

TITLE:

APPENDIX A  
EXAMPLE SYNTAX FOR AIM 1  
Piece-wise latent growth curve model of binge drinking frequency  
With cohort polynomials included as age-varying predictors of binge drinking indicators  
Gender included as grouping variable  
Model constraint command used to estimate gender differences

DATA:

FILE IS [FILE NAME HERE]  
Format is [FORMAT STATEMENT HERE];

VARIABLE:

NAMES ARE  
Freq18 Freq20 Freq22 Freq24 Freq26 Freq28 Freq30 !Age specific indicators of binge drinking frequency  
Lcohort Qcohort !Cohort polynomial predictors  
gender !Gender grouping variable  
fu6atrftf; !Attrition Weight

GROUPING IS GENDER (0 = male 1 = female);

USEVAR Freq18 Freq20 Freq22 Freq24 Freq26 Freq28 Freq30  
Lcohort Qcohort;

MISSING ARE .;

Weight is fu6atrftf;

ANALYSIS:

TYPE = MEANSTRUCTURE MISSING H1;  
ESTIMATOR = MLR;  
ITERATIONS = 10000;  
COVERAGE = .05;

MODEL:

!Specification of growth factors

IBINGE BY Freq18@1 Freq20@1 Freq22@1 Freq24@1  
Freq26@1 Freq28@1 Freq30@1;

L1BINGE BY Freq18@0 Freq20@1 Freq22@2 Freq24@2  
Freq26@2 Freq28@2 Freq30@2;

L2BINGE BY Freq18@0 Freq20@0 Freq22@0 Freq24@1  
Freq26@2 Freq28@2 Freq30@2;

L3BINGE BY Freq18@0 Freq20@0 Freq22@0 Freq24@0  
Freq26@0 Freq28@1 Freq30@2;

[IBINGE];  
[L1BINGE];  
[L2BINGE];  
[L3BINGE];

IBINGE;  
L1BINGE;  
L2BINGE;  
L3BINGE;

!Covariances among growth factors  
IBINGE with L1BINGE;  
IBINGE with L2BINGE;  
IBINGE with L3BINGE;

L1BINGE with L2BINGE;  
L1BINGE with L3BINGE;

L2BINGE with L3BINGE;

!Specifying cohort as predictor of growth factors  
[Lcohort];  
Lcohort;

[Qcohort];  
Qcohort;

Lcohort with Qcohort;

Freq18 on Lcohort;  
Freq20 on Lcohort;  
Freq22 on Lcohort;  
Freq24 on Lcohort;  
Freq26 on Lcohort;  
Freq28 on Lcohort;  
Freq30 on Lcohort;

Freq18 on Qcohort;  
Freq20 on Qcohort;  
Freq22 on Qcohort;  
Freq24 on Qcohort;  
Freq26 on Qcohort;  
Freq28 on Qcohort;  
Freq30 on Qcohort;

!Specifying variances and means of growth factor indicators  
Freq18;

Freq20;  
Freq22;  
Freq24;  
Freq26;  
Freq28;  
Freq30;

[Freq18@0];  
[Freq20@0];  
[Freq22@0];  
[Freq24@0];  
[Freq26@0];  
[Freq28@0];  
[Freq30@0];

rLCOHORT WITH IBINGE@0;  
rLCOHORT WITH L1BINGE@0;  
rLCOHORT WITH L2BINGE@0;  
rLCOHORT WITH L3BINGE@0;

rQCOHORT WITH IBINGE@0;  
rQCOHORT WITH L1BINGE@0;  
rQCOHORT WITH L2BINGE@0;  
rQCOHORT WITH L3BINGE@0;

!!!!!!!!!!!!!!!!!!!!!!  
MODEL MALE:  
!!!!!!!!!!!!!!!!!!!!!!

!Specification of growth factors

IBINGE BY Freq18@1 Freq20@1 Freq22@1 Freq24@1  
Freq26@1 Freq28@1 Freq30@1;

L1BINGE BY Freq18@0 Freq20@1 Freq22@2 Freq24@2  
Freq26@2 Freq28@2 Freq30@2;

L2BINGE BY Freq18@0 Freq20@0 Freq22@0 Freq24@1  
Freq26@2 Freq28@2 Freq30@2;

L3BINGE BY Freq18@0 Freq20@0 Freq22@0 Freq24@0  
Freq26@0 Freq28@1 Freq30@2;

[IBINGE](m1);  
[L1BINGE](m2);  
[L2BINGE](m3);  
[L3BINGE](m4);

IBINGE;  
L1BINGE;

```
L2BINGE;  
L3BINGE;
```

```
!Covariances among growth factors
```

```
IBINGE with L1BINGE;  
IBINGE with L2BINGE;  
IBINGE with L3BINGE;
```

```
L1BINGE with L2BINGE;  
L1BINGE with L3BINGE;
```

```
L2BINGE with L3BINGE;
```

```
!Specifying cohort as predictor of growth factors
```

```
[Lcohort];  
Lcohort;
```

```
[Qcohort];  
Qcohort;
```

```
Lcohort with Qcohort;
```

```
Freq18 on Lcohort(m5);  
Freq20 on Lcohort(m6);  
Freq22 on Lcohort(m7);  
Freq24 on Lcohort(m8);  
Freq26 on Lcohort(m9);  
Freq28 on Lcohort(m10);  
Freq30 on Lcohort(m11);
```

```
Freq18 on Qcohort(m12);  
Freq20 on Qcohort(m13);  
Freq22 on Qcohort(m14);  
Freq24 on Qcohort(m15);  
Freq26 on Qcohort(m16);  
Freq28 on Qcohort(m17);  
Freq30 on Qcohort(m18);
```

```
!Specifying variances and means of growth factor indicators
```

```
Freq18;  
Freq20;  
Freq22;  
Freq24;  
Freq26;  
Freq28;  
Freq30;
```

```
[Freq18@0];  
[Freq20@0];  
[Freq22@0];
```

[Freq24@0];  
[Freq26@0];  
[Freq28@0];  
[Freq30@0];

rLCOHORT WITH IBINGE@0;  
rLCOHORT WITH L1BINGE@0;  
rLCOHORT WITH L2BINGE@0;  
rLCOHORT WITH L3BINGE@0;

rQCOHORT WITH IBINGE@0;  
rQCOHORT WITH L1BINGE@0;  
rQCOHORT WITH L2BINGE@0;  
rQCOHORT WITH L3BINGE@0;

!!!!!!!!!!!!!!!!!!!!!!  
MODEL FEMALE:  
!!!!!!!!!!!!!!!!!!!!!!

!Specification of growth factors

IBINGE BY Freq18@1 Freq20@1 Freq22@1 Freq24@1  
Freq26@1 Freq28@1 Freq30@1;

L1BINGE BY Freq18@0 Freq20@1 Freq22@2 Freq24@2  
Freq26@2 Freq28@2 Freq30@2;

L2BINGE BY Freq18@0 Freq20@0 Freq22@0 Freq24@1  
Freq26@2 Freq28@2 Freq30@2;

L3BINGE BY Freq18@0 Freq20@0 Freq22@0 Freq24@0  
Freq26@0 Freq28@1 Freq30@2;

[IBINGE](f1);  
[L1BINGE](f2);  
[L2BINGE](f3);  
[L3BINGE](f4);

IBINGE;  
L1BINGE;  
L2BINGE;  
L3BINGE;

!Covariances among growth factors

IBINGE with L1BINGE;  
IBINGE with L2BINGE;  
IBINGE with L3BINGE;

L1BINGE with L2BINGE;  
L1BINGE with L3BINGE;

L2BINGE with L3BINGE;

!Specifying cohort as predictor of growth factors  
[Lcohort];  
Lcohort;

[Qcohort];  
Qcohort;

Lcohort with Qcohort;

Freq18 on Lcohort(f5);  
Freq20 on Lcohort(f6);  
Freq22 on Lcohort(f7);  
Freq24 on Lcohort(f8);  
Freq26 on Lcohort(f9);  
Freq28 on Lcohort(f10);  
Freq30 on Lcohort(f11);

Freq18 on Qcohort(f12);  
Freq20 on Qcohort(f13);  
Freq22 on Qcohort(f14);  
Freq24 on Qcohort(f15);  
Freq26 on Qcohort(f16);  
Freq28 on Qcohort(f17);  
Freq30 on Qcohort(f18);

!Specifying variances and means of growth factor indicators  
Freq18;  
Freq20;  
Freq22;  
Freq24;  
Freq26;  
Freq28;  
Freq30;

[Freq18@0];  
[Freq20@0];  
[Freq22@0];  
[Freq24@0];  
[Freq26@0];  
[Freq28@0];  
[Freq30@0];

rLCOHORT WITH IBINGE@0;  
rLCOHORT WITH L1BINGE@0;

```
rLCOHORT WITH L2BINGE@0;  
rLCOHORT WITH L3BINGE@0;
```

```
rQCOHORT WITH IBINGE@0;  
rQCOHORT WITH L1BINGE@0;  
rQCOHORT WITH L2BINGE@0;  
rQCOHORT WITH L3BINGE@0;
```

MODEL CONSTRAINT:

!Creating new parameters that capture gender differences (i.e., female estimates are subtracted from corresponding male estimates).

NEW (

!Names of effects for Gender differences in growth factors - see below for specifications

D\_I

D\_L1

D\_L2

D\_L3

!Names of effects for Gender differences in linear effects of cohort - see below for specifications

D\_LB20

D\_LB22

D\_LB24

D\_LB26

D\_LB28

D\_LB30

!Names of effects for Gender differences in quadratic effects of cohort - see below for specifications

D\_QB18

D\_QB20

D\_QB22

D\_QB24

D\_QB26

D\_QB28

D\_QB30

);

!!!! Gender differences in growth factors

D\_I = m1-f1; !Age 18 intercept

D\_L1 = m2-f2; !Age 18-22 growth

D\_L2 = m3-f3; !Age 22-26 growth

D\_L3 = m4-f4; !Age 26-30 growth

!!!Gender differences in linear effects of cohort

D\_LB18 = m5-f5; !Age 18

D\_LB20 = m6-f6; !Age 20

D\_LB22 = m7-f7; !Age 22

D\_LB24 = m8-f8; !Age 24

D\_LB26 = m9-f9; !Age 26

```
D_LB28 = m10-f10; !Age 29  
D_LB30 = m11-f11; !Age 30
```

```
!!!Gender differences in quadratic effects of cohort
```

```
D_QB18 = m12-f12; !Age 18  
D_QB20 = m13-f13; !Age 20  
D_QB22 = m14-f14; !Age 22  
D_QB24 = m15-f15; !Age 24  
D_QB26 = m16-f16; !Age 26  
D_QB28 = m17-f17; !Age 28  
D_QB30 = m18-f18; !Age 30
```

```
OUTPUT:Standardized sampstat;
```