

Appendix A:

Mplus syntax EFA & CFA

TITLE: SWEMWBS , Single-factor Confirmatory Factor Analysis (CFA) based FT17-data

DATA: FILE IS KTK17_FT17_SWEMWBS_ID.dat;

VARIABLE: NAMES ARE ID q1 q2 q3 q6 q7 q9 q11;
IDVARIABLE IS ID;
USEVARIABLES ARE q1 q2 q3 q6 q7 q9 q11;
CATEGORICAL ARE q1 q2 q3 q6 q7 q9 q11;
MISSING ARE ALL (99);

ANALYSIS:

! Weighted least squares with means and variance adjusted
ESTIMATOR IS WLSMV;

MODEL:

! Estimate one factor from the seven variables;
! the (*) indicates that all parameters are freely
! estimated, starting with the value 1.
! The default is to fix the scale by making the first
! variable have a loading of 1.
NAME BY q1* q2 q3 q6 q7 q9 q11;
! Since the scale isn't fixed by anything else,
! make the latent factor mean = 0 and variance = 1.
[NAME@0]; NAME@1;

! Allow a residual correlation between these variables.
! Chosen by greatest modification index value.
q2 WITH q1;
q11 WITH q7;
q7 WITH q6;
! q1 (i01), q2 (i02), q3 (i03), q4 (i06), q5 (i07), q6 (i09), q7 (i11)

OUTPUT:

SAMPSTAT MODINDICES(ALL) STANDARDIZED CINTERVAL;

SAVEDATA:

FILE IS Factor_scores_OneFactor.dat;
FORMAT IS FREE;
SAVE = FSCORES;
RESULTS IS Results.txt;

PLOT:

! Save the most extensive plot data, to allow for
! Item Characteristic Curves (ICCs),
! Item Information Curves (IICs), and
! Total Information Curve (TIC).
TYPE IS PLOT3;

TITLE: SWEMWBS , Two-factor Confirmatory Factor Analysis (CFA) based on FT17-data

DATA: FILE IS KTK17_FT17_SWEMWBS_ID.dat;

VARIABLE: NAMES ARE ID q1 q2 q3 q6 q7 q9 q11;
IDVARIABLE IS ID;
USEVARIABLES ARE q1 q2 q3 q6 q7 q9 q11;
CATEGORICAL ARE q1 q2 q3 q6 q7 q9 q11;
MISSING ARE ALL (99);

ANALYSIS:

! Weighted least squares with means and variance adjusted
ESTIMATOR IS WLSMV;

MODEL:

! Estimate one factor from the seven variables;
! the (*1) indicates that all parameters are freely
! estimated, starting with the value 1.
! The default is to fix the scale by making the first
! variable have a loading of 1.

F1 BY q1* q2 q3 q9;

F2 BY q6* q7 q11;

! Since the scale isn't fixed by anything else,
! make the latent factor mean = 0 and variance = 1.

[F1@0]; F1@1;

[F2@0]; F2@1;

! Allow a residual correlation between these variables.

! Chosen by greatest modification index value.

q2 WITH q1;

! q1 (i01), q2 (i02), q3 (i03), q4 (i06), q5 (i07), q6 (i09), q7 (i11)

OUTPUT:

SAMPSTAT MODINDICES(ALL) STANDARDIZED CINTERVAL;

SAVEDATA:

FILE IS Factor_scores_TwoFactor.dat;

FORMAT IS FREE;

SAVE = FSCORES;

RESULTS IS Results.txt;

PLOT:

TYPE IS PLOT3;

TITLE: Confirmatory bi-factor analyses of SWEMWBS based on FT-17 data

DATA: FILE = "KTK17_FT17_SWEMWBS_ID.dat";

VARIABLE:

NAMES ARE ID q1 q2 q3 q4 q5 q6 q7;

IDVARIABLE IS ID;

USEVARIABLES ARE q1 q2 q3 q4 q5 q6 q7;

CATEGORICAL ARE q1 q2 q3 q4 q5 q6 q7;

MISSING ARE ALL (99);

ANALYSIS:

! Weighted least squares with means and variance adjusted

ESTIMATOR IS WLSMV;

MODEL:

fg BY q1* q2 q3 q4 q5 q6 q7;

[fg@0]; fg@1;

f1 BY q4* q5 q7;

[f1@0]; f1@1;

fg WITH f1@0;

! q1 (i01), q2 (i02), q3 (i03), q4 (i06), q5 (i07), q6 (i09), q7 (i11)

OUTPUT:

STANDARDIZED TECH4;

SAVEDATA:

FILE IS Factor_scores_BiFactor.dat;

FORMAT IS FREE;

SAVE = FSCORES;

RESULTS IS Results_BiFactor.txt;

PLOT:

TYPE IS PLOT3;

TITLE: Exploratory factor analyses of SWEMWBS in KTK17 with BI-GEOMIN rotation
DATA: FILE = "KTK17_FT17_SWEMWBS_ID.dat";
VARIABLE: NAMES ARE ID i01 i02 i03 i06 i07 i09 i11;
IDVARIABLE IS ID;
USEVARIABLES ARE i01 i02 i03 i06 i07 i09 i11;
CATEGORICAL ARE i01 i02 i03 i06 i07 i09 i11;
MISSING ARE ALL (99);
ANALYSIS: TYPE = EFA 2 3;
ESTIMATOR = WLSMV;
PROCESSORS = 3;
ROTATION = BI-GEOMIN (OBLIQUE);
OUTPUT: RESIDUAL;
MODINDICES(ALL);
PLOT: TYPE = PLOT1 PLOT2 PLOT3;

TITLE: Exploratory factor analyses (EFA) if SWEMWBS Category, 1-3 factors
DATA: FILE IS KTK17_FT17_SWEMWBS_ID.dat;
VARIABLE: NAMES ARE ID i01 i02 i03 i06 i07 i09 i11;
IDVARIABLE IS ID;
USEVARIABLES ARE i01 i02 i03 i06 i07 i09 i11;
CATEGORICAL ARE i01 i02 i03 i06 i07 i09 i11;
MISSING ARE ALL (99);
ANALYSIS: TYPE = EFA 1 3;
OUTPUT: RESIDUAL;
MODINDICES(ALL);
PLOT: TYPE = PLOT1 PLOT2 PLOT3;

TITLE: SWEMWBS , Single-factor CFA

DATA: FILE IS KTK17_FT17_SWEMWBS_ID.dat;

VARIABLE: NAMES ARE ID i01 i02 i03 i06 i07 i09 i11;
IDVARIABLE IS ID;
USEVARIABLES ARE i01 i02 i03 i06 i07 i09 i11;
CATEGORICAL ARE i01 i02 i03 i06 i07 i09 i11;
MISSING ARE ALL (99);

ANALYSIS:

! Weighted least squares with means and variance adjusted
ESTIMATOR IS WLSMV;

MODEL:

NAME BY i01* i02 i03 i06 i07 i09 i11;

[NAME@0]; NAME@1;

! Allow a residual correlation between these variables.

! Chosen by greatest modification index value.

! I02 WITH I01;

! I11 WITH I09;

OUTPUT:

SAMPSTAT MODINDICES(ALL) STANDARDIZED CINTERVAL;

SAVEDATA:

FILE IS Factor_scores.dat;

FORMAT IS FREE;

SAVE = FSCORES;

RESULTS IS Results.txt;

PLOT:

TYPE IS PLOT3;

TITLE: SWEMWBS , Two-factor CFA

DATA: FILE IS KTK17_FT17_SWEMWBS_ID.dat;

VARIABLE: NAMES ARE ID i01 i02 i03 i06 i07 i09 i11;
IDVARIABLE IS ID;
USEVARIABLES ARE i01 i02 i03 i06 i07 i09 i11;
CATEGORICAL ARE i01 i02 i03 i06 i07 i09 i11;
MISSING ARE ALL (99);

ANALYSIS:

! Weighted least squares with means and variance adjusted
ESTIMATOR IS WLSMV;

MODEL:

F1 BY i01* i02 i03;
F2 BY i06* i07 i09 i11;
[F1@0]; F1@1;
[F2@0]; F2@1;

! Allow a residual correlation between these variables.

! Chosen by greatest modification index value.

! I02 WITH I01;

! I09 WITH I06;

OUTPUT:

SAMPSTAT MODINDICES(ALL) STANDARDIZED CINTERVAL;

SAVEDATA:

FILE IS Factor_scores_Two_eudi09_i02i01_i09i06.dat;
FORMAT IS FREE;
SAVE = FSCORES;
RESULTS IS Results_Two_eudi09_i02i01_i09i06.txt;

PLOT:

TYPE IS PLOT3;

TITLE: Confirmatory bi-factor analyses of SWEMWBS efa-driven

DATA: FILE = "KTK17_FT17_SWEMWBS_ID.dat";

VARIABLE:

NAMES ARE ID q1 q2 q3 q4 q5 q6 q7;

IDVARIABLE IS ID;

USEVARIABLES ARE q1 q2 q3 q4 q5 q6 q7;

CATEGORICAL ARE q1 q2 q3 q4 q5 q6 q7;

MISSING ARE ALL (99);

ANALYSIS:

! Weighted least squares with means and variance adjusted

ESTIMATOR IS WLSMV;

MODEL:

fg BY q1* q2 q3 q4 q5 q6 q7;

[fg@0]; fg@1;

f1 BY q1* q2 q5;

[f1@0]; f1@1;

fg WITH f1@0;

! q1 (i01), q2 (i02), q3 (i03), q4 (i06), q5 (i07), q6 (i09), q7 (i11)

OUTPUT:

STANDARDIZED TECH4;

SAVEDATA:

FILE IS Factor_scores_BiFactor_i01i02i07.dat;

FORMAT IS FREE;

SAVE = FSCORES;

RESULTS IS Results_i01i02i07.txt;

PLOT:

TYPE IS PLOT3;