optimization Specifications for the Quasi-Newton Algorithm for

Continuous Outcomes

 Maximum number of iterations 100

 Convergence criterion 0.100D-05

Optimization Specifications for the EM Algorithm

 Maximum number of iterations 500

 Convergence criteria

 Loglikelihood change 0.100D-02

 Relative loglikelihood change 0.100D-05

 Derivative 0.100D-02

Optimization Specifications for the M step of the EM Algorithm for

Categorical Latent variables

 Number of M step iterations 1

 M step convergence criterion 0.100D-02

 Basis for M step termination ITERATION

Optimization Specifications for the M step of the EM Algorithm for

Censored, Binary or Ordered Categorical (Ordinal), Unordered

Categorical (Nominal) and Count Outcomes

 Number of M step iterations 1

 M step convergence criterion 0.100D-02

 Basis for M step termination ITERATION

 Maximum value for logit thresholds 15

 Minimum value for logit thresholds -15

 Minimum expected cell size for chi-square 0.100D-01

Maximum number of iterations for H1 2000

Convergence criterion for H1 0.100D-03

Optimization algorithm EMA

Integration Specifications

 Type MONTECARLO

 Number of integration points 3250

 Dimensions of numerical integration 13

 Adaptive quadrature ON

 Monte Carlo integration seed 0

Cholesky OFF

Input data file(s)

 4-2-19 es FCU Outcome Genetics Mplus.dat

Input data format FREE

SUMMARY OF DATA

 Number of missing data patterns 17

COVARIANCE COVERAGE OF DATA

Minimum covariance coverage value 0.100

STANDARDIZED MODEL RESULTS

STDYX Standardization

 Two-Tailed

 Estimate S.E. Est./S.E. P-Value

 CHILDNEG2 ON

 INTPRS -0.025 0.044 -0.572 0.567

 AGGPRS 0.018 0.041 0.454 0.649

 URBANICITY -0.031 0.050 -0.627 0.530

 PAREDUC 0.005 0.048 0.107 0.915

 ANCESTRY1 -0.004 0.042 -0.084 0.933

 ANCESTRY2 -0.007 0.046 -0.161 0.872

 TCGENDER 0.027 0.043 0.618 0.536

 PARNEG2 0.276 0.053 5.190 0.000

 PARPOS2 0.151 0.098 1.546 0.122

 MOMDEP2 -0.036 0.043 -0.826 0.409

 CHILDBI2 ON

 INTPRS 0.104 0.042 2.485 0.013

 AGGPRS -0.131 0.041 -3.160 0.002

 URBANICITY -0.019 0.048 -0.404 0.686

 PAREDUC -0.028 0.050 -0.558 0.577

 ANCESTRY1 -0.056 0.047 -1.184 0.237

 ANCESTRY2 -0.096 0.055 -1.741 0.082

 TCGENDER -0.036 0.044 -0.811 0.417

 PARNEG2 0.018 0.046 0.387 0.699

 PARPOS2 0.107 0.056 1.913 0.056

 MOMDEP2 -0.022 0.041 -0.533 0.594

 CHILDIC2 ON

 INTPRS -0.007 0.045 -0.164 0.870

 AGGPRS -0.081 0.044 -1.862 0.063

 URBANICITY 0.023 0.048 0.485 0.628

 PAREDUC 0.035 0.041 0.861 0.389

 ANCESTRY1 0.081 0.050 1.612 0.107

 ANCESTRY2 -0.046 0.045 -1.028 0.304

 TCGENDER -0.011 0.044 -0.249 0.803

 PARNEG2 -0.049 0.033 -1.513 0.130

 PARPOS2 -0.021 0.044 -0.472 0.637

 MOMDEP2 -0.019 0.049 -0.384 0.701

 CHILDNEG3 ON

 FCU -0.021 0.044 -0.485 0.628

 INTPRS -0.040 0.041 -0.973 0.331

 AGGPRS 0.084 0.037 2.252 0.024

 URBANICITY -0.042 0.047 -0.891 0.373

 PAREDUC 0.051 0.041 1.255 0.209

 ANCESTRY1 0.027 0.044 0.615 0.539

 ANCESTRY2 -0.034 0.044 -0.773 0.440

 TCGENDER 0.035 0.044 0.793 0.428

 PARNEG3 0.357 0.143 2.504 0.012

 PARPOS3 0.117 0.045 2.594 0.009

 MOMDEP2 -0.028 0.039 -0.729 0.466

 CHILDNEG2 0.200 0.081 2.460 0.014

 CHILDBI2 0.054 0.043 1.245 0.213

 CHILDIC2 0.035 0.051 0.686 0.493

 CHILDBI3 ON

 FCU -0.009 0.045 -0.196 0.844

 INTPRS -0.001 0.044 -0.033 0.974

 AGGPRS 0.079 0.042 1.895 0.058

 URBANICITY 0.033 0.051 0.647 0.518

 PAREDUC -0.035 0.045 -0.767 0.443

 ANCESTRY1 -0.034 0.049 -0.697 0.486

 ANCESTRY2 -0.033 0.036 -0.921 0.357

 TCGENDER 0.026 0.045 0.585 0.559

 PARNEG3 0.038 0.040 0.959 0.337

 PARPOS3 0.070 0.044 1.581 0.114

 MOMDEP2 0.023 0.041 0.559 0.576

 CHILDNEG2 -0.092 0.041 -2.231 0.026

 CHILDBI2 0.271 0.050 5.380 0.000

 CHILDIC2 0.041 0.046 0.890 0.373

 CHILDIC3 ON

 FCU 0.064 0.039 1.632 0.103

 INTPRS 0.044 0.040 1.089 0.276

 AGGPRS -0.021 0.040 -0.512 0.609

 URBANICITY -0.047 0.040 -1.154 0.249

 PAREDUC 0.124 0.041 3.073 0.002

 ANCESTRY1 -0.055 0.042 -1.319 0.187

 ANCESTRY2 -0.074 0.035 -2.087 0.037

 TCGENDER 0.024 0.038 0.626 0.532

 PARNEG3 0.007 0.024 0.296 0.767

 PARPOS3 0.049 0.043 1.135 0.256

 MOMDEP2 -0.105 0.043 -2.445 0.014

 CHILDNEG2 -0.010 0.040 -0.256 0.798

 CHILDBI2 0.011 0.036 0.293 0.769

 CHILDIC2 0.492 0.039 12.697 0.000

***\*\*NOTE Co-occurring (reference) compared to Low Problems\*\****

T4CLS14#1 ON

 FCU -0.072 0.138 -0.522 0.602

 TCGENDER 0.057 0.124 0.464 0.643

 ANCESTRY1 -0.315 0.148 -2.138 0.033

 ANCESTRY2 -0.270 0.126 -2.136 0.033

 URBANICITY -0.052 0.138 -0.376 0.707

 PAREDUC 0.506 0.109 4.659 0.000

 CHILDINTERNALIZING2 0.355 0.170 2.085 0.037

 CHILDEXTERNALIZING2 -0.281 0.159 -1.771 0.077

 INTPRS 0.226 0.146 1.550 0.121

 AGGPRS -0.096 0.143 -0.672 0.502

 CHILDNEG2 -0.045 0.122 -0.369 0.712

 CHILDBI2 -0.158 0.108 -1.461 0.144

 CHILDIC2 0.151 0.148 1.022 0.307

 CHILDNEG3 -0.332 0.081 -4.116 0.000

 CHILDBI3 -0.004 0.126 -0.031 0.975

 CHILDIC3 0.026 0.172 0.149 0.882

 PARPOS3 0.489 0.179 2.735 0.006

 PARNEG3 0.008 0.065 0.119 0.905

 PARNEG2 0.121 0.187 0.645 0.519

 PARPOS2 0.123 0.161 0.763 0.446

 MOMDEP2 -0.028 0.132 -0.215 0.830

***\*\*NOTE Co-occurring (reference) compared to Externalizing only\*\****

T4CLS14#2 ON

 FCU -0.064 0.141 -0.457 0.648

 TCGENDER 0.171 0.123 1.391 0.164

 ANCESTRY1 0.052 0.126 0.411 0.681

 ANCESTRY2 -0.216 0.139 -1.549 0.121

 URBANICITY -0.015 0.139 -0.107 0.915

 PAREDUC 0.376 0.122 3.093 0.002

 CHILDINTERNALIZING2 0.344 0.168 2.042 0.041

 CHILDEXTERNALIZING2 -0.246 0.174 -1.411 0.158

 INTPRS 0.170 0.149 1.143 0.253

 AGGPRS -0.028 0.148 -0.191 0.848

 CHILDNEG2 -0.084 0.126 -0.662 0.508

 CHILDBI2 -0.198 0.116 -1.711 0.087

 CHILDIC2 0.176 0.161 1.092 0.275

 CHILDNEG3 -0.368 0.096 -3.821 0.000

 CHILDBI3 0.011 0.136 0.080 0.937

 CHILDIC3 -0.065 0.168 -0.389 0.697

 PARPOS3 0.600 0.163 3.681 0.000

 PARNEG3 0.032 0.067 0.469 0.639

 PARNEG2 0.379 0.195 1.948 0.051

 PARPOS2 0.141 0.162 0.873 0.382

 MOMDEP2 -0.070 0.143 -0.486 0.627

***\*\*NOTE Co-occurring (reference) compared to Internalizing only\*\****

T4CLS14#3 ON

 FCU -0.199 0.138 -1.442 0.149

 TCGENDER 0.148 0.127 1.165 0.244

 ANCESTRY1 -0.253 0.156 -1.627 0.104

 ANCESTRY2 -0.207 0.154 -1.348 0.178

 URBANICITY 0.110 0.139 0.789 0.430

 PAREDUC 0.551 0.120 4.574 0.000

 CHILDINTERNALIZING2 0.336 0.172 1.950 0.051

 CHILDEXTERNALIZING2 -0.194 0.177 -1.101 0.271

 INTPRS 0.069 0.154 0.450 0.653

 AGGPRS -0.069 0.146 -0.468 0.639

 CHILDNEG2 -0.150 0.133 -1.122 0.262

 CHILDBI2 0.012 0.121 0.103 0.918

 CHILDIC2 0.154 0.159 0.971 0.332

 CHILDNEG3 -0.249 0.100 -2.501 0.012

 CHILDBI3 -0.025 0.137 -0.181 0.856

 CHILDIC3 -0.037 0.182 -0.205 0.837

 PARPOS3 0.440 0.186 2.371 0.018

 PARNEG3 -0.025 0.088 -0.281 0.778

 PARNEG2 0.322 0.182 1.766 0.077

 PARPOS2 0.272 0.157 1.737 0.082

 MOMDEP2 -0.061 0.144 -0.427 0.669

 ZC9PNEG2 WITH

 CHILDBI2 0.039 0.058 0.669 0.504

 CHILDIC2 -0.087 0.046 -1.882 0.060

 CHILDINTERNALIZING2 0.081 0.041 1.982 0.047

 CHILDEXTERNALIZING2 0.082 0.055 1.481 0.139

 CHILDBI2 WITH

 CHILDIC2 0.006 0.045 0.144 0.886

 CHILDINTERNALIZING2 -0.007 0.046 -0.145 0.885

 CHILDEXTERNALIZING2 -0.041 0.049 -0.850 0.395

 ZPT0INH2 WITH

 CHILDINTERNALIZING2 -0.170 0.042 -4.030 0.000

 CHILDEXTERNALIZING2 -0.486 0.034 -14.095 0.000

 CHILDINTERNALIZING2 WITH

 CHILDEXTERNALIZING2 0.494 0.034 14.576 0.000

 FCU -0.016 0.044 -0.357 0.721

 TCGENDER 0.052 0.044 1.171 0.241

 ANCESTRY1 0.103 0.042 2.472 0.013

 ANCESTRY2 -0.162 0.039 -4.131 0.000

 URBANICITY 0.047 0.045 1.035 0.301

 PAREDUC -0.184 0.041 -4.544 0.000

 ZC9PNEG3 WITH

 CHILDBI3 0.004 0.035 0.103 0.918

 CHILDIC3 -0.036 0.046 -0.779 0.436

 CHILDBI3 WITH

 CHILDIC3 0.060 0.044 1.361 0.174

 TCGENDER WITH

 FCU 0.037 0.044 0.840 0.401

 ANCESTRY1 WITH

 FCU -0.028 0.044 -0.630 0.529

 TCGENDER 0.012 0.044 0.268 0.789

 ANCESTRY2 WITH

 FCU 0.000 0.044 0.001 0.999

 TCGENDER -0.039 0.044 -0.890 0.374

 ANCESTRY1 0.000 0.025 0.000 1.000

 URBANICITY WITH

 FCU 0.031 0.044 0.703 0.482

 TCGENDER -0.034 0.044 -0.767 0.443

 ANCESTRY1 0.171 0.047 3.678 0.000

 ANCESTRY2 0.193 0.032 6.020 0.000

 PAREDUC WITH

 FCU 0.011 0.044 0.249 0.804

 TCGENDER 0.013 0.044 0.288 0.773

 ANCESTRY1 -0.038 0.040 -0.961 0.336

 ANCESTRY2 0.279 0.050 5.601 0.000

 URBANICITY 0.119 0.041 2.890 0.004

 CHILDEXTERNALIZING2 WITH

 FCU -0.033 0.039 -0.831 0.406

 TCGENDER -0.093 0.044 -2.119 0.034

 ANCESTRY1 -0.014 0.045 -0.306 0.760

 ANCESTRY2 0.099 0.046 2.160 0.031

 URBANICITY 0.092 0.043 2.111 0.035

 PAREDUC -0.086 0.045 -1.921 0.055

 INTPRS WITH

 FCU -0.050 0.044 -1.144 0.253

 TCGENDER 0.000 0.044 0.000 1.000

 ANCESTRY1 0.327 0.039 8.400 0.000

 ANCESTRY2 -0.019 0.045 -0.420 0.674

 URBANICITY 0.088 0.045 1.944 0.052

 PAREDUC -0.021 0.045 -0.454 0.650

 CHILDINTERNALIZING2 0.067 0.045 1.475 0.140

 CHILDEXTERNALIZING2 -0.011 0.043 -0.265 0.791

 AGGPRS WITH

 FCU -0.044 0.044 -1.002 0.316

 TCGENDER 0.000 0.044 0.000 1.000

 ANCESTRY1 0.050 0.043 1.163 0.245

 ANCESTRY2 0.183 0.044 4.133 0.000

 URBANICITY 0.116 0.043 2.699 0.007

 PAREDUC 0.020 0.047 0.435 0.664

 CHILDINTERNALIZING2 -0.007 0.042 -0.178 0.859

 CHILDEXTERNALIZING2 -0.002 0.045 -0.040 0.968

 INTPRS 0.032 0.044 0.729 0.466

 PARPOS3 WITH

 FCU 0.148 0.043 3.466 0.001

 TCGENDER -0.081 0.045 -1.777 0.076

 ANCESTRY1 -0.093 0.047 -1.969 0.049

 ANCESTRY2 -0.002 0.052 -0.043 0.966

 URBANICITY 0.010 0.045 0.223 0.824

 PAREDUC 0.131 0.046 2.834 0.005

 CHILDINTERNALIZING2 -0.016 0.043 -0.378 0.706

 CHILDEXTERNALIZING2 -0.062 0.038 -1.633 0.103

 INTPRS -0.062 0.050 -1.224 0.221

 AGGPRS -0.047 0.046 -1.011 0.312

 PARNEG3 WITH

 FCU -0.002 0.048 -0.051 0.960

 TCGENDER -0.076 0.048 -1.577 0.115

 ANCESTRY1 0.040 0.049 0.825 0.409

 ANCESTRY2 0.013 0.023 0.565 0.572

 URBANICITY 0.072 0.038 1.888 0.059

 PAREDUC -0.018 0.036 -0.514 0.607

 CHILDINTERNALIZING2 0.037 0.024 1.534 0.125

 CHILDEXTERNALIZING2 0.108 0.030 3.598 0.000

 INTPRS -0.046 0.031 -1.475 0.140

 AGGPRS -0.006 0.033 -0.168 0.867

 PARPOS3 -0.058 0.030 -1.937 0.053

 PARNEG2 WITH

 FCU 0.006 0.043 0.128 0.898

 TCGENDER -0.088 0.035 -2.543 0.011

 ANCESTRY1 0.080 0.044 1.816 0.069

 ANCESTRY2 -0.001 0.031 -0.047 0.963

 URBANICITY 0.119 0.034 3.464 0.001

 PAREDUC 0.011 0.044 0.243 0.808

 CHILDINTERNALIZING2 -0.004 0.041 -0.102 0.919

 CHILDEXTERNALIZING2 0.129 0.042 3.087 0.002

 INTPRS 0.046 0.031 1.496 0.135

 AGGPRS 0.051 0.045 1.137 0.256

 PARPOS3 -0.003 0.057 -0.055 0.956

 PARNEG3 0.168 0.061 2.740 0.006

 PARPOS2 WITH

 FCU 0.038 0.044 0.881 0.378

 TCGENDER 0.009 0.044 0.209 0.835

 ANCESTRY1 -0.015 0.045 -0.339 0.735

 ANCESTRY2 0.057 0.037 1.555 0.120

 URBANICITY 0.030 0.047 0.631 0.528

 PAREDUC 0.097 0.043 2.267 0.023

 CHILDINTERNALIZING2 -0.023 0.041 -0.548 0.584

 CHILDEXTERNALIZING2 -0.009 0.044 -0.200 0.842

 INTPRS 0.015 0.044 0.342 0.732

 AGGPRS -0.010 0.046 -0.225 0.822

 PARPOS3 0.277 0.059 4.726 0.000

 PARNEG3 -0.062 0.031 -1.999 0.046

 PARNEG2 0.054 0.040 1.357 0.175

 MOMDEP2 WITH

 FCU 0.001 0.045 0.026 0.979

 TCGENDER -0.037 0.044 -0.828 0.408

 ANCESTRY1 0.064 0.045 1.414 0.157

 ANCESTRY2 0.080 0.040 1.999 0.046

 URBANICITY 0.148 0.042 3.561 0.000

 PAREDUC -0.064 0.048 -1.342 0.180

 CHILDINTERNALIZING2 0.228 0.043 5.351 0.000

 CHILDEXTERNALIZING2 0.156 0.049 3.218 0.001

 INTPRS -0.053 0.046 -1.157 0.247

 AGGPRS 0.015 0.046 0.337 0.736

 PARPOS3 0.051 0.047 1.066 0.286

 PARNEG3 0.035 0.037 0.935 0.350

 PARNEG2 -0.007 0.041 -0.169 0.866

 PARPOS2 0.166 0.051 3.244 0.001

 Means

 FCU 1.006 0.044 22.693 0.000

 TCGENDER 2.983 0.042 71.418 0.000

 ANCESTRY1 0.000 0.044 0.000 1.000

 ANCESTRY2 0.000 0.044 0.000 1.000

 URBANICITY 2.714 0.075 36.248 0.000

 PAREDUC 0.052 0.044 1.181 0.238

 CHILDINTERNALIZING2 -0.008 0.044 -0.187 0.852

 CHILDEXTERNALIZING2 0.006 0.044 0.127 0.899

 INTPRS 0.000 0.044 0.000 1.000

 AGGPRS 0.000 0.044 0.000 1.000

 PARPOS3 0.011 0.045 0.248 0.804

 PARNEG3 -0.019 0.050 -0.386 0.699

 PARNEG2 0.024 0.041 0.579 0.563

 PARPOS2 -0.020 0.045 -0.437 0.662

 MOMDEP2 0.032 0.044 0.720 0.472

 Intercepts

 CHILDNEG3 0.009 0.202 0.043 0.966

 CHILDBI3 -0.174 0.214 -0.816 0.415

 CHILDIC3 -0.032 0.159 -0.199 0.842

 CHILDNEG2 -0.014 0.215 -0.065 0.948

 CHILDBI2 0.126 0.201 0.625 0.532

 CHILDIC2 0.000 0.184 0.001 0.999

 T4CLS14#1 1.874 0.596 3.144 0.002

 T4CLS14#2 0.664 0.539 1.231 0.218

 T4CLS14#3 0.272 0.536 0.507 0.612

 Variances

 FCU 1.000 0.000 999.000 999.000

 TCGENDER 1.000 0.000 999.000 999.000

 ANCESTRY1 1.000 0.000 999.000 999.000

 ANCESTRY2 1.000 0.000 999.000 999.000

 URBANICITY 1.000 0.000 999.000 999.000

 PAREDUC 1.000 0.000 999.000 999.000

 CHILDINTERNALIZING2 1.000 0.000 999.000 999.000

 CHILDEXTERNALIZING2 1.000 0.000 999.000 999.000

 INTPRS 1.000 0.000 999.000 999.000

 AGGPRS 1.000 0.000 999.000 999.000

 PARPOS3 1.000 0.000 999.000 999.000

 PARNEG3 1.000 0.000 999.000 999.000

 PARNEG2 1.000 0.000 999.000 999.000

 PARPOS2 1.000 0.000 999.000 999.000

 MOMDEP2 1.000 0.000 999.000 999.000

 Residual Variances

 CHILDNEG3 0.804 0.094 8.512 0.000

 CHILDBI3 0.907 0.028 32.326 0.000

 CHILDIC3 0.701 0.039 18.210 0.000

 CHILDNEG2 0.897 0.028 31.713 0.000

 CHILDBI2 0.942 0.022 42.085 0.000

 CHILDIC2 0.981 0.012 83.600 0.000

R-SQUARE

 Observed Two-Tailed

 Variable Estimate S.E. Est./S.E. P-Value

 ZC9PNEG3 0.196 0.094 2.078 0.038

 CHILDBI3 0.093 0.028 3.328 0.001

 ZPT0INH3 0.299 0.039 7.751 0.000

 ZC9PNEG2 0.103 0.028 3.633 0.000

 CHILDBI2 0.058 0.022 2.584 0.010

 ZPT0INH2 0.019 0.012 1.608 0.1089