```
1 .
2 . regress BSIanx age i.sector
```

Source	SS	df	MS
Model	1838.01605	6	306.336008
Residual	5918.8411	693	8.54089624
Total	7756.85714	699	11.0970775

Number of obs	700
F(6, 693)	35.87
Prob > F	0.0000
R-squared	0.2370
Adj R-squared	0.2303
Root MSE	2.9225

BSIanx	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
age	.0411507	.0092411	4.45	0.000	.0230067	.0592946
sector						
2	-4.64515	.7584721	-6.12	0.000	-6.134329	-3.155971
3	-5.030488	.5788109	-8.69	0.000	-6.166922	-3.894055
4	-6.096304	.698512	-8.73	0.000	-7.467758	-4.724851
5	-2.10718	.6848285	-3.08	0.002	-3.451768	-.7625929
6	.3974188	.8767803	0.45	0.650	-1.324045	2.118883
_cons	10.78091	.7514435	14.35	0.000	9.305534	12.25629

```
3 . margins sector
```

Predictive margins — Number of obs = 700
Model VCE : **OLS**

Expression : **Linear prediction, predict()**

	Delta-method Margin	Std. Err.	z	P>|z|	[95% Conf.	Interval]
sector						
1	12.82751	.5637641	22.75	0.000	11.72255	13.93247
2	8.182361	.5094599	16.06	0.000	7.183838	9.180884
3	7.797023	.1289799	60.45	0.000	7.544227	8.049819
4	6.731207	.4134465	16.28	0.000	5.920867	7.541547
5	10.72033	.3914455	27.39	0.000	9.953112	11.48755
6	13.22493	.6706321	19.72	0.000	11.91052	14.53934

```
4 . marginsplot

    Variables that uniquely identify margins: sector

5 .
6 . // Dose anxiety models first
7 . set more off

8 . // only indirect effect on anxiety no direct effect
9 . sem (age avgcumdosew1->radhlw1) ///
  >    (airw1->airw2)(airw1->radhlw1)(airw2-radhlw2)(airw2 ->airw3) ///
  >     (radhlw1->radhlw2)(radw2->radhlw2)(radhlw2->radhlw3)(radtlw1->radhlw3) /
  > //
  >     (radhlw3->BSIanx) (radchw1->radhlw1)(radchw1->airw2)(radtlw1->radhlw1) /
  > //
  >     (airw1->airw3)(radw1->airw2)(radw2->airw2)(radchw3->radhlw3) ///
  >     (airw2 radtlw2 radw1->radhlw2)(BSIanx->airw1)(radtlw1->radhlw2) ///
  >      ( radw2 radchw2 radchw3 radw3 radtlw2->radtlw3)(radw1->airw1) ///
  >      (age->airw1) (radtlw1 radw2 -> BSIanx)(BSIanx->airw3) ///
  >      (avgcumdosew2->avgcumdosew3) (avgcumdosew3 ->radtlw3) ///
  >      (radw3 avgcumdosew1->avgcumdosew3) ///
  >      (radchw2 radtlw2 radtlw3->radhlw3)   ///
  >      if gender==1, nocapslatent cov(e.radhlw1*e.airw2) cov(e.radhlw1*e.radtl
  > w3)
  (9 observations with missing values excluded;
   specify option 'method(mlmv)' to use all observations)

  Endogenous variables

  Observed:  radhlw1 airw1 airw2 airw3 radtlw3 radhlw2 radhlw3 BSIanx
             avgcumdosew3

  Exogenous variables

  Observed:  age avgcumdosew1 radw1 radw2 radw3 radchw1 radchw2 radchw3
             radtlw1 radtlw2 avgcumdosew2

  Fitting target model:

  Iteration 0:   log likelihood = -24920.288
  Iteration 1:   log likelihood = -24904.784
  Iteration 2:   log likelihood = -24903.296
  Iteration 3:   log likelihood = -24903.287
  Iteration 4:   log likelihood = -24903.287

  Structural equation model                       Number of obs      =       330
  Estimation method  = ml
  Log likelihood     = -24903.287
```

```
──────────────────────────────────────────────────────────────────────────────
> ─────
                   │                 OIM
                   │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Inte
> rval]
───────────────────┼──────────────────────────────────────────────────────────
> ─────
Structural         │
  radhlw1 <-       │
             airw1 │   .4228654   .0478043     8.85   0.000     .3291707    .51
> 65601
               age │   .4554276   .1343542     3.39   0.001     .1920983     .7
> 18757
       avgcumdosew1 │   2.543521   .9737034     2.61   0.009     .6350972    4.4
> 51944
           radchw1 │  -.3068989   .0558286    -5.50   0.000    -.4163209   -.19
> 74769
           radtlw1 │   .4944257    .054122     9.14   0.000     .3883485    .60
> 05029
             _cons │  -13.91644   6.943247    -2.00   0.045    -27.52495   -.30
> 79265
  ─────────────────┼──────────────────────────────────────────────────────────
> ─────
  airw1 <-         │
            BSIanx │  -2.071441   .7686767    -2.69   0.007    -3.578019    -.5
> 64862
               age │   1.028223   .1574305     6.53   0.000     .7196649    1.3
> 36781
             radw1 │   .1880204   .0505414     3.72   0.000     .0889611    .28
> 70797
             _cons │   17.36313   9.051786     1.92   0.055    -.3780406    35.
> 10431
  ─────────────────┼──────────────────────────────────────────────────────────
> ─────
  airw2 <-         │
             airw1 │   .3615966   .0435193     8.31   0.000     .2763003    .44
> 68929
             radw1 │  -.4293954   .0589581    -7.28   0.000    -.5449512   -.31
> 38396
             radw2 │   .2439807   .0645514     3.78   0.000     .1174624     .3
> 70499
           radchw1 │   .1954475   .0468291     4.17   0.000     .1036642    .28
> 72308
             _cons │   2.132664   4.094897     0.52   0.602    -5.893186    10.
> 15852
  ─────────────────┼──────────────────────────────────────────────────────────
> ─────
  airw3 <-         │
             airw1 │   .1174887   .0392706     2.99   0.003     .0405198    .19
```

```
> 44576
           airw2 |   .7393925   .0444641    16.63   0.000     .6522445    .82
> 65406
          BSIanx |    1.35413   .4837669     2.80   0.005     .4059641    2.3
> 02295
           _cons |   -.261708   4.455641    -0.06   0.953    -8.994605    8.4
> 71188
-----------------+------------------------------------------------------------
> -----
radtlw3 <-       |
   avgcumdosew3 |   .7521122   .2536269     2.97   0.003     .2550127    1.2
> 49212
           radw2 |  -.0706836   .0376707    -1.88   0.061    -.1445168    .00
> 31496
           radw3 |   .1024029   .0378703     2.70   0.007     .0281784    .17
> 66274
         radchw2 |  -.4123534   .0435438    -9.47   0.000    -.4976978    -.3
> 27009
         radchw3 |   .4533292    .043421    10.44   0.000     .3682256    .53
> 84329
         radtlw2 |   .9310556   .0185054    50.31   0.000     .8947857    .96
> 73254
           _cons |   .5636131    1.19656     0.47   0.638    -1.781602    2.9
> 08828
-----------------+------------------------------------------------------------
> -----
radhlw2 <-       |
         radhlw1 |   .8248135   .0238474    34.59   0.000     .7780735    .87
> 15536
           airw2 |   .0668644   .0267991     2.50   0.013     .0143392    .11
> 93897
           radw1 |  -.0319682    .031425    -1.02   0.309    -.0935601    .02
> 96237
           radw2 |   .1357152    .034859     3.89   0.000     .0673928    .20
> 40377
         radtlw1 |  -.4173351   .0391168   -10.67   0.000    -.4940026   -.34
> 06676
         radtlw2 |   .4445898   .0379539    11.71   0.000     .3702015    .51
> 89781
           _cons |    2.99564   1.871057     1.60   0.109    -.6715646    6.6
> 62844
-----------------+------------------------------------------------------------
> -----
radhlw3 <-       |
         radtlw3 |     .27254   .0511663     5.33   0.000     .1722559    .37
> 28242
         radhlw2 |   .9570518   .0156366    61.21   0.000     .9264046    .98
> 76991
         radchw2 |  -.1686358   .0454909    -3.71   0.000    -.2577962   -.07
```

```
> 94753
         radchw3 |   .1942869   .0466714     4.16   0.000     .1028126    .28
> 57613
         radtlw1 |  -.0690666   .0224019    -3.08   0.002    -.1129736   -.02
> 51596
         radtlw2 |  -.1981681   .0556353    -3.56   0.000    -.3072112    -.0
> 89125
           _cons |   1.898926   1.163623     1.63   0.103    -.3817335    4.1
> 79585
-----------------+------------------------------------------------------------
> -----
  BSIanx <-      |
         radhlw3 |   .0261439   .0044016     5.94   0.000     .0175169    .03
> 47708
           radw2 |   .0189538   .0044894     4.22   0.000     .0101547     .0
> 27753
         radtlw1 |  -.0133454   .0038887    -3.43   0.001    -.0209671   -.00
> 57236
           _cons |   6.294749   .3232981    19.47   0.000     5.661096    6.9
> 28401
-----------------+------------------------------------------------------------
> -----
  avgcumdosew3 <-|
    avgcumdosew1 |  -.2872682   .0188352   -15.25   0.000    -.3241846   -.25
> 03518
           radw3 |   .0006231   .0003146     1.98   0.048     6.51e-06    .00
> 12396
    avgcumdosew2 |   1.314571   .0153886    85.43   0.000      1.28441    1.3
> 44732
           _cons |   .0729829    .016364     4.46   0.000     .0409101    .10
> 50557
-----------------+------------------------------------------------------------
> -----
Variance         |
       e.radhlw1 |     852.63   66.74083                     731.3607    994
> .0074
         e.airw1 |   1163.113   92.01613                     996.0517    135
> 8.195
         e.airw2 |   790.6768   61.59641                     678.7151    921
> .1079
         e.airw3 |   592.9169   46.15851                     509.0118    690
> .6528
       e.radtlw3 |   96.34638   7.505237                      82.7043    112
> .2387
       e.radhlw2 |    204.514   15.92323                     175.5696    238
> .2301
       e.radhlw3 |   87.06576   6.778275                     74.74452    101
> .4181
        e.BSIanx |   6.389755   .4991123                     5.482715    7.4
```

```
> 46851
   e.avgcumdosew3 |   .0331878   .0025837                      .0284913    .03
> 86585
------------------+------------------------------------------------------------
> ------
Covariance        |
  e.radhlw1       |
         e.airw2 |   200.7483   46.16891     4.35   0.000     110.2589    291
> .2377
        e.radtlw3 |  -54.65789   15.77238    -3.47   0.001     -85.5712   -23.
> 74458
------------------+------------------------------------------------------------
> ------
LR test of model vs. saturated: chi2(94)  =    111.41, Prob > chi2 = 0.1062

10 . estat mindices

Modification indices

------------------------------------------------------------------------------
                |                                                  Standard
                |        MI      df    P>MI        EPC             EPC
----------------+-------------------------------------------------------------
Structural      |
  radhlw1 <-    |
     radtlw3    |     4.704       1    0.03  -.1536315  -.1423716
     radtlw2    |     5.153       1    0.02  -.1599648  -.1476681
  --------------+----------------------------------------------------------
  airw2 <-      |
     radtlw3    |     3.930       1    0.05   .0960899   .1038364
     radchw3    |     8.356       1    0.00   .1800773   .1870333
  --------------+----------------------------------------------------------
  airw3 <-      |
     radhlw1    |     7.996       1    0.00   .1168555   .1234728
     radhlw2    |     7.571       1    0.01   .1202221   .1217613
     radhlw3    |     6.720       1    0.01   .1124795   .1141494
------------------------------------------------------------------------------
EPC = expected parameter change
```

```
11 .
12 .
13 .
14 . // direct effect from dose to anxiety for females
15 .
16 . set more off

17 . sem(age avgcumdosew1->BSIanx)(age ->radhlw1)(age radhlw1->BSIanx)(kzchorn->r
   > adhlw1) ///
   >    (radhlw1->radhlw2)(radhlw1->airw1)(radhlw2->radhlw3)(radhlw3->BSIanx) ///
   >    (radchw1 injselfr->radhlw1) (avgcumdosew1->radhlw2)(radchw1->airw1)(airw1
   >  kzchorn ->airw2) ///
   >    (radchw1 kzchorn ->radchw2)(radchw1 injselfr->radhlw2)(radchw2->radhlw2)
   > (radchw1->radhlw3) ///
   >    (radhlw1->radhlw3)(radchw1  ->BSIanx)(age kzchorn ->airw2)(airw2->radhlw2
   > ) ///
   >     (airw1 radchw2 radchw3 kzchorn radtlw3->radhlw3)(avgcumdosew1->avgcumdos
   > ew2) ///
   >     (avgcumdosew1->avgcumdosew3)(avgcumdosew2->avgcumdosew3) (airw2->radhlw2
   > ) ///
   >     (avgcumdosew1->carcin)(carcin->radhlw2)(carcin injselfr ->BSIanx)  ///
   >    if gender==2,    nocapslatent
   (2 observations with missing values excluded;
    specify option 'method(mlmv)' to use all observations)

   Endogenous variables

   Observed:  BSIanx radhlw1 radhlw2 airw1 radhlw3 airw2 radchw2 avgcumdosew2
              avgcumdosew3 carcin

   Exogenous variables

   Observed:  age avgcumdosew1 kzchorn radchw1 injselfr radchw3 radtlw3

   Fitting target model:

   Iteration 0:   log likelihood = -21799.747
   Iteration 1:   log likelihood = -21799.747

   Structural equation model                       Number of obs      =       361
   Estimation method  = ml
   Log likelihood     = -21799.747
```

```
─────────────────────────────┬──────────────────────────────────────────────────────────────────────────
> ─────
                             │              OIM
                             │     Coef.   Std. Err.      z    P>|z|     [95% Conf. Inte
> rval]
─────────────────────────────┼──────────────────────────────────────────────────────────────────────────
> ─────
Structural                   │
  BSIanx <-                  │
                     radhlw1 │  -.0261864   .0066269    -3.95   0.000    -.0391749    -.0
> 13198
                     radhlw3 │   .0202743   .0077012     2.63   0.008     .0051802    .03
> 53684
                      carcin │   .0238604    .005763     4.14   0.000     .0125652    .03
> 51556
                         age │   .0355411    .015072     2.36   0.018     .0060006    .06
> 50816
                avgcumdosew1 │   1.051125   .3130825     3.36   0.001     .4374942    1.6
> 64755
                     radchw1 │  -.0147116   .0050761    -2.90   0.004    -.0246607   -.00
> 47625
                    injselfr │   1.184326   .4349537     2.72   0.006     .3318322    2.0
> 36819
                       _cons │   5.548545   .8005203     6.93   0.000     3.979554    7.1
> 17536
  ───────────────────────────┼──────────────────────────────────────────────────────────────────────────
> ─────
  radhlw1 <-                 │
                         age │   .3600175   .1426167     2.52   0.012     .0804938    .63
> 95411
                     kzchorn │   .2142264   .0631237     3.39   0.001     .0905063    .33
> 79465
                     radchw1 │   .3958005   .0441655     8.96   0.000     .3092376    .48
> 23634
                    injselfr │   16.75712   3.698516     4.53   0.000      9.50816    24.
> 00607
                       _cons │  -13.65819    7.97131    -1.71   0.087    -29.28167    1.9
> 65286
  ───────────────────────────┼──────────────────────────────────────────────────────────────────────────
> ─────
  radhlw2 <-                 │
                     radhlw1 │   .6557659   .0300644    21.81   0.000     .5968408    .71
> 46911
                       airw2 │    .048711   .0261846     1.86   0.063    -.0026099    .10
> 00319
                     radchw2 │   .3593586   .0408785     8.79   0.000     .2792381     .4
> 39479
                      carcin │   .0922507   .0307511     3.00   0.003     .0319797    .15
> 25218
```

```
    avgcumdosew1 |   3.546406   1.702409     2.08   0.037     .2097453    6.8
> 83067
         radchw1 |  -.2772349   .0389849    -7.11   0.000    -.3536438   -.20
> 08259
       injselfr |   13.59271   2.228811     6.10   0.000     9.224324     17
> .9611
           _cons |  -1.165528   2.897474    -0.40   0.687    -6.844473    4.5
> 13417
-----------------+------------------------------------------------------------
> ------
  airw1 <-       |
         radhlw1 |   .2091065    .05076     4.12   0.000     .1096187    .30
> 85944
         radchw1 |   .1653757   .050728     3.26   0.001     .0659506    .26
> 48007
           _cons |    44.1344   3.565339    12.38   0.000     37.14647    51.
> 12234
-----------------+------------------------------------------------------------
> ------
  radhlw3 <-     |
         radhlw1 |  -.0749775   .0309992    -2.42   0.016    -.1357348   -.01
> 42202
         radhlw2 |   .954982   .0339465    28.13   0.000     .8884481    1.0
> 21516
           airw1 |   .037302   .0194978     1.91   0.056    -.0009129    .07
> 55169
         radchw2 |  -.1146538   .0560404    -2.05   0.041     -.224491   -.00
> 48167
         kzchorn |   .1004683   .0261373     3.84   0.000     .0492402    .15
> 16964
         radchw1 |  -.0692966   .0285057    -2.43   0.015    -.1251667   -.01
> 34265
         radchw3 |   .1428316   .0526619     2.71   0.007     .0396163     .2
> 46047
         radtlw3 |   .0479939    .025144     1.91   0.056    -.0012875    .09
> 72753
           _cons |  -2.656222   2.252076    -1.18   0.238     -7.07021    1.7
> 57766
-----------------+------------------------------------------------------------
> ------
  airw2 <-       |
           airw1 |   .3633257   .0532384     6.82   0.000     .2589803    .46
> 76711
             age |   .3040449   .1559757     1.95   0.051    -.0016618    .60
> 97516
         kzchorn |   .2288237   .0684717     3.34   0.001     .0946217    .36
> 30257
           _cons |  -21.59102   9.064738    -2.38   0.017    -39.35758   -3.8
> 24458
```

```
-------------------+----------------------------------------------------------------
> ------
  radchw2 <-       |
           kzchorn |   .2587261   .0457517     5.65   0.000      .1690543    .34
> 83979
           radchw1 |   .6143786   .0331247    18.55   0.000      .5494555    .67
> 93018
             _cons |   4.766612   4.085024     1.17   0.243     -3.239887    12.
> 77311
-------------------+----------------------------------------------------------------
> ------
  avgcumdosew2 <-  |
     avgcumdosew1 |   2.188851   .0650407    33.65   0.000      2.061373    2.3
> 16328
             _cons |   .1616736   .0419261     3.86   0.000         .0795    .24
> 38472
-------------------+----------------------------------------------------------------
> ------
  avgcumdosew3 <-  |
     avgcumdosew2 |   1.324066    .022628    58.51   0.000      1.279716    1.3
> 68416
     avgcumdosew1 |    -.20321   .0568778    -3.57   0.000     -.3146884   -.09
> 17316
             _cons |   .0841635   .0183928     4.58   0.000      .0481142    .12
> 02128
-------------------+----------------------------------------------------------------
> ------
  carcin <-        |
     avgcumdosew1 |   7.099894   2.991775     2.37   0.018      1.236124    12.
> 96367
             _cons |   66.29067   1.928535    34.37   0.000      62.51081    70.
> 07053
-------------------+----------------------------------------------------------------
> ------
Variance           |
          e.BSIanx |   10.09239   .7511994                      8.72242    11.
> 67752
         e.radhlw1 |   946.5787   70.45602                      818.0877    109
> 5.251
         e.radhlw2 |   307.5913   22.89472                      265.8381    355
> .9024
          e.airw1  |   1024.662   76.26796                       885.572    118
> 5.599
         e.radhlw3 |   138.9539   10.34266                       120.092    160
> .7784
          e.airw2  |   1174.033   87.38595                      1014.667    135
> 8.429
         e.radchw2 |    543.172   40.42953                      469.4404     62
> 8.484
```

```
   e.avgcumdosew2 |   .4618044   .0343732                      .3991179    .53
> 43366
   e.avgcumdosew3 |   .0853605   .0063536                      .0737734    .09
> 87675
         e.carcin |   977.1131   72.72877                      844.4773    113
> 0.581
----------------- |-------------------------------------------------------------
> ------
LR test of model vs. saturated: chi2(78)  =    850.81, Prob > chi2 = 0.0000
```

```
18 .  estat mindices
```

Modification indices

	MI	df	P>MI	EPC	Standard EPC
Structural					
BSIanx <- airw1	6.668	1	0.01	-.0135282	-.1289732
radhlw1 <- BSIanx	5.229	1	0.02	-3.06586	-.2952295
radhlw2	19.463	1	0.00	-.709408	-.6495669
airw1	7.133	1	0.01	-.3601391	-.3306264
radhlw3	41.858	1	0.00	-1.117885	-1.016884
radchw2	17.336	1	0.00	-.2892891	-.2633946
radchw3	19.133	1	0.00	-.2774954	-.2585745
radhlw2 <- radtlw3	9.833	1	0.00	.0944297	.096621
airw1 <- injselfr	13.633	1	0.00	14.20369	.1923955
radhlw3 <- carcin	6.052	1	0.01	.0491619	.0457665
injselfr	14.727	1	0.00	5.951295	.0813576
airw2 <- radhlw2	8.193	1	0.00	.1983743	.1801338
radhlw3	12.718	1	0.00	.2537389	.2288987
injselfr	8.735	1	0.00	12.16667	.1500427
radchw3	4.176	1	0.04	.1133934	.1047851
radtlw3	18.268	1	0.00	.2390365	.2220941
radchw2 <- radhlw1	12.034	1	0.00	-.1326343	-.1456737

radhlw2	4.576	1	0.03	-.1074778	-.1080865
carcin	5.587	1	0.02	.0920448	.0856087
injselfr	7.297	1	0.01	7.464508	.10195
radchw3	278.029	1	0.00	.7840556	.8024201
radtlw3	68.620	1	0.00	.3422096	.3521341
carcin <-					
BSIanx	9.224	1	0.00	4.318538	.4910781
radhlw2	6.979	1	0.01	.1517804	.1641156
radhlw3	22.222	1	0.00	.2689657	.28892
airw2	4.209	1	0.04	.0900424	.107219
radchw2	15.814	1	0.00	.1933982	.207938
age	6.205	1	0.01	.3525954	.1323314
kzchorn	98.187	1	0.00	.6059821	.5184232
radchw3	20.661	1	0.00	.2159948	.2376728
radtlw3	8.420	1	0.00	.1373464	.1519548
Covariance					
e.BSIanx					
e.airw1	6.668	1	0.01	-13.86182	-.1363117
e.radhlw1					
e.airw1	7.133	1	0.01	-369.021	-.3746988
e.radhlw3	15.997	1	0.00	-284.6873	-.7849724
e.radchw2	17.336	1	0.00	-157.1337	-.2191403
e.radhlw2					
e.radhlw3	23.927	1	0.00	-140.1522	-.6779187
e.radhlw3					
e.carcin	5.193	1	0.02	44.71243	.1213446
e.radchw2					
e.carcin	5.108	1	0.02	86.65737	.11895

EPC = expected parameter change

```
19 .
20 .
21 .
22 . // model for females BSIanx
23 . set more off

24 . sem(age avgcumdosew1->BSIanx)(radhlw1->BSIanx) ///
>   (injselfr->BSIanx)(avgcumdosew1->radhlw1) (BSIanx->radhlw1) ///
>  (avgcumdosew1->BSIanx)(radhlw1->BSIanx) if gender==2, nocapslatent
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  BSIanx radhlw1

Exogenous variables

Observed:  age avgcumdosew1 injselfr

Fitting target model:

Iteration 0:   log likelihood = -4708.2737  (not concave)
Iteration 1:   log likelihood = -4704.0373  (not concave)
Iteration 2:   log likelihood = -4702.6059  (not concave)
Iteration 3:   log likelihood = -4701.4967  (not concave)
Iteration 4:   log likelihood = -4700.7094  (not concave)
Iteration 5:   log likelihood = -4699.8784  (not concave)
Iteration 6:   log likelihood = -4698.1246
Iteration 7:   log likelihood = -4688.0528
Iteration 8:   log likelihood = -4679.4214
Iteration 9:   log likelihood = -4675.4394
Iteration 10:  log likelihood = -4674.3131
Iteration 11:  log likelihood = -4673.9836
Iteration 12:  log likelihood = -4673.9394
Iteration 13:  log likelihood = -4673.9384
Iteration 14:  log likelihood = -4673.9384

Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     = -4673.9384
```

	OIM					
	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Inter
Structural						
BSIanx <-						
radhlw1	-.1407127	.0277153	-5.08	0.000	-.1950337	-.086
age	.1117602	.0291086	3.84	0.000	.0547084	.16
avgcumdosew1	1.190002	.5153486	2.31	0.021	.1799374	2.20
injselfr	4.571848	.8812757	5.19	0.000	2.844579	6.29
_cons	7.807608	1.27076	6.14	0.000	5.316964	10.2
radhlw1 <-						
BSIanx	17.32319	5.114333	3.39	0.001	7.299283	27.
avgcumdosew1	-22.54112	10.64109	-2.12	0.034	-43.39728	-1.68
_cons	-91.41468	43.61049	-2.10	0.036	-176.8897	-5.93
Variance						
e.BSIanx	27.84519	8.048744			15.80184	49.0
e.radhlw1	5764.263	2451.204			2504.825	1326

LR test of model vs. saturated: chi2(1) = 0.02, Prob > chi2 = 0.8861

```
25 . estat mindices
   (no modification indices to report, all MI values less than 3.841458820694123)

26 .
27 .
28 .
29 .
30 . *-------- Male Perceived risk BSI male anxiety next
31 . set more off

32 . sem(crhtw1->whppain)(whppain->whpsleep)(whpsleep->whpel) ///
>   (whpel whpsleep->BSIanx)(crhtw1->whpsleep) ///
>    (whppain->whpel) if gender==1, nocapslatent

   Endogenous variables

   Observed:  whppain whpsleep whpel BSIanx

   Exogenous variables

   Observed:  crhtw1

   Fitting target model:

   Iteration 0:   log likelihood = -5745.6684
   Iteration 1:   log likelihood = -5745.6684

   Structural equation model                       Number of obs      =       339
   Estimation method  = ml
   Log likelihood     = -5745.6684

   ------------------------------------------------------------------------------
   > ------
                |                 OIM
                |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
   > ]
   -------------+----------------------------------------------------------------
   > ------
   Structural   |
     whppain <- |
          crhtw1 |   3.750412   .9400436     3.99   0.000     1.907961    5.59286
   > 4
           _cons |   10.74268   .8829189    12.17   0.000     9.012189    12.4731
   > 7
     -----------+----------------------------------------------------------------
   > ------
     whpsleep <- |
         whppain |   .6368974   .0718842     8.86   0.000     .4960069    .777787
   > 8
```

```
       crhtw1 |    5.84165   1.273048     4.59   0.000     3.346521    8.33677
> 8
        _cons |    11.6756   1.400675     8.34   0.000     8.930325    14.4208
> 7
-------------+----------------------------------------------------------------
> —
  whpel <-   |
     whppain |   .6331053   .0936262     6.76   0.000     .4496013    .816609
> 2
    whpsleep |   .3559356   .0620519     5.74   0.000     .2343162     .47755
> 5
        _cons |   10.54966   1.719989     6.13   0.000     7.178547    13.9207
> 8
-------------+----------------------------------------------------------------
> —
  BSIanx <-  |
    whpsleep |   .0392335   .0058974     6.65   0.000     .0276748    .050792
> 3
       whpel |    .021392   .0048781     4.39   0.000      .011831    .030952
> 9
        _cons |   6.436908   .1721046    37.40   0.000     6.099589    6.77422
> 7
-------------+----------------------------------------------------------------
> —
Variance     |
    e.whppain |   258.2155   19.83341                      222.1273    300.166
> 8
   e.whpsleep |   452.3232   34.74274                      389.1065    525.810
> 5
      e.whpel |   627.0886   48.16638                      539.4466    728.969
> 4
     e.BSIanx |    5.74099   .4409628                      4.938629    6.67370
> 8
-------------+----------------------------------------------------------------
> —
LR test of model vs. saturated: chi2(3)   =      4.45, Prob > chi2 = 0.2167
```

```
33 . estat mindices
   (no modification indices to report, all MI values less than 3.841458820694123)

34 .
35 . sem (crhtw1 -> whppain) (crhtw1 -> whpsleep) (whppain -> whpsleep) ///
   >   (whppain -> whpel) (whpsleep -> whpel) (whpsleep -> BSIanx) ///
   >   (whpel -> BSIanx) if gender==1, nocapslatent

   Endogenous variables

   Observed:  whppain whpsleep whpel BSIanx

   Exogenous variables

   Observed:  crhtw1

   Fitting target model:

   Iteration 0:   log likelihood = -5745.6684
   Iteration 1:   log likelihood = -5745.6684

   Structural equation model                       Number of obs      =       339
   Estimation method  = ml
   Log likelihood     = -5745.6684

   ------------------------------------------------------------------------------
   > -
                |                 OIM
                |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
   > ]
   -------------+----------------------------------------------------------------
   > -
   Structural   |
     whppain <- |
          crhtw1 |   3.750412   .9400436     3.99   0.000     1.907961    5.59286
   > 4
           _cons |   10.74268   .8829189    12.17   0.000     9.012189    12.4731
   > 7
     -----------+----------------------------------------------------------------
   > -
     whpsleep <-|
         whppain |   .6368974   .0718842     8.86   0.000     .4960069    .777787
   > 8
          crhtw1 |    5.84165   1.273048     4.59   0.000     3.346521    8.33677
   > 8
           _cons |    11.6756   1.400675     8.34   0.000     8.930325    14.4208
   > 7
     -----------+----------------------------------------------------------------
   > -
```

```
  whpel <-
      whppain |   .6331053   .0936262     6.76   0.000     .4496013    .816609
> 2
     whpsleep |   .3559356   .0620519     5.74   0.000     .2343162     .47755
> 5
        _cons |   10.54966   1.719989     6.13   0.000     7.178547    13.9207
> 8
  ------------+------------------------------------------------------------
> -
  BSIanx <-
     whpsleep |   .0392335   .0058974     6.65   0.000     .0276748    .050792
> 3
        whpel |    .021392   .0048781     4.39   0.000      .011831    .030952
> 9
        _cons |   6.436908   .1721046    37.40   0.000     6.099589    6.77422
> 7
  ------------+------------------------------------------------------------
> -
  Variance
     e.whppain |   258.2155   19.83341                      222.1273    300.166
> 8
    e.whpsleep |   452.3232   34.74274                      389.1065    525.810
> 5
       e.whpel |   627.0886   48.16638                      539.4466    728.969
> 4
     e.BSIanx |    5.74099   .4409628                      4.938629    6.67370
> 8
  ------------+------------------------------------------------------------
> -
  LR test of model vs. saturated: chi2(3)   =      4.45, Prob > chi2 = 0.2167

36 . estat gof

  ------------------------------------------------------------------------------
  Fit statistic               |      Value   Description
  ----------------------------+-------------------------------------------------
  Likelihood ratio            |
              chi2_ms(3)      |      4.451   model vs. saturated
                p > chi2      |      0.217
              chi2_bs(10)     |    344.945   baseline vs. saturated
                p > chi2      |      0.000
  ------------------------------------------------------------------------------
```

```
37 . estat ic
```

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	339	.	-5745.668	15	11521.34	11578.73

Note: N=Obs used in calculating BIC; see **[R] BIC note**

```
38 . estat framework
(model contains no latent variables)
```

Endogenous variables on endogenous variables

	observed			
Beta	whppain	whpsleep	whpel	BSIanx
observed				
whppain	0	0	0	0
whpsleep	.6368974	0	0	0
whpel	.6331053	.3559356	0	0
BSIanx	0	.0392335	.021392	0

Exogenous variables on endogenous variables

	observed
Gamma	crhtw1
observed	
whppain	3.750412
whpsleep	5.84165
whpel	0
BSIanx	0

Covariances of error variables

	observed			
Psi	e.whppain	e.whpsl~p	e.whpel	e.BSIanx
observed				
e.whppain	258.2155			
e.whpsleep	0	452.3232		
e.whpel	0	0	627.0886	
e.BSIanx	0	0	0	5.74099

Intercepts of endogenous variables

	observed			
alpha	whppain	whpsleep	whpel	BSIanx
_cons	**10.74268**	**11.6756**	**10.54966**	**6.436908**

Covariances of exogenous variables

	observed
Phi	crhtw1
observed	
crhtw1	**.861959**

Means of exogenous variables

	observed
kappa	crhtw1
mean	**-.1421184**

39 . estat residuals

Residuals of observed variables

Mean residuals

	whppain	whpsleep	whpel	BSIanx	crhtw1
raw	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

Covariance residuals

	whppain	whpsleep	whpel	BSIanx	crhtw1
whppain	**0.000**				
whpsleep	**0.000**	**0.000**			
whpel	**0.000**	**0.000**	**0.000**		
BSIanx	**2.132**	**0.000**	**0.000**	**0.000**	
crhtw1	**0.000**	**0.000**	**1.878**	**0.130**	**0.000**

```
40 . estat teffects
```

Direct effects

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
whppain <-						
crhtw1	**3.750412**	**.9400436**	**3.99**	**0.000**	**1.907961**	**5.59286**
whpsleep <-						
whppain	**.6368974**	**.0718842**	**8.86**	**0.000**	**.4960069**	**.777787**
crhtw1	**5.84165**	**1.273048**	**4.59**	**0.000**	**3.346521**	**8.33677**
whpel <-						
whppain	**.6331053**	**.0936262**	**6.76**	**0.000**	**.4496013**	**.816609**
whpsleep	**.3559356**	**.0620519**	**5.74**	**0.000**	**.2343162**	**.47755**
crhtw1	**0**	(no path)				
BSIanx <-						
whppain	**0**	(no path)				
whpsleep	**.0392335**	**.0058974**	**6.65**	**0.000**	**.0276748**	**.050792**
whpel	**.021392**	**.0048781**	**4.39**	**0.000**	**.011831**	**.030952**
crhtw1	**0**	(no path)				

Indirect effects

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
whppain <-						
crhtw1	**0**	(no path)				
whpsleep <-						
whppain	**0**	(no path)				
crhtw1	**2.388628**	**.6566101**	**3.64**	**0.000**	**1.101695**	**3.6755**
whpel <-						
whppain	**.2266945**	**.0255861**	**8.86**	**0.000**	**.1765465**	**.276842**
whpsleep	**0**	(no path)				
crhtw1	**5.303854**	**1.03223**	**5.14**	**0.000**	**3.280721**	**7.32698**
BSIanx <-						
whppain	**.0433806**	**.0039182**	**11.07**	**0.000**	**.0357011**	**.051060**
whpsleep	**.0076142**	**.0013274**	**5.74**	**0.000**	**.0050125**	**.010215**
whpel	**0**	(no path)				
crhtw1	**.4363629**	**.0838853**	**5.20**	**0.000**	**.2719507**	**.600775**

Total effects

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
whppain <-						
crhtw1	**3.750412**	**.9400436**	**3.99**	**0.000**	**1.907961**	**5.59286**
whpsleep <-						
whppain	**.6368974**	**.0718842**	**8.86**	**0.000**	**.4960069**	**.777787**
crhtw1	**8.230277**	**1.380734**	**5.96**	**0.000**	**5.524089**	**10.9364**
whpel <-						
whppain	**.8597997**	**.0970593**	**8.86**	**0.000**	**.669567**	**1.05003**
whpsleep	**.3559356**	**.0620519**	**5.74**	**0.000**	**.2343162**	**.47755**
crhtw1	**5.303854**	**1.03223**	**5.14**	**0.000**	**3.280721**	**7.32698**
BSIanx <-						
whppain	**.0433806**	**.0039182**	**11.07**	**0.000**	**.0357011**	**.051060**
whpsleep	**.0468477**	**.006045**	**7.75**	**0.000**	**.0349998**	**.058695**
whpel	**.021392**	**.0048781**	**4.39**	**0.000**	**.011831**	**.030952**
crhtw1	**.4363629**	**.0838853**	**5.20**	**0.000**	**.2719507**	**.600775**

```
41 .
42 .
43 .
44 . *--------Female Perceived risk  BSI anxiety models   (Nonrecursive model)
45 . set more off

46 . sem(injselfr age anxagw1->crhtw1)(anxagw1->crhtw1)( crhtw1 ->anxagw1)(crhtw1
   >  age->BSIanx) ///
   >   (injselfr ->BSIanx) ///
   >  (crhtw1 crhtw2->anxagw2)(crhtw1 age injselfr->crhtw2)(anxagw1 anxagw2 crhtw
   > 2->BSIanx) ///
   >   if gender==2, nocapslatent cov(e.anxagw1*e.anxagw2 e.crhtw1*e.crhtw2)
   (1 observations with missing values excluded;
    specify option 'method(mlmv)' to use all observations)

   Endogenous variables

   Observed:  anxagw1 crhtw1 BSIanx crhtw2 anxagw2

   Exogenous variables

   Observed:  injselfr age

   Fitting target model:

   Iteration 0:   log likelihood = -6877.7497  (not concave)
   Iteration 1:   log likelihood = -6769.0753
   Iteration 2:   log likelihood = -6747.0109
   Iteration 3:   log likelihood = -6722.4154
   Iteration 4:   log likelihood = -6715.7072
   Iteration 5:   log likelihood = -6715.4249
   Iteration 6:   log likelihood = -6715.4153
   Iteration 7:   log likelihood = -6715.4153

   Structural equation model                       Number of obs      =       362
   Estimation method  = ml
   Log likelihood     = -6715.4153
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
anxagw1 <-						
crhtw1	**27.06553**	**6.029764**	**4.49**	**0.000**	**15.24741**	**38.8836**
_cons	**18.82882**	**2.306313**	**8.16**	**0.000**	**14.30853**	**23.3491**
crhtw1 <-						
anxagw1	**-.0177973**	**.0045208**	**-3.94**	**0.000**	**-.026658**	**-.008936**
injselfr	**.8463269**	**.1404014**	**6.03**	**0.000**	**.5711451**	**1.12150**
age	**.0241364**	**.0053064**	**4.55**	**0.000**	**.0137361**	**.034536**
_cons	**-1.263198**	**.252502**	**-5.00**	**0.000**	**-1.758093**	**-.768303**
BSIanx <-						
anxagw1	**.0224586**	**.0053965**	**4.16**	**0.000**	**.0118816**	**.033035**
crhtw1	**-1.543679**	**.2442645**	**-6.32**	**0.000**	**-2.022428**	**-1.06492**
crhtw2	**1.303141**	**.2911649**	**4.48**	**0.000**	**.7324684**	**1.87381**
anxagw2	**.0233663**	**.0084438**	**2.77**	**0.006**	**.0068167**	**.039915**
injselfr	**.7696674**	**.4154463**	**1.85**	**0.064**	**-.0445925**	**1.58392**
age	**.0296011**	**.01482**	**2.00**	**0.046**	**.0005543**	**.058647**
_cons	**6.176989**	**.7699486**	**8.02**	**0.000**	**4.667917**	**7.6860**
crhtw2 <-						
crhtw1	**.3813272**	**.0700779**	**5.44**	**0.000**	**.243977**	**.518677**
injselfr	**.6533311**	**.0798319**	**8.18**	**0.000**	**.4968636**	**.809798**
age	**.0078401**	**.0029012**	**2.70**	**0.007**	**.0021539**	**.013526**

```
> 3
       _cons |  -.7219082   .1555237    -4.64   0.000    -1.026729   -.417087
> 2
-------------+----------------------------------------------------------------
> —
  anxagw2 <- |
       crhtw1 |   2.376723   2.414617     0.98   0.325    -2.355839    7.10928
> 5
       crhtw2 |   5.981107   1.653783     3.62   0.000     2.739752    9.22246
> 2
        _cons |   10.27432   1.226483     8.38   0.000     7.870461    12.6781
> 9
-------------+----------------------------------------------------------------
> —
Variance     |
    e.anxagw1 |    1692.38   275.5368                      1230.024    2328.53
> 2
     e.crhtw1 |   1.135186   .2055993                      .7959792    1.61894
> 6
     e.BSIanx |   9.775312   .7265932                      8.450089    11.3083
> 7
     e.crhtw2 |   .3484824   .0297778                      .2947445    .412017
> 7
    e.anxagw2 |    510.564   45.09996                      429.3985    607.071
> 6
-------------+----------------------------------------------------------------
> —
Covariance   |
  e.anxagw1  |
    e.anxagw2 |   467.1564   91.50086     5.11   0.000      287.818    646.494
> 8
-------------+----------------------------------------------------------------
> —
  e.crhtw1   |
     e.crhtw2 |   .1552923     .05936     2.62   0.009     .0389488    .271635
> 8
-------------+----------------------------------------------------------------
> —
LR test of model vs. saturated: chi2(3)   =      2.85, Prob > chi2 = 0.4157
```

```
47 . estat mindices
   (no modification indices to report, all MI values less than 3.841458820694123)

48 . estat residuals

   Residuals of observed variables

     Mean residuals

                    |   anxagw1     crhtw1     BSIanx     crhtw2    anxagw2   inj
   > selfr        age
     ---------------+------------------------------------------------------------
   > ---------------

                raw |    -0.000     -0.000      0.000     -0.000     -0.000
   > 0.000      0.000
     ---------------+------------------------------------------------------------
   > ---------------

     Covariance residuals

                    |   anxagw1     crhtw1     BSIanx     crhtw2    anxagw2   inj
   > selfr        age
     ---------------+------------------------------------------------------------
   > ---------------

            anxagw1 |     0.001
   >
             crhtw1 |     0.000      0.000
   >
             BSIanx |    -0.033      0.001      0.025
   >
             crhtw2 |    -0.045      0.001     -0.002      0.001
   >
            anxagw2 |    -0.271      0.005      0.579     -0.013     -0.177
   >
           injselfr |    -0.120      0.002     -0.005      0.001      0.017
   > 0.000
                age |     4.200     -0.075      0.646     -0.029     20.266
   > 0.000      0.000
     ---------------+------------------------------------------------------------
   > ---------------
```

```
49 .
50 .
51 . set more off

52 . sem (injselfr -> anxagw1) (injselfr -> crhtw1) (age -> anxagw1) (age -> crht
   > w1) ///
   >   (age -> BSIanx) (age -> crhtw2) (anxagw1 -> crhtw1) (anxagw1 -> BSIanx) //
   > /
   >   (anxagw1 -> anxagw2) (crhtw1 -> BSIanx) (crhtw1 -> crhtw2) (BSIanx -> anxa
   > gw2) ///
   >   (crhtw2 -> BSIanx) (anxagw2 -> BSIanx) if gender==2, cov( e.crhtw1*e.crhtw
   > 2) ///
   >    nocapslatent nolog
   (1 observations with missing values excluded;
    specify option 'method(mlmv)' to use all observations)

   Endogenous variables

   Observed:  anxagw1 crhtw1 BSIanx crhtw2 anxagw2

   Exogenous variables

   Observed:  injselfr age

   Structural equation model                       Number of obs      =       362
   Estimation method  = ml
   Log likelihood     = -6716.7577
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
anxagw1 <-						
injselfr	14.70514	3.935045	3.74	0.000	6.992591	22.41769
age	.4772258	.1542639	3.09	0.002	.174874	.7795775
_cons	-11.6744	7.857183	-1.49	0.137	-27.0742	3.725392
crhtw1 <-						
anxagw1	.0017397	.0007408	2.35	0.019	.0002877	.0031917
injselfr	.5329039	.0998046	5.34	0.000	.3372904	.7285174
age	.0150301	.0040071	3.75	0.000	.0071764	.0228839
_cons	-1.028066	.2024968	-5.08	0.000	-1.424952	-.6311795
BSIanx <-						
anxagw1	.0493934	.0097274	5.08	0.000	.030328	.0684589
crhtw1	-2.069252	.3217262	-6.43	0.000	-2.699824	-1.438681
crhtw2	2.045419	.3534434	5.79	0.000	1.352683	2.738156
anxagw2	-.073076	.0293674	-2.49	0.013	-.1306351	-.0155168

age	.046071	.0178107	2.59	0.010	.0111627	.0809792
_cons	6.337089	.87064	7.28	0.000	4.630666	8.043512
crhtw2 <-						
crhtw1	1.563981	.2201685	7.10	0.000	1.132459	1.995503
age	-.0109768	.0065898	-1.67	0.096	-.0238926	.0019389
_cons	.5160246	.3170495	1.63	0.104	-.1053809	1.13743
anxagw2 <-						
anxagw1	.1709357	.0447937	3.82	0.000	.0831417	.2587297
BSIanx	3.407355	.8782206	3.88	0.000	1.686074	5.128636
_cons	-22.84125	7.288221	-3.13	0.002	-37.1259	-8.556595
Variance						
e.anxagw1	1149.402	85.43441			993.5799	1329.663
e.crhtw1	.7638083	.0568312			.6601621	.8837269
e.BSIanx	13.39239	2.365549			9.473426	18.93255
e.crhtw2	1.165488	.362737			.633267	2.145008
e.anxagw2	435.7334	55.26366			339.8316	558.6991
Covariance						
e.crhtw1						
e.crhtw2	-.7999484	.1805223	-4.43	0.000	-1.153766	-.4461311

LR test of model vs. saturated: chi2(**5**) = **5.53**, Prob > chi2 = **0.3544**

53 . estat gof

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(**5**)	**5.532**	model vs. saturated
p > chi2	**0.354**	
chi2_bs(**20**)	**606.669**	baseline vs. saturated
p > chi2	**0.000**	

```
54 . estat stable, detail

   Stability analysis of simultaneous equation systems

      Eigenvalue stability condition
```

Eigenvalue	Modulus
-4.163e-17 + .4989948*i*	**.498995**
-4.163e-17 - .4989948*i*	**.498995**
2.045e-07 + 3.542e-07*i*	**4.1e-07**
2.045e-07 - 3.542e-07*i*	**4.1e-07**
-4.090e-07	**4.1e-07**

```
      stability index =  .4989948
      All the eigenvalues lie inside the unit circle.
      SEM satisfies stability condition.

      Endogenous variables on endogenous variables
```

	observed				
Beta	anxagw1	crhtw1	BSIanx	crhtw2	anxagw2
observed					
anxagw1	**0**	**0**	**0**	**0**	**0**
crhtw1	**.0017397**	**0**	**0**	**0**	**0**
BSIanx	**.0493934**	**-2.069252**	**0**	**2.045419**	**-.073076**
crhtw2	**0**	**1.563981**	**0**	**0**	**0**
anxagw2	**.1709357**	**0**	**3.407355**	**0**	**0**

```
55 . estat ic
```

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	**362**	**.**	**-6716.758**	**25**	**13483.52**	**13580.81**

Note: N=Obs used in calculating BIC; see **[R] BIC note**

```
56 . estat teffects
```

Direct effects

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
anxagw1 <-						
injselfr	**14.70514**	**3.935045**	**3.74**	**0.000**	**6.992591**	**22.41769**
age	**.4772258**	**.1542639**	**3.09**	**0.002**	**.174874**	**.7795775**
crhtw1 <-						
anxagw1	**.0017397**	**.0007408**	**2.35**	**0.019**	**.0002877**	**.0031917**
injselfr	**.5329039**	**.0998046**	**5.34**	**0.000**	**.3372904**	**.7285174**
age	**.0150301**	**.0040071**	**3.75**	**0.000**	**.0071764**	**.0228839**
BSIanx <-						
anxagw1	**.0493934**	**.0097274**	**5.08**	**0.000**	**.030328**	**.0684589**
crhtw1	**-2.069252**	**.3217262**	**-6.43**	**0.000**	**-2.699824**	**-1.438681**
BSIanx	**0**	(no path)				
crhtw2	**2.045419**	**.3534434**	**5.79**	**0.000**	**1.352683**	**2.738156**
anxagw2	**-.073076**	**.0293674**	**-2.49**	**0.013**	**-.1306351**	**-.0155168**
injselfr	**0**	(no path)				
age	**.046071**	**.0178107**	**2.59**	**0.010**	**.0111627**	**.0809792**
crhtw2 <-						
anxagw1	**0**	(no path)				
crhtw1	**1.563981**	**.2201685**	**7.10**	**0.000**	**1.132459**	**1.995503**
injselfr	**0**	(no path)				
age	**-.0109768**	**.0065898**	**-1.67**	**0.096**	**-.0238926**	**.0019389**
anxagw2 <-						
anxagw1	**.1709357**	**.0447937**	**3.82**	**0.000**	**.0831417**	**.2587297**
crhtw1	**0**	(no path)				
BSIanx	**3.407355**	**.8782206**	**3.88**	**0.000**	**1.686074**	**5.128636**
crhtw2	**0**	(no path)				
anxagw2	**0**	(no path)				
injselfr	**0**	(no path)				
age	**0**	(no path)				

Indirect effects

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
anxagw1 <-						
injselfr	**0**	(no path)				
age	**0**	(no path)				
crhtw1 <-						
anxagw1	**0**	(no path)				
injselfr	**.0255828**	**.0128665**	**1.99**	**0.047**	**.0003648**	**.0508007**
age	**.0008302**	**.0004439**	**1.87**	**0.061**	**-.0000397**	**.0017002**
BSIanx <-						
anxagw1	**-.0182744**	**.0023714**	**-7.71**	**0.000**	**-.0229221**	**-.0136266**
crhtw1	**2.973774**	**.3662194**	**8.12**	**0.000**	**2.255998**	**3.691551**
BSIanx	**-.1993568**	**.0513827**	**-3.88**	**0.000**	**-.3000651**	**-.0986485**
crhtw2	**-.4077682**	**.0704613**	**-5.79**	**0.000**	**-.5458699**	**-.2696666**
anxagw2	**.0145682**	**.0058546**	**2.49**	**0.013**	**.0030934**	**.026043**
injselfr	**.9396332**	**.2469747**	**3.80**	**0.000**	**.4555717**	**1.423695**
age	**.0012851**	**.0104927**	**0.12**	**0.903**	**-.0192802**	**.0218505**
crhtw2 <-						
anxagw1	**.0027209**	**.0011587**	**2.35**	**0.019**	**.00045**	**.0049918**
crhtw1	**0**	(no path)				
injselfr	**.8734625**	**.085583**	**10.21**	**0.000**	**.7057229**	**1.041202**
age	**.0248053**	**.0076718**	**3.23**	**0.001**	**.0097688**	**.0398418**
anxagw2 <-						
anxagw1	**.1060336**	**.0323036**	**3.28**	**0.001**	**.0427197**	**.1693476**
crhtw1	**3.082028**	**1.509864**	**2.04**	**0.041**	**.1227492**	**6.041306**
BSIanx	**-.6792794**	**.1750792**	**-3.88**	**0.000**	**-1.022428**	**-.3361304**
crhtw2	**5.580058**	**.9642202**	**5.79**	**0.000**	**3.690221**	**7.469895**
anxagw2	**-.1993568**	**.0801166**	**-2.49**	**0.013**	**-.3563825**	**-.0423311**
injselfr	**5.715297**	**1.389736**	**4.11**	**0.000**	**2.991465**	**8.439128**
age	**.2429341**	**.0695061**	**3.50**	**0.000**	**.1067046**	**.3791635**

Total effects

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
anxagw1 <-						
injselfr	**14.70514**	**3.935045**	**3.74**	**0.000**	**6.992591**	**22.41769**
age	**.4772258**	**.1542639**	**3.09**	**0.002**	**.174874**	**.7795775**
crhtw1 <-						
anxagw1	**.0017397**	**.0007408**	**2.35**	**0.019**	**.0002877**	**.0031917**
injselfr	**.5584867**	**.1016256**	**5.50**	**0.000**	**.3593042**	**.7576691**
age	**.0158604**	**.0039856**	**3.98**	**0.000**	**.0080487**	**.0236721**
BSIanx <-						
anxagw1	**.031119**	**.0094806**	**3.28**	**0.001**	**.0125375**	**.0497006**
crhtw1	**.9045221**	**.443119**	**2.04**	**0.041**	**.0360248**	**1.773019**
BSIanx	**-.1993568**	**.0513827**	**-3.88**	**0.000**	**-.3000651**	**-.0986485**
crhtw2	**1.637651**	**.282982**	**5.79**	**0.000**	**1.083016**	**2.192286**
anxagw2	**-.0585078**	**.0235128**	**-2.49**	**0.013**	**-.1045921**	**-.0124235**
injselfr	**.9396332**	**.2469747**	**3.80**	**0.000**	**.4555717**	**1.423695**
age	**.0473561**	**.0149934**	**3.16**	**0.002**	**.0179697**	**.0767426**
crhtw2 <-						
anxagw1	**.0027209**	**.0011587**	**2.35**	**0.019**	**.00045**	**.0049918**
crhtw1	**1.563981**	**.2201685**	**7.10**	**0.000**	**1.132459**	**1.995503**
injselfr	**.8734625**	**.085583**	**10.21**	**0.000**	**.7057229**	**1.041202**
age	**.0138285**	**.0033445**	**4.13**	**0.000**	**.0072735**	**.0203836**
anxagw2 <-						
anxagw1	**.2769693**	**.0312116**	**8.87**	**0.000**	**.2157957**	**.338143**
crhtw1	**3.082028**	**1.509864**	**2.04**	**0.041**	**.1227492**	**6.041306**
BSIanx	**2.728076**	**.7031413**	**3.88**	**0.000**	**1.349944**	**4.106207**
crhtw2	**5.580058**	**.9642202**	**5.79**	**0.000**	**3.690221**	**7.469895**
anxagw2	**-.1993568**	**.0801166**	**-2.49**	**0.013**	**-.3563825**	**-.0423311**
injselfr	**5.715297**	**1.389736**	**4.11**	**0.000**	**2.991465**	**8.439128**
age	**.2429341**	**.0695061**	**3.50**	**0.000**	**.1067046**	**.3791635**

```
57 . estat framework
   (model contains no latent variables)
```

Endogenous variables on endogenous variables

	observed				
Beta	anxagw1	crhtw1	BSIanx	crhtw2	anxagw2
observed					
anxagw1	0	0	0	0	0
crhtw1	.0017397	0	0	0	0
BSIanx	.0493934	-2.069252	0	2.045419	-.073076
crhtw2	0	1.563981	0	0	0
anxagw2	.1709357	0	3.407355	0	0

Exogenous variables on endogenous variables

	observed	
Gamma	injselfr	age
observed		
anxagw1	14.70514	.4772258
crhtw1	.5329039	.0150301
BSIanx	0	.046071
crhtw2	0	-.0109768
anxagw2	0	0

Covariances of error variables

	observed				
Psi	e.anxagw1	e.crhtw1	e.BSIanx	e.crhtw2	e.anxagw2
observed					
e.anxagw1	1149.402				
e.crhtw1	0	.7638083			
e.BSIanx	0	0	13.39239		
e.crhtw2	0	-.7999484	0	1.165488	
e.anxagw2	0	0	0	0	435.7334

Intercepts of endogenous variables

alpha	observed anxagw1	crhtw1	BSIanx	crhtw2	anxagw2
_cons	**-11.6744**	**-1.028066**	**6.337089**	**.5160246**	**-22.84125**

Covariances of exogenous variables

Phi	observed injselfr	age
observed		
injselfr	**.2147141**	
age	**1.161854**	**139.7112**

Means of exogenous variables

kappa	observed injselfr	age
mean	**.6878453**	**50.27072**

58 . estat residuals

Residuals of observed variables

Mean residuals

	anxagw1	crhtw1	BSIanx	crhtw2	anxagw2	injselfr	age
raw	**-0.000**	**-0.000**	**-0.000**	**0.000**	**-0.000**	**0.000**	**0.000**

Covariance residuals

```
                    |   anxagw1     crhtw1     BSIanx     crhtw2     anxagw2   inj
> selfr         age
    ----------------+---------------------------------------------------------
> ----------------

          anxagw1 |    -0.000
>
           crhtw1 |    -1.641      0.000
>
           BSIanx |     2.431     -0.076      0.144
>
           crhtw2 |    -0.176      0.000     -0.025      0.000
>
          anxagw2 |     8.284     -0.074      0.905      0.227      4.501
>
         injselfr |    -0.000      0.005      0.107      0.001      0.061
> 0.000
             age |    -0.000     -0.000     -0.326      0.000      4.467
> 0.000       0.000
    ----------------+---------------------------------------------------------
> ----------------

59 .
60 .
61 .
62 . save chwide27jul2012, replace
   file chwide27jul2012.dta saved

63 .
64 .
65 . // male data set
66 .
67 . drop if gender==2
   (363 observations deleted)

68 . keep radhlw1 airw1 airw2 airw3 radtlw3 radhlw2 radhlw3 avgcumdosew3 BSIanx /
   > //
   >   age avgcumdosew1 crhtw1 radtlw1 injselfr  radchw1 crhtw2 avgcumdosew2 ///
   >     radw1 radw2 radchw2 radchw3 radw3 crhtw3 ///
   >    radtlw1 radhlw1 radtlw2  whpsleep whppain  whpel
```

```
69 . saveold mBSIpth7, replace
   file mBSIpth7.dta saved

70 .
71 . use chwide27jul2012, clear
   (Chornobyl sequelae for both sexes   women=362  men = 340 wide format)

72 .
73 . drop if gender==1
   (339 observations deleted)

74 . keep id age BSIanx crhtw1 crhtw2 crhtw3 whpsleep whppain BSIanx whpel  ///
   >    avgcumdosew1 injselfr radhlw1 BSIdep

75 . saveold femBSIpath, replace
   file femBSIpath.dta saved
```