

```
*****  
> *  
*****  
> *  
*****  
> *  
*****  
(Male  
> *  
***** path  
> *  
***** models  
> *  
***** using  
> *  
***** only  
> *  
***** radhlw3  
> *  
***** respectively)  
> *  
*****  
  
9 Apr 2012    13:42:15 *****  
> *  
*****  
> *
```

```

2 .
3 . subtitle "Wave 1 with radhlw3 as dv "

```

```

                                Date and time:   9 Apr 2012   13:42:15
                                Working directory: /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                Stata data file:  chwide6apr2012old.dta
                                Stata version:   12.1
                                Operating system: MacOSX   10.6.8   on
> Macintosh (Intel 64-bit) with 4 processors
                                using 33554432 bytes of memory

```

Wave 1 with radhlw3 as dv

```

4 . des shfincw1 shhousw1 ecprw1 polprw1 BSIhos HP2inthob CSprbslv dafter cloud
> healthef carcin kzchorn ///
>   trrepw1 icdx1nr2 icdx1nr13 icdx3nr2 icdx3nr3 icdx3nr8 icdx4nr10 icdx4nr12
>   icdx5nr11

```

variable name	storage type	display format	value label	variable label
shfincw1	byte	%8.0g		Percentage of strains and hassles related to finances in 1986
shhousw1	byte	%8.0g		Percentage of strains and hassles related to housing in 1986
ecprw1	byte	%8.0g		consider hazardous (in percent) - economic problems in 1986
polprw1	byte	%8.0g		consider hazardous (in percent) - political problems in 1986
BSIhos	byte	%9.0g		Basic symptom invenstory hostility subscale
HP2inthob	byte	%9.0g	hp2fmt	Hlth profile Pt2: Hlth probs interfering with interests & hobbies
CSprbslv	byte	%9.0g		Coping Problem Solving Subscale
dafter	int	%8.0g		* how many days lapsed after Chornobyl accident before you heard about the acciden
cloud	byte	%8.0g		* radioactive fallout is only harmful when visible (% of agreement)
healthef	byte	%8.0g		* a person exposed to any radiation likely to suffer from (% of agreement)
carcin	byte	%8.0g		* a person exposed to carcinogen

			is likely to get cancer (% of agreement)
kzchorn	byte	%8.0g	* in k/z most cases of cancer in humans are known to be caused by radiation from
trrepw1	byte	%8.0g	* level of trust in medical/scientific reports about chornobyl in time period 197
icdx1nr2	byte	%8.0g	icdx1nr==goiter nec
icdx1nr13	byte	%8.0g	icdx1nr==532 duodenal ulcer
icdx3nr2	byte	%8.0g	icdx3nr==thyrotoxicosis
icdx3nr3	byte	%8.0g	icdx3nr==diabetes militus
icdx3nr8	byte	%8.0g	icdx3nr==ac bronchitis/brnchial
icdx4nr10	byte	%8.0g	icdx4nr==varicose veins in legs
icdx4nr12	byte	%8.0g	icdx4nr==gastritis/duodenitis
icdx5nr11	byte	%8.0g	icdx5nr==gastritis/duodenitis

```

5 . hireg radhlw3 age (shfincw1 shhousw1) (BSIhos CSprbslv HP2inthob) (ecprw1 po
> lprw1 trrepw1) ///
> (dafter cloud healthef carcin kzchorn) ///
> (icdx3nr3 icdx4nr10 icdx5nr11), r(beta robust)

```

Model 1:

Variables in Model:

Adding : shfincw1 shhousw1

Linear regression

Number of obs = 701
F(3, 697) = 38.37
Prob > F = 0.0000
R-squared = 0.1352
Root MSE = 33.337

radhlw3	Coef.	Robust Std. Err.	t	P> t	Beta
age	.8364492	.1068367	7.83	0.000	.281129
shfincw1	.0124801	.0409739	0.30	0.761	.0124853
shhousw1	.1944002	.0400493	4.85	0.000	.1927249
_cons	6.800547	5.548161	1.23	0.221	.

Model 2:

Variables in Model: shfincw1 shhousw1

Adding : BSIhos CSprbslv HP2inthob

Linear regression

Number of obs = 697
 F(6, 690) = 48.87
 Prob > F = 0.0000
 R-squared = 0.2377
 Root MSE = 31.345

radhlw3	Coef.	Robust Std. Err.	t	P> t	Beta
age	.583747	.1041475	5.61	0.000	.1966183
shfincw1	-.0271253	.0400334	-0.68	0.498	-.0271916
shhousw1	.145597	.0389332	3.74	0.000	.1443866
BSIhos	2.59545	.3858878	6.73	0.000	.23079
CSprbslv	-.2232716	.2548204	-0.88	0.381	-.030895
HP2inthob	21.50182	3.119105	6.89	0.000	.2144796
_cons	4.801997	8.066703	0.60	0.552	.

R-Square Diff. Model 2 - Model 1 = 0.103 F(3,690) = 30.637 p = 0.000

Model 3:

Variables in Model: shfincw1 shhousw1 BSIhos CSprbslv HP2inthob
 Adding : ecprw1 polprw1 trrepw1

Linear regression

Number of obs = 575
 F(9, 565) = 57.49
 Prob > F = 0.0000
 R-squared = 0.3788
 Root MSE = 27.589

radhlw3	Coef.	Robust Std. Err.	t	P> t	Beta
age	.2852404	.1108561	2.57	0.010	.0959981
shfincw1	-.0890937	.0383967	-2.32	0.021	-.0933129
shhousw1	.1348833	.0398239	3.39	0.001	.1403022
BSIhos	2.584293	.4316689	5.99	0.000	.2443722
CSprbslv	-.132661	.2557658	-0.52	0.604	-.0178771
HP2inthob	18.43029	3.170248	5.81	0.000	.1818763
ecprw1	.2145588	.0407373	5.27	0.000	.2084873
polprw1	.2384528	.0411003	5.80	0.000	.2445426
trrepw1	-.0008969	.0376585	-0.02	0.981	-.0009344
_cons	-4.859777	7.843381	-0.62	0.536	.

R-Square Diff. Model 3 - Model 2 = 0.141 F(3,565) = 22.285 p = 0.000

Model 4:

Variables in Model: shfincw1 shhousw1 BSIhos CSprbslv HP2inthob ecprw1 po
 > lprw1 trrepw1
 Adding : dafter cloud healthef carcin kzchorn

Linear regression

Number of obs = 568
 F(14, 553) = 83.80
 Prob > F = 0.0000
 R-squared = 0.5096
 Root MSE = 24.632

radhlw3	Coef.	Robust Std. Err.	t	P> t	Beta
age	.2292786	.1020822	2.25	0.025	.077133
shfincw1	-.1126791	.0344367	-3.27	0.001	-.1180009
shhousw1	.1262869	.0362319	3.49	0.001	.1317186
BSIhos	1.741937	.3902573	4.46	0.000	.1653857
CSprbslv	-.3425716	.2276616	-1.50	0.133	-.0460412
HP2inthob	12.77121	2.915023	4.38	0.000	.1266605
ecprw1	.162528	.0389357	4.17	0.000	.1582705
polprw1	.193292	.037242	5.19	0.000	.1974316
trrepw1	-.0294231	.0337792	-0.87	0.384	-.0305884
dafter	.069862	.0070182	9.95	0.000	.0718099
cloud	.0731828	.032544	2.25	0.025	.075137
healthef	.3048027	.2995575	1.02	0.309	.2614923
carcin	-.1652495	.2949743	-0.56	0.576	-.1426421
kzchorn	.356114	.0564332	6.31	0.000	.2777698
_cons	-20.09819	7.066714	-2.84	0.005	.

R-Square Diff. Model 4 - Model 3 = 0.131 F(5,553) = 28.461 p = 0.000

Model 5:

Variables in Model: shfincw1 shhousw1 BSIhos CSprbslv HP2inthob ecprw1 po
 > lprw1 trrepw1 dafter cloud healthef carcin kzchorn
 Adding : icdx3nr3 icdx4nr10 icdx5nr11

Linear regression

Number of obs = 568
 F(17, 550) = 68.79
 Prob > F = 0.0000
 R-squared = 0.5167
 Root MSE = 24.518

radhlw3	Coef.	Robust Std. Err.	t	P> t	Beta
age	.2535766	.1029864	2.46	0.014	.0853072
shfincw1	-.112432	.0347208	-3.24	0.001	-.117742
shhousw1	.126954	.0361501	3.51	0.000	.1324143
BSIhos	1.782527	.3935842	4.53	0.000	.1692394
CSprbslv	-.3601414	.2268989	-1.59	0.113	-.0484026
HP2inthob	12.10212	2.958596	4.09	0.000	.1200247
ecprw1	.1687812	.0389804	4.33	0.000	.1643598
polprw1	.1924513	.0371499	5.18	0.000	.1965729
trrepw1	-.0294099	.033556	-0.88	0.381	-.0305747
dafter	.0704298	.0071123	9.90	0.000	.0723936
cloud	.0794883	.0324222	2.45	0.015	.0816109
healthef	.3141411	.299027	1.05	0.294	.2695038
carcin	-.1750594	.2944026	-0.59	0.552	-.15111
kzchorn	.3544512	.056377	6.29	0.000	.2764728
icdx3nr3	11.71278	14.98751	0.78	0.435	.0282223
icdx4nr10	-27.7217	5.382291	-5.15	0.000	-.0667964
icdx5nr11	-26.79207	10.06289	-2.66	0.008	-.0457292
_cons	-21.0472	7.060028	-2.98	0.003	.

R-Square Diff. Model 5 - Model 4 = 0.007 F(3,550) = 2.721 p = 0.044

Model	R2	F(df)	p	R2 change	F(df) change	p
1:	0.135	38.365(3,697)	0.000			
2:	0.238	48.870(6,690)	0.000	0.103	30.637(3,690)	0.00
> 0						
3:	0.379	57.487(9,565)	0.000	0.141	22.285(3,565)	0.00
> 0						
4:	0.510	83.804(14,553)	0.000	0.131	28.461(5,553)	0.00
> 0						
5:	0.517	68.791(17,550)	0.000	0.007	2.721(3,550)	0.04
> 4						

6 .

```
7 . regress radhlw3 age shfincw1 shhousw1 ecprw1 polprw1 BSIhos HP2inthob CSprbs
> lv dafter cloud healthef carcin kzchorn ///
> trrepw1 icdx1nr2 icdx1nr13 icdx3nr2 icdx3nr3 icdx3nr8 icdx4nr10 icdx4nr12
> icdx5nr11, beta
```

Source	SS	df	MS	Number of obs =	544
Model	339430.952	22	15428.6796	F(22, 521) =	25.38
Residual	316752.313	521	607.96989	Prob > F =	0.0000
				R-squared =	0.5173
				Adj R-squared =	0.4969
Total	656183.265	543	1208.44063	Root MSE =	24.657

radhlw3	Coef.	Std. Err.	t	P> t	Beta
age	.2615395	.1015156	2.58	0.010	.0878627
shfincw1	-.116853	.0333043	-3.51	0.000	-.1232342
shhousw1	.1281516	.0342753	3.74	0.000	.1340153
ecprw1	.1686124	.037662	4.48	0.000	.1648733
polprw1	.1900894	.0347849	5.46	0.000	.1923706
BSIhos	1.873398	.3611831	5.19	0.000	.1790409
HP2inthob	11.40822	3.302998	3.45	0.001	.1151187
CSprbslv	-.3520205	.2394103	-1.47	0.142	-.0473718
dafter	.0715331	.0296062	2.42	0.016	.0750679
cloud	.0910305	.0331954	2.74	0.006	.0939491
healthef	.3292044	.280036	1.18	0.240	.2812171
carcin	-.192368	.2779451	-0.69	0.489	-.1654005
kzchorn	.3581543	.0518906	6.90	0.000	.27703
trrepw1	-.0286996	.0324517	-0.88	0.377	-.0300394
icdx1nr2	12.65681	10.45149	1.21	0.226	.0380609
icdx1nr13	-1.178204	9.372871	-0.13	0.900	-.0040835
icdx3nr2	-10.53523	9.467502	-1.11	0.266	-.0341875
icdx3nr3	11.58919	12.71557	0.91	0.362	.0285081
icdx3nr8	2.110961	9.671748	0.22	0.827	.0068502
icdx4nr10	-29.26849	12.89305	-2.27	0.024	-.0719971
icdx4nr12	-2.484778	12.91723	-0.19	0.848	-.0061123
icdx5nr11	-27.14816	17.57207	-1.54	0.123	-.0473089
_cons	-22.285	7.296347	-3.05	0.002	.

```

8 .
9 . predict mrstdlp3, rstandard
   (159 missing values generated)

10 . extremes mrstdlp3    // no outliers beyond 3.5

```

obs:	mrstdlp3
396.	-3.695925
199.	-3.040071
365.	-2.723591
462.	-2.342267
4.	-2.30277

474.	2.405734
66.	2.438743
503.	2.515896
653.	2.984545
642.	3.31641

```

11 . swilk mrstdlp3    // normal residuals

```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
mrstdlp3	544	0.99695	1.106	0.243	0.40392

```

12 . estat hettest    // homoscedasticity

```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of radhlw3

chi2(1) = 2.05

Prob > chi2 = 0.1517


```
13 . estat ovtest          // we should consider squares or cubes
```

Ramsey RESET test using powers of the fitted values of radhlw3

Ho: model has no omitted variables

F(3, 518) = **2.59**

Prob > F = **0.0519**

```
14 . eststo mradhlw3wlp3
```

```
15 . estat imtest, preserve white
```

White's test for Ho: homoskedasticity

against Ha: unrestricted heteroskedasticity

chi2(151) = **164.17**

Prob > chi2 = **0.2192**

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity	164.17	151	0.2192
Skewness	43.96	22	0.0036
Kurtosis	0.69	1	0.4076
Total	208.81	174	0.0368

```
16 .
```

```
17 . /*
```

```
> EQ(27) Modelling radhlw3 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 52 observation(s) with missing values from the sample
```

```
>
```

```
> Coefficient Std.Error HACSE t-HACSE t-prob Part.R^
```

```
> 2
```

```
> shfincw1 -0.219588 0.04052 0.04184 -5.25 0.0000 0.094
```

```
> 2
```

```
> shhousw1 0.186997 0.04469 0.04838 3.87 0.0001 0.053
```

```
> 4
```

```
> trrepw1 -0.0651037 0.04136 0.04400 -1.48 0.1402 0.008
```

```
> 2
```

```
> ecprw1 0.220344 0.04547 0.04484 4.91 0.0000 0.083
```

```
> 5
```

```
> polprw1 0.227944 0.04335 0.04322 5.27 0.0000 0.095
```

```
> 0
```

```

> dafter          0.0856269    0.02664    0.007446    11.5    0.0000    0.332
> 9
> healthef        0.755676    0.3919    0.1252    6.04    0.0000    0.120
> 9
> carcin          -0.619302    0.3840    0.09353    -6.62    0.0000    0.141
> 9
> kzchorn         0.351927    0.06696    0.07712    4.56    0.0000    0.072
> 9
> CSprbslv        -1.00554    0.1736    0.1364    -7.37    0.0000    0.170
> 1
> HP2inthob       16.7570    4.352    3.792    4.42    0.0000    0.068
> 6
> BSIhos          2.69055    0.4523    0.5434    4.95    0.0000    0.084
> 7
> icdx1nr2        24.4931    21.95    3.754    6.52    0.0000    0.138
> 4
> icdx1nr13       -27.2486    17.01    4.498    -6.06    0.0000    0.121
> 6
> icdx3nr2        -50.5234    22.17    4.784    -10.6    0.0000    0.296
> 2
> icdx3nr3        49.0661    13.85    5.285    9.28    0.0000    0.245
> 4
> icdx3nr8        -17.6817    21.89    3.742    -4.73    0.0000    0.077
> 7
> icdx4nr10       -19.3155    15.61    3.767    -5.13    0.0000    0.090
> 2
> icdx4nr12       -30.3630    22.64    6.075    -5.00    0.0000    0.086
> 1
> icdx5nr11       -22.8510    22.03    4.679    -4.88    0.0000    0.082
> 6
>
> sigma           21.6673    RSS           124410.32
> log-likelihood   -1270.63
> no. of observations      285    no. of parameters      20
> mean(radhlw3)          47.8982    se(radhlw3)          35.2272
> When the log-likelihood constant is NOT included:
> AIC                    6.21920    SC                    6.47552
> HQ                     6.32195    FPE                   502.418
> When the log-likelihood constant is included:
> AIC                    9.05708    SC                    9.31339
> HQ                     9.15983    FPE                   8581.04
>
> Normality test:    Chi^2(2) =    6.8962 [0.0318]*
> Hetero test:      F(26,253) =    1.0085 [0.4569]
> RESET23 test:    F(2,263) =    4.5911 [0.0110]*
> */

```

```

18 .
19 .
20 .
21 .
22 .
23 .
24 . subtitle "Wave 2 with radhlw3 as dv "

```

```

                                Date and time:  9 Apr 2012   13:42:16
                                Working directory: /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                Stata data file:  chwide6apr2012old.dta
                                Stata version:   12.1
                                Operating system: MacOSX   10.6.8   on
> Macintosh (Intel 64-bit) with 4 processors
                                using 33554432 bytes of memory

```

Wave 2 with radhlw3 as dv

```

25 . // did not include radfmw1 2 or 3 because of possible feedback
26 . /*
>
> EQ(23) Modelling radhlw3 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 53 observation(s) with missing values from the sample
>
>
>               Coefficient   Std.Error       HACSE   t-HACSE   t-prob   Part.R^
> 2
> emplw12          -29.7058        4.819        4.430    -6.71    0.0000    0.146
> 0
> emplw13          -32.4829        4.868        3.818    -8.51    0.0000    0.215
> 8
> emplw16          -18.8073        5.324        5.654    -3.33    0.0010    0.040
> 4
> emplw24          -85.7835       22.60        6.861   -12.5    0.0000    0.372
> 8
> shjobw1           0.199398     0.04830     0.04973     4.01    0.0001    0.057
> 6
> shfincw1         -0.160787     0.04254     0.03593    -4.47    0.0000    0.070
> 8
> shhousw2          0.109874     0.03921     0.04207     2.61    0.0095    0.025
> 3
> trgovw1           0.00693324    0.03983     0.05018     0.138    0.8902    0.000
> 1
> polprw2           0.178275     0.04071     0.04387     4.06    0.0001    0.059
> 1

```

```

> radtlw1          0.102379    0.03588    0.03946    2.59  0.0100    0.025
> 0
> dafter          0.0517400    0.02534    0.006773    7.64  0.0000    0.181
> 6
> cloud           0.146632    0.04011    0.03865    3.79  0.0002    0.051
> 9
> kzchorn         0.385291    0.05858    0.07437    5.18  0.0000    0.092
> 6
> HP2pbfhm        12.9488      5.235      3.623      3.57  0.0004    0.046
> 3
> BSIsoma         1.72026     0.2901     0.3195     5.38  0.0000    0.099
> 3
> icdx1nr2        33.5974     21.58      4.206      7.99  0.0000    0.195
> 2
> icdx2nr2        22.6047     21.19      4.273      5.29  0.0000    0.096
> 2
> icdx3nr2       -38.7794     21.08      3.043     -12.7  0.0000    0.381
> 7
> icdx3nr3        16.9664     12.43      3.357      5.05  0.0000    0.088
> 5
> icdx5nr7        44.5465     14.92      6.796      6.55  0.0000    0.140
> 4
> icdx5nr11      -40.3983     21.49      4.760      -8.49  0.0000    0.215
> 0
>
> sigma           20.8907  RSS           114778.581
> log-likelihood   -1255.23
> no. of observations    284  no. of parameters        21
> mean(radhlw3)         47.9965  se(radhlw3)         35.2503
> When the log-likelihood constant is NOT included:
> AIC                   6.14967  SC                   6.41949
> HQ                    6.25785  FPE                  468.691
> When the log-likelihood constant is included:
> AIC                   8.98755  SC                   9.25737
> HQ                    9.09573  FPE                  8004.99
>
> Normality test:  Chi^2(2) = 6.1180 [0.0469]*
> Hetero test:    F(26,252) = 1.8078 [0.0115]*
> RESET23 test:   F(2,261) = 2.5464 [0.0803]
>
> */

```

```

27 .
28 . des emplw12-emplw16 emplw24 shjobw1 trgovw1 shfincw1 shhousw2 polprw2 dafte
    > r cloud ///
    >   HP2pbfhm BSIsoma kzchorn radtlw1 icdx1nr2 icdx2nr2 icdx3nr2 icdx3nr3 icdx
    > 5nr7 icdx5nr11

```

variable name	storage type	display format	value label	variable label
emplw12	byte	%8.0g		emplw1==1. full time
emplw13	byte	%8.0g		emplw1==2. part time
emplw14	byte	%8.0g		emplw1==3. voluntary
emplw15	byte	%8.0g		emplw1==4. retired
emplw16	byte	%8.0g		emplw1==5. unemployed
emplw24	byte	%8.0g		emplw2==3. voluntary
shjobw1	byte	%8.0g		Percentage of strains and hassles related to job in 1986
trgovw1	byte	%8.0g		level of trust in government reports about chornobyl in time period 1976-1986
shfincw1	byte	%8.0g		Percentage of strains and hassles related to finances in 1986
shhousw2	byte	%8.0g		Percentage of strains and hassles related to housing in 1996
polprw2	byte	%8.0g		consider hazardous (in percent) - political problems in 1996
dafter	int	%8.0g		* how many days lapsed after Chornobyl accident before you heard about the acciden
cloud	byte	%8.0g		* radioactive fallout is only harmful when visible (% of agreement)
HP2pbfhm	byte	%9.0g	hp2fmt	Hlth profile Pt2: Hlth causing probs with family members at home
BSIsoma	byte	%9.0g		Basic symptom inventory obsessive compulsive subscale
kzchorn	byte	%8.0g		* in k/z most cases of cancer in humans are known to be caused by radiation from
radtlw1	byte	%8.0g		believed % of cumulative radiation exposed to in a lifetime in 1986
icdx1nr2	byte	%8.0g		icdx1nr==goiter nec
icdx2nr2	byte	%8.0g		icdx2nr==242 thyrotoxicosis
icdx3nr2	byte	%8.0g		icdx3nr==thyrotoxicosis
icdx3nr3	byte	%8.0g		icdx3nr==diabetes militus

```
icdx5nr7      byte    %8.0g      icdx5nr==angina pectoris
icdx5nr11     byte    %8.0g      icdx5nr==gastritis/duodenitis
```

```
29 .
30 .
31 .
32 .
33 . regress radhlw3 age emplw12-emplw16 emplw24 shjobw1 trgovw1 shfincw1 shhous
> w2 polprw2 dafter cloud ///
> HP2pbfhm BSIso ma kzchorn radtlw1 icdx1nr2 icdx2nr2 icdx3nr2 icdx3nr3 icdx
> 5nr7 icdx5nr11, beta
note: emplw14 omitted because of collinearity
note: emplw24 omitted because of collinearity
```

Source	SS	df	MS	Number of obs =	545
Model	359900.101	22	16359.0955	F(22, 522) =	28.88
Residual	295735.099	522	566.542335	Prob > F =	0.0000
				R-squared =	0.5489
				Adj R-squared =	0.5299
Total	655635.2	544	1205.21176	Root MSE =	23.802

radhlw3	Coef.	Std. Err.	t	P> t	Beta
age	-.0164474	.124926	-0.13	0.895	-.0055557
emplw12	40.31234	17.09979	2.36	0.019	.548894
emplw13	33.00796	17.42579	1.89	0.059	.3000385
emplw14	0	(omitted)			0
emplw15	37.09327	22.12607	1.68	0.094	.0791272
emplw16	41.95824	17.32162	2.42	0.016	.4967098
emplw24	0	(omitted)			0
shjobw1	.1346157	.0379114	3.55	0.000	.1348311
trgovw1	.0059052	.0310364	0.19	0.849	.0063269
shfincw1	-.0961808	.0339388	-2.83	0.005	-.1014061
shhousw2	.0701799	.0303918	2.31	0.021	.0846738
polprw2	.241816	.031028	7.79	0.000	.2587474
dafter	.0581785	.0283569	2.05	0.041	.0610792
cloud	.09896	.0318867	3.10	0.002	.1022271
HP2pbfhm	6.152398	3.661677	1.68	0.094	.0542828
BSIso ma	1.309056	.2347959	5.58	0.000	.2157269
kzchorn	.3900795	.0437304	8.92	0.000	.3020442
radtlw1	.1218912	.0299412	4.07	0.000	.1296527
icdx1nr2	8.467972	9.231716	0.92	0.359	.027491
icdx2nr2	-9.895316	7.374665	-1.34	0.180	-.0401206
icdx3nr2	-7.479042	9.160339	-0.82	0.415	-.0242805
icdx3nr3	8.944112	12.12751	0.74	0.461	.0220108
icdx5nr7	44.89852	16.96237	2.65	0.008	.078274
icdx5nr11	-31.50021	17.03854	-1.85	0.065	-.054916
_cons	-61.01472	18.30045	-3.33	0.001	.

```

34 .
35 . predict mrstd2p3, rstandard
    (158 missing values generated)

36 . extremes mrstd2p3    // no outliers beyond 3.5

```

obs:	mrstd2p3
679.	-2.881844
396.	-2.694246
615.	-2.672986
532.	-2.381693
666.	-2.28533

420.	2.486798
306.	2.505583
143.	2.542651
642.	2.779658
401.	2.833189

```

37 . swilk mrstd2p3    // normal residuals

```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
mrstd2p3	545	0.99747	0.922	-0.197	0.57810

```

38 . estat hettest    // homoscedasticity

```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of radhlw3

chi2(1) = 0.25

Prob > chi2 = 0.6150

```
39 . estat ovtest          // we should consider squares or cubes
```

Ramsey RESET test using powers of the fitted values of radhlw3

Ho: model has no omitted variables

F(3, 519) = **3.11**

Prob > F = **0.0260**

```
40 . eststo mradhlw3w2p3
```

```
41 . estat imtest, preserve white
```

White's test for Ho: homoskedasticity

against Ha: unrestricted heteroskedasticity

chi2(153) = **217.97**

Prob > chi2 = **0.0004**

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity	217.97	153	0.0004
Skewness	45.42	22	0.0023
Kurtosis	0.41	1	0.5217
Total	263.80	176	0.0000

```
42 .
```

```
43 . subtitle "Radhlw3 as dv wave 3 Autometrics pass 3"
```

```
                                Date and time:  9 Apr 2012   13:42:16
                                Working directory: /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                Stata data file:  chwide6apr2012old.dta
                                Stata version:  12.1
                                Operating system: MacOSX   10.6.8  on
> Macintosh (Intel 64-bit) with 4 processors
                                using 33554432 bytes of memory
```

Radhlw3 as dv wave 3 Autometrics pass 3

```

44 . // round 3 of full male model radhlw3
45 .
46 . des radhlw3 shjobw1 phlthw1 liqw1 trgovw1 airw1 radw1 radtlw1 dafter saferad
    > ///
    > BSIposymp BSIglobsi icdxlnr9

```

variable name	storage type	display format	value label	variable label
radhlw3	byte	%8.0g		Observed
shjobw1	byte	%8.0g		Percentage of strains and hassles related to job in 1986
phlthw1	byte	%8.0g		level of general physical health in 1986
liqw1	byte	%8.0g		number of spirits per week in 1976-1986
trgovw1	byte	%8.0g		level of trust in government reports about chornobyl in time period 1976-1986
airw1	byte	%8.0g		consider hazardous (in percent) - air and water pollution in 1986
radw1	byte	%8.0g		believed % of the radioactively contaminated area in 1986
radtlw1	byte	%8.0g		believed % of cumulative radiation exposed to in a lifetime in 1986
dafter	int	%8.0g		* how many days lapsed after Chornobyl accident before you heard about the acciden
saferad	byte	%8.0g		there is no safe level of radiation (% of agreement)
BSIposymp	int	%9.0g		Brief Symptom inventory positive symptom total subscale
BSIglobsi	float	%9.0g		Brief Symptom Inventory Global Severity (mean) Index
icdxlnr9	byte	%8.0g		icdxlnr==454 chronic t & a dis

```

47 .
48 . /*
    > // autometrics output
    > // dv = radhlw3
    >
          Coefficient   Std.Error   t-value   t-prob   Part.R^2
    > shjobw1           0.210183     0.05773     3.64    0.0003    0.0480
    > phlthw1          -0.253855     0.05504    -4.61    0.0000    0.0748
    > liqw1             0.528939     0.5563      0.951    0.3426    0.0034
    > trgovw1          -0.0943490     0.04586    -2.06    0.0406    0.0158
    > airw1             0.331504     0.04707     7.04    0.0000    0.1587
    > radw1            -0.102499     0.04762    -2.15    0.0323    0.0173
    > radtlw1           0.305617     0.04397     6.95    0.0000    0.1552
    > dafter           -0.0520044     0.03028    -1.72    0.0870    0.0111
    > saferad           0.146226     0.04321     3.38    0.0008    0.0417
    > BSiposymp         6.38279       1.265       5.05    0.0000    0.0883
    > BSIglobsi        -304.221       63.40      -4.80    0.0000    0.0805
    > icdxlnr9          27.3179       13.05       2.09    0.0372    0.0164      //
    > chronic t & a dis
    >
    > sigma             25.2164   RSS              167233.333
    > log-likelihood    -1271.63
    > no. of observations      275   no. of parameters      12
    > mean(radhlw1)          47.8545   se(radhlw1)          37.6371
    > When the log-likelihood constant is NOT included:
    > AIC                   6.49765   SC                   6.65547
    > HQ                    6.56099   FPE                  663.615
    > When the log-likelihood constant is included:
    > AIC                   9.33552   SC                   9.49335
    > HQ                    9.39886   FPE                  11334.2
    >
    > Normality test:   Chi^2(2)   =   3.0300 [0.2198]
    > Hetero test:     F(23,251)   =   1.8906 [0.0097]**
    > Hetero-X test:   F(78,196)   =   2.1206 [0.0000]**
    > RESET23 test:    F(2,261)    =   4.0220 [0.0190]*
    > */
49 .
50 . regress radhlw3 age shjobw1 phlthw1 liqw1 trgovw1 airw1 radw1 radtlw1 dafter
    > saferad ///
    > BSiposymp BSIglobsi icdxlnr9, beta

```

Source	SS	df	MS
Model	278467.463	13	21420.574
Residual	369292.575	521	708.814923
Total	647760.037	534	1213.03378

```

Number of obs =      535
F( 13,  521) =      30.22
Prob > F       =      0.0000
R-squared      =      0.4299
Adj R-squared  =      0.4157
Root MSE      =      26.624

```

radhlw3	Coef.	Std. Err.	t	P> t	Beta
age	.2331328	.1128584	2.07	0.039	.0784318
shjobw1	.1457929	.0405425	3.60	0.000	.1458363
phlthw1	.0526506	.0750374	0.70	0.483	.0241258
liqw1	.6461775	.541519	1.19	0.233	.042347
trgovw1	-.0108591	.0331469	-0.33	0.743	-.0116119
airw1	.1996866	.0355537	5.62	0.000	.2052162
radw1	-.1406225	.0319667	-4.40	0.000	-.1554106
radtlw1	.2257843	.033265	6.79	0.000	.2396367
dafter	.053563	.0315795	1.70	0.090	.0565735
saferad	.169335	.0307362	5.51	0.000	.2044227
BSIposymp	1.508993	.8126671	1.86	0.064	1.17361
BSIglobsi	-56.44501	40.53598	-1.39	0.164	-.8736023
icdxlnr9	14.62748	9.733945	1.50	0.134	.0510195
_cons	-30.82091	9.85862	-3.13	0.002	.

```
51 . predict mrstd3p3, rstandard
    (168 missing values generated)
```

```
52 . extremes mrstd3p3    // no outliers beyond 3.5
```

obs:	mrstd3p3
562.	-3.150446
88.	-2.636085
557.	-2.47966
199.	-2.475838
396.	-2.462685

208.	2.452952
86.	2.500124
267.	2.519261
143.	2.699016
420.	2.959671

```
53 . swilk mrstd3p3    // normal residuals
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
mrstd3p3	535	0.99478	1.866	1.504	0.06625

```
54 . estat hettest    // heteroskedasticity
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of radhlw3

chi2(1) = **0.00**

Prob > chi2 = **0.9614**

```
55 . estat ovtest    // we should consider squares or cubes
```

Ramsey RESET test using powers of the fitted values of radhlw3

Ho: model has no omitted variables

F(3, 518) = **1.24**

Prob > F = **0.2932**

```
56 . eststo mradhlw3w3p3
```

```
57 . estat imtest, preserve white
```

White's test for Ho: homoskedasticity

against Ha: unrestricted heteroskedasticity

chi2(98) = **132.08**

Prob > chi2 = **0.0124**

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity	132.08	98	0.0124
Skewness	46.52	13	0.0000
Kurtosis	0.14	1	0.7124
Total	178.73	112	0.0001

```

58 .
59 .
60 . set more off

```

```

61 . subtitle "Key variables for male path analysis using radhlw3 as dep var only
> "

```

```

                                Date and time:   9 Apr 2012   13:42:17
                                Working directory: /Users/robertyaffee
> /Documents/data/research/chwk/phase3/data/ox
                                Stata data file:  chwide6apr2012old.dta
                                Stata version:    12.1
                                Operating system:  MacOSX    10.6.8  on
> Macintosh (Intel 64-bit) with 4 processors
                                using 33554432 bytes of memory

```

Key variables for male path analysis using radhlw3 as dep var only

```

62 . estout *, cells(b(star) se p ) stats( r2 r2_a bic N, fmt(%9.3f %9.3f %9.0f)
> ) ///
> starlevels(# .1 * .05 ** .01 *** .001 *** .0001) legend title(Male Au
> toMet Regressions for dv=rahdlw3)

```

Male AutoMet Regressions for dv=rahdlw3

	mradhlw3w1p3 b/se/p	mradhlw3w2p3 b/se/p	mradhlw3w3p3 b/se/p
age	.2615395* .1015156 .0102592	-.0164474 .124926 .8953062	.2331328* .1128584 .0393496
shfincw1	-.116853*** .0333043 .0004894	-.0961808** .0339388 .0047756	
shhousw1	.1281516*** .0342753 .0002053		
ecprw1	.1686124*** .037662 9.31e-06		
polprw1	.1900894*** .0347849 7.20e-08		
BSIhos	1.873398*** .3611831 3.07e-07		
HP2inthob	11.40822*** 3.302998		

	.0005976		
CSprbslv	-.3520205		
	.2394103		
	.1420666		
dafter	.0715331*	.0581785*	.053563#
	.0296062	.0283569	.0315795
	.0160281	.0407018	.0904581
cloud	.0910305**	.09896**	
	.0331954	.0318867	
	.0063116	.0020162	
healthef	.3292044		
	.280036		
	.2403002		
carcin	-.192368		
	.2779451		
	.4891779		
kzchorn	.3581543***	.3900795***	
	.0518906	.0437304	
	1.49e-11	7.86e-18	
trrepw1	-.0286996		
	.0324517		
	.3768996		
icdx1nr2	12.65681	8.467972	
	10.45149	9.231716	
	.2264426	.359425	
icdx1nr13	-1.178204		
	9.372871		
	.900015		
icdx3nr2	-10.53523	-7.479042	
	9.467502	9.160339	
	.2663171	.4146101	
icdx3nr3	11.58919	8.944112	
	12.71557	12.12751	
	.3624968	.461146	
icdx3nr8	2.110961		
	9.671748		
	.8273116		
icdx4nr10	-29.26849*		
	12.89305		
	.0236092		
icdx4nr12	-2.484778		
	12.91723		
	.847534		
icdx5nr11	-27.14816	-31.50021#	
	17.57207	17.03854	
	.1229628	.0650574	
emplw12		40.31234*	
		17.09979	
		.0187678	

emplw13	33.00796#	
	17.42579	
	.0587507	
o.emplw14	0	
	.	
	.	
emplw15	37.09327#	
	22.12607	
	.0942486	
emplw16	41.95824*	
	17.32162	
	.0157619	
o.emplw24	0	
	.	
	.	
shjobw1	.1346157***	.1457929***
	.0379114	.0405425
	.0004188	.0003538
trgovw1	.0059052	-.0108591
	.0310364	.0331469
	.8491736	.7433417
shhousw2	.0701799*	
	.0303918	
	.0213235	
polprw2	.241816***	
	.031028	
	3.55e-14	
HP2pbfhm	6.152398#	
	3.661677	
	.0935141	
BSIsoma	1.309056***	
	.2347959	
	3.97e-08	
radtlw1	.1218912***	.2257843***
	.0299412	.033265
	.0000541	3.12e-11
icdx2nr2	-9.895316	
	7.374665	
	.1802446	
icdx5nr7	44.89852**	
	16.96237	
	.0083675	
phlthw1		.0526506
		.0750374
		.4832059
liqw1		.6461775
		.541519
		.2333074
airw1		.1996866***

			.0355537
			3.18e-08
radwl			-.1406225***
			.0319667
			.0000132
saferad			.169335***
			.0307362
			5.67e-08
BSIposymp			1.508993#
			.8126671
			.0638981
BSIglobsi			-56.44501
			40.53598
			.1643751
icdx1nr9			14.62748
			9.733945
			.1335148
_cons	-22.285**	-61.01472***	-30.82091**
	7.296347	18.30045	9.85862
	.0023715	.0009167	.0018691
r2	0.517	0.549	0.430
r2_a	0.497	0.530	0.416
bic	5152	5123	5104
N	544	545	535

p<.1, * p<.05, ** p<.01, *** p<.001, *** p<.0001