```
 1 . *  Robert A. Yaffee     10-17 July 2012
 2 . *!  H8   program to test hypothesis 8
 3 . *
 4 . *   h8: Perceived risk of exposure measured by summary score directly predic
   > ts self-reported illnesses as
 5 . *            measured by Nottingham
 6 .
 7 .
 8 . ************************************************************************
   > **********************
 9 . ****   REQUIRED Programs for this do file to run
10 . ****   to run this program the user must install mcmclinear.ado and mcmcstat
   > s.ado
11 . ***        use findit mcmclinear
12 . ***        use findit mcmcstats
13 . ***        Sam Sculhofer-Whol, Federal Reserve Bank of Minneapolis, is the a
   > uthor of these
14 . ***           two programs, which were gratefully obtained from
15 . ***           net describe mcmclinear, from(http://fmwww.bc.edu/RePEc/bocode
   > /m)
16 . ***           I want to thank him for posting his extremely useful packages.
   >  They are of
17 . ***           great help.
18 . ***   the user must previously install rdiagrbst.ado available on our websit
   > e
19 . ***       rdiagrbst.ado is a program that tests for the assumptions of a reg
   > ression model
20 . ***       when it is run with robust variance estimators
21 .
22 . ****    File to construct Chornobyl related health threat indices for each w
   > ave adn gender: CRHT.do
23 . ************************************************************************
   > **********************
24 .
25 .
26 . *---------- Introduction to endogenous variables-- chunk--------------------
   > ----
```

```
27 .
28 .
29 .
30 . set linesize 80

31 . set matsize 11000

32 .
33 . cd /Users/robertyaffee/Documents/data/research/chwk/phase3/Htests/H8
   /Users/robertyaffee/Documents/data/research/chwk/phase3/Htests/H8

34 .
35 . cap drop id==22

36 . use chwide13jul2012, clear
   (Chornobyl sequelae for both sexes   women=362  men = 340 wide format)

37 . label data "Chornobyl sequelae for both sexes   women=362  men = 340 wide fo
   > rmat"

38 . save chwide13jul2012, replace
   file chwide13jul2012.dta saved

39 . note: data "Chornobyl study  women = 362 men=340  wide format"

40 .
41 . cap drop crhtgen*

42 .
43 .
44 .
45 .
46 . cap drop crhtw1

47 . cap drop crhtw2

48 . cap drop crhtw3
```

```
49 .
50 . forvalues j=1/3 {
     2. drop if id==22
     3. set more off
     4. di as input "wave == `j'"
     5. factor radhlw`j' radfmw`j' kzchorn , mineigen(1)
     6. rotate, varimax
     7. estat kmo
     8. estat rotatecompare
     9. predict crhtw`j'
    10. alpha radhlw`j' radfmw`j' kzchorn, item detail
    11. label var crhtw`j' "Chornobyl related health threat: wave `j ' alpha = `r
   > (alpha)'"
    12. }
   (0 observations deleted)
   wave == 1
   (obs=701)

   Factor analysis/correlation                       Number of obs    =      701
       Method: principal factors                     Retained factors =        1
       Rotation: (unrotated)                         Number of params =        3

   ------------------------------------------------------------------------------
        Factor  |   Eigenvalue   Difference        Proportion   Cumulative
   -------------+----------------------------------------------------------------
       Factor1  |      1.85292      1.86544            1.0617       1.0617
       Factor2  |     -0.01253      0.08264           -0.0072       1.0545
       Factor3  |     -0.09517            .           -0.0545       1.0000
   ------------------------------------------------------------------------------
       LR test: independent vs. saturated:  chi2(3)  = 1226.65 Prob>chi2 = 0.0000

   Factor loadings (pattern matrix) and unique variances

   -------------------------------------
       Variable |    Factor1 |  Uniqueness
   -------------+------------+------------
        radhlw1 |     0.9228 |     0.1484
        radfmw1 |     0.9177 |     0.1579
        kzchorn |     0.3990 |     0.8408
   -------------------------------------

   Factor analysis/correlation                       Number of obs    =      701
       Method: principal factors                     Retained factors =        1
       Rotation: orthogonal varimax (Kaiser off)     Number of params =        3
```

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.85292**	.	**1.0617**	**1.0617**

LR test: independent vs. saturated: chi2(**3**) = **1226.65** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
radhlw1	**0.9228**	**0.1484**
radfmw1	**0.9177**	**0.1579**
kzchorn	**0.3990**	**0.8408**

Factor rotation matrix

	Factor1
Factor1	**1.0000**

Kaiser-Meyer-Olkin measure of sampling adequacy

Variable	kmo
radhlw1	**0.5449**
radfmw1	**0.5462**
kzchorn	**0.9282**
Overall	**0.5759**

Rotation matrix — orthogonal varimax (Kaiser off)

Variable	Factor1
Factor1	**1.0000**

Factor loadings

Variable	Rotated Factor1	Unrotated Factor1
radhlw1	**0.9228**	**0.9228**
radfmw1	**0.9177**	**0.9177**
kzchorn	**0.3990**	**0.3990**

(regression scoring assumed)

Scoring coefficients (method = regression; based on varimax rotated factors)

Variable	Factor1
radhlw1	**0.49763**
radfmw1	**0.45687**
kzchorn	**0.04548**

Test scale = mean(unstandardized items)

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem covariance	alph
radhlw1	**701**	+	**0.9346**	**0.8128**	**354.7096**	**0.514**
radfmw1	**702**	+	**0.9274**	**0.8034**	**384.8812**	**0.528**
kzchorn	**702**	+	**0.6333**	**0.3815**	**1220.234**	**0.943**
Test scale					**653.1331**	**0.796**

Interitem covariances (obs=pairwise, see below)

	radhlw1	radfmw1	kzchorn
radhlw1	**1416.4631**		
radfmw1	**1220.2343**	**1319.2412**	
kzchorn	**384.8812**	**354.7096**	**727.8189**

Pairwise number of observations

	radhlw1	radfmw1	kzchorn
radhlw1	**701**		
radfmw1	**701**	**702**	
kzchorn	**701**	**702**	**702**

(0 observations deleted)
wave == 2
(obs=702)

Factor analysis/correlation — Number of obs = **702**
Method: principal factors — Retained factors = **1**
Rotation: (unrotated) — Number of params = **3**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**1.80132**	**1.84878**	**1.1176**	**1.1176**
Factor2	**-0.04746**	**0.09468**	**-0.0294**	**1.0882**
Factor3	**-0.14214**	**.**	**-0.0882**	**1.0000**

LR test: independent vs. saturated: chi2(**3**) = **973.89** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
radhlw2	**0.8591**	**0.2619**
radfmw2	**0.8677**	**0.2471**
kzchorn	**0.5571**	**0.6896**

Factor analysis/correlation — Number of obs = **702**
Method: principal factors — Retained factors = **1**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **3**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.80132**	**.**	**1.1176**	**1.1176**

LR test: independent vs. saturated: chi2(**3**) = **973.89** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
radhlw2	**0.8591**	**0.2619**
radfmw2	**0.8677**	**0.2471**
kzchorn	**0.5571**	**0.6896**

Factor rotation matrix

	Factor1
Factor1	**1.0000**

Kaiser-Meyer-Olkin measure of sampling adequacy

Variable	kmo
radhlw2	**0.6035**
radfmw2	**0.5991**
kzchorn	**0.8764**
Overall	**0.6443**

Rotation matrix — orthogonal varimax (Kaiser off)

Variable	Factor1
Factor1	**1.0000**

Factor loadings

Variable	Rotated Factor1	Unrotated Factor1
radhlw2	**0.8591**	**0.8591**
radfmw2	**0.8677**	**0.8677**
kzchorn	**0.5571**	**0.5571**

(regression scoring assumed)

Scoring coefficients (method = regression; based on varimax rotated factors)

Variable	Factor1
radhlw2	**0.42722**
radfmw2	**0.46166**
kzchorn	**0.11774**

Test scale = mean(unstandardized items)

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem covariance	alph
> a						
> —						
radhlw2	**702**	+	**0.9131**	**0.7674**	**458.0626**	**0.658**
> 2						
radfmw2	**702**	+	**0.9155**	**0.7844**	**461.4201**	**0.637**
> 6						
kzchorn	**702**	+	**0.7360**	**0.5187**	**966.6148**	**0.895**
> 7						
> —						
Test scale					**628.6991**	**0.822**
> 0						
> —						

Interitem covariances (obs=702 in all pairs)

	radhlw2	radfmw2	kzchorn
radhlw2	**1243.8933**		
radfmw2	**966.6148**	**1139.7526**	
kzchorn	**461.4201**	**458.0626**	**727.8189**

(0 observations deleted)
wave == 3
(obs=702)

Factor analysis/correlation — Number of obs = **702**
Method: principal factors — Retained factors = **1**
Rotation: (unrotated) — Number of params = **3**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**1.87187**	**1.91732**	**1.1035**	**1.1035**
Factor2	**-0.04545**	**0.08463**	**-0.0268**	**1.0767**
Factor3	**-0.13008**	.	**-0.0767**	**1.0000**

LR test: independent vs. saturated: chi2(**3**) = **1065.66** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
radhlw3	**0.8810**	**0.2239**
radfmw3	**0.8752**	**0.2341**
kzchorn	**0.5743**	**0.6701**

Factor analysis/correlation — Number of obs = **702**
Method: principal factors — Retained factors = **1**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **3**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.87187**	.	**1.1035**	**1.1035**

LR test: independent vs. saturated: chi2(**3**) = **1065.66** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
radhlw3	**0.8810**	**0.2239**
radfmw3	**0.8752**	**0.2341**
kzchorn	**0.5743**	**0.6701**

Factor rotation matrix

	Factor1
Factor1	**1.0000**

Kaiser-Meyer-Olkin measure of sampling adequacy

Variable	kmo
radhlw3	**0.6027**
radfmw3	**0.6060**
kzchorn	**0.8872**
Overall	**0.6494**

Rotation matrix — orthogonal varimax (Kaiser off)

Variable	Factor1
Factor1	**1.0000**

Factor loadings

Variable	Rotated Factor1	Unrotated Factor1
radhlw3	**0.8810**	**0.8810**
radfmw3	**0.8752**	**0.8752**
kzchorn	**0.5743**	**0.5743**

(regression scoring assumed)

Scoring coefficients (method = regression; based on varimax rotated factors)

Variable	Factor1
radhlw3	**0.46118**
radfmw3	**0.43480**
kzchorn	**0.11123**

Test scale = mean(unstandardized items)

```
                                                              average
                        item-test     item-rest       interitem
Item          |  Obs  Sign  correlation  correlation     covariance       alph
> a
--------------+-------------------------------------------------------------
> —
radhlw3       |  702    +       0.9252       0.7999       480.3776      0.661
> 4
radfmw3       |  702    +       0.9196       0.7924        504.381      0.669
> 1
kzchorn       |  702    +       0.7447       0.5400       1037.251      0.908
> 0
--------------+-------------------------------------------------------------
> —
Test scale    |                                          674.0032      0.834
> 7
--------------+-------------------------------------------------------------
> —

Interitem covariances (obs=702 in all pairs)

             radhlw3    radfmw3    kzchorn
radhlw3    1278.5715
radfmw3    1037.2510  1216.4911
kzchorn     504.3810   480.3776   727.8189

51 .
52 .
53 . *  Graphs of summary health indices
54 .
55 .
56 . hist crhtw1, freq normal title("Chornobyl related health" ///
>  "threat summary score" "in wave 1")
(bin=26, start=-1.5015442, width=.10573498)

57 . gr save histsum1.gph, replace
(file histsum1.gph saved)
```

```
58 . gr export histsum1.eps, replace
   (file histsum1.eps written in EPS format)

59 .
60 . kdensity crhtw1, normal kernel(gaussian) title("Chornobyl related health" //
   > /
   >  "threat summary score" "in wave 1")

61 . gr save kdsum1.gph, replace
   (file kdsum1.gph saved)

62 . gr export kdsum1.eps, replace
   (file kdsum1.eps written in EPS format)

63 .
64 . hist crhtw2, freq normal title("Chornobyl related health" ///
   >  "threat summary score" "in wave 2")
   (bin=26, start=-1.8199788, width=.11597039)

65 . gr save histsum2.gph, replace
   (file histsum2.gph saved)

66 . gr export histsum2.eps, replace
   (file histsum2.eps written in EPS format)

67 .
68 . kdensity crhtw2, normal kernel(gaussian) title("Chornobyl related health" //
   > /
   >   "threat summary score" "in wave 2")

69 . gr save kdsum2.gph, replace
   (file kdsum2.gph saved)

70 . gr export kdsum2.eps, replace
   (file kdsum2.eps written in EPS format)

71 .
```

```
72 .
73 . hist crhtw3, freq normal title("Chornobyl related health" ///
   >  "threat summary score" "in wave 3")
   (bin=26, start=-1.7886385, width=.1134113)

74 . gr save histsum3.gph, replace
   (file histsum3.gph saved)

75 . gr export histsum3.eps, replace
   (file histsum3.eps written in EPS format)

76 .
77 . kdensity crhtw3, normal kernel(gaussian) title("Chornobyl related health" //
   > /
   >  "threat summary score" "in wave 3")

78 . gr save kdsum3.gph, replace
   (file kdsum3.gph saved)

79 . gr export kdsum3.eps, replace
   (file kdsum3.eps written in EPS format)

80 .
81 .
82 . title " Construction of summary health threat indices"


   ********************************************************************************
   > *
   ********************************************************************************
   > *
   *****                                                                      ****
   > *
   *****                                                                      ****
   > *
   *****            Construction of summary health threat indices             ****
   > *
   *****                                                                      ****
   > *
   *****                                                                      ****
   > *
   *****                                          17 Jul 2012    16:00:05  ****
   > *
   ********************************************************************************
   > *
   ********************************************************************************
   > *
```

```
83 .
84 .
85 . di "For males"
For males

86 . tabstat crhtw1 crhtw2 crhtw3 if gender==1, stat(n mean median sd sem skewnes
> s kurtosis min max range)
```

stats	crhtw1	crhtw2	crhtw3
N	339	339	339
mean	-.1421184	-.1840074	-.1842635
p50	-.3135327	-.3123638	-.3142916
sd	.9297899	.9217839	.9209234
se(mean)	.0504993	.0500644	.0500177
skewness	.2685256	.1426297	.1072786
kurtosis	1.723372	1.784132	1.750789
min	-1.501544	-1.819979	-1.788638
max	1.247565	1.195251	1.160055
range	2.74911	3.01523	2.948694

```
87 . di "For females"
For females

88 . tabstat crhtw1 crhtw2 crhtw3 if gender==2, stat(n mean median sd sem skewnes
> s kurtosis min max range)
```

stats	crhtw1	crhtw2	crhtw3
N	362	363	363
mean	.1330888	.1718416	.1720808
p50	-.0271604	.0978736	.2342184
sd	.9446965	.8710879	.8910531
se(mean)	.0496521	.0457203	.0467682
skewness	-.1395848	-.3168993	-.3923478
kurtosis	1.558054	1.959277	1.914075
min	-1.501544	-1.819979	-1.788638
max	1.247565	1.195251	1.160055
range	2.74911	3.01523	2.948694

```
89 .
90 .
91 . summ crhtw1 crhtw2 crhtw3 if gender==2, detail
```

Chornobyl related health threat: wave 1 alpha = .7962935573200089

Percentiles		Smallest		
1%	**-1.450967**	**-1.501544**		
5%	**-1.349814**	**-1.501544**		
10%	**-1.159198**	**-1.501544**	Obs	**362**
25%	**-.6832043**	**-1.450967**	Sum of Wgt.	**362**
50%	**-.0271604**		Mean	**.1330888**
		Largest	Std. Dev.	**.9446965**
75%	**1.213848**	**1.247565**		
90%	**1.247565**	**1.247565**	Variance	**.8924515**
95%	**1.247565**	**1.247565**	Skewness	**-.1395848**
99%	**1.247565**	**1.247565**	Kurtosis	**1.558054**

Chornobyl related health threat: wave 2 alpha = .8219889682935094

Percentiles		Smallest		
1%	**-1.819979**	**-1.819979**		
5%	**-1.343879**	**-1.819979**		
10%	**-.9394541**	**-1.819979**	Obs	**363**
25%	**-.5305853**	**-1.819979**	Sum of Wgt.	**363**
50%	**.0978736**		Mean	**.1718416**
		Largest	Std. Dev.	**.8710879**
75%	**1.107963**	**1.195251**		
90%	**1.195251**	**1.195251**	Variance	**.7587942**
95%	**1.195251**	**1.195251**	Skewness	**-.3168993**
99%	**1.195251**	**1.195251**	Kurtosis	**1.959277**

Chornobyl related health threat: wave 3 alpha = .8347477221944793

Percentiles		Smallest		
1%	**-1.788638**	**-1.788638**		
5%	**-1.328854**	**-1.788638**		
10%	**-1.075214**	**-1.788638**	Obs	**363**
25%	**-.5310169**	**-1.788638**	Sum of Wgt.	**363**

```
    50%      .2342184                      Mean           .1720808
                            Largest       Std. Dev.      .8910531
    75%      1.160055       1.160055
    90%      1.160055       1.160055       Variance       .7939757
    95%      1.160055       1.160055       Skewness      -.3923478
    99%      1.160055       1.160055       Kurtosis       1.914075

 92 .
 93 . save chwide145jul2012, replace
    file chwide145jul2012.dta saved

 94 . note: data "Chornobyl study  women = 362 men=340  wide format"

 95 .
 96 . *  summary health threat indices
 97 .
 98 . di "For males"
    For males

 99 . tabstat whppain whppa whpsociso whpsleep whpel if gender==1, stat(n mean med
    > ian sd sem skewness kurtosis min max range)

       stats |   whppain     whppa  whpsoc~o  whpsleep     whpel
-------------+--------------------------------------------------
           N |       339       339       339       339       339
        mean |  10.20968  9.512625  6.330561  17.34791   23.1882
         p50 |         0         0         0         0         0
          sd |  16.46631  14.56254  14.86534  24.84498  30.03647
    se(mean) |   .894327  .7909285  .8073742  1.349394  1.631357
    skewness |   1.74253  1.771128  2.818294  1.516516  .9421123
    kurtosis |   5.454974  6.244686   11.9889  4.480959  2.666238
         min |         0         0         0         0         0
         max |      82.75  87.27999       100       101       100
       range |      82.75  87.27999       100       101       100
-------------------------------------------------------------------

100 . di "For females"
    For females
```

```
101 . tabstat whppain whppa whpsociso whpsleep whpel if gender==2, stat(n mean med
    > ian sd sem skewness kurtosis min max range)
```

stats	whppain	whppa	whpsoc~o	whpsleep	whpel
N	**363**	**363**	**363**	**363**	**363**
mean	**18.01157**	**18.46551**	**10.28085**	**26.24466**	**31.83691**
p50	**9.99**	**11.2**	**0**	**12.57**	**24**
sd	**22.32649**	**21.43057**	**18.76083**	**30.90295**	**34.44306**
se(mean)	**1.171837**	**1.124813**	**.9846881**	**1.621984**	**1.807792**
skewness	**1.147824**	**1.277785**	**2.168495**	**1.084023**	**.6682731**
kurtosis	**3.304064**	**4.778915**	**7.870519**	**3.007434**	**2.169185**
min	**0**	**0**	**0**	**0**	**0**
max	**82.75**	**99.96999**	**100**	**101**	**100**
range	**82.75**	**99.96999**	**100**	**101**	**100**

```
102 .
103 .
104 . foreach var in whppain whppa whpsociso whpsleep whpel {
      2. hist `var' if gender==1, freq normal title(`var' for males)
      3. gr save m`var'hist.gph, replace
      4. gr export m`var'hist.eps, replace
      5.
105 . hist `var' if gender==2, freq normal title(`var' for females)
      6. gr save f`var'hist.gph, replace
      7. gr export f`var'hist.eps, replace
      8.
106 . kdensity `var' if gender==1, normal kernel(gaus) ///
    > title(kernel density distn. of `var' for males)
      9. gr save mkd`var'.gph, replace
     10. gr export mkd`var'.eps, replace
     11.
107 .
108 . kdensity `var' if gender==2, normal kernel(gaus) ///
    > title(kernel density distn. of `var' for females)
     12. gr save fkd`var'.gph, replace
     13. gr export fkd`var'.eps, replace
     14.
```

```
109 . }
    (bin=18, start=0, width=4.5972222)
    (file mwhppainhist.gph saved)
    (file mwhppainhist.eps written in EPS format)
    (bin=19, start=0, width=4.3552632)
    (file fwhppainhist.gph saved)
    (file fwhppainhist.eps written in EPS format)
    (file mkdwhppain.gph saved)
    (file mkdwhppain.eps written in EPS format)
    (file fkdwhppain.gph saved)
    (file fkdwhppain.eps written in EPS format)
    (bin=18, start=0, width=4.8488884)
    (file mwhppahist.gph saved)
    (file mwhppahist.eps written in EPS format)
    (bin=19, start=0, width=5.2615786)
    (file fwhppahist.gph saved)
    (file fwhppahist.eps written in EPS format)
    (file mkdwhppa.gph saved)
    (file mkdwhppa.eps written in EPS format)
    (file fkdwhppa.gph saved)
    (file fkdwhppa.eps written in EPS format)
    (bin=18, start=0, width=5.5555556)
    (file mwhpsocisohist.gph saved)
    (file mwhpsocisohist.eps written in EPS format)
    (bin=19, start=0, width=5.2631579)
    (file fwhpsocisohist.gph saved)
    (file fwhpsocisohist.eps written in EPS format)
    (file mkdwhpsociso.gph saved)
    (file mkdwhpsociso.eps written in EPS format)
    (file fkdwhpsociso.gph saved)
    (file fkdwhpsociso.eps written in EPS format)
    (bin=18, start=0, width=5.6111111)
    (file mwhpsleephist.gph saved)
    (file mwhpsleephist.eps written in EPS format)
    (bin=19, start=0, width=5.3157895)
    (file fwhpsleephist.gph saved)
    (file fwhpsleephist.eps written in EPS format)
    (file mkdwhpsleep.gph saved)
    (file mkdwhpsleep.eps written in EPS format)
    (file fkdwhpsleep.gph saved)
    (file fkdwhpsleep.eps written in EPS format)
    (bin=18, start=0, width=5.5555556)
    (file mwhpelhist.gph saved)
    (file mwhpelhist.eps written in EPS format)
    (bin=19, start=0, width=5.2631579)
    (file fwhpelhist.gph saved)
    (file fwhpelhist.eps written in EPS format)
    (file mkdwhpel.gph saved)
    (file mkdwhpel.eps written in EPS format)
```

```
    (file fkdwhpel.gph saved)
    (file fkdwhpel.eps written in EPS format)

110 .
111 . title "Birth cohort variable construction"


    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                  Birth cohort variable construction                  ****
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                                          17 Jul 2012    16:00:31  ****
    > *
    ********************************************************************************
    > *
    ********************************************************************************
    > *



112 . *** 5 year Birth cohort construction *******
113 . cap gen bcohort = 1

114 . replace bcohort = 2 if age >= 35 & age < 40
    (0 real changes made)

115 . replace bcohort = 3 if age >= 40 & age < 45
    (0 real changes made)
```

```
116 . replace bcohort = 4 if age >= 45 & age < 50
    (0 real changes made)

117 . replace bcohort = 5 if age >= 50 & age < 55
    (0 real changes made)

118 . replace bcohort = 6 if age >= 55 & age < 60
    (0 real changes made)

119 . replace bcohort = 7 if age >= 60 & age < 65
    (0 real changes made)

120 . replace bcohort = 8 if age >= 65 & age < 70
    (0 real changes made)

121 . replace bcohort = 9 if age >= 70 & age < 85
    (0 real changes made)

122 .
123 . label var bcohort "Birth cohort (5 year) span except boundary spans"

124 . cap label define bc5 1 "under 35 yrs old" 2 "35 thru 39" 3 "40 thru 44" ///
    >     4 "50 thru 54" 5 "55 thru 59" 6 "60 thru 64" 7 "65 thru 69" ///
    >     8 "65 thru 69" 9 "75 plus years old"

125 . label values bcohort bc5

126 .
127 .
128 . title "Graphical review of endogenous variables "


    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                    ****
    > *
    *****                                                                    ****
    > *
    *****             Graphical review of endogenous variables               ****
    > *
    *****                                                                    ****
    > *
    *****                                                                    ****
    > *
    *****                                          17 Jul 2012    16:00:31  ****
    > *
    ********************************************************************************
```

```
> *
********************************************************************************
> *


129 .
130 . set more off

131 . replace lwhppain = ln(WHPpain)
(0 real changes made)

132 . cap gen lwhpsleep = ln(WHPsleep + 1)

133 . cap gen lwhpel = ln(WHPel)

134 . summ lwhppain if gender==1, detail

                          lwhppain
-------------------------------------------------------------
      Percentiles      Smallest
 1%     1.763017       1.763017
 5%     1.763017       1.763017
10%     2.301584       1.763017       Obs                 133
25%     2.415914       1.763017       Sum of Wgt.         133

50%     3.085116                      Mean           3.047645
                       Largest       Std. Dev.      .6697764
75%     3.660994       4.083957
90%      3.89914       4.280271       Variance       .4486005
95%     4.071417       4.287166       Skewness       -.084509
99%     4.287166       4.415824       Kurtosis       2.038931

135 . kdensity lwhppain if gender==1, xline(3.0476 3.085) ///
>   text(.2 2.9 "mean" .35  3.2 "median",orientation(vertical))  ///
>   title(male kd est of ln(whppain)) lcolor(green red blue)
```

```
136 . gr save kdlpainmales.gph, replace
    (file kdlpainmales.gph saved)

137 . hist lwhppain
    (bin=18, start=1.7630169, width=.14737817)

138 . summ lwhppain if gender==2, detail

                            lwhppain
-------------------------------------------------------------
      Percentiles      Smallest
 1%     1.763017       1.763017
 5%     1.763017       1.763017
10%     2.301584       1.763017       Obs                 205
25%     2.558002       1.763017       Sum of Wgt.         205

50%     3.296577                      Mean           3.210635
                       Largest        Std. Dev.      .7560198
75%     3.889573       4.415824
90%      4.13148       4.415824       Variance       .5715659
95%     4.287166       4.415824       Skewness      -.3353243
99%     4.415824       4.415824       Kurtosis       2.067303

139 . kdensity lwhppain if gender==2, xline(3.2  3.297) ///
    >   text(.2 3 "mean" .35 3.4 "median", orientation(vertical)) ///
    >   title( female kd est of ln(whppain)) color(green red blue)

140 . gr save kdpainfemales.gph, replace
    (file kdpainfemales.gph saved)

141 . gr combine kdlpainmales.gph kdpainfemales.gph, col(2)

142 .
143 .
144 .
145 . // Due to correlation among endo vars, we test in a multivariate ///
146 . //  regression analysis
```

```
147 .
148 . forvalues k=1/1 {
  2. forvalues i=1/3 {
  3. set more off
  4. xi:mvreg  WHPpain WHPsleep WHPsociso WHPpa WHPel = crhtw`i' avgcumdosew`i
> ' icdxcnt i.ranown ///
>    airw`i' radchw`i' kzchorn if gender==`k'
  5. }
  6. }
i.ranown          _Iranown_52-102     (naturally coded; _Iranown_52 omitted)
note: _Iranown_58 omitted because of collinearity
note: _Iranown_61 omitted because of collinearity
note: _Iranown_62 omitted because of collinearity
note: _Iranown_63 omitted because of collinearity
note: _Iranown_64 omitted because of collinearity
note: _Iranown_65 omitted because of collinearity
note: _Iranown_70 omitted because of collinearity
note: _Iranown_74 omitted because of collinearity
note: _Iranown_75 omitted because of collinearity
note: _Iranown_84 omitted because of collinearity
note: _Iranown_87 omitted because of collinearity
note: _Iranown_88 omitted because of collinearity
note: _Iranown_89 omitted because of collinearity
note: _Iranown_91 omitted because of collinearity
note: _Iranown_92 omitted because of collinearity
note: _Iranown_95 omitted because of collinearity
note: _Iranown_97 omitted because of collinearity
```

Equation	Obs	Parms	RMSE	"R-sq"	F	P
WHPpain	**339**	**40**	**13.79963**	**0.3787**	**4.673172**	**0.0000**
WHPsleep	**339**	**40**	**21.73828**	**0.3228**	**3.654188**	**0.0000**
WHPsociso	**339**	**40**	**14.9148**	**0.1095**	**.942614**	**0.5719**
WHPpa	**339**	**40**	**12.65549**	**0.3319**	**3.808741**	**0.0000**
WHPel	**339**	**40**	**27.86724**	**0.2385**	**2.401772**	**0.0000**

	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
WHPpain						
crhtw1	**2.450872**	**1.177362**	**2.08**	**0.038**	**.1339053**	**4.767838**
avgcumdosew1	**.1478663**	**.4850508**	**0.30**	**0.761**	**-.8066795**	**1.102412**
icdxcnt	**1.039246**	**.5352462**	**1.94**	**0.053**	**-.0140811**	**2.092573**
_Iranown_53	**-2.762642**	**16.98231**	**-0.16**	**0.871**	**-36.18264**	**30.65735**
_Iranown_54	**13.93149**	**19.62877**	**0.71**	**0.478**	**-24.69655**	**52.55952**
_Iranown_55	**-13.41339**	**15.50529**	**-0.87**	**0.388**	**-43.92671**	**17.09993**
_Iranown_56	**2.833102**	**15.99708**	**0.18**	**0.860**	**-28.64803**	**34.31423**
_Iranown_57	**-2.379773**	**16.936**	**-0.14**	**0.888**	**-35.70863**	**30.94908**
_Iranown_58	**0**	(omitted)				

_Iranown_59	11.35032	14.48694	0.78	0.434	-17.15896	39.8596
_Iranown_60	3.809912	15.47392	0.25	0.806	-26.64168	34.2615
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-6.642624	15.45124	-0.43	0.668	-37.04958	23.76433
_Iranown_67	16.19858	14.35344	1.13	0.260	-12.04798	44.44514
_Iranown_68	-10.16425	19.70637	-0.52	0.606	-48.94499	28.61649
_Iranown_69	9.458371	17.18347	0.55	0.582	-24.35749	43.27423
_Iranown_70	0	(omitted)				
_Iranown_71	4.752318	14.79141	0.32	0.748	-24.35613	33.86077
_Iranown_72	-3.980092	13.85307	-0.29	0.774	-31.24195	23.28177
_Iranown_73	31.27105	19.59318	1.60	0.112	-7.286947	69.82904
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	34.07154	19.59906	1.74	0.083	-4.498034	72.64111
_Iranown_77	16.82189	16.92994	0.99	0.321	-16.49505	50.13883
_Iranown_78	19.0063	19.76954	0.96	0.337	-19.89876	57.91136
_Iranown_79	9.721114	15.50024	0.63	0.531	-20.78226	40.22449
_Iranown_80	1.526698	16.94173	0.09	0.928	-31.81343	34.86683
_Iranown_81	38.49742	19.63061	1.96	0.051	-.1342525	77.12908
_Iranown_82	50.56804	19.61943	2.58	0.010	11.95838	89.17771
_Iranown_83	-9.047447	19.55199	-0.46	0.644	-47.52438	29.42949
_Iranown_84	0	(omitted)				
_Iranown_85	-5.089591	19.66733	-0.26	0.796	-43.7935	33.61432
_Iranown_86	4.579223	15.98574	0.29	0.775	-26.8796	36.03804
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-11.91992	19.62002	-0.61	0.544	-50.53073	26.6909
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	.7191677	19.65197	0.04	0.971	-37.95454	39.39287
_Iranown_94	-5.979498	16.93622	-0.35	0.724	-39.30879	27.34979
_Iranown_95	0	(omitted)				
_Iranown_96	-4.241632	19.62706	-0.22	0.829	-42.86631	34.38305
_Iranown_97	0	(omitted)				
_Iranown_98	-14.2063	19.64728	-0.72	0.470	-52.87076	24.45816
_Iranown_99	3.927701	19.65136	0.20	0.842	-34.7448	42.6002
_Iranown_100	36.38902	19.66181	1.85	0.065	-2.304032	75.08207
_Iranown_101	17.49555	15.97675	1.10	0.274	-13.94558	48.93668
_Iranown_102	10.7391	14.20218	0.76	0.450	-17.20979	38.68799
airw1	-.047417	.0246634	-1.92	0.055	-.0959528	.0011187
radchw1	.0147278	.0223649	0.66	0.511	-.0292848	.0587404
kzchorn	.1209305	.0375864	3.22	0.001	.0469631	.194898
_cons	2.249652	14.2503	0.16	0.875	-25.79393	30.29323

WHPsleep						
crhtw1	6.302748	1.854675	3.40	0.001	2.652878	9.952617
avgcumdosew1	1.055803	.7640905	1.38	0.168	-.4478738	2.559479
icdxcnt	1.578499	.8431623	1.87	0.062	-.0807849	3.237783
_Iranown_53	-4.168258	26.75189	-0.16	0.876	-56.81409	48.47757
_Iranown_54	-18.15776	30.9208	-0.59	0.557	-79.00771	42.6922
_Iranown_55	-30.61082	24.42517	-1.25	0.211	-78.67784	17.45619
_Iranown_56	-32.58536	25.19987	-1.29	0.197	-82.17694	17.00621
_Iranown_57	-24.68525	26.67893	-0.93	0.356	-77.18751	27.81701
_Iranown_58	0	(omitted)				
_Iranown_59	-21.57034	22.82098	-0.95	0.345	-66.48042	23.33974
_Iranown_60	-30.69724	24.37575	-1.26	0.209	-78.667	17.27252
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-31.67945	24.34002	-1.30	0.194	-79.5789	16.22
_Iranown_67	2.653845	22.61068	0.12	0.907	-41.84238	47.15007
_Iranown_68	-39.94228	31.04303	-1.29	0.199	-101.0328	21.14822
_Iranown_69	-30.89886	27.06877	-1.14	0.255	-84.1683	22.37057
_Iranown_70	0	(omitted)				
_Iranown_71	6.51452	23.3006	0.28	0.780	-39.33942	52.36846
_Iranown_72	-19.66477	21.82245	-0.90	0.368	-62.60981	23.28028
_Iranown_73	7.854563	30.86473	0.25	0.799	-52.88505	68.59418
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	-4.71806	30.87399	-0.15	0.879	-65.47591	56.03979
_Iranown_77	-13.61533	26.66939	-0.51	0.610	-66.09882	38.86816
_Iranown_78	24.41249	31.14255	0.78	0.434	-36.87384	85.69883
_Iranown_79	-18.73	24.4172	-0.77	0.444	-66.78134	29.32133
_Iranown_80	-12.34675	26.68795	-0.46	0.644	-64.86677	40.17327
_Iranown_81	44.84596	30.9237	1.45	0.148	-16.00971	105.7016
_Iranown_82	9.169636	30.90609	0.30	0.767	-51.65137	69.99065
_Iranown_83	22.12168	30.79984	0.72	0.473	-38.49025	82.73361
_Iranown_84	0	(omitted)				
_Iranown_85	22.25795	30.98153	0.72	0.473	-38.71152	83.22743
_Iranown_86	-10.13925	25.18201	-0.40	0.688	-59.69569	39.41718
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-29.96214	30.90701	-0.97	0.333	-90.78496	30.86068
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-47.57783	30.95735	-1.54	0.125	-108.4997	13.34406
_Iranown_94	2.367807	26.67928	0.09	0.929	-50.13514	54.87075
_Iranown_95	0	(omitted)				
_Iranown_96	-20.64802	30.91811	-0.67	0.505	-81.49268	40.19664
_Iranown_97	0	(omitted)				

_Iranown_98	31.86503	30.94995	1.03	0.304	-29.0423	92.77235
_Iranown_99	32.28291	30.95639	1.04	0.298	-28.63708	93.20291
_Iranown_100	-7.856095	30.97284	-0.25	0.800	-68.80846	53.09627
_Iranown_101	-27.02461	25.16785	-1.07	0.284	-76.55317	22.50396
_Iranown_102	-11.54469	22.3724	-0.52	0.606	-55.57201	32.48262
airw1	-.0002088	.0388517	-0.01	0.996	-.0766662	.0762486
radchw1	-.0091171	.035231	-0.26	0.796	-.0784492	.0602151
kzchorn	.1572993	.0592091	2.66	0.008	.0407798	.2738187
_cons	21.03971	22.4482	0.94	0.349	-23.13677	65.21619
WHPsociso						
crhtw1	2.277694	1.272506	1.79	0.074	-.2265092	4.781897
avgcumdosew1	-.0571972	.5242483	-0.11	0.913	-1.088881	.9744866
icdxcnt	.720121	.5785001	1.24	0.214	-.4183265	1.858568
_Iranown_53	-8.157124	18.35467	-0.44	0.657	-44.27783	27.96358
_Iranown_54	-22.77546	21.21499	-1.07	0.284	-64.52507	18.97416
_Iranown_55	-17.16103	16.75829	-1.02	0.307	-50.14017	15.81811
_Iranown_56	-19.43138	17.28982	-1.12	0.262	-53.45654	14.59378
_Iranown_57	-18.08703	18.30462	-0.99	0.324	-54.10923	17.93517
_Iranown_58	0	(omitted)				
_Iranown_59	-14.56137	15.65765	-0.93	0.353	-45.37452	16.25177
_Iranown_60	-9.281192	16.72439	-0.55	0.579	-42.19361	23.63122
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-15.06051	16.69987	-0.90	0.368	-47.92468	17.80367
_Iranown_67	-9.085513	15.51336	-0.59	0.559	-39.61471	21.44368
_Iranown_68	-22.98715	21.29886	-1.08	0.281	-64.90181	18.92751
_Iranown_69	-12.18906	18.57209	-0.66	0.512	-48.73762	24.3595
_Iranown_70	0	(omitted)				
_Iranown_71	-18.94047	15.98672	-1.18	0.237	-50.40121	12.52027
_Iranown_72	-13.86281	14.97255	-0.93	0.355	-43.32773	15.60211
_Iranown_73	-19.94023	21.17652	-0.94	0.347	-61.61414	21.73368
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	22.22156	21.18288	1.05	0.295	-19.46486	63.90798
_Iranown_77	-18.2556	18.29807	-1.00	0.319	-54.26492	17.75372
_Iranown_78	-2.391401	21.36714	-0.11	0.911	-44.44042	39.65762
_Iranown_79	-13.58413	16.75283	-0.81	0.418	-46.55252	19.38425
_Iranown_80	-7.629804	18.31081	-0.42	0.677	-43.66419	28.40458
_Iranown_81	-.8802412	21.21699	-0.04	0.967	-42.63378	40.8733
_Iranown_82	3.06584	21.2049	0.14	0.885	-38.66392	44.7956
_Iranown_83	-18.42321	21.13201	-0.87	0.384	-60.00952	23.16309
_Iranown_84	0	(omitted)				
_Iranown_85	-18.82142	21.25666	-0.89	0.377	-60.65304	23.0102
_Iranown_86	-4.239892	17.27757	-0.25	0.806	-38.24094	29.76115
_Iranown_87	0	(omitted)				

_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-15.58689	21.20553	-0.74	0.463	-57.31789	26.14411
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-21.76811	21.24007	-1.02	0.306	-63.56708	20.03086
_Iranown_94	-16.81046	18.30486	-0.92	0.359	-52.83313	19.21221
_Iranown_95	0	(omitted)				
_Iranown_96	-15.75714	21.21315	-0.74	0.458	-57.50313	25.98884
_Iranown_97	0	(omitted)				
_Iranown_98	3.303693	21.23499	0.16	0.876	-38.48528	45.09267
_Iranown_99	-21.79849	21.23941	-1.03	0.306	-63.59616	19.99918
_Iranown_100	-.0166883	21.2507	-0.00	0.999	-41.83657	41.80319
_Iranown_101	-20.12699	17.26785	-1.17	0.245	-54.10891	13.85494
_Iranown_102	-2.047695	15.34988	-0.13	0.894	-32.25517	28.15978
airw1	-.0039838	.0266564	-0.15	0.881	-.0564418	.0484742
radchw1	.0098677	.0241723	0.41	0.683	-.0377016	.057437
kzchorn	-.029045	.0406238	-0.71	0.475	-.1089899	.0508998
_cons	19.84145	15.40188	1.29	0.199	-10.46837	50.15127
WHPpa						
crhtw1	2.736745	1.079746	2.53	0.012	.6118805	4.86161
avgcumdosew1	-.653008	.4448348	-1.47	0.143	-1.528412	.2223956
icdxcnt	1.304225	.4908685	2.66	0.008	.3382306	2.27022
_Iranown_53	-6.410071	15.57429	-0.41	0.681	-37.05919	24.23904
_Iranown_54	5.226895	18.00133	0.29	0.772	-30.19846	40.65225
_Iranown_55	-10.53103	14.21973	-0.74	0.460	-38.51447	17.4524
_Iranown_56	3.702258	14.67075	0.25	0.801	-25.16875	32.57326
_Iranown_57	-2.25282	15.53182	-0.15	0.885	-32.81835	28.31271
_Iranown_58	0	(omitted)				
_Iranown_59	16.93622	13.28581	1.27	0.203	-9.209329	43.08177
_Iranown_60	7.360472	14.19096	0.52	0.604	-20.56635	35.28729
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-9.153327	14.17016	-0.65	0.519	-37.03921	18.73256
_Iranown_67	2.108504	13.16338	0.16	0.873	-23.79611	28.01312
_Iranown_68	-12.77412	18.07249	-0.71	0.480	-48.33951	22.79128
_Iranown_69	4.488282	15.75877	0.28	0.776	-26.52388	35.50044
_Iranown_70	0	(omitted)				
_Iranown_71	-1.242822	13.56504	-0.09	0.927	-27.93786	25.45222
_Iranown_72	-3.48924	12.7045	-0.27	0.784	-28.49079	21.51231
_Iranown_73	15.52717	17.96869	0.86	0.388	-19.83395	50.88828
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	30.93535	17.97408	1.72	0.086	-4.436378	66.30709
_Iranown_77	6.695862	15.52627	0.43	0.667	-23.85874	37.25046

_Iranown_78	25.30696	18.13043	1.40	0.164	-10.37244	60.98637
_Iranown_79	11.10138	14.2151	0.78	0.435	-16.87293	39.07569
_Iranown_80	-7.458301	15.53707	-0.48	0.632	-38.03417	23.11757
_Iranown_81	42.86286	18.00302	2.38	0.018	7.434176	78.29154
_Iranown_82	34.50658	17.99277	1.92	0.056	-.90192	69.91509
_Iranown_83	-8.813294	17.93092	-0.49	0.623	-44.10007	26.47349
_Iranown_84	0	(omitted)				
_Iranown_85	-2.43729	18.03669	-0.14	0.893	-37.93223	33.05765
_Iranown_86	10.78314	14.66035	0.74	0.463	-18.0674	39.63368
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-7.904848	17.9933	-0.44	0.661	-43.31441	27.50471
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-3.997949	18.02261	-0.22	0.825	-39.46518	31.46928
_Iranown_94	-6.207403	15.53202	-0.40	0.690	-36.77333	24.35853
_Iranown_95	0	(omitted)				
_Iranown_96	3.264791	17.99976	0.18	0.856	-32.15748	38.68706
_Iranown_97	0	(omitted)				
_Iranown_98	-9.615153	18.0183	-0.53	0.594	-45.07391	25.8436
_Iranown_99	26.28524	18.02205	1.46	0.146	-9.180889	61.75137
_Iranown_100	27.54801	18.03163	1.53	0.128	-7.936963	63.03299
_Iranown_101	9.900589	14.65211	0.68	0.500	-18.93373	38.73491
_Iranown_102	4.315792	13.02467	0.33	0.741	-21.31583	29.94742
airw1	-.0164748	.0226185	-0.73	0.467	-.0609864	.0280368
radchw1	.0186166	.0205106	0.91	0.365	-.0217469	.0589801
kzchorn	.034453	.0344701	1.00	0.318	-.0333818	.1022877
_cons	5.961493	13.06879	0.46	0.649	-19.75697	31.67996
WHPel						
crhtw1	4.829601	2.377588	2.03	0.043	.1506758	9.508527
avgcumdosew1	1.144404	.9795207	1.17	0.244	-.7832238	3.072032
icdxcnt	5.792381	1.080886	5.36	0.000	3.665273	7.91949
_Iranown_53	-1.520773	34.2944	-0.04	0.965	-69.00974	65.9682
_Iranown_54	-44.75391	39.63871	-1.13	0.260	-122.7601	33.25228
_Iranown_55	-38.71927	31.31168	-1.24	0.217	-100.3385	22.89991
_Iranown_56	-15.89679	32.30481	-0.49	0.623	-79.47038	47.6768
_Iranown_57	-.1183324	34.20088	-0.00	0.997	-67.42325	67.18659
_Iranown_58	0	(omitted)				
_Iranown_59	-2.500348	29.2552	-0.09	0.932	-60.07252	55.07182
_Iranown_60	-27.75271	31.24833	-0.89	0.375	-89.24722	33.7418
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-18.63985	31.20253	-0.60	0.551	-80.04422	42.76453
_Iranown_67	-1.004238	28.98561	-0.03	0.972	-58.04587	56.03739

_Iranown_68	-37.52572	39.79541	-0.94	0.346	-115.8403	40.78884
_Iranown_69	-44.03199	34.70063	-1.27	0.205	-112.3204	24.2564
_Iranown_70	0	(omitted)				
_Iranown_71	-19.96928	29.87005	-0.67	0.504	-78.75143	38.81287
_Iranown_72	-11.28669	27.97514	-0.40	0.687	-66.3398	43.76642
_Iranown_73	8.238871	39.56683	0.21	0.835	-69.62587	86.10361
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	13.5241	39.57871	0.34	0.733	-64.36402	91.41221
_Iranown_77	-31.41615	34.18865	-0.92	0.359	-98.69701	35.8647
_Iranown_78	11.555	39.92298	0.29	0.772	-67.01061	90.12061
_Iranown_79	-22.42914	31.30147	-0.72	0.474	-84.02823	39.16994
_Iranown_80	-9.279919	34.21244	-0.27	0.786	-76.6076	58.04776
_Iranown_81	9.567297	39.64243	0.24	0.809	-68.44622	87.58081
_Iranown_82	24.64776	39.61985	0.62	0.534	-53.32132	102.6168
_Iranown_83	5.648383	39.48365	0.14	0.886	-72.05267	83.34944
_Iranown_84	0	(omitted)				
_Iranown_85	-53.64872	39.71657	-1.35	0.178	-131.8081	24.51069
_Iranown_86	-15.30676	32.28191	-0.47	0.636	-78.83529	48.22178
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-33.39828	39.62103	-0.84	0.400	-111.3697	44.57313
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-40.40637	39.68557	-1.02	0.309	-118.5048	37.69203
_Iranown_94	-12.15331	34.20132	-0.36	0.723	-79.4591	55.15249
_Iranown_95	0	(omitted)				
_Iranown_96	-25.4583	39.63526	-0.64	0.521	-103.4577	52.5411
_Iranown_97	0	(omitted)				
_Iranown_98	-39.90469	39.67608	-1.01	0.315	-117.9844	38.17504
_Iranown_99	-.5985803	39.68433	-0.02	0.988	-78.69456	77.4974
_Iranown_100	62.26546	39.70542	1.57	0.118	-15.87201	140.4029
_Iranown_101	-2.076982	32.26376	-0.06	0.949	-65.56979	61.41583
_Iranown_102	-12.81066	28.68015	-0.45	0.655	-69.25118	43.62986
airw1	-.0706895	.0498057	-1.42	0.157	-.1687035	.0273246
radchw1	.0021772	.0451642	0.05	0.962	-.0867027	.0910571
kzchorn	.0659617	.0759028	0.87	0.386	-.0834096	.215333
_cons	22.27025	28.77732	0.77	0.440	-34.36149	78.90199

```
i.ranown          _Iranown_52-102     (naturally coded; _Iranown_52 omitted)
note: _Iranown_58 omitted because of collinearity
note: _Iranown_61 omitted because of collinearity
note: _Iranown_62 omitted because of collinearity
note: _Iranown_63 omitted because of collinearity
note: _Iranown_64 omitted because of collinearity
note: _Iranown_65 omitted because of collinearity
note: _Iranown_70 omitted because of collinearity
note: _Iranown_74 omitted because of collinearity
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note: _Iranown_75 omitted because of collinearity
note: _Iranown_84 omitted because of collinearity
note: _Iranown_87 omitted because of collinearity
note: _Iranown_88 omitted because of collinearity
note: _Iranown_89 omitted because of collinearity
note: _Iranown_91 omitted because of collinearity
note: _Iranown_92 omitted because of collinearity
note: _Iranown_95 omitted because of collinearity
note: _Iranown_97 omitted because of collinearity
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Equation	Obs	Parms	RMSE	"R-sq"	F	P
WHPpain	**339**	**40**	**13.76841**	**0.3815**	**4.729201**	**0.0000**
WHPsleep	**339**	**40**	**21.71717**	**0.3241**	**3.676202**	**0.0000**
WHPsociso	**339**	**40**	**14.86572**	**0.1153**	**.9995573**	**0.4761**
WHPpa	**339**	**40**	**12.65788**	**0.3317**	**3.804413**	**0.0000**
WHPel	**339**	**40**	**27.29197**	**0.2697**	**2.830695**	**0.0000**

	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
WHPpain						
crhtw2	**3.355429**	**1.220813**	**2.75**	**0.006**	**.952956**	**5.757903**
avgcumdosew2	**-.0657886**	**.3355156**	**-0.20**	**0.845**	**-.7260596**	**.5944825**
icdxcnt	**.6814007**	**.5370727**	**1.27**	**0.206**	**-.3755206**	**1.738322**
_Iranown_53	**-2.812525**	**16.91301**	**-0.17**	**0.868**	**-36.09614**	**30.47109**
_Iranown_54	**15.09732**	**19.48355**	**0.77**	**0.439**	**-23.24493**	**53.43956**
_Iranown_55	**-10.39198**	**15.55381**	**-0.67**	**0.505**	**-41.00078**	**20.21682**
_Iranown_56	**3.966242**	**15.98105**	**0.25**	**0.804**	**-27.48333**	**35.41581**
_Iranown_57	**3.963182**	**17.17737**	**0.23**	**0.818**	**-29.84068**	**37.76705**
_Iranown_58	**0**	(omitted)				
_Iranown_59	**13.33561**	**14.44856**	**0.92**	**0.357**	**-15.09813**	**41.76936**
_Iranown_60	**5.871381**	**15.48575**	**0.38**	**0.705**	**-24.60348**	**36.34624**
_Iranown_61	**0**	(omitted)				
_Iranown_62	**0**	(omitted)				
_Iranown_63	**0**	(omitted)				
_Iranown_64	**0**	(omitted)				
_Iranown_65	**0**	(omitted)				
_Iranown_66	**-3.249817**	**15.48051**	**-0.21**	**0.834**	**-33.71437**	**27.21474**
_Iranown_67	**20.82752**	**14.54553**	**1.43**	**0.153**	**-7.797072**	**49.4521**
_Iranown_68	**-10.22392**	**19.54269**	**-0.52**	**0.601**	**-48.68256**	**28.23471**
_Iranown_69	**12.99432**	**17.52784**	**0.74**	**0.459**	**-21.49923**	**47.48787**
_Iranown_70	**0**	(omitted)				
_Iranown_71	**6.397107**	**14.79743**	**0.43**	**0.666**	**-22.7232**	**35.51742**
_Iranown_72	**-.6557586**	**14.02554**	**-0.05**	**0.963**	**-28.25703**	**26.94551**
_Iranown_73	**35.32532**	**19.60448**	**1.80**	**0.073**	**-3.254905**	**73.90555**
_Iranown_74	**0**	(omitted)				
_Iranown_75	**0**	(omitted)				
_Iranown_76	**31.85535**	**19.51066**	**1.63**	**0.104**	**-6.540255**	**70.25095**

_Iranown_77	21.77211	17.11239	1.27	0.204	-11.90388	55.4481
_Iranown_78	24.69549	19.95105	1.24	0.217	-14.56678	63.95776
_Iranown_79	12.35316	15.62234	0.79	0.430	-18.39051	43.09684
_Iranown_80	5.309151	17.11328	0.31	0.757	-28.36857	38.98687
_Iranown_81	36.30094	19.75116	1.84	0.067	-2.56795	75.16982
_Iranown_82	49.73564	19.6899	2.53	0.012	10.9873	88.48398
_Iranown_83	-3.173774	19.69282	-0.16	0.872	-41.92785	35.58031
_Iranown_84	0	(omitted)				
_Iranown_85	-.5611976	19.80837	-0.03	0.977	-39.54268	38.42029
_Iranown_86	5.618184	15.97544	0.35	0.725	-25.82035	37.05672
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-9.356762	19.67935	-0.48	0.635	-48.08435	29.37082
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	2.409267	19.63493	0.12	0.902	-36.23089	41.04942
_Iranown_94	-1.102347	17.14118	-0.06	0.949	-34.83499	32.6303
_Iranown_95	0	(omitted)				
_Iranown_96	-.9870983	19.73711	-0.05	0.960	-39.82835	37.85415
_Iranown_97	0	(omitted)				
_Iranown_98	-15.08307	19.70274	-0.77	0.445	-53.85668	23.69053
_Iranown_99	5.079363	19.50945	0.26	0.795	-33.31387	43.4726
_Iranown_100	36.91097	19.5538	1.89	0.060	-1.569521	75.39147
_Iranown_101	21.27405	16.03506	1.33	0.186	-10.28182	52.82992
_Iranown_102	12.94646	14.35292	0.90	0.368	-15.29908	41.192
airw2	.0047136	.0293843	0.16	0.873	-.0531126	.0625398
radchw2	.0070913	.0245771	0.29	0.773	-.0412746	.0554573
kzchorn	.0785907	.0398259	1.97	0.049	.0002161	.1569652
_cons	.6912302	14.46691	0.05	0.962	-27.77863	29.16109
WHPsleep						
crhtw2	7.352067	1.925611	3.82	0.000	3.562601	11.14153
avgcumdosew2	.5473059	.529215	1.03	0.302	-.494152	1.588764
icdxcnt	1.313704	.8471349	1.55	0.122	-.3533976	2.980806
_Iranown_53	-5.756733	26.67721	-0.22	0.829	-58.2556	46.74214
_Iranown_54	-12.464	30.73176	-0.41	0.685	-72.94195	48.01395
_Iranown_55	-31.89591	24.53331	-1.30	0.195	-80.17574	16.38393
_Iranown_56	-30.53921	25.2072	-1.21	0.227	-80.14521	19.0668
_Iranown_57	-20.35291	27.0942	-0.75	0.453	-73.67238	32.96656
_Iranown_58	0	(omitted)				
_Iranown_59	-17.45634	22.78998	-0.77	0.444	-62.30542	27.39274
_Iranown_60	-25.74571	24.42596	-1.05	0.293	-73.81429	22.32286
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-26.98487	24.4177	-1.11	0.270	-75.03718	21.06744

_Iranown_67	7.43575	22.94294	0.32	0.746	-37.71435	52.58585
_Iranown_68	-35.22944	30.82505	-1.14	0.254	-95.89097	25.43208
_Iranown_69	-31.60004	27.64699	-1.14	0.254	-86.00737	22.80729
_Iranown_70	0	(omitted)				
_Iranown_71	8.735687	23.34027	0.37	0.708	-37.19633	54.6677
_Iranown_72	-15.28571	22.12274	-0.69	0.490	-58.82171	28.2503
_Iranown_73	8.207518	30.92251	0.27	0.791	-52.6458	69.06084
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	-8.193408	30.77453	-0.27	0.790	-68.75552	52.3687
_Iranown_77	-7.759721	26.9917	-0.29	0.774	-60.87749	45.35805
_Iranown_78	29.00648	31.46917	0.92	0.357	-32.92264	90.93559
_Iranown_79	-16.72866	24.64142	-0.68	0.498	-65.22124	31.76391
_Iranown_80	-8.155216	26.99309	-0.30	0.763	-61.27572	44.96529
_Iranown_81	36.90071	31.15387	1.18	0.237	-24.40792	98.20933
_Iranown_82	6.279224	31.05725	0.20	0.840	-54.83926	67.39771
_Iranown_83	26.21074	31.06185	0.84	0.399	-34.9168	87.33828
_Iranown_84	0	(omitted)				
_Iranown_85	25.52687	31.24412	0.82	0.415	-35.95936	87.0131
_Iranown_86	-10.81147	25.19836	-0.43	0.668	-60.40006	38.77713
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-31.2579	31.04061	-1.01	0.315	-92.34365	29.82784
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-42.88692	30.97054	-1.38	0.167	-103.8348	18.06092
_Iranown_94	7.100487	27.03711	0.26	0.793	-46.10665	60.30762
_Iranown_95	0	(omitted)				
_Iranown_96	-15.58183	31.13172	-0.50	0.617	-76.84686	45.68321
_Iranown_97	0	(omitted)				
_Iranown_98	20.26887	31.0775	0.65	0.515	-40.88946	81.42721
_Iranown_99	37.79135	30.77263	1.23	0.220	-22.76702	98.34972
_Iranown_100	-3.195849	30.84257	-0.10	0.918	-63.89186	57.50016
_Iranown_101	-23.72273	25.2924	-0.94	0.349	-73.49639	26.05093
_Iranown_102	-10.89807	22.63913	-0.48	0.631	-55.45029	33.65415
airw2	-.0086165	.0463484	-0.19	0.853	-.0998269	.0825938
radchw2	-.0383286	.0387659	-0.99	0.324	-.1146171	.0379599
kzchorn	.1259332	.0628181	2.00	0.046	.0023116	.2495549
_cons	21.99904	22.81893	0.96	0.336	-22.907	66.90508
WHPsociso						
crhtw2	2.966248	1.318108	2.25	0.025	.372304	5.560192
avgcumdosew2	.095285	.3622553	0.26	0.793	-.6176079	.8081779
icdxcnt	.5900649	.5798759	1.02	0.310	-.5510902	1.73122
_Iranown_53	-8.001251	18.26093	-0.44	0.662	-43.93748	27.93498
_Iranown_54	-20.16055	21.03633	-0.96	0.339	-61.55858	21.23747
_Iranown_55	-15.96072	16.7934	-0.95	0.343	-49.00896	17.08752
_Iranown_56	-17.7662	17.25469	-1.03	0.304	-51.72222	16.18982

_Iranown_57	-14.23882	18.54636	-0.77	0.443	-50.73676	22.25913
_Iranown_58	0	(omitted)				
_Iranown_59	-12.02899	15.60007	-0.77	0.441	-42.72883	18.67085
_Iranown_60	-6.565362	16.71992	-0.39	0.695	-39.46899	26.33827
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-12.28565	16.71426	-0.74	0.463	-45.17815	20.60684
_Iranown_67	-5.771501	15.70477	-0.37	0.714	-36.67739	25.13439
_Iranown_68	-21.4121	21.10019	-1.01	0.311	-62.93579	20.11158
_Iranown_69	-12.04785	18.92476	-0.64	0.525	-49.29045	25.19474
_Iranown_70	0	(omitted)				
_Iranown_71	-17.33859	15.97675	-1.09	0.279	-48.77971	14.10253
_Iranown_72	-10.66565	15.14334	-0.70	0.482	-40.46667	19.13537
_Iranown_73	-18.51818	21.1669	-0.87	0.382	-60.17315	23.13679
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	21.14107	21.06561	1.00	0.316	-20.31456	62.5967
_Iranown_77	-14.35203	18.47621	-0.78	0.438	-50.7119	22.00785
_Iranown_78	-.3871763	21.5411	-0.02	0.986	-42.77854	42.00419
_Iranown_79	-11.32733	16.8674	-0.67	0.502	-44.5212	21.86653
_Iranown_80	-4.235076	18.47716	-0.23	0.819	-40.59682	32.12667
_Iranown_81	-3.948535	21.32527	-0.19	0.853	-45.91517	38.0181
_Iranown_82	2.506107	21.25913	0.12	0.906	-39.33037	44.34259
_Iranown_83	-15.06023	21.26228	-0.71	0.479	-56.9029	26.78245
_Iranown_84	0	(omitted)				
_Iranown_85	-15.60049	21.38705	-0.73	0.466	-57.6887	26.48772
_Iranown_86	-3.71068	17.24864	-0.22	0.830	-37.65478	30.23342
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-15.34277	21.24775	-0.72	0.471	-57.15683	26.4713
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-18.99395	21.19978	-0.90	0.371	-60.71362	22.72572
_Iranown_94	-13.20372	18.50729	-0.71	0.476	-49.62476	23.21733
_Iranown_95	0	(omitted)				
_Iranown_96	-12.37892	21.31011	-0.58	0.562	-54.31572	29.55787
_Iranown_97	0	(omitted)				
_Iranown_98	-.0038876	21.27299	-0.00	1.000	-41.86764	41.85987
_Iranown_99	-19.20421	21.06431	-0.91	0.363	-60.65728	22.24886
_Iranown_100	2.386639	21.11218	0.11	0.910	-39.16065	43.93393
_Iranown_101	-17.27993	17.31301	-1.00	0.319	-51.35072	16.79085
_Iranown_102	-.9746033	15.49681	-0.06	0.950	-31.47124	29.52203
airw2	.0041275	.0317261	0.13	0.897	-.0583072	.0665623
radchw2	.0003397	.0265358	0.01	0.990	-.0518808	.0525603
kzchorn	-.0514567	.0429999	-1.20	0.232	-.1360775	.0331641

_cons	19.14352	15.61988	1.23	0.221	-11.59531	49.88235
WHPpa						
crhtw2	2.606125	1.122345	2.32	0.021	.3974303	4.814821
avgcumdosew2	-.3914797	.3084536	-1.27	0.205	-.9984947	.2155353
icdxcnt	1.259876	.4937536	2.55	0.011	.2882042	2.231549
_Iranown_53	-6.551542	15.54884	-0.42	0.674	-37.15057	24.04749
_Iranown_54	8.460455	17.91205	0.47	0.637	-26.78919	43.7101
_Iranown_55	-8.424971	14.29927	-0.59	0.556	-36.56493	19.71499
_Iranown_56	6.524955	14.69205	0.44	0.657	-22.38796	35.43787
_Iranown_57	3.986867	15.79188	0.25	0.801	-27.09045	35.06419
_Iranown_58	0	(omitted)				
_Iranown_59	20.57735	13.28317	1.55	0.122	-5.562989	46.71769
_Iranown_60	11.05559	14.2367	0.78	0.438	-16.96124	39.07242
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-4.802954	14.23189	-0.34	0.736	-32.8103	23.2044
_Iranown_67	7.90538	13.37232	0.59	0.555	-18.41041	34.22117
_Iranown_68	-9.539494	17.96642	-0.53	0.596	-44.89614	25.81715
_Iranown_69	7.699527	16.11408	0.48	0.633	-24.01185	39.4109
_Iranown_70	0	(omitted)				
_Iranown_71	1.506173	13.60391	0.11	0.912	-25.26536	28.2777
_Iranown_72	1.422302	12.89427	0.11	0.912	-23.95271	26.79732
_Iranown_73	18.00555	18.02322	1.00	0.319	-17.46288	53.47398
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	29.42945	17.93697	1.64	0.102	-5.869249	64.72815
_Iranown_77	12.02779	15.73215	0.76	0.445	-18.93197	42.98755
_Iranown_78	31.35656	18.34184	1.71	0.088	-4.738898	67.45202
_Iranown_79	13.75076	14.36228	0.96	0.339	-14.5132	42.01472
_Iranown_80	-2.22844	15.73296	-0.14	0.887	-33.18979	28.73291
_Iranown_81	40.49423	18.15807	2.23	0.026	4.760424	76.22804
_Iranown_82	34.8379	18.10176	1.92	0.055	-.7850815	70.46089
_Iranown_83	-3.453712	18.10444	-0.19	0.849	-39.08197	32.17455
_Iranown_84	0	(omitted)				
_Iranown_85	1.08106	18.21067	0.06	0.953	-34.75627	36.91839
_Iranown_86	11.36547	14.68689	0.77	0.440	-17.5373	40.26824
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-7.494367	18.09206	-0.41	0.679	-43.09827	28.10953
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	.3399294	18.05122	0.02	0.985	-35.18359	35.86345
_Iranown_94	-1.2081	15.75861	-0.08	0.939	-32.21994	29.80374
_Iranown_95	0	(omitted)				

_Iranown_96	7.0934	18.14516	0.39	0.696	-28.615	42.8018
_Iranown_97	0	(omitted)				
_Iranown_98	-11.79616	18.11356	-0.65	0.515	-47.44237	23.85005
_Iranown_99	29.577	17.93586	1.65	0.100	-5.719517	64.87352
_Iranown_100	31.31351	17.97663	1.74	0.083	-4.063235	66.69025
_Iranown_101	15.51481	14.7417	1.05	0.293	-13.49583	44.52545
_Iranown_102	6.1375	13.19525	0.47	0.642	-19.82981	32.10482
airw2	.0112517	.0270142	0.42	0.677	-.0419104	.0644137
radchw2	.0207375	.0225947	0.92	0.359	-.0237273	.0652024
kzchorn	.0196944	.0366136	0.54	0.591	-.0523586	.0917474
_cons	1.589983	13.30004	0.12	0.905	-24.58356	27.76352
WHPel						
crhtw2	8.201445	2.419915	3.39	0.001	3.439222	12.96367
avgcumdosew2	1.564829	.6650646	2.35	0.019	.2560287	2.873629
icdxcnt	5.364316	1.064594	5.04	0.000	3.269269	7.459363
_Iranown_53	-.2228154	33.52525	-0.01	0.995	-66.19815	65.75252
_Iranown_54	-43.02406	38.62061	-1.11	0.266	-119.0267	32.97858
_Iranown_55	-32.04248	30.83102	-1.04	0.300	-92.71575	28.63079
_Iranown_56	-17.01464	31.67789	-0.54	0.592	-79.3545	45.32523
_Iranown_57	9.052224	34.04928	0.27	0.791	-57.95436	76.05881
_Iranown_58	0	(omitted)				
_Iranown_59	-.0709252	28.64017	-0.00	0.998	-56.43277	56.29092
_Iranown_60	-26.58111	30.69611	-0.87	0.387	-86.98889	33.82667
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-14.16712	30.68572	-0.46	0.645	-74.55447	46.22022
_Iranown_67	.9926617	28.8324	0.03	0.973	-55.74747	57.7328
_Iranown_68	-41.98842	38.73784	-1.08	0.279	-118.2218	34.24492
_Iranown_69	-59.02656	34.74397	-1.70	0.090	-127.4003	9.347137
_Iranown_70	0	(omitted)				
_Iranown_71	-17.06371	29.33172	-0.58	0.561	-74.78647	40.65906
_Iranown_72	-6.893901	27.80165	-0.25	0.804	-61.6056	47.8178
_Iranown_73	15.07853	38.86032	0.39	0.698	-61.39584	91.55291
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	9.13419	38.67435	0.24	0.813	-66.97422	85.2426
_Iranown_77	-26.69249	33.92047	-0.79	0.432	-93.4456	40.06061
_Iranown_78	.2842918	39.54731	0.01	0.994	-77.54203	78.11062
_Iranown_79	-19.64438	30.96687	-0.63	0.526	-80.585	41.29624
_Iranown_80	-2.522767	33.92222	-0.07	0.941	-69.27931	64.23377
_Iranown_81	-5.106357	39.15107	-0.13	0.896	-82.15291	71.9402
_Iranown_82	16.94264	39.02965	0.43	0.665	-59.86497	93.75024
_Iranown_83	14.20797	39.03543	0.36	0.716	-62.61101	91.02695
_Iranown_84	0	(omitted)				
_Iranown_85	-42.18096	39.26449	-1.07	0.284	-119.4507	35.0888

_Iranown_86	-12.93175	31.66678	-0.41	0.683	-75.24974	49.38624
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-34.32989	39.00874	-0.88	0.380	-111.0964	42.43657
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-45.76187	38.92068	-1.18	0.241	-122.355	30.83128
_Iranown_94	-4.358091	33.97754	-0.13	0.898	-71.2235	62.50732
_Iranown_95	0	(omitted)				
_Iranown_96	-14.22507	39.12324	-0.36	0.716	-91.21685	62.76671
_Iranown_97	0	(omitted)				
_Iranown_98	-48.6244	39.0551	-1.25	0.214	-125.4821	28.23328
_Iranown_99	1.07665	38.67197	0.03	0.978	-75.02706	77.18036
_Iranown_100	57.57129	38.75986	1.49	0.139	-18.70539	133.848
_Iranown_101	-1.707489	31.78496	-0.05	0.957	-64.25805	60.84307
_Iranown_102	-13.58988	28.4506	-0.48	0.633	-69.57865	42.3989
airw2	-.0708589	.058246	-1.22	0.225	-.185483	.0437651
radchw2	.0608982	.0487171	1.25	0.212	-.0349735	.15677
kzchorn	-.0203549	.0789435	-0.26	0.797	-.1757102	.1350004
_cons	20.0636	28.67655	0.70	0.485	-36.36983	76.49702

```
i.ranown          _Iranown_52-102     (naturally coded; _Iranown_52 omitted)
note: _Iranown_58 omitted because of collinearity
note: _Iranown_61 omitted because of collinearity
note: _Iranown_62 omitted because of collinearity
note: _Iranown_63 omitted because of collinearity
note: _Iranown_64 omitted because of collinearity
note: _Iranown_65 omitted because of collinearity
note: _Iranown_70 omitted because of collinearity
note: _Iranown_74 omitted because of collinearity
note: _Iranown_75 omitted because of collinearity
note: _Iranown_84 omitted because of collinearity
note: _Iranown_87 omitted because of collinearity
note: _Iranown_88 omitted because of collinearity
note: _Iranown_89 omitted because of collinearity
note: _Iranown_91 omitted because of collinearity
note: _Iranown_92 omitted because of collinearity
note: _Iranown_95 omitted because of collinearity
note: _Iranown_97 omitted because of collinearity
```

Equation	Obs	Parms	RMSE	"R-sq"	F	P
WHPpain	**339**	**40**	**13.73052**	**0.3849**	**4.797713**	**0.0000**
WHPsleep	**339**	**40**	**21.70996**	**0.3245**	**3.683737**	**0.0000**
WHPsociso	**339**	**40**	**14.89577**	**0.1118**	**.9646265**	**0.5345**
WHPpa	**339**	**40**	**12.64667**	**0.3328**	**3.824759**	**0.0000**
WHPel	**339**	**40**	**27.55263**	**0.2556**	**2.633014**	**0.0000**

	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
WHPpain						
crhtw3	**3.558178**	**1.218027**	**2.92**	**0.004**	**1.161186**	**5.95517**
avgcumdosew3	**-.0793234**	**.3271583**	**-0.24**	**0.809**	**-.7231478**	**.5645011**
icdxcnt	**.7199697**	**.5350578**	**1.35**	**0.179**	**-.3329865**	**1.772926**
_Iranown_53	**-3.341217**	**16.8737**	**-0.20**	**0.843**	**-36.54746**	**29.86503**
_Iranown_54	**15.1032**	**19.42939**	**0.78**	**0.438**	**-23.13247**	**53.33888**
_Iranown_55	**-10.50478**	**15.47241**	**-0.68**	**0.498**	**-40.95339**	**19.94383**
_Iranown_56	**4.344242**	**15.93001**	**0.27**	**0.785**	**-27.0049**	**35.69339**
_Iranown_57	**5.294685**	**17.09935**	**0.31**	**0.757**	**-28.35563**	**38.945**
_Iranown_58	**0**	(omitted)				
_Iranown_59	**13.8002**	**14.40406**	**0.96**	**0.339**	**-14.54597**	**42.14637**
_Iranown_60	**6.237424**	**15.43198**	**0.40**	**0.686**	**-24.13163**	**36.60648**
_Iranown_61	**0**	(omitted)				
_Iranown_62	**0**	(omitted)				
_Iranown_63	**0**	(omitted)				
_Iranown_64	**0**	(omitted)				
_Iranown_65	**0**	(omitted)				
_Iranown_66	**-2.869561**	**15.41038**	**-0.19**	**0.852**	**-33.19611**	**27.45699**
_Iranown_67	**20.96713**	**14.41679**	**1.45**	**0.147**	**-7.40409**	**49.33835**
_Iranown_68	**-10.2332**	**19.50426**	**-0.52**	**0.600**	**-48.61622**	**28.14981**
_Iranown_69	**12.82211**	**17.53538**	**0.73**	**0.465**	**-21.68628**	**47.33051**
_Iranown_70	**0**	(omitted)				
_Iranown_71	**6.710743**	**14.73654**	**0.46**	**0.649**	**-22.28973**	**35.71122**
_Iranown_72	**.2208605**	**13.9538**	**0.02**	**0.987**	**-27.23924**	**27.68096**
_Iranown_73	**34.99238**	**19.53858**	**1.79**	**0.074**	**-3.45816**	**73.44293**
_Iranown_74	**0**	(omitted)				
_Iranown_75	**0**	(omitted)				
_Iranown_76	**31.77609**	**19.45791**	**1.63**	**0.104**	**-6.515707**	**70.06788**
_Iranown_77	**22.40396**	**17.00602**	**1.32**	**0.189**	**-11.06268**	**55.87061**
_Iranown_78	**24.80947**	**20.01523**	**1.24**	**0.216**	**-14.57909**	**64.19804**
_Iranown_79	**11.51889**	**15.50744**	**0.74**	**0.458**	**-18.99866**	**42.03643**
_Iranown_80	**6.132227**	**17.04544**	**0.36**	**0.719**	**-27.412**	**39.67646**
_Iranown_81	**36.10535**	**19.64498**	**1.84**	**0.067**	**-2.554585**	**74.76529**
_Iranown_82	**47.65056**	**19.53792**	**2.44**	**0.015**	**9.201299**	**86.09981**
_Iranown_83	**-2.436806**	**19.54221**	**-0.12**	**0.901**	**-40.89451**	**36.0209**
_Iranown_84	**0**	(omitted)				
_Iranown_85	**.2113462**	**19.7601**	**0.01**	**0.991**	**-38.67513**	**39.09783**
_Iranown_86	**5.594289**	**15.91672**	**0.35**	**0.725**	**-25.7287**	**36.91728**
_Iranown_87	**0**	(omitted)				
_Iranown_88	**0**	(omitted)				
_Iranown_89	**0**	(omitted)				
_Iranown_90	**-8.394502**	**19.62301**	**-0.43**	**0.669**	**-47.0112**	**30.22219**
_Iranown_91	**0**	(omitted)				
_Iranown_92	**0**	(omitted)				
_Iranown_93	**2.603181**	**19.56526**	**0.13**	**0.894**	**-35.89988**	**41.10625**
_Iranown_94	**-.4344621**	**17.00172**	**-0.03**	**0.980**	**-33.89266**	**33.02373**

_Iranown_95	0	(omitted)				
_Iranown_96	.1382794	19.68443	0.01	0.994	-38.5993	38.87585
_Iranown_97	0	(omitted)				
_Iranown_98	-14.05204	19.63772	-0.72	0.475	-52.6977	24.59361
_Iranown_99	5.174608	19.45515	0.27	0.790	-33.11177	43.46098
_Iranown_100	36.92681	19.48669	1.89	0.059	-1.421613	75.27524
_Iranown_101	21.69215	15.93806	1.36	0.175	-9.67284	53.05714
_Iranown_102	12.78919	14.25204	0.90	0.370	-15.25783	40.83621
airw3	.0053485	.0261705	0.20	0.838	-.0461533	.0568503
radchw3	.0165499	.0251273	0.66	0.511	-.0328988	.0659985
kzchorn	.0742268	.0395045	1.88	0.061	-.0035154	.151969
_cons	-.1577118	14.39479	-0.01	0.991	-28.48564	28.17022
WHPsleep						
crhtw3	6.774086	1.92588	3.52	0.001	2.98409	10.56408
avgcumdosew3	.5038596	.5172852	0.97	0.331	-.5141213	1.521841
icdxcnt	1.292291	.8460049	1.53	0.128	-.3725868	2.957169
_Iranown_53	-10.63853	26.67979	-0.40	0.690	-63.14248	41.86542
_Iranown_54	-12.46283	30.72072	-0.41	0.685	-72.91904	47.99337
_Iranown_55	-34.81368	24.46415	-1.42	0.156	-82.9574	13.33004
_Iranown_56	-30.05273	25.18769	-1.19	0.234	-79.62033	19.51486
_Iranown_57	-20.43824	27.03658	-0.76	0.450	-73.64432	32.76784
_Iranown_58	0	(omitted)				
_Iranown_59	-17.95139	22.77493	-0.79	0.431	-62.77085	26.86807
_Iranown_60	-25.43186	24.40022	-1.04	0.298	-73.44979	22.58606
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-28.18105	24.36608	-1.16	0.248	-76.13178	19.76967
_Iranown_67	6.058602	22.79505	0.27	0.791	-38.80046	50.91766
_Iranown_68	-35.36711	30.8391	-1.15	0.252	-96.05629	25.32206
_Iranown_69	-32.28932	27.72601	-1.16	0.245	-86.85216	22.27351
_Iranown_70	0	(omitted)				
_Iranown_71	8.257842	23.30063	0.35	0.723	-37.59616	54.11185
_Iranown_72	-16.02189	22.06301	-0.73	0.468	-59.44034	27.39656
_Iranown_73	9.712145	30.89336	0.31	0.753	-51.08381	70.50809
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	-7.885214	30.76581	-0.26	0.798	-68.43015	52.65973
_Iranown_77	-7.661808	26.88901	-0.28	0.776	-60.57748	45.25387
_Iranown_78	28.78427	31.64701	0.91	0.364	-33.49482	91.06337
_Iranown_79	-20.22951	24.51953	-0.83	0.410	-68.48222	28.02321
_Iranown_80	-9.001397	26.95134	-0.33	0.739	-62.03975	44.03695
_Iranown_81	38.93519	31.06159	1.25	0.211	-22.19184	100.0622
_Iranown_82	1.373639	30.89232	0.04	0.965	-59.42028	62.16755
_Iranown_83	25.56381	30.89911	0.83	0.409	-35.24345	86.37108
_Iranown_84	0	(omitted)				

_Iranown_85	21.77445	31.24361	0.70	0.486	-39.71078	83.25967
_Iranown_86	-12.43047	25.16667	-0.49	0.622	-61.95672	37.09577
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-32.4584	31.02685	-1.05	0.296	-93.51706	28.60026
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-41.22935	30.93555	-1.33	0.184	-102.1083	19.64964
_Iranown_94	6.090128	26.88222	0.23	0.821	-46.81219	58.99244
_Iranown_95	0	(omitted)				
_Iranown_96	-18.38578	31.12397	-0.59	0.555	-79.63557	42.864
_Iranown_97	0	(omitted)				
_Iranown_98	21.92172	31.05012	0.71	0.481	-39.18274	83.02617
_Iranown_99	37.69104	30.76145	1.23	0.221	-22.84533	98.22741
_Iranown_100	-1.733614	30.81131	-0.06	0.955	-62.3681	58.90087
_Iranown_101	-23.98825	25.20042	-0.95	0.342	-73.5809	25.6044
_Iranown_102	-12.24603	22.53457	-0.54	0.587	-56.59248	32.10042
airw3	.0151222	.0413795	0.37	0.715	-.0663097	.096554
radchw3	-.0659628	.0397299	-1.66	0.098	-.1441484	.0122227
kzchorn	.1359544	.0624625	2.18	0.030	.0130327	.2588762
_cons	22.41944	22.76027	0.99	0.325	-22.37118	67.21006
WHPsociso						
crhtw3	2.609951	1.321396	1.98	0.049	.0095366	5.210365
avgcumdosew3	.090938	.3549227	0.26	0.798	-.607525	.789401
icdxcnt	.7300834	.5804658	1.26	0.209	-.4122325	1.872399
_Iranown_53	-8.710235	18.30569	-0.48	0.635	-44.73455	27.31408
_Iranown_54	-20.00762	21.07828	-0.95	0.343	-61.48818	21.47295
_Iranown_55	-16.65853	16.78548	-0.99	0.322	-49.69118	16.37411
_Iranown_56	-17.88449	17.28192	-1.03	0.302	-51.89409	16.12512
_Iranown_57	-14.53861	18.55049	-0.78	0.434	-51.04468	21.96745
_Iranown_58	0	(omitted)				
_Iranown_59	-11.95771	15.62647	-0.77	0.445	-42.7095	18.79408
_Iranown_60	-6.945583	16.74162	-0.41	0.679	-39.89192	26.00076
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-12.19356	16.71819	-0.73	0.466	-45.09379	20.70667
_Iranown_67	-6.457952	15.64027	-0.41	0.680	-37.23691	24.32101
_Iranown_68	-20.8714	21.1595	-0.99	0.325	-62.51181	20.76901
_Iranown_69	-13.73632	19.02353	-0.72	0.471	-51.17329	23.70065
_Iranown_70	0	(omitted)				
_Iranown_71	-17.12507	15.98716	-1.07	0.285	-48.58669	14.33655
_Iranown_72	-10.79273	15.138	-0.71	0.476	-40.58325	18.99779
_Iranown_73	-19.75359	21.19673	-0.93	0.352	-61.46726	21.96008
_Iranown_74	0	(omitted)				

_Iranown_75	0	(omitted)				
_Iranown_76	20.91737	21.10921	0.99	0.323	-20.62408	62.45882
_Iranown_77	-15.19185	18.44924	-0.82	0.411	-51.49866	21.11496
_Iranown_78	-1.266142	21.71383	-0.06	0.954	-43.99744	41.46515
_Iranown_79	-13.16738	16.82348	-0.78	0.434	-46.27482	19.94005
_Iranown_80	-4.528901	18.49201	-0.24	0.807	-40.91988	31.86208
_Iranown_81	-4.852642	21.31216	-0.23	0.820	-46.79348	37.08819
_Iranown_82	.1829129	21.19602	0.01	0.993	-41.52936	41.89519
_Iranown_83	-15.22998	21.20068	-0.72	0.473	-56.95141	26.49146
_Iranown_84	0	(omitted)				
_Iranown_85	-16.55732	21.43705	-0.77	0.441	-58.74392	25.62928
_Iranown_86	-4.369104	17.2675	-0.25	0.800	-38.35034	29.61213
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-16.19952	21.28832	-0.76	0.447	-58.09344	25.6944
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-19.68114	21.22568	-0.93	0.355	-61.45179	22.0895
_Iranown_94	-13.65408	18.44458	-0.74	0.460	-49.95172	22.64357
_Iranown_95	0	(omitted)				
_Iranown_96	-12.42055	21.35496	-0.58	0.561	-54.44561	29.60451
_Iranown_97	0	(omitted)				
_Iranown_98	-.2440899	21.30429	-0.01	0.991	-42.16943	41.68125
_Iranown_99	-18.9964	21.10623	-0.90	0.369	-60.53196	22.53917
_Iranown_100	2.179398	21.14043	0.10	0.918	-39.42349	43.78228
_Iranown_101	-17.35348	17.29066	-1.00	0.316	-51.38028	16.67332
_Iranown_102	-2.117765	15.46155	-0.14	0.891	-32.54501	28.30948
airw3	-.0066865	.0283915	-0.24	0.814	-.062559	.049186
radchw3	.01129	.0272597	0.41	0.679	-.0423551	.0649352
kzchorn	-.0412135	.0428571	-0.96	0.337	-.1255533	.0431263
_cons	18.12707	15.61641	1.16	0.247	-12.60493	48.85907
WHPpa						
crhtw3	2.998075	1.12188	2.67	0.008	.7902945	5.205855
avgcumdosew3	-.3902444	.3013333	-1.30	0.196	-.9832472	.2027583
icdxcnt	1.302721	.4928219	2.64	0.009	.3328821	2.27256
_Iranown_53	-7.06666	15.54173	-0.45	0.650	-37.6517	23.51838
_Iranown_54	8.540262	17.89569	0.48	0.634	-26.67719	43.75772
_Iranown_55	-9.798432	14.25106	-0.69	0.492	-37.84352	18.24665
_Iranown_56	5.616868	14.67254	0.38	0.702	-23.25766	34.4914
_Iranown_57	2.39575	15.74957	0.15	0.879	-28.5983	33.3898
_Iranown_58	0	(omitted)				
_Iranown_59	20.05935	13.26704	1.51	0.132	-6.049258	46.16796
_Iranown_60	9.940523	14.21382	0.70	0.485	-18.03128	37.91233
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				

_Iranown_65	0	(omitted)				
_Iranown_66	-5.276573	14.19393	-0.37	0.710	-33.20923	22.65608
_Iranown_67	5.985694	13.27877	0.45	0.652	-20.14598	32.11737
_Iranown_68	-9.09529	17.96465	-0.51	0.613	-44.44846	26.25788
_Iranown_69	6.393011	16.15119	0.40	0.693	-25.39139	38.17741
_Iranown_70	0	(omitted)				
_Iranown_71	.9440407	13.57328	0.07	0.945	-25.76722	27.6553
_Iranown_72	-.0420484	12.85233	-0.00	0.997	-25.33453	25.25043
_Iranown_73	15.81991	17.99626	0.88	0.380	-19.59546	51.23527
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	29.29229	17.92195	1.63	0.103	-5.976854	64.56144
_Iranown_77	10.36649	15.66361	0.66	0.509	-20.4584	41.19137
_Iranown_78	31.56181	18.43528	1.71	0.088	-4.717529	67.84116
_Iranown_79	11.30961	14.28332	0.79	0.429	-16.79897	39.41818
_Iranown_80	-4.085571	15.69992	-0.26	0.795	-34.98192	26.81077
_Iranown_81	38.70346	18.09426	2.14	0.033	3.095228	74.31169
_Iranown_82	31.45246	17.99565	1.75	0.082	-3.961719	66.86664
_Iranown_83	-4.891671	17.99961	-0.27	0.786	-40.31363	30.53029
_Iranown_84	0	(omitted)				
_Iranown_85	-.2787624	18.20029	-0.02	0.988	-36.09565	35.53813
_Iranown_86	10.44048	14.6603	0.71	0.477	-18.40997	39.29092
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-8.693451	18.07402	-0.48	0.631	-44.26185	26.87495
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-1.19212	18.02084	-0.07	0.947	-36.65586	34.27162
_Iranown_94	-2.68091	15.65966	-0.17	0.864	-33.49801	28.13619
_Iranown_95	0	(omitted)				
_Iranown_96	6.799704	18.1306	0.38	0.708	-28.88004	42.47944
_Iranown_97	0	(omitted)				
_Iranown_98	-13.68455	18.08758	-0.76	0.450	-49.27962	21.91053
_Iranown_99	29.73604	17.91942	1.66	0.098	-5.528118	65.00019
_Iranown_100	30.09136	17.94846	1.68	0.095	-5.229947	65.41267
_Iranown_101	14.46439	14.67996	0.99	0.325	-14.42474	43.35351
_Iranown_102	3.915434	13.12703	0.30	0.766	-21.91763	29.7485
airw3	-.011764	.0241047	-0.49	0.626	-.0592004	.0356723
radchw3	.0128479	.0231438	0.56	0.579	-.0326974	.0583933
kzchorn	.0173712	.0363862	0.48	0.633	-.0542342	.0889766
_cons	4.347284	13.2585	0.33	0.743	-21.74452	30.43909
WHPel						
crhtw3	6.359955	2.44418	2.60	0.010	1.54998	11.16993
avgcumdosew3	1.589459	.656499	2.42	0.016	.2975149	2.881403
icdxcnt	5.418643	1.073685	5.05	0.000	3.305706	7.53158
_Iranown_53	-3.6092	33.85996	-0.11	0.915	-70.24322	63.02482
_Iranown_54	-43.00235	38.9884	-1.10	0.271	-119.7288	33.72407

_Iranown_55	-35.11326	31.04803	-1.13	0.259	-96.21361	25.98709
_Iranown_56	-15.39669	31.9663	-0.48	0.630	-78.30412	47.51074
_Iranown_57	8.971058	34.31277	0.26	0.794	-58.55405	76.49617
_Iranown_58	0	(omitted)				
_Iranown_59	.3772269	28.90421	0.01	0.990	-56.50422	57.25868
_Iranown_60	-25.17633	30.96691	-0.81	0.417	-86.11702	35.76437
_Iranown_61	0	(omitted)				
_Iranown_62	0	(omitted)				
_Iranown_63	0	(omitted)				
_Iranown_64	0	(omitted)				
_Iranown_65	0	(omitted)				
_Iranown_66	-14.23393	30.92357	-0.46	0.646	-75.08934	46.62149
_Iranown_67	1.874715	28.92975	0.06	0.948	-55.05699	58.80642
_Iranown_68	-42.72943	39.13864	-1.09	0.276	-119.7515	34.29265
_Iranown_69	-60.04223	35.18774	-1.71	0.089	-129.2892	9.204768
_Iranown_70	0	(omitted)				
_Iranown_71	-17.46095	29.57139	-0.59	0.555	-75.65536	40.73346
_Iranown_72	-5.897409	28.00069	-0.21	0.833	-61.0008	49.20599
_Iranown_73	12.90543	39.2075	0.33	0.742	-64.25216	90.06303
_Iranown_74	0	(omitted)				
_Iranown_75	0	(omitted)				
_Iranown_76	7.967163	39.04562	0.20	0.838	-68.87187	84.8062
_Iranown_77	-25.05366	34.12548	-0.73	0.463	-92.21021	42.10289
_Iranown_78	-.6442933	40.16398	-0.02	0.987	-79.68419	78.3956
_Iranown_79	-21.45631	31.11832	-0.69	0.491	-82.69499	39.78236
_Iranown_80	-3.214634	34.2046	-0.09	0.925	-70.52687	64.09761
_Iranown_81	-.2287901	39.42101	-0.01	0.995	-77.80657	77.34899
_Iranown_82	12.93309	39.20618	0.33	0.742	-64.22192	90.08811
_Iranown_83	16.19685	39.2148	0.41	0.680	-60.97511	93.36882
_Iranown_84	0	(omitted)				
_Iranown_85	-46.2147	39.65201	-1.17	0.245	-124.2471	31.81768
_Iranown_86	-14.58595	31.93963	-0.46	0.648	-77.44089	48.26899
_Iranown_87	0	(omitted)				
_Iranown_88	0	(omitted)				
_Iranown_89	0	(omitted)				
_Iranown_90	-29.83825	39.37692	-0.76	0.449	-107.3293	47.65276
_Iranown_91	0	(omitted)				
_Iranown_92	0	(omitted)				
_Iranown_93	-41.98425	39.26105	-1.07	0.286	-119.2472	35.27874
_Iranown_94	-3.437091	34.11687	-0.10	0.920	-70.57669	63.7025
_Iranown_95	0	(omitted)				
_Iranown_96	-18.98174	39.50018	-0.48	0.631	-96.71531	58.75183
_Iranown_97	0	(omitted)				
_Iranown_98	-42.95726	39.40645	-1.09	0.277	-120.5064	34.59186
_Iranown_99	.8520405	39.04009	0.02	0.983	-75.97612	77.6802
_Iranown_100	61.26605	39.10337	1.57	0.118	-15.68662	138.2187
_Iranown_101	-.295847	31.98245	-0.01	0.993	-63.23507	62.64337
_Iranown_102	-12.75788	28.59917	-0.45	0.656	-69.03903	43.52327
airw3	-.0127187	.0525157	-0.24	0.809	-.1160658	.0906284

```
      radchw3 |   .0302951   .0504221     0.60   0.548    -.0689321    .1295223
      kzchorn |   .0093228   .0792726     0.12   0.906    -.1466801    .1653258
        _cons |   16.70073   28.88561     0.58   0.564    -40.14411    73.54557
------------------------------------------------------------------------------

149 .
150 . title "H8 Initial Bivariate zero-order graphs of core H8 relationships "

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    > *
    *****  H8 Initial Bivariate zero-order graphs of core H8 relationships    ****
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    *****                                          17 Jul 2012    16:00:42  ****
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151 .
152 . forvalues i=1/3 {
      2. set more off
      3. foreach var in whppain whppa whpsociso whsleep whpel {
      4. forvalues k=1/2 {
      5. scatter whppain crhtw`i',color(sand)  || lowess whppain crhtw`i', ///
    >   title("`var' by wave `i'" "perceived threat") ///
    >   xtitle("Perceived Chornobyl" "health threat") ///
    >   legend(off)
      6. gr save `var'g`k'w`i'.gph, replace
      7. gr export `var'g`k'w`i'.eps, replace
      8.
```

```
153 . }
      9. }
     10. }
    (file whppaing1w1.gph saved)
    (file whppaing1w1.eps written in EPS format)
    (file whppaing2w1.gph saved)
    (file whppaing2w1.eps written in EPS format)
    (file whppag1w1.gph saved)
    (file whppag1w1.eps written in EPS format)
    (file whppag2w1.gph saved)
    (file whppag2w1.eps written in EPS format)
    (file whpsocisog1w1.gph saved)
    (file whpsocisog1w1.eps written in EPS format)
    (file whpsocisog2w1.gph saved)
    (file whpsocisog2w1.eps written in EPS format)
    (file whsleepg1w1.gph saved)
    (file whsleepg1w1.eps written in EPS format)
    (file whsleepg2w1.gph saved)
    (file whsleepg2w1.eps written in EPS format)
    (file whpelg1w1.gph saved)
    (file whpelg1w1.eps written in EPS format)
    (file whpelg2w1.gph saved)
    (file whpelg2w1.eps written in EPS format)
    (file whppaing1w2.gph saved)
    (file whppaing1w2.eps written in EPS format)
    (file whppaing2w2.gph saved)
    (file whppaing2w2.eps written in EPS format)
    (file whppag1w2.gph saved)
    (file whppag1w2.eps written in EPS format)
    (file whppag2w2.gph saved)
    (file whppag2w2.eps written in EPS format)
    (file whpsocisog1w2.gph saved)
    (file whpsocisog1w2.eps written in EPS format)
    (file whpsocisog2w2.gph saved)
    (file whpsocisog2w2.eps written in EPS format)
    (file whsleepg1w2.gph saved)
    (file whsleepg1w2.eps written in EPS format)
    (file whsleepg2w2.gph saved)
    (file whsleepg2w2.eps written in EPS format)
    (file whpelg1w2.gph saved)
    (file whpelg1w2.eps written in EPS format)
    (file whpelg2w2.gph saved)
    (file whpelg2w2.eps written in EPS format)
    (file whppaing1w3.gph saved)
    (file whppaing1w3.eps written in EPS format)
    (file whppaing2w3.gph saved)
    (file whppaing2w3.eps written in EPS format)
    (file whppag1w3.gph saved)
    (file whppag1w3.eps written in EPS format)
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(file whppag2w3.gph saved)
(file whppag2w3.eps written in EPS format)
(file whpsocisog1w3.gph saved)
(file whpsocisog1w3.eps written in EPS format)
(file whpsocisog2w3.gph saved)
(file whpsocisog2w3.eps written in EPS format)
(file whsleepg1w3.gph saved)
(file whsleepg1w3.eps written in EPS format)
(file whsleepg2w3.gph saved)
(file whsleepg2w3.eps written in EPS format)
(file whpelg1w3.gph saved)
(file whpelg1w3.eps written in EPS format)
(file whpelg2w3.gph saved)
(file whpelg2w3.eps written in EPS format)

154 .
155 . title "Graphical review of core hypothesis (H8) relationship by wave "


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*****   Graphical review of core hypothesis (H8) relationship by wave      ****
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*****                                          17 Jul 2012    16:01:19  ****
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```
156 .
157 . // Graphs of Health effect by threat by wave
158 .
159 . graph combine whppaing1w1.gph whppaing1w2.gph whppaing1w3.gph, col(3) title(
    > Male Pain by perceived health threat by wave)

160 . gr save cmpain.gph, replace
    (file cmpain.gph saved)

161 . gr export cmpain.eps, replace
    (file cmpain.eps written in EPS format)

162 .
163 . graph combine whppaing2w1.gph whppaing2w2.gph whppaing2w3.gph, col(3) title(
    > Female Pain by perceived health threat by wave)

164 . gr save cfpain.gph, replace
    (file cfpain.gph saved)

165 . gr export cfpain.eps, replace
    (file cfpain.eps written in EPS format)

166 .
167 . graph combine whppag1w1.gph whppag1w2.gph whppag1w3.gph, col(3) title(Male p
    > hysical ability by perceived health threat by wave)

168 . gr save cfma.gph, replace
    (file cfma.gph saved)

169 . gr export cmpa.eps, replace
    (file cmpa.eps written in EPS format)

170 .
171 .
172 . graph combine whppag2w1.gph whppag2w2.gph whppag2w3.gph, col(3) title(Female
    >  physical ability by perceived health threat by wave)
```

```
173 . gr save cfpa.gph, replace
    (file cfpa.gph saved)

174 . gr export cfpa.eps, replace
    (file cfpa.eps written in EPS format)

175 .
176 . graph combine whpsocisog1w1.gph whpsocisog1w2.gph whpsocisog1w3.gph, col(3)
    > ///
    >      title(Male social isolation by perceived health threat by wave)

177 . gr save cmsi.gph, replace
    (file cmsi.gph saved)

178 . gr export cmsi.eps, replace
    (file cmsi.eps written in EPS format)

179 .
180 .
181 . graph combine whpsocisog2w1.gph whpsocisog2w2.gph whpsocisog2w3.gph, col(3)
    > ///
    >     title(Female social isolation by perceived health threat by wave)

182 . gr save cfsi.gph, replace
    (file cfsi.gph saved)

183 . gr export cfsi.eps, replace
    (file cfsi.eps written in EPS format)

184 .
185 .
186 . graph combine whsleepg1w1.gph whsleepg1w2.gph whsleepg1w3.gph, col(3) title(
    > Male sleep by perceived health threat by wave)

187 . gr save cmslp.gph, replace
    (file cmslp.gph saved)
```

```
188 . gr export cmslp.eps, replace
    (file cmslp.eps written in EPS format)

189 .
190 .
191 . graph combine whsleepg2w1.gph whsleepg2w2.gph whsleepg2w3.gph, col(3) title(
    > Female sleep by perceived health threat by wave)

192 . gr save cfslp.gph, replace
    (file cfslp.gph saved)

193 . gr export cfslp.eps, replace
    (file cfslp.eps written in EPS format)

194 .
195 . graph combine whpelg1w1.gph whpelg1w2.gph whpelg1w3.gph, col(3) title(Male e
    > nergy level by perceived health threat by wave)

196 . gr save cmel.gph, replace
    (file cmel.gph saved)

197 . gr export cmel.eps, replace
    (file cmel.eps written in EPS format)

198 .
199 . graph combine whpelg2w1.gph whpelg2w2.gph whpelg2w3.gph, col(3) title(Female
    >  energy level by perceived health threat by wave)

200 . gr save cfel.gph, replace
    (file cfel.gph saved)

201 . gr export cfel.eps, replace
    (file cfel.eps written in EPS format)

202 .
203 . //  Zero-Order Preliminary findings
204 . //   crhtw1=> sleep in males
```

```
205 . //   crhtw1=> physical ability in males
206 . //   crhtw1=> energy level in males
207 .
208 . //   crhtw2 => sleep in males
209 . //   crhtw2=> physical ability in males
210 . //   crhtw2=> energy level in males
211 .
212 . //   crhtw3 => pain in males
213 . //   crhtw3 => sleep in males
214 . //   crhtw3=> physical ability in males
215 . //   crhtw3=> energy level in males
216 . //
217 . /*
    >
    >
    > /* a test for candiate illnesses for male pain model
    >
    > foreach i in 7 {
    > foreach j in 1 5 6 {
    > foreach k in 3 {
    > foreach m in 2 {
    > foreach n in 4 {
    > regress whppain icdx`i'nr1-icdx`i'nr28 if gender==1
    > regress whppain icdx`j'nr1-icdx`j'nr18 if gender==1
    > regress whppain icdx`k'nr1-icdx`k'nr11 if gender==1
    > regress whppain icdx`m'nr1-icdx`m'nr8 if gender==1
    > regress whppain icdx`n'nr1-icdx`n'nr20 if gender==1
    > }
    > }
    > }
    > }
    > }
    >
    > */
    >
    > /* a test for candiate illnesses for the female pain model
    >
    > foreach i in 7 {
    > foreach j in 1 5 6 {
    > foreach k in 3 {
    > foreach m in 2 {
    > foreach n in 4 {
    > regress whppain icdx`i'nr1-icdx`i'nr28 if gender==2
    > regress whppain icdx`j'nr1-icdx`j'nr18 if gender==2
    > regress whppain icdx`k'nr1-icdx`k'nr11 if gender==2
    > regress whppain icdx`m'nr1-icdx`m'nr8 if gender==2
    > regress whppain icdx`n'nr1-icdx`n'nr20 if gender==2
    > }
    > }
```

```
> }
> }
> }
> */
>
> cap drop rmpainp1
>
> title "H8 linear pain model for male respondents"
> des icdx1nr5 icdx1nr18 icdx2nr8 icdx3nr3 icdx3nr4 icdx3nr7 icdx4nr9 ///
>   icdx4nr10 icdx4nr12  icdx5nr7
> title "Full  Male Pain model "
> // Full Male Pain model
> regress whppain age  inc4w1 occ5w3   suchrw2 pillw3 ///
>   defnw2  airw1  BSIposymp BSItotal WHPpa WHPsleep  ///
>    PTSDw1 crhtw1 crhtw2 crhtw3  ///
>    icdx1nr5 icdx1nr18 icdx2nr8  icdx3nr3 icdx4nr9 ///
>    icdx4nr10 icdx4nr12  icdx5nr7 ///
>  if gender==1, vce(cluster id)
> di e(r2_a)
>
> title "H8 Trimmed Male Pain Model"
>
> regress whppain age  inc4w1 occ5w3   suchrw2 pillw3 ///
>    defnw2  airw1  BSIposymp BSItotal WHPpa WHPsleep  ///
>    PTSDw1 crhtw1 crhtw2 crhtw3  ///
>    icdx3nr3 icdx4nr9 ///
>       if gender==1, vce(cluster id)
> di e(r2_a)
> cap confirm variable rm5
> if _rc !=0 {
> rdiagrbst rm5
> }
> else {
> cap drop rm5
>  }
>
> cap drop H8Malepainpred
> cap drop h8Mpainsepred
> cap drop Mpainrsires
> cap drop upbpainm
> cap drop lpbpainm
>
>
>
> title "H8 Trimmed Male Pain model "
> regress whppain age  inc4w1 occ5w3   suchrw2 pillw3 ///
>   defnw2  airw1  BSIposymp BSItotal WHPpa WHPsleep  ///
>    PTSDw1 crhtw1 crhtw2 crhtw3  ///
>   icdx3nr3 icdx4nr9 ///
```

```
>  if gender==1, vce(cluster id)
> di e(r2_a)
>
>
> // prep for residual and prediction interval analysis
>     predict H8Malepainpred if gender==2, xb
>      predict h8Mpainsepred if gender==2, stdp
>      predict Mpainrsires if gender==2, residual
>      gen upbpainm = H8Malepainpred + 1.96*h8Mpainsepred
>      gen lpbpainm = H8Malepainpred - 1.96*h8Mpainsepred
>
>      // prediction interval graphics
>  scatter H8Malepainpred Mpainrsires, color(sand) || lowess H8Malepainpred  M
> painrsires  ///
>   || lowess upbpainm Mpainrsires || lowess lpbpainm Mpainrsires, ///
>   title(Prediction interval of Male pain model)   ///
>   ytitle(Predicted Male Pain )
> gr save H8malePain.gph, replace
> gr export H8malePain.eps, replace
>
>
>  // residual diagnostics
> regress whppain age  inc4w1 occ5w3   suchrw2 pillw3 ///
>   defnw2  airw1  BSIposymp BSItotal WHPpa WHPsleep  ///
>    PTSDw1 crhtw1 crhtw2 crhtw3  ///
>   icdx3nr3 icdx4nr9 ///
>  if gender==1, vce(cluster id)
>
> rdiagrbst rmpainp1
>
>
> title "Possible moderators of H8 perceived risk and pain "
> *-------------------------------------------------------------------------
> ----
> // Possible moderation effects done because crhtw3 is significant main effec
> t
> // moderator test is not peformed if no signif perceived risk
> *-------------------------------------------------------------------------
> ----
> foreach varx in age  inc4w1 occ5w3   suchrw2 pillw3 ///
>   defnw2  airw1  BSIposymp BSItotal WHPpa WHPsleep  ///
>    PTSDw1 icdx1nr5 icdx1nr18 icdx2nr8  icdx3nr3 icdx4nr9 ///
>     icdx4nr10 icdx4nr12  icdx5nr7 {
>
>  cap gen `varx'Xcrht1 = `varx'*crhtw1
>  cap gen `varx'Xcrht2 = `varx'*crhtw2
>  cap gen `varx'Xcrht3 = `varx'*crhtw3
>
> }
```

```
>
>
>
> set more off
> // Full moderator model
> regress whppain age  inc4w1 occ5w3   suchrw2 pillw3 ///
>   defnw2  airw1  BSIposymp BSItotal WHPpa WHPsleep  ///
>    PTSDw1 crhtw1 crhtw2 crhtw3  ///
>   icdx3nr3 icdx4nr9  ageXcrht1-defnw2Xcrht3 ///
>   PTSDw1Xcrht1- PTSDw1Xcrht3  ///
>   if gender==1, vce(cluster id)
>
> // Trimmed moderator model
> set more off
> regress whppain age  inc4w1 occ5w3   suchrw2 pillw3 ///
>   defnw2  airw1  BSIposymp BSItotal WHPpa WHPsleep  ///
>    PTSDw1 crhtw1 crhtw2 crhtw3  ///
>   icdx3nr3 icdx4nr9    ///
>   WHPpaXcrht1-WHPpaXcrht3   ///
>   if gender==1, vce(cluster id)
>
>
> title "H8 Male Trimmed moderator pain model"
> set more off
> hireg whppain (age bcohort inc4w1 occ5w3) ///
>    (airw1 defnw2)(suchrw2 pillw3) ///
>   ( BSIposymp BSItotal) (WHPpa WHPsleep PTSDw1) ///
>   ( crhtw1 crhtw2 crhtw3)  ///
>   (icdx3nr3 icdx4nr9)    ///
>   (WHPpaXcrht1-WHPpaXcrht3)   ///
>   if gender==1, r(beta robust)
>
>   // BSItotal negative effect on pain is strange
>   // ineraction with perceived health threat is sig in w3
>
>
> title "H8 Male Trimmed moderator pain model"
> set more off
> nestreg: regress whppain (age bcohort inc4w1 occ5w3) ///
>    (airw1 defnw2)(suchrw2 pillw3) ///
>   ( BSIposymp BSItotal) (WHPpa WHPsleep PTSDw1) ///
>   ( crhtw1 crhtw2 crhtw3)  ///
>   (icdx3nr3 icdx4nr9)    ///
>   (WHPpaXcrht1-WHPpaXcrht3)  ///
>   if gender==1, vce(cluster id)
>
>
>
>
```

```
>
> // Male moderators include whppa in waves 2 and 3
>
>
>
> title " tests for possible H8 indirect effects  for male pain"
> set more off
> foreach var in age  inc4w1 occ5w3   suchrw2 pillw3 ///
>   defnw2  airw1  BSIposymp BSItotal WHPpa WHPsleep  ///
>    PTSDw1 icdx1nr5 icdx1nr18 icdx2nr8  icdx3nr3 icdx4nr9 ///
>     icdx4nr10 icdx4nr12  icdx5nr7 {
> sem (crhtw1-> `var')(`var'-> whppain) if gender==1, nocapslatent iterate(50)
> sem (crhtw2-> `var')(`var'-> whppain) if gender==1, nocapslatent iterate(50)
> sem (crhtw3-> `var')(`var'-> whppain) if gender==1, nocapslatent iterate(50)
> }
>
> // summary of  findings
> ************************************************************************
> ****
> *-+-  male crhtw1
> *-+- possible indirect effects through  icdx1nr5 icdx3nr3 icdx1nr5 sleep, ph
> ysical
> //     ability, BSItotal
> *-+- BSIposymp  defnw2 and age
> ************************************************************************
> ****
>
> ************************************************************************
> ****
> *-+-  male crhtw2
> *-+- possible indirect effects through  icdx1nr5 icdx3nr3 sleep, physical
> //    ability, pain, BSItotal
> *-+- BSIposymp  defnw2 and age occ5w3
> ********************************************
>
> ************************************************************************
> ****
> *-+-  male crhtw3
> *-+- possible indirect effects through icdx1nr5 icdx5nr7 icdx3nr3 sleep
> //    physical ability, pain, BSItotal,
> *-+- BSIposymp  defnw2 and age occ5w3
> ********************************************
>
>
>
>
>
> *-+- No significant direct effect male model pain relationships to crht vars
>
```

```
> // Full linear Pain model for female respondents
>
> des bffpain9 bffpain21 bffpain24 bffpain26 icdx1nr7 icdx1nr16 icdx3nr7 icdx4
> nr12 ///
>   icdx4nr17 icdx5nr4 icdx5nr5 icdx5nr12 icdx6nr3 icdx6nr6 icdx6nr14 icdx6nr1
> 5  ///
>   icdx7nr5 icdx7nr11 icdx7nr19 icdx7nr26 crhtw1 crhtw3 crhtw3
>
> regress whppain age emplw31 emplw33 occ8w3 illw3 pillw1 pillw3  phlthw3 ///
>   defnw3 kzchorn BSIposymp BSIglobsi BSIsoma  avgcumdosew1 avgcumdosew3 ///
>   crhtw1 crhtw2 crhtw3 ///
>   bffpain9 bffpain21 bffpain24 icdx1nr7 icdx1nr16 ///
>   icdx3nr7 icdx4nr12 icdx4nr17 icdx5nr4 icdx5nr5 icdx5nr12  ///
>    icdx7nr5 icdx7nr11 icdx7nr19 icdx7nr26 if gender==2, vce(cluster id)
> di e(r2_a)
>   cap confirm variable rf5
> if _rc !=0 {
>    rdiagrbst rf5
> }
> else {
>    cap drop rf5
>  }
>
>
>
>
>
> title " Trimmed Female Pain model"
> cap drop H8Fempainpred
> cap drop h8Fempainsepred
> cap drop H8fempainrsires
> cap drop upbpainf
> cap drop upbpainf
> cap drop rfpainp1
>
>
>
> des bffpain9 bffpain21 bffpain24 bffpain26 icdx1nr7  icdx4nr17 ///
>      icdx6nr6    icdx7nr5 icdx7nr11 icdx7nr19 icdx7nr26
>
> regress whppain age  emplw31 emplw33 occ8w3 illw3 pillw1 pillw3  phlthw3 ///
>   defnw3 kzchorn BSIposymp BSIglobsi BSIsoma  avgcumdosew1 avgcumdosew3 ///
>   crhtw1 crhtw2 crhtw3   bffpain9 bffpain21 bffpain24 icdx1nr7 icdx4nr17 icd
> x5nr4  ///
>     icdx6nr6 icdx7nr5  icdx7nr26 if gender==2, vce(cluster id)
> di e(r2_a)
>
> // prep for residual and prediction interval analysis
>     predict H8Fempainpred if gender==2, xb
```

```
>      predict h8Fempainsepred if gender==2, stdp
>      predict H8fempainrsires if gender==2, residual
>      gen upbpainf = H8Fempainpred + 1.96*h8Fempainsepred
>      gen lpbpainf = H8Fempainpred - 1.96*h8Fempainsepred
>  // residual diagnostics
>
> rdiagrbst rfpainp1
>
> // prediction interval generation
> scatter H8Fempainpred H8fempainrsires, color(sand) || lowess H8Fempainpred
> H8fempainrsires  ///
>   || lowess upbpainf H8fempainrsires || lowess lpbpainf H8fempainrsires, ///
>   title(Prediction interval of Female pain model)   ///
>   ytitle(Predicted Female Pain )
> gr save H8FemPain.gph, replace
> gr export H8FemPain.eps, replace
>
>
>
> title "tests for female pain moderators"
> *--------  Tests for Female Moderators-------------------------------------
> ----
> * not performed owing to failure of main effect significances
> *------------------------------------------------------------------------
> ----
> label var whppa "Nottingham Pt 1 phys ability subscale"
> label var whpel "Nottingham Pt 1 energy level subscale"
> des age bcohort BSIposymp  BSIips whppa whpel ///
>    airw2-airw3 pillw1 pillw3 icdx1nr7  icdx2nr5  ///
>    icdx3nr3 icdx3nr7 icdx3nr12 icdx4nr19 icdx6nr14 icdx6nr17 ///
>    icdx7nr8 icdx7nr10  icdx7nr20 icdx7nr23 icdx7nr25 ///
>    icdx8nr3  icdx8nr13-icdx8nr13 crhtw1 crhtw2 crhtw3
>
> regress whppain age bcohort BSIposymp  BSIips whppa whpel ///
>    airw2-airw3 pillw1 pillw3 icdx1nr7 icdx2nr5  ///
>    icdx3nr3 icdx3nr7 icdx3nr12 icdx4nr19 icdx6nr14 icdx6nr17 ///
>    icdx7nr8 icdx7nr10  icdx7nr20 icdx7nr23 icdx7nr25 ///
>    icdx8nr3  icdx8nr13-icdx8nr13 if gender==2, ///
>    vce(cluster id)
>
> // construction of potential moderators
> foreach xvar in whppain age bcohort BSIposymp  BSIips whppa whpel ///
>    airw2-airw3 pillw1 pillw3 icdx1nr7 icdx2nr5  ///
>    icdx3nr3 icdx3nr7 icdx3nr12 icdx4nr19 icdx6nr14 icdx6nr17 ///
>    icdx7nr8 icdx7nr10  icdx7nr20 icdx7nr23 icdx7nr25 ///
>    icdx8nr3  icdx8nr13-icdx8nr13 {
>    cap gen `xvar'Xcht1= `xvar'*crhtw1
>    cap gen `xvar'Xcht2= `xvar'*crhtw2
>    cap gen `xvar'Xcht3= `xvar'*crhtw3
```

```
>    }
>
>
> // main effects model
> regress whppain age bcohort BSIposymp  BSIips whppa whpel ///
>    airw2-airw3 pillw1 pillw3 icdx1nr7 icdx2nr5  ///
>    icdx3nr3 icdx3nr7 icdx3nr12 icdx4nr19 icdx6nr14 icdx6nr17 ///
>    icdx7nr8 icdx7nr10  icdx7nr20 icdx7nr23 icdx7nr25 ///
>    icdx8nr3  icdx8nr13-icdx8nr13 if gender==2, ///
>    vce(cluster id)
>
> // full moderator model
> set more off
> regress whppain age bcohort BSIposymp  BSIips whppa whpel ///
>    airw2-airw3 pillw1 pillw3 icdx1nr7 icdx2nr5  ///
>    icdx3nr3 icdx3nr7 icdx3nr12 icdx4nr19 icdx6nr14 icdx6nr17 ///
>    icdx7nr8 icdx7nr10  icdx7nr20 icdx7nr23 icdx7nr25 ///
>    icdx8nr3  icdx8nr13-icdx8nr13  ///
>    whppaXcht1 icdx3nr3Xcht1-icdx3nr7Xcht1 icdx6nr17Xcht1-icdx7nr8Xcht1 ///
>     pillw3Xcht3 ///
>    icdx3nr3Xcht2 icdx3nr7Xcht2 ///
>    if gender==2, ///
>    vce(cluster id)
>
> // interactions with icdx6nr17 and icdx7nr8 could not be estimated with
> // Stata owing to collinearity
>
>
>
>
> // trimmed one moderator model
> set more off
> regress whppain age bcohort BSIposymp  BSIips whppa whpel ///
>    airw2-airw3 pillw1 pillw3 crhtw1 crhtw2 crhtw3 icdx1nr7 icdx2nr5  ///
>    icdx3nr3 icdx3nr7 icdx3nr12  ///
>    icdx7nr10  icdx7nr20 icdx7nr23 icdx7nr25 ///
>    icdx8nr3  icdx8nr13-icdx8nr13 ///
>    pillw1Xcht1 icdx3nr3Xcht1-icdx3nr7Xcht3 ///
>    icdx4nr19Xcht1 icdx6nr14Xcht1 ///
>    if gender==2, vce(cluster id)
> // many interactions were inestimable owing to collinearity
>
> // trimmed two moderator model for female pain
>    set more off
>
>
>
> title "Trimmed female pain moderators"
> des icdx3nr7 pillw3
```

```
> regress whppain age bcohort BSIposymp  BSIips whppa whpel ///
>    airw2-airw3 pillw1 pillw3 crhtw1 crhtw2 crhtw3 icdx1nr7 icdx2nr5  ///
>    icdx3nr3 icdx3nr7 icdx3nr12   ///
>    icdx7nr10  icdx7nr20 icdx7nr23 icdx7nr25 ///
>    icdx8nr3  icdx8nr13-icdx8nr13 ///
>     icdx3nr7Xcht3 ///  ///
>     pillw3Xcht3   ///
>    if gender==2, vce(cluster id)
> // many interactions were inestimable owing to collinearity
>
> *findings: stroke X cht3 b=155.013 p=0.007
> *findings: wave3 :pillw3Xcht3 b= .397  p=0.001
>
>
>
>
>
>
>
> title "tests for possible indirect effects for female pain model"
> set more off
> foreach var in age  inc4w1 occ5w3   suchrw2 pillw3 ///
>   defnw2  airw1  BSIposymp BSItotal WHPpa WHPsleep  ///
>    PTSDw1 icdx1nr5 icdx1nr18 icdx2nr8  icdx3nr3 icdx4nr9 ///
>     icdx4nr10 icdx4nr12  icdx5nr7 {
> sem (crhtw1-> `var')(`var'-> whppain) if gender==2, nocapslatent iterate(50)
> sem (crhtw2-> `var')(`var'-> whppain) if gender==2, nocapslatent iterate(50)
> sem (crhtw3-> `var')(`var'-> whppain) if gender==2, nocapslatent iterate(50)
> }
>
> *-+-- Possible indirect effects in the female pain model--------------------
> -
>
> * wave 1:   sleep whppa defnw2 age
> * wave 2:   sleep whppa BSItotal BSIposymp defnw2 age
> * wave 3:   sleep whppa BSItotal BSIposymp defnw2 suchrw2 age
> *------------------------------------------------------------------------------
> -
>
>
> // Pain is not explained or predicted by crhtw1-crhtw3 according to those te
> sts
> //   for males or females
>
>
>
>
>
>  // Bayesian check
```

```
>
>
>
>
> *---------- Supplementary Bayseian chunk ---------------------------------
> ----
> *---------- supplementary analysis  results not included owing to need for
> * voluminous sensitivity analysis of the prior and likelihood family
> *------------------------------------------------------------------------
> ----
> use chwide13jul2012, clear
>
>
> // Bayesian analysis for Pain wrt males using stata
>
> tempfile temp
> set more off
> mcmcreg whppain age illw3  pillw3  ///
>   defnw2  BSIposymp BSItotal WHPpa WHPsleep WHPel ///
>    crhtw1 crhtw2 crhtw3  if gender==1,  saving(`temp') d0(0.01) seed(12345)
> ///
>    iterate(1000)
>  use `temp', clear
>  gen byte chain=1
>  set more off
>  save mcmcreg_whppainm.dta, replace
>
> tempfile temp
> set more off
> use chwide12jul2012, clear
> mcmcreg whppain age illw3  pillw3  ///
>   defnw2  BSIposymp BSItotal WHPpa WHPsleep WHPel ///
>    crhtw1 crhtw2 crhtw3  if gender==1, saving(`temp') d0(0.01) seed(12345) /
> //
>    iterate(1000)
> use `temp', clear
> gen byte chain=2
> append using mcmcreg_whppain.dta
>    save mcmcreg_whppainm, replace
>    by chain, sort: summarize *
>
>
> foreach var in beta_age beta_illw3 beta_pillw3 beta_defnw2 beta_BSIposymp be
> ta_BSItotal ///
>   beta_WHPpa beta_WHPsleep beta_WHPel beta_crhtw1 beta_crhtw2 beta_crhtw3  s
> igma2 {
> set more off
> *tabstat `var', stat(min p5 mean p95 max )
> * tabstat `var', stat(min p5 mean p95 max)
```

```
>  summ `var', detail
> if `r(p5)' > 0 & `r(p95)' > 0 {
> kdensity `var', title(Male Distribution of `var') caption( "mean= `r(mean)'"
> )  ///
>   note("05% = `r(p5)'" "p95= `r(p95)'" "positive signif")
> gr save `var'm.gph, replace
>  }
> else if  `r(p5)' < 0  &  `r(p95)' < 0 {
> kdensity `var', title(Male Distribution of `var') caption( "mean= `r(mean)'"
> )  ///
>   note("05% = `r(p5)'" "p95= `r(p95)'" "negative significance")
> gr save `var'm.gph, replace
>   }
> else {
> kdensity `var', title(Male Distribution of `var') caption( "mean= `r(mean)'"
> )  ///
>   note("05% = `r(p5)'" "p95= `r(p95)'" "no stat signif")
> gr save `var'm.gph, replace
> }
> }
>
>
>
>
>
> save malesBayesPainModel, replace
> use chwide13jul2012, clear
>
> // Bayesian analysis for Pain wrt females using stata
>
> tempfile temp
> set more off
> mcmcreg whppain age illw3  pillw3  ///
>   defnw2  BSIposymp BSItotal WHPpa WHPsleep WHPel ///
>    crhtw1 crhtw2 crhtw3  if gender==2,  saving(`temp') d0(0.01) seed(12345)
> iterate(1000)
>  use `temp', clear
>  gen byte chain=1
>  set more off
>  save mcmcreg_whppainf.dta, replace
>
> tempfile temp
> set more off
> use chwide12jul2012, clear
> mcmcreg whppain age illw3  pillw3  ///
>   defnw2  BSIposymp BSItotal WHPpa WHPsleep WHPel ///
>    crhtw1 crhtw2 crhtw3  if gender==2, saving(`temp') d0(0.01) seed(12345)
> iterate(1000)
> use `temp', clear
```

```
> gen byte chain=2
> append using mcmcreg_whppain.dta
>    save mcmcreg_whppainf, replace
>    by chain, sort: summarize *
>
>
> foreach var in beta_age beta_illw3 beta_pillw3 beta_defnw2 beta_BSIposymp be
> ta_BSItotal ///
>   beta_WHPpa beta_WHPsleep beta_WHPel beta_crhtw1 beta_crhtw2 beta_crhtw3  s
> igma2 {
> set more off
> *tabstat `var', stat(min p5 mean p95 max )
> * tabstat `var', stat(min p5 mean p95 max)
>  summ `var', detail
> if `r(p5)' > 0 & `r(p95)' > 0 {
> kdensity `var', title(Female Distribution of `var') caption( "mean= `r(mean)
> '")  ///
>   note("05% = `r(p5)'" "p95= `r(p95)'" "positive signif")
> gr save `var'f.gph, replace
>  }
> else if  `r(p5)' < 0  &  `r(p95)' < 0 {
> kdensity `var', title(Female Distribution of `var') caption( "mean= `r(mean)
> '")  ///
>   note("05% = `r(p5)'" "p95= `r(p95)'" "negative significance")
> gr save `var'f.gph, replace
>   }
> else {
> kdensity `var', title(Female Distribution of `var') caption( "mean= `r(mean)
> '")  ///
>   note("05% = `r(p5)'" "p95= `r(p95)'" "no stat signif")
> gr save `var'f.gph, replace
> }
> }
>
>
> *--------- resuming frequentist analysis chunk------------------------------
> ---
> set linesize 80
>
>
> use chwide13jul2012, clear
>
>
> ***** Multivariate preliminaries owing to intercorrelation of Nottingham----
> ---
>
> pwcorr WHPpain WHPsleep WHPsociso WHPpa WHPel if gender==1, sig obs
> pwcorr  WHPpain WHPsleep WHPsociso WHPpa WHPel if gender==2, sig obs
>
```

```
>
> forvalues i=1/3 {
> forvalues k=1/2 {
> set more off
> di _skip(5)
> di "Gender=`k' and Wave = `i' :"
> mvreg  WHPpain WHPsleep WHPsociso WHPpa WHPel = crhtw`i' avgcumdosew`i' icdx
> cnt  ///
>    airw`i' radchw`i' kzchorn radhlw`i' if gender==`k'
> }
> }
>
>
> title "Zero order pain relationships for men and women in different waves"
> forvalues k=1/2 {
> regress WHPpain crhtw1 crhtw2 crhtw3 if gender==`k'
> // zero order relationships in wave 1 and 3 for men
> // zero order relationship in wave three for women
> }
> *
>
> cap gen illw3sq=illw3^2
> cap gen whpasq=whppa^2
> // h8 trimmed Pain male  ns
> regress whppain age bcohort marrw11 marrw33 childw2 emplw12 emplw13 emplw14
> emplw16 ///
>   emplw26 occ4w1 inc1w2-inc4w2 inc1w3-inc4w3 ///
>   cataw2 illw3 shfincw2 shrelaw2 sufamw2 suchrw3 ///
>   phlthw3 contw1 smokw2-smokw3 hospw1 efradw2 polprw3 airw1  ///
>   radchw3 illw3sq crhtw1 crhtw2 crhtw3 whpasq if gender==1, vce(cluster id)
>
>
>
>
>
> /*
>
> EQ(26) Modelling WHPpain by OLS-CS
>        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
> e3/Htests/H8/gals3.dta
>        The estimation sample is: 1 - 340
>        Dropped 5 observation(s) with missing values from the sample
>
>                   Coefficient  Std.Error      HACSE  t-HACSE  t-prob Part.R^
> 2
> edu6                 -6.63048      2.158      2.185    -3.03  0.0026   0.028
> 7
> emplw31              -6.39926      2.149      2.042    -3.13  0.0019   0.030
> 5
```

```
> occ4w1               -16.9523      5.665      5.066    -3.35  0.0009   0.034
> 6
> occ1w2               -5.29133      2.321      2.242    -2.36  0.0189   0.017
> 5
> occ4w3                16.6095      8.187      8.653     1.92  0.0558   0.011
> 7
> inc1w2                13.3593      3.484      3.973     3.36  0.0009   0.035
> 0
> inc2w2                12.6961      3.015      3.212     3.95  0.0001   0.047
> 7
> inc3w2                9.64192      3.355      3.454     2.79  0.0056   0.024
> 4
> inc4w2                15.7682      6.941      7.010     2.25  0.0252   0.016
> 0
> illw3                 2.22451      1.054      1.306     1.70  0.0895   0.009
> 2
> shhlw3               0.125097    0.03199    0.03229     3.87  0.0001   0.045
> 9
> shfincw1          -0.0468429    0.03015    0.02666    -1.76  0.0799   0.009
> 8
> sufamw2            0.0968918    0.02755    0.03258     2.97  0.0032   0.027
> 6
> suchrw1            0.0833139    0.09138    0.09259    0.900  0.3689   0.002
> 6
> phlthw3            -0.288120    0.04597    0.04579    -6.29  0.0000   0.112
> 6
> contw1                4.96577      1.795      2.268     2.19  0.0293   0.015
> 1
> smokw1               0.160225    0.07869    0.07784     2.06  0.0404   0.013
> 4
> smokw2            -0.0634916    0.04978    0.04501    -1.41  0.1594   0.006
> 3
> radchw3           -0.0394319    0.03215    0.03102    -1.27  0.2046   0.005
> 2
> age           U     0.365376    0.06866    0.06844     5.34  0.0000   0.083
> 7
> pCRHTw1       U    -0.220349      1.700      1.742   -0.127  0.8994   0.000
> 1
> pCRHTw2       U    0.0439025      3.834      3.440   0.0128  0.9898   0.000
> 0
> pCRHTw3       U      3.75391      3.482      3.315     1.13  0.2584   0.004
> 1
>
> sigma                17.2565  RSS                92909.1599
> log-likelihood      -1417.57
> no. of observations       335  no. of parameters          23
> mean(WHPpain)        19.3536  se(WHPpain)           22.6856
> When the log-likelihood constant is NOT included:
> AIC                  5.76256  SC                    6.02443
```

```
> HQ                    5.86696  FPE                   318.231
> When the log-likelihood constant is included:
> AIC                   8.60044  SC                    8.86230
> HQ                    8.70484  FPE                   5435.21
>
> Normality test:   Chi^2(2)  =   18.348 [0.0001]**
> Hetero test:      F(37,297) =   1.6393 [0.0141]*
> Hetero-X test:    F(128,206)=   1.4752 [0.0065]**
> RESET23 test:     F(2,310)  =   6.0568 [0.0026]**
>
> */
>
> gen pcrhtw1=crhtw1
> gen pcrhtw2 = crhtw2
> gen pcrhtw3= crhtw3
>
> title "H8 Female Pain model"
> regress whppain age bcohort educ6 emplw31 occ4w1 occ1w2 occ4w3 inc1w2-inc4w2
>  illw3 shhlw3 ///
>   shfincw1 sufamw2 suchrw1 phlthw3 contw1 smokw1 smokw2 radchw3 crhtw1 crhtw
> 2 crhtw3  ///
>    if gender==2, vce(cluster id)
> // no signif results
> rdiagrbst rfp1   // 20% valid
>
>
> // age is female mediator of pain without a direct effect
> sem (pcrhtw1 -> age)(age-> whppain)(pcrhtw1->whppain) if gender==2, nocapsla
> tent
> // illw1, illw2, illw3 are mediators and there is a direct effect at wave 3
> a medidator
> forvalues i=1/3 {
> sem (pcrhtw`i' -> illw1)(illw`i'-> whppain)(pcrhtw`i'->whppain) if gender==2
> , nocapslatent
> }
>
>
>
>
> title "Male physical ability model"
>
> *------ Male PA chunk ------------------------------------------------------
> ----
>
>
>
>
>
> *------ H8: Physical ability as a function of crhtw
```

```
> /*
> EQ( 4) Modelling WHPpa by OLS-CS
>        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/
>        phase3/data/ox/workingdatasets/MARS/guys.dta
>        The estimation sample is: 1 - 340
>        Dropped 3 observation(s) with missing values from the sample
>
>                  Coefficient  Std.Error  t-value  t-prob Part.R^2
> BSIsoma              1.13862     0.1624     7.01  0.0000   0.1321
> BSIdep              0.785203     0.2309     3.40  0.0008   0.0346
> BSIhos              -1.04403     0.2655    -3.93  0.0001   0.0457
> childw1             -1.70882     0.8279    -2.06  0.0398   0.0130
> emplw33              7.24315      1.888     3.84  0.0002   0.0436
> deaw1                3.83888      1.257     3.05  0.0025   0.0280
> illw3                2.76037     0.7702     3.58  0.0004   0.0382
> shfamw1           -0.0363219    0.01900    -1.91  0.0568   0.0112
> shhousw1           0.0943166    0.02406     3.92  0.0001   0.0454
> shrelaw2          -0.0351518    0.02429    -1.45  0.1488   0.0064
> sufamw2            0.0588756    0.01588     3.71  0.0002   0.0408
> suchrw1             0.147311    0.05851     2.52  0.0123   0.0192
> phlthw3            -0.106420    0.02165    -4.91  0.0000   0.0696
> physdisagw2        -0.141342    0.04688    -3.02  0.0028   0.0274
>
> sigma                10.9813  RSS                38949.9482
> log-likelihood      -1278.55
> no. of observations       337  no. of parameters          14
> mean(WHPpa)            9.5427  se(WHPpa)             14.5571
> When the log-likelihood constant is NOT included:
> AIC                  4.83304  SC                    4.99173
> HQ                   4.89629  FPE                   125.598
> When the log-likelihood constant is included:
> AIC                  7.67091  SC                    7.82961
> HQ                   7.73417  FPE                   2145.14
>
> Normality test:   Chi^2(2)  =   79.671 [0.0000]**
> Hetero test:      F(27,309) =   1.2388 [0.1963]
> Hetero-X test:    F(105,231)=   1.8860 [0.0000]**
> RESET23 test:     F(2,321)  =   7.4221 [0.0007]**
>
> Robust standard errors
>              Coefficients           SE        HACSE         HCSE        JHC
> SE
> BSIsoma             1.1386      0.16239      0.18603      0.17424      0.184
> 38
> BSIdep             0.78520      0.23090      0.27351      0.25808      0.271
> 64
> BSIhos             -1.0440      0.26549      0.30466      0.29082      0.304
> 33
> childw1            -1.7088      0.82790      0.83367      0.79466      0.821
```

```
> 70
> emplw33              7.2432       1.8879       2.2931       2.2673       2.36
> 31
> deaw1                3.8389       1.2574       1.5782       1.6798       1.78
> 74
> illw3                2.7604      0.77019       1.0096      0.90800      0.971
> 51
> shfamw1           -0.036322     0.019002     0.020292     0.020705     0.0215
> 57
> shhousw1           0.094317     0.024061     0.035886     0.033831     0.0352
> 50
> shrelaw2          -0.035152     0.024287     0.029372     0.027854     0.0290
> 34
> sufamw2            0.058876     0.015879     0.016071     0.015954     0.0166
> 87
> suchrw1             0.14731     0.058513      0.10492      0.10099      0.125
> 69
> phlthw3            -0.10642     0.021654     0.018411     0.019472     0.0205
> 27
> physdisagw2        -0.14134     0.046878     0.039933     0.040963     0.0431
> 72
>
>               Coefficients          t-SE      t-HACSE       t-HCSE       t-JHC
> SE
> BSIsoma              1.1386       7.0118       6.1207       6.5349        6.17
> 55
> BSIdep              0.78520       3.4006       2.8708       3.0425        2.89
> 06
> BSIhos              -1.0440      -3.9325      -3.4269      -3.5900       -3.43
> 06
> childw1             -1.7088      -2.0640      -2.0498      -2.1504       -2.07
> 96
> emplw33              7.2432       3.8366       3.1586       3.1946        3.06
> 51
> deaw1                3.8389       3.0529       2.4324       2.2853        2.14
> 78
> illw3                2.7604       3.5840       2.7343       3.0401        2.84
> 13
> shfamw1           -0.036322      -1.9115      -1.7900      -1.7543       -1.68
> 49
> shhousw1           0.094317       3.9199       2.6282       2.7878        2.67
> 56
> shrelaw2          -0.035152      -1.4474      -1.1968      -1.2620       -1.21
> 07
> sufamw2            0.058876       3.7079       3.6636       3.6902        3.52
> 82
> suchrw1             0.14731       2.5176       1.4040       1.4586        1.17
> 20
> phlthw3            -0.10642      -4.9145      -5.7803      -5.4652       -5.18
```

```
> 44
> physdisagw2       -0.14134      -3.0151      -3.5395      -3.4505      -3.27
> 39
>
> WHPpa =  + 1.14*BSIsoma + 0.785*BSIdep - 1.04*BSIhos - 1.71*childw1
> (SE)      (0.162)        (0.231)        (0.265)       (0.828)
>          + 7.24*emplw33 + 3.84*deaw1 + 2.76*illw3 - 0.0363*shfamw1
>           (1.89)         (1.26)       (0.77)       (0.019)
>          + 0.0943*shhousw1 - 0.0352*shrelaw2 + 0.0589*sufamw2
>           (0.0241)          (0.0243)          (0.0159)
>          + 0.147*suchrw1 - 0.106*phlthw3 - 0.141*physdisagw2
>           (0.0585)        (0.0217)        (0.0469)
>
> /*
> EQ( 2) Modelling WHPpa by OLS-CS
>        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
> e3/data/ox/workingdatasets/MARS/guys.dta
>        The estimation sample is: 1 - 340
>
>                   Coefficient  Std.Error  t-value  t-prob Part.R^2
> BSIsoma               1.33609     0.1591     8.40  0.0000   0.1742
> BSIdep                1.16750     0.2295     5.09  0.0000   0.0719
> BSIhos               -1.46692     0.2616    -5.61  0.0000   0.0860
> deaw1                 5.22227      1.287     4.06  0.0001   0.0470
> sufamw2             0.0634838    0.01584     4.01  0.0001   0.0459
> phlthw3             -0.128363    0.02032    -6.32  0.0000   0.1067
>
> sigma                 11.7675  RSS                46250.2562
> log-likelihood       -1317.63
> no. of observations       340  no. of parameters           6
> mean(WHPpa)           9.54859  se(WHPpa)             14.5562
> When the log-likelihood constant is NOT included:
> AIC                   4.94817  SC                    5.01574
> HQ                    4.97509  FPE                   140.917
> When the log-likelihood constant is included:
> AIC                   7.78605  SC                    7.85362
> HQ                    7.81297  FPE                   2406.80
>
> Normality test:   Chi^2(2)  =   100.71 [0.0000]**
> Hetero test:      F(12,327) =   1.3791 [0.1740]
> Hetero-X test:    F(27,312) =   1.0351 [0.4202]
> RESET23 test:     F(2,332)  =   3.7470 [0.0246]*
>
> */
>
>
> cap gen whppa = WHPpa
> // candidate illness variables for Physical ability
> /* candiate illnesses  for males
```

```
>
> foreach i in 7 {
> foreach j in 1 5 6 {
> foreach k in 3 {
> foreach m in 2 {
> foreach n in 4 {
> regress whppa icdx`i'nr1-icdx`i'nr28 if gender==1
> regress whppa icdx`j'nr1-icdx`j'nr18 if gender==1
> regress whppa icdx`k'nr1-icdx`k'nr11 if gender==1
> regress whppa icdx`m'nr1-icdx`m'nr8 if gender==1
> regress whppa icdx`n'nr1-icdx`n'nr20 if gender==1
> }
> }
> }
> }
> }
>
> */
>
>
> *-------Full male Physical ability crhtw model  **************/
> des icdx1nr5 icdx1nr18 icdx2nr4 icdx3nr3 icdx3nr7 icdx4nr8-icdx4nr10 icdx4nr
> 12  ///
>   icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1
>
> regress WHPpa age BSIsoma BSIdep deaw1 physdisagw2 ///
>    illw3 BSIanx medcow1 WHPpain crhtw1-crhtw3 ///
>    icdx1nr5 icdx1nr18 icdx2nr4 icdx3nr3 icdx3nr7 ///
>    icdx4nr8-icdx4nr10 icdx4nr12 icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1 ///
>    if gender==1, vce(cluster id)
>    di e(r2_a)
>
> *-------Trimmed male Physical ability crhtw model  **************/
218 . des icdx1nr5 icdx1nr18 icdx3nr3  icdx4nr9 icdx4nr12  ///
>   icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1

              storage  display     value
variable name   type   format      label      variable label
------------------------------------------------------------------------------
icdx1nr5        double %8.0g                  icdx1nr==401 hypertension
icdx1nr18       double %8.0g                  icdx1nr==732 osteochondropathies
icdx3nr3        double %8.0g                  icdx3nr==diabetes militus
icdx4nr9        double %8.0g                  icdx4nr==434.91 crbrl art ocl
                                                nos w infarc
icdx4nr12       double %8.0g                  icdx4nr==gastritis/duodenitis
icdx5nr7        double %8.0g                  icdx5nr==angina pectoris
icdx5nr10       double %8.0g                  icdx5nr==ac bronchitis/brnchial
icdx6nr7        double %8.0g                  icdx6nr==varicose veins in legs
icdx7nr1        double %8.0g                  icdx7nr==malignant melanoma skin
```

```
219 .
220 .
221 . * Graph preparation
222 .
223 . cap drop H8MalePApred

224 . cap drop h8MPAsepred

225 . cap drop MrPAres

226 . cap drop upbPAm

227 . cap drop lpbPAm

228 .
229 .
230 . regress WHPpa age BSIsoma BSIdep deaw1 physdisagw2 ///
    >    illw3 BSIanx medcow1 WHPpain crhtw1-crhtw3 ///
    >     icdx3nr3 ///
    >     icdx4nr9 icdx4nr12 icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1 ///
    >    if gender==1, vce(cluster id)

Linear regression                               Number of obs =     338
                                                F( 15,   337) =       .
                                                Prob > F      =       .
                                                R-squared     =  0.5878
                                                Root MSE      =  9.6286

                                   (Std. Err. adjusted for 338 clusters in id)
------------------------------------------------------------------------------
             |               Robust
       WHPpa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         age |   .0578442   .0597399     0.97   0.334    -.0596658    .1753543
     BSIsoma |   .5294401   .1869968     2.83   0.005     .1616121     .897268
      BSIdep |   .3052377   .3041135     1.00   0.316    -.2929623    .9034376
       deaw1 |   2.045296   1.306777     1.57   0.118    -.5251717    4.615763
  physdisagw2 |  -.1115784   .0384099    -2.90   0.004    -.1871319    -.036025
       illw3 |   1.827375   .8479948     2.15   0.032     .1593456    3.495405
      BSIanx |  -.7640778   .3060775    -2.50   0.013    -1.366141   -.1620147
     medcow1 |    .521033   .2245599     2.32   0.021     .0793172    .9627487
     WHPpain |   .4871103   .0573704     8.49   0.000     .3742612    .5999594
      crhtw1 |   1.401308   1.365234     1.03   0.305    -1.284147    4.086763
      crhtw2 |   .3348103   1.972859     0.17   0.865     -3.54586    4.215481
      crhtw3 |  -1.045175   1.796972    -0.58   0.561    -4.579869     2.48952
    icdx3nr3 |   10.71167   4.781384     2.24   0.026     1.306554    20.11679
    icdx4nr9 |  -17.75787   4.863508    -3.65   0.000    -27.32453   -8.191217
   icdx4nr12 |   16.40801   3.340722     4.91   0.000     9.836713     22.9793
```

```
     icdx5nr7 |   6.313072   3.440606     1.83   0.067    -.4546969    13.08084
    icdx5nr10 |   14.78105   1.392747    10.61   0.000     12.04148    17.52063
     icdx6nr7 |    22.5554   1.848801    12.20   0.000     18.91875    26.19204
     icdx7nr1 |   14.53545    2.90797     5.00   0.000     8.815386    20.25551
        _cons |  -2.409054   3.293573    -0.73   0.465    -8.887604    4.069497
------------------------------------------------------------------------------
```

```
231 .    di e(r2_a)
.56320566

232 .
233 .      predict H8MalePApred if gender==2, xb
(340 missing values generated)

234 .      predict h8MPAsepred if gender==2, stdp
(340 missing values generated)

235 .      predict MrPAres if gender==2, residual
(340 missing values generated)

236 .      gen upbPAm = H8MalePApred + 1.96*h8MPAsepred
(340 missing values generated)

237 .      gen lpbPAm = H8MalePApred - 1.96*h8MPAsepred
(340 missing values generated)

238 .
239 . scatter H8MalePApred MrPAres, color(sand) || lowess H8MalePApred  MrPAres  /
> //
>   || lowess upbPAm MrPAres || lowess lpbPAm MrPAres, ///
>   title(Prediction interval of Male Physical Ability model)   ///
>   ytitle(Predicted Male Physical Ability)

240 .
241 . fracpoly regress WHPpa age BSIsoma BSIdep deaw1 physdisagw2 ///
>    illw3 BSIanx medcow1 WHPpain crhtw1-crhtw3 ///
>     icdx3nr3 ///
>     icdx4nr9 icdx4nr12 icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1 ///
>    if gender==1, vce(cluster id) powers(5)
-> gen double IBSIs__1 = BSIsoma-11.67751479 if e(sample)
-> gen double IBSId__1 = BSIdep-8.124260355 if e(sample)
-> gen double Ideaw__1 = deaw1-.1715976331 if e(sample)
-> gen double Iphys__1 = physdisagw2-7.945266274 if e(sample)
-> gen double Iillw__1 = illw3-.4881656805 if e(sample)
-> gen double IBSIa__1 = BSIanx-7.621301775 if e(sample)
-> gen double Imedc__1 = medcow1-1.00591716 if e(sample)
-> gen double IWHPp__1 = WHPpain-10.15130164 if e(sample)
-> gen double Icrht__1 = crhtw1+.1461800117 if e(sample)
-> gen double Icrhta_1 = crhtw2+.18795889 if e(sample)
```

```
-> gen double Icrhtb_1 = crhtw3+.1881187736 if e(sample)
..
-> gen double Iage__1 = X-4.910946746 if e(sample)
-> gen double Iage__2 = X^5-2856.44669 if e(sample)
   (where: X = age/10)
```

Linear regression

Number of obs =	**338**
F(16, 337) =	**.**
Prob > F =	**.**
R-squared =	**0.5881**
Root MSE =	**9.6412**

(Std. Err. adjusted for **338** clusters in id)

WHPpa	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
Iage__1	**.1544549**	**.9829496**	**0.16**	**0.875**	**-1.779035**	**2.087945**
Iage__2	**.0001025**	**.0002729**	**0.38**	**0.708**	**-.0004344**	**.0006393**
IBSIs__1	**.5295921**	**.18688**	**2.83**	**0.005**	**.1619939**	**.8971903**
IBSId__1	**.3082517**	**.3056617**	**1.01**	**0.314**	**-.2929934**	**.9094968**
Ideaw__1	**2.057673**	**1.302912**	**1.58**	**0.115**	**-.5051915**	**4.620538**
Iphys__1	**-.1109997**	**.0385064**	**-2.88**	**0.004**	**-.1867428**	**-.0352566**
Iillw__1	**1.848158**	**.8669567**	**2.13**	**0.034**	**.1428291**	**3.553486**
IBSIa__1	**-.754578**	**.305347**	**-2.47**	**0.014**	**-1.355204**	**-.1539519**
Imedc__1	**.5136651**	**.2304303**	**2.23**	**0.026**	**.0604021**	**.9669281**
IWHPp__1	**.4843921**	**.0581433**	**8.33**	**0.000**	**.3700226**	**.5987617**
Icrht__1	**1.41358**	**1.382269**	**1.02**	**0.307**	**-1.305381**	**4.132542**
Icrhta_1	**.2692346**	**2.000677**	**0.13**	**0.893**	**-3.666155**	**4.204624**
Icrhtb_1	**-.9850723**	**1.794732**	**-0.55**	**0.583**	**-4.515361**	**2.545216**
icdx3nr3	**10.60845**	**4.784885**	**2.22**	**0.027**	**1.196442**	**20.02045**
icdx4nr9	**-18.11597**	**4.729218**	**-3.83**	**0.000**	**-27.41848**	**-8.813465**
icdx4nr12	**16.40428**	**3.350766**	**4.90**	**0.000**	**9.813226**	**22.99533**
icdx5nr7	**6.333594**	**3.475396**	**1.82**	**0.069**	**-.5026078**	**13.16979**
icdx5nr10	**14.73802**	**1.475263**	**9.99**	**0.000**	**11.83613**	**17.6399**
icdx6nr7	**22.65023**	**1.817573**	**12.46**	**0.000**	**19.07501**	**26.22545**
icdx7nr1	**14.35475**	**3.097656**	**4.63**	**0.000**	**8.261571**	**20.44793**
_cons	**8.822317**	**.7463177**	**11.82**	**0.000**	**7.354289**	**10.29035**

Deviance: **2469.37.** Best powers of **age** among **5** models fit: **1 5.**

```
242 .    di e(r2_a)
    .5620673

243 .
244 . // No significant risk => physical ability relationships
245 .
246 .  title "Male Moderators of Physical ability"
```

```
    ******************************************************************************
    > *
    ******************************************************************************
    > *
    *****                                                                    ****
    > *
    *****                                                                    ****
    > *
    *****                Male Moderators of Physical ability                 ****
    > *
    *****                                                                    ****
    > *
    *****                                                                    ****
    > *
    *****                                          17 Jul 2012    16:02:09  ****
    > *
    ******************************************************************************
    > *
    ******************************************************************************
    > *
```

```
247 .
248 . // constructing the potential moderators
249 . foreach xvar in age BSIsoma BSIdep deaw1 physdisagw2 ///
    >    illw3 BSIanx medcow1 WHPpain ///
    >     icdx3nr3 ///
    >     icdx4nr9 icdx4nr12 icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1 {
      2. forvalues j=1/3 {
      3.  cap gen `xvar'Xcht`j' = `xvar'*crhtw`j'
      4.  }
      5.  }
```

```
250 .
251 . title "Full moderator model of male physical ability"

    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****           Full moderator model of male physical ability              ****
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                                          17 Jul 2012    16:02:09   ****
    > *
    ********************************************************************************
    > *
    ********************************************************************************
    > *



252 .
253 . regress WHPpa age BSIsoma BSIdep deaw1 physdisagw2 ///
    >    illw3 BSIanx medcow1 WHPpain crhtw1-crhtw3 ///
    >     icdx3nr3 ///
    >     icdx4nr9 icdx4nr12 icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1 ///
    >     ageXcht1 ageXcht2 ageXcht3 BSIsomaXcht1-icdx7nr1Xcht3 ///
    >    if gender==1, vce(cluster id)
    note: icdx4nr9 omitted because of collinearity
    note: icdx4nr9Xcht1 omitted because of collinearity
    note: icdx4nr9Xcht3 omitted because of collinearity
    note: icdx4nr12Xcht1 omitted because of collinearity
    note: icdx4nr12Xcht2 omitted because of collinearity
    note: icdx4nr12Xcht3 omitted because of collinearity
    note: icdx5nr7Xcht3 omitted because of collinearity
    note: icdx5nr10Xcht1 omitted because of collinearity
    note: icdx5nr10Xcht3 omitted because of collinearity
    note: icdx6nr7Xcht1 omitted because of collinearity
    note: icdx6nr7Xcht2 omitted because of collinearity
    note: icdx6nr7Xcht3 omitted because of collinearity
    note: icdx7nr1Xcht1 omitted because of collinearity
    note: icdx7nr1Xcht2 omitted because of collinearity
    note: icdx7nr1Xcht3 omitted because of collinearity
```

Linear regression

Number of obs =	**338**
F(39, 337) =	**.**
Prob > F =	**.**
R-squared =	**0.6301**
Root MSE =	**9.6349**

(Std. Err. adjusted for **338** clusters in id
>)

WHPpa	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
age	**.0241283**	**.068565**	**0.35**	**0.725**	**-.110741**	**.158997**
BSIsoma	**.8484683**	**.3115319**	**2.72**	**0.007**	**.2356762**	**1.4612**
BSIdep	**.2659683**	**.3290953**	**0.81**	**0.420**	**-.3813714**	**.913308**
deaw1	**1.639015**	**1.567175**	**1.05**	**0.296**	**-1.443662**	**4.72169**
physdisagw2	**-.0765392**	**.0479539**	**-1.60**	**0.111**	**-.1708659**	**.017787**
illw3	**.9294245**	**1.257862**	**0.74**	**0.460**	**-1.544827**	**3.40367**
BSIanx	**-.4436983**	**.2975484**	**-1.49**	**0.137**	**-1.028984**	**.141587**
medcow1	**.5463451**	**.3664382**	**1.49**	**0.137**	**-.1744491**	**1.26713**
WHPpain	**.4381672**	**.0669789**	**6.54**	**0.000**	**.3064179**	**.569916**
crhtw1	**6.523711**	**7.321803**	**0.89**	**0.374**	**-7.878482**	**20.925**
crhtw2	**-16.35309**	**22.25881**	**-0.73**	**0.463**	**-60.13679**	**27.4306**
crhtw3	**15.37105**	**21.36352**	**0.72**	**0.472**	**-26.65159**	**57.3936**
icdx3nr3	**-24.26871**	**23.66035**	**-1.03**	**0.306**	**-70.80929**	**22.2718**
icdx4nr9	**0**	(omitted)				
icdx4nr12	**15.65736**	**3.807022**	**4.11**	**0.000**	**8.168837**	**23.1458**
icdx5nr7	**1.412903**	**6.994267**	**0.20**	**0.840**	**-12.34502**	**15.1708**
icdx5nr10	**15.76929**	**2.792074**	**5.65**	**0.000**	**10.27721**	**21.2613**

```
      icdx6nr7 |   23.74186   2.102228    11.29   0.000     19.60671      27.87
> 7
      icdx7nr1 |   15.98847   3.400819     4.70   0.000     9.298963     22.6779
> 8
      ageXcht1 |   .0511236    .149203     0.34   0.732    -.2423629     .344610
> 1
      ageXcht2 |   .1502065   .3816667     0.39   0.694    -.6005427     .900955
> 7
      ageXcht3 |  -.1597032    .375948    -0.42   0.671    -.8992037     .579797
> 2
 BSIsomaXcht1 |  -.1587751   .3988023    -0.40   0.691    -.9432305     .625680
> 3
 BSIsomaXcht2 |   .6596748    .955047     0.69   0.490     -1.21893     2.53827
> 9
 BSIsomaXcht3 |    -.92765   .8790863    -1.06   0.292    -2.656838     .801537
> 6
  BSIdepXcht1 |  -.9342188   .7081326    -1.32   0.188    -2.327136      .45869
> 8
  BSIdepXcht2 |   .0336583   2.172301     0.02   0.988     -4.23932     4.30663
> 7
  BSIdepXcht3 |   .8069147   1.946605     0.41   0.679    -3.022113     4.63594
> 2
   deaw1Xcht1 |  -2.932924   4.316421    -0.68   0.497    -11.42345     5.55759
> 9
   deaw1Xcht2 |   7.053726   7.376406     0.96   0.340    -7.455873     21.5633
> 2
   deaw1Xcht3 |  -3.832795    5.39286    -0.71   0.478     -14.4407     6.77511
> 3
physdisagw2~1 |   -.084288   .1684282    -0.50   0.617    -.4155911     .247015
> 1
physdisagw2~2 |   .3573559   .4090232     0.87   0.383    -.4472042     1.16191
> 6
physdisagw2~3 |  -.3087771   .3466503    -0.89   0.374    -.9906481     .373093
> 9
   illw3Xcht1 |   .3310153    1.54751     0.21   0.831     -2.71298      3.3750
> 1
   illw3Xcht2 |   .6753583   3.817655     0.18   0.860    -6.834077     8.18479
> 3
   illw3Xcht3 |   .3304215   4.317244     0.08   0.939    -8.161719     8.82256
> 2
  BSIanxXcht1 |   .2826062   .3298186     0.86   0.392    -.3661563     .931368
> 7
  BSIanxXcht2 |  -.0153624   2.462142    -0.01   0.995    -4.858465      4.8277
> 4
  BSIanxXcht3 |   -.619787   2.688677    -0.23   0.818    -5.908492     4.66891
> 7
 medcow1Xcht1 |  -1.370974   1.065415    -1.29   0.199    -3.466675     .724727
> 2
 medcow1Xcht2 |  -2.451122    2.33222    -1.05   0.294    -7.038665      2.1364
```

```
> 2
 medcow1Xcht3 |    4.33789   2.400142     1.81   0.072    -.3832582    9.05903
> 8
 WHPpainXcht1 |    .0727379   .1130571     0.64   0.520    -.1496487    .295124
> 4
 WHPpainXcht2 |    .0404668    .287969     0.14   0.888    -.5259763    .606909
> 9
 WHPpainXcht3 |   -.0666146    .251528    -0.26   0.791    -.5613772    .428148
> 1
icdx3nr3Xcht1 |   -18.97998   11.45086    -1.66   0.098    -41.50416     3.5441
> 9
icdx3nr3Xcht2 |    .2980147   22.35903     0.01   0.989    -43.68283    44.2788
> 6
icdx3nr3Xcht3 |    39.41313   31.74891     1.24   0.215    -23.03789    101.864
> 1
icdx4nr9Xcht1 |          0  (omitted)
icdx4nr9Xcht2 |   -52.49793   16.32479    -3.22   0.001    -84.60926    -20.386
> 6
icdx4nr9Xcht3 |          0  (omitted)
icdx4nr1~cht1 |          0  (omitted)
icdx4nr1~cht2 |          0  (omitted)
icdx4nr1~cht3 |          0  (omitted)
icdx5nr7Xcht1 |    3.347524   6.543811     0.51   0.609    -9.524337    16.2193
> 8
icdx5nr7Xcht2 |    6.289228   10.89848     0.58   0.564    -15.14839    27.7268
> 4
icdx5nr7Xcht3 |          0  (omitted)
icdx5nr10Xc~1 |          0  (omitted)
icdx5nr10Xc~2 |     6.08023   6.245243     0.97   0.331    -6.204339     18.364
> 8
icdx5nr10Xc~3 |          0  (omitted)
icdx6nr7Xcht1 |          0  (omitted)
icdx6nr7Xcht2 |          0  (omitted)
icdx6nr7Xcht3 |          0  (omitted)
icdx7nr1Xcht1 |          0  (omitted)
icdx7nr1Xcht2 |          0  (omitted)
icdx7nr1Xcht3 |          0  (omitted)
        _cons |   -4.800909   3.931749    -1.22   0.223    -12.53477    2.93295
> 2
--------------+-------------------------------------------------------------------

> —
```

```
254 .
255 .
256 . title "Trim of male physical ability moderators"

    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****              Trim of male physical ability moderators                ****
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                                          17 Jul 2012    16:02:09   ****
    > *
    ********************************************************************************
    > *
    ********************************************************************************
    > *

257 .  regress WHPpa age BSIsoma BSIdep deaw1 physdisagw2 ///
    >    illw3 BSIanx medcow1 WHPpain crhtw1-crhtw3 ///
    >     icdx3nr3 ///
    >     icdx4nr9 icdx4nr12 icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1 ///
    >      medcow1Xcht2 ///
    >     icdx3nr3Xcht1  physdisagw2Xcht2  ///
    >      if gender==1, vce(cluster id)

    Linear regression                               Number of obs =     338
                                                    F( 18,   337) =       .
                                                    Prob > F      =       .
                                                    R-squared     =  0.5967
                                                    Root MSE      =  9.5701
```

(Std. Err. adjusted for **338** clusters in id
>)

WHPpa	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
age	.0536852	.061197	0.88	0.381	-.0666911	.174061
BSIsoma	.5841086	.1970463	2.96	0.003	.196513	.971704
BSIdep	.3753539	.3098885	1.21	0.227	-.2342056	.984913
deaw1	1.836054	1.324466	1.39	0.167	-.769207	4.44131
physdisagw2	-.0574389	.0417909	-1.37	0.170	-.1396427	.024764
illw3	1.529605	.8850271	1.73	0.085	-.2112683	3.27047
BSIanx	-.7269585	.305447	-2.38	0.018	-1.327781	-.126135
medcow1	.3238851	.2478251	1.31	0.192	-.1635939	.81136
WHPpain	.4765141	.0575324	8.28	0.000	.3633461	.58968
crhtw1	1.357444	1.353635	1.00	0.317	-1.305195	4.02008
crhtw2	.4984941	1.973734	0.25	0.801	-3.383896	4.38088
crhtw3	-1.469133	1.820693	-0.81	0.420	-5.050488	2.11222
icdx3nr3	12.24827	3.527199	3.47	0.001	5.310167	19.1863
icdx4nr9	-24.67723	4.638743	-5.32	0.000	-33.80177	-15.5526
icdx4nr12	17.16877	3.31209	5.18	0.000	10.6538	23.6837
icdx5nr7	6.694614	3.298825	2.03	0.043	.2057321	13.183
icdx5nr10	14.34391	1.432519	10.01	0.000	11.5261	17.1617
icdx6nr7	22.64834	1.889337	11.99	0.000	18.93196	26.3647
icdx7nr1	15.24491	2.96479	5.14	0.000	9.413088	21.0767
medcow1Xcht2	.707715	.2602257	2.72	0.007	.1958438	1.21958

```
icdx3nr3Xcht1 |  -16.85925   5.746572    -2.93   0.004    -28.16292   -5.55558
> 1
physdisagw2~2 |  -.0716418    .037142    -1.93   0.055    -.1447011    .001417
> 6
        _cons |  -3.550309   3.375635    -1.05   0.294    -10.19028     3.0896
> 6
--------------+-------------------------------------------------------------
> —

258 .  * summary findings:
259 .  * wave 1 med condtn in wave 1  diabetes in wave 1
260 .  * wave 2: physical discomfort in wave 2
261 .
262 . title "Male physical ability indirect effects test"


*******************************************************************************
> *
*******************************************************************************
> *
*****                                                                      ****
> *
*****                                                                      ****
> *
*****            Male physical ability indirect effects test               ****
> *
*****                                                                      ****
> *
*****                                                                      ****
> *
*****                                          17 Jul 2012    16:02:09  ****
> *
*******************************************************************************
> *
*******************************************************************************
> *
```

```
263 . set more off

264 .  foreach var in age BSIsoma BSIdep deaw1 physdisagw2 ///
    >    illw3 BSIanx medcow1 WHPpain ///
    >     icdx3nr3 ///
    >     icdx4nr9 icdx4nr12 icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1 {
      2. sem (crhtw1-> `var')(`var'-> whppa) if gender==1, nocapslatent iterate(50
    > )
      3. sem (crhtw2-> `var')(`var'-> whppa) if gender==1, nocapslatent iterate(50
    > )
      4. sem (crhtw3-> `var')(`var'-> whppa) if gender==1, nocapslatent iterate(50
    > )
      5. }

    Endogenous variables

    Observed:  age whppa

    Exogenous variables

    Observed:  crhtw1

    Fitting target model:

    Iteration 0:   log likelihood = -3133.4458
    Iteration 1:   log likelihood = -3133.4458

    Structural equation model                       Number of obs      =       339
    Estimation method  = ml
    Log likelihood     = -3133.4458
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
age <-						
crhtw1	**4.266795**	**.6763452**	**6.31**	**0.000**	**2.941183**	**5.592408**
_cons	**49.78043**	**.635245**	**78.36**	**0.000**	**48.53537**	**51.02549**
whppa <-						
age	**.4123818**	**.0606164**	**6.80**	**0.000**	**.2935758**	**.5311877**
_cons	**-10.76585**	**3.07143**	**-3.51**	**0.000**	**-16.78574**	**-4.745961**
Variance						
e.age	**133.6667**	**10.26687**			**114.9854**	**155.383**
e.whppa	**186.0421**	**14.28981**			**160.0409**	**216.2677**

```
    LR test of model vs. saturated: chi2(1)   =      6.64, Prob > chi2 = 0.0100
```

Endogenous variables

Observed: **age whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-3123.9492**
Iteration 1: log likelihood = **-3123.9492**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-3123.9492**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
age <-						
crhtw2	**4.951499**	**.6691348**	**7.40**	**0.000**	**3.640019**	**6.262979**
_cons	**50.08515**	**.6280741**	**79.74**	**0.000**	**48.85415**	**51.31616**
whppa <-						
age	**.4123818**	**.0606164**	**6.80**	**0.000**	**.2935758**	**.5311877**
_cons	**-10.76585**	**3.07143**	**-3.51**	**0.000**	**-16.78574**	**-4.745961**
Variance						
e.age	**128.5885**	**9.876824**			**110.617**	**149.4798**
e.whppa	**186.0421**	**14.28981**			**160.0409**	**216.2677**

LR test of model vs. saturated: chi2(**1**) = **19.20**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **age whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

```
Iteration 0:   log likelihood = -3124.4426
Iteration 1:   log likelihood = -3124.4426

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -3124.4426
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
age <-						
crhtw3	4.882082	.6713623	7.27	0.000	3.566236	6.197928
_cons	50.07363	.629633	79.53	0.000	48.83957	51.30769
whppa <-						
age	.4123818	.0606164	6.80	0.000	.2935758	.5311877
_cons	-10.76585	3.07143	-3.51	0.000	-16.78574	-4.745961
Variance						
e.age	129.2045	9.924137			111.1469	150.1959
e.whppa	186.0421	14.28981			160.0409	216.2677

```
LR test of model vs. saturated: chi2(1)   =     22.88, Prob > chi2 = 0.0000

Endogenous variables

Observed:  BSIsoma whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood =  -2829.416
Iteration 1:   log likelihood =  -2829.416

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     =  -2829.416
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIsoma <-						
crhtw1	**2.705062**	**.2869551**	**9.43**	**0.000**	**2.142641**	**3.267484**
_cons	**12.07175**	**.2695174**	**44.79**	**0.000**	**11.54351**	**12.6**
whppa <-						
BSIsoma	**1.140767**	**.1292278**	**8.83**	**0.000**	**.8874849**	**1.394048**
_cons	**-3.819875**	**1.669799**	**-2.29**	**0.022**	**-7.092621**	**-.5471293**
Variance						
e.BSIsoma	**24.06104**	**1.848117**			**20.69827**	**27.97015**
e.whppa	**171.9222**	**13.20526**			**147.8943**	**199.8538**

LR test of model vs. saturated: chi2(**1**) = **0.80**, Prob > chi2 = **0.3718**

Endogenous variables

Observed: **BSIsoma whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-2807.4447**
Iteration 1: log likelihood = **-2807.4447**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2807.4447**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIsoma <-						
crhtw2	**3.234601**	**.2736389**	**11.82**	**0.000**	**2.698279**	**3.770924**
_cons	**12.28251**	**.2568474**	**47.82**	**0.000**	**11.77909**	**12.78592**
whppa <-						
BSIsoma	**1.140767**	**.1292278**	**8.83**	**0.000**	**.8874849**	**1.394048**
_cons	**-3.819875**	**1.669799**	**-2.29**	**0.022**	**-7.092621**	**-.5471293**

Variance						
e.BSIsoma	**21.50457**	**1.651756**			**18.49909**	**24.99834**
e.whppa	**171.9222**	**13.20526**			**147.8943**	**199.8538**

LR test of model vs. saturated: chi2(**1**) = **5.93**, Prob > chi2 = **0.0149**

Endogenous variables

Observed: **BSIsoma whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-2805.1526**
Iteration 1: log likelihood = **-2805.1526**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2805.1526**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIsoma <-						
crhtw3	**3.282815**	**.2723032**	**12.06**	**0.000**	**2.74911**	**3.816519**
_cons	**12.29222**	**.2553779**	**48.13**	**0.000**	**11.79169**	**12.79275**
whppa <-						
BSIsoma	**1.140767**	**.1292278**	**8.83**	**0.000**	**.8874849**	**1.394048**
_cons	**-3.819875**	**1.669799**	**-2.29**	**0.022**	**-7.092621**	**-.5471293**
Variance						
e.BSIsoma	**21.2554**	**1.632618**			**18.28475**	**24.70869**
e.whppa	**171.9222**	**13.20526**			**147.8943**	**199.8538**

LR test of model vs. saturated: chi2(**1**) = **7.74**, Prob > chi2 = **0.0054**

Endogenous variables

Observed: **BSIdep whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-2662.9175**
Iteration 1: log likelihood = **-2662.9175**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2662.9175**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIdep <-						
crhtw1	**.5548862**	**.1648543**	**3.37**	**0.001**	**.2317777**	**.8779948**
_cons	**8.199803**	**.1548364**	**52.96**	**0.000**	**7.89633**	**8.503277**
whppa <-						
BSIdep	**1.413114**	**.2647865**	**5.34**	**0.000**	**.8941423**	**1.932086**
_cons	**-1.963197**	**2.280185**	**-0.86**	**0.389**	**-6.432277**	**2.505883**
Variance						
e.BSIdep	**7.941215**	**.6099611**			**6.831351**	**9.231396**
e.whppa	**195.0542**	**14.98202**			**167.7934**	**226.744**

LR test of model vs. saturated: chi2(**1**) = **13.38**, Prob > chi2 = **0.0003**

Endogenous variables

Observed: **BSIdep whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-2651.7516**
Iteration 1: log likelihood = **-2651.7516**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2651.7516**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIdep <-						
crhtw2	**.8704939**	**.1622957**	**5.36**	**0.000**	**.5524002**	**1.188588**
_cons	**8.281121**	**.1523366**	**54.36**	**0.000**	**7.982547**	**8.579696**
whppa <-						
BSIdep	**1.413114**	**.2647865**	**5.34**	**0.000**	**.8941423**	**1.932086**
_cons	**-1.963197**	**2.280185**	**-0.86**	**0.389**	**-6.432277**	**2.505883**
Variance						
e.BSIdep	**7.564653**	**.5810375**			**6.507417**	**8.793655**
e.whppa	**195.0542**	**14.98202**			**167.7934**	**226.744**

LR test of model vs. saturated: chi2(**1**) = **27.11**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **BSIdep whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-2650.6659**
Iteration 1: log likelihood = **-2650.6659** (backed up)

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2650.6659**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIdep <-						
crhtw3	**.8942456**	**.1620792**	**5.52**	**0.000**	**.5765761**	**1.211915**
_cons	**8.285721**	**.152005**	**54.51**	**0.000**	**7.987796**	**8.583645**
whppa <-						
BSIdep	**1.413114**	**.2647865**	**5.34**	**0.000**	**.8941423**	**1.932086**
_cons	**-1.963197**	**2.280185**	**-0.86**	**0.389**	**-6.432277**	**2.505883**

Variance					
e.BSIdep	**7.530408**	**.5784071**		**6.477957**	**8.753846**
e.whppa	**195.0542**	**14.98202**		**167.7934**	**226.744**

LR test of model vs. saturated: chi2(**1**) = **30.60**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **deaw1 whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-2080.8683**
Iteration 1: log likelihood = **-2080.8683**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2080.8683**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
deaw1 <-						
crhtw1	**.0047246**	**.0290116**	**0.16**	**0.871**	**-.0521372**	**.0615864**
_cons	**.1776626**	**.0272487**	**6.52**	**0.000**	**.1242562**	**.231069**
whppa <-						
deaw1	**5.795987**	**1.561016**	**3.71**	**0.000**	**2.736452**	**8.855523**
_cons	**8.486787**	**.8219993**	**10.32**	**0.000**	**6.875698**	**10.09788**
Variance						
e.deaw1	**.245941**	**.0188906**			**.2115683**	**.2858982**
e.whppa	**203.1793**	**15.60611**			**174.7829**	**236.1891**

LR test of model vs. saturated: chi2(**1**) = **19.92**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **deaw1 whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-2076.8898**
Iteration 1: log likelihood = **-2076.8898**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2076.8898**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
deaw1 <-						
crhtw2	**.0425455**	**.0291734**	**1.46**	**0.145**	**-.0146333**	**.0997243**
_cons	**.1848198**	**.0273832**	**6.75**	**0.000**	**.1311498**	**.2384899**
whppa <-						
deaw1	**5.795987**	**1.561016**	**3.71**	**0.000**	**2.736452**	**8.855523**
_cons	**8.486787**	**.8219993**	**10.32**	**0.000**	**6.875698**	**10.09788**
Variance						
e.deaw1	**.2444268**	**.0187743**			**.2102657**	**.2841379**
e.whppa	**203.1793**	**15.60611**			**174.7829**	**236.1891**

LR test of model vs. saturated: chi2(**1**) = **37.92**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **deaw1 whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-2076.3415**
Iteration 1: log likelihood = **-2076.3415**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2076.3415**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
deaw1 <-						
crhtw3	**.0469941**	**.0291807**	**1.61**	**0.107**	**-.010199**	**.1041872**
_cons	**.1856505**	**.0273669**	**6.78**	**0.000**	**.1320122**	**.2392887**
whppa <-						
deaw1	**5.795987**	**1.561016**	**3.71**	**0.000**	**2.736452**	**8.855523**
_cons	**8.486787**	**.8219993**	**10.32**	**0.000**	**6.875698**	**10.09788**
Variance						
e.deaw1	**.2440928**	**.0187487**			**.2099784**	**.2837497**
e.whppa	**203.1793**	**15.60611**			**174.7829**	**236.1891**

LR test of model vs. saturated: chi2(**1**) = **41.90**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **physdisagw2 whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-3234.3092**
Iteration 1: log likelihood = **-3234.3092**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-3234.3092**

> —						
	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval
>]						
> —						
Structural						
physd~w2 <-						
crhtw1	**6.137606**	**.8624974**	**7.12**	**0.000**	**4.447142**	**7.8280**
> 7						
_cons	**9.059582**	**.8100851**	**11.18**	**0.000**	**7.471845**	**10.6473**
> 2						

```
> ─
  whppa <-
  physdisagw2 |   .1267652   .0494881     2.56   0.010     .0297703    .223760
> 1
        _cons |   8.474758   .8809347     9.62   0.000     6.748158    10.2013
> 6
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      |
  e.physdi~w2 |   217.3712   16.69618                      186.9914    252.686
> 7
      e.whppa |   207.4271   15.93238                      178.4371    241.127
> 1
──────────────┴──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     14.07, Prob > chi2 = 0.0002

Endogenous variables

Observed:  physdisagw2 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -3222.6182
Iteration 1:   log likelihood = -3222.6182

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -3222.6182

──────────────┬──────────────────────────────────────────────────────────────
> ─
              |                 OIM
              |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    |
  physd~w2 <- |
       crhtw2 |   7.158925   .8477969     8.44   0.000     5.497274    8.82057
> 7
        _cons |   9.504611   .7957728    11.94   0.000     7.944925     11.064
> 3
──────────────┴──────────────────────────────────────────────────────────────
```

```
> ─
  whppa <-     │
  physdisagw2 │   .1267652   .0494881     2.56   0.010     .0297703    .223760
> 1
        _cons │   8.474758   .8809347     9.62   0.000     6.748158    10.2013
> 6
─────────────┼────────────────────────────────────────────────────────────────
> ─
Variance       │
  e.physdi~w2 │   206.4232   15.85527                      177.5735    239.960
> 1
      e.whppa │   207.4271   15.93238                      178.4371    241.127
> 1
─────────────┴────────────────────────────────────────────────────────────────

> ─
LR test of model vs. saturated: chi2(1)   =     33.47, Prob > chi2 = 0.0000

Endogenous variables

Observed:  physdisagw2 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -3222.2885
Iteration 1:   log likelihood = -3222.2885

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -3222.2885

─────────────┬────────────────────────────────────────────────────────────────
> ─
             │                 OIM
             │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
─────────────┼────────────────────────────────────────────────────────────────
> ─
Structural     │
  physd~w2 <-  │
       crhtw3 │    7.16693   .8485563     8.45   0.000      5.50379     8.8300
> 7
        _cons │   9.507919   .7958133    11.95   0.000     7.948154    11.0676
> 8
  ─────────────┼────────────────────────────────────────────────────────────────
> ─
```

```
  whppa <-
  physdisagw2 |   .1267652   .0494881     2.56   0.010     .0297703    .223760
> 1
        _cons |   8.474758   .8809347     9.62   0.000     6.748158    10.2013
> 6
--------------+----------------------------------------------------------------
> -
Variance      |
  e.physdi~w2 |   206.4073   15.85405                      177.5598    239.941
> 5
      e.whppa |   207.4271   15.93238                      178.4371    241.127
> 1
--------------+----------------------------------------------------------------
> -
LR test of model vs. saturated: chi2(1)   =     37.89, Prob > chi2 = 0.0000

Endogenous variables

Observed:  illw3 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -2280.7795
Iteration 1:   log likelihood = -2280.7795

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -2280.7795

------------------------------------------------------------------------------
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
Structural   |
  illw3 <-   |
      crhtw1 |  -.0596154   .0551874    -1.08   0.280    -.1677807    .0485498
       _cons |   .4841529   .0518337     9.34   0.000     .3825607    .5857452
-------------+----------------------------------------------------------------
  whppa <-   |
       illw3 |   5.680648   .7766955     7.31   0.000     4.158353    7.202944
       _cons |   6.714194   .8277159     8.11   0.000       5.0919    8.336487
-------------+----------------------------------------------------------------
Variance     |
     e.illw3 |   .8899501   .0683567                      .7655706    1.034537
     e.whppa |   182.6246   14.02731                       157.101     212.295
```

LR test of model vs. saturated: chi2(1) = **27.19**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **illw3 whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-2268.3706**
Iteration 1: log likelihood = **-2268.3706**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2268.3706**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
illw3 <-						
crhtw2	**.2464559**	**.054132**	**4.55**	**0.000**	**.1403591**	**.3525526**
_cons	**.5379751**	**.0508102**	**10.59**	**0.000**	**.4383888**	**.6375613**
whppa <-						
illw3	**5.680648**	**.7766955**	**7.31**	**0.000**	**4.158353**	**7.202944**
_cons	**6.714194**	**.8277159**	**8.11**	**0.000**	**5.0919**	**8.336487**
Variance						
e.illw3	**.8415554**	**.0646395**			**.7239396**	**.9782798**
e.whppa	**182.6246**	**14.02731**			**157.101**	**212.295**

LR test of model vs. saturated: chi2(1) = **25.94**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **illw3 whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

```
Iteration 0:   log likelihood = -2262.0154
Iteration 1:   log likelihood = -2262.0154

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -2262.0154
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
illw3 <-						
crhtw3	.3093305	.053226	5.81	0.000	.2050096	.4136515
_cons	.5496237	.0499176	11.01	0.000	.4517869	.6474605
whppa <-						
illw3	5.680648	.7766955	7.31	0.000	4.158353	7.202944
_cons	6.714194	.8277159	8.11	0.000	5.0919	8.336487
Variance						
e.illw3	.8121021	.0623772			.6986027	.9440414
e.whppa	182.6246	14.02731			157.101	212.295

```
LR test of model vs. saturated: chi2(1)   =     25.61, Prob > chi2 = 0.0000

Endogenous variables

Observed:  BSIanx whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -2656.3059
Iteration 1:   log likelihood = -2656.3059

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -2656.3059
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIanx <-						
crhtw1	.58706	.1588541	3.70	0.000	.2757116	.8984084
_cons	7.697001	.1492009	51.59	0.000	7.404573	7.98943
whppa <-						
BSIanx	1.107621	.2787348	3.97	0.000	.5613114	1.653932
_cons	1.079673	2.258219	0.48	0.633	-3.346355	5.505701
Variance						
e.BSIanx	7.373665	.5663678			6.343121	8.571638
e.whppa	202.0313	15.51793			173.7954	234.8546

LR test of model vs. saturated: chi2(**1**) = **14.25**, Prob > chi2 = **0.0002**

Endogenous variables

Observed: **BSIanx whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-2637.1488**
Iteration 1: log likelihood = **-2637.1488**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2637.1488**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIanx <-						
crhtw2	1.070136	.1527452	7.01	0.000	.770761	1.369511
_cons	7.810482	.1433722	54.48	0.000	7.529478	8.091487
whppa <-						
BSIanx	1.107621	.2787348	3.97	0.000	.5613114	1.653932
_cons	1.079673	2.258219	0.48	0.633	-3.346355	5.505701

Variance						
e.BSIanx	**6.700548**	**.514666**			**5.764079**	**7.789162**
e.whppa	**202.0313**	**15.51793**			**173.7954**	**234.8546**

LR test of model vs. saturated: chi2(**1**) = **28.28**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **BSIanx whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-2634.4204**
Iteration 1: log likelihood = **-2634.4204**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-2634.4204**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIanx <-						
crhtw3	**1.122177**	**.1518041**	**7.39**	**0.000**	**.8246464**	**1.419708**
_cons	**7.820346**	**.1423686**	**54.93**	**0.000**	**7.541308**	**8.099383**
whppa <-						
BSIanx	**1.107621**	**.2787348**	**3.97**	**0.000**	**.5613114**	**1.653932**
_cons	**1.079673**	**2.258219**	**0.48**	**0.633**	**-3.346355**	**5.505701**
Variance						
e.BSIanx	**6.605884**	**.5073949**			**5.682646**	**7.679118**
e.whppa	**202.0313**	**15.51793**			**173.7954**	**234.8546**

LR test of model vs. saturated: chi2(**1**) = **31.84**, Prob > chi2 = **0.0000**
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed: **medcow1 whppa**

```
Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -2574.3788
Iteration 1:   log likelihood = -2574.3788

Structural equation model                       Number of obs      =       338
Estimation method  = ml
Log likelihood     = -2574.3788
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
medcow1 <-						
crhtw1	.5424444	.1266741	4.28	0.000	.2941676	.7907211
_cons	1.085212	.1188501	9.13	0.000	.8522697	1.318154
whppa <-						
medcow1	.9690895	.3531383	2.74	0.006	.2769511	1.661228
_cons	8.501626	.8594458	9.89	0.000	6.817143	10.18611
Variance						
e.medcow1	4.658475	.3583442			4.006514	5.416526
e.whppa	207.0116	15.92397			178.04	240.6976

```
LR test of model vs. saturated: chi2(1)   =     14.86, Prob > chi2 = 0.0001
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  medcow1 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -2572.1572
Iteration 1:   log likelihood = -2572.1572
```

```
Structural equation model                       Number of obs      =       338
Estimation method  = ml
Log likelihood     = -2572.1572
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
medcow1 <-						
crhtw2	.5269721	.1280089	4.12	0.000	.2760792	.7778649
_cons	1.104966	.120064	9.20	0.000	.8696452	1.340287
whppa <-						
medcow1	.9690895	.3531383	2.74	0.006	.2769511	1.661228
_cons	8.501626	.8594458	9.89	0.000	6.817143	10.18611
Variance						
e.medcow1	4.67672	.3597477			4.022206	5.43774
e.whppa	207.0116	15.92397			178.04	240.6976

```
LR test of model vs. saturated: chi2(1)   =     34.10, Prob > chi2 = 0.0000
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  medcow1 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -2573.1878
Iteration 1:   log likelihood = -2573.1878

Structural equation model                       Number of obs      =       338
Estimation method  = ml
Log likelihood     = -2573.1878
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
medcow1 <-						
crhtw3	**.4851739**	**.1286026**	**3.77**	**0.000**	**.2331175**	**.7372303**
_cons	**1.097187**	**.1205336**	**9.10**	**0.000**	**.860946**	**1.333429**
whppa <-						
medcow1	**.9690895**	**.3531383**	**2.74**	**0.006**	**.2769511**	**1.661228**
_cons	**8.501626**	**.8594458**	**9.89**	**0.000**	**6.817143**	**10.18611**
Variance						
e.medcow1	**4.712756**	**.3625197**			**4.053199**	**5.47964**
e.whppa	**207.0116**	**15.92397**			**178.04**	**240.6976**

LR test of model vs. saturated: chi2(**1**) = **38.63**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **WHPpain whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-3152.7352**
Iteration 1: log likelihood = **-3152.7352**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-3152.7352**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
WHPpain <-						
crhtw1	**3.750412**	**.9400436**	**3.99**	**0.000**	**1.907961**	**5.592864**
_cons	**10.74268**	**.8829189**	**12.17**	**0.000**	**9.012189**	**12.47317**
whppa <-						
WHPpain	**.6188354**	**.0343149**	**18.03**	**0.000**	**.5515794**	**.6860915**
_cons	**3.194516**	**.6641311**	**4.81**	**0.000**	**1.892843**	**4.496189**

Variance					
e.WHPpain	**258.2155**	**19.83341**		**222.1273**	**300.1668**
e.whppa	**107.9135**	**8.288784**		**92.83148**	**125.4458**

LR test of model vs. saturated: chi2(**1**) = **5.40**, Prob > chi2 = **0.0202**

Endogenous variables

Observed: **WHPpain whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-3133.7867**
Iteration 1: log likelihood = **-3133.7867**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-3133.7867**

	OIM				
	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
Structural					
WHPpain <-					
crhtw2	**6.464798**	**.9044495**	**7.15**	**0.000**	**4.692109**	**8.237486**
_cons	**11.39925**	**.848949**	**13.43**	**0.000**	**9.735336**	**13.06316**
whppa <-					
WHPpain	**.6188354**	**.0343149**	**18.03**	**0.000**	**.5515794**	**.6860915**
_cons	**3.194516**	**.6641311**	**4.81**	**0.000**	**1.892843**	**4.496189**
Variance					
e.WHPpain	**234.9328**	**18.04508**			**202.0986**	**273.1014**
e.whppa	**107.9135**	**8.288784**			**92.83148**	**125.4458**

LR test of model vs. saturated: chi2(**1**) = **4.96**, Prob > chi2 = **0.0259**

Endogenous variables

Observed: **WHPpain whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-3128.9028**
Iteration 1: log likelihood = **-3128.9028**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-3128.9028**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
WHPpain <-						
crhtw3	**7.018416**	**.8931795**	**7.86**	**0.000**	**5.267816**	**8.769015**
_cons	**11.50291**	**.8376629**	**13.73**	**0.000**	**9.861124**	**13.1447**
whppa <-						
WHPpain	**.6188354**	**.0343149**	**18.03**	**0.000**	**.5515794**	**.6860915**
_cons	**3.194516**	**.6641311**	**4.81**	**0.000**	**1.892843**	**4.496189**
Variance						
e.WHPpain	**228.6868**	**17.56533**			**196.7256**	**265.8408**
e.whppa	**107.9135**	**8.288784**			**92.83148**	**125.4458**

LR test of model vs. saturated: chi2(**1**) = **4.51**, Prob > chi2 = **0.0337**

Endogenous variables

Observed: **icdx3nr3 whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-1598.8869**
Iteration 1: log likelihood = **-1598.8869**

Structural equation model Number of obs = **339**
Estimation method = **ml**
Log likelihood = **-1598.8869**

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx3nr3 <- │
       crhtw1 │   .0041994   .0070484     0.60   0.551    -.0096151     .01801
> 4
        _cons │   .0153461     .00662     2.32   0.020      .002371     .028321
> 1
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx3nr3 │   27.55783   6.378184     4.32   0.000     15.05682     40.0588
> 4
        _cons │   9.106168   .7746084    11.76   0.000     7.587963     10.6243
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx3nr3 │   .0145165    .001115                      .0124877     .01687
> 5
      e.whppa │   200.4061    15.3931                      172.3973     232.965
> 3
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     19.24, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx3nr3 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1593.9397
Iteration 1:   log likelihood = -1593.9397

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1593.9397
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx3nr3 <- │
       crhtw2 │   .0148493   .0070674     2.10   0.036     .0009974    .028701
> 2
        _cons │   .0174817   .0066337     2.64   0.008     .0044797    .030483
> 6
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx3nr3 │   27.55783   6.378184     4.32   0.000     15.05682    40.0588
> 4
        _cons │   9.106168   .7746084    11.76   0.000     7.587963    10.6243
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx3nr3 │   .0143449   .0011018                     .0123401    .016675
> 5
      e.whppa │   200.4061    15.3931                     172.3973    232.965
> 3
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     36.14, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx3nr3 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1591.3169
Iteration 1:   log likelihood = -1591.3169

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1591.3169
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx3nr3 <- │
       crhtw3 │   .0212169   .0070261     3.02   0.003     .0074461    .034987
> 8
        _cons │   .0186588   .0065894     2.83   0.005     .0057439    .031573
> 7
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx3nr3 │   27.55783   6.378184     4.32   0.000     15.05682    40.0588
> 4
        _cons │   9.106168   .7746084    11.76   0.000     7.587963    10.6243
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx3nr3 │   .0141511   .0010869                     .0121733    .016450
> 1
      e.whppa │   200.4061    15.3931                     172.3973    232.965
> 3
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     38.10, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx4nr9 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1334.3152
Iteration 1:   log likelihood = -1334.3152

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1334.3152
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx4nr9 <- │
       crhtw1 │  -.0005647   .0031725    -0.18   0.859    -.0067826    .005653
> 1
        _cons │   .0028696   .0029797     0.96   0.336    -.0029705    .008709
> 6
   ───────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx4nr9 │   35.73278   14.43264     2.48   0.013     7.445329    64.0202
> 3
        _cons │   9.407219   .7838733    12.00   0.000     7.870855    10.9435
> 8
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx4nr9 │   .0029409   .0002259                     .0025299    .003418
> 7
      e.whppa │   207.6866   15.95231                     178.6603    241.428
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     20.00, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx4nr9 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1330.2696
Iteration 1:   log likelihood = -1330.2696

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1330.2696
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx4nr9 <- │
       crhtw2 │   .0048025   .0031895     1.51   0.132    -.0014488    .011053
> 9
        _cons │   .0038336   .0029938     1.28   0.200    -.0020342    .009701
> 3
   ───────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx4nr9 │   35.73278   14.43264     2.48   0.013     7.445329    64.0202
> 3
        _cons │   9.407219   .7838733    12.00   0.000     7.870855    10.9435
> 8
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx4nr9 │   .0029216   .0002244                     .0025133    .003396
> 3
      e.whppa │   207.6866   15.95231                     178.6603    241.428
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     38.24, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx4nr9 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1330.0077
Iteration 1:   log likelihood = -1330.0077

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1330.0077
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx4nr9 <- │
       crhtw3 │   .0046896    .003193     1.47   0.142    -.0015685    .010947
> 8
        _cons │    .003814   .0029945     1.27   0.203    -.0020552    .009683
> 2
   ───────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx4nr9 │   35.73278   14.43264     2.48   0.013     7.445329    64.0202
> 3
        _cons │   9.407219   .7838733    12.00   0.000     7.870855    10.9435
> 8
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx4nr9 │   .0029226   .0002245                     .0025141    .003397
> 4
      e.whppa │   207.6866   15.95231                     178.6603    241.428
> 7
──────────────┴──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     42.63, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx4nr12 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1334.5888
Iteration 1:   log likelihood = -1334.5888

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1334.5888
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx4~12 <- │
       crhtw1 │  -.0009735   .0031722    -0.31   0.759    -.0071908    .005243
> 8
        _cons │   .0028115   .0029794     0.94   0.345     -.003028     .00865
> 1
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
    icdx4nr12 │    33.9074   14.44562     2.35   0.019     5.594495     62.220
> 3
        _cons │   9.412604   .7845786    12.00   0.000     7.874858    10.9503
> 5
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
  e.icdx4nr12 │   .0029403   .0002258                     .0025294     .00341
> 8
      e.whppa │   208.0605   15.98103                     178.9819    241.863
> 3
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     20.11, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx4nr12 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1331.6493
Iteration 1:   log likelihood = -1331.6493

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1331.6493
```

```
> ─
                │                 OIM
                │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
────────────────┼──────────────────────────────────────────────────────────────
> ─
Structural      │
  icdx4~12 <-   │
       crhtw2   │  -.0010612   .0031996    -0.33   0.740    -.0073323      .0052
> 1
         _cons  │   .0027546   .0030033     0.92   0.359    -.0031318    .008640
> 9
   ─────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-      │
    icdx4nr12   │    33.9074   14.44562     2.35   0.019     5.594495     62.220
> 3
         _cons  │   9.412604   .7845786    12.00   0.000     7.874858    10.9503
> 5
────────────────┼──────────────────────────────────────────────────────────────
> ─
Variance        │
  e.icdx4nr12   │   .0029402   .0002258                     .0025293    .003417
> 9
       e.whppa  │   208.0605   15.98103                     178.9819    241.863
> 3
────────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     41.27, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx4nr12 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1331.3335
Iteration 1:   log likelihood = -1331.3335

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1331.3335
```

```
> ─
                │                 OIM
                │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
────────────────┼──────────────────────────────────────────────────────────────
> ─
Structural      │
  icdx4~12 <-   │
       crhtw3   │  -.0010542   .0032026    -0.33   0.742    -.0073312    .005222
> 9
         _cons  │   .0027556   .0030036     0.92   0.359    -.0031313    .008642
> 5
   ─────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-      │
    icdx4nr12   │    33.9074   14.44562     2.35   0.019     5.594495     62.220
> 3
         _cons  │   9.412604   .7845786    12.00   0.000     7.874858    10.9503
> 5
────────────────┼──────────────────────────────────────────────────────────────
> ─
Variance        │
  e.icdx4nr12   │   .0029402   .0002258                     .0025293    .003417
> 9
       e.whppa  │   208.0605   15.98103                     178.9819    241.863
> 3
────────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     45.76, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx5nr7 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1519.8299
Iteration 1:   log likelihood = -1519.8299

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1519.8299
```

```
------------------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> ─
Structural   |
  icdx5nr7 <-|
       crhtw1|  -.0003965   .0054788    -0.07   0.942    -.0111347    .010341
> 7
       _cons |   .0087932   .0051458     1.71   0.087    -.0012925    .018878
> 9
  -----------+----------------------------------------------------------------
> ─
  whppa <-   |
     icdx5nr7|   19.67818   8.364668     2.35   0.019     3.283738    36.0726
> 3
       _cons |   9.338482   .7868817    11.87   0.000     7.796222    10.8807
> 4
-------------+----------------------------------------------------------------
> ─
Variance     |
   e.icdx5nr7|   .0087711   .0006737                      .0075453    .010196
> 1
      e.whppa|   208.0454   15.97987                       178.969    241.845
> 8
-------------+----------------------------------------------------------------
> ─
LR test of model vs. saturated: chi2(1)   =     19.83, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx5nr7 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1515.4729
Iteration 1:   log likelihood = -1515.4729

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1515.4729
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx5nr7 <- │
       crhtw2 │   .0093199   .0055032     1.69   0.090    -.0014662    .020105
> 9
        _cons │   .0105645   .0051655     2.05   0.041     .0004403    .020688
> 6
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx5nr7 │   19.67818   8.364668     2.35   0.019     3.283738    36.0726
> 3
        _cons │   9.338482   .7868817    11.87   0.000     7.796222    10.8807
> 4
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx5nr7 │   .0086977   .0006681                      .0074821    .010110
> 7
      e.whppa │   208.0454   15.97987                       178.969    241.845
> 8
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     38.06, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx5nr7 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1515.1813
Iteration 1:   log likelihood = -1515.1813

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1515.1813
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx5nr7 <- │
       crhtw3 │   .0092469   .0055087     1.68   0.093      -.00155    .020043
> 8
        _cons │   .0105534   .0051663     2.04   0.041     .0004276    .020679
> 2
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx5nr7 │   19.67818   8.364668     2.35   0.019     3.283738    36.0726
> 3
        _cons │   9.338482   .7868817    11.87   0.000     7.796222    10.8807
> 4
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx5nr7 │   .0086989   .0006682                      .0074832    .010112
> 2
      e.whppa │   208.0454   15.97987                       178.969    241.845
> 8
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     42.39, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx5nr10 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1518.7511
Iteration 1:   log likelihood = -1518.7511

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1518.7511
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx5~10 <- │
       crhtw1 │   .0001098   .0054788     0.02   0.984    -.0106285    .010848
> 1
        _cons │   .0088652   .0051459     1.72   0.085    -.0012206    .018950
> 9
   ───────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
    icdx5nr10 │   23.19598   8.338031     2.78   0.005     6.853742    39.5382
> 2
        _cons │   9.307351    .784376    11.87   0.000     7.770003     10.844
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
  e.icdx5nr10 │   .0087712   .0006737                      .0075454    .010196
> 3
      e.whppa │   206.7225   15.87826                       177.831     240.30
> 8
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     19.84, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx5nr10 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1515.6964
Iteration 1:   log likelihood = -1515.6964

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1515.6964
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx5~10 <- │
       crhtw2 │   .0027437   .0055244     0.50   0.619    -.0080839    .013571
> 3
        _cons │   .0093544   .0051854     1.80   0.071    -.0008088    .019517
> 6
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
    icdx5nr10 │   23.19598   8.338031     2.78   0.005     6.853742    39.5382
> 2
        _cons │   9.307351    .784376    11.87   0.000     7.770003     10.844
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
  e.icdx5nr10 │   .0087649   .0006732                      .0075399    .010188
> 9
       e.whppa │   206.7225   15.87826                       177.831     240.30
> 8
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     39.93, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx5nr10 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1515.3786
Iteration 1:   log likelihood = -1515.3786

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1515.3786
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx5~10 <- │
       crhtw3 │   .0027586   .0055295     0.50   0.618    -.0080791    .013596
> 3
        _cons │   .0093579   .0051858     1.80   0.071    -.0008062    .019521
> 9
   ───────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
    icdx5nr10 │   23.19598   8.338031     2.78   0.005     6.853742    39.5382
> 2
        _cons │   9.307351    .784376    11.87   0.000     7.770003     10.844
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
  e.icdx5nr10 │   .0087648   .0006732                      .0075398    .010188
> 8
       e.whppa │   206.7225   15.87826                       177.831     240.30
> 8
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     44.36, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx6nr7 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1334.4895
Iteration 1:   log likelihood = -1334.4895

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1334.4895
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx6nr7 <- │
       crhtw1 │   .0006774   .0031724     0.21   0.831    -.0055404    .006895
> 1
        _cons │   .0030461   .0029796     1.02   0.307    -.0027938     .00888
> 6
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx6nr7 │   34.65962   14.44036     2.40   0.016     6.357037    62.9621
> 9
        _cons │   9.410385   .7842925    12.00   0.000       7.8732    10.9475
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx6nr7 │   .0029408   .0002259                     .0025298    .003418
> 5
      e.whppa │   207.9088   15.96938                     178.8514     241.68
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     19.50, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx6nr7 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1331.5716
Iteration 1:   log likelihood = -1331.5716

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1331.5716
```

```
───────────────┬──────────────────────────────────────────────────────────────
> ─
               │                 OIM
               │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
───────────────┼──────────────────────────────────────────────────────────────
> ─
Structural     │
  icdx6nr7 <-  │
        crhtw2 │   .0004308   .0032001     0.13   0.893    -.0058413    .006702
> 8
         _cons │   .0030291   .0030037     1.01   0.313    -.002858     .008916
> 3
  ─────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-     │
      icdx6nr7 │   34.65962   14.44036     2.40   0.016     6.357037    62.9621
> 9
         _cons │   9.410385   .7842925    12.00   0.000       7.8732    10.9475
> 7
───────────────┼──────────────────────────────────────────────────────────────
> ─
Variance       │
    e.icdx6nr7 │    .002941   .0002259                        .00253    .003418
> 8
       e.whppa │   207.9088   15.96938                      178.8514     241.68
> 7
───────────────┴──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     40.45, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx6nr7 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1331.2551
Iteration 1:   log likelihood = -1331.2551

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1331.2551
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx6nr7 <- │
       crhtw3 │   .0004278   .0032031     0.13   0.894    -.0058501    .006705
> 7
        _cons │   .0030287    .003004     1.01   0.313     -.002859    .008916
> 4
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx6nr7 │   34.65962   14.44036     2.40   0.016     6.357037    62.9621
> 9
        _cons │   9.410385   .7842925    12.00   0.000       7.8732    10.9475
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx6nr7 │    .002941   .0002259                      .00253    .003418
> 8
      e.whppa │   207.9088   15.96938                    178.8514     241.68
> 7
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     44.90, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx7nr1 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1334.8243
Iteration 1:   log likelihood = -1334.8243

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1334.8243
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx7nr1 <- │
       crhtw1 │   .0009926   .0031721     0.31   0.754    -.0052247    .007209
> 9
        _cons │   .0030909   .0029794     1.04   0.300    -.0027486    .008930
> 4
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx7nr1 │   32.41299   14.45574     2.24   0.025     4.080262    60.7457
> 2
        _cons │   9.417012    .785128    11.99   0.000     7.878189    10.9558
> 3
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx7nr1 │   .0029403   .0002258                      .0025294     .00341
> 8
      e.whppa │    208.352   16.00342                      179.2327    242.202
> 2
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     19.37, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx7nr1 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1331.9239
Iteration 1:   log likelihood = -1331.9239

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1331.9239
```

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  icdx7nr1 <- │
       crhtw2 │    .000603      .0032     0.19   0.851    -.0056689    .006874
> 8
        _cons │   .0030608   .0030036     1.02   0.308    -.0028262    .008947
> 8
  ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
     icdx7nr1 │   32.41299   14.45574     2.24   0.025     4.080262    60.7457
> 2
        _cons │   9.417012    .785128    11.99   0.000     7.878189    10.9558
> 3
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
   e.icdx7nr1 │   .0029408   .0002259                      .0025298    .003418
> 6
      e.whppa │    208.352   16.00342                      179.2327    242.202
> 2
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     40.28, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx7nr1 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1331.6089
Iteration 1:   log likelihood = -1331.6089

Structural equation model                       Number of obs      =       339
Estimation method  = ml
Log likelihood     = -1331.6089
```

```
------------------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> ─
Structural   |
  icdx7nr1 <-|
       crhtw3|    .000575    .003203     0.18   0.858    -.0057027    .006852
> 8
       _cons |   .0030558   .0030039     1.02   0.309    -.0028317    .008943
> 4
  ───────────┼────────────────────────────────────────────────────────────────
> ─
  whppa <-   |
     icdx7nr1|   32.41299   14.45574     2.24   0.025     4.080262    60.7457
> 2
       _cons |   9.417012    .785128    11.99   0.000     7.878189    10.9558
> 3
-------------+----------------------------------------------------------------
> ─
Variance     |
   e.icdx7nr1|   .0029409   .0002259                      .0025299    .003418
> 7
      e.whppa|    208.352   16.00342                      179.2327    242.202
> 2
-------------+----------------------------------------------------------------
> ─
LR test of model vs. saturated: chi2(1)   =     44.74, Prob > chi2 = 0.0000

265 .
266 . // possible indirect effects for males on physical ability
267 .
268 . // wave 1 whppain medcow1 BSIanx physdisagw2  BSIdep BSIsoma age
269 . // wave 2 icdx3nr3 medcow1 whpain   BSIanx illw3 physdisagw2  BSIdep BSIsoma
>  age
```

```
270 . // wave 3 icdx3nr3 medcow1 whppain  BSIanx illw3 physdisagw2  BSIdep BSIsoma
    >  age
271 .
272 .
273 .
274 .
275 . gr save MPAPredInt.gph, replace
    (file MPAPredInt.gph saved)

276 . gr export MPAPredInt.eps, replace
    (file MPAPredInt.eps written in EPS format)

277 . gr use  MPAPredInt.gph

278 .
279 .
280 . // No significant main effect for Risk perceptioin => Physical ability
281 .
282 .
283 .
284 .
285 .
286 .
287 .
288 . *-+-  No male threat physical ability relationship found
289 .
290 .
291 .
292 . *--------------------------- FemPA-chunk-----------------------------------
    > ----
293 .
294 .
295 .
296 . *------  female Physical ability
297 . /* testing for candiate illnesses for female model
    >
    > foreach i in 7 {
    > foreach j in 1 5 6 {
    > foreach k in 3 {
    > foreach m in 2 {
    > foreach n in 4 {
    > regress whppa icdx`i'nr1-icdx`i'nr28 if gender==2
    > regress whppa icdx`j'nr1-icdx`j'nr18 if gender==2
    > regress whppa icdx`k'nr1-icdx`k'nr11 if gender==2
    > regress whppa icdx`m'nr1-icdx`m'nr8 if gender==2
    > regress whppa icdx`n'nr1-icdx`n'nr20 if gender==2
    > }
    > }
    > }
```

```
    > }
    > }
    > */
298 .
299 . // Full female Physical ability model with candidate illnesses
300 . des icdx1nr12 icdx4nr5 icdx4nr12 icdx5nr4 icdx5nr5 icdx6nr5 icdx6nr6 icdx6nr
    > 12 ///
    >   icdx6nr15 icdx7nr10 icdx7nr19 icdx7nr26

              storage  display     value
variable name   type   format      label      variable label
------------------------------------------------------------------------------
icdx1nr12       double %8.0g                  icdx1nr==531 gastric ulcer
icdx4nr5        double %8.0g                  icdx4nr==rheum fev w/o hrt
                                                involv
icdx4nr12       double %8.0g                  icdx4nr==gastritis/duodenitis
icdx5nr4        double %8.0g                  icdx5nr==rheum fev w/o hrt
                                                involv
icdx5nr5        double %8.0g                  icdx5nr==hypertension
icdx6nr5        double %8.0g                  icdx6nr==hypertension
icdx6nr6        double %8.0g                  icdx6nr==acute myocardial
                                                infarct
icdx6nr12       double %8.0g                  icdx6nr==575.1 cholecystitis
icdx6nr15       double %8.0g                  icdx6nr==renal/ureteral calculus
icdx7nr10       double %8.0g                  icdx7nr==acute myocardial
                                                infarct
icdx7nr19       double %8.0g                  icdx7nr==oth gallbladder disordr
icdx7nr26       double %8.0g                  icdx7nr==intervertebral disc
                                                dis*

301 . regress WHPpa age marrw14 marrw15 CSprbslv injselfr ///
    >   BSIanx illw3  medcow1 sepaw2 inc2w1 inc2w3 inc4w3 WHPpain ///
    >   crhtw1 crhtw2 crhtw3  icdx1nr12  icdx1nr12 icdx4nr5 icdx4nr12 icdx5nr4 ///
    >     icdx5nr5 icdx6nr5 icdx6nr6 icdx6nr12 ///
    >   icdx6nr15 icdx7nr10 icdx7nr19 icdx7nr26 ///
    >   if gender==2, vce(cluster id)
note: icdx1nr12 omitted because of collinearity
note: icdx6nr15 omitted because of collinearity

Linear regression                               Number of obs =     360
                                                F( 20,   359) =       .
                                                Prob > F      =       .
                                                R-squared     =  0.6941
                                                Root MSE      =   12.35
```

(Std. Err. adjusted for **360** clusters in id)

WHPpa	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
age	.342642	.0586434	5.84	0.000	.2273142	.4579697
marrw14	20.0629	17.61741	1.14	0.256	-14.58339	54.7092
marrw15	6.572265	10.32968	0.64	0.525	-13.74203	26.88656
CSprbslv	-.2490141	.1556114	-1.60	0.110	-.5550386	.0570105
injselfr	3.927676	1.402029	2.80	0.005	1.170455	6.684897
BSIanx	-.5985432	.2248685	-2.66	0.008	-1.040768	-.1563182
illw3	1.64225	.7453057	2.20	0.028	.1765363	3.107964
medcow1	.6925395	.2106715	3.29	0.001	.2782343	1.106845
sepaw2	-9.833499	2.856635	-3.44	0.001	-15.45134	-4.215658
inc2w1	-1.478954	1.50891	-0.98	0.328	-4.446368	1.488459
inc2w3	-2.827452	1.413466	-2.00	0.046	-5.607166	-.0477392
inc4w3	-8.222078	3.466326	-2.37	0.018	-15.03893	-1.405222
WHPpain	.5732947	.0405816	14.13	0.000	.4934872	.6531023
crhtw1	1.179102	1.153757	1.02	0.307	-1.089869	3.448074
crhtw2	2.46974	2.156825	1.15	0.253	-1.771859	6.711339
crhtw3	-3.161378	1.911385	-1.65	0.099	-6.920295	.5975404
icdx1nr12	6.717806	6.058974	1.11	0.268	-5.197735	18.63335
icdx1nr12	0	(omitted)				
icdx4nr5	-.6352011	5.472252	-0.12	0.908	-11.3969	10.1265
icdx4nr12	.7603838	3.107902	0.24	0.807	-5.351597	6.872364
icdx5nr4	29.49139	3.320407	8.88	0.000	22.9615	36.02128
icdx5nr5	5.528182	11.70114	0.47	0.637	-17.4832	28.53956
icdx6nr5	9.906	2.129735	4.65	0.000	5.717677	14.09432
icdx6nr6	-18.4459	4.310556	-4.28	0.000	-26.92301	-9.968787
icdx6nr12	14.59511	5.834292	2.50	0.013	3.121424	26.06879
icdx6nr15	0	(omitted)				
icdx7nr10	14.50939	10.50235	1.38	0.168	-6.144459	35.16325
icdx7nr19	43.74917	12.49369	3.50	0.001	19.17915	68.3192
icdx7nr26	14.34909	12.02749	1.19	0.234	-9.304108	38.00228
_cons	-1.96652	4.347224	-0.45	0.651	-10.51574	6.582704

```
302 .
303 . // Trimmed female Physical ability model with candidate illnesses
304 . des  WHPpa age marrw14 marrw15 CSprbslv injselfr ///
    >                 BSIanx illw3  medcow1 sepaw2 inc2w1 inc2w3 inc4w3 WHPpain //
    > /
    >                 crhtw1 crhtw2 crhtw3    icdx5nr4 ///
    >         icdx6nr5 icdx6nr6 icdx6nr12 ///
    >                 icdx7nr19

                storage  display     value
    variable name   type   format      label      variable label
    ------------------------------------------------------------------------------
    WHPpa           double %9.0g                  Wtd Health Profile Physical
                                                    Ability Pt 1 Subscale
    age             double %8.0g                * Respondent's age
    marrw14         byte   %8.0g                 marrw1==4. separated
    marrw15         byte   %8.0g                 marrw1==5. divorced
    CSprbslv        double %9.0g                  Coping Problem Solving Subscale
    injselfr        double %9.0g       dum        Were u injured because of
                                                    Chornobyl acc in 1986?
    BSIanx          double %9.0g                  Basic symptom inventory Anxiety
                                                    subscale
    illw3           double %8.0g                  Total number of illnesses
                                                    experienced in time period
                                                    1996-NOW
    medcow1         double %8.0g                  number of medical visits for a
                                                    medical condition per year
                                                    1976-1986
    sepaw2          double %8.0g                  Total number of separations
                                                    experienced in time period
                                                    1987-1996
    inc2w1          double %15.0g      LABJ       Income is just sufficient for
                                                    basic neccessities in 1986
    inc2w3          double %15.0g      LABJ       Income is just sufficient for
                                                    basic neccessities NOW
    inc4w3          double %15.0g      LABJ       Income allows to comfortably
                                                    afford luxury items NOW
    WHPpain         double %9.0g                  Wtd Health Profile Pain Pt 1
                                                    subscale
    crhtw1          float  %9.0g                  Chornobyl related health threat:
                                                    wave 1 alpha =
                                                    .7962935573200089
    crhtw2          float  %9.0g                  Chornobyl related health threat:
                                                    wave 2 alpha =
                                                    .8219889682935094
    crhtw3          float  %9.0g                  Chornobyl related health threat:
                                                    wave 3 alpha =
                                                    .8347477221944793
    icdx5nr4        double %8.0g                  icdx5nr==rheum fev w/o hrt
```

```
                                                  involv
icdx6nr5        double %8.0g                  icdx6nr==hypertension
icdx6nr6        double %8.0g                  icdx6nr==acute myocardial
                                                  infarct
icdx6nr12       double %8.0g                  icdx6nr==575.1 cholecystitis
icdx7nr19       double %8.0g                  icdx7nr==oth gallbladder disordr

305 .
306 .
307 . * Graph preparation
308 .
309 . cap drop H8FemPApred

310 . cap drop h8FPAsepred

311 . cap drop FrPAres

312 . cap drop upbF

313 . cap drop lpbF

314 .
315 .
316 . regress WHPpa age marrw14 marrw15 CSprbslv injselfr ///
    >         BSIanx illw3  medcow1 sepaw2 inc2w1 inc2w3 inc4w3 WHPpain ///
    >         crhtw1 crhtw2 crhtw3    icdx5nr4 ///
    >     icdx6nr5 icdx6nr6 icdx6nr12 ///
    >         icdx7nr19 if gender==2, vce(cluster id)

Linear regression                               Number of obs =     360
                                                F( 17,   359) =       .
                                                Prob > F      =       .
                                                R-squared     =  0.6892
                                                Root MSE      =  12.339

                                   (Std. Err. adjusted for 360 clusters in id)
------------------------------------------------------------------------------
             |               Robust
       WHPpa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         age |   .3482028    .059034     5.90   0.000     .2321069    .4642986
     marrw14 |   19.62981   17.55158     1.12   0.264    -14.88702    54.14664
     marrw15 |   7.810871   9.178617     0.85   0.395    -10.23974    25.86148
    CSprbslv |  -.2572574   .1528363    -1.68   0.093    -.5578243    .0433096
    injselfr |   3.826369   1.403084     2.73   0.007     1.067073    6.585665
      BSIanx |  -.6087282   .2229695    -2.73   0.007    -1.047219   -.1702377
       illw3 |   1.756534   .7445011     2.36   0.019     .2924022    3.220665
     medcow1 |   .6841996   .2016887     3.39   0.001     .2875597    1.080839
      sepaw2 |  -9.869247   2.905035    -3.40   0.001    -15.58227   -4.156222
```

inc2w1	-1.056651	1.497261	-0.71	0.481	-4.001156	1.887854
inc2w3	-3.014879	1.407928	-2.14	0.033	-5.783703	-.246056
inc4w3	-8.317145	3.472502	-2.40	0.017	-15.14615	-1.488143
WHPpain	.5860507	.0407996	14.36	0.000	.5058145	.6662869
crhtw1	1.085233	1.211396	0.90	0.371	-1.29709	3.467557
crhtw2	2.663147	2.260917	1.18	0.240	-1.783158	7.109451
crhtw3	-3.222642	1.933385	-1.67	0.096	-7.024826	.5795418
icdx5nr4	28.21617	3.251006	8.68	0.000	21.82276	34.60957
icdx6nr5	16.23052	6.727014	2.41	0.016	3.001214	29.45982
icdx6nr6	-19.87407	4.324977	-4.60	0.000	-28.37955	-11.3686
icdx6nr12	13.41546	5.62233	2.39	0.018	2.358615	24.4723
icdx7nr19	49.72662	4.86081	10.23	0.000	40.16738	59.28586
_cons	-2.032377	4.308756	-0.47	0.637	-10.50595	6.441197

```
317 .  di e(r2_a)
    .66987567

318 .     predict H8FemPApred if gender==2, xb
    (342 missing values generated)

319 .      predict h8FPAsepred if gender==2, stdp
    (346 missing values generated)

320 .      predict FrPAres if gender==2, residual
    (342 missing values generated)

321 .      gen upbF = H8FemPApred + 1.96*h8FPAsepred
    (346 missing values generated)

322 .      gen lpbF = H8FemPApred - 1.96*h8FPAsepred
    (346 missing values generated)

323 .
324 . scatter H8FemPApred FrPAres, color(sand) || lowess H8FemPApred  FrPAres  ///
    >   || lowess upbF FrPAres || lowess lpbF FrPAres, ///
    >   title(Prediction interval of Female Physical Ability model)   ///
    >   ytitle(Predicted Female Physical Ability)
```

```
325 .
326 . gr save FPAPredInt.gph, replace
    (file FPAPredInt.gph saved)

327 . gr export FPAPredInt.eps, replace
    (file FPAPredInt.eps written in EPS format)

328 . gr use  FPAPredInt.gph

329 .
330 . // no significant perceived risk => physical ability main effects
331 .
332 .
333 .  title "Female physical ability indirect effects test"


    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****           Female physical ability indirect effects test              ****
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                                          17 Jul 2012    16:02:25  ****
    > *
    ********************************************************************************
    > *
    ********************************************************************************
    > *
```

```
334 . set more off

335 .  foreach var in age BSIsoma BSIdep deaw1 physdisagw2 ///
    >    illw3 BSIanx medcow1 WHPpain  ///
    >     icdx3nr3 ///
    >     icdx4nr9 icdx4nr12 icdx5nr7 icdx5nr10 icdx6nr7 icdx7nr1 {
      2. sem (crhtw1-> `var')(`var'-> whppa) if gender==2, nocapslatent iterate(50
    > )
      3. sem (crhtw2-> `var')(`var'-> whppa) if gender==2, nocapslatent iterate(50
    > )
      4. sem (crhtw3-> `var')(`var'-> whppa) if gender==2, nocapslatent iterate(50
    > )
      5. }
    (1 observations with missing values excluded;
     specify option 'method(mlmv)' to use all observations)

    Endogenous variables

    Observed:  age whppa

    Exogenous variables

    Observed:  crhtw1

    Fitting target model:

    Iteration 0:   log likelihood = -3457.9701
    Iteration 1:   log likelihood = -3457.9701

    Structural equation model                       Number of obs      =       362
    Estimation method  = ml
    Log likelihood     = -3457.9701
```

	OIM				
	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
Structural					
age <-					
crhtw1	**3.218873**	**.6364183**	**5.06**	**0.000**	**1.971516** **4.46623**
_cons	**49.84232**	**.6063362**	**82.20**	**0.000**	**48.65393** **51.03072**
whppa <-					
age	**.9102984**	**.082299**	**11.06**	**0.000**	**.7489954** **1.071601**
_cons	**-27.24484**	**4.250053**	**-6.41**	**0.000**	**-35.57479** **-18.91489**
Variance					
e.age	**130.49**	**9.699243**			**112.7997** **150.9546**
e.whppa	**342.5539**	**25.46183**			**296.1145** **396.2765**

LR test of model vs. saturated: chi2(1) = **2.57**, Prob > chi2 = **0.1088**

Endogenous variables

Observed: **age whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-3435.4369**
Iteration 1: log likelihood = **-3435.4369**

Structural equation model — Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-3435.4369**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
age <-						
crhtw2	**3.897443**	**.6851925**	**5.69**	**0.000**	**2.554491**	**5.240396**
_cons	**49.54513**	**.6075589**	**81.55**	**0.000**	**48.35434**	**50.73593**
whppa <-						
age	**.9103239**	**.0818546**	**11.12**	**0.000**	**.7498917**	**1.070756**
_cons	**-27.24629**	**4.223246**	**-6.45**	**0.000**	**-35.5237**	**-18.96888**
Variance						
e.age	**128.9608**	**9.57237**			**111.5002**	**149.1557**
e.whppa	**341.6103**	**25.35669**			**295.3581**	**395.1055**

LR test of model vs. saturated: chi2(1) = **10.05**, Prob > chi2 = **0.0015**

Endogenous variables

Observed: **age whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

```
Iteration 0:   log likelihood =  -3445.014
Iteration 1:   log likelihood =  -3445.014

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     =  -3445.014
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
age <-						
crhtw3	3.646918	.6723377	5.42	0.000	2.32916	4.964675
_cons	49.58731	.6093473	81.38	0.000	48.39301	50.78161
whppa <-						
age	.9103239	.0818546	11.12	0.000	.7498917	1.070756
_cons	-27.24629	4.223246	-6.45	0.000	-35.5237	-18.96888
Variance						
e.age	129.9244	9.643895			112.3333	150.2702
e.whppa	341.6103	25.35669			295.3581	395.1055

```
LR test of model vs. saturated: chi2(1)   =     11.41, Prob > chi2 = 0.0007
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  BSIsoma whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -3198.3058
Iteration 1:   log likelihood = -3198.3058

Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     = -3198.3058
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIsoma <-						
crhtw1	**.8048852**	**.3153465**	**2.55**	**0.011**	**.1868174**	**1.422953**
_cons	**13.62769**	**.3004408**	**45.36**	**0.000**	**13.03883**	**14.21654**
whppa <-						
BSIsoma	**1.96533**	**.1677785**	**11.71**	**0.000**	**1.63649**	**2.294169**
_cons	**-8.476903**	**2.495671**	**-3.40**	**0.001**	**-13.36833**	**-3.585478**
Variance						
e.BSIsoma	**32.03819**	**2.38138**			**27.69482**	**37.06272**
e.whppa	**332.3496**	**24.70335**			**287.2935**	**384.4717**

LR test of model vs. saturated: chi2(**1**) = **8.65**, Prob > chi2 = **0.0033**

Endogenous variables

Observed: **BSIsoma whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-3163.6622**
Iteration 1: log likelihood = **-3163.6622**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-3163.6622**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIsoma <-						
crhtw2	**1.964404**	**.328986**	**5.97**	**0.000**	**1.319604**	**2.609205**
_cons	**13.37869**	**.2917112**	**45.86**	**0.000**	**12.80694**	**13.95043**
whppa <-						
BSIsoma	**1.968322**	**.1672464**	**11.77**	**0.000**	**1.640525**	**2.296119**
_cons	**-8.532494**	**2.485088**	**-3.43**	**0.001**	**-13.40318**	**-3.661811**

Variance						
e.BSIsoma	**29.72948**	**2.206729**			**25.70427**	**34.38503**
e.whppa	**331.5103**	**24.607**			**286.6256**	**383.4239**

LR test of model vs. saturated: chi2(**1**) = **8.54**, Prob > chi2 = **0.0035**

Endogenous variables

Observed: **BSIsoma whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-3169.2668**
Iteration 1: log likelihood = **-3169.2668**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-3169.2668**

	OIM					
	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIsoma <-						
crhtw3	**2.055796**	**.3193004**	**6.44**	**0.000**	**1.429978**	**2.681613**
_cons	**13.36249**	**.2893856**	**46.18**	**0.000**	**12.79531**	**13.92968**
whppa <-						
BSIsoma	**1.968322**	**.1672464**	**11.77**	**0.000**	**1.640525**	**2.296119**
_cons	**-8.532494**	**2.485088**	**-3.43**	**0.001**	**-13.40318**	**-3.661811**
Variance						
e.BSIsoma	**29.30318**	**2.175086**			**25.33569**	**33.89198**
e.whppa	**331.5103**	**24.607**			**286.6256**	**383.4239**

LR test of model vs. saturated: chi2(**1**) = **7.58**, Prob > chi2 = **0.0059**
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed: **BSIdep whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-3083.9248**
Iteration 1: log likelihood = **-3083.9248**

Structural equation model Number of obs = **362**
Estimation method = **ml**
Log likelihood = **-3083.9248**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIdep <-						
crhtw1	**.3880135**	**.2084177**	**1.86**	**0.063**	**-.0204776**	**.7965047**
_cons	**9.614106**	**.1985662**	**48.42**	**0.000**	**9.224923**	**10.00329**
whppa <-						
BSIdep	**1.952909**	**.2812052**	**6.94**	**0.000**	**1.401757**	**2.504061**
_cons	**-.3597985**	**2.916346**	**-0.12**	**0.902**	**-6.075732**	**5.356135**
Variance						
e.BSIdep	**13.99461**	**1.040211**			**12.09739**	**16.18938**
e.whppa	**404.4403**	**30.06181**			**349.611**	**467.8684**

LR test of model vs. saturated: chi2(**1**) = **11.60**, Prob > chi2 = **0.0007**

Endogenous variables

Observed: **BSIdep whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-3049.2186**
Iteration 1: log likelihood = **-3049.2186**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-3049.2186**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIdep <-						
crhtw2	**1.222397**	**.2175138**	**5.62**	**0.000**	**.7960774**	**1.648716**
_cons	**9.445589**	**.192869**	**48.97**	**0.000**	**9.067572**	**9.823605**
whppa <-						
BSIdep	**1.961005**	**.2805733**	**6.99**	**0.000**	**1.411092**	**2.510919**
_cons	**-.4692658**	**2.907125**	**-0.16**	**0.872**	**-6.167126**	**5.228595**
Variance						
e.BSIdep	**12.99589**	**.9646457**			**11.23632**	**15.03101**
e.whppa	**403.6796**	**29.96391**			**349.0235**	**466.8947**

LR test of model vs. saturated: chi2(**1**) = **15.40**, Prob > chi2 = **0.0001**

Endogenous variables

Observed: **BSIdep whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-3052.7098**
Iteration 1: log likelihood = **-3052.7098**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-3052.7098**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIdep <-						
crhtw3	**1.360398**	**.2098845**	**6.48**	**0.000**	**.9490322**	**1.771764**
_cons	**9.421549**	**.1902207**	**49.53**	**0.000**	**9.048723**	**9.794375**
whppa <-						
BSIdep	**1.961005**	**.2805733**	**6.99**	**0.000**	**1.411092**	**2.510919**
_cons	**-.4692658**	**2.907125**	**-0.16**	**0.872**	**-6.167126**	**5.228595**

Variance					
e.BSIdep	**12.66125**	**.9398062**		**10.94698**	**14.64397**
e.whppa	**403.6796**	**29.96391**		**349.0235**	**466.8947**

LR test of model vs. saturated: chi2(**1**) = **14.05**, Prob > chi2 = **0.0002**
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed: **deaw1 whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-2545.5755**
Iteration 1: log likelihood = **-2545.5755**

Structural equation model Number of obs = **362**
Estimation method = **ml**
Log likelihood = **-2545.5755**

	OIM				
	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
Structural					
deaw1 <-					
crhtw1	**.1533406**	**.0446205**	**3.44**	**0.001**	**.065886** **.2407951**
_cons	**.2779346**	**.0425114**	**6.54**	**0.000**	**.1946139** **.3612554**
whppa <-					
deaw1	**3.38289**	**1.37107**	**2.47**	**0.014**	**.6956415** **6.070138**
_cons	**17.50726**	**1.188474**	**14.73**	**0.000**	**15.17789** **19.83663**
Variance					
e.deaw1	**.6414464**	**.0476783**			**.5544866** **.7420441**
e.whppa	**450.7446**	**33.50358**			**389.6379** **521.4346**

LR test of model vs. saturated: chi2(**1**) = **12.05**, Prob > chi2 = **0.0005**

Endogenous variables

Observed: **deaw1 whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-2520.164**
Iteration 1: log likelihood = **-2520.164**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-2520.164**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
deaw1 <-						
crhtw2	**.1967562**	**.0479479**	**4.10**	**0.000**	**.10278**	**.2907324**
_cons	**.2637098**	**.0425153**	**6.20**	**0.000**	**.1803812**	**.3470383**
whppa <-						
deaw1	**3.404605**	**1.370208**	**2.48**	**0.013**	**.7190463**	**6.090163**
_cons	**17.45257**	**1.18609**	**14.71**	**0.000**	**15.12788**	**19.77726**
Variance						
e.deaw1	**.6314985**	**.0468742**			**.5459969**	**.7303893**
e.whppa	**450.3446**	**33.42771**			**389.3703**	**520.8672**

LR test of model vs. saturated: chi2(**1**) = **25.76**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **deaw1 whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-2529.0621**
Iteration 1: log likelihood = **-2529.0621**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-2529.0621**

	OIM					
	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
deaw1 <-						
crhtw3	**.1844962**	**.0469605**	**3.93**	**0.000**	**.0924554**	**.276537**
_cons	**.2657724**	**.0425608**	**6.24**	**0.000**	**.1823548**	**.34919**
whppa <-						
deaw1	**3.404605**	**1.370208**	**2.48**	**0.013**	**.7190463**	**6.090163**
_cons	**17.45257**	**1.18609**	**14.71**	**0.000**	**15.12788**	**19.77726**
Variance						
e.deaw1	**.6338412**	**.0470481**			**.5480224**	**.7330989**
e.whppa	**450.3446**	**33.42771**			**389.3703**	**520.8672**

LR test of model vs. saturated: chi2(**1**) = **26.57**, Prob > chi2 = **0.0000**
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed: **physdisagw2 whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-3570.7114**
Iteration 1: log likelihood = **-3570.7114**

Structural equation model Number of obs = **362**
Estimation method = **ml**
Log likelihood = **-3570.7114**

```
> ─
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
──────────────┼──────────────────────────────────────────────────────────────
> ─
Structural    │
  physd~w2 <- │
       crhtw1 │   .1794615    .757552     0.24   0.813    -1.305313    1.66423
> 6
        _cons │   8.429154   .7217442    11.68   0.000     7.014562    9.84374
> 7
   ───────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-    │
  physdisagw2 │   .2028482    .082055     2.47   0.013     .0420233     .36367
> 3
        _cons │   16.80184   1.313839    12.79   0.000     14.22676    19.3769
> 1
──────────────┼──────────────────────────────────────────────────────────────
> ─
Variance      │
  e.physdi~w2 │   184.8914   13.74287                      159.826    213.887
> 8
      e.whppa │   450.7157   33.50144                      389.613    521.401
> 2
──────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     14.70, Prob > chi2 = 0.0001

Endogenous variables

Observed:  physdisagw2 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -3549.6989
Iteration 1:   log likelihood = -3549.6989

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -3549.6989
```

```
> ─
               │                 OIM
               │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
───────────────┼──────────────────────────────────────────────────────────────
> ─
Structural     │
  physd~w2 <-  │
       crhtw2  │   1.136389    .817627     1.39   0.165    -.4661308    2.73890
> 8
       _cons   │   8.234473   .7249883    11.36   0.000     6.813522    9.65542
> 4
   ────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-     │
  physdisagw2  │   .2049617   .0819689     2.50   0.012     .0443057    .365617
> 8
       _cons   │   16.73773    1.31065    12.77   0.000     14.16891    19.3065
> 6
───────────────┼──────────────────────────────────────────────────────────────
> ─
Variance       │
  e.physdi~w2  │   183.6297   13.63028                     158.7673    212.385
> 6
      e.whppa  │   450.2488    33.4206                     389.2875    520.756
> 5
───────────────┼──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     28.45, Prob > chi2 = 0.0000

Endogenous variables

Observed:  physdisagw2 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -3557.6034
Iteration 1:   log likelihood = -3557.6034

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -3557.6034
```

```
> ─
                │                                OIM
                │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
────────────────┼──────────────────────────────────────────────────────────────
> ─
Structural      │
  physd~w2 <-   │
       crhtw3   │   1.282413   .7985994     1.61   0.108    -.2828131    2.84763
> 9
       _cons    │   8.209073   .7237797    11.34   0.000     6.790491    9.62765
> 6
  ──────────────┼──────────────────────────────────────────────────────────────
> ─
  whppa <-      │
  physdisagw2   │   .2049617   .0819689     2.50   0.012     .0443057    .365617
> 8
       _cons    │   16.73773    1.31065    12.77   0.000     14.16891    19.3065
> 6
────────────────┼──────────────────────────────────────────────────────────────
> ─
Variance        │
  e.physdi~w2   │   183.3048   13.60616                      158.4863    212.009
> 8
      e.whppa   │   450.2488    33.4206                      389.2875    520.756
> 5
────────────────┴──────────────────────────────────────────────────────────────
> ─
LR test of model vs. saturated: chi2(1)   =     28.87, Prob > chi2 = 0.0000
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  illw3 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -2651.8571
Iteration 1:   log likelihood = -2651.8571
```

```
Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     = -2651.8571
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
illw3 <-						
crhtw1	**-.3790981**	**.0616884**	**-6.15**	**0.000**	**-.500005**	**-.2581911**
_cons	**.7631609**	**.0587725**	**12.99**	**0.000**	**.6479689**	**.8783529**
whppa <-						
illw3	**5.017812**	**.9303606**	**5.39**	**0.000**	**3.194339**	**6.841286**
_cons	**14.94029**	**1.269483**	**11.77**	**0.000**	**12.45215**	**17.42843**
Variance						
e.illw3	**1.226022**	**.0911295**			**1.059813**	**1.418299**
e.whppa	**424.235**	**31.53314**			**366.7221**	**490.7675**

```
LR test of model vs. saturated: chi2(1)   =     36.42, Prob > chi2 = 0.0000

Endogenous variables

Observed:  illw3 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -2646.0783
Iteration 1:   log likelihood = -2646.0783

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -2646.0783
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
illw3 <-						
crhtw2	**.1047588**	**.0699308**	**1.50**	**0.134**	**-.032303**	**.2418206**
_cons	**.6927419**	**.0620075**	**11.17**	**0.000**	**.5712095**	**.8142743**
whppa <-						
illw3	**5.039456**	**.9292706**	**5.42**	**0.000**	**3.218119**	**6.860792**
_cons	**14.88375**	**1.266248**	**11.75**	**0.000**	**12.40195**	**17.36555**
Variance						
e.illw3	**1.343288**	**.0997082**			**1.161414**	**1.553643**
e.whppa	**423.6788**	**31.44839**			**366.315**	**490.0257**

LR test of model vs. saturated: chi2(**1**) = **27.61**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **illw3 whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-2648.7298**
Iteration 1: log likelihood = **-2648.7298**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-2648.7298**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
illw3 <-						
crhtw3	**.2486013**	**.067322**	**3.69**	**0.000**	**.1166525**	**.3805501**
_cons	**.6679643**	**.0610147**	**10.95**	**0.000**	**.5483776**	**.787551**
whppa <-						
illw3	**5.039456**	**.9292706**	**5.42**	**0.000**	**3.218119**	**6.860792**
_cons	**14.88375**	**1.266248**	**11.75**	**0.000**	**12.40195**	**17.36555**

Variance				
e.illw3	**1.302658**	**.0966923**	**1.126285**	**1.50665**
e.whppa	**423.6788**	**31.44839**	**366.315**	**490.0257**

LR test of model vs. saturated: chi2(**1**) = **22.61**, Prob > chi2 = **0.0000**
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed: **BSIanx whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-3081.1411**
Iteration 1: log likelihood = **-3081.1411**

Structural equation model Number of obs = **362**
Estimation method = **ml**
Log likelihood = **-3081.1411**

	OIM				
	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
Structural					
BSIanx <-					
crhtw1	**-.4122699**	**.2021768**	**-2.04**	**0.041**	**-.8085292**	**-.0160107**
_cons	**9.043819**	**.1926204**	**46.95**	**0.000**	**8.66629**	**9.421348**
whppa <-					
BSIanx	**1.623054**	**.2962642**	**5.48**	**0.000**	**1.042387**	**2.203721**
_cons	**3.926965**	**2.874244**	**1.37**	**0.172**	**-1.70645**	**9.56038**
Variance					
e.BSIanx	**13.16905**	**.9788479**	**11.38375**	**15.23435**
e.whppa	**423.2349**	**31.4588**	**365.8577**	**489.6106**

LR test of model vs. saturated: chi2(**1**) = **21.39**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **BSIanx whppa**

```
Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -3054.9919
Iteration 1:   log likelihood = -3054.9919

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -3054.9919
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIanx <-						
crhtw2	.8193537	.2160312	3.79	0.000	.3959404	1.242767
_cons	8.837162	.1915544	46.13	0.000	8.461723	9.212602
whppa <-						
BSIanx	1.632956	.2955091	5.53	0.000	1.053769	2.212143
_cons	3.804892	2.864018	1.33	0.184	-1.808479	9.418263
Variance						
e.BSIanx	12.81933	.9515401			11.08366	14.8268
e.whppa	422.4661	31.35837			365.2664	488.623

```
LR test of model vs. saturated: chi2(1)   =     21.64, Prob > chi2 = 0.0000

Endogenous variables

Observed:  BSIanx whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -3059.1876
Iteration 1:   log likelihood = -3059.1876

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -3059.1876
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
BSIanx <-						
crhtw3	**.9985733**	**.2088589**	**4.78**	**0.000**	**.5892175**	**1.407929**
_cons	**8.806126**	**.1892912**	**46.52**	**0.000**	**8.435122**	**9.17713**
whppa <-						
BSIanx	**1.632956**	**.2955091**	**5.53**	**0.000**	**1.053769**	**2.212143**
_cons	**3.804892**	**2.864018**	**1.33**	**0.184**	**-1.808479**	**9.418263**
Variance						
e.BSIanx	**12.53781**	**.9306433**			**10.84025**	**14.50119**
e.whppa	**422.4661**	**31.35837**			**365.2664**	**488.623**

LR test of model vs. saturated: chi2(**1**) = **20.12**, Prob > chi2 = **0.0000**
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed: **medcow1 whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-3111.0569**
Iteration 1: log likelihood = **-3111.0569**

Structural equation model Number of obs = **362**
Estimation method = **ml**
Log likelihood = **-3111.0569**

	OIM				
	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
Structural					
medcow1 <-					
crhtw1	**1.302134**	**.2209042**	**5.89**	**0.000**	**.8691698** **1.735098**
_cons	**2.484159**	**.2104626**	**11.80**	**0.000**	**2.07166** **2.896658**
whppa <-					
medcow1	**1.5254**	**.2589418**	**5.89**	**0.000**	**1.017883** **2.032916**
_cons	**14.46283**	**1.276266**	**11.33**	**0.000**	**11.9614** **16.96427**
Variance					
e.medcow1	**15.72171**	**1.168586**			**13.59035** **18.18734**
e.whppa	**418.2315**	**31.0869**			**361.5326** **483.8225**

LR test of model vs. saturated: chi2(**1**) = **5.48**, Prob > chi2 = **0.0192**

Endogenous variables

Observed: **medcow1 whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-3096.5341**
Iteration 1: log likelihood = **-3096.5341**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-3096.5341**

	OIM				
	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
Structural					
medcow1 <-					
crhtw2	**1.156964**	**.2432171**	**4.76**	**0.000**	**.6802673** **1.633661**
_cons	**2.473362**	**.2156601**	**11.47**	**0.000**	**2.050676** **2.896048**
whppa <-					
medcow1	**1.502726**	**.2585977**	**5.81**	**0.000**	**.995884** **2.009568**
_cons	**14.44996**	**1.277436**	**11.31**	**0.000**	**11.94623** **16.95369**

Variance					
e.medcow1	**16.24878**	**1.206098**		**14.04878**	**18.79329**
e.whppa	**419.024**	**31.10288**		**362.2903**	**484.6419**

LR test of model vs. saturated: chi2(**1**) = **19.14**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **medcow1 whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-3108.1622**
Iteration 1: log likelihood = **-3108.1622**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-3108.1622**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
medcow1 <-						
crhtw3	**.9439075**	**.2400064**	**3.93**	**0.000**	**.4735037**	**1.414311**
_cons	**2.509748**	**.2175205**	**11.54**	**0.000**	**2.083416**	**2.93608**
whppa <-						
medcow1	**1.502726**	**.2585977**	**5.81**	**0.000**	**.995884**	**2.009568**
_cons	**14.44996**	**1.277436**	**11.31**	**0.000**	**11.94623**	**16.95369**
Variance						
e.medcow1	**16.55622**	**1.228918**			**14.3146**	**19.14888**
e.whppa	**419.024**	**31.10288**			**362.2903**	**484.6419**

LR test of model vs. saturated: chi2(**1**) = **21.60**, Prob > chi2 = **0.0000**
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed: **WHPpain whppa**

Exogenous variables

Observed: **crhtw1**

Fitting target model:

Iteration 0: log likelihood = **-3610.1709**
Iteration 1: log likelihood = **-3610.1709**

Structural equation model Number of obs = **362**
Estimation method = **ml**
Log likelihood = **-3610.1709**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
WHPpain <-						
crhtw1	**1.729479**	**1.239418**	**1.40**	**0.163**	**-.6997351**	**4.158694**
_cons	**17.83115**	**1.180833**	**15.10**	**0.000**	**15.51676**	**20.14554**
whppa <-						
WHPpain	**.7073063**	**.034096**	**20.74**	**0.000**	**.6404794**	**.7741332**
_cons	**5.741629**	**.9786106**	**5.87**	**0.000**	**3.823588**	**7.659671**
Variance						
e.WHPpain	**494.9113**	**36.78647**			**427.817**	**572.5279**
e.whppa	**209.3976**	**15.5644**			**181.0099**	**242.2373**

LR test of model vs. saturated: chi2(**1**) = **17.27**, Prob > chi2 = **0.0000**

Endogenous variables

Observed: **WHPpain whppa**

Exogenous variables

Observed: **crhtw2**

Fitting target model:

Iteration 0: log likelihood = **-3581.7982**
Iteration 1: log likelihood = **-3581.7982**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-3581.7982**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
WHPpain <-						
crhtw2	**5.721746**	**1.311307**	**4.36**	**0.000**	**3.151631**	**8.291861**
_cons	**17.02834**	**1.162733**	**14.65**	**0.000**	**14.74942**	**19.30725**
whppa <-						
WHPpain	**.7078794**	**.0340256**	**20.80**	**0.000**	**.6411904**	**.7745684**
_cons	**5.71549**	**.9752457**	**5.86**	**0.000**	**3.804043**	**7.626936**
Variance						
e.WHPpain	**472.3255**	**35.05929**			**408.3752**	**546.2904**
e.whppa	**208.9112**	**15.50684**			**180.6257**	**241.6261**

LR test of model vs. saturated: chi2(**1**) = **11.51**, Prob > chi2 = **0.0007**

Endogenous variables

Observed: **WHPpain whppa**

Exogenous variables

Observed: **crhtw3**

Fitting target model:

Iteration 0: log likelihood = **-3586.8894**
Iteration 1: log likelihood = **-3586.8894**

Structural equation model Number of obs = **363**
Estimation method = **ml**
Log likelihood = **-3586.8894**

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
WHPpain <-						
crhtw3	**6.442221**	**1.270903**	**5.07**	**0.000**	**3.951297**	**8.933145**
_cons	**16.90299**	**1.151834**	**14.67**	**0.000**	**14.64544**	**19.16054**
whppa <-						
WHPpain	**.7078794**	**.0340256**	**20.80**	**0.000**	**.6411904**	**.7745684**
_cons	**5.71549**	**.9752457**	**5.86**	**0.000**	**3.804043**	**7.626936**

```
Variance |
   e.WHPpain |   464.2378   34.45896                      401.3825    536.9361
     e.whppa |   208.9112   15.50684                      180.6257    241.6261
-------------+------------------------------------------------------------------

LR test of model vs. saturated: chi2(1)   =      7.69, Prob > chi2 = 0.0055
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  icdx3nr3 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1758.9097
Iteration 1:   log likelihood = -1758.9097

Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     = -1758.9097

-------------+------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+------------------------------------------------------------------
> ─
Structural   |
  icdx3nr3 <-|
       crhtw1|   .0045417   .0050451     0.90   0.368    -.0053464    .014429
> 9
       _cons |   .0076828   .0048066     1.60   0.110    -.0017379    .017103
> 6
  -----------+------------------------------------------------------------------
> ─
  whppa <-   |
     icdx3nr3|   13.62977   12.39106     1.10   0.271    -10.65627     37.915
> 8
       _cons |   18.40357   1.128015    16.32   0.000      16.1927    20.6144
> 3
-------------+------------------------------------------------------------------
> ─
Variance     |
   e.icdx3nr3|   .0082003   .0006095                      .0070886    .009486
```

```
> 3
      e.whppa |   456.7979   33.95352                      394.8706    528.437
> 3
--------------+------------------------------------------------------------------
> —
LR test of model vs. saturated: chi2(1)   =     14.36, Prob > chi2 = 0.0002

Endogenous variables

Observed:  icdx3nr3 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1733.8302
Iteration 1:   log likelihood = -1733.8302

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1733.8302

--------------+------------------------------------------------------------------
> —
              |                 OIM
              |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
--------------+------------------------------------------------------------------
> —
Structural    |
  icdx3nr3 <- |
       crhtw2 |   .0040269   .0054584     0.74   0.461    -.0066714    .014725
> 1
        _cons |   .0075725   .0048399     1.56   0.118    -.0019136    .017058
> 6
  ------------+------------------------------------------------------------------
> —
  whppa <-    |
     icdx3nr3 |   13.68089   12.38647     1.10   0.269    -10.59615    37.9579
> 2
        _cons |   18.35244   1.126043    16.30   0.000     16.14544    20.5594
> 5
--------------+------------------------------------------------------------------
> —
Variance      |
   e.icdx3nr3 |   .0081839   .0006075                      .0070758    .009465
> 5
```

```
      e.whppa |     456.47   33.88238                      394.6664    527.951
> 9
--------------+-------------------------------------------------------------
> —
LR test of model vs. saturated: chi2(1)   =     29.50, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx3nr3 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1742.1075
Iteration 1:   log likelihood = -1742.1075

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1742.1075

--------------+-------------------------------------------------------------
> —
              |                 OIM
              |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
--------------+-------------------------------------------------------------
> —
Structural    |
  icdx3nr3 <- |
       crhtw3 |   .0035461   .0053368     0.66   0.506    -.0069139    .014006
> 1
        _cons |   .0076543   .0048368     1.58   0.114    -.0018258    .017134
> 3
  ------------+-------------------------------------------------------------
> —
  whppa <-    |
     icdx3nr3 |   13.68089   12.38647     1.10   0.269    -10.59615    37.9579
> 2
        _cons |   18.35244   1.126043    16.30   0.000     16.14544    20.5594
> 5
--------------+-------------------------------------------------------------
> —
Variance      |
   e.icdx3nr3 |   .0081862   .0006076                      .0070778    .009468
> 1
      e.whppa |     456.47   33.88238                      394.6664    527.951
```

```
> 9
-------------+----------------------------------------------------------------
> —
LR test of model vs. saturated: chi2(1)   =     30.25, Prob > chi2 = 0.0000
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  icdx4nr9 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1686.6347
Iteration 1:   log likelihood = -1686.6347

Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     = -1686.6347

-------------+----------------------------------------------------------------
> —
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> —
Structural   |
  icdx4nr9 <-|
       crhtw1|  -.0008901   .0041294    -0.22   0.829    -.0089836    .007203
> 3
       _cons |   .0056433   .0039342     1.43   0.151    -.0020675    .013354
> 2
-------------+----------------------------------------------------------------
> —
  whppa <-   |
     icdx4nr9|   13.13606   15.16439     0.87   0.386    -16.58561    42.8577
> 2
       _cons |   18.44394    1.12716    16.36   0.000     16.23475    20.6531
> 4
-------------+----------------------------------------------------------------
> —
Variance     |
   e.icdx4nr9|   .0054936   .0004083                      .0047489    .006355
> 2
```

```
      e.whppa |   457.3766   33.99654                      395.3709    529.106
> 7
--------------+-------------------------------------------------------------
> —
LR test of model vs. saturated: chi2(1)   =     14.80, Prob > chi2 = 0.0001

Endogenous variables

Observed:  icdx4nr9 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1661.2089
Iteration 1:   log likelihood = -1661.2089

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1661.2089

--------------+-------------------------------------------------------------
> —
              |                 OIM
              |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
--------------+-------------------------------------------------------------
> —
Structural    |
  icdx4nr9 <- |
       crhtw2 |  -.0011924   .0044658    -0.27   0.789    -.0099453    .007560
> 5
        _cons |   .0057145   .0039599     1.44   0.149    -.0020466    .013475
> 7
  ------------+-------------------------------------------------------------
> —
  whppa <-    |
     icdx4nr9 |   13.18715   15.15888     0.87   0.384    -16.52371    42.8980
> 1
        _cons |   18.39285   1.125198    16.35   0.000     16.18751     20.598
> 2
--------------+-------------------------------------------------------------
> —
Variance      |
   e.icdx4nr9 |   .0054782   .0004066                      .0047365    .006336
> 1
      e.whppa |   457.0512   33.92552                      395.1689    528.624
```

```
> 1
--------------+-------------------------------------------------------------
> --
LR test of model vs. saturated: chi2(1)   =     30.06, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx4nr9 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1669.3034
Iteration 1:   log likelihood = -1669.3034  (backed up)

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1669.3034

--------------+-------------------------------------------------------------
> --
              |                 OIM
              |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
--------------+-------------------------------------------------------------
> --
Structural    |
  icdx4nr9 <- |
       crhtw3 |  -.0025237   .0043642    -0.58   0.563    -.0110774    .006029
> 9
        _cons |   .0059439   .0039553     1.50   0.133    -.0018084    .013696
> 2
  ------------+-------------------------------------------------------------
> --
  whppa <-    |
     icdx4nr9 |   13.18715   15.15888     0.87   0.384    -16.52371    42.8980
> 1
        _cons |   18.39285   1.125198    16.35   0.000     16.18751     20.598
> 2
--------------+-------------------------------------------------------------
> --
Variance      |
   e.icdx4nr9 |   .0054742   .0004063                      .0047331    .006331
> 5
      e.whppa |   457.0512   33.92552                      395.1689    528.624
> 1
```

```
-------------+------------------------------------------------------------------
> ─
LR test of model vs. saturated: chi2(1)   =     30.96, Prob > chi2 = 0.0000
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  icdx4nr12 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1848.9789
Iteration 1:   log likelihood = -1848.9789

Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     = -1848.9789

-------------+------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+------------------------------------------------------------------
> ─
Structural   |
  icdx4~12 <-|
       crhtw1|  -.0070144   .0064918    -1.08   0.280    -.0197381    .005709
> 3
       _cons |   .0147457    .006185     2.38   0.017     .0026234     .02686
> 8
  -----------+------------------------------------------------------------------
> ─
  whppa <-   |
    icdx4nr12|   18.27185   9.593044     1.90   0.057    -.5301669    37.0738
> 8
       _cons |   18.26415   1.127424    16.20   0.000     16.05444    20.4738
> 6
-------------+------------------------------------------------------------------
> ─
Variance     |
  e.icdx4nr12|   .0135776   .0010092                      .0117369     .01570
> 7
      e.whppa|   453.7771   33.72898                      392.2593    524.942
```

```
> 7
-------------+----------------------------------------------------------------
> -
LR test of model vs. saturated: chi2(1)   =     15.76, Prob > chi2 = 0.0001

Endogenous variables

Observed:  icdx4nr12 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1824.3077
Iteration 1:   log likelihood = -1824.3077

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1824.3077

-------------+----------------------------------------------------------------
> -
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> -
Structural   |
  icdx4~12 <-|
       crhtw2|   .0053593   .0070268     0.76   0.446    -.0084129    .019131
> 5
       _cons |   .0128532   .0062306     2.06   0.039     .0006414     .02506
> 5
  -----------+----------------------------------------------------------------
> -
  whppa <-   |
    icdx4nr12|   18.32287   9.589332     1.91   0.056    -.4718728    37.1176
> 2
       _cons |   18.21313   1.125434    16.18   0.000     16.00732    20.4189
> 4
-------------+----------------------------------------------------------------
> -
Variance     |
  e.icdx4nr12|   .0135626   .0010067                      .0117263    .015686
> 5
     e.whppa |   453.4434   33.65772                      392.0496    524.451
> 3
```

```
-------------+----------------------------------------------------------------
> ─
LR test of model vs. saturated: chi2(1)   =     29.33, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx4nr12 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1832.1805
Iteration 1:   log likelihood = -1832.1805

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1832.1805

-------------+----------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> ─
Structural   |
  icdx4~12 <-|
       crhtw3|   .0077943   .0068626     1.14   0.256    -.0056562    .021244
> 9
       _cons |   .0124328   .0062197     2.00   0.046     .0002425    .024623
> 2
-------------+----------------------------------------------------------------
> ─
  whppa <-   |
    icdx4nr12|   18.32287   9.589332     1.91   0.056    -.4718728    37.1176
> 2
       _cons |   18.21313   1.125434    16.18   0.000     16.00732    20.4189
> 4
-------------+----------------------------------------------------------------
> ─
Variance     |
  e.icdx4nr12|   .0135363   .0010048                      .0117035     .01565
> 6
      e.whppa|   453.4434   33.65772                      392.0496    524.451
> 3
-------------+----------------------------------------------------------------
```

```
> —
LR test of model vs. saturated: chi2(1)   =     29.65, Prob > chi2 = 0.0000
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  icdx5nr7 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1561.6848
Iteration 1:   log likelihood = -1561.6848

Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     = -1561.6848

——————————————————————————————————————————————————————————————————————————
> —
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
—————————————+————————————————————————————————————————————————————————————
> —
Structural   |
  icdx5nr7 <-|
       crhtw1|  -.0025381   .0029211    -0.87   0.385    -.0082634    .003187
> 1
       _cons |   .0031002    .002783     1.11   0.265    -.0023544    .008554
> 9
  ———————————+————————————————————————————————————————————————————————————
> —
  whppa <-   |
     icdx5nr7|   3.483102   21.43737     0.16   0.871    -38.53337    45.4995
> 7
       _cons |    18.5069   1.126723    16.43   0.000     16.29856    20.7152
> 3
—————————————+————————————————————————————————————————————————————————————
> —
Variance     |
   e.icdx5nr7|   .0027491   .0002043                     .0023764    .003180
> 2
      e.whppa|   458.2913   34.06452                     396.1615    530.164
> 8
```

```
> ─
LR test of model vs. saturated: chi2(1)   =     14.78, Prob > chi2 = 0.0001

Endogenous variables

Observed:  icdx5nr7 whphpa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1536.2465
Iteration 1:   log likelihood = -1536.2465

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1536.2465

> ─
> ]
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
icdx5nr7 <-						
crhtw2	.0010798	.003162	0.34	0.733	-.0051176	.007277
_cons	.0025693	.0028037	0.92	0.359	-.002926	.008064
whppa <-						
icdx5nr7	3.534226	21.42977	0.16	0.869	-38.46734	45.5357
_cons	18.45577	1.124771	16.41	0.000	16.25126	20.6602
Variance						
e.icdx5nr7	.0027463	.0002039			.0023745	.003176
e.whppa	457.9697	33.9937			395.9631	529.686

```
> ——
LR test of model vs. saturated: chi2(1)   =     29.83, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx5nr7 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1544.4563
Iteration 1:   log likelihood = -1544.4563

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1544.4563

——————————————┬———————————————————————————————————————————————————————————
> ——
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
——————————————┼———————————————————————————————————————————————————————————
> ——
Structural    │
  icdx5nr7 <- │
       crhtw3 │   .0011937    .003091     0.39   0.699    -.0048646     .00725
> 2
        _cons │   .0025494   .0028014     0.91   0.363    -.0029413    .008040
> 1
  ————————————┼———————————————————————————————————————————————————————————
> ——
  whppa <-    │
     icdx5nr7 │   3.534226   21.42977     0.16   0.869    -38.46734    45.5357
> 9
        _cons │   18.45577   1.124771    16.41   0.000     16.25126    20.6602
> 8
——————————————┼———————————————————————————————————————————————————————————
> ——
Variance      │
   e.icdx5nr7 │   .0027461   .0002038                     .0023743    .003176
> 1
      e.whppa │   457.9697    33.9937                     395.9631    529.686
> 5
——————————————┴———————————————————————————————————————————————————————————

> ——
```

```
LR test of model vs. saturated: chi2(1)   =     30.53, Prob > chi2 = 0.0000
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  icdx5nr10 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1849.5235
Iteration 1:   log likelihood = -1849.5235

Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     = -1849.5235

------------------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> ─
Structural   |
  icdx5~10 <-|
       crhtw1|  -.0088058   .0064858    -1.36   0.175    -.0215177    .003906
> 1
       _cons |   .0149841   .0061792     2.42   0.015     .0028731    .027095
> 1
-------------+----------------------------------------------------------------
> ─
  whppa <-   |
    icdx5nr10|   13.08826   9.616421     1.36   0.174    -5.759581     31.936
> 1
       _cons |   18.33574   1.130171    16.22   0.000     16.12065    20.5508
> 4
-------------+----------------------------------------------------------------
> ─
Variance     |
  e.icdx5nr10|   .0135524   .0010073                      .0117151    .015677
> 8
     e.whppa |   455.9913   33.89357                      394.1734    527.504
> 2
------------------------------------------------------------------------------
```

```
> ——
LR test of model vs. saturated: chi2(1)   =     15.62, Prob > chi2 = 0.0001

Endogenous variables

Observed:  icdx5nr10 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1825.4481
Iteration 1:   log likelihood = -1825.4481

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1825.4481

——————————————┬———————————————————————————————————————————————————————————
> ——
              │                 OIM
              │      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
——————————————┼———————————————————————————————————————————————————————————
> ——
Structural    │
  icdx5~10 <- │
       crhtw2 │   .0018573   .0070317     0.26   0.792    -.0119246    .015639
> 2
        _cons │   .0134549    .006235     2.16   0.031     .0012345    .025675
> 4
  ————————————┼———————————————————————————————————————————————————————————
> ——
  whppa <-    │
    icdx5nr10 │   13.13948   9.612728     1.37   0.172    -5.701126    31.9800
> 8
        _cons │   18.28453    1.12818    16.21   0.000     16.07333    20.4957
> 2
——————————————┼———————————————————————————————————————————————————————————
> ——
Variance      │
  e.icdx5nr10 │   .0135818   .0010081                      .0117429    .015708
> 6
      e.whppa │   455.6588   33.82216                       393.965    527.013
> 6
——————————————┴———————————————————————————————————————————————————————————

> ——
```

```
LR test of model vs. saturated: chi2(1)   =     29.80, Prob > chi2 = 0.0000

Endogenous variables

Observed:  icdx5nr10 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1833.4948
Iteration 1:   log likelihood = -1833.4948

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1833.4948

------------------------------------------------------------------------------
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
Structural   |
  icdx5~10 <-|
       crhtw3|   .0044981   .0068708     0.65   0.513    -.0089684    .017964
       _cons |   .0130001   .0062271     2.09   0.037     .0007953    .025204
-------------+----------------------------------------------------------------
  whppa <-   |
    icdx5nr10|   13.13948   9.612728     1.37   0.172    -5.701126    31.9800
       _cons |   18.28453    1.12818    16.21   0.000     16.07333    20.4957
-------------+----------------------------------------------------------------
Variance     |
  e.icdx5nr10|   .0135684   .0010071                      .0117313    .015693
     e.whppa |   455.6588   33.82216                       393.965    527.013
------------------------------------------------------------------------------

LR test of model vs. saturated: chi2(1)   =     30.20, Prob > chi2 = 0.0000
```

```
(1 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  icdx6nr7 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -1759.5605
Iteration 1:   log likelihood = -1759.5605

Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     = -1759.5605

------------------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> ─
Structural   |
  icdx6nr7 <-|
       crhtw1|   .0011809   .0050503     0.23   0.815    -.0087176    .011079
> 4
       _cons |   .0081301   .0048116     1.69   0.091    -.0013005    .017560
> 7
-------------+----------------------------------------------------------------
> ─
  whppa <-   |
     icdx6nr7|   10.08708   12.40042     0.81   0.416    -14.21731    34.3914
> 6
       _cons |   18.43292   1.128867    16.33   0.000     16.22039    20.6454
> 6
-------------+----------------------------------------------------------------
> ─
Variance     |
   e.icdx6nr7|   .0082174   .0006108                      .0071034    .009506
> 1
     e.whppa |   457.4885   34.00485                      395.4676    529.236
> 1
------------------------------------------------------------------------------

> ─
```

```
LR test of model vs. saturated: chi2(1)   =     14.64, Prob > chi2 = 0.0001

Endogenous variables

Observed:  icdx6nr7 whphpa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -1734.3094
Iteration 1:   log likelihood = -1734.3094

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1734.3094

------------------------------------------------------------------------------
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
Structural   |
  icdx6nr7 <-|
       crhtw2|   .0020067   .0054615     0.37   0.713    -.0086975     .01271
           1 |
       _cons |   .0079196   .0048427     1.64   0.102    -.0015718    .017411
             |
  whphpa <-  |
    icdx6nr7 |   10.13828   12.39585     0.82   0.413    -14.15714     34.433
           7 |
       _cons |   18.38172   1.126895    16.31   0.000     16.17305     20.590
             |
           4 |
-------------+----------------------------------------------------------------
Variance     |
   e.icdx6nr7|   .0081931   .0006081                      .0070838    .009476
           1 |
     e.whphpa|   457.1616   33.93372                      395.2643    528.751
           8 |
------------------------------------------------------------------------------

LR test of model vs. saturated: chi2(1)   =     29.74, Prob > chi2 = 0.0000
```

```
Endogenous variables

Observed:  icdx6nr7 whphpa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -1742.3307
Iteration 1:   log likelihood = -1742.3307

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     = -1742.3307

------------------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> ─
Structural   |
  icdx6nr7 <-|
       crhtw3|   .0039382   .0053361     0.74   0.460    -.0065203    .014396
> 7
       _cons |   .0075868   .0048361     1.57   0.117    -.0018919    .017065
> 4
  ───────────┼────────────────────────────────────────────────────────────────
> ─
  whppa <-   |
     icdx6nr7|   10.13828   12.39585     0.82   0.413    -14.15714     34.433
> 7
       _cons |   18.38172   1.126895    16.31   0.000     16.17305     20.590
> 4
-------------+----------------------------------------------------------------
> ─
Variance     |
   e.icdx6nr7|   .0081839   .0006075                      .0070758    .009465
> 5
     e.whppa |   457.1616   33.93372                      395.2643    528.751
> 8
-------------+----------------------------------------------------------------
> ─
LR test of model vs. saturated: chi2(1)   =     30.29, Prob > chi2 = 0.0000
(1 observations with missing values excluded;
```

```
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  icdx7nr1 whppa

Exogenous variables

Observed:  crhtw1

Fitting target model:

Iteration 0:   log likelihood = -2447.9634  (not concave)
Iteration 1:   log likelihood = -2307.0232  (not concave)
Iteration 2:   log likelihood = -2177.9662  (not concave)
Iteration 3:   log likelihood = -2038.0006  (not concave)
Iteration 4:   log likelihood = -1881.4665  (not concave)
Iteration 5:   log likelihood = -1697.1886  (not concave)
Iteration 6:   log likelihood = -1457.0113  (not concave)
Iteration 7:   log likelihood = -1270.0788  (not concave)
Iteration 8:   log likelihood = -1120.9207  (not concave)
Iteration 9:   log likelihood =  -270.9283  (not concave)
Iteration 10:  log likelihood =   302.7646  (not concave)
Iteration 11:  log likelihood =   441.4664  (not concave)
Iteration 12:  log likelihood =  715.92964  (not concave)
Iteration 13:  log likelihood =  897.29676  (not concave)
Iteration 14:  log likelihood =   1182.545  (not concave)
Iteration 15:  log likelihood =  1316.4038  (not concave)
Iteration 16:  log likelihood =  1474.2143  (not concave)
Iteration 17:  log likelihood =  1665.0544  (not concave)
Iteration 18:  log likelihood =  1906.0672  (not concave)
Iteration 19:  log likelihood =  2240.5696  (not concave)
Iteration 20:  log likelihood =  3079.7494  (not concave)
Iteration 21:  log likelihood =   3286.331  (not concave)
Iteration 22:  log likelihood =  3949.1192  (not concave)
Iteration 23:  log likelihood =  4322.2456  (not concave)
Iteration 24:  log likelihood =  4743.5939  (not concave)
Iteration 25:  log likelihood =  4873.0668  (not concave)
Iteration 26:  log likelihood =  5033.5106  (not concave)
Iteration 27:  log likelihood =  5272.1782  (not concave)
Iteration 28:  log likelihood =  5417.6967  (not concave)
Iteration 29:  log likelihood =  5613.4561  (not concave)
Iteration 30:  log likelihood =  6023.9952  (not concave)
Iteration 31:  log likelihood =  6681.9685  (not concave)
Iteration 32:  log likelihood =  6924.6362  (not concave)
Iteration 33:  log likelihood =  7071.4972  (not concave)
Iteration 34:  log likelihood =  7268.2992  (not concave)
Iteration 35:  log likelihood =  7375.5315  (not concave)
Iteration 36:  log likelihood =  7494.2223  (not concave)
```

```
Iteration 37:  log likelihood =  7632.0568  (not concave)
Iteration 38:  log likelihood =  7646.6679  (not concave)
Iteration 39:  log likelihood =  7658.7753  (not concave)
Iteration 40:  log likelihood =   7659.992  (not concave)
Iteration 41:  log likelihood =  7660.9682  (not concave)
Iteration 42:  log likelihood =  7660.9926  (not concave)
Iteration 43:  log likelihood =  7660.9975  (not concave)
Iteration 44:  log likelihood =  7660.9976  (not concave)
Iteration 45:  log likelihood =  7660.9976  (not concave)
Iteration 46:  log likelihood =  7660.9976  (not concave)
Iteration 47:  log likelihood =  7660.9976  (not concave)
Iteration 48:  log likelihood =  7660.9976  (not concave)
Iteration 49:  log likelihood =  7660.9976  (not concave)
Iteration 50:  log likelihood =  7660.9976  (not concave)
convergence not achieved

Structural equation model                       Number of obs      =       362
Estimation method  = ml
Log likelihood     =  7660.9976

------------------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> ─
Structural   |
  icdx7nr1 <-|
       crhtw1|          0   4.15e-14     0.00   1.000    -8.14e-14    8.14e-1
> 4
       _cons |          0   3.95e-14     0.00   1.000    -7.75e-14    7.75e-1
> 4
  -----------+----------------------------------------------------------------
> ─
  whppa <-   |
     icdx7nr1|          0  (constrained)
       _cons |   18.51652   1.125207    16.46   0.000     16.31115    20.7218
> 8
-------------+----------------------------------------------------------------
> ─
Variance     |
   e.icdx7nr1|   5.55e-25          .                           .
> .
      e.whppa|   458.3247   34.06701                      396.1904    530.203
> 5
-------------+----------------------------------------------------------------
> ─
Warning: convergence not achieved
```

```
Endogenous variables

Observed:  icdx7nr1 whppa

Exogenous variables

Observed:  crhtw2

Fitting target model:

Iteration 0:   log likelihood = -2425.1532  (not concave)
Iteration 1:   log likelihood = -2286.3826  (not concave)
Iteration 2:   log likelihood = -2159.1602  (not concave)
Iteration 3:   log likelihood = -2022.2947  (not concave)
Iteration 4:   log likelihood = -1871.2022  (not concave)
Iteration 5:   log likelihood = -1697.3845  (not concave)
Iteration 6:   log likelihood = -1481.8806  (not concave)
Iteration 7:   log likelihood = -1289.6862  (not concave)
Iteration 8:   log likelihood = -1137.1559  (not concave)
Iteration 9:   log likelihood = -1010.9042  (not concave)
Iteration 10:  log likelihood = -608.36762  (not concave)
Iteration 11:  log likelihood =  -468.8809  (not concave)
Iteration 12:  log likelihood = -150.78423  (not concave)
Iteration 13:  log likelihood = -13.093461  (not concave)
Iteration 14:  log likelihood =  230.50661  (not concave)
Iteration 15:  log likelihood =  534.62947  (not concave)
Iteration 16:  log likelihood =  1053.2958  (not concave)
Iteration 17:  log likelihood =  1532.1674  (not concave)
Iteration 18:  log likelihood =  1736.3482  (not concave)
Iteration 19:  log likelihood =   1999.448  (not concave)
Iteration 20:  log likelihood =  2386.2519  (not concave)
Iteration 21:  log likelihood =  2521.7105  (not concave)
Iteration 22:  log likelihood =  2702.6365  (not concave)
Iteration 23:  log likelihood =  3052.7251  (not concave)
Iteration 24:  log likelihood =  3255.4811  (not concave)
Iteration 25:  log likelihood =  3810.6206  (not concave)
Iteration 26:  log likelihood =  4143.0144  (not concave)
Iteration 27:  log likelihood =  4431.9316  (not concave)
Iteration 28:  log likelihood =   4639.384  (not concave)
Iteration 29:  log likelihood =  5211.2955  (not concave)
Iteration 30:  log likelihood =  5366.2778  (not concave)
Iteration 31:  log likelihood =   5586.888  (not concave)
Iteration 32:  log likelihood =  5714.9518  (not concave)
Iteration 33:  log likelihood =  5871.2863  (not concave)
Iteration 34:  log likelihood =  6094.6681  (not concave)
Iteration 35:  log likelihood =  6224.5237  (not concave)
Iteration 36:  log likelihood =   6383.957  (not concave)
Iteration 37:  log likelihood =  6615.4779  (not concave)
```

```
Iteration 38:  log likelihood =  6752.0299  (not concave)
Iteration 39:  log likelihood =  6924.9468  (not concave)
Iteration 40:  log likelihood =  7201.1579  (not concave)
Iteration 41:  log likelihood =  7383.0972  (not concave)
Iteration 42:  log likelihood =  7696.5623  (not concave)
Iteration 43:  log likelihood =  7704.9212  (not concave)
Iteration 44:  log likelihood =  7711.7422  (not concave)
Iteration 45:  log likelihood =  7712.4262  (not concave)
Iteration 46:  log likelihood =  7712.9742  (not concave)
Iteration 47:  log likelihood =   7713.029  (not concave)
Iteration 48:  log likelihood =    7713.04  (not concave)
Iteration 49:  log likelihood =  7713.0488  (not concave)
Iteration 50:  log likelihood =  7713.0505  (not concave)
convergence not achieved

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     =  7713.0505

------------------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> ─
Structural   |
  icdx7nr1 <-|
       crhtw2|          0   4.48e-14     0.00   1.000    -8.78e-14    8.78e-1
> 4
       _cons |          0   3.97e-14     0.00   1.000    -7.78e-14    7.78e-1
> 4
  -----------+----------------------------------------------------------------
> ─
  whppa <-   |
     icdx7nr1|          0  (constrained)
        _cons|   18.46551   1.123263    16.44   0.000     16.26396    20.6670
> 6
-------------+----------------------------------------------------------------
> ─
Variance     |
   e.icdx7nr1|   5.51e-25          .                           .
> .
      e.whppa|    458.004   33.99625                      395.9927    529.726
> 1
------------------------------------------------------------------------------
> ─
Warning: convergence not achieved
```

```
Endogenous variables

Observed:  icdx7nr1 whppa

Exogenous variables

Observed:  crhtw3

Fitting target model:

Iteration 0:   log likelihood = -2433.3792  (not concave)
Iteration 1:   log likelihood = -2293.9004  (not concave)
Iteration 2:   log likelihood = -2166.0709  (not concave)
Iteration 3:   log likelihood = -2028.2457  (not concave)
Iteration 4:   log likelihood = -1875.5541  (not concave)
Iteration 5:   log likelihood = -1698.8098  (not concave)
Iteration 6:   log likelihood = -1476.8534  (not concave)
Iteration 7:   log likelihood = -1285.8149  (not concave)
Iteration 8:   log likelihood = -1134.0009  (not concave)
Iteration 9:   log likelihood =  321.07832  (not concave)
Iteration 10:  log likelihood =  472.61534  (not concave)
Iteration 11:  log likelihood =  797.74115  (not concave)
Iteration 12:  log likelihood =  1018.2348  (not concave)
Iteration 13:  log likelihood =  1431.8805  (not concave)
Iteration 14:  log likelihood =  1612.8934  (not concave)
Iteration 15:  log likelihood =  1838.1425  (not concave)
Iteration 16:  log likelihood =  2139.7569  (not concave)
Iteration 17:  log likelihood =  2660.1584  (not concave)
Iteration 18:  log likelihood =  2820.3356  (not concave)
Iteration 19:  log likelihood =  3070.8819  (not concave)
Iteration 20:  log likelihood =  3237.7433  (not concave)
Iteration 21:  log likelihood =  3508.8342  (not concave)
Iteration 22:  log likelihood =  3698.0689  (not concave)
Iteration 23:  log likelihood =  4081.5046  (not concave)
Iteration 24:  log likelihood =  4498.5279  (not concave)
Iteration 25:  log likelihood =  5361.9751  (not concave)
Iteration 26:  log likelihood =  5524.1774  (not concave)
Iteration 27:  log likelihood =  5766.2915  (not concave)
Iteration 28:  log likelihood =  5914.0542  (not concave)
Iteration 29:  log likelihood =  6114.1718  (not concave)
Iteration 30:  log likelihood =  6555.1023  (not concave)
Iteration 31:  log likelihood =  6688.6633  (not concave)
Iteration 32:  log likelihood =   6855.285  (not concave)
Iteration 33:  log likelihood =  7108.8802  (not concave)
Iteration 34:  log likelihood =  7266.1423  (not concave)
Iteration 35:  log likelihood =  7489.8807  (not concave)
Iteration 36:  log likelihood =  7618.7141  (not concave)
Iteration 37:  log likelihood =  7680.5733  (not concave)
Iteration 38:  log likelihood =  7693.4948  (not concave)
```

```
Iteration 39:  log likelihood =  7704.1565  (not concave)
Iteration 40:  log likelihood =  7704.4236  (not concave)
Iteration 41:  log likelihood =   7704.477  (not concave)
Iteration 42:  log likelihood =  7704.4984  (not concave)
Iteration 43:  log likelihood =  7704.4995  (not concave)
Iteration 44:  log likelihood =  7704.4999  (not concave)
Iteration 45:  log likelihood =     7704.5  (not concave)
Iteration 46:  log likelihood =     7704.5  (not concave)
Iteration 47:  log likelihood =     7704.5  (not concave)
Iteration 48:  log likelihood =     7704.5  (not concave)
Iteration 49:  log likelihood =     7704.5  (not concave)
Iteration 50:  log likelihood =     7704.5  (not concave)
convergence not achieved

Structural equation model                       Number of obs      =       363
Estimation method  = ml
Log likelihood     =     7704.5

------------------------------------------------------------------------------
> ─
             |                 OIM
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval
> ]
-------------+----------------------------------------------------------------
> ─
Structural   |
  icdx7nr1 <-|
       crhtw3|          0   4.38e-14     0.00   1.000    -8.59e-14    8.59e-1
> 4
       _cons |          0   3.97e-14     0.00   1.000    -7.79e-14    7.79e-1
> 4
  -----------+----------------------------------------------------------------
> ─
  whppa <-   |
     icdx7nr1|          0  (constrained)
       _cons |   18.46551   1.123263    16.44   0.000     16.26396    20.6670
> 6
-------------+----------------------------------------------------------------
> ─
Variance     |
   e.icdx7nr1|   5.52e-25          .                           .
> .
      e.whppa|    458.004   33.99625                      395.9927    529.726
> 1
------------------------------------------------------------------------------

> ─
Warning: convergence not achieved
```

```
336 .
337 . // possible indirect effects for females on physical ability
338 .
339 . // wave 1 medcow1 BSIanx illw3 deaw1 BSIdep BSIsoma age
340 . // wave 2 whpain medcow1  BSIanx deaw1 BSIdep BSIsoma age
341 . // wave 3 whppain medcow1 BSIanx illw3 deaw1 BSIdep BSIsoma age
342 .
343 .
344 .
345 .
346 .
347 .
348 . *-+-  No female threat physical ability relationships significant
349 .
350 .
351 .
352 .
353 .
354 .
355 . /*
    >
    >
    >
    >  /* Autometrics female Physical ability model
    >
    > EQ(45) Modelling WHPpa by OLS-CS   H8 pa fem4.out
    >        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
    > e3/Htests/H8/gals3.dta
    >        The estimation sample is: 1 - 363
    >        Dropped 97 observation(s) with missing values from the sample
    >
    >                   Coefficient  Std.Error      HACSE  t-HACSE  t-prob Part.R^
    > 2
    > age                  0.260726    0.06364    0.06948     3.75  0.0002   0.056
    > 1
    > CSavoid             0.0288375     0.1792     0.1618    0.178  0.8587   0.000
    > 1
    > BSIsoma              0.512319     0.2483     0.2536     2.02  0.0445   0.016
    > 9
    > WHPsociso            0.128662    0.04133    0.05699     2.26  0.0249   0.021
    > 1
    > WHPpain              0.621810    0.04170    0.04658     13.4  0.0000   0.429
    > 2
    > BFptsd1             -0.168299    0.04533    0.04609    -3.65  0.0003   0.053
    > 3
    > marrw14               18.0771      7.892      16.24     1.11  0.2668   0.005
    > 2
    > marrw21              -10.9380      2.799      3.093    -3.54  0.0005   0.050
    > 1
```

```
> marrw22              -14.4998      4.996      3.578    -4.05  0.0001   0.064
> 8
> marrw23              -9.39101      2.389      2.708    -3.47  0.0006   0.048
> 3
> emplw22              -1.26532      1.674      1.554   -0.814  0.4162   0.002
> 8
> sepaw1               -16.9972      6.581      5.806    -2.93  0.0038   0.034
> 9
> accdw3               -5.80077      2.177      2.121    -2.74  0.0067   0.030
> 6
> suprtw1              0.291326     0.1199     0.2085     1.40  0.1637   0.008
> 2
> ncontw1              -3.55181      1.449      1.517    -2.34  0.0200   0.022
> 6
> medcow1              0.726722     0.1860     0.1456     4.99  0.0000   0.095
> 1
> trgovw3             -0.0252594    0.02034    0.02191    -1.15  0.2501   0.005
> 6
> airw2                0.140919    0.03511    0.03937     3.58  0.0004   0.051
> 3
> airw3               -0.0842096    0.03321    0.03799    -2.22  0.0276   0.020
> 3
> radw2               -0.0805794    0.04954    0.05011    -1.61  0.1091   0.010
> 8
> radw3                0.116446    0.05037    0.04825     2.41  0.0166   0.024
> 0
> dafter               0.268491     0.1517    0.09611     2.79  0.0056   0.031
> 9
> toxic               0.0183942    0.02017    0.01676     1.10  0.2735   0.005
> 1
> cloud               0.0590052    0.02096    0.02336     2.53  0.0122   0.026
> 2
> depagw2             -0.218273    0.08109    0.08205    -2.66  0.0083   0.029
> 0
> depagw3              0.227231    0.07790    0.07816     2.91  0.0040   0.034
> 4
> pCRHTw1       U      0.848693      1.225      1.336    0.635  0.5257   0.001
> 7
> pCRHTw2       U       1.02247      2.930      2.672    0.383  0.7023   0.000
> 6
> pCRHTw3       U      -4.38369      2.653      2.420    -1.81  0.0714   0.013
> 7
>
> sigma                10.6432  RSS                26846.9324
> log-likelihood      -991.154
> no. of observations       266  no. of parameters          29
> mean(WHPpa)          17.4309  se(WHPpa)             21.4384
> When the log-likelihood constant is NOT included:
> AIC                  4.83246  SC                    5.22314
```

```
> HQ                    4.98941  FPE                   125.628
> When the log-likelihood constant is included:
> AIC                   7.67033  SC                    8.06101
> HQ                    7.82728  FPE                   2145.66
>
> Normality test:   Chi^2(2)  =   8.3767 [0.0152]*
> Hetero test:      F(51,214) =   1.6114 [0.0105]*
> RESET23 test:     F(2,235)  =   4.2251 [0.0157]*
>
> BFptsd1 =       max(0, BSItotal-53)
> */
>
>
>
> // Trimmed female Physical ability model
> des BFptsd1 whppa age CSavoid BSIsoma BSIpsyc WHPsociso WHPpain  marrw21 ///
>    marrw22 marrw23  medcow1 airw2 airw3 radw2 radw3 dafter cloud crhtw1 ///
>   crhtw3 crhtw3 bcohort
> regress whppa age  BSIsoma BSIpsyc WHPsociso WHPpain  marrw21 ///
>    marrw22 marrw23  medcow1  ///
>   airw2 airw3 dafter crhtw1 crhtw2 ///
>   crhtw3 bcohort if gender==2, vce(cluster id)
>
> // no significant relationship
>
>
> //  Female  Physical ability moderator model
>
> foreach xvar in regress whppa age  BSIsoma BSIpsyc whpsociso WHPpain  marrw2
> 1 ///
>    marrw22 marrw23  medcow1 airw2 airw3 dafter bcohort {
>     cap gen `xvar'Xcht1= `xvar'*crhtw1
>    cap gen `xvar'Xcht2= `xvar'*crhtw2
>    cap gen `xvar'Xcht3= `xvar'*crhtw3
>    }
>
> //  Full Female Moderator model
>
> regress whppa age  BSIsoma BSIpsyc WHPsociso WHPpain  marrw21 ///
>    marrw22 marrw23  medcow1  ///
>   airw2 airw3 dafter crhtw1 crhtw2 ///
>   crhtw3 bcohort ageXcht1 ageXcht2 ageXcht3 BSIsomaXcht1-BSIsomaXcht3 ///
>   BSIpsycXcht1-BSIpsycXcht3 whpsocisoXcht1-whpsocisoXcht3 ///
>   marrw21Xcht1-marrw21Xcht3 marrw22Xcht1-marrw22Xcht3 ///
>   marrw23Xcht1-marrw23Xcht3 medcow1Xcht1-medcow1Xcht3 ///
>   airw2Xcht2-airw2Xcht3 airw3Xcht3 dafterXcht1-dafterXcht3 ///
>   if gender==2, vce(cluster id)
>
>
```

```
>
> //  Trimm 1  Female Moderator physical ability model
> // age socialIsolation and days after are moderators
> regress whppa age  BSIsoma BSIpsyc WHPsociso WHPpain  marrw21 ///
>    marrw22 marrw23  medcow1  ///
>   airw2 airw3 dafter crhtw1 crhtw2 ///
>   crhtw3 bcohort ageXcht1 ageXcht2 ageXcht3 ///
>    whpsocisoXcht2-whpsocisoXcht3 ///
>    dafterXcht1 ///
>   if gender==2, vce(cluster id)
>
>
>
>
> title "Female Physical ability possible indirect effects model"
>
> set more off
> foreach xvar in  age  BSIsoma BSIpsyc whpsociso WHPpain  marrw21 ///
>    marrw22 marrw23  medcow1 airw2 airw3 dafter bcohort {
>   sem (crhtw1-> `xvar')(`xvar' -> whppa)(crhtw1->whppa) if gender==2, nocaps
> latent
>   sem (crhtw2-> `xvar')(`xvar' -> whppa)(crhtw2->whppa) if gender==2, nocaps
> latent
>   sem (crhtw3-> `xvar')(`xvar' -> whppa)(crhtw3->whppa) if gender==2, nocaps
> latent
>    }
> *-+ summary of findings
> * wave 1 age BSIsoma whpsociso single medcow1 bcohort
> * wave 2 age BSIsoma BSIpsyc whpsociso whppain single medcow1 bcohort
> * wave 3 age BSIsoma BSIpsyc whpsociso whppain single medcow1 bcohort
>
>
>
>
>
>
>
>
>
>   // Revised verison
>
>
>
>
> *----   Female social isolation model
> /*
> GUM( 8) Modelling WHPsociso by OLS-CS
>         The dataset is: /Users/robertyaffee/Documents/data/research/chwk/pha
> se3/Htests/H8/gals3.dta
>         The estimation sample is: 4 - 360
```

```
>        Dropped 103 observation(s) with missing values from the sample
>
>                   Coefficient  Std.Error      HACSE  t-HACSE  t-prob Part.R^
> 2
> BSIsoma             -0.909242     0.2745     0.3543    -2.57  0.0110   0.031
> 4
> marrw14               25.5232      11.00      13.63     1.87  0.0625   0.017
> 0
> ncontw1               3.54455      2.223      2.642     1.34  0.1813   0.008
> 8
> dafter               0.135531     0.2129     0.1853    0.731  0.4654   0.002
> 6
> depagw3             0.0729733    0.09727     0.1072    0.680  0.4970   0.002
> 3
> marrw11              -3.78691      3.742      3.117    -1.21  0.2259   0.007
> 2
> marrw15              -5.56208      8.316      7.456   -0.746  0.4565   0.002
> 7
> emplw1               -1.74901     0.8010     0.7507    -2.33  0.0208   0.026
> 0
> emplw13               9.98210      4.133      4.630     2.16  0.0323   0.022
> 4
> emplw15               16.8246      14.76      6.258     2.69  0.0078   0.034
> 4
> occ1w1                8.97121      3.820      3.050     2.94  0.0037   0.040
> 9
> occ2w1                19.5652      4.335      4.298     4.55  0.0000   0.092
> 6
> occ3w1                13.0452      4.336      3.691     3.53  0.0005   0.058
> 0
> occ4w1                11.3450      5.032      4.694     2.42  0.0165   0.028
> 0
> occ6w1                6.36644      6.188      5.404     1.18  0.2401   0.006
> 8
> occ8w1                13.6631      4.846      3.991     3.42  0.0007   0.054
> 6
> inc1w1                2.23218      3.027      3.048    0.732  0.4648   0.002
> 6
> deaw2                -4.04439      1.652      1.640    -2.47  0.0145   0.029
> 1
> deaw3                0.671420      1.009     0.9735    0.690  0.4912   0.002
> 3
> dvcew2               -6.93593      4.043      3.975    -1.75  0.0825   0.014
> 8
> sepaw3               -9.43492      4.713      5.312    -1.78  0.0772   0.015
> 3
> accdw2                7.75983      2.759      3.136     2.47  0.0142   0.029
> 3
> cataw1               -2.43993      2.985      2.518   -0.969  0.3338   0.004
```

```
> 6
> shjobw1              0.240005    0.04681    0.04450     5.39  0.0000   0.125
> 3
> shjobw2             0.0206693    0.02985    0.02928    0.706  0.4811   0.002
> 4
> shhlw1              -0.240089    0.05287    0.04831    -4.97  0.0000   0.108
> 5
> shhousw1            0.0225457    0.03799    0.03077    0.733  0.4646   0.002
> 6
> suchrw1             0.0437467     0.1146     0.1239    0.353  0.7244   0.000
> 6
> goferw2             -0.225493    0.07123    0.07889    -2.86  0.0047   0.038
> 7
> fdferw2              0.122374    0.05017    0.05254     2.33  0.0208   0.026
> 0
> trgovw2             0.0825072    0.03283    0.03259     2.53  0.0121   0.030
> 6
> injothr              -7.55575      2.778      2.599    -2.91  0.0041   0.040
> 0
> ecprw3              0.0673284    0.04029    0.04002     1.68  0.0941   0.013
> 7
> polprw2             -0.115957    0.03504    0.03813    -3.04  0.0027   0.043
> 6
> polprw3             -0.247060    0.05335    0.06510    -3.79  0.0002   0.066
> 2
> airw1                0.209741    0.04712    0.05711     3.67  0.0003   0.062
> 3
> radw1               0.0777307    0.02807    0.02897     2.68  0.0079   0.034
> 2
> radchw2             -0.280752    0.08278    0.07429    -3.78  0.0002   0.065
> 7
> radchw3              0.218530    0.07886    0.07218     3.03  0.0028   0.043
> 2
> radtlw1             -0.201237    0.05779    0.05069    -3.97  0.0001   0.072
> 1
> radtlw2              0.230499    0.06677    0.05862     3.93  0.0001   0.070
> 8
> radhlw3             -0.228633    0.07876    0.08745    -2.61  0.0096   0.032
> 6
> dauthw3              0.0613239    0.03366    0.02832     2.17  0.0315   0.022
> 6
> neiw3               -0.0512290    0.03642    0.03308    -1.55  0.1230   0.011
> 7
> carcin              -0.0983180    0.03739    0.03656    -2.69  0.0078   0.034
> 4
> chsize               0.0651231    0.03825    0.04034     1.61  0.1080   0.012
> 7
> BSIpsyc                2.70957     0.3960     0.5024     5.39  0.0000   0.125
> 3
```

```
> WHPpa                0.303421    0.05519    0.07460     4.07  0.0001   0.075
> 4
> pCRHTw1       U       2.22840      2.035      1.866     1.19  0.2337   0.007
> 0
> pCRHTw2       U      -6.80746      4.274      4.673    -1.46  0.1467   0.010
> 3
> pCRHTw3       U       18.6516      4.628      5.949     3.14  0.0020   0.046
> 2
>
> sigma                13.4072  RSS                36490.0345
> log-likelihood      -991.278
> no. of observations       254  no. of parameters          51
> mean(WHPsociso)      10.9497  se(WHPsociso)         18.8325
> When the log-likelihood constant is NOT included:
> AIC                  5.36904  SC                    6.07929
> HQ                   5.65476  FPE                   215.846
> When the log-likelihood constant is included:
> AIC                  8.20691  SC                    8.91716
> HQ                   8.49264  FPE                   3686.54
>
> Normality test:   Chi^2(2)  =   13.815 [0.0010]**
> Hetero test:      F(84,168) =   1.4873 [0.0155]*
> RESET23 test:     F(2,201)  =   31.652 [0.0000]**
> Chow test:        F(3,200)  =  0.37163 [0.7736]   for break after 254
> */
>
>
>
> * Full Female social isolation model
>  regress whpsociso age BSIsoma marrw14 ncontw1 dafter depagw3 marrw11 marrw1
> 5 ///
>   emplw13 emplw15 occ1w1 occ2w1-occ8w1 inc1w1 deaw2 deaw3 dvcew2 sepaw3 accd
> w2 ///
>   cataw1 shjobw1 shjobw2 shhlw1 shhousw1 suchrw1 goferw2 fdferw2 trgovw2 ///
>   injothr ecprw3 polprw2 polprw3 airw1 radw1 radchw2 radchw3 radtlw1 radtlw2
>  ///
>   radhlw3 dauthw3 neiw3 carcin chsize BSIpsyc whppa pcrhtw1 pcrhtw2 ///
>   pcrhtw3 if gender==2, vce(cluster id)
>
> * Trimmed Female social isolation model
> sw, pr(.1): regress whpsociso age BSIsoma marrw14 ncontw1 dafter depagw3 mar
> rw11 marrw15 ///
>   emplw13 emplw15 occ1w1 occ2w1-occ3w1 occ5w1 occ7w2 occ8w2 inc1w1 deaw2 dea
> w3 dvcew2 sepaw3 accdw2 ///
>   cataw1 shjobw1 shjobw2 shhlw1 shhousw1 suchrw1 goferw2 fdferw2 trgovw2 ///
>   injothr ecprw3 polprw2 polprw3 airw1 radw1 radchw2 radchw3 radtlw1 radtlw2
>  ///
>   radhlw3 dauthw3 neiw3 carcin chsize BSIpsyc whppa pcrhtw1 pcrhtw2 ///
>   pcrhtw3 if gender==2, vce(cluster id)
```

```
>
>
>
> title" Trimmed Female social isolation model "
> * signifi w3 effect on social isolation
> regress whpsociso age bcohort  ncontw1  ///
>   emplw13 emplw15 occ5w1  accdw2 ///
>   shjobw1 shhlw1 trgovw2 ///
>   injothr  polprw2 polprw3 airw1 radw1 radchw2 radchw3 radtlw1 radtlw2 ///
>     BSIpsyc BSIdep  BSIanx whppa  ///
>     crhtw1 crhtw2 crhtw3 if gender==2, vce(cluster id)
>
>
>
> *  Moderator analysis
>    foreach var in age bcohort ncontw1 emplw13 emplw15 occ5w1 accdw2 ///
>   shjobw1 shhlw1 trgovw2 injothr polprw2 polprw3 airw1 radw1 radchw2 ///
>   radchw3 radtlw1 radtlw2 BSIpsyc BSIdep  BSIanx whppa {
>   cap gen `var'Xcht1 = `var'*pcrhtw1
>   cap gen `var'Xcht2 = `var'*pcrhtw2
>   cap gen `var'Xcht3 = `var'*pcrhtw3
>   }
>
> * Moderator model for female social isolation
> * signifi w3 effect on social isolation
> regress whpsociso age bcohort  ncontw1  ///
>   emplw13 emplw15 occ5w1  accdw2 ///
>   shjobw1 shhlw1 trgovw2 ///
>   injothr  polprw2 polprw3 airw1 radw1 radchw2 radchw3 radtlw1 radtlw2 ///
>     BSIpsyc BSIdep  BSIanx whppa crhtw1 crhtw2 ///
>   crhtw3 ageXcht1- whppaXcht3 if gender==2, vce(cluster id)
>
> * Moderator model trim 1
>
> des whpsociso age bcohort age emplw13 emplw15 accdw2 ///
>     marrw22 marrw23  medcow1  ///
>    BSIsoma  BSIdep  BSIanx BSIpsyc WHPsociso WHPpain  marrw21 ///
>   shjobw1 shhlw1 trgovw2 ///
>   injothr  polprw3 airw1 radw1 radchw2 radchw3 radtlw1 radtlw2 ///
>   airw2 airw3 dafter crhtw1 crhtw2 ///
>   crhtw3 bcohort whppa
> cap gen emplw15Xcht2 = emplw15*crhtw2
> cap gen polprw2Xcht2 = polprw2*crhtw2
> cap gen airw1Xcht2 = airw1*crhtw2
> * Trimmed  second pass female social isolation moderator model
>
> regress whpsociso age bcohort ///
>   emplw13 emplw15   accdw2 ///
>   shjobw1 shhlw1 trgovw2  ///
```

```
>   injothr  polprw2 polprw3 airw1 radw1 radchw2 radchw3 radtlw1 radtlw2 ///
>     BSIpsyc BSIdep  BSIanx whppa crhtw1 crhtw2 ///
>   crhtw3 emplw15Xcht2  ageXcht1 ageXcht2 ageXcht3 ///
>   polprw2Xcht2 airw1Xcht2  ///
>    whpsocisoXcht2-whpsocisoXcht3 ///
>    dafterXcht1 ///
> if gender==2, ///
>   vce(cluster id)
>
>  * Trimmed  3rd pass female social isolation moderator model
>
> regress whpsociso age bcohort ///
>   emplw13 emplw15   accdw2 ///
>   shjobw1 shhlw1 trgovw2  ///
>   injothr  polprw2 polprw3 airw1 radw1 radchw2 radchw3 radtlw1 radtlw2 ///
>     BSIpsyc BSIdep  BSIanx whppa crhtw1 crhtw2 ///
>   crhtw3 emplw15Xcht2  ///
>   polprw2Xcht2 airw1Xcht2  ///
>   if gender==2, ///
>   vce(cluster id)
>
>
>
>
> // moderators include retirement (emplw15)(airw1) and (polpwr2) political pr
> oblems and
> // proportion of pollution of air and water due to Chornobyl
> // moderators of emplw15 could not be completely ( in waves 1 and 3) estimat
> ed owing to colinearity
>
> nestreg: regress WHPsociso (age bcohort)(emplw13 emplw15) ///
>  (emplw15Xcht1) (accdw2)(shjobw1 shhlw1 injothr ) (radw1 airw1 radtlw1 crhtw
> 1) ///
>   (airw1Xcht2)  (emplw15Xcht2)(radchw2 radtlw2 crhtw2) (trgovw2 polprw2)  //
> /
>   (crhtw3 radchw3)(polprw2Xcht3 ) (BSIpsyc BSIdep BSIanx whppa )(polprw3) if
>  gender==2, vce(cluster id)
>
>
>
>
>  title "Female social isolation potential indirect effects"
>
> foreach xvar in age bcohort ///
>   emplw13 emplw15   accdw2 ///
>   shjobw1 shhlw1 trgovw2  ///
>   injothr  polprw2 polprw3 airw1 radw1 radchw2 radchw3 radtlw1 radtlw2 ///
>     BSIpsyc BSIdep  BSIanx whppa ///
>     emplw15Xcht2  ///
```

```
>   polprw2Xcht2 airw1Xcht2 {
> set more off
> sem (crhtw1->`xvar')(`xvar'->whpsociso)(crhtw1->whpsociso) if gender==2, noc
> apslatent
> sem (crhtw2->`xvar')(`xvar'->whpsociso)(crhtw2->whpsociso) if gender==2, noc
> apslatent
> sem (crhtw3->`xvar')(`xvar'->whpsociso)(crhtw3->whpsociso) if gender==2, noc
> apslatent
>
> }
>
> ** Summary of findings:
> * wave 1  age BSIanx whppa retiredXcht2 polprw2Xcht2 airw1Xcht2
> * wave2 age shjobw1  BSIpsyc BSIdep BSIanx whppa retiredXcht2
> * wave3 age BSIpsyc BSIdep BSIanx whppa retiredXcht2
>
>
>
>
>
>
>
> *--------Male Sleep crhtw models ------------------------------------------
> -
> cap drop rmslp1
> cap drop H8MaleSLpred
> cap drop h8MSLsepred
> cap drop MSLrsires
> cap drop upbSLm
> cap drop lpbSLm
>
>
> des icdx1nr8 icdx2nr8 icdx3nr7 icdx4nr7 icdx4nr12
>
> // Full male sleep regression model
> regress WHPsleep age emplw24 inc1w2-inc4w2 ///
>   shrelaw1 shrelaw2 dafter  ///
>   BSIposymp WHPpain illw1 illw3 icdxcnt ///
>   avgcumdosew1 crhtw1-crhtw3 ///
>   icdx1nr8 icdx2nr8 icdx3nr7 icdx4nr7 icdx4nr12  ///
>   if gender==1, vce(cluster id)
>
>
> // Trimmed male sleep regression model
> cap drop H8MaleSLpred
> cap drop h8MSLsepred
> cap drop MSLrsires
> cap drop upbSLm
> cap drop lpbSLm
```

```
> cap drop rmslp1
>
> regress WHPsleep age emplw24 inc1w2-inc4w2 ///
>   shrelaw1 shrelaw2 dafter  ///
>   BSIposymp WHPpain illw1 illw3  ///
>   avgcumdosew1 crhtw1-crhtw3 ///
>    icdx3nr7 icdx4nr7 icdx4nr12  ///
>   if gender==1, vce(cluster id)
>
> *-+ no male sleep relationships between health threat sleep
>
> // prep for residual and prediction interval analysis
>     predict H8MaleSLpred if gender==2, xb
>      predict h8MSLsepred if gender==2, stdp
>      predict MSLrsires if gender==2, residual
>      gen upbSLm = H8MaleSLpred + 1.96*h8MSLsepred
>      gen lpbSLm = H8MaleSLpred - 1.96*h8MSLsepred
>  // residual diagnostics
>
> rdiagrbst rmslp1
>
> // prediction interval
> scatter H8MaleSLpred MSLrsires, color(sand) || lowess H8MaleSLpred  MSLrsire
> s  ///
>   || lowess upbSLm MSLrsires || lowess lpbSLm MSLrsires, ///
>   title(Prediction interval of Male Sleep model)   ///
>   ytitle(Predicted Male Sleep )
>
> // saving graph
> gr save MSLPredInt.gph, replace
> gr export MSLPredInt.eps, replace
> gr use  MSLPredInt.gph
>
> title "perception of risk => the Male Sleep model "
>
>
> *--------------------------------  Male Sleep Model
> /* candiate illnesses  for male sleep model
>
> foreach i in 7 {
> foreach j in 1 5 6 {
> foreach k in 3 {
> foreach m in 2 {
> foreach n in 4 {
> regress whpsleep icdx`i'nr1-icdx`i'nr28 if gender==1
> regress whpsleep icdx`j'nr1-icdx`j'nr18 if gender==1
> regress whpsleep icdx`k'nr1-icdx`k'nr11 if gender==1
> regress whpsleep icdx`m'nr1-icdx`m'nr8 if gender==1
> regress whpsleep icdx`n'nr1-icdx`n'nr20 if gender==1
```

```
> }
> }
> }
> }
> }
>
> */
>
> title "Potential Male sleep moderators"
>
>  foreach xvar in  age emplw24 inc1w2 inc2w2 inc3w2 inc4w2 ///
>   shrelaw1 shrelaw2 dafter  ///
>   BSIposymp WHPpain illw1 illw3  ///
>   avgcumdosew1 crhtw1-crhtw3 ///
>    icdx3nr7 icdx4nr7 icdx4nr12 {
>  forvalues j=1/3 {
>  cap gen `xvar'Xcht`j' = `xvar'*crhtw`j'
>  }
>  }
>
>
>  des icdx3nr7 icdx4nr7 icdx4nr12
>
> regress WHPsleep age emplw24 inc1w2-inc4w2 ///
>   shrelaw1 shrelaw2 dafter  ///
>   BSIposymp WHPpain illw1 illw3  ///
>   avgcumdosew1 crhtw1-crhtw3 ///
>    icdx3nr7 icdx4nr7 icdx4nr12  ///
>     icdx3nr7Xcht1-icdx3nr7Xcht3 ///
>    if gender==1, vce(cluster id)
> * findings: waves 1 through three stroke in sleep is a potential male modera
> tor
>
>
>
> title "tests for possible indirect effects for male sleep model"
> set more off
> foreach var in age emplw24 inc1w2 inc3w2 inc4w2 ///
>   shrelaw1 shrelaw2 dafter  ///
>   BSIposymp WHPpain illw1 illw3  ///
>   avgcumdosew1 icdx3nr7 icdx4nr7 icdx4nr12  {
> sem (crhtw1-> `var')(`var'-> whpsleep) if gender==1, nocapslatent iterate(50
> )
> sem (crhtw2-> `var')(`var'-> whpsleep) if gender==1, nocapslatent iterate(50
> )
> sem (crhtw3-> `var')(`var'-> whpsleep) if gender==1, nocapslatent iterate(50
> )
> }
>
```

```
> * Possible male sleep indirect effects ------------------------------------
> ---
> *-+- Possible indirect effects through
> * wave 1 icdx3nr7(stroke) pain BISposymp shrelaw1 shrelaw2 shrelaw1 age
> * wave 2 icdx3nr7(stroke) illw3 illw1 pain BSIposymp shrelaw2 shrelaw1 inc1w
> 2 inc1w age
> * wave 3 icdx3nr7(stroke) illw3 illw1 pain BSIposymp shrelaw2 shrelaw1  inc1
> w2 age
> *-------------------------------------------------------------------------
> ---
> /*
>
> EQ(71) Modelling WHPsleep by OLS-CS
>        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
> e3/
>        data/ox/workingdatasets/MARS/gals.dta
>        The estimation sample is: 1 - 363
>        Dropped 2 observation(s) with missing values from the sample
>
>                   Coefficient  Std.Error      HACSE  t-HACSE  t-prob Part.R^
> 2
> sepaw2               -26.8551      8.383      5.060    -5.31  0.0000   0.074
> 5
> shhousw2            0.0659946    0.03288    0.03315     1.99  0.0473   0.011
> 2
> sufamw1            -0.0327914    0.03549    0.02975    -1.10  0.2711   0.003
> 5
> pillw2               -1.10178     0.3324     0.2845    -3.87  0.0001   0.041
> 1
> radchw3             -0.128170    0.03728    0.02801    -4.58  0.0000   0.056
> 4
> WHPpain              0.438681    0.07103    0.07325     5.99  0.0000   0.093
> 0
> HP2probsoc            14.3111      3.544      4.216     3.39  0.0008   0.031
> 9
> BSIposymp            0.219874    0.03616    0.03478     6.32  0.0000   0.102
> 5
> radhw1       U     0.0290023    0.05173    0.04457    0.651  0.5157   0.0012
> radhw2       U     -0.128956     0.1199     0.1024    -1.26  0.2087   0.0045
> radhw3       U      0.187958     0.1026    0.09274     2.03  0.0434   0.0116
>
> sigma                 23.044  RSS                 185858.71
> log-likelihood       -1639.25
> no. of observations       361  no. of parameters          11
> mean(WHPsleep)        26.3552  se(WHPsleep)          30.9492
> When the log-likelihood constant is NOT included:
> AIC                   6.30481  SC                    6.42330
> HQ                    6.35192  FPE                   547.206
> When the log-likelihood constant is included:
```

```
> AIC                   9.14268  SC                    9.26118
> HQ                    9.18980  FPE                   9345.98
>
> Normality test:   Chi^2(2)  =   72.322 [0.0000]**
> Hetero test:      F(20,340) =   1.7360 [0.0267]*
> Hetero-X test:    F(56,304) =  0.91870 [0.6407]
> RESET23 test:     F(2,348)  =   10.472 [0.0000]**
> */
>
> /* candiate illnesses  for female sleep model
>
> foreach i in 7 {
> foreach j in 1 5 6 {
> foreach k in 3 {
> foreach m in 2 {
> foreach n in 4 {
> regress whpsleep icdx`i'nr1-icdx`i'nr28 if gender==2
> regress whpsleep icdx`j'nr1-icdx`j'nr18 if gender==2
> regress whpsleep icdx`k'nr1-icdx`k'nr11 if gender==2
> regress whpsleep icdx`m'nr1-icdx`m'nr8 if gender==2
> regress whpsleep icdx`n'nr1-icdx`n'nr20 if gender==2
> }
> }
> }
> }
> }
> */
>
> * for females:
> des icdx1nr9 icdx3nr4 icdx3nr5 icdx4nr6 icdx4nr17 icdx5nr4 icdx5nr10 icdx6nr
> 5 ///
>   icdx6nr6 icdx6nr11 icdx6nr12 icdx6nr15
>
> *-----------------   Female Sleep crhtw models-----------------------------
> --------
> // H8: Full Female Sleep Model
>
> des bffpain24 bffpain26 BFdepx1 icdx1nr9 icdx3nr4 icdx3nr5 icdx4nr6 icdx4nr1
> 7 ///
>    icdx5nr4 icdx5nr10 icdx6nr5 icdx6nr6 icdx6nr11 icdx6nr12 icdx6nr15
>
> regress WHPsleep age sepaw2  sufamw1  pillw2  radchw3 WHPpain bffpain24 bffp
> ain26   ///
>   BSIanx HP2probsoc HP2pbfhm BSIposymp BSItotal BSIdep crhtw1 crhtw2 crhtw3
>  ///
>   BFdepx1 ///
>   icdx1nr9 icdx3nr4 icdx3nr5 icdx4nr6 icdx4nr17 icdx5nr4 icdx5nr10 icdx6nr5
> ///
>   icdx6nr6 icdx6nr11 icdx6nr12  if gender==2, vce(cluster id)
```

```
>
> // H8: Trimmed Female Sleep Model
>
> des bffpain24 bffpain26 BFdepx1  icdx3nr5 icdx4nr6 ///
>   icdx5nr4 icdx6nr5
>
> cap drop H8FemaleSLpred
> cap drop h8FSLsepred
> cap drop FSLrsires
> cap drop upbSLF
> cap drop lpbSLF
> cap drop rFslp1
>
>
>
>
>
>
> regress WHPsleep age sepaw2   pillw2  radchw3 WHPpain bffpain24 bffpain26
> ///
>   BSIanx HP2probsoc BSIposymp BSItotal BSIdep crhtw1 crhtw2 crhtw3  ///
>   BFdepx1 icdx3nr5 icdx4nr6 icdx5nr4 icdx6nr5 ///
>    if gender==2, vce(cluster id)
>    di e(r2_a)
>
>  // residual diagnostics
>
>  rdiagrbst rFslp1
>
> regress WHPsleep age sepaw2   pillw2  radchw3 WHPpain bffpain24 bffpain26
> ///
>   BSIanx HP2probsoc BSIposymp BSItotal BSIdep crhtw1 crhtw2 crhtw3  ///
>   BFdepx1 icdx3nr5 icdx4nr6 icdx5nr4 icdx6nr5 ///
>    if gender==2, vce(cluster id)
>    di e(r2_a)
>
>
> // prep for residual and prediction interval analysis
>     predict H8FemaleSLpred if gender==2, xb
>       predict h8FSLsepred if gender==2, stdp
>      predict FSLrsires if gender==2, residual
>      gen upbSLF = H8FemaleSLpred + 1.96*h8FSLsepred
>      gen lpbSLF = H8FemaleSLpred - 1.96*h8FSLsepred
>  // residual diagnostics
>
> // prediction interval
> scatter H8FemaleSLpred FSLrsires, color(sand) || lowess H8FemaleSLpred  FSLr
> sires  ///
>   || lowess upbSLF FSLrsires || lowess lpbSLF FSLrsires, ///
```

```
>   title(Prediction interval of Female Sleep model)   ///
>   ytitle(Predicted Female Sleep )
>
> // saving graph
> gr save FSLPredInt.gph, replace
> gr export FSLPredInt.eps, replace
> gr use  FSLPredInt.gph
>
> title "Moderation effects testing for female sleep owing to significant main
>  eff"
>
> foreach varx in age occ5w3 sepaw2   pillw2  radchw3 WHPpain bffpain24 bffpai
> n26   ///
>   BSIanx HP2probsoc BSIposymp BSItotal BSIdep WHPpa defnw2  ///
>   BFdepx1 icdx3nr5 icdx4nr6 icdx4nr10 icdx5nr4 icdx5nr7 icdx6nr5 {
>  cap gen `varx'Xcrht1 = `varx'*crhtw1
>  cap gen `varx'Xcrht2 = `varx'*crhtw2
>  cap gen `varx'Xcrht3 = `varx'*crhtw3
>  }
>
>  // Full moderation model
>  set more off
>  regress WHPsleep age sepaw2   pillw2   ///
>   BSIanx HP2probsoc BSIposymp BSItotal BSIdep WHPpain crhtw1 crhtw2 crhtw3 r
> adchw3 ///
>   icdx3nr5 icdx4nr6 icdx5nr4 icdx6nr5   BFdepx1  bffpain24 bffpain26 ///
>    ageXcrht1-BFdepx1Xcrht3 if gender==2, vce(cluster id)
>    di e(r2_a)
>
> title "Trimmed moderation female sleep model"
> set more off
>  regress WHPsleep age sepaw2   pillw2  radchw3 WHPpain bffpain24 bffpain26
>  ///
>   BSIanx HP2probsoc BSIposymp BSItotal BSIdep crhtw1 crhtw2 crhtw3  ///
>   BFdepx1 icdx3nr5 icdx4nr6 icdx5nr4 icdx6nr5 ///
>   occ5w3Xcrht1-occ5w3Xcrht3 pillw2Xcrht2  ///
>   WHPpaXcrht3 icdx4nr10Xcrht1 icdx4nr10Xcrht3 ///
>   icdx5nr7Xcrht1  if gender==2, vce(cluster id)
>    di e(r2_a)
> *-+- possible female moderators of sleep include occ5w3 pillw2 pillw3 defnw2
>  WHPpa
> *-+- and icdx4nr10 and icdx5nr7
>
>
> title "tests for possible indirect effects for female sleep model"
> set more off
> foreach var in  age sepaw2   pillw2  radchw3 WHPpain bffpain24 bffpain26   /
> //
>   BSIanx HP2probsoc BSIposymp BSItotal BSIdep  ///
```

```
>   BFdepx1 icdx3nr5 icdx4nr6 icdx5nr4 icdx6nr5 {
> sem (crhtw1-> `var')(`var'-> whpsleep) if gender==2, nocapslatent iterate(50
> )
> sem (crhtw2-> `var')(`var'-> whpsleep) if gender==2, nocapslatent iterate(50
> )
> sem (crhtw3-> `var')(`var'-> whpsleep) if gender==2, nocapslatent iterate(50
> )
> }
>
> des BFdepx1 BSIdep BSItotal BSIposymp HP2probsoc BSIanx WHPpain age
>
> * Possible female sleep indirect effects ----------------------------------
> -----
> *-+- Possible female indirect effects through
> * wave 1 HP2probsoc BSIanx age
> * wave 2 BFdepx1 BSIdep BSItotal BSIposymp HP2probsoc BSIanx WHPpain age
> * wave 3 BFdepx1 BSIdep BSItotal BSIposymp HP2probsoc BSIanx WHPpain age
> *-------------------------------------------------------------------------
> ---
>
>
>
> *-+- Wave one chornobyl related health threat and female sleep relationship
>
>
>
>   cap gen whpsociso=WHPsociso
>
> *------------------Social isolation Models ------------------
>
>
> *  Male Model
> *-------
> /*
>
>                  Coefficient  Std.Error      HACSE  t-HACSE  t-prob Part.R^2
> BSIposymp            -1.46478     0.5219     0.8332    -1.76  0.0798   0.010
> 5
> BSIglobsi             78.8130      26.11      41.84     1.88  0.0606   0.012
> 0
> BSIips               0.952409     0.4524     0.5870     1.62  0.1058   0.009
> 0
> BSIdep                1.81136     0.3513     0.3854     4.70  0.0000   0.070
> 6
> BSIphanx              1.39740     0.4819     0.6283     2.22  0.0269   0.016
> 7
> BSIhos               -1.14289     0.3950     0.4175    -2.74  0.0066   0.025
> 1
> childw1             -0.540819     0.9065     0.9830   -0.550  0.5826   0.001
```

```
> 0
> emplw16              3.71768      1.989      1.899      1.96  0.0512   0.013
> 0
> emplw25             -11.8891      6.084      6.719     -1.77  0.0778   0.010
> 6
> emplw32              5.35049      2.083      2.823      1.90  0.0591   0.012
> 2
> emplw33             -4.54916      2.324      2.613     -1.74  0.0827   0.010
> 3
> emplw34             -1.93771      4.239      3.503    -0.553  0.5805   0.001
> 1
> occ2w1               2.92963      2.181      1.698      1.73  0.0854   0.010
> 1
> occ3w1               2.14184      3.048      3.898     0.549  0.5832   0.001
> 0
> occ2w2              -6.45172      2.140      1.887     -3.42  0.0007   0.038
> 6
> occ7w2               18.7993      6.364      6.034      3.12  0.0020   0.032
> 3
> occ1w3              -3.70596      1.862      1.835     -2.02  0.0443   0.013
> 8
> occ3w3              -10.2579      2.695      3.056     -3.36  0.0009   0.037
> 3
> occ4w3              -5.52024      2.358      2.278     -2.42  0.0160   0.019
> 8
> inc1w1              -5.93487      2.162      1.845     -3.22  0.0014   0.034
> 3
> inc2w2              -6.66515      1.785      1.889     -3.53  0.0005   0.041
> 0
> inc3w2              -5.31900      1.827      1.960     -2.71  0.0070   0.024
> 7
> inc1w3               2.64052      2.064      2.219      1.19  0.2351   0.004
> 8
> deaw2               -1.52614      1.067      1.044     -1.46  0.1450   0.007
> 3
> deaw3               -2.59636     0.7422     0.6189     -4.19  0.0000   0.057
> 0
> dvcew2              -5.24808      3.745      2.209     -2.38  0.0181   0.019
> 0
> accdw2              -3.85351      1.774      1.867     -2.06  0.0399   0.014
> 4
> accdw3               4.53051      2.037      1.908      2.37  0.0182   0.019
> 0
> illw3               -1.68376     0.8143     0.9070     -1.86  0.0644   0.011
> 7
> shjobw2          -0.0257525    0.02537    0.03555    -0.724  0.4694   0.001
> 8
> shhlw1           -0.0895325    0.03207    0.03236    -2.77  0.0060   0.025
> 6
```

```
> shhlw2               0.0885717    0.02906    0.03687     2.40  0.0169    0.019
> 4
> shhlw3               0.0374061    0.02177    0.02578     1.45  0.1479    0.007
> 2
> shhousw1             0.0284480    0.02825    0.03064    0.928  0.3540    0.003
> 0
> shrelaw1            -0.0322388    0.02429    0.02565    -1.26  0.2098    0.005
> 4
> shrelaw2            -0.0537294    0.02711    0.02556    -2.10  0.0364    0.015
> 0
> suprtw3             -0.0698056    0.01696    0.01765    -3.96  0.0001    0.051
> 0
> sufamw2              0.0313763    0.01787    0.01916     1.64  0.1026    0.009
> 1
> phlthw2              -0.130255    0.04622    0.04565    -2.85  0.0046    0.027
> 2
> mhlthw1               0.157294    0.05652    0.07700     2.04  0.0420    0.014
> 1
> mhlthw2              -0.102581    0.05359    0.07163    -1.43  0.1532    0.007
> 0
> mhlthw3             -0.0348549    0.03984    0.04767   -0.731  0.4652    0.001
> 8
> physdisagw1          0.0675537    0.02651    0.03190     2.12  0.0351    0.015
> 2
> physdisagw3         -0.0897442    0.05381    0.05622    -1.60  0.1115    0.008
> 7
> PTSDw2                0.116686    0.07006    0.08233     1.42  0.1575    0.006
> 9
> painmedspw2          -0.262683     0.4982     0.3496   -0.751  0.4531    0.001
> 9
> painmedspw3           0.360395     0.2595     0.1606     2.24  0.0256    0.017
> 0
>
> sigma                  10.4238  RSS                31618.9354
> log-likelihood        -1246.6
> no. of observations       338  no. of parameters          47
> mean(WHPsociso)       6.53124  se(WHPsociso)         15.1785
> When the log-likelihood constant is NOT included:
> AIC                    4.81657  SC                    5.34818
> HQ                     5.02844  FPE                   123.765
> When the log-likelihood constant is included:
> AIC                    7.65445  SC                    8.18606
> HQ                     7.86632  FPE                   2113.84
>
> Normality test:   Chi^2(2)  =   18.339 [0.0001]**
> Hetero test:      F(77,260) =   3.7956 [0.0000]**
> RESET23 test:     F(2,289)  =   48.418 [0.0000]**
>
>
```

```
>
> EQ( 5) Modelling WHPsociso by OLS-CS
>        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
> e3/
>        data/ox/workingdatasets/MARS/gals.dta
>        The estimation sample is: 1 - 340
>
>                   Coefficient  Std.Error      HACSE  t-HACSE  t-prob Part.R^
> 2
> BSIdep                2.68936     0.2834     0.3172     8.48  0.0000   0.176
> 7
> BSIphanx             -0.861432     0.3202     0.2628    -3.28  0.0012   0.031
> 1
> emplw25               14.5963      3.297      4.303     3.39  0.0008   0.033
> 2
> emplw33              -11.6544      15.94      1.338    -8.71  0.0000   0.184
> 8
> mhlthw1              -0.109320    0.02351    0.02273    -4.81  0.0000   0.064
> 6
>
> sigma                 15.8844  RSS                84525.3375
> log-likelihood       -1420.14
> no. of observations       340  no. of parameters           5
> mean(WHPsociso)         10.28  se(WHPsociso)         18.9672
> When the log-likelihood constant is NOT included:
> AIC                   5.54527  SC                    5.60158
> HQ                    5.56771  FPE                   256.025
> When the log-likelihood constant is included:
> AIC                   8.38315  SC                    8.43946
> HQ                    8.40559  FPE                   4372.77
>
> Normality test:   Chi^2(2)  =   198.40 [0.0000]**
> Hetero test:      F(7,331)  =   3.4195 [0.0015]**
> Hetero-X test:    F(10,328) =   2.6079 [0.0046]**
> RESET23 test:     F(2,333)  =  0.28016 [0.7558]
>
> */
>
> cap gen whpsociso = WHPsociso
> // candidate illness variables for social isolation
> /* candiate illnesses  for males
>
> foreach i in 7 {
> foreach j in 1 5 6 {
> foreach k in 3 {
> foreach m in 2 {
> foreach n in 4 {
> regress whpsociso icdx`i'nr1-icdx`i'nr28 if gender==1
> regress whpsociso icdx`j'nr1-icdx`j'nr18 if gender==1
```

```
> regress whpsociso icdx`k'nr1-icdx`k'nr11 if gender==1
> regress whpsociso icdx`m'nr1-icdx`m'nr8 if gender==1
> regress whpsociso icdx`n'nr1-icdx`n'nr20 if gender==1
> }
> }
> }
> }
> }
>
> */
>
> cap drop H8MaleSIpred
> cap drop h8Msepred
> cap drop Mrsires
> cap drop upbm
> cap drop lpbm
> des icdx4nr9 icdx4nr10 icdx7nr21 icdx7nr26
>
> ****  Full WHPsocial model for males--------
> regress WHPsociso age BSIposymp BSIips BSIdep BSIphanx  ///
>   emplw32 deaw2 deaw3 dvcew2  shhlw1 shhlw2 shhousw2 suprtw3  ///
>      crhtw1-crhtw3 icdx4nr9 icdx4nr10 icdx7nr21 icdx7nr26 ///
>      if gender==1, vce(cluster id)
>      predict H8MaleSIpred if gender==2, xb
>      predict h8Msepred if gender==2, stdp
>      predict Mrsires if gender==2, residual
>      gen upbm = H8MaleSIpred + 1.96*h8Msepred
>      gen lpbm = H8MaleSIpred - 1.96*h8Msepred
>
> scatter H8MaleSIpred Mrsires, color(sand) || lowess H8MaleSIpred  Mrsires  /
> //
>   || lowess upbm Mrsires || lowess lpbm Mrsires, ///
>   title(Prediction interval of Male social isolation model)   ///
>   ytitle(Predicted Male Social Isolation)
>
> gr save MSocIsoPredInt.gph, replace
> gr export MSocIsoPredInt.eps, replace
> gr use  MsocIsoPredInt.gph
>
> cap drop H8MaleSIpred
> cap drop h8Msepred
> cap drop Mrsires
> cap drop upbm
> cap drop lpbm
> des icdx4nr9 icdx4nr10 icdx7nr21 icdx7nr26
>
> title "  Trimmed WHPsocial model for males-------- "
> regress WHPsociso age  BSIips BSIdep BSIphanx  ///
>   emplw32 deaw2 deaw3 dvcew2  shhlw1 shhlw2 shhousw2 suprtw3  ///
```

```
>      crhtw1-crhtw3 icdx4nr9 icdx4nr10 icdx7nr21 ///
>      if gender==1, vce(cluster id)
> *-+- no social isolation threat relationships for males
>      predict H8MaleSIpred if gender==2, xb
>      predict h8Msepred if gender==2, stdp
>      predict Mrsires if gender==2, residual
>      gen upbm = H8MaleSIpred + 1.96*h8Msepred
>      gen lpbm = H8MaleSIpred - 1.96*h8Msepred
>
> scatter H8MaleSIpred Mrsires, color(sand) || lowess H8MaleSIpred  Mrsires  /
> //
>   || lowess upbm Mrsires || lowess lpbm Mrsires, ///
>   title(Prediction interval of Male social isolation model)   ///
>   ytitle(Predicted Male Social Isolation)
>
> gr save MSocIsoPredInt.gph, replace
> gr export MSocIsoPredInt.eps, replace
> gr use  MsocIsoPredInt.gph
>
>
> // No significant main effects for risk perception and male social isolation
>
>
>
> title "Possible male social isolation moderators for the males"
> foreach xvar in  age  BSIips BSIdep BSIphanx  ///
>   emplw32 deaw2 deaw3 dvcew2  shhlw1 shhlw2 shhousw2 suprtw3  ///
>      icdx4nr9 icdx4nr10 icdx7nr21 {
>      forvalues j=1/3 {
>    cap gen `xvar'Xcht`j' = `xvar'*crhtw`j'
>    }
>    }
> regress WHPsociso age  BSIips BSIdep BSIphanx  ///
>   emplw32 deaw2 deaw3 dvcew2  shhlw1 shhlw2 shhousw2 suprtw3  ///
>      crhtw1-crhtw3 icdx4nr9 icdx4nr10 icdx7nr21 ///
>      icdx4nr10Xcht3   ///
>      if gender==1, vce(cluster id)
>  * findings: moderators are death in wave2 and varicose veins in legs
>
>
>
>
> title "tests for possible indirect effects for male social isolation model"
> set more off
> foreach var in age  BSIips BSIdep BSIphanx  ///
>   emplw32 deaw2 deaw3 dvcew2  shhlw1 shhlw2 shhousw2 suprtw3  ///
>     icdx4nr9 icdx4nr10 icdx7nr21 {
> sem (crhtw1-> `var')(`var'-> whpsociso) if gender==1, nocapslatent iterate(5
> 0)
```

```
> sem (crhtw2-> `var')(`var'-> whpsociso) if gender==1, nocapslatent iterate(5
> 0)
> sem (crhtw3-> `var')(`var'-> whpsociso) if gender==1, nocapslatent iterate(5
> 0)
> }
>
> * Possible male sociso indirect effects ----------------------------------
> ----
> *-+- Possible indirect effects through
> * wave 1 age BSIphanx BSIdep
> * wave 2 age BSIphanx BSIdep BSIips
> * wave 3 age BSIphanx BSIdep BSIips
> *-------------------------------------------------------------------------
> -
>
>
>
>
> /* candiate illnesses for females social isolation model
>
> foreach i in 7 {
> foreach j in 1 5 6 {
> foreach k in 3 {
> foreach m in 2 {
> foreach n in 4 {
> regress whpsociso icdx`i'nr1-icdx`i'nr28 if gender==2
> regress whpsociso icdx`j'nr1-icdx`j'nr18 if gender==2
> regress whpsociso icdx`k'nr1-icdx`k'nr11 if gender==2
> regress whpsociso icdx`m'nr1-icdx`m'nr8 if gender==2
> regress whpsociso icdx`n'nr1-icdx`n'nr20 if gender==2
> }
> }
> }
> }
> }
> */
> des icdx1nr12 icdx5nr4 icdx6nr3 icdx6nr11 icdx6nr12 icdx6nr15  icdx7nr26
>
>
> // Full female social isolation crhtw model
> cap drop H8FemSIpred
> cap drop h8sepred
> cap drop rsires
> cap drop upb
> cap drop lpb
> regress WHPsociso age BSIdep BSIphanx  sepaw2  WHPel WHPpa ///
>      emplw25 emplw33 deaw2 shhlw2  shfincw2 suprtw3  ///
>      medcow3 illw3 crhtw1-crhtw3 ///
>       icdx1nr12 icdx5nr4 icdx6nr3 icdx6nr11 icdx6nr12 icdx6nr15  ///
```

```
>       icdx7nr26 if gender==2, vce(cluster id)
>
>
> // Trimmed female social isolation crhtw model
> des icdx1nr12 icdx5nr4 icdx6nr3 icdx6nr11 icdx6nr12 icdx7nr26
> cap drop H8FemSIpred
> cap drop h8sepred
> cap drop rsires
> cap drop upb
> cap drop lpb
> regress WHPsociso age BSIdep BSIphanx  sepaw2  WHPel WHPpa ///
>      emplw25 emplw33 deaw2 shhlw2  shfincw2 suprtw3  ///
>      medcow3 illw3 crhtw1-crhtw3 ///
>       icdx1nr12 icdx5nr4 icdx6nr3 icdx6nr11 icdx6nr12  ///
>       icdx7nr26 if gender==2, vce(cluster id)
>       di e(r2_a)
>  *-+- No threat social isolation relationship for women
>      predict H8FemSIpred if gender==2, xb
>      predict h8sepred if gender==2, stdp
>      predict rsires if gender==2, residual
>      gen upb = H8FemSIpred + 1.96*h8sepred
>      gen lpb = H8FemSIpred - 1.96*h8sepred
>
> scatter H8FemSIpred rsires, color(sand) || lowess H8FemSIpred  rsires  ///
>   || lowess upb rsires || lowess lpb rsires, ///
>   title(Prediction interval of Female social isolation model)   ///
>   ytitle(Predicted Female Social Isolation)
>
> gr save FemSocIsoPredInt.gph, replace
> gr export FemSocIsoPredInt.eps, replace
> gr use  FemsocIsoPredInt.gph
>
> // No significant main effects for risk perception vs. female social isolati
> on
>
>
>
> title "tests for possible indirect effects for female social isolation model
> "
> set more off
> foreach var in age BSIdep BSIphanx  sepaw2  WHPel WHPpa ///
>      emplw25 emplw33 deaw2 shhlw2  shfincw2 suprtw3  ///
>      medcow3 illw3 ///
>       icdx1nr12 icdx5nr4 icdx6nr3 icdx6nr11 icdx6nr12  ///
>       icdx7nr26 {
> sem (crhtw1-> `var')(`var'-> whpsociso) if gender==2, nocapslatent iterate(5
> 0)
> sem (crhtw2-> `var')(`var'-> whpsociso) if gender==2, nocapslatent iterate(5
> 0)
```

```
> sem (crhtw3-> `var')(`var'-> whpsociso) if gender==2, nocapslatent iterate(5
> 0)
> }
>
> * Possible female social isolation indirect effects-------------------------
> ---
> *-+- Possible indirect effects through
> * wave 1 age illw3 suprtw3 emplw25 whpPA whpEL
> * wave 2 age illw3 shhlw2 emplw25 whpPA whpEL BSIphanx BSIdep
> * wave 3 age illw3 shhlw2 emplw25 whpPA whpEL BSIphanx BSIdep
> ********************************************************************************
> ****
>
> *    h8 female sleep model
>
> /*
>
> EQ( 4) Modelling WHPsleep by OLS-CS
>        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
> e3/Htests/H8/gals3.dta
>        The estimation sample is: 4 - 360
>        Dropped 94 observation(s) with missing values from the sample
>
>                   Coefficient  Std.Error      HACSE  t-HACSE  t-prob Part.R^
> 2
> BSIsoma              -5.23876     0.7877     0.8705    -6.02  0.0000   0.131
> 6
> suchrw1              0.119259     0.1547     0.2056    0.580  0.5624   0.001
> 4
> trgovw2             0.0295369    0.04203    0.03759    0.786  0.4328   0.002
> 6
> ecprw3              -0.161269    0.04323    0.04058    -3.97  0.0001   0.062
> 0
> radchw2            -0.0729658    0.04099    0.03577    -2.04  0.0425   0.017
> 1
> BSIpsyc              -3.83858     0.9539      1.074    -3.58  0.0004   0.050
> 8
> WHPpa                0.500257    0.07485     0.1010     4.95  0.0000   0.093
> 0
> emplw23               10.2036      4.269      5.381     1.90  0.0591   0.014
> 8
> occ2w2               -4.92256      3.657      3.285    -1.50  0.1353   0.009
> 3
> shfincw2            -0.124745    0.06532    0.06414    -1.94  0.0530   0.015
> 6
> shrelaw2             0.130585    0.06379    0.06855     1.90  0.0580   0.015
> 0
> sufamw2             0.0526073    0.03474    0.03853     1.37  0.1735   0.007
> 7
```

```
> depagw2              0.280706     0.1402     0.1496     1.88  0.0618   0.014
> 5
> BSIposymp             4.45507     0.5737     0.6316     7.05  0.0000   0.172
> 3
> BSIoc                -4.53201     0.8271     0.8644    -5.24  0.0000   0.103
> 1
> BSIips               -2.86455     0.9610     0.9066    -3.16  0.0018   0.040
> 1
> BSIdep               -5.72334     0.8799     0.8585    -6.67  0.0000   0.156
> 8
> BSIanx               -3.33035     0.9529      1.026    -3.25  0.0013   0.042
> 2
> BSIphanx             -4.20149     0.7338     0.7625    -5.51  0.0000   0.112
> 7
> BSIhos               -5.39063     0.9173     0.9879    -5.46  0.0000   0.110
> 8
> BSIpar               -3.32197     0.6939     0.6566    -5.06  0.0000   0.096
> 7
> pCRHTw1       U    -0.0825221      2.096      2.230  -0.0370  0.9705   0.000
> 0
> pCRHTw2       U       5.33646      5.559      4.714     1.13  0.2587   0.005
> 3
> pCRHTw3       U       2.67684      4.870      4.185    0.640  0.5231   0.001
> 7
>
> sigma                20.6512  RSS                101926.692
> log-likelihood       -1156.9
> no. of observations       263  no. of parameters          24
> mean(WHPsleep)       26.1302  se(WHPsleep)          31.0115
> When the log-likelihood constant is NOT included:
> AIC                  6.14236  SC                    6.46834
> HQ                   6.27337  FPE                   465.389
> When the log-likelihood constant is included:
> AIC                  8.98024  SC                    9.30622
> HQ                   9.11124  FPE                   7948.60
>
> Normality test:   Chi^2(2)  =   9.0936 [0.0106]*
> Hetero test:      F(46,216) =   1.5169 [0.0262]*
> RESET23 test:     F(2,237)  =   9.5901 [0.0001]**
>
> WHPsleep =  - 5.24*BSIsoma + 0.119*suchrw1 + 0.0295*trgovw2 - 0.161*ecprw3
> (SE)         (0.788)        (0.155)         (0.042)          (0.0432)
>             - 0.073*radchw2 - 3.84*BSIpsyc + 0.5*WHPpa + 10.2*emplw23
>              (0.041)         (0.954)        (0.0749)    (4.27)
>             - 4.92*occ2w2 - 0.125*shfincw2 + 0.131*shrelaw2 + 0.0526*sufamw2
>              (3.66)        (0.0653)         (0.0638)         (0.0347)
>             + 0.281*depagw2 + 4.46*BSIposymp - 4.53*BSIoc - 2.86*BSIips
>              (0.14)          (0.574)          (0.827)      (0.961)
>             - 5.72*BSIdep - 3.33*BSIanx - 4.2*BSIphanx - 5.39*BSIhos
```

```
>              (0.88)        (0.953)       (0.734)        (0.917)
>             - 3.32*BSIpar - 0.0825*pCRHTw1 + 5.34*pCRHTw2 + 2.68*pCRHTw3
>              (0.694)       (2.1)            (5.56)         (4.87)
>
>
> Normality test:   Chi^2(2)  =   9.0936 [0.0106]*
> Hetero test:      F(46,216) =   1.5169 [0.0262]*
> RESET23 test:     F(2,237)  =   9.5901 [0.0001]**
>
> */
>
>
> title "Female sleep model trimmed"
>
>
> des occ2w2 emplw23 suchrw1 shfincw2 shrelaw2 sufamw2  depagw2 ///
>  whppa BSIsoma BSIoc BSIdep BSIanx BSIphanx BSIhos BSIpar BSIpsyc ///
>  trgovw2 ecprw3 radchw3 crhtw1 crhtw2 crhtw3
>
> regress whpsleep age bcohort occ2w2 emplw23 suchrw1 shfincw2 shrelaw2 sufamw
> 2 ///
>   depagw2 ///
>  whppa BSIsoma BSIoc BSIdep BSIanx BSIphanx BSIhos BSIpar BSIpsyc ///
>  trgovw2 ecprw3 radchw3 crhtw1 crhtw2 crhtw3 if gender==2, vce(cluster id)
>
> // Trimm 1 of female sleep model  ns
>
> regress whpsleep age bcohort emplw23  sufamw2 ///
>    whppa BSIanx radchw3 crhtw1 crhtw2 crhtw3 if gender==2, vce(cluster id)
>
>
>
>
>
>
> title "H8 Full Male Energy Level Model"
>
>
>
> des icdx1nr5 icdx2nr4 icdx3nr7 icdx4nr10 icdx4nr12 icdx4nr17 ///
>   icdx5nr4 icdx5nr12 icdx5nr17  icdx5nr7 icdx7nr3
>
> des icdx1nr5  icdx4nr10 icdx7nr3
> regress WHPel age BSItotal BSIposymp BSIips BSIhos emplw34 ///
>    deaw3 dvcew1 sepaw1 movew2 shfincw1 fdferw1 radw2  ///
>    ecprw3 HP2pbfhm PTSDw2 radtlw1-radtlw2 crhtw1 crhtw2 crhtw3  WHPsleep  //
> /
>    WHPpa icdx1nr5  icdx4nr10 icdx7nr3 if gender==1, vce(cluster id)
>
```

```
>
>
>
> title " Trimmed Male Energy level Model "
>
>
> des icdx1nr5 icdx2nr4 icdx3nr7 icdx4nr10 icdx4nr12 icdx4nr17 ///
>   icdx5nr4 icdx5nr12 icdx5nr17  icdx5nr7 icdx7nr3
>
> * Graph preparation
>   cap drop h8MElsepred
> cap drop H8MaleELpred
> cap drop h8MELsepred
> cap drop MrELres
> cap drop upbELM
> cap drop lpbELM
>
>
>
>
>
> des icdx1nr5  icdx4nr10
>
>
> cap drop MEL1
>
> regress WHPel age BSItotal BSIposymp BSIips BSIhos emplw34 ///
>    dvcew1 sepaw1 HP2pbfhm movew2 fdferw1 radw2  ///
>    ecprw3  PTSDw2  crhtw1 crhtw2 crhtw3  WHPsleep  ///
>    WHPpa icdx1nr5  icdx4nr10  if gender==1, vce(cluster id)
> di e(r2_a)
> rdiagrbst MEL1
>
> regress WHPel age BSItotal BSIposymp BSIips BSIhos emplw34 ///
>    dvcew1 sepaw1 HP2pbfhm movew2 fdferw1 radw2  ///
>    ecprw3  PTSDw2  crhtw1 crhtw2 crhtw3  WHPsleep  ///
>    WHPpa icdx1nr5  icdx4nr10  if gender==1, vce(cluster id)
> di e(r2_a)
>
>      predict H8MaleELpred if gender==2, xb
>      predict h8MELsepred if gender==2, stdp
>      predict MrELres if gender==2, residual
>      gen upbELM = H8MaleELpred + 1.96*h8MELsepred
>      gen lpbELM = H8MaleELpred - 1.96*h8MELsepred
>
> scatter H8MaleELpred MrELres, color(sand) || lowess H8MaleELpred  MrELres  /
> //
>   || lowess upbm MrELres || lowess lpbm MrELres, ///
>   title(Prediction interval of Male Energy Level model)   ///
```

```
>   ytitle(Predicted Male Energy Level)
>
>
>
> gr save MELPredInt.gph, replace
> gr export MELPredInt.eps, replace
> gr use  MELPredInt.gph
>
> *-+-  no significant direct male energy level relationships apparent
> cap drop mfelres
> rdiagrbst mfelres
>
>
> title "Potential moderators of the Male energy level model"
>
>  foreach var in age BSItotal BSIposymp BSIips BSIhos emplw34 ///
>    dvcew1 sepaw1 HP2pbfhm movew2 fdferw1 radw2  ///
>    ecprw3  PTSDw2  WHPsleep  ///
>    WHPpa icdx1nr5  icdx4nr10   {
> cap gen `var'Xcht1 = `var'* crhtw1
> cap gen `var'Xcht2 = `var'* crhtw2
> cap gen `var'Xcht3 = `var'* crhtw3
>
> }
>
> // Full male energy level moderator model
> regress WHPel age BSItotal BSIposymp BSIips BSIhos emplw34 ///
>    dvcew1 sepaw1 HP2pbfhm movew2 fdferw1 radw2  ///
>    ecprw3  PTSDw2  crhtw1 crhtw2 crhtw3  WHPsleep  ///
>    WHPpa icdx1nr5  icdx4nr10  ageXcht1  ageXcht2 ageXcht3 ///
>    BSIipsXcht1-BSIipsXcht3 sepaw1Xcht1-sepaw1Xcht2 ///
>    fdferw1Xcht1-icdx1nr5Xcht3 icdx4nr10Xcht3 if gender==1
>
> title "h8 Trimmed male energy level moderator model"
>
> regress WHPel age BSItotal BSIposymp BSIips BSIhos emplw34 ///
>    dvcew1 sepaw1 HP2pbfhm movew2 fdferw1 radw2  ///
>    ecprw3  PTSDw2  crhtw1 crhtw2 crhtw3  WHPsleep  ///
>    WHPpa icdx1nr5  icdx4nr10  ageXcht1  ageXcht2 ageXcht3 ///
>    BSIipsXcht1-BSIipsXcht3  ///
>    fdferw1Xcht1-fdferw1Xcht3 ecprw3Xcht2-ecprw3Xcht3 ///
>    WHPpaXcht1-WHPpaXcht3 if gender==1
>
> *-+ summary   potential moderators of male energy level model are
> * wave1 ageXcht1 b=-.444 p=.037   whppaXcht1 b=.352 p=0.034
> * wave2 ageXcht2 b= 1.418 p=0.049 BSIipsXcht2 b=7.467 p=0.006 ///
> *     ecprw3Xcht2 b=-3.94 p=0.035  ///
> *       fdferw1Xcht2 b=.767 p=0.000
> * wave3 BSIipsXcht3 b= -7.307 p=.002  fdferw1Xcht3 b=-3.94 p=0.000
```

```
> *      ecprw3Xcht3 b=.410 p = 0.030
>
>
>
>
> title "Male Energy level indirect effects test"
> set more off
>  foreach var in age BSItotal BSIposymp BSIips BSIhos emplw34 ///
>    dvcew1 sepaw1 HP2pbfhm movew2 fdferw1 radw2  ///
>    ecprw3  PTSDw2  WHPsleep  ///
>    WHPpa icdx1nr5  icdx4nr10   {
> sem (crhtw1-> `var')(`var'-> whpel)(crhtw1->whpel) if gender==1, nocapslaten
> t iterate(50)
> sem (crhtw2-> `var')(`var'-> whpel)(crhtw2->whpel) if gender==1, nocapslaten
> t iterate(50)
> sem (crhtw3-> `var')(`var'-> whpel)(crhtw3->whpel) if gender==1, nocapslaten
> t iterate(50)
> }
>
> *-+-  Possible male energy level indirect effects:
> // wave 1  icdx1nr5 WHPpa WHPsleep PTSDw2 ecprw3 radw2 fdferw1 HP2pbfhm BSIh
> os ///
> //   BSIips BSIposymp BSItotal age
> // wave 2  icdx1nr5 WHPpa WHPsleep PTSDw2 ecprw3 radw2  fdferw1 HP2pbfhm BSI
> hos ///
> //   BSIips BSIposymp BSItotal age
> // wave 3  icdx1nr5 WHPpa WHPsleep PTSDw2 ecprw3 radw2 fdferw1 HP2pbfhm BSIh
> os ///
> //   BSIips BSIposymp BSItotal age
>
> title "H8 Full female energy level model"
> *--------Full  Female energy level crhtw model------------------------------
> --
> des icdx3nr1 icdx4nr17  icdx5nr17
> regress WHPel age marrw11-marrw16 marrw21 marrw23-marrw26 ///
>    BSIposymp BSIanx  BSIips phlthw3 mhlthw1 ///
>     PTSDw1 PTSDw2 HP2pbfhm WHPpain   WHPsleep whpsociso ///
>      ecprw3 crhtw1 crhtw2 ///
>     crhtw3 icdx3nr1 icdx4nr17  icdx5nr17   ///
>      if gender==2, vce(cluster id)
>
> * Variable labels
> des WHPel age marrw11-marrw16 marrw21 marrw23-marrw26 ///
>    BSIposymp BSIanx  BSIips phlthw3 mhlthw1 ///
>     PTSDw1 PTSDw2 WHPpain whpsociso  WHPsleep  ///
>     HP2pbfhm ecprw3 crhtw1 crhtw2 goferw2  ///
>     crhtw3 icdx3nr1 icdx4nr17  icdx5nr17
> title "H8 Trimmed  Female energy level crhtw model-------------------------
> --"
```

```
>
>
> //Full model
> regress WHPel age bcohort marrw11-marrw16 marrw21 marrw23-marrw26 ///
>    childw2 jsw3 movew2 phlthw2 anxagw1 BSIposymp BSIsoma BSIanx  ///
>     BSIips phlthw3 mhlthw1 ///
>     PTSDw1 PTSDw2 WHPpain whpsociso  WHPsleep  ///
>     HP2pbfhm ecprw3 crhtw1 crhtw2 goferw2  ///
>     crhtw3 icdx3nr1 icdx4nr17  icdx5nr17   ///
>      if gender==2, vce(cluster id)
>  di e(r2_a)
>  * Graph preparation
>
> cap drop H8FemELpred
> cap drop h8FELsepred
> cap drop FrELres
> cap drop upbELF
> cap drop lpbELF
>
>
> title "Trimmed female energy level model for direct effects"
> regress WHPel age bcohort marrw11-marrw16 marrw21 marrw23-marrw26 ///
>    childw2 jsw3  BSIposymp BSIanx  ///
>     BSIips phlthw3 mhlthw1 ///
>     PTSDw1 PTSDw2 WHPpain whpsociso  WHPsleep  ///
>     HP2pbfhm ecprw3 crhtw1 crhtw2 goferw2  ///
>     crhtw3 icdx3nr1 icdx4nr17  icdx5nr17   ///
>      if gender==2, vce(cluster id)
>  di e(r2_a)
>      predict H8FemELpred if gender==2, xb
>      predict h8FELsepred if gender==2, stdp
>      predict FrELres if gender==2, residual
>      gen upbELF = H8FemELpred + 1.96*h8FELsepred
>      gen lpbELF = H8FemELpred - 1.96*h8FELsepred
>
> scatter H8FemELpred FrELres, color(sand) || lowess H8FemELpred  FrELres  ///
>   || lowess upbELF FrELres || lowess lpbELF FrELres, ///
>   title(Prediction interval of Female Energy Level model)   ///
>   ytitle(Predicted Female Energy Level)
>
>  // no significant direct effects
>
> gr save FELPredInt.gph, replace
> gr export FELPredInt.eps, replace
> gr use  FELPredInt.gph
>
>
> title "Residual analysis"
>  regress WHPel age marrw11-marrw16 marrw21 marrw23-marrw26 ///
```

```
>    BSIposymp BSIanx  BSIips phlthw3 mhlthw1 ///
>     PTSDw1 PTSDw2 WHPpain whpsociso  WHPsleep  ///
>     HP2pbfhm ecprw3 crhtw1 crhtw2 goferw2  ///
>     crhtw3 icdx3nr1 icdx4nr17  icdx5nr17   ///
>      if gender==2, vce(cluster id)
>  di e(r2_a)
>
>  cap drop tfrelres
>  rdiagrbst tfrelres
>
>  title "Female Potential moderators of energy level"
>
> foreach xvar in  age marrw11-marrw16 marrw21 marrw23-marrw26 ///
>    BSIposymp BSIanx  BSIips phlthw3 mhlthw1 ///
>     PTSDw1 PTSDw2 WHPpain whpsociso  WHPsleep  ///
>     HP2pbfhm ecprw3 crhtw1 crhtw2 goferw2  ///
>     crhtw3 icdx3nr1 icdx4nr17 icdx5nr17 {
>   forvalues j=1/3 {
> cap gen `xvar'*cht`j' = `xvar'*crhtw`j'
>    }
>    }
>  replace phlthw3Xcht1 = phlthw3*crhtw1
>  cap gen phlthw3Xcht3 = phlthw3*crhtw2
>
>  forvalues j=1/3 {
> cap gen PTSDw`j'Xcht`j'= PTSDw`j'*crhtw`j'
>  }
>
> cap gen whpsleep=WHPsleep
>
>  forvalues j=1/3 {
> cap gen whpsleepXcht`j'= whpsleep*crhtw`j'
>  }
> forvalues j=1/3 {
> cap gen icdx5nr17Xcht`j'= icdx5nr17*crhtw`j'
>  }
>
> cap gen marrw25Xcht2 = marrw25*crhtw2
> cap gen marrw26Xcht2 = marrw26*crhtw2
>
>  regress WHPel age marrw11-marrw16 marrw21 marrw23-marrw26 ///
>    BSIposymp BSIanx  BSIips phlthw3 mhlthw1 ///
>     PTSDw1 PTSDw2 WHPpain whpsociso  WHPsleep  ///
>     HP2pbfhm ecprw3 crhtw1 crhtw2 crhtw3 goferw2  ///
>     icdx3nr1 icdx4nr17  icdx5nr17   ///
>     WHPpainXcht1-WHPpainXcht3 ///
>     if gender==2, vce(cluster id)
>
>
```

```
>  title "Female Energy level indirect effects test"
> set more off
>  foreach var in  age marrw11-marrw16 marrw21 marrw23-marrw26 ///
>    BSIposymp BSIanx  BSIips phlthw3 mhlthw1 ///
>     PTSDw1 PTSDw2 WHPpain whpsociso  WHPsleep  ///
>     HP2pbfhm ecprw3  goferw2  ///
>    icdx3nr1 icdx4nr17  icdx5nr17  {
> sem (crhtw1-> `var')(`var'-> whpel)(crhtw1->whpel) if gender==2, nocapslaten
> t iterate(50)
> sem (crhtw2-> `var')(`var'-> whpel)(crhtw2->whpel) if gender==2, nocapslaten
> t iterate(50)
> sem (crhtw3-> `var')(`var'-> whpel)(crhtw3->whpel) if gender==2, nocapslaten
> t iterate(50)
> }
>
> // Significant main effects for perceived risk to female energy level
> *-+-  Possible direct effects  (if unspecified means between .05 and .10)
> *      crhtw2 -> whpel
> *      crhtw3 -> whpel
> *      crhtw1,w2,w3 -> whpel with BSIanx (persistence) as indirect
> *      crhtw2,w3-> whpel with BSIips (persistence) as indirect
> *      crhtw2,w3 -> whpel with phlthw3 (persistence)  "
> *      crhtw2,w3 -> whpel with mhlthw1
> *      crhtw2,w3 -> whpel with PTSDw2
> *      crhtw2,w3 -> whpel with whppain (persistence)
> *      critw2,w3-> whpel with whpsociso
> *      critw2,w3-> whpel with whpsleep as indirect
> *      critw2,w3-> whpel with HP2pbfhm as indirect
>
>           *-+  no direct effects (p > .10)
>  *     crhtw1 not with BSIposymp
>
> *-+-  Possible female energy level indirect effects:
> // wave 1   HP2pbfhm whpsleep whpsociso  BSIanx ///
> //     age marrw11 marrw13 marrw16 marrw21 marrw26
> // wave 2   HP2pbfhm whpsleep whpsociso whppain BSIips  PTSDw2  BSIanx ///
> //   BSIips BSIposymp BSItotal age marrw21 marrw25 marrw26
> // wave 3   HP2pbfhm whpsleep whosociso whppain PTSDw2 phlthw3 BSIanx ///
> //   BSIips BSIposymp marrw25 marrw26 BSItotal age
>
>
>
>
>   sjlog close, replace
>   translate H8.smcl H8.pdf, replace

end of do-file
```

```
356 . view h8.smcl

357 . pwd
    /Users/robertyaffee/Documents/data/research/chwk/phase3/Htests/H8

358 . dir h8*

    -rw-r--r--  1 robertyaffee  staff   568737 Jul 17 17:10 h8.smcl
    -rw-r--r--  1 robertyaffee  staff      791 Jul 14 11:52 h8MalesPA.fl
    -rw-r--r--  1 robertyaffee  staff    20547 Jul 16 20:57 h8intro.log
    -rw-r--r--  1 robertyaffee  staff    21397 Jul 16 20:57 h8intro.log.tex
    -rw-r--r--  1 robertyaffee  staff    28961 Jul 16 20:57 h8intro.smcl
    -rw-r--r--  1 robertyaffee  staff   384461 Jul 12 23:20 h8paintest.log.tex
    -rw-r--r--  1 robertyaffee  staff    48858 Jul 16 17:28 h8paintest.pdf
    -rw-r--r--  1 robertyaffee  staff     2178 Jul 16 17:24 h8paintest.smcl
    -rw-r--r--  1 robertyaffee  staff  1731169 Jul 15 11:44 h8socialIsoFem.out

359 . translate h8.smcl h8pdf
    translator option required
    r(198);
```