

Mplus VERSION 8.4 (Mac)
MUTHEN & MUTHEN
08/05/2020 12:44 PM

INPUT INSTRUCTIONS

```
TITLE: Measurement Models - School Conn PAF Int
DATA: FILE = "All_Variables_072720.dat";
VARIABLE:
  NAMES = ff_id ThreatComp DepComp k6d2ag k6d2ai k6d2d k6d2j k6d2t
k6d2ac k6d2ak k6d2c
        k6d2n k6d2x p6b36 p6b40 p6b52 p6b53 p6b54 p6b68 p6b65 p6b66
k6d2ag_r k6d2ai_r
        k6d2d_r k6d2j_r k6d2t_r k6d2ac_r k6d2ak_r k6d2c_r k6d2n_r
k6d2x_r k6d61a k6d61b
        k6d61c k6d61d k6d61e k6d61f k6d61g k6d61h k6d61i k6d61j k6d61k
k6d61l k6d61m
        k6d2a k6d2p k6d2r k6d2z k6d2ab k6d2aj k6d40 k6d48 k6f63 k6f68
k6f74 p6b35 p6b37
        p6b38 p6b39 p6b41 p6b42 p6b43 p6b44 p6b45 p6b57 p6b59 p6b49
p6b50 p6b51 p6b60
        p6b61 p6b62 p6b63 p6b64 p6b67 k6d2a_r k6d2p_r k6d2r_r k6d2z_r
k6d2ab_r k6d2aj_r
        k6d40_r k6d48_r k6f63_r k6f68_r k6f74_r k6d2b k6d2e k6d2f k6d2g
k6d2h k6d2i
        k6d2k k6d2l k6d2m k6d2o k6d2s k6d2u k6d2v k6d2w k6d2y k6d2aa
k6d2ad k6d2ae
        k6d2af k6d2ah k6d2b_r k6d2e_r k6d2f_r k6d2g_r k6d2h_r k6d2i_r
k6d2k_r k6d2l_r
        k6d2m_r k6d2o_r k6d2s_r k6d2u_r k6d2v_r k6d2w_r k6d2y_r
k6d2aa_r k6d2ad_r
        k6d2ae_r k6d2af_r k6d2ah_r k5e1a k5e1b k5e1c k5e1d k5e2a k5e2b
k5e2c k5e2d
        k6b1a k6b1b k6b1c k6b1d k6b32a k6b32b k6b32c k6b32d k6b32e
k6b32f k5e2a_r
        k5e2b_r k5e2c_r k5e2d_r k6b1a_r k6b1b_r k6b1c_r k6b1d_r;

USEVARIABLES =
  !ThreatComp DepComp ! Not used in measurement model.
  ! SC15
  k6b1a_r k6b1b_r k6b1c_r k6b1d_r
  ! SC9
  ! k5e1a k5e1b k5e1c k5e1d
  ! Anxiety
  ! k6d2ag_r k6d2ai_r k6d2d_r k6d2j_r k6d2t_r
  ! Depression
  ! k6d2ac_r k6d2ak_r k6d2c_r k6d2n_r k6d2x_r
  ! Internalizing CBCL
  !p6b36 p6b40 p6b52 p6b53 p6b54 p6b68 p6b65 p6b66
  ! Delinquency (Reverse Coded)
```

! k6d2a_r k6d2p_r k6d2r_r k6d2z_r k6d2ab_r k6d2aj_r
 ! Impulsivity
 ! k6d61a k6d61b k6d61c k6d61d k6d61e k6d61f k6d61g k6d61h
 ! k6d61i k6d61j k6d61k k6d61l k6d61m
 ! Substance Use (Dichotomous)
 ! k6d40_r k6d48_r k6f63_r k6f68_r k6f74_r
 ! Externalizing CBCL
 !p6b35 p6b37 p6b38 p6b39 p6b41 p6b42 p6b43 p6b44 p6b45 p6b57 p6b59
 p6b49 p6b50
 !p6b51 p6b60 p6b61 p6b62 p6b63 p6b64 p6b67
 ! PAF
 ! k6d2b_r k6d2f_r k6d2g_r
 ! k6d2i_r k6d2k_r k6d2l_r k6d2m_r k6d2o_r
 ! k6d2s_r k6d2v_r k6d2w_r k6d2y_r
 ! k6d2aa_r k6d2ae_r k6d2af_r k6d2ah_r
 ;
 ! 9.24.2019 – I am removing te 4 items on the PAF engagement
 subscale because
 ! they all have standard factor loadings below 0.3 and qualitatively
 seem
 ! to be measuring something different. Those items are: k6d2e,
 k6d2h, k6d2u, k6d2ad.

CATEGORICAL =
 ! SC15
 k6b1a_r k6b1b_r k6b1c_r k6b1d_r
 ! SC9
 ! k5e1a k5e1b k5e1c k5e1d
 ! Anxiety
 ! k6d2ag_r k6d2ai_r k6d2d_r k6d2j_r k6d2t_r
 ! Depression
 ! k6d2ac_r k6d2ak_r k6d2c_r k6d2n_r k6d2x_r
 ! Internalizing CBCL
 !p6b36 p6b40 p6b52 p6b53 p6b54 p6b68 p6b65 p6b66
 ! Delinquency (Reverse Coded)
 ! k6d2a_r k6d2p_r k6d2r_r k6d2z_r k6d2ab_r k6d2aj_r
 ! Impulsivity
 ! k6d61a k6d61b k6d61c k6d61d k6d61e k6d61f k6d61g k6d61h
 ! k6d61i k6d61j k6d61k k6d61l k6d61m
 ! Substance Use (Dichotomous)
 ! k6d40_r k6d48_r k6f63_r k6f68_r k6f74_r
 ! Externalizing CBCL
 !p6b35 p6b37 p6b38 p6b39 p6b41 p6b42 p6b43 p6b44 p6b45 p6b57 p6b59
 p6b49 p6b50
 !p6b51 p6b60 p6b61 p6b62 p6b63 p6b64 p6b67
 ! PAF
 ! k6d2b_r k6d2f_r k6d2g_r
 ! k6d2i_r k6d2k_r k6d2l_r k6d2m_r k6d2o_r
 ! k6d2s_r k6d2v_r k6d2w_r k6d2y_r
 ! k6d2aa_r k6d2ae_r k6d2af_r k6d2ah_r

;

IDVARIABLE = ff_id;
MISSING=ALL(99);

MODEL:

! School Connectedness @ Age 15

SC15 BY k6b1a_r* k6b1b_r k6b1c_r k6b1d_r;

SC15 @ 1;

! School Connectedness @ Age 9

! SC9 BY k5e1a* k5e1b k5e1c k5e1d;

! SC9 @ 1;

! Internalizing @ Age 15

! Internalizing BY k6d2ag_r* k6d2ai_r k6d2d_r k6d2j_r k6d2t_r

! k6d2ac_r k6d2ak_r k6d2c_r k6d2n_r k6d2x_r;

!p6b36 p6b40 p6b52 p6b53 p6b54 p6b68 p6b65 p6b66

! Internalizing @ 1;

! Externalizing @ Age 15 (Multi-informant)

! EXTERN BY k6d2a_r* k6d2p_r k6d2r_r k6d2z_r k6d2ab_r k6d2aj_r

! k6d61a k6d61b k6d61c k6d61d k6d61e k6d61f k6d61g k6d61h

! k6d61i k6d61j k6d61k k6d61l k6d61m

! k6d40_r k6d48_r k6f63_r k6f68_r k6f74_r;

!p6b35 p6b37 p6b38

!p6b39 p6b41 p6b42 p6b43 p6b44 p6b45 p6b57 p6b59 p6b49 p6b50

!p6b51 p6b60 p6b61 p6b62 p6b63 p6b64 p6b67

! EXTERN @ 1;

! PAF @ Age 15

! PAF BY k6d2b_r* k6d2f_r k6d2g_r

! k6d2i_r k6d2k_r k6d2l_r k6d2m_r k6d2o_r

! k6d2s_r k6d2v_r k6d2w_r k6d2y_r

! k6d2aa_r k6d2ae_r k6d2af_r k6d2ah_r;

! PAF @ 1;

OUTPUT: modindices (ALL) standardized sampstat;

SAVEDATA:

FILE IS CFA_FactorScores_SC15_080520.txt;

save = fscores;

*** WARNING

Data set contains cases with missing on all variables.
These cases were not included in the analysis.
Number of cases with missing on all variables: 1511
1 WARNING(S) FOUND IN THE INPUT INSTRUCTIONS

Measurement Models – School Conn PAF Int

SUMMARY OF ANALYSIS

Number of groups	1
Number of observations	3387
Number of dependent variables	4
Number of independent variables	0
Number of continuous latent variables	1

Observed dependent variables

Binary and ordered categorical (ordinal)

K6B1A_R K6B1B_R K6B1C_R K6B1D_R

Continuous latent variables

SC15

Variables with special functions

ID variable FF_ID

Estimator	WLSMV
Maximum number of iterations	1000
Convergence criterion	0.500D-04
Maximum number of steepest descent iterations	20
Maximum number of iterations for H1	2000
Convergence criterion for H1	0.100D-03
Parameterization	DELTA
Link	PROBIT

Input data file(s)

All_Variables_072720.dat

Input data format FREE

SUMMARY OF DATA

Number of missing data patterns	6
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COVARIANCE COVERAGE OF DATA

Minimum covariance coverage value 0.100

PROPORTION OF DATA PRESENT

	Covariance Coverage			
	K6B1A_R	K6B1B_R	K6B1C_R	K6B1D_R
K6B1A_R	1.000			
K6B1B_R	0.999	0.999		
K6B1C_R	0.999	0.999	0.999	
K6B1D_R	0.999	0.999	0.999	0.999

UNIVARIATE PROPORTIONS AND COUNTS FOR CATEGORICAL VARIABLES

K6B1A_R		
Category 1	0.046	157.000
Category 2	0.079	269.000
Category 3	0.400	1353.000
Category 4	0.475	1607.000
K6B1B_R		
Category 1	0.037	126.000
Category 2	0.071	239.000
Category 3	0.329	1115.000
Category 4	0.563	1904.000
K6B1C_R		
Category 1	0.056	189.000
Category 2	0.059	201.000
Category 3	0.313	1058.000
Category 4	0.572	1936.000
K6B1D_R		
Category 1	0.025	83.000
Category 2	0.039	131.000
Category 3	0.233	789.000
Category 4	0.704	2380.000

SAMPLE STATISTICS

ESTIMATED SAMPLE STATISTICS

MEANS/INTERCEPTS/THRESHOLDS

K6B1B_R\$	K6B1A_R\$	K6B1A_R\$	K6B1A_R\$	K6B1B_R\$
_____	_____	_____	_____	_____
-1.238	-1.681	-1.146	0.064	-1.784

MEANS/INTERCEPTS/THRESHOLDS				
K6B1D_R\$	K6B1B_R\$	K6B1C_R\$	K6B1C_R\$	K6B1C_R\$
_____	_____	_____	_____	_____
-1.968	-0.158	-1.591	-1.199	-0.182

MEANS/INTERCEPTS/THRESHOLDS	
K6B1D_R\$	K6B1D_R\$
_____	_____
-1.528	-0.535

CORRELATION MATRIX (WITH VARIANCES ON THE DIAGONAL)				
	K6B1A_R	K6B1B_R	K6B1C_R	K6B1D_R
_____	_____	_____	_____	_____
K6B1A_R				
K6B1B_R	0.553			
K6B1C_R	0.521	0.580		
K6B1D_R	0.423	0.450	0.481	

THE MODEL ESTIMATION TERMINATED NORMALLY

MODEL FIT INFORMATION

Number of Free Parameters 16

Chi-Square Test of Model Fit

Value	5.715*
Degrees of Freedom	2
P-Value	0.0574

* The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be used for chi-square difference testing in the regular way. MLM, MLR and WLSM

chi-square difference testing is described on the Mplus website.
MLMV, WLSMV,
and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

Estimate	0.023	
90 Percent C.I.	0.000	0.047
Probability RMSEA <= .05	0.970	

CFI/TLI

CFI	0.999
TLI	0.997

Chi-Square Test of Model Fit for the Baseline Model

Value	4194.741
Degrees of Freedom	6
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value	0.007
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Optimum Function Value for Weighted Least-Squares Estimator

Value	0.43189564D-03
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MODEL RESULTS

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
SC15 BY				
K6B1A_R	0.703	0.015	46.464	0.000
K6B1B_R	0.769	0.015	52.106	0.000
K6B1C_R	0.757	0.015	50.356	0.000
K6B1D_R	0.608	0.019	32.156	0.000
Thresholds				
K6B1A_R\$1	-1.681	0.037	-45.170	0.000
K6B1A_R\$2	-1.146	0.028	-41.595	0.000
K6B1A_R\$3	0.064	0.022	2.956	0.003
K6B1B_R\$1	-1.784	0.040	-44.548	0.000
K6B1B_R\$2	-1.238	0.029	-43.042	0.000
K6B1B_R\$3	-0.158	0.022	-7.286	0.000
K6B1C_R\$1	-1.591	0.035	-45.370	0.000

K6B1C_R\$2	-1.199	0.028	-42.465	0.000
K6B1C_R\$3	-0.182	0.022	-8.385	0.000
K6B1D_R\$1	-1.968	0.046	-42.568	0.000
K6B1D_R\$2	-1.528	0.034	-45.324	0.000
K6B1D_R\$3	-0.535	0.023	-23.543	0.000

Variances				
SC15	1.000	0.000	999.000	999.000

STANDARDIZED MODEL RESULTS

STDYX Standardization

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
SC15 BY				
K6B1A_R	0.703	0.015	46.464	0.000
K6B1B_R	0.769	0.015	52.106	0.000
K6B1C_R	0.757	0.015	50.356	0.000
K6B1D_R	0.608	0.019	32.156	0.000

Thresholds				
K6B1A_R\$1	-1.681	0.037	-45.170	0.000
K6B1A_R\$2	-1.146	0.028	-41.595	0.000
K6B1A_R\$3	0.064	0.022	2.956	0.003
K6B1B_R\$1	-1.784	0.040	-44.548	0.000
K6B1B_R\$2	-1.238	0.029	-43.042	0.000
K6B1B_R\$3	-0.158	0.022	-7.286	0.000
K6B1C_R\$1	-1.591	0.035	-45.370	0.000
K6B1C_R\$2	-1.199	0.028	-42.465	0.000
K6B1C_R\$3	-0.182	0.022	-8.385	0.000
K6B1D_R\$1	-1.968	0.046	-42.568	0.000
K6B1D_R\$2	-1.528	0.034	-45.324	0.000
K6B1D_R\$3	-0.535	0.023	-23.543	0.000

Variances				
SC15	1.000	0.000	999.000	999.000

STDY Standardization

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
SC15 BY				
K6B1A_R	0.703	0.015	46.464	0.000
K6B1B_R	0.769	0.015	52.106	0.000

K6B1C_R	0.757	0.015	50.356	0.000
K6B1D_R	0.608	0.019	32.156	0.000

Thresholds

K6B1A_R\$1	-1.681	0.037	-45.170	0.000
K6B1A_R\$2	-1.146	0.028	-41.595	0.000
K6B1A_R\$3	0.064	0.022	2.956	0.003
K6B1B_R\$1	-1.784	0.040	-44.548	0.000
K6B1B_R\$2	-1.238	0.029	-43.042	0.000
K6B1B_R\$3	-0.158	0.022	-7.286	0.000
K6B1C_R\$1	-1.591	0.035	-45.370	0.000
K6B1C_R\$2	-1.199	0.028	-42.465	0.000
K6B1C_R\$3	-0.182	0.022	-8.385	0.000
K6B1D_R\$1	-1.968	0.046	-42.568	0.000
K6B1D_R\$2	-1.528	0.034	-45.324	0.000
K6B1D_R\$3	-0.535	0.023	-23.543	0.000

Variances

SC15	1.000	0.000	999.000	999.000
------	-------	-------	---------	---------

STD Standardization

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
SC15 BY				
K6B1A_R	0.703	0.015	46.464	0.000
K6B1B_R	0.769	0.015	52.106	0.000
K6B1C_R	0.757	0.015	50.356	0.000
K6B1D_R	0.608	0.019	32.156	0.000
Thresholds				
K6B1A_R\$1	-1.681	0.037	-45.170	0.000
K6B1A_R\$2	-1.146	0.028	-41.595	0.000
K6B1A_R\$3	0.064	0.022	2.956	0.003
K6B1B_R\$1	-1.784	0.040	-44.548	0.000
K6B1B_R\$2	-1.238	0.029	-43.042	0.000
K6B1B_R\$3	-0.158	0.022	-7.286	0.000
K6B1C_R\$1	-1.591	0.035	-45.370	0.000
K6B1C_R\$2	-1.199	0.028	-42.465	0.000
K6B1C_R\$3	-0.182	0.022	-8.385	0.000
K6B1D_R\$1	-1.968	0.046	-42.568	0.000
K6B1D_R\$2	-1.528	0.034	-45.324	0.000
K6B1D_R\$3	-0.535	0.023	-23.543	0.000
Variances				
SC15	1.000	0.000	999.000	999.000

R-SQUARE

Observed Residual Variable Variance	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
K6B1A_R 0.506	0.494	0.021	23.232	0.000
K6B1B_R 0.408	0.592	0.023	26.053	0.000
K6B1C_R 0.427	0.573	0.023	25.178	0.000
K6B1D_R 0.630	0.370	0.023	16.078	0.000

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix
0.460E-01
(ratio of smallest to largest eigenvalue)

MODEL MODIFICATION INDICES

Minimum M.I. value for printing the modification index 10.000

	M.I.	E.P.C.	Std E.P.C.	StdYX
E.P.C.				

No modification indices above the minimum value.

SAMPLE STATISTICS FOR ESTIMATED FACTOR SCORES

SAMPLE STATISTICS

Means	
SC15	SC15_SE
<hr/>	<hr/>
-0.045	0.537
Covariances	
SC15	SC15_SE
<hr/>	<hr/>

SC15	0.620	
SC15_SE	0.050	0.006

	Correlations	
	SC15	SC15_SE
SC15	<u>1.000</u>	<u></u>
SC15_SE	0.851	1.000

SAVEDATA INFORMATION

Save file
CFA_FactorScores_SC15_080520.txt

Order and format of variables

K6B1A_R	F10.3
K6B1B_R	F10.3
K6B1C_R	F10.3
K6B1D_R	F10.3
SC15	F10.3
SC15_SE	F10.3
FF_ID	I6

Save file format
6F10.3 I6

Save file record length 10000

Beginning Time: 12:44:06
Ending Time: 12:44:06
Elapsed Time: 00:00:00

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