```
 1 . set linesize 80

 2 . global user "Robert A. Yaffee"

 3 . di "$user"
   Robert A. Yaffee

 4 . cd /Users/robertyaffee/Documents/data/research/chwk/phase3/data/ox
   /Users/robertyaffee/Documents/data/research/chwk/phase3/data/ox

 5 . di c(pwd)
   /Users/robertyaffee/Documents/data/research/chwk/phase3/data/ox

 6 . di c(filename)
   chwide22apr2012malesold.dta

 7 . di c(current_date)
   23 Apr 2012

 8 . di c(current_time)
   12:41:54

 9 .
10 . title(Primary objective:  Explore variables related by AutoMetrics to Radhlw
   > 1 Radhlw2 and Radhlw3  ///
   >  for latent variables)


   ********************************************************************************
   > *
   ********************************************************************************
   > *
   *****                                                                      ****
   > *
   *****                                                                      ****
   > *
   *****                              (Primary                                ****
   > *
   *****                             objective:                               ****
   > *
   *****                              Explore                                 ****
   > *
   *****                             variables                                ****
   > *
   *****                              related                                 ****
   > *
   *****                                 by                                   ****
   > *
   *****                             AutoMetrics                              ****
```

```
> *
*****                                to                                ****
> *
*****                            Radhlw1                               ****
> *
*****                            Radhlw2                               ****
> *
*****                              and                                 ****
> *
*****                            Radhlw3                               ****
> *
*****                              for                                 ****
> *
*****                             latent                               ****
> *
*****                           variables)                             ****
> *
*****                                                                  ****
> *
*****                                                                  ****
> *
*****                                        23 Apr 2012    12:41:54  ****
> *
********************************************************************************
> *
********************************************************************************
> *


11 .
12 .
13 . subtitle " 2 strategies: conventional factor analysis and polychoric-polyser
   > ial correlation input" ///
   >  " to accommodate dichotomous variables in the mix"
-------------------------------------------------------------------------------
                                      Date and time:  23 Apr 2012    12:41:54
                                      Working directory:  /Users/robertyaffee
   > /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012maleso
   > ld.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
   >  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

 2 strategies: conventional factor analysis and polychoric-polyserial correlat
   > ion input
-------------------------------------------------------------------------------
```

```
14 . di "{hline}"
```

```
15 . di "{hline}"
```

```
16 . di as input "Part I female factor analysis"
   Part I female factor analysis

17 .
18 . * Identify robust commonalities over three waves
19 . * Examine differences  over three waves
20 .
21 .
22 . * These will serve as guides to the SEM path models over time.
23 .
24 .
25 .
26 . *  In AutoMetrics we proceed from general to specific
27 .
28 . *  We reverse the order for simplicity of presentation only
29 . *  The actual analysis was performed from general to specific by including
30 . *  variables from all waves first and filtering out the nonsignificantly rel
   > ated
31 . *  items.
32 .
33 .
34 .
35 .
36 .
37 .
38 .
39 .
40 . subtitle "Female Radhlw1 model using variables selected by AutoMetrics"
```

```
                                      Date and time:  23 Apr 2012    12:41:54
                                      Working directory:  /Users/robertyaffee
   > /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012maleso
   > ld.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
   >  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

   Female Radhlw1 model using variables selected by AutoMetrics
```

```
41 . use chwide22apr2012femmesold, clear

42 .
43 .
44 . subtitle "Variable index"
```

```
                                      Date and time:  23 Apr 2012    12:41:54
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
> old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory
```

Variable index

```
45 . des suchrw1 smokw1 trgovw1 ecprw1 radchw1 dafter chsize icdx1nr5 icdx4nr10
```

variable name	storage type	display format	value label	variable label
suchrw1	byte	%8.0g		**Level of support (in percent) from Chernobyl survivor benefits in 1986**
smokw1	int	%8.0g		**number of cigarettes per week in 1976-1986**
trgovw1	byte	%8.0g		**level of trust in government reports about chornobyl in time period 1976-1986**
ecprw1	byte	%8.0g		**consider hazardous (in percent) - economic problems in 1986**
radchw1	byte	%8.0g		**believed % of polution related to chornobyl in 1986**
dafter	int	%8.0g	*	**how many days lapsed after Chornobyl accident before you heard about the acciden**
chsize	byte	%8.0g	*	**the radioactive fallout from chornobyl affected more people than the radioactive**
icdx1nr5	byte	%8.0g		**icdx1nr==401 hypertension**
icdx4nr10	byte	%8.0g		**icdx4nr==varicose veins in legs**

```
46 .
47 . subtitle "Stata regression analysis"
```

```
                                      Date and time:  23 Apr 2012    12:41:54
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
> old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

Stata regression analysis
```

```
48 . // differing results may be due to differential dropping of observations
49 . *--------- Trimmed female radhlw1 regression model
50 . di _skip(1)
```

```
51 . regress suchrw1 smokw1 trgovw1 ecprw1 radchw1 dafter chsize icdx1nr5 icdx4nr
   > 10
```

Source	SS	df	MS		
Model	158.371978	8	19.7964972	Number of obs =	256
				F(8, 247) =	0.24
Residual	20619.2374	247	83.4786939	Prob > F =	0.9836
				R-squared =	0.0076
				Adj R-squared =	-0.0245
Total	20777.6094	255	81.4808211	Root MSE =	9.1367

suchrw1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
smokw1	.0130402	.0360591	0.36	0.718	-.0579822	.0840627
trgovw1	.0071742	.0163703	0.44	0.662	-.0250689	.0394174
ecprw1	.0094946	.0181097	0.52	0.601	-.0261747	.0451638
radchw1	-.000444	.0163037	-0.03	0.978	-.0325561	.031668
dafter	.0838843	.1250718	0.67	0.503	-.162459	.3302275
chsize	-.0072379	.0213257	-0.34	0.735	-.0492414	.0347655
icdx1nr5	1.50296	2.072082	0.73	0.469	-2.578244	5.584164
icdx4nr10	-2.401571	6.629066	-0.36	0.717	-15.45828	10.65514
_cons	1.504281	1.927103	0.78	0.436	-2.29137	5.299932

```
52 . // items are dropped due to missing values
53 .
54 . *--------- Factor analysis of female radhlw1 wave 1 explanatory vars
55 . di _skip(1)


56 .
57 . polychoricpca suchrw1 smokw1 trgovw1 ecprw1 radchw1 dafter chsize icdx4nr10
```

Polychoric correlation matrix

	suchrw1	smokw1	trgovw1	ecprw1	radchw1
suchrw1	1				
smokw1	.01964444	1			
trgovw1	.0447752	-.08938678	1		
ecprw1	.03689915	-.03723037	.28077415	1	
radchw1	.00473513	.06660046	.04863307	.14257218	1
dafter	.04004928	-.07539482	.09960487	-.05656598	-.02181122
chsize	-.01190292	-.07217215	.02939964	.21970153	.19639619
icdx4nr10	-.34602635	.18677529	-.18157629	.26418113	.45418276

	dafter	chsize	icdx4nr10
dafter	1		
chsize	.05380153	1	
icdx4nr10	.0525849	.45929989	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	1.956554	0.244569	0.244569
2	1.374763	0.171845	0.416415
3	1.082791	0.135349	0.551764
4	1.005773	0.125722	0.677485
5	0.919347	0.114918	0.792404
6	0.790294	0.098787	0.891190
7	0.630098	0.078762	0.969953
8	0.240379	0.030047	1.000000

```
58 . matrix define mypc1f =r(R)

59 . factormat mypc1f, n(363) blanks(.36) factors(1)
   (obs=363)
```

Factor analysis/correlation — Number of obs = **363**
Method: principal factors — Retained factors = **1**
Rotation: (unrotated) — Number of params = **8**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**1.36889**	**0.76854**	**0.6925**	**0.6925**
Factor2	**0.60035**	**0.34958**	**0.3037**	**0.9963**
Factor3	**0.25077**	**0.06958**	**0.1269**	**1.1231**
Factor4	**0.18119**	**0.10283**	**0.0917**	**1.2148**
Factor5	**0.07836**	**0.06891**	**0.0396**	**1.2544**
Factor6	**0.00945**	**0.14771**	**0.0048**	**1.2592**
Factor7	**-0.13826**	**0.23583**	**-0.0699**	**1.1893**
Factor8	**-0.37409**	.	**-0.1893**	**1.0000**

LR test: independent vs. saturated: chi2(**28**) = **406.99** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
suchrw1		**0.9394**
smokw1		**0.9884**
trgovw1		**0.9988**
ecprw1		**0.8906**
radchw1	**0.4824**	**0.7673**
dafter		**0.9998**
chsize	**0.5035**	**0.7464**
icdx4nr10	**0.8364**	**0.3004**

(blanks represent abs(loading)<**.36**)

```
60 . rotate, blanks(.36)

Factor analysis/correlation                    Number of obs    =        363
    Method: principal factors                  Retained factors =          1
    Rotation: orthogonal varimax (Kaiser off)  Number of params =          8
```

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.36889**	.	**0.6925**	**0.6925**

LR test: independent vs. saturated: chi2(**28**) = **406.99** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
suchrw1		**0.9394**
smokw1		**0.9884**
trgovw1		**0.9988**
ecprw1		**0.8906**
radchw1	**0.4824**	**0.7673**
dafter		**0.9998**
chsize	**0.5035**	**0.7464**
icdx4nr10	**0.8364**	**0.3004**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1
Factor1	**1.0000**

```
61 .
62 .
63 .
64 .
65 .
66 . /*
   > EQ(11) Modelling radhlw1 by OLS-CS              // females wave 1
   >
   >        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
   > e3/data/ox/chwide6apr2012femmeold.dta
   >        The estimation sample is: 1 - 363
   >        Dropped 107 observation(s) with missing values from the sample
   >
   >                   Coefficient  Std.Error  t-value  t-prob Part.R^2
   > suchrw1              0.711000     0.1839     3.87  0.0001   0.0571
   > smokw1               0.175042     0.1031     1.70  0.0908   0.0115
   > trgovw1             -0.148936    0.04600    -3.24  0.0014   0.0407
   > ecprw1               0.313397    0.05239     5.98  0.0000   0.1265
   > radchw1              0.345753    0.04453     7.76  0.0000   0.1962
   > dafter              0.0240393     0.3544   0.0678  0.9460   0.0000
   > chsize               0.345099    0.04527     7.62  0.0000   0.1905
   > icdx1nr5              9.83570      6.002     1.64  0.1026   0.0108
   > icdx4nr10            -60.2293      19.15    -3.14  0.0019   0.0385
   >
   > sigma                 26.4385  RSS                172651.943
   > log-likelihood       -1197.02
   > no. of observations       256  no. of parameters           9
   > mean(radhlw1)         55.7969  se(radhlw1)           35.0624
   > When the log-likelihood constant is NOT included:
   > AIC                   6.58417  SC                    6.70880
   > HQ                    6.63430  FPE                   723.570
   > When the log-likelihood constant is included:
   > AIC                   9.42205  SC                    9.54668
   > HQ                    9.47217  FPE                   12358.2
   >
   > Normality test:   Chi^2(2)  =   2.6459 [0.2663]
   > Hetero test:      F(16,239) =   1.9307 [0.0186]*
   > Hetero-X test:    F(37,218) =   1.7336 [0.0086]**
   > RESET23 test:     F(2,245)  =  0.56343 [0.5700]
   >
   >
   > */
```

```
67 .
68 . subtitle "Variable index"
```

```
                                      Date and time:  23 Apr 2012    12:41:56
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
> old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory
```

Variable index

```
69 . des radhlw2 emplw1 beerw2 trrepw1 defnw2 ecprw1 polprw1 radw1 radtlw2 dafter
   >  ///
   >  toxic lBSItotal BSIphanx MiPTSD Fastivskiy PereyaslavKhmelnitskiy Zhitomirs
   > kiy icdx1nr8
```

variable name	storage type	display format	value label		variable label
radhlw2	byte	%8.0g			**how much believed personal health is affected by radiation in 1996**
emplw1	byte	%15.0g	LABI		**mode of employment in 1986**
beerw2	byte	%8.0g			**nuber of beers per week in 1987-1996**
trrepw1	byte	%8.0g		*	**level of trust in medical/scientific reports about chornobyl in time period 197**
defnw2	byte	%8.0g		*	**consider hazardous (in percent) - deficiencies in essential nutrition in 1996**
ecprw1	byte	%8.0g			**consider hazardous (in percent) - economic problems in 1986**
polprw1	byte	%8.0g			**consider hazardous (in percent) - political problems in 1986**
radw1	byte	%8.0g			**believed % of the radioactively contaminated area in 1986**
radtlw2	byte	%8.0g			**believed % of cumulative radiation exposed to in a lifetime in 1996**
dafter	int	%8.0g		*	**how many days lapsed after Chornobyl accident before you heard about the acciden**

toxic	byte	%8.0g	**all radioactive materials remain toxic for thousands of years (% of agreement)**
lBSItotal	float	%9.0g	**Ln(bsItotal)**
BSIphanx	byte	%9.0g	**Basic symptom inventory phobic anxiety subscale**
MiPTSD	byte	%9.0g	**Misssissipi post-traumatic stress disorder scale**
Fastivskiy	byte	%8.0g	**ranown==66**
PereyaslavKhm~y	byte	%8.0g	**ranown==83**
Zhitomirskiy	byte	%8.0g	**ranown==102**
icdx1nr8	byte	%8.0g	**icdx1nr==466 ac bronchitis/brnchial**

```
70 .
71 .
72 . // full female radhlw2 model
73 . regress radhlw2 emplw1 beerw2 trrepw1 defnw2 ecprw1 polprw1 radw1 radtlw2 da
   > fter ///
   >  toxic lBSItotal BSIphanx MiPTSD Fastivskiy PereyaslavKhmelnitskiy Zhitomirs
   > kiy icdx1nr8
```

Source	SS	df	MS		
Model	**164367.192**	**17**	**9668.65834**	Number of obs =	**258**
Residual	**111937.711**	**240**	**466.40713**	F(17, 240) =	**20.73**
				Prob > F =	**0.0000**
				R-squared =	**0.5949**
				Adj R-squared =	**0.5662**
Total	**276304.903**	**257**	**1075.11635**	Root MSE =	**21.596**

radhlw2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
emplw1	**-3.219544**	**.850322**	**-3.79**	**0.000**	**-4.894592**	**-1.54449**
beerw2	**.2853234**	**.4000908**	**0.71**	**0.476**	**-.5028145**	**1.07346**
trrepw1	**-.0567232**	**.0391257**	**-1.45**	**0.148**	**-.1337968**	**.020350**
defnw2	**.1581877**	**.0547314**	**2.89**	**0.004**	**.0503725**	**.266002**
ecprw1	**.1188287**	**.049893**	**2.38**	**0.018**	**.0205445**	**.217112**
polprw1	**.1904486**	**.0511675**	**3.72**	**0.000**	**.0896539**	**.291243**
radw1	**-.113607**	**.0403429**	**-2.82**	**0.005**	**-.1930784**	**-.034135**

```
      radtlw2 |   .2915847   .0423369     6.89   0.000     .2081854     .37498
> 4
       dafter |   .9859397   .3725751     2.65   0.009     .2520049    1.71987
> 5
        toxic |   .1499127   .0408433     3.67   0.000     .0694555    .230369
> 9
    lBSItotal |  -3.654524    7.77286    -0.47   0.639    -18.96626    11.6572
> 1
     BSIphanx |   1.644464   .6063649     2.71   0.007     .4499876    2.83894
> 1
      MiPTSD |   .6147609   .1597713     3.85   0.000     .3000277     .92949
> 4
   Fastivskiy |  -53.05307   19.09927    -2.78   0.006    -90.67667   -15.4294
> 6
PereyaslavK~y |   38.89078   11.30564     3.44   0.001     16.61982    61.1617
> 4
 Zhitomirskiy |  -21.24333   5.871147    -3.62   0.000    -32.80889   -9.67777
> 2
     icdx1nr8 |    14.2548   6.987222     2.04   0.042     .4906826    28.0189
> 1
        _cons |  -15.46635   28.00721    -0.55   0.581    -70.63768    39.7049
> 8
--------------+----------------------------------------------------------------

> —

74 .
75 .
76 . // trimmed model for radhlw2 for females
77 . sw, pr(.1): regress radhlw2 emplw1 beerw2 trrepw1 defnw2 ecprw1 polprw1 radw
   > 1 radtlw2 dafter ///
   >  toxic lBSItotal BSIphanx MiPTSD Fastivskiy PereyaslavKhmelnitskiy Zhitomirs
   > kiy icdx1nr8
                      begin with full model
   p = 0.6387 >= 0.1000  removing lBSItotal
   p = 0.4952 >= 0.1000  removing beerw2
   p = 0.1581 >= 0.1000  removing trrepw1

      Source |       SS       df       MS              Number of obs =     258
-------------+------------------------------           F( 14,   243) =   25.01
       Model |  163117.19     14  11651.2279           Prob > F      =  0.0000
    Residual |  113187.713    243  465.793058           R-squared     =  0.5904
-------------+------------------------------           Adj R-squared =  0.5668
       Total |  276304.903    257  1075.11635           Root MSE      =  21.582
```

```
------------------------------------------------------------------------------
> ——
      radhlw2 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval
> ]
--------------+---------------------------------------------------------------
> ——
       emplw1 |  -3.132875   .8480331    -3.69   0.000    -4.803309   -1.46244
> 1
 Zhitomirskiy |  -21.36803   5.814203    -3.68   0.000     -32.8207   -9.91536
> 3
PereyaslavK~y |   37.81273   11.16988     3.39   0.001      15.8106    59.8148
> 7
       defnw2 |   .1533565   .0533752     2.87   0.004     .0482194    .258493
> 5
       ecprw1 |   .1041828   .0489413     2.13   0.034     .0077794    .200586
> 2
      polprw1 |   .1877675   .0505898     3.71   0.000     .0881171     .28741
> 8
        radw1 |  -.1194716   .0400584    -2.98   0.003    -.1983777   -.040565
> 5
      radtlw2 |   .2909574   .0421012     6.91   0.000     .2080275    .373887
> 2
       dafter |   .9054713   .3636316     2.49   0.013      .189199    1.62174
> 4
        toxic |    .144018   .0405756     3.55   0.000     .0640933    .223942
> 7
     icdx1nr8 |   14.51539   6.965372     2.08   0.038     .7951768     28.235
> 6
     BSIphanx |   1.403382   .4776115     2.94   0.004     .4625949    2.34416
> 9
       MiPTSD |   .5813225   .1360522     4.27   0.000     .3133303    .849314
> 6
   Fastivskiy |  -54.30072   18.95439    -2.86   0.005    -91.63658   -16.9648
> 5
        _cons |  -28.69245   7.586452    -3.78   0.000    -43.63605   -13.7488
> 5
------------------------------------------------------------------------------
> ——
```

```
78 .
79 . /*
   > EQ( 4) Modelling radhlw2 by OLS-CS females        wave 2   AutoMetrics outpu
   > t
   >
   >        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
   > e3/data/ox/chwide6apr2012femmeold.dta
   >        The estimation sample is: 1 - 363
   >        Dropped 105 observation(s) with missing values from the sample
   >
   >                           Coefficient  Std.Error  t-value  t-prob Part.R^2
   > emplw1                      -3.25618     0.8465    -3.85  0.0002   0.0578
   > beerw2                      0.298501     0.3988    0.748  0.4549   0.0023
   > trrepw1                   -0.0569961    0.03907    -1.46  0.1459   0.0088
   > defnw2                      0.154823    0.05431     2.85  0.0047   0.0326
   > ecprw1                      0.119916    0.04978     2.41  0.0168   0.0235
   > polprw1                     0.191334    0.05107     3.75  0.0002   0.0550
   > radw1                      -0.113229    0.04028    -2.81  0.0053   0.0317
   > radtlw2                     0.290731    0.04225     6.88  0.0000   0.1642
   > dafter                       1.02022     0.3668     2.78  0.0058   0.0311
   > toxic                       0.149913    0.04078     3.68  0.0003   0.0531
   > lBSItotal                   -7.78541      2.109    -3.69  0.0003   0.0535
   > BSIphanx                     1.83428     0.4988     3.68  0.0003   0.0531
   > MiPTSD                      0.647294     0.1483     4.36  0.0000   0.0733
   > Fastivskiy                  -53.9830      19.00    -2.84  0.0049   0.0324
   > PereyaslavKhmelnitskiy       39.5479      11.23     3.52  0.0005   0.0490
   > Zhitomirskiy                -20.8431      5.818    -3.58  0.0004   0.0506
   > icdx1nr8                     14.0392      6.966     2.02  0.0450   0.0166
   >
   > sigma                 21.5653  RSS                112079.945
   > log-likelihood       -1149.63
   > no. of observations       258  no. of parameters          17
   > mean(radhlw2)         57.9806  se(radhlw2)             32.789
   > When the log-likelihood constant is NOT included:
   > AIC                   6.20579  SC                     6.43990
   > HQ                    6.29993  FPE                    495.706
   > When the log-likelihood constant is included:
   > AIC                   9.04367  SC                     9.27778
   > HQ                    9.13780  FPE                    8466.39
   >
   > Normality test:   Chi^2(2)  =   6.7189 [0.0348]*
   > Hetero test:      F(30,227) =   1.0607 [0.3875]
   > Hetero-X test:    F(108,149)=   1.8131 [0.0004]**
   > RESET23 test:     F(2,239)  =  0.99104 [0.3727]
   > */
```

```
80 .
81 .
82 . subtitle "Female factor analysis of Polychoric correlation input for wave 2"
-------------------------------------------------------------------------------
                                      Date and time:  23 Apr 2012    12:41:56
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
> old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

Female factor analysis of Polychoric correlation input for wave 2
-------------------------------------------------------------------------------

83 .
84 . polychoricpca emplw1 beerw2 trrepw1 defnw2 ecprw1 polprw1 radw1 radtlw2 daft
> er ///
>  toxic lBSItotal BSIphanx MiPTSD Zhitomirskiy icdx1nr8

Polychoric correlation matrix

                emplw1        beerw2       trrepw1        defnw2
     emplw1          1
     beerw2  .00536823             1
    trrepw1  -.0459714     .07262927             1
     defnw2 -.03017636     .11155139     .25236078             1
     ecprw1  .07106673     -.0524772     .22092736     .42764079
    polprw1 -.06312253    -.04397897     .10608968     .46171796
      radw1 -.06587822    -.08966142    -.08458825    -.31568584
    radtlw2 -.00932769     .10332458      .1704423     .31991194
     dafter  .24898792    -.01397172     .11599442      .0500484
      toxic  .01629875     .01685074     .13161004     .03654197
  lBSItotal -.07839542     .04716042     .11229156     .12758417
   BSIphanx -.10906565     .00663866     .11436174     .11099077
     MiPTSD -.04018481     .05951987      .1150889     .25677074
Zhitomirskiy -.05392818     .00866494     .00936541     .40593247
   icdx1nr8  .40693901     .01784683    -.04430329    -.03380422
```

	ecprw1	polprw1	radw1	radtlw2
ecprw1	1			
polprw1	.43041553	1		
radw1	-.32609601	-.00790456	1	
radtlw2	.24925181	.17611945	-.10363159	1
dafter	-.06058092	-.12257213	-.11310304	.02240842
toxic	.11785733	.04405026	.03126825	.15088674
lBSItotal	.02789273	-.08370333	.06397724	.05643446
BSIphanx	-.03363922	-.19374699	.0253977	.04331518
MiPTSD	.14007647	-.04321772	-.02404628	.09510186
Zhitomirskiy	.00627293	-.17698005	.06008136	-.01230024
icdx1nr8	-.01549182	-.04636697	.28775977	-.13059975

	dafter	toxic	lBSItotal	BSIphanx
dafter	1			
toxic	-.00548779	1		
lBSItotal	.13962894	.12021994	1	
BSIphanx	.06363806	.07623447	.72164469	1
MiPTSD	.06058466	.11121417	.66559174	.49301222
Zhitomirskiy	-.04921272	-.12307188	.33317099	.22792813
icdx1nr8	-.08441423	-.06513577	-.05264543	-.06933084

	MiPTSD	Zhitomirskiy	icdx1nr8
MiPTSD	1		
Zhitomirskiy	.26073448	1	
icdx1nr8	.08813359	.45467799	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	2.718995	0.181266	0.181266
2	2.248385	0.149892	0.331159
3	1.636160	0.109077	0.440236
4	1.361810	0.090787	0.531023
5	1.171682	0.078112	0.609135
6	1.064052	0.070937	0.680072
7	0.900856	0.060057	0.740129
8	0.821045	0.054736	0.794866
9	0.799838	0.053323	0.848188
10	0.696596	0.046440	0.894628
11	0.491029	0.032735	0.927363
12	0.438530	0.029235	0.956598
13	0.301593	0.020106	0.976705
14	0.269167	0.017944	0.994649
15	0.080263	0.005351	1.000000

```
85 . matrix define mypcw2f= r(R)

86 . factormat mypcw2f, n(363) blanks(.36) factors(4)
   (obs=363)
```

Factor analysis/correlation — Number of obs = **363**
Method: principal factors — Retained factors = **4**
Rotation: (unrotated) — Number of params = **54**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**2.32859**	**0.54362**	**0.3588**	**0.3588**
Factor2	**1.78497**	**0.52762**	**0.2750**	**0.6338**
Factor3	**1.25736**	**0.53135**	**0.1937**	**0.8275**
Factor4	**0.72601**	**0.12269**	**0.1119**	**0.9394**
Factor5	**0.60331**	**0.35009**	**0.0930**	**1.0323**
Factor6	**0.25322**	**0.05113**	**0.0390**	**1.0714**
Factor7	**0.20209**	**0.08001**	**0.0311**	**1.1025**
Factor8	**0.12209**	**0.09576**	**0.0188**	**1.1213**
Factor9	**0.02633**	**0.01240**	**0.0041**	**1.1254**
Factor10	**0.01393**	**0.04981**	**0.0021**	**1.1275**
Factor11	**-0.03589**	**0.04549**	**-0.0055**	**1.1220**
Factor12	**-0.08137**	**0.13106**	**-0.0125**	**1.1094**
Factor13	**-0.21244**	**0.03337**	**-0.0327**	**1.0767**
Factor14	**-0.24581**	**0.00628**	**-0.0379**	**1.0388**
Factor15	**-0.25209**	.	**-0.0388**	**1.0000**

LR test: independent vs. saturated: chi2(**105**) = **1651.34** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Factor4	Uniqueness
emplw1				**0.5817**	**0.5311**
beerw2					**0.9889**
trrepw1					**0.8789**
defnw2	**0.5622**	**0.5958**			**0.2594**
ecprw1		**0.5575**			**0.5987**
polprw1		**0.6556**			**0.5162**
radw1		**-0.3774**			**0.7694**
radtlw2					**0.8387**
dafter				**0.3999**	**0.8246**
toxic					**0.9501**
lBSItotal	**0.7887**				**0.2143**
BSIphanx	**0.6442**				**0.4097**
MiPTSD	**0.6961**				**0.4822**
Zhitomirskiy	**0.5069**		**0.5546**		**0.3053**

icdx1nr8	**0.7576**	**0.3358**

(blanks represent abs(loading)<**.36**)

```
87 . rotate, blanks(.36)
```

Factor analysis/correlation — Number of obs = **363**
Method: principal factors — Retained factors = **4**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **54**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**2.13242**	**0.26226**	**0.3286**	**0.3286**
Factor2	**1.87016**	**0.52863**	**0.2881**	**0.6167**
Factor3	**1.34153**	**0.58872**	**0.2067**	**0.8234**
Factor4	**0.75282**	**.**	**0.1160**	**0.9394**

LR test: independent vs. saturated: chi2(**105**) = **1651.34** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Factor4	Uniqueness
emplw1				**0.6450**	**0.5311**
beerw2					**0.9889**
trrepw1					**0.8789**
defnw2		**0.8304**			**0.2594**
ecprw1		**0.6163**			**0.5987**
polprw1		**0.6301**			**0.5162**
radw1					**0.7694**
radtlw2		**0.3659**			**0.8387**
dafter				**0.3710**	**0.8246**
toxic					**0.9501**
lBSItotal	**0.8840**				**0.2143**
BSIphanx	**0.7650**				**0.4097**
MiPTSD	**0.6875**				**0.4822**
Zhitomirskiy			**0.7323**		**0.3053**
icdx1nr8			**0.7656**		**0.3358**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1	Factor2	Factor3	Factor4
Factor1	**0.8663**	**0.4606**	**0.1931**	**-0.0091**
Factor2	**-0.3774**	**0.8571**	**-0.3503**	**0.0175**
Factor3	**-0.3155**	**0.2224**	**0.8952**	**0.2227**
Factor4	**0.0869**	**-0.0619**	**-0.1965**	**0.9747**

```
88 .
89 .
90 .
91 .
92 . subtitle "Female wave 3 factor analysis"
```

```
                                      Date and time:  23 Apr 2012    12:42:02
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
> old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

Female wave 3 factor analysis
```

```
93 .
94 . des shjobw3 smokw1 beerw2 trrepw3 defnw2 polprw3 airw1 airw3 radchw3 dafter
> ///
>   dauthw3 kzchorn WHPpain icdx1nr14
```

variable name	storage type	display format	value label	variable label
shjobw3	byte	%8.0g	*	**Percentage of strains and hassles related to job NOW**
smokw1	int	%8.0g		**number of cigarettes per week in 1976-1986**
beerw2	byte	%8.0g		**nuber of beers per week in 1987-1996**
trrepw3	byte	%8.0g	*	**level of trust in medical/scientific reports about chornobyl in time period 1997**
defnw2	byte	%8.0g	*	**consider hazardous (in percent) - deficiencies in essential nutrition in 1996**

```
polprw3         byte    %8.0g                 consider hazardous (in percent)
                                                - political problems NOW
airw1           byte    %8.0g                 consider hazardous (in percent)
                                                - air and water pollution in
                                                1986
airw3           byte    %8.0g                 consider hazardous (in percent)
                                                - air and water pollution NOW
radchw3         byte    %8.0g                 believed % of polution related
                                                to chornobyl NOW
dafter          int     %8.0g               * how many days lapsed after
                                                Chornobyl accident before you
                                                heard about the acciden
dauthw3         byte    %8.0g                 level of danger by authorities
                                                (in percent) NOW
kzchorn         byte    %8.0g               * in k/z most cases of cancer in
                                                humans are known to be caused
                                                by radiation from
WHPpain         float   %9.0g                 Wtd Health Profile Pain Pt 1
                                                subscale
icdx1nr14       byte    %8.0g                 icdx1nr==535 gastritus &
                                                duodenitis

95 .
96 . subtitle "Female full wave 3 regression model"
-------------------------------------------------------------------------------
                                      Date and time:  23 Apr 2012    12:42:02
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
> old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

Female full wave 3 regression model
-------------------------------------------------------------------------------
```

```
97 . regress radhlw3 shjobw3 smokw1 beerw2 trrepw3 defnw2 polprw3 airw1 airw3 rad
   > chw3 dafter ///
   >   dauthw3 kzchorn WHPpain icdx1nr14
```

Source	SS	df	MS		
Model	171261.481	14	12232.9629	Number of obs =	256
Residual	115574.172	241	479.560878	F(14, 241) =	25.51
				Prob > F =	0.0000
Total	286835.652	255	1124.8457	R-squared =	0.5971
				Adj R-squared =	0.5737
				Root MSE =	21.899

radhlw3	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
shjobw3	-.0185503	.0412157	-0.45	0.653	-.0997392	.0626387
smokw1	.1113993	.0865983	1.29	0.200	-.059187	.2819856
beerw2	.7666538	.405691	1.89	0.060	-.0324992	1.565807
trrepw3	-.0940009	.0436017	-2.16	0.032	-.17989	-.0081118
defnw2	.3464436	.0508897	6.81	0.000	.2461982	.446689
polprw3	-.2033643	.0713801	-2.85	0.005	-.3439729	-.0627556
airw1	.1642731	.0626425	2.62	0.009	.0408764	.2876698
airw3	.209619	.0461261	4.54	0.000	.1187573	.3004808
radchw3	.1631134	.0466972	3.49	0.001	.0711266	.2551001
dafter	.5421591	.3108658	1.74	0.082	-.0702018	1.15452
dauthw3	.1696669	.0416989	4.07	0.000	.0875261	.2518077
kzchorn	.2495692	.0565581	4.41	0.000	.1381578	.3609806
WHPpain	.2928728	.0617871	4.74	0.000	.1711612	.4145845
icdx1nr14	-24.11579	8.534668	-2.83	0.005	-40.92785	-7.303718
_cons	-11.07583	5.888114	-1.88	0.061	-22.67456	.5229128

```
98 .
99 . subtitle "Female trimmed  wave 3 regression model"
-------------------------------------------------------------------------------
                                      Date and time:  23 Apr 2012    12:42:02
                                      Working directory:  /Users/robertyaffee
   > /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
   > old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
   >  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

   Female trimmed  wave 3 regression model
-------------------------------------------------------------------------------
```

```
100 . regress radhlw3 beerw2 trrepw3 defnw2 polprw3 airw1 airw3 radchw3 ///
    >   dauthw3 kzchorn WHPpain icdx1nr14
```

Source	SS	df	MS		
Model	172163.863	11	15651.2602	Number of obs =	264
Residual	122526.622	252	486.216755	F(11, 252) =	32.19
				Prob > F =	0.0000
				R-squared =	0.5842
				Adj R-squared =	0.5661
Total	294690.485	263	1120.49614	Root MSE =	22.05

radhlw3	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
beerw2	.7029709	.4057389	1.73	0.084	-.0961004	1.502042
trrepw3	-.0887523	.0421355	-2.11	0.036	-.1717349	-.0057698
defnw2	.3406043	.0500576	6.80	0.000	.2420198	.4391889
polprw3	-.1939185	.0701288	-2.77	0.006	-.3320316	-.0558053
airw1	.16782	.0608063	2.76	0.006	.0480668	.2875733
airw3	.178982	.0444199	4.03	0.000	.0915006	.2664635
radchw3	.1830639	.0459724	3.98	0.000	.0925247	.273603
dauthw3	.1722366	.0411146	4.19	0.000	.0912645	.2532087
kzchorn	.25682	.0541301	4.74	0.000	.150215	.363425
WHPpain	.2974334	.0612549	4.86	0.000	.1767966	.4180703
icdx1nr14	-22.14917	8.53145	-2.60	0.010	-38.9512	-5.347141
_cons	-11.19289	5.69842	-1.96	0.051	-22.41549	.0297036

```
101 .
102 .
103 .
104 . /*  AutoMetrics radhlw3 female model
    > EQ(29) Modelling radhlw3 by OLS-CS
    >        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
    > e3/data/ox/chwide6apr2012femmeold.dta
    >        The estimation sample is: 1 - 363
    >        Dropped 107 observation(s) with missing values from the sample
    >
    >                   Coefficient  Std.Error  t-value  t-prob Part.R^2
    > shjobw3            -0.0338494    0.04062   -0.833  0.4054   0.0029
    > smokw1               0.101026    0.08687     1.16  0.2460   0.0056
    > beerw2               0.746231     0.4077     1.83  0.0684   0.0137
    > trrepw3             -0.116531    0.04214    -2.77  0.0061   0.0306
    > defnw2               0.347097    0.05115     6.79  0.0000   0.1598
    > polprw3             -0.235952    0.06961    -3.39  0.0008   0.0453
    > airw1                0.154278    0.06274     2.46  0.0146   0.0244
    > airw3                0.221710    0.04591     4.83  0.0000   0.0879
    > radchw3              0.156687    0.04682     3.35  0.0009   0.0442
    > dafter               0.470830     0.3102     1.52  0.1303   0.0094
    > dauthw3              0.145001    0.03979     3.64  0.0003   0.0520
```

```
> kzchorn              0.203070    0.05114     3.97  0.0001   0.0612
> WHPpain              0.270440    0.06094     4.44  0.0000   0.0753
> icdx1nr14            -25.1169      8.563    -2.93  0.0037   0.0343
>
> sigma                 22.0134  RSS                117271.022
> log-likelihood       -1147.51
> no. of observations       256  no. of parameters          14
> mean(radhlw3)         58.1445  se(radhlw3)           33.5387
> When the log-likelihood constant is NOT included:
> AIC                   6.23644  SC                    6.43032
> HQ                    6.31442  FPE                   511.092
> When the log-likelihood constant is included:
> AIC                   9.07432  SC                    9.26819
> HQ                    9.15229  FPE                   8729.18
>
> Normality test:   Chi^2(2)  =   5.7972 [0.0551]
> Hetero test:      F(27,228) =   1.3648 [0.1155]
> Hetero-X test:    F(105,150)=   1.3894 [0.0323]*
> RESET23 test:     F(2,240)  =   2.9910 [0.0521]
>
> */
105 . subtitle "Factor analysis of variables selected from Wave 1 2 and 3 female m
> odel by AutoMetrics"
------------------------------------------------------------------------------

                                      Date and time:  23 Apr 2012    12:42:02
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
> old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

Factor analysis of variables selected from Wave 1 2 and 3 female model by Auto
> Metrics
------------------------------------------------------------------------------
```

```
106 . polychoricpca shjobw3 smokw1 beerw2 trrepw3 defnw2 polprw3 airw1 airw3 radch
    > w3 dafter ///
    >   dauthw3 kzchorn WHPpain icdx1nr14

    Polychoric correlation matrix
```

	shjobw3	smokw1	beerw2	trrepw3	defnw2
shjobw3	1				
smokw1	-.05369732	1			
beerw2	.05423938	-.00162106	1		
trrepw3	-.04884877	-.05705684	.05953755	1	
defnw2	.07098333	-.08836571	.10891562	.12368059	1
polprw3	.07803389	.00393133	.00640399	.0366051	.46830002
airw1	.08308479	.00604761	-.07724819	-.01765498	.35985254
airw3	.11792586	-.1490295	-.09748675	.07621211	.30107623
radchw3	-.04969593	.01132317	.04861646	.08418387	.43972972
dafter	.01968209	-.07570174	-.0151061	.18898874	.04297816
dauthw3	.03470812	-.01403834	-.08584863	.11842673	-.06809778
kzchorn	.04171686	-.01291009	.07102177	.08599383	.32348985
WHPpain	-.07767883	.056724	.01478814	-.0507616	.15231801
icdx1nr14	-.16573795	.08604017	-.05583692	-.04832767	.06871127

	polprw3	airw1	airw3	radchw3	dafter
polprw3	1				
airw1	.74418935	1			
airw3	.37925456	.43920689	1		
radchw3	.23718026	.14420036	.22455683	1	
dafter	-.11332987	-.11735001	-.09991308	.07034981	1
dauthw3	.05905241	.08788357	.12408414	.09703211	-.02582924
kzchorn	.09487342	.14759516	.21991739	.37096557	.1117706
WHPpain	.02242527	-.01632456	.02281425	.07871909	.02832516
icdx1nr14	.2728676	.19283538	-.10688716	-.08085474	.08379581

	dauthw3	kzchorn	WHPpain	icdx1nr14
dauthw3	1			
kzchorn	.10896014	1		
WHPpain	-.06990383	.0624623	1	
icdx1nr14	-.10229208	-.16545533	-.1805861	1

```
    Principal component analysis
```

k	Eigenvalues	Proportion explained	Cum. explained
1	2.740669	0.195762	0.195762
2	1.633528	0.116681	0.312443
3	1.318380	0.094170	0.406613
4	1.239252	0.088518	0.495131
5	1.125804	0.080415	0.575545
6	1.021974	0.072998	0.648543
7	0.935016	0.066787	0.715330
8	0.888112	0.063437	0.778767
9	0.760678	0.054334	0.833101
10	0.653626	0.046688	0.879789
11	0.569438	0.040674	0.920463
12	0.484556	0.034611	0.955074
13	0.407344	0.029096	0.984170
14	0.221623	0.015830	1.000000

```
107 . matrix define pc3f=r(R)

108 . factormat pc3f, n(363) factors(5)
    (obs=363)

    Factor analysis/correlation                       Number of obs    =        363
        Method: principal factors                     Retained factors =          5
        Rotation: (unrotated)                         Number of params =         60
```

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2.21251	1.26808	0.6524	0.6524
Factor2	0.94443	0.41867	0.2785	0.9308
Factor3	0.52577	0.17205	0.1550	1.0858
Factor4	0.35372	0.11487	0.1043	1.1901
Factor5	0.23884	0.11065	0.0704	1.2606
Factor6	0.12820	0.06960	0.0378	1.2984
Factor7	0.05860	0.01356	0.0173	1.3156
Factor8	0.04504	0.11167	0.0133	1.3289
Factor9	-0.06663	0.04362	-0.0196	1.3093
Factor10	-0.11025	0.06506	-0.0325	1.2768
Factor11	-0.17531	0.01621	-0.0517	1.2251
Factor12	-0.19151	0.02736	-0.0565	1.1686
Factor13	-0.21887	0.13408	-0.0645	1.1041
Factor14	-0.35295	.	-0.1041	1.0000

```
    LR test: independent vs. saturated:  chi2(91) =  874.81 Prob>chi2 = 0.0000

    Factor loadings (pattern matrix) and unique variances
```

Variable	Factor1	Factor2	Factor3	Factor4	Factor5
shjobw3	0.0962	0.0507	-0.2357	-0.0050	-0.2589
smokw1	-0.0574	-0.1078	0.1119	-0.1467	0.2081
beerw2	0.0031	0.1371	0.1323	-0.1114	-0.1884
trrepw3	0.0914	0.1993	0.0812	0.2965	-0.0301
defnw2	0.6311	0.2284	0.2356	-0.0918	-0.1216
polprw3	0.7883	-0.3148	0.0543	-0.0211	-0.0300
airw1	0.7458	-0.3269	-0.1167	0.0082	0.0267
airw3	0.5369	0.0830	-0.2968	0.0508	-0.0045
radchw3	0.4300	0.3830	0.1511	-0.0204	0.1552
dafter	-0.0496	0.1945	0.2414	0.2584	-0.0772
dauthw3	0.1015	0.0866	-0.2352	0.2182	0.1865
kzchorn	0.3397	0.4274	0.0162	0.0235	0.0802
WHPpain	0.0599	0.1825	0.0591	-0.2891	0.0614
icdx1nr14	0.1041	-0.4458	0.3650	0.1464	0.0253

Variable	Uniqueness
shjobw3	0.8656
smokw1	0.9077
beerw2	0.9158
trrepw3	0.8565
defnw2	0.4709
polprw3	0.2752
airw1	0.3225
airw3	0.6141
radchw3	0.6210
dafter	0.8287
dauthw3	0.8445
kzchorn	0.6947
WHPpain	0.8723
icdx1nr14	0.6352

```
109 . factormat pc3f, n(363) blanks(.36) factors(2)
    (obs=363)
```

Factor analysis/correlation — Number of obs = **363**
Method: principal factors — Retained factors = **2**
Rotation: (unrotated) — Number of params = **27**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**2.21251**	**1.26808**	**0.6524**	**0.6524**
Factor2	**0.94443**	**0.41867**	**0.2785**	**0.9308**
Factor3	**0.52577**	**0.17205**	**0.1550**	**1.0858**
Factor4	**0.35372**	**0.11487**	**0.1043**	**1.1901**
Factor5	**0.23884**	**0.11065**	**0.0704**	**1.2606**
Factor6	**0.12820**	**0.06960**	**0.0378**	**1.2984**
Factor7	**0.05860**	**0.01356**	**0.0173**	**1.3156**
Factor8	**0.04504**	**0.11167**	**0.0133**	**1.3289**
Factor9	**-0.06663**	**0.04362**	**-0.0196**	**1.3093**
Factor10	**-0.11025**	**0.06506**	**-0.0325**	**1.2768**
Factor11	**-0.17531**	**0.01621**	**-0.0517**	**1.2251**
Factor12	**-0.19151**	**0.02736**	**-0.0565**	**1.1686**
Factor13	**-0.21887**	**0.13408**	**-0.0645**	**1.1041**
Factor14	**-0.35295**	**.**	**-0.1041**	**1.0000**

LR test: independent vs. saturated: chi2(**91**) = **874.81** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
shjobw3			**0.9882**
smokw1			**0.9851**
beerw2			**0.9812**
trrepw3			**0.9519**
defnw2	**0.6311**		**0.5496**
polprw3	**0.7883**		**0.2795**
airw1	**0.7458**		**0.3369**
airw3	**0.5369**		**0.7048**
radchw3	**0.4300**	**0.3830**	**0.6684**
dafter			**0.9597**
dauthw3			**0.9822**
kzchorn		**0.4274**	**0.7020**
WHPpain			**0.9631**
icdx1nr14		**-0.4458**	**0.7905**

(blanks represent abs(loading)<**.36**)

```
110 . rotate, blanks(.36)

Factor analysis/correlation                    Number of obs    =       363
    Method: principal factors                  Retained factors =         2
    Rotation: orthogonal varimax (Kaiser off)  Number of params =        27
```

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.96742**	**0.77789**	**0.5801**	**0.5801**
Factor2	**1.18953**	**.**	**0.3507**	**0.9308**

LR test: independent vs. saturated: chi2(**91**) = **874.81** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
shjobw3			**0.9882**
smokw1			**0.9851**
beerw2			**0.9812**
trrepw3			**0.9519**
defnw2	**0.4664**	**0.4826**	**0.5496**
polprw3	**0.8464**		**0.2795**
airw1	**0.8136**		**0.3369**
airw3	**0.4458**		**0.7048**
radchw3		**0.5331**	**0.6684**
dafter			**0.9597**
dauthw3			**0.9822**
kzchorn		**0.5332**	**0.7020**
WHPpain			**0.9631**
icdx1nr14			**0.7905**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1	Factor2
Factor1	**0.8982**	**0.4396**
Factor2	**-0.4396**	**0.8982**

```
111 .
112 . di "{hline}"
```

```
113 . di "{hline}"
```

```
114 . di as input "Part II Male factor analysis"
    Part II Male factor analysis

115 .
116 . title(Factor Analysis of AutoMetrics selected Variables for Male Models of R
    > adhlw1 Radhlw2 and Radhlw3)


    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                    ****
    > *
    *****                                                                    ****
    > *
    *****                              (Factor                               ****
    > *
    *****                             Analysis                               ****
    > *
    *****                                of                                  ****
    > *
    *****                            AutoMetrics                             ****
    > *
    *****                             selected                               ****
    > *
    *****                            Variables                               ****
    > *
    *****                                for                                 ****
    > *
    *****                               Male                                 ****
    > *
    *****                              Models                                ****
    > *
    *****                                of                                  ****
    > *
    *****                             Radhlw1                                ****
    > *
    *****                             Radhlw2                                ****
    > *
    *****                                and                                 ****
    > *
```

```
*****                              Radhlw3)                                ****
> *
*****                                                                      ****
> *
*****                                                                      ****
> *
*****                                          23 Apr 2012    12:42:04   ****
> *
*******************************************************************************
> *
*******************************************************************************
> *


117 . subtitle "Radhlw1 males
-------------------------------------------------------------------------------

                                         Date and time:  23 Apr 2012    12:42:04
                                         Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                         Stata data file:  chwide22apr2012femmes
> old.dta
                                         Stata version:  12.1
                                         Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                         using  33554432 bytes of memory

Radhlw1 males
-------------------------------------------------------------------------------

118 .
119 . use chwide22apr2012malesold, clear
    (OxMetrics data)

120 .
121 . /* AutoMetrics Male models with variables Selected from Radhlw  */
122 .
```

```
123 . subtitle "Variable index for male model for radhlw1"
```

```
                                      Date and time:  23 Apr 2012    12:42:04
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012maleso
> ld.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory
```

Variable index for male model for radhlw1

```
124 . des edu8 accdw1 shjobw1 shfincw1 shhousw1 ncontw1 smokw1 liqw1 fdferw1 ecprw
> 1 polprw1 ///
>   airw1 radw1 radtlw1 dafter skin kzchorn WHPpain lBSItotal BSIposymp BSIglo
> bsi BSIips ///
>   icdx1nr9 icdx1nr10 icdx2nr4 icdx4nr21 physdisagw1 PTSDw1
```

variable name	storage type	display format	value label	variable label
edu8	double			
accdw1	double			**Total number of accidents experienced in time period 1976-1986**
shjobw1	double			**Percentage of strains and hassles related to job in 1986**
shfincw1	double			**Percentage of strains and hassles related to finances in 1986**
shhousw1	double			**Percentage of strains and hassles related to housing in 1986**
ncontw1	double		choice309	**use of natural contraception in 1976-1986**
smokw1	double			**number of cigarettes per week in 1976-1986**
liqw1	double			**number of spirits per week in 1976-1986**
fdferw1	double			**level of fear in percent from consuming foods contaminated with radiation in 197**
ecprw1	double			**consider hazardous (in percent) - economic problems in 1986**
polprw1	double			**consider hazardous (in percent)**

		- political problems in 1986
airw1	double	consider hazardous (in percent) - air and water pollution in 1986
radw1	double	believed % of the radioactively contaminated area in 1986
radtlw1	double	believed % of cumulative radiation exposed to in a lifetime in 1986
dafter	double	how many days lapsed after Chornobyl accident before you heard about the acciden
skin	double	a suntan is caused by radiating damage to the skin (% of agreement)
kzchorn	double	in k/z most cases of cancer in humans are known to be caused by radiation from
WHPpain	double	Wtd Health Profile Pain Pt 1 subscale
lBSItotal	double	Ln(bsItotal)
BSIposymp	double	Brief Symptom inventory positive symptom total subscale
BSIglobsi	double	Brief Symptom Inventory Global Severity (mean) Index
BSIips	double	Basic symptom invenstory interpersonal sensitivity subscale
icdx1nr9	double	icdx1nr==454 chronic t & a dis
icdx1nr10	double	icdx1nr==486 pneumonia
icdx2nr4	double	icdx2nr==401 hypertension
icdx4nr21	double	icdx4nr==misc tiny categs < 10 cases
physdisagw1	double	Average Physical Discomfort level in percent in wave 1
PTSDw1	double	Average PTSD level in percent in wave 1

```
125 .
126 .
127 . /*
    >
    > EQ(17) Modelling radhlw1 by OLS-CS
    >        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
    > e3/data/ox/chwide6apr2012malesold.dta
    >        The estimation sample is: 3 - 339
    >        Dropped 64 observation(s) with missing values from the sample
    >
    >                   Coefficient  Std.Error  t-value  t-prob Part.R^2
    > shjobw1             0.210612    0.05807     3.63  0.0003   0.0482
    > phlthw1            -0.252120    0.05550    -4.54  0.0000   0.0735
    > liqw1               0.551138     0.5621    0.981  0.3277   0.0037
    > mhoutw1             0.00000        ---
    > trgovw1           -0.0955969    0.04621    -2.07  0.0396   0.0162
    > airw1               0.331346    0.04732     7.00  0.0000   0.1586
    > radw1              -0.102448    0.04788    -2.14  0.0333   0.0173
    > radtlw1             0.305518    0.04421     6.91  0.0000   0.1552
    > dafter            -0.0518694    0.03044    -1.70  0.0896   0.0110
    > saferad             0.144983    0.04355     3.33  0.0010   0.0409
    > BSIposymp            6.36424      1.273     5.00  0.0000   0.0877
    > BSIglobsi           -303.328      63.81    -4.75  0.0000   0.0800
    > icdx1nr9              27.4278      13.12     2.09  0.0375   0.0165
    >
    > sigma                 25.3534  RSS                167127.263
    > log-likelihood       -1263.3
    > no. of observations       273  no. of parameters          13
    > mean(radhlw1)         48.0586  se(radhlw1)            37.699
    > When the log-likelihood constant is NOT included:
    > AIC                   6.51228  SC                    6.68416
    > HQ                    6.58127  FPE                   673.407
    > When the log-likelihood constant is included:
    > AIC                   9.35015  SC                    9.52203
    > HQ                    9.41915  FPE                   11501.4
    >
    > Normality test:   Chi^2(2)  =   2.9249 [0.2317]
    > Hetero test:      F(23,249) =   1.8520 [0.0120]*
    > Hetero-X test:    F(78,194) =   2.0890 [0.0000]**
    > RESET23 test:     F(2,258)  =   3.9063 [0.0213]*
    >
    >
    > */
```

```
128 .
129 .
130 . // full male model wave 1
131 . regress radhlw1 edu8 accdw1 shjobw1 shfincw1 shhousw1 ncontw1 smokw1 ///
    >   liqw1 fdferw1 ecprw1 polprw1 ///
    >   airw1 radw1 radtlw1 dafter skin kzchorn WHPpain lBSItotal BSIposymp BSIglo
    > bsi BSIips ///
    >   icdx1nr9 icdx1nr10 icdx2nr4 icdx4nr21 physdisagw1 PTSDw1
```

Source	SS	df	MS
Model	281300.026	28	10046.4295
Residual	147418.703	270	545.995197
Total	428718.729	298	1438.65345

Number of obs	299
F(28, 270)	18.40
Prob > F	0.0000
R-squared	0.6561
Adj R-squared	0.6205
Root MSE	23.367

radhlw1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
edu8	39.48547	17.55754	2.25	0.025	4.918381	74.05257
accdw1	25.64856	9.303338	2.76	0.006	7.33225	43.96487
shjobw1	.0887848	.0566083	1.57	0.118	-.022665	.2002346
shfincw1	-.1872157	.0453059	-4.13	0.000	-.2764135	-.0980179
shhousw1	.1561877	.0534641	2.92	0.004	.0509281	.2614472
ncontw1	3.572655	2.783888	1.28	0.200	-1.908234	9.053544
smokw1	-.0539265	.0312182	-1.73	0.085	-.1153887	.0075356
liqw1	.5134239	.5574348	0.92	0.358	-.5840475	1.610895
fdferw1	.0795755	.0518999	1.53	0.126	-.0226044	.1817555
ecprw1	.1466208	.0498731	2.94	0.004	.0484312	.2448105
polprw1	.128158	.0532163	2.41	0.017	.0233863	.2329297
airw1	.1594657	.0553732	2.88	0.004	.0504475	.2684839
radw1	-.1092565	.0444494	-2.46	0.015	-.1967679	-.0217451
radtlw1	.3317387	.0434273	7.64	0.000	.2462395	.4172379
dafter	-.0124329	.0295774	-0.42	0.675	-.0706647	.0457988
skin	.0622751	.0414158	1.50	0.134	-.0192639	.1438142
kzchorn	.2610042	.0664777	3.93	0.000	.1301235	.3918848
WHPpain	-.2086112	.0970387	-2.15	0.032	-.39966	-.0175625
lBSItotal	7.833662	33.55787	0.23	0.816	-58.2347	73.90203
BSIposymp	5.228869	1.173069	4.46	0.000	2.919343	7.538395
BSIglobsi	-250.052	61.86731	-4.04	0.000	-371.8557	-128.2484
BSIips	-1.419046	.9980975	-1.42	0.156	-3.384089	.5459975
icdx1nr9	21.09041	10.89333	1.94	0.054	-.3562635	42.53708
icdx1nr10	19.11652	9.254426	2.07	0.040	.896503	37.33653
icdx2nr4	11.9653	6.139544	1.95	0.052	-.1221667	24.05277
icdx4nr21	9.682191	5.516868	1.76	0.080	-1.179357	20.54374
physdisagw1	.1312875	.0629988	2.08	0.038	.0072562	.2553189
PTSDw1	-.0045772	.051622	-0.09	0.929	-.1062101	.0970557
_cons	-72.72142	115.952	-0.63	0.531	-301.0064	155.5635

```
132 .
133 . // Stata version  trimmed male model wave 1
134 . sw, pr(.1): regress radhlw1 edu8 accdw1 shjobw1 shfincw1 shhousw1 ncontw1 sm
    > okw1 ///
    >   liqw1 fdferw1 ecprw1 polprw1 ///
    >   airw1 radw1 radtlw1 dafter skin kzchorn WHPpain lBSItotal BSIposymp BSIglo
    > bsi BSIips ///
    >   icdx1nr9 icdx1nr10 icdx2nr4 icdx4nr21 physdisagw1 PTSDw1
                          begin with full model
    p = 0.9294 >= 0.1000  removing PTSDw1
    p = 0.8159 >= 0.1000  removing lBSItotal
    p = 0.6735 >= 0.1000  removing dafter
    p = 0.3259 >= 0.1000  removing liqw1
    p = 0.2162 >= 0.1000  removing ncontw1
    p = 0.1651 >= 0.1000  removing BSIips
    p = 0.1904 >= 0.1000  removing fdferw1
    p = 0.1418 >= 0.1000  removing smokw1
    p = 0.1341 >= 0.1000  removing skin
```

Source	SS	df	MS		
Model	275413.829	19	14495.4647	Number of obs =	299
Residual	153304.9	279	549.479929	F(19, 279) =	26.38
				Prob > F =	0.0000
				R-squared =	0.6424
				Adj R-squared =	0.6181
Total	428718.729	298	1438.65345	Root MSE =	23.441

radhlw1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
edu8	39.94239	17.19586	2.32	0.021	6.092284	73.7925
accdw1	20.70386	8.683547	2.38	0.018	3.610273	37.79745
shjobw1	.1078206	.0555429	1.94	0.053	-.0015157	.2171569
shfincw1	-.1736157	.043909	-3.95	0.000	-.2600507	-.0871808
shhousw1	.1598644	.0522069	3.06	0.002	.0570951	.2626338
icdx1nr10	19.49273	9.133851	2.13	0.034	1.512711	37.47274
BSIglobsi	-256.4016	57.8815	-4.43	0.000	-370.3415	-142.4617
icdx2nr4	10.57024	6.04762	1.75	0.082	-1.334519	22.475
icdx1nr9	20.90525	10.80227	1.94	0.054	-.3590549	42.16956
ecprw1	.1194354	.0489126	2.44	0.015	.0231508	.21572
polprw1	.1479373	.0509404	2.90	0.004	.0476609	.2482137
airw1	.1582631	.0529021	2.99	0.003	.0541251	.262401
radw1	-.0933853	.0431361	-2.16	0.031	-.1782989	-.0084717
radtlw1	.3240154	.0421806	7.68	0.000	.2409828	.4070481
icdx4nr21	9.343446	5.199452	1.80	0.073	-.8916914	19.57858
BSIposymp	5.332641	1.163172	4.58	0.000	3.042932	7.62235
kzchorn	.3224555	.0617877	5.22	0.000	.2008262	.4440848
WHPpain	-.2173451	.0945764	-2.30	0.022	-.403519	-.0311712
physdisagw1	.1928167	.0538852	3.58	0.000	.0867435	.29889

_cons	-42.55148	8.632969	-4.93	0.000	-59.5455	-25.55745

```
135 .
136 . // dropping items with missing values and items that are not significant
137 . summ  edu8 accdw1 shjobw1 shfincw1 shhousw1 ncontw1 smokw1 liqw1 fdferw1 ///
    >   ecprw1 polprw1 airw1 radw1 radtlw1 dafter skin kzchorn WHPpain lBSItotal B
    > SIposymp BSIglobsi BSIips ///
    >   icdx1nr9 icdx1nr10 icdx2nr4 icdx4nr21 physdisagw1 PTSDw1
```

Variable	Obs	Mean	Std. Dev.	Min	Max
edu8	340	.0058824	.0765833	0	1
accdw1	340	.0294118	.1692067	0	1
shjobw1	340	49.57059	37.15936	0	100
shfincw1	339	34.22714	37.49838	0	100
shhousw1	340	27.86176	35.13289	0	100
ncontw1	340	1.585294	.5552816	0	2
smokw1	338	25.61538	49.42302	0	280
liqw1	338	1.650888	2.913595	0	30
fdferw1	340	32.37059	39.08826	0	100
ecprw1	340	27.51471	33.22698	0	100
polprw1	340	61.33529	38.49077	0	100
airw1	340	61.39706	36.32179	0	100
radw1	332	49.6988	37.59057	0	100
radtlw1	339	53.52507	36.40715	0	100
dafter	338	5.751479	46.12874	0	850
skin	339	37.33333	39.93083	0	100
kzchorn	340	70.18529	26.54141	0	100
WHPpain	340	10.17965	16.45132	0	82.75
lBSItotal	340	4.332422	.2797073	3.951244	5.26269
BSIposymp	340	74.96176	23.12557	49	185
BSIglobsi	340	1.496837	.4594622	.9811321	3.64151
BSIips	340	5.867647	2.375542	4	17
icdx1nr9	315	.015873	.1251831	0	1
icdx1nr10	315	.0253968	.1575775	0	1
icdx2nr4	340	.0529412	.2242461	0	1
icdx4nr21	340	.9147059	.2797305	0	1
physdisagw1	340	14.63235	31.94432	0	100
PTSDw1	340	24.52941	39.13613	0	100

```
138 . pwcorr edu8 accdw1 shjobw1 shfincw1 shhousw1 ncontw1 liqw1 fdferw1 ///
    >   ecprw1 polprw1 airw1 radw1 radtlw1 dafter skin kzchorn WHPpain lBSItotal B
    > SIposymp BSIglobsi BSIips ///
    >    physdisagw1 PTSDw1, obs sig
```

	edu8	accdw1	shjobw1	shfincw1	shhousw1	ncontw1	liqw1
edu8	1.0000						
	340						
accdw1	-0.0134	1.0000					
	0.8057						
	340	340					
shjobw1	-0.0613	0.0724	1.0000				
	0.2596	0.1830					
	340	340	340				
shfincw1	0.0633	0.0641	0.4394	1.0000			
	0.2450	0.2390	0.0000				
	339	339	339	339			
shhousw1	-0.0172	0.0181	0.5514	0.5105	1.0000		
	0.7515	0.7401	0.0000	0.0000			
	340	340	340	339	340		
ncontw1	0.0575	-0.0268	-0.1216	-0.0559	-0.0607	1.0000	
	0.2901	0.6227	0.0249	0.3044	0.2643		
	340	340	340	339	340	340	
liqw1	0.0225	0.1841	0.1439	-0.0220	-0.0334	-0.1818	1.0000
	0.6800	0.0007	0.0081	0.6875	0.5404	0.0008	
	338	338	338	337	338	338	338
fdferw1	-0.0441	-0.0507	0.4818	0.3547	0.3657	-0.1204	0.0210
	0.4177	0.3512	0.0000	0.0000	0.0000	0.0264	0.7000
	340	340	340	339	340	340	338
ecprw1	-0.0638	-0.0657	0.2954	0.3025	0.3258	-0.1584	0.0162
	0.2407	0.2272	0.0000	0.0000	0.0000	0.0034	0.7662
	340	340	340	339	340	340	338
polprw1	0.0273	-0.0196	0.3936	0.2444	0.2596	0.0281	0.0216
	0.6153	0.7183	0.0000	0.0000	0.0000	0.6062	0.6926
	340	340	340	339	340	340	338
airw1	-0.0666	-0.0019	0.3176	0.1777	0.2207	-0.1650	0.0656
	0.2207	0.9721	0.0000	0.0010	0.0000	0.0023	0.2287

	340	340	340	339	340	340	338
radw1	0.0110	-0.0283	0.2215	0.0775	-0.0028	0.0753	-0.0713
	0.8418	0.6073	0.0000	0.1593	0.9593	0.1708	0.1964
	332	332	332	331	332	332	330
radtlw1	-0.0287	-0.0169	-0.0874	-0.0707	-0.0086	0.0412	-0.1199
	0.5990	0.7565	0.1081	0.1947	0.8747	0.4491	0.0278
	339	339	339	338	339	339	337
dafter	-0.0046	-0.0116	0.0663	0.0895	-0.0376	-0.0485	-0.0340
	0.9327	0.8322	0.2239	0.1009	0.4914	0.3742	0.5349
	338	338	338	337	338	338	336
skin	0.0245	-0.0517	0.2388	0.1278	0.0538	0.0249	0.0984
	0.6534	0.3422	0.0000	0.0187	0.3230	0.6483	0.0711
	339	339	339	338	339	339	337
kzchorn	-0.1312	0.0382	0.3393	0.2207	0.2453	-0.1439	0.1046
	0.0155	0.4827	0.0000	0.0000	0.0000	0.0079	0.0546
	340	340	340	339	340	340	338
WHPpain	-0.0340	-0.0103	0.3274	0.1048	0.1659	-0.0721	0.1508
	0.5319	0.8492	0.0000	0.0539	0.0021	0.1846	0.0055
	340	340	340	339	340	340	338
lBSItotal	0.0457	0.0849	0.4817	0.2702	0.2773	-0.1625	0.2056
	0.4012	0.1183	0.0000	0.0000	0.0000	0.0027	0.0001
	340	340	340	339	340	340	338
BSIposymp	0.0318	0.0810	0.4696	0.2441	0.2601	-0.1542	0.2010
	0.5593	0.1363	0.0000	0.0000	0.0000	0.0044	0.0002
	340	340	340	339	340	340	338
BSIglobsi	0.0337	0.0857	0.4594	0.2439	0.2518	-0.1639	0.2061
	0.5352	0.1148	0.0000	0.0000	0.0000	0.0024	0.0001
	340	340	340	339	340	340	338
BSIips	0.1178	0.1345	0.2325	0.1789	0.1037	-0.0596	0.1066
	0.0299	0.0131	0.0000	0.0009	0.0561	0.2729	0.0502
	340	340	340	339	340	340	338
physdisagw1	0.0009	0.0893	0.4017	0.1627	0.2754	-0.0801	0.0528
	0.9870	0.1001	0.0000	0.0027	0.0000	0.1404	0.3334
	340	340	340	339	340	340	338
PTSDw1	-0.0483	0.1402	0.4351	0.3441	0.3498	-0.0626	-0.0314
	0.3748	0.0096	0.0000	0.0000	0.0000	0.2495	0.5649
	340	340	340	339	340	340	338

	fdferw1	ecprw1	polprw1	airw1	radw1	radtlw1	dafter
fdferw1	1.0000						
	340						
ecprw1	0.1982	1.0000					
	0.0002						
	340	340					
polprw1	0.3814	0.4121	1.0000				
	0.0000	0.0000					
	340	340	340				
airw1	0.3251	0.4077	0.6437	1.0000			
	0.0000	0.0000	0.0000				
	340	340	340	340			
radw1	0.2580	-0.0913	0.2757	0.1666	1.0000		
	0.0000	0.0969	0.0000	0.0023			
	332	332	332	332	332		
radtlw1	0.0408	-0.0180	0.1993	0.1198	0.2634	1.0000	
	0.4541	0.7414	0.0002	0.0274	0.0000		
	339	339	339	339	331	339	
dafter	0.0856	-0.0035	0.0507	-0.0396	-0.0415	-0.0372	1.0000
	0.1161	0.9485	0.3530	0.4675	0.4522	0.4967	
	338	338	338	338	330	337	338
skin	0.2975	0.0280	0.2246	0.1681	0.1757	-0.0308	-0.0345
	0.0000	0.6078	0.0000	0.0019	0.0013	0.5725	0.5282
	339	339	339	339	331	338	337
kzchorn	0.3366	0.2047	0.2761	0.2961	0.0857	0.1312	-0.0441
	0.0000	0.0001	0.0000	0.0000	0.1190	0.0157	0.4195
	340	340	340	340	332	339	338
WHPpain	0.1636	0.1179	0.1706	0.0463	0.0560	0.1193	0.1293
	0.0025	0.0297	0.0016	0.3943	0.3093	0.0281	0.0174
	340	340	340	340	332	339	338
lBSItotal	0.4595	0.1611	0.2714	0.1889	0.1749	-0.0368	0.0643
	0.0000	0.0029	0.0000	0.0005	0.0014	0.4989	0.2384
	340	340	340	340	332	339	338
BSIposymp	0.4469	0.1319	0.2552	0.1681	0.2031	-0.0552	0.0606

	0.0000	0.0149	0.0000	0.0019	0.0002	0.3110	0.2662
	340	340	340	340	332	339	338
BSIglobsi	0.4428	0.1374	0.2515	0.1703	0.1935	-0.0616	0.0610
	0.0000	0.0112	0.0000	0.0016	0.0004	0.2580	0.2637
	340	340	340	340	332	339	338
BSIips	0.2637	0.1071	0.1009	-0.0388	0.0871	-0.0535	0.0465
	0.0000	0.0485	0.0631	0.4757	0.1131	0.3265	0.3943
	340	340	340	340	332	339	338
physdisagw1	0.4896	0.0961	0.2807	0.3140	0.2138	-0.0118	0.0383
	0.0000	0.0768	0.0000	0.0000	0.0001	0.8289	0.4824
	340	340	340	340	332	339	338
PTSDw1	0.6227	0.1770	0.3544	0.3618	0.2284	0.0522	0.0268
	0.0000	0.0010	0.0000	0.0000	0.0000	0.3382	0.6234
	340	340	340	340	332	339	338

	skin	kzchorn	WHPpain	lBSIto~l	BSIpos~p	BSIglo~i	BSIips
skin	1.0000						
	339						
kzchorn	0.3149	1.0000					
	0.0000						
	339	340					
WHPpain	0.2053	0.2899	1.0000				
	0.0001	0.0000					
	339	340	340				
lBSItotal	0.3620	0.3993	0.4542	1.0000			
	0.0000	0.0000	0.0000				
	339	340	340	340			
BSIposymp	0.3733	0.3891	0.4457	0.9859	1.0000		
	0.0000	0.0000	0.0000	0.0000			
	339	340	340	340	340		
BSIglobsi	0.3669	0.3836	0.4403	0.9871	0.9984	1.0000	
	0.0000	0.0000	0.0000	0.0000	0.0000		
	339	340	340	340	340	340	
BSIips	0.1692	0.1305	0.2630	0.7268	0.7243	0.7307	1.0000
	0.0018	0.0161	0.0000	0.0000	0.0000	0.0000	
	339	340	340	340	340	340	340

physdisagw1	0.3275	0.2955	0.2116	0.4231	0.4256	0.4144	0.0664
	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.2219
	339	340	340	340	340	340	340
PTSDw1	0.2738	0.2756	0.0930	0.3532	0.3483	0.3415	0.0753
	0.0000	0.0000	0.0868	0.0000	0.0000	0.0000	0.1658
	339	340	340	340	340	340	340

	physdi~1	PTSDw1
physdisagw1	1.0000	
	340	
PTSDw1	0.5589	1.0000
	0.0000	
	340	340

```
139 .
140 .
141 .
142 .
143 . // male wave 1
144 . // some items dropped owing to missing values
145 . polychoricpca shjobw1 shfincw1 shhousw1 fdferw1 ///
    >   ecprw1 polprw1 airw1 radw1 radtlw1 skin kzchorn WHPpain lBSItotal BSIposym
    > p BSIglobsi BSIips ///
    >    physdisagw1 PTSDw1

    Polychoric correlation matrix
```

	shjobw1	shfincw1	shhousw1	fdferw1	ecprw1
shjobw1	1				
shfincw1	.43900281	1			
shhousw1	.54895089	.50658669	1		
fdferw1	.48139086	.36324133	.37796119	1	
ecprw1	.3022453	.3068503	.33778426	.19625724	1
polprw1	.39308092	.2543043	.26361319	.38359411	.41821507
airw1	.32103094	.18437415	.22796573	.32055921	.41483114
radw1	.2179951	.07886022	-.00539794	.25802755	-.09484404
radtlw1	-.08780156	-.06415	.00088262	.03830383	-.02126058
skin	.25248002	.13536607	.07276385	.29936615	.0293811
kzchorn	.34423912	.21340187	.24730388	.33250416	.20611505
WHPpain	.31896177	.10312616	.16386256	.15397312	.11898514
lBSItotal	.47558497	.27413487	.27541774	.45861304	.17098101
BSIposymp	.46339421	.2471058	.25772318	.44504836	.14053368

BSIglobsi	.45293161	.24668717	.24943024	.43973718	.14550191
BSIips	.22793347	.17745795	.10168645	.25585696	.1131214
physdisagw1	.40338684	.17088488	.26708395	.50379086	.10211027
PTSDw1	.44268324	.34276805	.35137542	.62753625	.1731002

	polprw1	airw1	radw1	radtlw1	skin
polprw1	1				
airw1	.64414034	1			
radw1	.26883952	.16769951	1		
radtlw1	.18996893	.10335207	.26514844	1	
skin	.23138381	.17172718	.18439489	-.04270411	1
kzchorn	.2788452	.28663075	.09343755	.12554619	.31783762
WHPpain	.1677703	.04612751	.05451709	.11838422	.20435829
lBSItotal	.27401152	.19224176	.17922002	-.03714878	.36598561
BSIposymp	.25641527	.16912174	.20681649	-.0565745	.37812298
BSIglobsi	.25246212	.17093166	.19693198	-.06331362	.37132501
BSIips	.1002395	-.04998042	.09178754	-.05944167	.1649353
physdisagw1	.27850496	.31237653	.21403828	-.01777715	.34593205
PTSDw1	.36213929	.36637807	.22839729	.05637658	.28167975

	kzchorn	WHPpain	lBSItotal	BSIposymp	BSIglobsi
kzchorn	1				
WHPpain	.28945473	1			
lBSItotal	.40453169	.44795371	1		
BSIposymp	.39286123	.43959841	.9857482	1	
BSIglobsi	.38660576	.43377321	.98713766	.99844137	1
BSIips	.12076547	.25843502	.72690515	.72372405	.72990682
physdisagw1	.3068694	.21560542	.42631526	.42831503	.41718339
PTSDw1	.27654138	.0952971	.36194728	.35577339	.3481173

	BSIips	physdisagw1	PTSDw1
BSIips	1		
physdisagw1	.06393134	1	
PTSDw1	.07345017	.56717639	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	6.144829	0.341379	0.341379
2	2.316495	0.128694	0.470074
3	1.522718	0.084595	0.554669
4	1.261206	0.070067	0.624736
5	1.036769	0.057598	0.682334
6	0.990212	0.055012	0.737346
7	0.766166	0.042565	0.779911
8	0.713907	0.039662	0.819572
9	0.596835	0.033157	0.852730
10	0.497612	0.027645	0.880375

11	0.476149	0.026453	0.906828
12	0.455423	0.025301	0.932129
13	0.353736	0.019652	0.951781
14	0.325670	0.018093	0.969874
15	0.305127	0.016951	0.986825
16	0.220651	0.012258	0.999084
17	0.015243	0.000847	0.999930
18	0.001253	0.000070	1.000000

```
146 . matrix define pcwaves123m=r(R)

147 . factormat pcwaves123m, n(340) blanks(.36) factors(2)
    (obs=340)

    Factor analysis/correlation                      Number of obs    =       340
        Method: principal factors                    Retained factors =         2
        Rotation: (unrotated)                        Number of params =        35
```

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	5.81186	3.84140	0.6231	0.6231
Factor2	1.97046	1.08482	0.2113	0.8344
Factor3	0.88564	0.17495	0.0950	0.9293
Factor4	0.71069	0.31516	0.0762	1.0055
Factor5	0.39553	0.01921	0.0424	1.0479
Factor6	0.37632	0.23669	0.0403	1.0883
Factor7	0.13963	0.04799	0.0150	1.1032
Factor8	0.09164	0.06595	0.0098	1.1131
Factor9	0.02569	0.02680	0.0028	1.1158
Factor10	-0.00112	0.00346	-0.0001	1.1157
Factor11	-0.00458	0.05994	-0.0005	1.1152
Factor12	-0.06452	0.04228	-0.0069	1.1083
Factor13	-0.10680	0.01817	-0.0114	1.0968
Factor14	-0.12497	0.01593	-0.0134	1.0834
Factor15	-0.14090	0.02983	-0.0151	1.0683
Factor16	-0.17073	0.02579	-0.0183	1.0500
Factor17	-0.19652	0.07355	-0.0211	1.0290
Factor18	-0.27007	.	-0.0290	1.0000

```
    LR test: independent vs. saturated: chi2(153) = 5242.85 Prob>chi2 = 0.0000

    Factor loadings (pattern matrix) and unique variances
```

Variable	Factor1	Factor2	Uniqueness
shjobw1	**0.6663**		**0.4973**
shfincw1	**0.4354**		**0.7493**
shhousw1	**0.4660**		**0.6828**
fdferw1	**0.6539**		**0.5076**
ecprw1			**0.7931**
polprw1	**0.5020**	**0.4514**	**0.5443**
airw1	**0.4129**	**0.5117**	**0.5676**
radw1			**0.9163**
radtlw1			**0.9793**
skin	**0.4293**		**0.8157**
kzchorn	**0.4949**		**0.7415**
WHPpain	**0.4201**		**0.7995**
lBSItotal	**0.8948**	**-0.4203**	**0.0227**
BSIposymp	**0.8880**	**-0.4517**	**0.0075**
BSIglobsi	**0.8826**	**-0.4601**	**0.0093**
BSIips	**0.5413**	**-0.5347**	**0.4211**
physdisagw1	**0.5714**		**0.6329**
PTSDw1	**0.5829**	**0.3612**	**0.5298**

(blanks represent abs(loading)<**.36**)

```
148 . rotate, blanks(.36)
```

Factor analysis/correlation — Number of obs = **340**
Method: principal factors — Retained factors = **2**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **35**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**4.51252**	**1.24271**	**0.4838**	**0.4838**
Factor2	**3.26980**	**.**	**0.3506**	**0.8344**

LR test: independent vs. saturated: chi2(**153**) = **5242.85** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
shjobw1	**0.4010**	**0.5847**	**0.4973**
shfincw1		**0.4543**	**0.7493**
shhousw1		**0.5284**	**0.6828**
fdferw1	**0.3839**	**0.5874**	**0.5076**
ecprw1		**0.4484**	**0.7931**
polprw1		**0.6591**	**0.5443**
airw1		**0.6564**	**0.5676**
radw1			**0.9163**
radtlw1			**0.9793**
skin			**0.8157**
kzchorn		**0.3825**	**0.7415**
WHPpain	**0.4319**		**0.7995**
lBSItotal	**0.9723**		**0.0227**
BSIposymp	**0.9850**		**0.0075**
BSIglobsi	**0.9856**		**0.0093**
BSIips	**0.7513**		**0.4211**
physdisagw1		**0.4962**	**0.6329**
PTSDw1		**0.6328**	**0.5298**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1	Factor2
Factor1	**0.8135**	**0.5816**
Factor2	**-0.5816**	**0.8135**

```
149 .
150 .
151 . /*
    > EQ( 4) Modelling radhlw2 by OLS-CS
    >        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
    > e3/data/ox/chwide6apr2012malesold.dta
    >        The estimation sample is: 3 - 339
    >        Dropped 28 observation(s) with missing values from the sample
    >
    >                   Coefficient  Std.Error      HACSE  t-HACSE  t-prob Part.R^
    > 2
    > Constant             -48.8515      9.026      8.379    -5.83  0.0000   0.103
    > 0
    > inc1w2                16.9257      5.212      6.661     2.54  0.0116   0.021
    > 3
    > hospw1               0.230883     0.1492     0.1496     1.54  0.1238   0.008
```

```
> 0
> polprw1              0.253216    0.03830    0.04241     5.97  0.0000   0.107
> 5
> radtlw2              0.254212    0.03951    0.04534     5.61  0.0000   0.096
> 0
> dafter            -0.00468398    0.02817   0.005382   -0.870  0.3848   0.002
> 6
> woman                0.376729    0.04622    0.04901     7.69  0.0000   0.166
> 4
> CSavoid              0.976047     0.3874     0.4060     2.40  0.0168   0.019
> 1
> BSIsoma               2.32569     0.2762     0.2436     9.55  0.0000   0.235
> 5
> mincumdosew2          1.23375     0.9247     0.8835     1.40  0.1636   0.006
> 5
> Ovruchskiy           -62.7004      23.94      3.954    -15.9  0.0000   0.459
> 3
> Zhitomirskiy         -30.2743      5.967      5.969    -5.07  0.0000   0.079
> 9
> icdx1nr4             -8.13320      10.80      12.61   -0.645  0.5193   0.001
> 4
>
> sigma                 23.6453  RSS                165493.734
> R^2                  0.573253  F(12,296) =   33.13 [0.000]**
> Adj.R^2              0.555952  log-likelihood       -1409.23
> no. of observations       309  no. of parameters          13
> mean(radhlw2)         48.4595  se(radhlw2)           35.4838
> When the log-likelihood constant is NOT included:
> AIC                   6.36749  SC                    6.52456
> HQ                    6.43029  FPE                   582.622
> When the log-likelihood constant is included:
> AIC                   9.20537  SC                    9.36243
> HQ                    9.26816  FPE                   9950.88
>
> Normality test:   Chi^2(2)  =   3.9766 [0.1369]
> Hetero test:      F(19,288) =   1.9676 [0.0101]*
> Hetero-X test:    F(47,260) =   2.0829 [0.0002]**
> RESET23 test:     F(2,294)  =   3.4491 [0.0331]*
> */
```

```
152 .
153 . des inc1w2 shfincw1 liqw1 hospw1 polprw1 radw1 radtlw2 dafter ///
    >   woman CSavoid BSIsoma avgcumdosew2 icdx1nr4

              storage  display     value
variable name   type   format      label      variable label
------------------------------------------------------------------------------
inc1w2          double               choice118
                                               Income is not sufficient for
                                                 basic neccessities in 1996
shfincw1        double                         Percentage of strains and
                                                 hassles related to finances in
                                                 1986
liqw1           double                         number of spirits per week in
                                                 1976-1986
hospw1          double                         number of days per year as a
                                                 patient in a clinic for
                                                 medical condition in 1976-
polprw1         double                         consider hazardous (in percent)
                                                 - political problems in 1986
radw1           double                         believed % of the radioactively
                                                 contaminated area in 1986
radtlw2         double                         believed % of cumulative
                                                 radiation exposed to in a
                                                 lifetime in 1996
dafter          double                         how many days lapsed after
                                                 Chornobyl accident before you
                                                 heard about the acciden
woman           double                         pregnant exposed to radiation
                                                 likely to give birth to
                                                 children with deffects (%
CSavoid         double                         Coping Avoidance subscale
BSIsoma         double                         Basic symptom inventory
                                                 obsessive compulsive subscale
avgcumdosew2    double                         Average mean dose CS1337 in mGy
                                                 for wave 2
icdx1nr4        double                         icdx1nr==333.0 degeneration of
                                                 basal ganglia
```

```
154 .
155 . // Full autometrics model waves 1 and 2
156 . regress radhlw2 inc1w2 shfincw1 liqw1 hospw1 polprw1 radw1 radtlw2 dafter //
    > /
    >   woman CSavoid BSIsoma avgcumdosew2 icdx1nr4 Ovruchskiy Zhitomirskiy
```

Source	SS	df	MS		
Model	228533.962	15	15235.5975	Number of obs =	300
Residual	152699.704	284	537.675015	F(15, 284) =	28.34
				Prob > F =	0.0000
Total	381233.667	299	1275.02899	R-squared =	0.5995
				Adj R-squared =	0.5783
				Root MSE =	23.188

radhlw2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
inc1w2	16.9185	5.235395	3.23	0.001	6.613401	27.2236
shfincw1	-.0552442	.0377669	-1.46	0.145	-.1295827	.0190942
liqw1	.0137102	.5132136	0.03	0.979	-.9964749	1.023895
hospw1	.2003267	.1472082	1.36	0.175	-.0894309	.4900843
polprw1	.2883324	.0392998	7.34	0.000	.2109767	.3656882
radw1	-.0817631	.0399169	-2.05	0.041	-.1603336	-.0031925
radtlw2	.2636111	.0397445	6.63	0.000	.18538	.3418422
dafter	-.0059542	.0278667	-0.21	0.831	-.0608057	.0488972
woman	.3886131	.0480041	8.10	0.000	.294124	.4831021
CSavoid	.8500873	.3849748	2.21	0.028	.0923214	1.607853
BSIsoma	2.343448	.2820556	8.31	0.000	1.788263	2.898633
avgcumdosew2	1.186636	.6727547	1.76	0.079	-.1375823	2.510854
icdx1nr4	-10.18136	10.6414	-0.96	0.339	-31.12739	10.76466
Ovruchskiy	-66.54387	23.52389	-2.83	0.005	-112.8472	-20.24056
Zhitomirskiy	-31.47127	6.342622	-4.96	0.000	-43.95579	-18.98676
_cons	-44.48268	9.091943	-4.89	0.000	-62.37883	-26.58654

```
157 .
158 . // trimmed autometrics model  waves 1 and 2
159 . regress radhlw2 inc1w2 hospw1 polprw1 radw1 radtlw2  ///
    >   woman CSavoid BSIsoma avgcumdosew2  Ovruchskiy Zhitomirskiy
```

Source	SS	df	MS		
Model	242393.688	11	22035.7898	Number of obs =	329
Residual	172349.929	317	543.690628	F(11, 317) =	40.53
				Prob > F =	0.0000
Total	414743.617	328	1264.46225	R-squared =	0.5844
				Adj R-squared =	0.5700
				Root MSE =	23.317

radhlw2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
inc1w2	15.49485	5.148771	3.01	0.003	5.364764	25.62493
hospw1	.2311938	.1454794	1.59	0.113	-.0550333	.5174209
polprw1	.2822504	.0365721	7.72	0.000	.2102957	.3542051
radw1	-.112157	.0373019	-3.01	0.003	-.1855475	-.0387664
radtlw2	.2739917	.037841	7.24	0.000	.1995404	.348443
woman	.337686	.0447044	7.55	0.000	.2497312	.4256409
CSavoid	.5942053	.3613379	1.64	0.101	-.1167183	1.305129
BSIsoma	2.349606	.2664805	8.82	0.000	1.825312	2.8739
avgcumdosew2	1.218807	.6729669	1.81	0.071	-.1052386	2.542853
Ovruchskiy	-64.83099	23.63328	-2.74	0.006	-111.3289	-18.33309
Zhitomirskiy	-31.95719	5.917087	-5.40	0.000	-43.59892	-20.31547
_cons	-37.77059	8.460251	-4.46	0.000	-54.41593	-21.12525

```
160 .
161 . // waves 1 and 2 male factor analysis with polychoric correlation input
162 .
163 . polychoricpca inc1w2 shfincw1 liqw1 hospw1 polprw1 radw1 radtlw2 dafter ///
    >   woman CSavoid BSIsoma avgcumdosew2 icdx1nr4  Zhitomirskiy

    Polychoric correlation matrix
```

	inc1w2	shfincw1	liqw1	hospw1
inc1w2	1			
shfincw1	.01858947	1		
liqw1	-.01937932	-.00717351	1	
hospw1	-.24649804	-.06390411	.0416423	1
polprw1	.06291262	.23482239	.0351981	-.11721696
radw1	-.14111416	.0882113	-.10165236	-.01632559
radtlw2	.04089203	-.02279479	.01837484	.06559066
dafter	-.01453833	.09197455	-.03390144	.05454356
woman	-.11927648	.25160402	.18000902	.03925462
CSavoid	.04475482	-.12343079	.10563633	.07423918
BSIsoma	.05464003	.1159464	.21222558	-.00971906
avgcumdosew2	-.09524543	.01400426	.01651303	.12245485
icdx1nr4	.25951317	-.01614978	.02223125	.01258519
Zhitomirskiy	.27732028	.11118354	.33619141	-.15098928

	polprw1	radw1	radtlw2	dafter
polprw1	1			
radw1	.25843206	1		
radtlw2	.08872337	.11834004	1	
dafter	.05009596	-.04477363	.01072363	1
woman	.13740301	.00976435	.11109266	.07369424
CSavoid	-.13033712	-.22514149	-.08583304	.02003341
BSIsoma	.30907504	.25703799	.0307972	.08939627
avgcumdosew2	.08500238	-.03235409	.05849214	.0376363
icdx1nr4	.06858145	-.28852973	.41347737	-.02042337
Zhitomirskiy	.17136155	-.23200252	.03718725	-.03602115

	woman	CSavoid	BSIsoma	avgcumdosew2
woman	1			
CSavoid	-.0995079	1		
BSIsoma	.31953719	-.27040336	1	
avgcumdosew2	.12949918	-.01634757	.04014855	1
icdx1nr4	.01048275	.18125466	-.01906203	.04591044
Zhitomirskiy	.23152299	.28610814	.02870787	.13993945

	icdx1nr4	Zhitomirskiy
icdx1nr4	1	
Zhitomirskiy	.31892827	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	2.065939	0.147567	0.147567
2	2.043160	0.145940	0.293507
3	1.425648	0.101832	0.395339
4	1.320985	0.094356	0.489695
5	1.093674	0.078120	0.567815
6	0.978834	0.069917	0.637731
7	0.911369	0.065098	0.702829
8	0.887734	0.063410	0.766239
9	0.750683	0.053620	0.819859
10	0.656604	0.046900	0.866759
11	0.629153	0.044940	0.911699
12	0.508908	0.036351	0.948049
13	0.406518	0.029037	0.977086
14	0.320791	0.022914	1.000000

```
164 . matrix define pcw12m = r(R)

165 . factormat pcw12m, n(340) blanks(.36) factors(2)
    (obs=340)
```

Factor analysis/correlation — Number of obs = **340**
Method: principal factors — Retained factors = **2**
Rotation: (unrotated) — Number of params = **27**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**1.39410**	**0.08842**	**0.4303**	**0.4303**
Factor2	**1.30568**	**0.66653**	**0.4030**	**0.8334**
Factor3	**0.63915**	**0.05637**	**0.1973**	**1.0306**
Factor4	**0.58277**	**0.33343**	**0.1799**	**1.2105**
Factor5	**0.24934**	**0.07259**	**0.0770**	**1.2875**
Factor6	**0.17675**	**0.09154**	**0.0546**	**1.3421**
Factor7	**0.08521**	**0.04248**	**0.0263**	**1.3684**
Factor8	**0.04273**	**0.11911**	**0.0132**	**1.3815**
Factor9	**-0.07638**	**0.03511**	**-0.0236**	**1.3580**
Factor10	**-0.11148**	**0.02895**	**-0.0344**	**1.3236**
Factor11	**-0.14043**	**0.10920**	**-0.0433**	**1.2802**
Factor12	**-0.24963**	**0.03826**	**-0.0771**	**1.2032**
Factor13	**-0.28789**	**0.08238**	**-0.0889**	**1.1143**
Factor14	**-0.37027**	.	**-0.1143**	**1.0000**

LR test: independent vs. saturated: chi2(**91**) = **653.63** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
inc1w2			**0.8726**
shfincw1			**0.8805**
liqw1			**0.8871**
hospw1			**0.9869**
polprw1		**0.4820**	**0.7486**
radw1	**-0.3616**	**0.4186**	**0.6940**
radtlw2			**0.9278**
dafter			**0.9919**
woman		**0.4456**	**0.7586**
CSavoid		**-0.3819**	**0.7670**
BSIsoma		**0.5965**	**0.6420**
avgcumdosew2			**0.9756**
icdx1nr4	**0.5833**		**0.6477**
Zhitomirskiy	**0.6901**		**0.5198**

(blanks represent abs(loading)<**.36**)

```
166 . rotate, blanks(.36)
```

Factor analysis/correlation — Number of obs = **340**
Method: principal factors — Retained factors = **2**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **27**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.39354**	**0.08731**	**0.4302**	**0.4302**
Factor2	**1.30624**	**.**	**0.4032**	**0.8334**

LR test: independent vs. saturated: chi2(**91**) = **653.63** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
inc1w2			**0.8726**
shfincw1			**0.8805**
liqw1			**0.8871**
hospw1			**0.9869**
polprw1		**0.4914**	**0.7486**
radw1	**-0.3936**	**0.3886**	**0.6940**
radtlw2			**0.9278**
dafter			**0.9919**
woman		**0.4606**	**0.7586**
CSavoid			**0.7670**
BSIsoma		**0.5983**	**0.6420**
avgcumdosew2			**0.9756**
icdx1nr4	**0.5902**		**0.6477**
Zhitomirskiy	**0.6829**		**0.5198**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1	Factor2
Factor1	**0.9968**	**0.0794**
Factor2	**-0.0794**	**0.9968**

```
167 .
168 .
169 . subtitle "Factor analysis of AutoMetrics Selected Variables from Waves 1 2 a
    > nd 3 male radhlw3 model"
-------------------------------------------------------------------------------

                                      Date and time:  23 Apr 2012    12:42:13
                                      Working directory:  /Users/robertyaffee
    > /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012maleso
    > ld.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
    >  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

    Factor analysis of AutoMetrics Selected Variables from Waves 1 2 and 3 male ra
    > dhlw3 model
-------------------------------------------------------------------------------

170 .
171 . /*
    > EQ(88) Modelling radhlw3 by OLS-CS
    >        The dataset is: /Users/robertyaffee/Documents/data/research/chwk/phas
    > e3/data/ox/chwideMales7jan2012.dta
    >        The estimation sample is: 36 - 340
    >        Dropped 2 observation(s) with missing values from the sample
    >
    >                   Coefficient  Std.Error  t-value  t-prob Part.R^2
    > occ8w2               -12.0862      3.937    -3.07  0.0023   0.0315
    > inc1w1                20.1317      4.106     4.90  0.0000   0.0765
    > inc4w1               -10.1058      5.045    -2.00  0.0461   0.0136
    > dvcew3               -14.9972      5.787    -2.59  0.0100   0.0226
    > sepaw2               -25.3567      10.48    -2.42  0.0161   0.0198
    > illw3                 5.68966      1.748     3.25  0.0013   0.0352
    > movew2               -11.2457      3.362    -3.35  0.0009   0.0372
    > shjobw1              0.281912    0.05958     4.73  0.0000   0.0717
    > shfamw2              0.103851    0.05628     1.85  0.0660   0.0116
    > shfamw3              0.196233    0.05214     3.76  0.0002   0.0466
    > shfincw1            -0.271702    0.05318    -5.11  0.0000   0.0826
    > shhousw1             0.180285    0.05475     3.29  0.0011   0.0360
    > age           U      0.472903    0.06185     7.65  0.0000   0.1678
    >
    > sigma                 24.8325  RSS                178828.907
    > log-likelihood       -1396.58
    > no. of observations       303  no. of parameters          13
    > mean(radhlw3)         46.6205  se(radhlw3)           35.1183
    > When the log-likelihood constant is NOT included:
    > AIC                   6.46626  SC                    6.62560
    > HQ                    6.53001  FPE                   643.108
```

```
> When the log-likelihood constant is included:
> AIC                   9.30414  SC                    9.46347
> HQ                    9.36788  FPE                   10983.9
>
> Normality test:   Chi^2(2)  =   4.2917 [0.1170]
> Hetero test:      F(21,281) =  0.90536 [0.5844]
> Hetero-X test:    F(49,253) =   1.6420 [0.0078]**
> RESET23 test:     F(2,288)  =   1.0843 [0.3395]
>
> */
172 . subtitle "Variable index 123"
```

```
                                      Date and time:  23 Apr 2012    12:42:13
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012maleso
> ld.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory
```

Variable index 123

```
173 . des occ8w2 inc1w1 inc4w1 dvcew3 sepaw2 illw3 movew2 shjobw1 shfamw2 shfamw3
> shfincw1 ///
>  shhousw1 age
```

variable name	storage type	display format	value label	variable label
occ8w2	double		choice105	**student in 1996**
inc1w1	double		choice114	**Income is not sufficient for basic neccessities in 1986**
inc4w1	double		choice117	**Income allows to comfortably afford luxury items in 1986**
dvcew3	double			**Total number of divorces experienced in time period 1996-NOW**
sepaw2	double			**Total number of separations experienced in time period 1987-1996**
illw3	double			**Total number of illnesses experienced in time period 1996-NOW**

movew2	double	**Total number of moves experienced in time period 1987-1996**
shjobw1	double	**Percentage of strains and hassles related to job in 1986**
shfamw2	double	**Percentage of strains and hassles related to family in 1996**
shfamw3	double	**Percentage of strains and hassles related to family NOW**
shfincw1	double	**Percentage of strains and hassles related to finances in 1986**
shhousw1	double	**Percentage of strains and hassles related to housing in 1986**
age	double	**Respondent's age**

```
174 . // Full model
175 . regress radhlw3 occ8w2 inc1w1 inc4w1 dvcew3 sepaw2 illw3 movew2 shjobw1 shfa
    > mw2 shfamw3 shfincw1 ///
    >  shhousw1 age
```

Source	SS	df	MS		
Model	**189259.119**	**13**	**14558.3938**	Number of obs =	**338**
Residual	**236639.082**	**324**	**730.367536**	F(13, 324) =	**19.93**
				Prob > F =	**0.0000**
				R-squared =	**0.4444**
				Adj R-squared =	**0.4221**
Total	**425898.201**	**337**	**1263.79288**	Root MSE =	**27.025**

radhlw3	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
occ8w2	**-10.28222**	**5.248897**	**-1.96**	**0.051**	**-20.60845**	**.0439985**
inc1w1	**22.34935**	**4.512661**	**4.95**	**0.000**	**13.47153**	**31.22716**
inc4w1	**-11.16715**	**5.391579**	**-2.07**	**0.039**	**-21.77407**	**-.5602297**
dvcew3	**-13.21337**	**6.308213**	**-2.09**	**0.037**	**-25.6236**	**-.8031441**
sepaw2	**-26.02072**	**11.36994**	**-2.29**	**0.023**	**-48.38895**	**-3.652495**
illw3	**5.085362**	**1.75883**	**2.89**	**0.004**	**1.625194**	**8.545531**
movew2	**-11.03904**	**3.567658**	**-3.09**	**0.002**	**-18.05774**	**-4.020342**
shjobw1	**.1616467**	**.0596153**	**2.71**	**0.007**	**.0443648**	**.2789286**
shfamw2	**.0797751**	**.0567387**	**1.41**	**0.161**	**-.0318476**	**.1913979**
shfamw3	**.205867**	**.0558144**	**3.69**	**0.000**	**.0960626**	**.3156713**
shfincw1	**-.2243752**	**.0552936**	**-4.06**	**0.000**	**-.333155**	**-.1155954**
shhousw1	**.2116148**	**.0573538**	**3.69**	**0.000**	**.098782**	**.3244477**
age	**.7380765**	**.156839**	**4.71**	**0.000**	**.4295251**	**1.046628**
_cons	**-9.245209**	**8.744681**	**-1.06**	**0.291**	**-26.44873**	**7.958313**

```
176 . // trimmed model
177 . regress radhlw3 occ8w2 inc1w1 inc4w1 dvcew3 sepaw2 illw3 movew2 shjobw1  shf
    > amw3 shfincw1 ///
    >  shhousw1 age
```

Source	SS	df	MS		
Model	184123.136	12	15343.5947	Number of obs =	339
Residual	242519.542	326	743.924977	F(12, 326) =	20.63
				Prob > F =	0.0000
Total	426642.678	338	1262.25645	R-squared =	0.4316
				Adj R-squared =	0.4106
				Root MSE =	27.275

radhlw3	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
occ8w2	-10.73356	5.294946	-2.03	0.043	-21.15014	-.3169893
inc1w1	22.3545	4.554146	4.91	0.000	13.39528	31.31372
inc4w1	-10.50023	5.436073	-1.93	0.054	-21.19444	.1939804
dvcew3	-13.94518	6.349633	-2.20	0.029	-26.4366	-1.453749
sepaw2	-26.61657	11.46027	-2.32	0.021	-49.16198	-4.071164
illw3	5.013903	1.765123	2.84	0.005	1.541433	8.486372
movew2	-10.9662	3.600486	-3.05	0.003	-18.04932	-3.883085
shjobw1	.1797047	.0584284	3.08	0.002	.0647603	.294649
shfamw3	.2148951	.0555559	3.87	0.000	.1056017	.3241884
shfincw1	-.1812713	.0506758	-3.58	0.000	-.2809642	-.0815783
shhousw1	.2092267	.057535	3.64	0.000	.09604	.3224134
age	.6920683	.157406	4.40	0.000	.3824086	1.001728
_cons	-7.172712	8.793558	-0.82	0.415	-24.47199	10.12657

```
178 .
179 . pwcorr occ8w2 inc1w1 inc4w1 dvcew3 illw3 movew2 shjobw1 shfamw3 shfincw1 ///
    >  shhousw1 age, sig obs
```

	occ8w2	inc1w1	inc4w1	dvcew3	illw3	movew2	shjobw1
occ8w2	1.0000						
	340						
inc1w1	0.1068	1.0000					
	0.0491						
	340	340					
inc4w1	-0.0945	-0.1261	1.0000				
	0.0817	0.0200					
	340	340	340				
dvcew3	-0.1053	0.2024	-0.0818	1.0000			

	0.0523	0.0002	0.1321				
	340	340	340	340			
illw3	-0.0842	-0.0433	-0.0866	0.0008	1.0000		
	0.1211	0.4258	0.1109	0.9880			
	340	340	340	340	340		
movew2	-0.0267	0.1103	-0.0657	0.0727	0.1738	1.0000	
	0.6231	0.0422	0.2272	0.1810	0.0013		
	340	340	340	340	340	340	
shjobw1	-0.2893	0.0730	-0.0369	0.0610	0.2413	0.0924	1.0000
	0.0000	0.1794	0.4974	0.2617	0.0000	0.0889	
	340	340	340	340	340	340	340
shfamw3	-0.1902	0.0786	-0.0903	0.0154	0.2017	0.0646	0.6154
	0.0004	0.1480	0.0963	0.7773	0.0002	0.2350	0.0000
	340	340	340	340	340	340	340
shfincw1	-0.2072	0.0231	-0.1239	0.0182	0.1355	0.0594	0.4394
	0.0001	0.6721	0.0225	0.7380	0.0125	0.2756	0.0000
	339	339	339	339	339	339	339
shhousw1	-0.2306	-0.0283	-0.0978	-0.0555	-0.0417	0.0076	0.5514
	0.0000	0.6036	0.0717	0.3072	0.4439	0.8889	0.0000
	340	340	340	340	340	340	340
age	-0.5038	-0.2587	0.1500	-0.1254	0.2270	-0.0340	0.2162
	0.0000	0.0000	0.0056	0.0207	0.0000	0.5319	0.0001
	340	340	340	340	340	340	340

	shfamw3	shfincw1	shhousw1	age
shfamw3	1.0000			
	340			
shfincw1	0.5052	1.0000		
	0.0000			
	339	339		
shhousw1	0.4664	0.5105	1.0000	
	0.0000	0.0000		
	340	339	340	
age	0.0142	0.0085	0.1516	1.0000
	0.7935	0.8759	0.0051	
	340	339	340	340

```
180 . summ occ8w2 inc1w1 inc4w1 dvcew3 illw3 movew2 shjobw1 shfamw2 shfamw3 shfinc
    > w1 ///
    >  shhousw1 age
```

Variable	Obs	Mean	Std. Dev.	Min	Max
occ8w2	340	.1382353	.3456555	0	1
inc1w1	340	.1411765	.3487167	0	1
inc4w1	340	.0882353	.2840548	0	1
dvcew3	340	.0647059	.2463687	0	1
illw3	340	.4970588	.9485232	0	5
movew2	340	.1558824	.4232834	0	3
shjobw1	340	49.57059	37.15936	0	100
shfamw2	339	34.0413	37.07746	0	100
shfamw3	340	54.20588	36.91997	0	100
shfincw1	339	34.22714	37.49838	0	100
shhousw1	340	27.86176	35.13289	0	100
age	340	49.18235	12.22222	30	77

```
181 .
182 . subtitle "Male factor analysis of explanatory vars for radhlw3 from waves 1
    > 2 and 3"
-------------------------------------------------------------------------------

                                      Date and time:  23 Apr 2012    12:42:13
                                      Working directory:  /Users/robertyaffee
    > /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012maleso
    > ld.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
    >  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

Male factor analysis of explanatory vars for radhlw3 from waves 1 2 and 3
-------------------------------------------------------------------------------
```

```
183 . // dropping items with missing obs  and no significance
184 . polychoricpca occ8w2 inc1w1  movew2 shjobw1 shfamw3 ///
>  shhousw1
```

Polychoric correlation matrix

	occ8w2	inc1w1	movew2	shjobw1	shfamw3
occ8w2	1				
inc1w1	.22940521	1			
movew2	-.07784141	.21166529	1		
shjobw1	-.45323973	.11507447	.17499527	1	
shfamw3	-.2973838	.12484394	.104462	.61544894	1
shhousw1	-.44609634	-.04473445	.04266167	.55140634	.46639514

	shhousw1
shhousw1	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	2.456676	0.409446	0.409446
2	1.302228	0.217038	0.626484
3	0.877505	0.146251	0.772735
4	0.536881	0.089480	0.862215
5	0.486646	0.081108	0.943323
6	0.340064	0.056677	1.000000

```
185 . matrix define pcrmatw123m = r(R)

186 . factormat pcrmatw123m, n(340) factors(1) blanks(.36)
(obs=340)
```

Factor analysis/correlation — Number of obs = 340
Method: principal factors — Retained factors = 1
Rotation: (unrotated) — Number of params = 6

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	1.87594	1.38530	0.9988	0.9988
Factor2	0.49063	0.43630	0.2612	1.2601
Factor3	0.05434	0.17497	0.0289	1.2890
Factor4	-0.12063	0.05619	-0.0642	1.2248
Factor5	-0.17682	0.06851	-0.0941	1.1306
Factor6	-0.24533	.	-0.1306	1.0000

LR test: independent vs. saturated: chi2(15) = 468.19 Prob>chi2 = 0.0000

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
occ8w2	**-0.5600**	**0.6864**
inc1w1		**0.9991**
movew2		**0.9745**
shjobw1	**0.7929**	**0.3714**
shfamw3	**0.6736**	**0.5463**
shhousw1	**0.6736**	**0.5463**

(blanks represent abs(loading)<**.36**)

```
187 . rotate, blanks(.36)
```

Factor analysis/correlation — Number of obs = **340**
Method: principal factors — Retained factors = **1**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **6**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.87594**	.	**0.9988**	**0.9988**

LR test: independent vs. saturated: chi2(**15**) = **468.19** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
occ8w2	**-0.5600**	**0.6864**
inc1w1		**0.9991**
movew2		**0.9745**
shjobw1	**0.7929**	**0.3714**
shfamw3	**0.6736**	**0.5463**
shhousw1	**0.6736**	**0.5463**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1
Factor1	**1.0000**

```
188 .
189 .
190 .
191 . di "{hline}"
```

```
192 . di "{hline}"
```

```
193 . di as input "Part III Comparison of Male and female factor analysis"
    Part III Comparison of Male and female factor analysis

194 .
195 . title(Comparison of male and female models for waves 1  -  1 and 2 -  and th
    > en 1 2 and 3)


    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                              (Comparison                             ****
    > *
    *****                                 of                                   ****
    > *
    *****                                male                                  ****
    > *
    *****                                and                                   ****
    > *
    *****                               female                                 ****
    > *
    *****                               models                                 ****
    > *
    *****                                for                                   ****
    > *
    *****                               waves                                  ****
    > *
    *****                                 1                                    ****
    > *
    *****                                 -                                    ****
    > *
    *****                                 1                                    ****
    > *
    *****                                and                                   ****
    > *
```

```
    *****                                 2                                 ****
    > *
    *****                                 -                                 ****
    > *
    *****                               and                                 ****
    > *
    *****                              then                                 ****
    > *
    *****                                 1                                 ****
    > *
    *****                                 2                                 ****
    > *
    *****                               and                                 ****
    > *
    *****                                 3)                                ****
    > *
    *****                                                                   ****
    > *
    *****                                                                   ****
    > *
    *****                                          23 Apr 2012    12:42:15  ****
    > *
    ********************************************************************************
    > *
    ********************************************************************************
    > *


196 .
197 . title(Male model wave 1 radhlw1)


    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                   ****
    > *
    *****                                                                   ****
    > *
    *****                               (Male                               ****
    > *
    *****                              model                                ****
    > *
    *****                               wave                                ****
    > *
    *****                                 1                                 ****
    > *
```

```
*****                                radhlw1)                                ****
> *
*****                                                                        ****
> *
*****                                                                        ****
> *
*****                                          23 Apr 2012    12:42:15  ****
> *
********************************************************************************
> *
********************************************************************************
> *
```

```
198 .  // male wave 1
199 . polychoricpca shjobw1 shfincw1 shhousw1 fdferw1 ///
    >   ecprw1 polprw1 airw1 radw1 radtlw1 skin kzchorn WHPpain lBSItotal BSIposym
    > p BSIglobsi BSIips ///
    >    physdisagw1 PTSDw1

    Polychoric correlation matrix

                   shjobw1     shfincw1     shhousw1      fdferw1       ecprw1
        shjobw1          1
       shfincw1   .43900281            1
       shhousw1   .54895089    .50658669            1
        fdferw1   .48139086    .36324133    .37796119            1
         ecprw1    .3022453     .3068503    .33778426    .19625724            1
        polprw1   .39308092     .2543043    .26361319    .38359411    .41821507
          airw1   .32103094    .18437415    .22796573    .32055921    .41483114
          radw1    .2179951    .07886022   -.00539794    .25802755   -.09484404
        radtlw1   -.08780156      -.06415    .00088262    .03830383   -.02126058
           skin   .25248002    .13536607    .07276385    .29936615     .0293811
        kzchorn   .34423912    .21340187    .24730388    .33250416    .20611505
        WHPpain   .31896177    .10312616    .16386256    .15397312    .11898514
      lBSItotal   .47558497    .27413487    .27541774    .45861304    .17098101
      BSIposymp   .46339421     .2471058    .25772318    .44504836    .14053368
      BSIglobsi   .45293161    .24668717    .24943024    .43973718    .14550191
         BSIips   .22793347    .17745795    .10168645    .25585696     .1131214
    physdisagw1   .40338684    .17088488    .26708395    .50379086    .10211027
         PTSDw1   .44268324    .34276805    .35137542    .62753625     .1731002
```

	polprw1	airw1	radw1	radtlw1	skin
polprw1	1				
airw1	.64414034	1			
radw1	.26883952	.16769951	1		
radtlw1	.18996893	.10335207	.26514844	1	
skin	.23138381	.17172718	.18439489	-.04270411	1
kzchorn	.2788452	.28663075	.09343755	.12554619	.31783762
WHPpain	.1677703	.04612751	.05451709	.11838422	.20435829
lBSItotal	.27401152	.19224176	.17922002	-.03714878	.36598561
BSIposymp	.25641527	.16912174	.20681649	-.0565745	.37812298
BSIglobsi	.25246212	.17093166	.19693198	-.06331362	.37132501
BSIips	.1002395	-.04998042	.09178754	-.05944167	.1649353
physdisagw1	.27850496	.31237653	.21403828	-.01777715	.34593205
PTSDw1	.36213929	.36637807	.22839729	.05637658	.28167975

	kzchorn	WHPpain	lBSItotal	BSIposymp	BSIglobsi
kzchorn	1				
WHPpain	.28945473	1			
lBSItotal	.40453169	.44795371	1		
BSIposymp	.39286123	.43959841	.9857482	1	
BSIglobsi	.38660576	.43377321	.98713766	.99844137	1
BSIips	.12076547	.25843502	.72690515	.72372405	.72990682
physdisagw1	.3068694	.21560542	.42631526	.42831503	.41718339
PTSDw1	.27654138	.0952971	.36194728	.35577339	.3481173

	BSIips	physdisagw1	PTSDw1
BSIips	1		
physdisagw1	.06393134	1	
PTSDw1	.07345017	.56717639	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	6.144829	0.341379	0.341379
2	2.316495	0.128694	0.470074
3	1.522718	0.084595	0.554669
4	1.261206	0.070067	0.624736
5	1.036769	0.057598	0.682334
6	0.990212	0.055012	0.737346
7	0.766166	0.042565	0.779911
8	0.713907	0.039662	0.819572
9	0.596835	0.033157	0.852730
10	0.497612	0.027645	0.880375
11	0.476149	0.026453	0.906828
12	0.455423	0.025301	0.932129
13	0.353736	0.019652	0.951781
14	0.325670	0.018093	0.969874
15	0.305127	0.016951	0.986825

16	0.220651	0.012258	0.999084
17	0.015243	0.000847	0.999930
18	0.001253	0.000070	1.000000

```
200 . matrix define pcwaves123m=r(R)

201 . factormat pcwaves123m, n(340) blanks(.36) factors(2)
    (obs=340)
```

Factor analysis/correlation — Number of obs = 340
Method: principal factors — Retained factors = 2
Rotation: (unrotated) — Number of params = 35

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	5.81186	3.84140	0.6231	0.6231
Factor2	1.97046	1.08482	0.2113	0.8344
Factor3	0.88564	0.17495	0.0950	0.9293
Factor4	0.71069	0.31516	0.0762	1.0055
Factor5	0.39553	0.01921	0.0424	1.0479
Factor6	0.37632	0.23669	0.0403	1.0883
Factor7	0.13963	0.04799	0.0150	1.1032
Factor8	0.09164	0.06595	0.0098	1.1131
Factor9	0.02569	0.02680	0.0028	1.1158
Factor10	-0.00112	0.00346	-0.0001	1.1157
Factor11	-0.00458	0.05994	-0.0005	1.1152
Factor12	-0.06452	0.04228	-0.0069	1.1083
Factor13	-0.10680	0.01817	-0.0114	1.0968
Factor14	-0.12497	0.01593	-0.0134	1.0834
Factor15	-0.14090	0.02983	-0.0151	1.0683
Factor16	-0.17073	0.02579	-0.0183	1.0500
Factor17	-0.19652	0.07355	-0.0211	1.0290
Factor18	-0.27007	.	-0.0290	1.0000

LR test: independent vs. saturated: chi2(153) = 5242.85 Prob>chi2 = 0.0000

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
shjobw1	**0.6663**		**0.4973**
shfincw1	**0.4354**		**0.7493**
shhousw1	**0.4660**		**0.6828**
fdferw1	**0.6539**		**0.5076**
ecprw1			**0.7931**
polprw1	**0.5020**	**0.4514**	**0.5443**
airw1	**0.4129**	**0.5117**	**0.5676**
radw1			**0.9163**
radtlw1			**0.9793**
skin	**0.4293**		**0.8157**
kzchorn	**0.4949**		**0.7415**
WHPpain	**0.4201**		**0.7995**
lBSItotal	**0.8948**	**-0.4203**	**0.0227**
BSIposymp	**0.8880**	**-0.4517**	**0.0075**
BSIglobsi	**0.8826**	**-0.4601**	**0.0093**
BSIips	**0.5413**	**-0.5347**	**0.4211**
physdisagw1	**0.5714**		**0.6329**
PTSDw1	**0.5829**	**0.3612**	**0.5298**

(blanks represent abs(loading)<**.36**)

```
202 . rotate, blanks(.36)
```

Factor analysis/correlation — Number of obs = **340**
Method: principal factors — Retained factors = **2**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **35**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**4.51252**	**1.24271**	**0.4838**	**0.4838**
Factor2	**3.26980**	**.**	**0.3506**	**0.8344**

LR test: independent vs. saturated: chi2(**153**) = **5242.85** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
shjobw1	**0.4010**	**0.5847**	**0.4973**
shfincw1		**0.4543**	**0.7493**
shhousw1		**0.5284**	**0.6828**
fdferw1	**0.3839**	**0.5874**	**0.5076**
ecprw1		**0.4484**	**0.7931**
polprw1		**0.6591**	**0.5443**
airw1		**0.6564**	**0.5676**
radw1			**0.9163**
radtlw1			**0.9793**
skin			**0.8157**
kzchorn		**0.3825**	**0.7415**
WHPpain	**0.4319**		**0.7995**
lBSItotal	**0.9723**		**0.0227**
BSIposymp	**0.9850**		**0.0075**
BSIglobsi	**0.9856**		**0.0093**
BSIips	**0.7513**		**0.4211**
physdisagw1		**0.4962**	**0.6329**
PTSDw1		**0.6328**	**0.5298**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1	Factor2
Factor1	**0.8135**	**0.5816**
Factor2	**-0.5816**	**0.8135**

```
203 .
204 .
205 . title(Female wave 1 radhlw1)
```

```
    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                                (Female                               ****
    > *
    *****                                  wave                                ****
    > *
    *****                                   1                                  ****
    > *
    *****                                radhlw1)                              ****
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                                             23 Apr 2012    12:42:17  ****
    > *
    ********************************************************************************
    > *
    ********************************************************************************
    > *


206 .
207 .
208 . use chwide22apr2012femmesold, clear

209 . title(Female model wave 1)


    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                                (Female                               ****
    > *
    *****                                 model                                ****
    > *
    *****                                  wave                                ****
```

```
> *
*****                                1)                                  ****
> *
*****                                                                    ****
> *
*****                                                                    ****
> *
*****                                          23 Apr 2012    12:42:17  ****
> *
********************************************************************************
> *
********************************************************************************
> *


210 . subtitle "Female wave 1 variable index"
-------------------------------------------------------------------------------

                                          Date and time:  23 Apr 2012    12:42:17
                                          Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                          Stata data file:  chwide22apr2012femmes
> old.dta
                                          Stata version:  12.1
                                          Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                          using  33554432 bytes of memory

Female wave 1 variable index
-------------------------------------------------------------------------------


211 .
212 . *---------Variable index
213 . di _skip(2)


214 . des suchrw1 smokw1 trgovw1 ecprw1 radchw1 dafter chsize icdx4nr10
```

```
              storage  display     value
variable name   type   format      label      variable label
------------------------------------------------------------------------------
suchrw1         byte   %8.0g                  Level of support (in percent)
                                                from Chernobyl survivor
                                                benefits in 1986
smokw1          int    %8.0g                  number of cigarettes per week in
                                                1976-1986
trgovw1         byte   %8.0g                  level of trust in government
                                                reports about chornobyl in
                                                time period 1976-1986
ecprw1          byte   %8.0g                  consider hazardous (in percent)
                                                - economic problems in 1986
radchw1         byte   %8.0g                  believed % of polution related
                                                to chornobyl in 1986
dafter          int    %8.0g                * how many days lapsed after
                                                Chornobyl accident before you
                                                heard about the acciden
chsize          byte   %8.0g                * the radioactive fallout from
                                                chornobyl affected more people
                                                than the radioactive
icdx4nr10       byte   %8.0g                  icdx4nr==varicose veins in legs

215 .
216 . *---------Trimmed female radhlw1 regression
217 . di _skip(2)


218 . sw, pr(.1): regress radhlw1 smokw1 suchrw1 (dafter trgovw1 ecprw1) (radchw1
    > chsize) icdx4nr10
                      begin with full model
    p < 0.1000        for all terms in model

      Source |       SS       df       MS              Number of obs =     261
-------------+------------------------------           F(  8,   252) =   24.13
       Model |  138076.412     8  17259.5515            Prob > F      =  0.0000
    Residual |  180215.527   252  715.140979            R-squared     =  0.4338
-------------+------------------------------           Adj R-squared =  0.4158
       Total |  318291.939   260  1224.19976            Root MSE      =  26.742
```

radhlw1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
smokw1	.1931429	.1048807	1.84	0.067	-.0134114	.3996973
suchrw1	.7225358	.1859797	3.89	0.000	.3562633	1.088808
dafter	-.0537947	.3648414	-0.15	0.883	-.7723215	.6647322
trgovw1	-.1390733	.04757	-2.92	0.004	-.2327587	-.0453878
ecprw1	.3027088	.0523621	5.78	0.000	.1995857	.4058319
radchw1	.3325285	.0468084	7.10	0.000	.2403431	.424714
chsize	.3602986	.0617115	5.84	0.000	.2387625	.4818346
icdx4nr10	-61.21019	19.38757	-3.16	0.002	-99.39251	-23.02787
_cons	.8775316	5.614401	0.16	0.876	-10.17959	11.93466

```
219 .
220 .
221 . subtitle "Female wave 1 factor analysis"
```

```
                                      Date and time:  23 Apr 2012    12:42:17
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
> old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

Female wave 1 factor analysis
```

```
222 . di _skip(2)


223 .
224 . polychoricpca suchrw1 smokw1 trgovw1 ecprw1 radchw1 dafter chsize icdx4nr10

Polychoric correlation matrix

             suchrw1      smokw1     trgovw1      ecprw1     radchw1
  suchrw1          1
   smokw1   .01964444           1
  trgovw1    .0447752  -.08938678           1
   ecprw1   .03689915  -.03723037   .28077415           1
  radchw1   .00473513   .06660046   .04863307   .14257218           1
   dafter   .04004928  -.07539482   .09960487  -.05656598  -.02181122
   chsize  -.01190292  -.07217215   .02939964   .21970153   .19639619
icdx4nr10  -.34602635   .18677529  -.18157629   .26418113   .45418276
```

	dafter	chsize	icdx4nr10
dafter	1		
chsize	.05380153	1	
icdx4nr10	.0525849	.45929989	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	1.956554	0.244569	0.244569
2	1.374763	0.171845	0.416415
3	1.082791	0.135349	0.551764
4	1.005773	0.125722	0.677485
5	0.919347	0.114918	0.792404
6	0.790294	0.098787	0.891190
7	0.630098	0.078762	0.969953
8	0.240379	0.030047	1.000000

```
225 . matrix define mypc1f =r(R)

226 . factormat mypc1f, n(363) blanks(.36) factors(1)
    (obs=363)
```

Factor analysis/correlation — Number of obs = 363
Method: principal factors — Retained factors = 1
Rotation: (unrotated) — Number of params = 8

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	1.36889	0.76854	0.6925	0.6925
Factor2	0.60035	0.34958	0.3037	0.9963
Factor3	0.25077	0.06958	0.1269	1.1231
Factor4	0.18119	0.10283	0.0917	1.2148
Factor5	0.07836	0.06891	0.0396	1.2544
Factor6	0.00945	0.14771	0.0048	1.2592
Factor7	-0.13826	0.23583	-0.0699	1.1893
Factor8	-0.37409	.	-0.1893	1.0000

LR test: independent vs. saturated: chi2(28) = 406.99 Prob>chi2 = 0.0000

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
suchrw1		**0.9394**
smokw1		**0.9884**
trgovw1		**0.9988**
ecprw1		**0.8906**
radchw1	**0.4824**	**0.7673**
dafter		**0.9998**
chsize	**0.5035**	**0.7464**
icdx4nr10	**0.8364**	**0.3004**

(blanks represent abs(loading)<**.36**)

```
227 . rotate, blanks(.36)
```

Factor analysis/correlation — Number of obs = **363**
Method: principal factors — Retained factors = **1**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **8**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.36889**	.	**0.6925**	**0.6925**

LR test: independent vs. saturated: chi2(**28**) = **406.99** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
suchrw1		**0.9394**
smokw1		**0.9884**
trgovw1		**0.9988**
ecprw1		**0.8906**
radchw1	**0.4824**	**0.7673**
dafter		**0.9998**
chsize	**0.5035**	**0.7464**
icdx4nr10	**0.8364**	**0.3004**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1
Factor1	**1.0000**

```
228 .
229 .
230 . di "{hline}"
```

```
231 .
232 .
233 . title(male radhlw2 model waves 1 and 2)
```

```
*******************************************************************************
> *
*******************************************************************************
> *
*****                                                                      ****
> *
*****                                                                      ****
> *
*****                              (male                                   ****
> *
*****                             radhlw2                                  ****
> *
*****                              model                                   ****
> *
*****                              waves                                   ****
> *
*****                                1                                     ****
> *
*****                               and                                    ****
> *
*****                                2)                                    ****
> *
*****                                                                      ****
> *
*****                                                                      ****
> *
*****                                          23 Apr 2012    12:42:19  ****
> *
*******************************************************************************
> *
*******************************************************************************
> *
```

```
234 . use chwide22apr2012malesold, clear
    (OxMetrics data)

235 . subtitle "Male waves 1 and 2 radhlw2 variable index"
-------------------------------------------------------------------------------
                                      Date and time:  23 Apr 2012    12:42:19
                                      Working directory:  /Users/robertyaffee
    > /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012maleso
    > ld.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
    >  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory

    Male waves 1 and 2 radhlw2 variable index
-------------------------------------------------------------------------------

236 . di _skip(2)


237 . *------------------Variable index
238 . des inc1w2 shfincw1 liqw1 hospw1 polprw1 radw1 radtlw2 dafter ///
    >   woman CSavoid BSIsoma avgcumdosew2 icdx1nr4  Zhitomirskiy

                 storage  display     value
    variable name   type   format      label      variable label
-------------------------------------------------------------------------------
    inc1w2          double             choice118
                                                  Income is not sufficient for
                                                    basic neccessities in 1996
    shfincw1        double                        Percentage of strains and
                                                    hassles related to finances in
                                                    1986
    liqw1           double                        number of spirits per week in
                                                    1976-1986
    hospw1          double                        number of days per year as a
                                                    patient in a clinic for
                                                    medical condition in 1976-
    polprw1         double                        consider hazardous (in percent)
                                                    - political problems in 1986
    radw1           double                        believed % of the radioactively
                                                    contaminated area in 1986
    radtlw2         double                        believed % of cumulative
                                                    radiation exposed to in a
                                                    lifetime in 1996
    dafter          double                        how many days lapsed after
```

```
                                                Chornobyl accident before you
                                                heard about the acciden
woman           double                        pregnant exposed to radiation
                                                likely to give birth to
                                                children with deffects (%
CSavoid         double                        Coping Avoidance subscale
BSIsoma         double                        Basic symptom inventory
                                                obsessive compulsive subscale
avgcumdosew2    double                        Average mean dose CS1337 in mGy
                                                for wave 2
icdx1nr4        double                        icdx1nr==333.0 degeneration of
                                                basal ganglia
Zhitomirskiy    double                        ranown==102

239 . // waves 1 and 2 male factor analysis with polychoric correlation input
240 . subtitle "Male waves 1 and 2 radhlw2 factor analysis"
-------------------------------------------------------------------------------

                                          Date and time:  23 Apr 2012    12:42:19
                                          Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                          Stata data file:  chwide22apr2012maleso
> ld.dta
                                          Stata version:  12.1
                                          Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                          using  33554432 bytes of memory

Male waves 1 and 2 radhlw2 factor analysis
-------------------------------------------------------------------------------

241 . *------------------Trimmed radhlw2 male regression on waves 1 and 2
242 . di _skip(2)


243 . sw, pr(.1): regress radhlw2 inc1w2 shfincw1 liqw1 hospw1 polprw1 radw1 radtl
    > w2 dafter ///
    >   woman CSavoid BSIsoma avgcumdosew2 icdx1nr4  Zhitomirskiy
                        begin with full model
    p = 0.9999 >= 0.1000  removing liqw1
    p = 0.8809 >= 0.1000  removing dafter
    p = 0.3567 >= 0.1000  removing icdx1nr4
    p = 0.1565 >= 0.1000  removing hospw1
    p = 0.1271 >= 0.1000  removing shfincw1
```

Source	SS	df	MS		
Model	221365.135	9	24596.1261	Number of obs =	300
Residual	159868.532	290	551.270799	F(9, 290) =	44.62
				Prob > F =	0.0000
Total	381233.667	299	1275.02899	R-squared =	0.5807
				Adj R-squared =	0.5676
				Root MSE =	23.479

radhlw2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
inc1w2	16.34464	5.279739	3.10	0.002	5.953172	26.73611
CSavoid	.8608922	.3825905	2.25	0.025	.1078861	1.613898
Zhitomirskiy	-31.66433	6.09343	-5.20	0.000	-43.65728	-19.67137
BSIsoma	2.346265	.2756425	8.51	0.000	1.803752	2.888779
polprw1	.2629823	.0386624	6.80	0.000	.1868878	.3390769
radw1	-.0739296	.039807	-1.86	0.064	-.1522768	.0044176
radtlw2	.2718238	.039633	6.86	0.000	.193819	.3498286
avgcumdosew2	1.201932	.6716689	1.79	0.075	-.1200322	2.523896
woman	.3670737	.0469409	7.82	0.000	.2746857	.4594617
_cons	-44.41468	9.060167	-4.90	0.000	-62.2467	-26.58266

```
244 .
245 . *------------------Factor analysis of male waves 1 and 2 radhlw2 expanatory
    > vars
246 . di _skip(2)


247 .
248 . polychoricpca inc1w2 shfincw1 liqw1 hospw1 polprw1 radw1 radtlw2 dafter ///
    >   woman CSavoid BSIsoma avgcumdosew2 icdx1nr4  Zhitomirskiy

    Polychoric correlation matrix

                       inc1w2      shfincw1         liqw1        hospw1
          inc1w2            1
        shfincw1     .01858947             1
           liqw1    -.01937932    -.00717351             1
          hospw1    -.24649804    -.06390411      .0416423             1
          polprw1     .06291262     .23482239      .0351981    -.11721696
            radw1    -.14111416      .0882113    -.10165236    -.01632559
          radtlw2     .04089203    -.02279479     .01837484     .06559066
           dafter    -.01453833     .09197455    -.03390144     .05454356
            woman    -.11927648     .25160402     .18000902     .03925462
          CSavoid     .04475482    -.12343079     .10563633     .07423918
          BSIsoma     .05464003      .1159464     .21222558    -.00971906
        avgcumdosew2    -.09524543     .01400426     .01651303     .12245485
            icdx1nr4     .25951317    -.01614978     .02223125     .01258519
        Zhitomirskiy     .27732028     .11118354     .33619141    -.15098928
```

	polprw1	radw1	radtlw2	dafter
polprw1	1			
radw1	.25843206	1		
radtlw2	.08872337	.11834004	1	
dafter	.05009596	-.04477363	.01072363	1
woman	.13740301	.00976435	.11109266	.07369424
CSavoid	-.13033712	-.22514149	-.08583304	.02003341
BSIsoma	.30907504	.25703799	.0307972	.08939627
avgcumdosew2	.08500238	-.03235409	.05849214	.0376363
icdx1nr4	.06858145	-.28852973	.41347737	-.02042337
Zhitomirskiy	.17136155	-.23200252	.03718725	-.03602115

	woman	CSavoid	BSIsoma	avgcumdosew2
woman	1			
CSavoid	-.0995079	1		
BSIsoma	.31953719	-.27040336	1	
avgcumdosew2	.12949918	-.01634757	.04014855	1
icdx1nr4	.01048275	.18125466	-.01906203	.04591044
Zhitomirskiy	.23152299	.28610814	.02870787	.13993945

	icdx1nr4	Zhitomirskiy
icdx1nr4	1	
Zhitomirskiy	.31892827	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	2.065939	0.147567	0.147567
2	2.043160	0.145940	0.293507
3	1.425648	0.101832	0.395339
4	1.320985	0.094356	0.489695
5	1.093674	0.078120	0.567815
6	0.978834	0.069917	0.637731
7	0.911369	0.065098	0.702829
8	0.887734	0.063410	0.766239
9	0.750683	0.053620	0.819859
10	0.656604	0.046900	0.866759
11	0.629153	0.044940	0.911699
12	0.508908	0.036351	0.948049
13	0.406518	0.029037	0.977086
14	0.320791	0.022914	1.000000

```
249 . matrix define pcw12m = r(R)

250 . factormat pcw12m, n(340) blanks(.36) factors(2)
    (obs=340)
```

Factor analysis/correlation — Number of obs = **340**
Method: principal factors — Retained factors = **2**
Rotation: (unrotated) — Number of params = **27**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**1.39410**	**0.08842**	**0.4303**	**0.4303**
Factor2	**1.30568**	**0.66653**	**0.4030**	**0.8334**
Factor3	**0.63915**	**0.05637**	**0.1973**	**1.0306**
Factor4	**0.58277**	**0.33343**	**0.1799**	**1.2105**
Factor5	**0.24934**	**0.07259**	**0.0770**	**1.2875**
Factor6	**0.17675**	**0.09154**	**0.0546**	**1.3421**
Factor7	**0.08521**	**0.04248**	**0.0263**	**1.3684**
Factor8	**0.04273**	**0.11911**	**0.0132**	**1.3815**
Factor9	**-0.07638**	**0.03511**	**-0.0236**	**1.3580**
Factor10	**-0.11148**	**0.02895**	**-0.0344**	**1.3236**
Factor11	**-0.14043**	**0.10920**	**-0.0433**	**1.2802**
Factor12	**-0.24963**	**0.03826**	**-0.0771**	**1.2032**
Factor13	**-0.28789**	**0.08238**	**-0.0889**	**1.1143**
Factor14	**-0.37027**	.	**-0.1143**	**1.0000**

LR test: independent vs. saturated: chi2(**91**) = **653.63** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
inc1w2			**0.8726**
shfincw1			**0.8805**
liqw1			**0.8871**
hospw1			**0.9869**
polprw1		**0.4820**	**0.7486**
radw1	**-0.3616**	**0.4186**	**0.6940**
radtlw2			**0.9278**
dafter			**0.9919**
woman		**0.4456**	**0.7586**
CSavoid		**-0.3819**	**0.7670**
BSIsoma		**0.5965**	**0.6420**
avgcumdosew2			**0.9756**
icdx1nr4	**0.5833**		**0.6477**
Zhitomirskiy	**0.6901**		**0.5198**

(blanks represent abs(loading)<**.36**)

```
251 . rotate, blanks(.36)
```

Factor analysis/correlation — Number of obs = **340**
Method: principal factors — Retained factors = **2**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **27**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.39354**	**0.08731**	**0.4302**	**0.4302**
Factor2	**1.30624**	**.**	**0.4032**	**0.8334**

LR test: independent vs. saturated: chi2(**91**) = **653.63** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
inc1w2			**0.8726**
shfincw1			**0.8805**
liqw1			**0.8871**
hospw1			**0.9869**
polprw1		**0.4914**	**0.7486**
radw1	**-0.3936**	**0.3886**	**0.6940**
radtlw2			**0.9278**
dafter			**0.9919**
woman		**0.4606**	**0.7586**
CSavoid			**0.7670**
BSIsoma		**0.5983**	**0.6420**
avgcumdosew2			**0.9756**
icdx1nr4	**0.5902**		**0.6477**
Zhitomirskiy	**0.6829**		**0.5198**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1	Factor2
Factor1	**0.9968**	**0.0794**
Factor2	**-0.0794**	**0.9968**

```
252 .
253 .
254 . title(female radhlw2 model waves 1 and 2)

    ********************************************************************************
    > *
    ********************************************************************************
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                              (female                                 ****
    > *
    *****                              radhlw2                                 ****
    > *
    *****                               model                                  ****
    > *
    *****                               waves                                  ****
    > *
    *****                                 1                                    ****
    > *
    *****                                and                                   ****
    > *
    *****                                 2)                                   ****
    > *
    *****                                                                      ****
    > *
    *****                                                                      ****
    > *
    *****                                          23 Apr 2012    12:42:25  ****
    > *
    ********************************************************************************
    > *
    ********************************************************************************
    > *
```

```
255 . use chwide22apr2012femmesold, clear

256 .
257 . subtitle "Female Variable index for Factor Analysis of radhlw2 waves 1 and
    > 2"
```

```
                                      Date and time:  23 Apr 2012    12:42:25
                                      Working directory:  /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                      Stata data file:  chwide22apr2012femmes
> old.dta
                                      Stata version:  12.1
                                      Operating system:  MacOSX   10.6.8  on
>  Macintosh (Intel 64-bit)  with  4  processors
                                      using  33554432 bytes of memory
```

Female Variable index for Factor Analysis of radhlw2 waves 1 and 2

```
258 . *--------------Variable index
259 . di _skip(2)


260 . des emplw1 beerw2 trrepw1 defnw2 ecprw1 polprw1 radw1 radtlw2 dafter ///
    >  toxic lBSItotal BSIphanx MiPTSD Zhitomirskiy icdx1nr8
```

variable name	storage type	display format	value label	variable label
emplw1	byte	%15.0g	LABI	**mode of employment in 1986**
beerw2	byte	%8.0g		**nuber of beers per week in 1987-1996**
trrepw1	byte	%8.0g	*	**level of trust in medical/scientific reports about chornobyl in time period 197**
defnw2	byte	%8.0g	*	**consider hazardous (in percent) - deficiencies in essential nutrition in 1996**
ecprw1	byte	%8.0g		**consider hazardous (in percent) - economic problems in 1986**
polprw1	byte	%8.0g		**consider hazardous (in percent) - political problems in 1986**
radw1	byte	%8.0g		**believed % of the radioactively contaminated area in 1986**
radtlw2	byte	%8.0g		**believed % of cumulative radiation exposed to in a lifetime in 1996**
dafter	int	%8.0g	*	**how many days lapsed after**

			Chornobyl accident before you heard about the acciden
toxic	byte	%8.0g	**all radioactive materials remain toxic for thousands of years (% of agreement)**
lBSItotal	float	%9.0g	**Ln(bsItotal)**
BSIphanx	byte	%9.0g	**Basic symptom inventory phobic anxiety subscale**
MiPTSD	byte	%9.0g	**Misssissipi post-traumatic stress disorder scale**
Zhitomirskiy	byte	%8.0g	**ranown==102**
icdx1nr8	byte	%8.0g	**icdx1nr==466 ac bronchitis/brnchial**

```
261 .
262 . *--------------Trimmed female radhlw2 regression waves 1 and 2
263 . di _skip(2)


264 . sw, pr(.1): regress radhlw2 emplw1 beerw2 trrepw1 defnw2 ecprw1 polprw1 radw
    > 1 radtlw2 dafter ///
    >  toxic lBSItotal BSIphanx MiPTSD Zhitomirskiy icdx1nr8
                          begin with full model
    p = 0.7605 >= 0.1000  removing lBSItotal
    p = 0.5253 >= 0.1000  removing beerw2
    p = 0.2442 >= 0.1000  removing dafter
    p = 0.1631 >= 0.1000  removing trrepw1
```

Source	SS	df	MS		
Model	**153177.134**	**11**	**13925.194**	Number of obs =	**258**
Residual	**123127.769**	**246**	**500.519387**	F(11, 246) =	**27.82**
				Prob > F =	**0.0000**
Total	**276304.903**	**257**	**1075.11635**	R-squared =	**0.5544**
				Adj R-squared =	**0.5345**
				Root MSE =	**22.372**

radhlw2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
emplw1	**-2.952441**	**.8564698**	**-3.45**	**0.001**	**-4.63939**	**-1.265491**
Zhitomirskiy	**-22.36431**	**6.010441**	**-3.72**	**0.000**	**-34.2028**	**-10.52582**
BSIphanx	**1.424238**	**.4947282**	**2.88**	**0.004**	**.4497948**	**2.398682**
defnw2	**.1739123**	**.0539058**	**3.23**	**0.001**	**.0677366**	**.280088**
ecprw1	**.0903684**	**.0503559**	**1.79**	**0.074**	**-.0088154**	**.1895521**
polprw1	**.1812503**	**.0520121**	**3.48**	**0.001**	**.0788046**	**.2836961**
radw1	**-.1113724**	**.0411457**	**-2.71**	**0.007**	**-.1924152**	**-.0303296**
radtlw2	**.2794414**	**.0430326**	**6.49**	**0.000**	**.1946821**	**.3642008**
MiPTSD	**.5653267**	**.1392525**	**4.06**	**0.000**	**.2910475**	**.839606**
toxic	**.1370552**	**.0418596**	**3.27**	**0.001**	**.0546064**	**.2195041**
icdx1nr8	**13.5151**	**7.212486**	**1.87**	**0.062**	**-.6910009**	**27.72121**

```
       _cons |   -24.09045   7.725484    -3.12   0.002    -39.30698   -8.873921
```

```
265 .
266 . *--------------Factor analysis of female radhlw2 explanatory vars selected b
    > y AutoMetrics
267 . di _skip(2)


268 .
269 .
270 . polychoricpca emplw1 beerw2 trrepw1 defnw2 ecprw1 polprw1 radw1 radtlw2 daft
    > er ///
    >  toxic lBSItotal BSIphanx MiPTSD Zhitomirskiy icdx1nr8

    Polychoric correlation matrix

                        emplw1        beerw2       trrepw1        defnw2
          emplw1             1
          beerw2     .00536823             1
          trrepw1     -.0459714     .07262927             1
          defnw2     -.03017636     .11155139     .25236078             1
          ecprw1      .07106673     -.0524772     .22092736     .42764079
          polprw1    -.06312253    -.04397897     .10608968     .46171796
            radw1    -.06587822    -.08966142    -.08458825    -.31568584
          radtlw2    -.00932769     .10332458      .1704423     .31991194
           dafter     .24898792    -.01397172     .11599442      .0500484
            toxic     .01629875     .01685074     .13161004     .03654197
       lBSItotal    -.07839542     .04716042     .11229156     .12758417
        BSIphanx    -.10906565     .00663866     .11436174     .11099077
          MiPTSD    -.04018481     .05951987      .1150889     .25677074
    Zhitomirskiy    -.05392818     .00866494     .00936541     .40593247
        icdx1nr8     .40693901     .01784683    -.04430329    -.03380422

                        ecprw1       polprw1         radw1       radtlw2
          ecprw1             1
          polprw1     .43041553             1
            radw1    -.32609601    -.00790456             1
          radtlw2     .24925181     .17611945    -.10363159             1
           dafter    -.06058092    -.12257213    -.11310304     .02240842
            toxic     .11785733     .04405026     .03126825     .15088674
       lBSItotal     .02789273    -.08370333     .06397724     .05643446
        BSIphanx    -.03363922    -.19374699      .0253977     .04331518
          MiPTSD     .14007647    -.04321772    -.02404628     .09510186
    Zhitomirskiy     .00627293    -.17698005     .06008136    -.01230024
        icdx1nr8    -.01549182    -.04636697     .28775977    -.13059975
```

	dafter	toxic	lBSItotal	BSIphanx
dafter	1			
toxic	-.00548779	1		
lBSItotal	.13962894	.12021994	1	
BSIphanx	.06363806	.07623447	.72164469	1
MiPTSD	.06058466	.11121417	.66559174	.49301222
Zhitomirskiy	-.04921272	-.12307188	.33317099	.22792813
icdx1nr8	-.08441423	-.06513577	-.05264543	-.06933084

	MiPTSD	Zhitomirskiy	icdx1nr8
MiPTSD	1		
Zhitomirskiy	.26073448	1	
icdx1nr8	.08813359	.45467854	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	2.718995	0.181266	0.181266
2	2.248385	0.149892	0.331159
3	1.636160	0.109077	0.440236
4	1.361810	0.090787	0.531023
5	1.171682	0.078112	0.609135
6	1.064052	0.070937	0.680072
7	0.900856	0.060057	0.740129
8	0.821045	0.054736	0.794866
9	0.799838	0.053323	0.848188
10	0.696596	0.046440	0.894628
11	0.491029	0.032735	0.927363
12	0.438530	0.029235	0.956598
13	0.301593	0.020106	0.976705
14	0.269167	0.017944	0.994649
15	0.080263	0.005351	1.000000

```
271 . matrix define mypcw2f= r(R)

272 . factormat mypcw2f, n(363) blanks(.36) factors(3)
    (obs=363)

    Factor analysis/correlation                       Number of obs    =        363
        Method: principal factors                     Retained factors =          3
        Rotation: (unrotated)                         Number of params =         42
```

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**2.32859**	**0.54362**	**0.3588**	**0.3588**
Factor2	**1.78497**	**0.52762**	**0.2750**	**0.6338**
Factor3	**1.25736**	**0.53135**	**0.1937**	**0.8275**
Factor4	**0.72601**	**0.12270**	**0.1119**	**0.9394**
Factor5	**0.60331**	**0.35009**	**0.0930**	**1.0323**
Factor6	**0.25322**	**0.05113**	**0.0390**	**1.0714**
Factor7	**0.20209**	**0.08001**	**0.0311**	**1.1025**
Factor8	**0.12209**	**0.09576**	**0.0188**	**1.1213**
Factor9	**0.02633**	**0.01240**	**0.0041**	**1.1254**
Factor10	**0.01393**	**0.04981**	**0.0021**	**1.1275**
Factor11	**-0.03589**	**0.04549**	**-0.0055**	**1.1220**
Factor12	**-0.08137**	**0.13106**	**-0.0125**	**1.1094**
Factor13	**-0.21244**	**0.03337**	**-0.0327**	**1.0767**
Factor14	**-0.24581**	**0.00628**	**-0.0379**	**1.0388**
Factor15	**-0.25209**	**.**	**-0.0388**	**1.0000**

LR test: independent vs. saturated: chi2(**105**) = **1651.34** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Uniqueness
emplw1				**0.8694**
beerw2				**0.9919**
trrepw1				**0.8887**
defnw2	**0.5622**	**0.5958**		**0.2654**
ecprw1		**0.5575**		**0.6086**
polprw1		**0.6556**		**0.5544**
radw1		**-0.3774**		**0.8303**
radtlw2				**0.8423**
dafter				**0.9845**
toxic				**0.9601**
lBSItotal	**0.7887**			**0.2158**
BSIphanx	**0.6442**			**0.4099**
MiPTSD	**0.6961**			**0.4877**
Zhitomirskiy	**0.5069**		**0.5546**	**0.3754**
icdx1nr8			**0.7576**	**0.3447**

(blanks represent abs(loading)<**.36**)

```
273 . rotate, blanks(.36)
```

Factor analysis/correlation — Number of obs = **363**
Method: principal factors — Retained factors = **3**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **42**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**2.14985**	**0.27729**	**0.3312**	**0.3312**
Factor2	**1.87257**	**0.52406**	**0.2885**	**0.6198**
Factor3	**1.34851**	**.**	**0.2078**	**0.8275**

LR test: independent vs. saturated: chi2(**105**) = **1651.34** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Uniqueness
emplw1				**0.8694**
beerw2				**0.9919**
trrepw1				**0.8887**
defnw2		**0.8281**		**0.2654**
ecprw1		**0.6233**		**0.6086**
polprw1		**0.6185**		**0.5544**
radw1				**0.8303**
radtlw2		**0.3691**		**0.8423**
dafter				**0.9845**
toxic				**0.9601**
lBSItotal	**0.8845**			**0.2158**
BSIphanx	**0.7666**			**0.4099**
MiPTSD	**0.6851**			**0.4877**
Zhitomirskiy	**0.3702**		**0.6814**	**0.3754**
icdx1nr8			**0.8032**	**0.3447**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1	Factor2	Factor3
Factor1	**0.8711**	**0.4618**	**0.1672**
Factor2	**-0.3885**	**0.8562**	**-0.3405**
Factor3	**-0.3004**	**0.2317**	**0.9252**

```
274 .
275 .
276 .
277 . di "{hline}"
```

```
278 .
279 .  title(Female factor analysis for radhlw3 model: Waves 1 2 and 3)
```

```
*******************************************************************************
> *
*******************************************************************************
> *
*****                                                                      ****
> *
*****                                                                      ****
> *
*****                              (Female                                 ****
> *
*****                               factor                                 ****
> *
*****                              analysis                                ****
> *
*****                                for                                   ****
> *
*****                              radhlw3                                 ****
> *
*****                               model:                                 ****
> *
*****                               Waves                                  ****
> *
*****                                 1                                    ****
> *
*****                                 2                                    ****
> *
*****                                and                                   ****
> *
*****                                 3)                                   ****
> *
*****                                                                      ****
> *
*****                                                                      ****
> *
*****                                          23 Apr 2012    12:42:31  ****
> *
*******************************************************************************
> *
*******************************************************************************
```

```
    > *


280 .  use chwide22apr2012femmesold, clear

281 .  subtitle "Factor analysis of variables selected from Wave 1 2 and 3 female
    > model by AutoMetrics"
-------------------------------------------------------------------------------
                                          Date and time:  23 Apr 2012    12:42:31
                                          Working directory:  /Users/robertyaffee
    > /Documents/data/research/chwk/phase3/data/ox
                                          Stata data file:  chwide22apr2012femmes
    > old.dta
                                          Stata version:  12.1
                                          Operating system:  MacOSX   10.6.8  on
    >  Macintosh (Intel 64-bit)  with  4  processors
                                          using  33554432 bytes of memory

    Factor analysis of variables selected from Wave 1 2 and 3 female model by Auto
    > Metrics
-------------------------------------------------------------------------------


282 .
283 . *---------Variable index
284 . di _skip(1)


285 .
286 . des shjobw3 smokw1 beerw2 trrepw3 defnw2 polprw3 airw1 airw3 radchw3 dafter
    > ///
    >   dauthw3 kzchorn WHPpain icdx1nr14

              storage  display     value
    variable name   type   format      label      variable label
-------------------------------------------------------------------------------
    shjobw3         byte   %8.0g                * Percentage of strains and
                                                    hassles related to job NOW
    smokw1          int    %8.0g                  number of cigarettes per week in
                                                    1976-1986
    beerw2          byte   %8.0g                  nuber of beers per week in
                                                    1987-1996
    trrepw3         byte   %8.0g                * level of trust in
                                                    medical/scientific reports
                                                    about chornobyl in time period
                                                    1997
    defnw2          byte   %8.0g                * consider hazardous (in percent)
                                                    - deficiencies in essential
                                                    nutrition in 1996
```

```
polprw3         byte    %8.0g                 consider hazardous (in percent)
                                                - political problems NOW
airw1           byte    %8.0g                 consider hazardous (in percent)
                                                - air and water pollution in
                                                1986
airw3           byte    %8.0g                 consider hazardous (in percent)
                                                - air and water pollution NOW
radchw3         byte    %8.0g                 believed % of polution related
                                                to chornobyl NOW
dafter          int     %8.0g               * how many days lapsed after
                                                Chornobyl accident before you
                                                heard about the acciden
dauthw3         byte    %8.0g                 level of danger by authorities
                                                (in percent) NOW
kzchorn         byte    %8.0g               * in k/z most cases of cancer in
                                                humans are known to be caused
                                                by radiation from
WHPpain         float   %9.0g                 Wtd Health Profile Pain Pt 1
                                                subscale
icdx1nr14       byte    %8.0g                 icdx1nr==535 gastritus &
                                                duodenitis

287 .
288 . *---------Trimmed female radhlw3 regression model for waves 1 2 and 3
289 . sw, pr(.1): regress radhlw3 shjobw3 smokw1 beerw2 trrepw3 defnw2 polprw3 air
    > w1 airw3 radchw3 dafter ///
    >   dauthw3 kzchorn WHPpain icdx1nr14
                          begin with full model
    p = 0.6531 >= 0.1000  removing shjobw3
    p = 0.1959 >= 0.1000  removing smokw1
    p = 0.1078 >= 0.1000  removing dafter

      Source |       SS       df       MS              Number of obs =     256
-------------+------------------------------           F( 11,   244) =   31.86
       Model |  169111.519    11  15373.7745           Prob > F      =  0.0000
    Residual |  117724.133   244  482.475956           R-squared     =  0.5896
-------------+------------------------------           Adj R-squared =  0.5711
       Total |  286835.652   255   1124.8457           Root MSE      =  21.965
```

radhlw3	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
icdx1nr14	-22.23669	8.506681	-2.61	0.010	-38.99258	-5.480787
WHPpain	.3041906	.0615025	4.95	0.000	.183047	.4253343
beerw2	.7100277	.405177	1.75	0.081	-.0880633	1.508119
trrepw3	-.0796113	.0427665	-1.86	0.064	-.16385	.0046275
defnw2	.3413423	.0505869	6.75	0.000	.2416995	.4409851
polprw3	-.2087325	.0713936	-2.92	0.004	-.3493589	-.0681061
airw1	.1655458	.0627393	2.64	0.009	.041966	.2891257
airw3	.1904303	.0451733	4.22	0.000	.101451	.2794096
radchw3	.1731779	.0463718	3.73	0.000	.0818378	.2645179
kzchorn	.2609056	.0563821	4.63	0.000	.149848	.3719633
dauthw3	.165432	.0417511	3.96	0.000	.0831936	.2476705
_cons	-9.912878	5.728345	-1.73	0.085	-21.19619	1.370437

```
290 . di _skip(1)


291 .
292 .
293 . *---------factor analysis of female radhlw3 explanatory variables
294 . di _skip(1)


295 . polychoricpca shjobw3 smokw1 beerw2 trrepw3 defnw2 polprw3 airw1 airw3 radch
    > w3 dafter ///
    >   dauthw3 kzchorn WHPpain icdx1nr14

    Polychoric correlation matrix

                 shjobw3      smokw1      beerw2      trrepw3      defnw2
      shjobw3          1
       smokw1 -.05369732           1
       beerw2  .05423938 -.00162106           1
      trrepw3 -.04884877 -.05705684  .05953755           1
       defnw2  .07098333 -.08836571  .10891562  .12368059           1
      polprw3  .07803389  .00393133  .00640399   .0366051  .46830002
        airw1  .08308479  .00604761 -.07724819 -.01765498  .35985254
        airw3  .11792586  -.1490295 -.09748675  .07621211  .30107623
      radchw3 -.04969593  .01132317  .04861646  .08418387  .43972972
       dafter  .01968209 -.07570174  -.0151061  .18898874  .04297816
      dauthw3  .03470812 -.01403834 -.08584863  .11842673 -.06809778
      kzchorn  .04171686 -.01291009  .07102177  .08599383  .32348985
      WHPpain -.07767883    .056724  .01478814  -.0507616  .15231801
    icdx1nr14 -.16573795  .08604017 -.05583692 -.04832767  .06871127
```

	polprw3	airw1	airw3	radchw3	dafter
polprw3	1				
airw1	.74418935	1			
airw3	.37925456	.43920689	1		
radchw3	.23718026	.14420036	.22455683	1	
dafter	-.11332987	-.11735001	-.09991308	.07034981	1
dauthw3	.05905241	.08788357	.12408414	.09703211	-.02582924
kzchorn	.09487342	.14759516	.21991739	.37096557	.1117706
WHPpain	.02242527	-.01632456	.02281425	.07871909	.02832516
icdx1nr14	.2728676	.19283538	-.10688716	-.08085474	.08379581

	dauthw3	kzchorn	WHPpain	icdx1nr14
dauthw3	1			
kzchorn	.10896014	1		
WHPpain	-.06990383	.0624623	1	
icdx1nr14	-.10229208	-.16545533	-.1805861	1

Principal component analysis

k	Eigenvalues	Proportion explained	Cum. explained
1	2.740669	0.195762	0.195762
2	1.633528	0.116681	0.312443
3	1.318380	0.094170	0.406613
4	1.239252	0.088518	0.495131
5	1.125804	0.080415	0.575545
6	1.021974	0.072998	0.648543
7	0.935016	0.066787	0.715330
8	0.888112	0.063437	0.778767
9	0.760678	0.054334	0.833101
10	0.653626	0.046688	0.879789
11	0.569438	0.040674	0.920463
12	0.484556	0.034611	0.955074
13	0.407344	0.029096	0.984170
14	0.221623	0.015830	1.000000

```
296 . matrix define pc3f=r(R)
```

```
297 . factormat pc3f, n(363) factors(5)
    (obs=363)
```

Factor analysis/correlation — Number of obs = **363**
Method: principal factors — Retained factors = **5**
Rotation: (unrotated) — Number of params = **60**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**2.21251**	**1.26808**	**0.6524**	**0.6524**
Factor2	**0.94443**	**0.41867**	**0.2785**	**0.9308**
Factor3	**0.52577**	**0.17205**	**0.1550**	**1.0858**
Factor4	**0.35372**	**0.11487**	**0.1043**	**1.1901**
Factor5	**0.23884**	**0.11065**	**0.0704**	**1.2606**
Factor6	**0.12820**	**0.06960**	**0.0378**	**1.2984**
Factor7	**0.05860**	**0.01356**	**0.0173**	**1.3156**
Factor8	**0.04504**	**0.11167**	**0.0133**	**1.3289**
Factor9	**-0.06663**	**0.04362**	**-0.0196**	**1.3093**
Factor10	**-0.11025**	**0.06506**	**-0.0325**	**1.2768**
Factor11	**-0.17531**	**0.01621**	**-0.0517**	**1.2251**
Factor12	**-0.19151**	**0.02736**	**-0.0565**	**1.1686**
Factor13	**-0.21887**	**0.13408**	**-0.0645**	**1.1041**
Factor14	**-0.35295**	**.**	**-0.1041**	**1.0000**

LR test: independent vs. saturated: chi2(**91**) = **874.81** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Factor4	Factor5
shjobw3	**0.0962**	**0.0507**	**-0.2357**	**-0.0050**	**-0.2589**
smokw1	**-0.0574**	**-0.1078**	**0.1119**	**-0.1467**	**0.2081**
beerw2	**0.0031**	**0.1371**	**0.1323**	**-0.1114**	**-0.1884**
trrepw3	**0.0914**	**0.1993**	**0.0812**	**0.2965**	**-0.0301**
defnw2	**0.6311**	**0.2284**	**0.2356**	**-0.0918**	**-0.1216**
polprw3	**0.7883**	**-0.3148**	**0.0543**	**-0.0211**	**-0.0300**
airw1	**0.7458**	**-0.3269**	**-0.1167**	**0.0082**	**0.0267**
airw3	**0.5369**	**0.0830**	**-0.2968**	**0.0508**	**-0.0045**
radchw3	**0.4300**	**0.3830**	**0.1511**	**-0.0204**	**0.1552**
dafter	**-0.0496**	**0.1945**	**0.2414**	**0.2584**	**-0.0772**
dauthw3	**0.1015**	**0.0866**	**-0.2352**	**0.2182**	**0.1865**
kzchorn	**0.3397**	**0.4274**	**0.0162**	**0.0235**	**0.0802**
WHPpain	**0.0599**	**0.1825**	**0.0591**	**-0.2891**	**0.0614**
icdx1nr14	**0.1041**	**-0.4458**	**0.3650**	**0.1464**	**0.0253**

Variable	Uniqueness
shjobw3	**0.8656**
smokw1	**0.9077**
beerw2	**0.9158**
trrepw3	**0.8565**
defnw2	**0.4709**
polprw3	**0.2752**
airw1	**0.3225**
airw3	**0.6141**
radchw3	**0.6210**
dafter	**0.8287**
dauthw3	**0.8445**
kzchorn	**0.6947**
WHPpain	**0.8723**
icdx1nr14	**0.6352**

```
298 . factormat pc3f, n(363) blanks(.36) factors(2)
    (obs=363)

    Factor analysis/correlation                      Number of obs    =      363
        Method: principal factors                    Retained factors =        2
        Rotation: (unrotated)                        Number of params =       27
```

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**2.21251**	**1.26808**	**0.6524**	**0.6524**
Factor2	**0.94443**	**0.41867**	**0.2785**	**0.9308**
Factor3	**0.52577**	**0.17205**	**0.1550**	**1.0858**
Factor4	**0.35372**	**0.11487**	**0.1043**	**1.1901**
Factor5	**0.23884**	**0.11065**	**0.0704**	**1.2606**
Factor6	**0.12820**	**0.06960**	**0.0378**	**1.2984**
Factor7	**0.05860**	**0.01356**	**0.0173**	**1.3156**
Factor8	**0.04504**	**0.11167**	**0.0133**	**1.3289**
Factor9	**-0.06663**	**0.04362**	**-0.0196**	**1.3093**
Factor10	**-0.11025**	**0.06506**	**-0.0325**	**1.2768**
Factor11	**-0.17531**	**0.01621**	**-0.0517**	**1.2251**
Factor12	**-0.19151**	**0.02736**	**-0.0565**	**1.1686**
Factor13	**-0.21887**	**0.13408**	**-0.0645**	**1.1041**
Factor14	**-0.35295**	**.**	**-0.1041**	**1.0000**

```
    LR test: independent vs. saturated:  chi2(91) =  874.81 Prob>chi2 = 0.0000

    Factor loadings (pattern matrix) and unique variances
```

Variable	Factor1	Factor2	Uniqueness
shjobw3			**0.9882**
smokw1			**0.9851**
beerw2			**0.9812**
trrepw3			**0.9519**
defnw2	**0.6311**		**0.5496**
polprw3	**0.7883**		**0.2795**
airw1	**0.7458**		**0.3369**
airw3	**0.5369**		**0.7048**
radchw3	**0.4300**	**0.3830**	**0.6684**
dafter			**0.9597**
dauthw3			**0.9822**
kzchorn		**0.4274**	**0.7020**
WHPpain			**0.9631**
icdx1nr14		**-0.4458**	**0.7905**

(blanks represent abs(loading)<**.36**)

```
299 . rotate, blanks(.36)
```

Factor analysis/correlation — Number of obs = **363**
Method: principal factors — Retained factors = **2**
Rotation: orthogonal varimax (Kaiser off) — Number of params = **27**

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.96742**	**0.77789**	**0.5801**	**0.5801**
Factor2	**1.18953**	**.**	**0.3507**	**0.9308**

LR test: independent vs. saturated: chi2(**91**) = **874.81** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
shjobw3			**0.9882**
smokw1			**0.9851**
beerw2			**0.9812**
trrepw3			**0.9519**
defnw2	**0.4664**	**0.4826**	**0.5496**
polprw3	**0.8464**		**0.2795**
airw1	**0.8136**		**0.3369**
airw3	**0.4458**		**0.7048**
radchw3		**0.5331**	**0.6684**
dafter			**0.9597**

dauthw3		**0.9822**
kzchorn	**0.5332**	**0.7020**
WHPpain		**0.9631**
icdx1nr14		**0.7905**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1	Factor2
Factor1	**0.8982**	**0.4396**
Factor2	**-0.4396**	**0.8982**

```
300 .
301 .
302 .
303 .
304 .
305 .
306 .  title(male radhlw3 model for waves 1 2 and 3)
```

```
**************************************************************************
> *
**************************************************************************
> *
*****                                                                ****
> *
*****                                                                ****
> *
*****                          (male                                 ****
> *
*****                         radhlw3                                ****
> *
*****                          model                                 ****
> *
*****                           for                                  ****
> *
*****                          waves                                 ****
> *
*****                            1                                   ****
> *
*****                            2                                   ****
> *
*****                           and                                  ****
> *
```

```
*****                                3)                                ****
> *
*****                                                                  ****
> *
*****                                                                  ****
> *
*****                                          23 Apr 2012    12:42:34  ****
> *
********************************************************************************
> *
********************************************************************************
> *


307 .  use chwide22apr2012malesold, clear
    (OxMetrics data)

308 . subtitle "Male factor analysis of explanatory vars for radhlw3 from waves 1
    > 2 and 3"
-------------------------------------------------------------------------------

                                       Date and time:  23 Apr 2012    12:42:34
                                       Working directory:  /Users/robertyaffee
    > /Documents/data/research/chwk/phase3/data/ox
                                       Stata data file:  chwide22apr2012maleso
    > ld.dta
                                       Stata version:  12.1
                                       Operating system:  MacOSX   10.6.8  on
    >  Macintosh (Intel 64-bit)  with  4  processors
                                       using  33554432 bytes of memory

    Male factor analysis of explanatory vars for radhlw3 from waves 1 2 and 3
-------------------------------------------------------------------------------

309 .
310 . *-----------Variable index
311 . di _skip(1)
```

```
312 . des occ8w2 inc1w1  movew2 shjobw1 shfamw3 ///
    >  shhousw1

              storage  display     value
variable name   type   format      label      variable label
------------------------------------------------------------------------------
occ8w2          double              choice105
                                                student in 1996
inc1w1          double              choice114
                                                Income is not sufficient for
                                                  basic neccessities in 1986
movew2          double                          Total number of moves
                                                  experienced in time period
                                                  1987-1996
shjobw1         double                          Percentage of strains and
                                                  hassles related to job in 1986
shfamw3         double                          Percentage of strains and
                                                  hassles related to family NOW
shhousw1        double                          Percentage of strains and
                                                  hassles related to housing in
                                                  1986

313 . // dropping items with missing obs  and no significance
314 .
315 . *---------- trimmed male radhlw3 model
316 . sw, pr(.1): regress radhlw3 occ8w2 inc1w1  movew2 shjobw1 shfamw3 ///
    >  shhousw1
                      begin with full model
    p < 0.1000        for all terms in model

      Source |       SS       df       MS              Number of obs =     340
-------------+------------------------------           F(  6,   333) =   23.80
       Model |  128576.008     6  21429.3347           Prob > F      =  0.0000
    Residual |  299889.297   333  900.568461           R-squared     =  0.3001
-------------+------------------------------           Adj R-squared =  0.2875
       Total |  428465.306   339  1263.90946           Root MSE      =  30.009

------------------------------------------------------------------------------
     radhlw3 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      occ8w2 |  -18.82067   4.987352    -3.77   0.000    -28.63136   -9.009982
      inc1w1 |   15.14692   4.774218     3.17   0.002     5.755488    24.53834
      movew2 |  -10.01078     3.8931    -2.57   0.011    -17.66895   -2.352607
      shjobw1 |   .2313093   .0614839     3.76   0.000     .1103635    .3522551
      shfamw3 |   .1460204    .057197     2.55   0.011     .0335075    .2585334
     shhousw1 |   .1284682   .0571513     2.25   0.025     .0160451    .2408913
        _cons |   26.43373   3.349248     7.89   0.000     19.84538    33.02208
------------------------------------------------------------------------------
```

```
317 . di _skip(1)


318 .
319 .
320 . *---------- factor analysis of male radhlw3 explanatory variables
321 . di _skip(1)


322 . polychoricpca occ8w2 inc1w1  movew2 shjobw1 shfamw3 ///
>  shhousw1

    Polychoric correlation matrix

                 occ8w2      inc1w1      movew2     shjobw1     shfamw3
      occ8w2          1
      inc1w1   .22940521           1
      movew2  -.07784141   .21166529           1
     shjobw1  -.45323973   .11507447   .17499527           1
     shfamw3   -.2973838   .12484394     .104462   .61544894           1
    shhousw1  -.44609634  -.04473445   .04266167   .55140634   .46639514

                shhousw1
    shhousw1          1

    Principal component analysis

     k  |   Eigenvalues  |  Proportion explained  |  Cum. explained
    ----+----------------+------------------------+-----------------
      1 |      2.456676  |       0.409446         |      0.409446
      2 |      1.302228  |       0.217038         |      0.626484
      3 |      0.877505  |       0.146251         |      0.772735
      4 |      0.536881  |       0.089480         |      0.862215
      5 |      0.486646  |       0.081108         |      0.943323
      6 |      0.340064  |       0.056677         |      1.000000

323 . matrix define pcrmatw123m = r(R)
```

```
324 . factormat pcrmatw123m, n(340) factors(1) blanks(.36)
    (obs=340)

    Factor analysis/correlation                       Number of obs    =      340
        Method: principal factors                     Retained factors =        1
        Rotation: (unrotated)                         Number of params =        6
```

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	**1.87594**	**1.38530**	**0.9988**	**0.9988**
Factor2	**0.49063**	**0.43630**	**0.2612**	**1.2601**
Factor3	**0.05434**	**0.17497**	**0.0289**	**1.2890**
Factor4	**-0.12063**	**0.05619**	**-0.0642**	**1.2248**
Factor5	**-0.17682**	**0.06851**	**-0.0941**	**1.1306**
Factor6	**-0.24533**	**.**	**-0.1306**	**1.0000**

LR test: independent vs. saturated: chi2(**15**) = **468.19** Prob>chi2 = **0.0000**

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
occ8w2	**-0.5600**	**0.6864**
inc1w1		**0.9991**
movew2		**0.9745**
shjobw1	**0.7929**	**0.3714**
shfamw3	**0.6736**	**0.5463**
shhousw1	**0.6736**	**0.5463**

(blanks represent abs(loading)<**.36**)

```
325 . rotate, blanks(.36)

    Factor analysis/correlation                       Number of obs    =      340
        Method: principal factors                     Retained factors =        1
        Rotation: orthogonal varimax (Kaiser off)     Number of params =        6
```

Factor	Variance	Difference	Proportion	Cumulative
Factor1	**1.87594**	**.**	**0.9988**	**0.9988**

LR test: independent vs. saturated: chi2(**15**) = **468.19** Prob>chi2 = **0.0000**

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
occ8w2	**-0.5600**	**0.6864**
inc1w1		**0.9991**
movew2		**0.9745**
shjobw1	**0.7929**	**0.3714**
shfamw3	**0.6736**	**0.5463**
shhousw1	**0.6736**	**0.5463**

(blanks represent abs(loading)<**.36**)

Factor rotation matrix

	Factor1
Factor1	**1.0000**

```
326 .
327 .
```