Supplementary Material

Mplus Code for Analysis

Mplus Code for Mediation Using CLPM

```
DATA:
 FILE IS mydata.dat;
 VARIABLE:
NAMES ARE gender x1 w1  m1 y1 x2 w2 m2  y2 x3 w3 m3  y3;
 USEVARIABLES ARE gender x1 m1 y1 x2 m2 y2 x3 m3 y3;
ANALYSIS:
 TYPE = GENERAL;
 ESTIMATOR = ML;
BOOTSTRAP = 1000;
MODEL:
 x2 ON x1 gender;
 x3 ON x2 gender;
 m2 ON m1 gender;
 m3 ON m2 gender;
 y2 ON y1 gender;
 y3 ON y2 gender ;
  m1 with x1;
  m2 with x2;
  m3 with x3;
  m1 with y1;
  m2 with y2;
  m3 with y3;
  x1 with y1;
  x2 with y2;
  x3 with y3;
  GENDER   WITH y1;
  GENDER   WITH x1;
  GENDER   WITH m1;
  x2 on m1 y1 gender;
  x3 on m2 (b2)
     y2
     gender
     y1 (c2);
  m2 on x1 (a1)
```

```
     gender
     y1 (a2);
 m3 on x2 y2 gender;
 y2 on x1 m1 gender;
 y3 on x2
     m2(b1)
     gender
     x1(c1);
 !x1-x3 m1-m3 y1-y3 ON gender;
 MODEL CONSTRAINT:
  NEW(a1b1 TOTAL1 a2b2 Total2);
  a1b1 = a1*b1;   ! Indirect effect of X on Y via M
   TOTAL1 = a1*b1 + c1;   ! Total effect of X on Y
   a2b2 = a2*b2;   ! Indirect effect of Y on xX via M
    TOTAL2 = a2*b2 + c2;   ! Total effect of Y on X
```

Mplus Code for Mediation Using RI-CLPM

```
TITLE:
  RI-CLPM (3 waves) with mediation X1 -> M2 -> Y3 (keep X2 -> Y3 direct);
  Variables: x1 x2 x3, m1 m2 m3, y1 y2 y3.
 DATA:
  FILE = mydata.dat;
  FORMAT = FREE;
 VARIABLE:
  NAMES ARE gender x1 w1  m1 y1 x2 w2 m2  y2 x3 w3 m3  y3;
    USEVARIABLES ARE  gender x1 m1 y1 x2 m2 y2
     x3 m3 y3;
 ANALYSIS:   MODEL = NOCOV; ! Sets all default covariances to zero
            TYPE = GENERAL;
           ESTIMATOR = ML;
           BOOTSTRAP = 1000;
 MODEL:      ! Create between components (random intercepts)
            RIx BY x1@1 x2@1 x3@1;
            RIm BY m1@1 m2@1 m3@1;
            RIy by y1@1 y2@1 y3@1;
            ! Create within-person centered variables
            wx1 BY x1@1;
            wx2 BY x2@1;
            wx3 BY x3@1;
```

```
wm1 BY m1@1;
wm2 BY m2@1;
wm3 BY m3@1;
wy1 BY y1@1;
wy2 BY y2@1;
wy3 BY y3@1;
! Constrain measurement error variances to 0
x1-x3@0;
y1-y3@0;
m1-m3@0
! Estimate lagged effects between within-person centered variables
 wx2 on wx1;
 wx3 on wx2;
 wx2 on wm1 wy1;
 wm2 on wx1
       wy1;
 wy2 on wx1 wm1;
 wx3 on wm2  wy2;
 wm3 on wx2 wy2;
 wy3 on wx1 (c)
       wx2
       wm2 (b);
 wm3 on wm2;
 wm2 on wm1;
 wy2 on wy1;
 wy3 on wy2;
! Estimate covariance between random intercepts
RIx WITH RIm RIy;
RIm with RIy;
! Regression of random intercepts on z1
RIx RIy RIm ON gender;
! Estimate covariance between within-person components at first wave
 wx1 WITH wm1;
 wx1 with wy1;
 wm1 with wy1;
! Estimate covariances between residuals of within-person components
! (i.e., innovations)
wx2 WITH wy2;
wx3 WITH wy3;
```

```
          wx2 WITH wm2;
          wx3 WITH wm3;
          wm2 with wy2;
          wm3 with wy3;
       MODEL CONSTRAINT:
        NEW(ab  TOTAL);
        ab = a*b;   ! Indirect effect of X on Y via M
        TOTAL = a*b + c;   ! Total effect of X on Y
        a2b2 = a2*b2;   ! Indirect effect of Y on xX via M
        TOTAL2 = a2*b2 + c2;   ! Total effect of Y on X
OUTPUT:     STDYX MODINDICES  STAND CINT (bcbootstrap);
```

Mplus Code for Multiple Group Analysis Using CLPM With Constraint Model

```
DATA:
    FILE IS mydata1.dat;
  VARIABLE:
    NAMES ARE gender x1 w1 m1 y1      x2 w2 m2 y2 x3 w3
           m3 y3 w wg;
    USEVARIABLES ARE gender x1 m1 y1 x2 m2 y2 x3 m3 y3 wg;
    grouping is wg (0=Low_SN,1=High_SN);
    ANALYSIS:
     TYPE = GENERAL;
     ESTIMATOR = ML;
     BOOTSTRAP = 1000;
  MODEL:
    x2 ON x1 gender;
    x3 ON x2 gender;
    m2 ON m1 gender;
    m3 ON m2 gender;
    y2 ON y1 gender;
    y3 ON y2 gender ;
  m1 with x1;
  m2 with x2;
  m3 with x3;
  m1 with y1;
  m2 with y2;
  m3 with y3;
  x1 with y1;
  x2 with y2;
```

```
x3 with y3;
GENDER   WITH y1;
GENDER   WITH x1;
GENDER   WITH m1;
x2 on m1 y1 gender;
x3 on m2 (b2)
     y2
     gender
     y1 (c2);
m2 on x1 (a1)
      gender
     y1 (a2);
m3 on x2 y2 gender;
y2 on x1 m1 gender;
y3 on x2
     m2(b1)
     gender
     x1(c1);
 MODEL CONSTRAINT:
  NEW(a1b1 TOTAL1  a2b2 Total2);
  a1b1 = a1*b1;   ! Indirect effect of X on Y via M
   TOTAL1 = a1*b1 + c1;   ! Total effect of X on Y
   a2b2= a2*b2;   ! Indirect effect of Y on xX via M
   TOTAL2 = a2*b2 + c2;   ! Total effect of Y on X
```

Mplus Code for Multiple Group Analysis Using CLPM for Unconstraint Model

```
DATA:
  FILE IS mydata1.dat;
 VARIABLE:
  NAMES ARE gender x1 w1 m1 y1      x2 w2 m2 y2 x3 w3
           m3 y3 w wg;
USEVARIABLES ARE gender x1 m1 y1 x2 m2 y2 x3 m3 y3 wg;
  grouping is wg (0=Low_SN,1=High_SN);
  ANALYSIS:
   TYPE = GENERAL;
   ESTIMATOR = ML;
   BOOTSTRAP = 1000;
 MODEL:
  x2 ON x1 gender;
```

```
  x3 ON x2 gender;
  m2 ON m1 gender;
  m3 ON m2 gender;
  y2 ON y1 gender;
  y3 ON y2 gender ;
m1 with x1;
m2 with x2;
m3 with x3;
m1 with y1;
m2 with y2;
m3 with y3;
x1 with y1;
x2 with y2;
x3 with y3;
GENDER   WITH y1;
GENDER   WITH x1;
GENDER   WITH m1;
MODEL Low_SN:
x2 on m1 y1 gender;
x3 on m2 (b2_l)
     y2
     gender
     y1 (c2_l);
m2 on x1 (a1_l)
      gender
     y1 (a2_l);
m3 on x2 y2 gender;
y2 on x1 m1 gender;
y3 on x2
     m2(b1_l)
     gender
     x1(c1_l);
 MODEL High_SN:
 x2 on m1 y1 gender;
x3 on m2 (b2_h)
     y2
     gender
     y1 (c2_h);
m2 on x1 (a1_h)
```

```
     gender
    y1 (a2_h);
m3 on x2 y2 gender;
y2 on x1 m1 gender;
y3 on x2
    m2(b1_h)
    gender
    x1(c1_h);
MODEL CONSTRAINT:
NEW( delta deltb deltc);
  delta = a1_l-a1_h;
        deltb = b1_l-b1_h;
        deltc = c1_l-c1_h;
NEW( lindirect ltotal); !
        lindirect = a1_l * b1_l;
        ltotal = c1_l +a1_l * b1_l;
 NEW( hindirect htotal);
        hindirect = a1_h * b1_h;
        htotal = c1_h +a1_h * b1_h;
NEW(deltaind deltatotal);
        deltaind = a1_l * b1_l-a1_h * b1_h;
        deltatotal = c1_l +a1_l * b1_l-c1_h-a1_h * b1_h;
```