

```

1 . set linesize 80

2 . cd /Users/robertyaffee/Documents/data/research/chwk/phase3/sem/BSIdepPathMod
   > el
   /Users/robertyaffee/Documents/data/research/chwk/phase3/sem/BSIdepPathModel

3 .
4 . use chwide28jul2012, clear
   (Chornobyl sequelae for both sexes   women=362   men = 340 wide format)

5 .
6 .
7 . set more off

8 . title "Male Dose Depression path model"

```

```

*****
> *
*****
> *
*****                                     ****
> *
*****                                     ****
> *
*****               Male Dose Depression path model               ****
> *
*****                                     ****
> *
*****                                     ****
> *
*****                                     ****
> *
*****               31 Jul 2012       03:54:51       ****
> *
*****
> *
*****
> *

```

```

9 . // sembuilder "/Users/robertyaffee/Documents/data/research/chwk/phase3/sem/B
> SIdepPathModel/MaleDoseDepPthModel.stsem"
10 . // save "/Users/robertyaffee/Documents/data/research/chwk/phase3/sem/BSIdepP
> athModel/MaleDoseDepPthModel.stsem", replace
11 . des avgcumdosew1 radhlw1 radhlw2 radchw1 radchw2 depagw1 depagw2 BSIdep

```

variable name	storage type	display format	value label	variable label
avgcumdosew1	double	%8.0g		Cumulative external dose in mGy for wave 1
radhlw1	double	%8.0g		how much believed personal health is affected by radiation in 1986
radhlw2	double	%8.0g		how much believed personal health is affected by radiation in 1996
radchw1	double	%8.0g		believed % of pollution due to Chornobyl in wave 1
radchw2	double	%8.0g		believed % of pollution due to Chornobyl in wave 2
depagw1	double	%9.0g		Self-reported depressive symptoms in wave 1 (1986)
depagw2	double	%9.0g		Self-reported depressive symptoms in wave 2 1987-1996 inc.
BSIdep	double	%9.0g		Brief symptom inventory depression subscale score

```

12 . title4 "nonrobust"

```

```

nonrobust

```

```

13 . sem (avgcumdosew1 -> radhlw1) (avgcumdosew1 -> radchw2) (depagw1 -> radchw2
> ) ///
> (depagw1 -> depagw2) (radchw1 -> depagw1) (radchw1 -> radchw2) ///
> (radchw1 -> radhlw2) (radhlw1 -> depagw1) (radhlw1 -> radhlw2) ///
> (radchw2 -> radhlw2) (depagw2 -> radhlw2) (radhlw2 -> BSIdep) ///
> (BSIdep -> depagw2) if gender==1, difficult nocapslatent nolog

```

Endogenous variables

Observed: **radhlw1 radchw2 depagw1 depagw2 radhlw2 BSIdep**

Exogenous variables

Observed: **avgcumdosew1 radchw1**

Structural equation model

Number of obs = 339

Estimation method = ml

Log likelihood = -10885.385

		Coef.	OIM Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
radhlw1 <-							
avgcumdos~1		2.41282	1.204051	2.00	0.045	.0529243	4.77271
> 6							
_cons		44.52567	2.074916	21.46	0.000	40.45891	48.5924
> 4							
> -							
radchw2 <-							
depagw1		-.1015498	.0433431	-2.34	0.019	-.1865007	-.016598
> 9							
avgcumdos~1		2.680468	.79736	3.36	0.001	1.117671	4.24326
> 5							
radchw1		.6250525	.0387244	16.14	0.000	.5491542	.700950
> 9							
_cons		15.88568	2.704211	5.87	0.000	10.58553	21.1858
> 4							
> -							
depagw1 <-							
radhlw1		.3222346	.0412123	7.82	0.000	.24146	.403009
> 2							
radchw1		-.2704084	.0428609	-6.31	0.000	-.3544141	-.186402
> 6							
_cons		15.14743	3.314327	4.57	0.000	8.651465	21.6433
> 9							
> -							
depagw2 <-							
depagw1		.2311921	.0250256	9.24	0.000	.1821429	.280241
> 3							
BSIdep		.9811087	.2824521	3.47	0.001	.4275129	1.53470
> 5							
_cons		-3.084811	2.396002	-1.29	0.198	-7.780888	1.61126
> 6							
> -							
radhlw2 <-							

```

> 7   radhlw1 |   .8126957   .0246632   32.95   0.000   .7643566   .861034
> 9   radchw2 |   .300364   .0366165    8.20   0.000   .228597   .372130
> 6   depagw2 |   .1656212   .0553487    2.99   0.003   .0571397   .274102
> 7   radchw1 |  -.2355238   .0351119   -6.71   0.000  -.3043418  -.166705
> 8   _cons   |   6.136548   2.117608    2.90   0.004   1.986112   10.2869
> -----
> -
BSIdep <-
> 2   radhlw2 |   .0172557   .0043131    4.00   0.000   .0088021   .025709
> 6   _cons   |   7.315476   .252025   29.03   0.000   6.821516   7.80943
> -----
> -
Variance
> 5   e.radhlw1 |  1368.577   105.1198                1177.305   1590.92
> 8   e.radchw2 |   592.9015   45.54049                510.0375    689.22
> 8   e.depagw1 |   797.2865   61.23921                685.8577   926.818
> 8   e.depagw2 |   213.1001   16.37175                183.3111     247.7
> 3   e.radhlw2 |   279.1774    21.4499                240.1488   324.54
> 9   e.BSIdep |   7.791174   .5985366                6.70211    9.05720
> 6
> -----
> -
LR test of model vs. saturated: chi2(14) =    19.53, Prob > chi2 = 0.1456

```

```
14 . title4 "cluster robust"
```

```
cluster robust
```

```

15 . sem (avgcumdosew1 -> radhlw1) (avgcumdosew1 -> radchw2) (depagw1 -> radchw2
> ) ///
> (depagw1 -> depagw2) (radchw1 -> depagw1) (radchw1 -> radchw2) ///
> (radchw1 -> radhlw2) (radhlw1 -> depagw1) (radhlw1 -> radhlw2) ///
> (radchw2 -> radhlw2) (depagw2 -> radhlw2) (radhlw2 -> BSIdp) ///
> (BSIdp -> depagw2) if gender==1, vce(cluster id) difficult nocapslatent no
> log

```

Endogenous variables

Observed: **radhlw1 radchw2 depagw1 depagw2 radhlw2 BSIdp**

Exogenous variables

Observed: **avgcumdosew1 radchw1**

```

Structural equation model                Number of obs      =      339
Estimation method  = ml
Log pseudolikelihood= -10885.385

```

(Std. Err. adjusted for 339 clusters in id)

```
> )
```

> --							
	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval		
>]							
> --							
Structural							
radhlw1 <-							
avgcumdos~1	2.41282	.6121466	3.94	0.000	1.213035	3.61260	
> 6							
_cons	44.52567	2.057047	21.65	0.000	40.49394	48.5574	
> 1							
> --							
radchw2 <-							
depagw1	-.1015498	.0423147	-2.40	0.016	-.184485	-.018614	
> 5							
avgcumdos~1	2.680468	.5755574	4.66	0.000	1.552396	3.8085	
> 4							
radchw1	.6250525	.0472639	13.22	0.000	.5324169	.717688	
> 2							
_cons	15.88568	3.505764	4.53	0.000	9.01451	22.7568	
> 5							
> --							
depagw1 <-							

```

      radhlw1 |   .3222346   .0481044    6.70   0.000   .2279517   .416517
> 4      radchw1 |  -.2704084   .0482875   -5.60   0.000  -.3650502  -.175766
> 5      _cons |   15.14743   3.003698    5.04   0.000   9.260287  21.0345
> 7
-----
> -
      depagw2 <-
      depagw1 |   .2311921   .037071    6.24   0.000   .1585343   .303849
> 9      BSIdcp |   .9811087   .2931539    3.35   0.001   .4065376   1.5556
> 8      _cons |  -3.084811   2.241914   -1.38   0.169  -7.478882   1.30926
> 1
-----
> -
      radhlw2 <-
      radhlw1 |   .8126957   .0266565   30.49   0.000   .7604498   .864941
> 5      radchw2 |   .300364   .0601198    5.00   0.000   .1825312   .418196
> 7      depagw2 |   .1656212   .0573098    2.89   0.004   .0532961   .277946
> 3      radchw1 |  -.2355238   .0600088   -3.92   0.000  -.3531388  -.117908
> 7      _cons |   6.136548   2.035603    3.01   0.003   2.146839  10.1262
> 6
-----
> -
      BSIdcp <-
      radhlw2 |   .0172557   .0042348    4.07   0.000   .0089556   .025555
> 8      _cons |   7.315476   .2382199   30.71   0.000   6.848574   7.78237
> 9
-----
> -
Variance
      e.radhlw1 |  1368.577   59.50623                1256.778   1490.32
> 1      e.radchw2 |  592.9015   66.29016                476.2256   738.16
> 3      e.depagw1 |  797.2865   82.03237                651.6806   975.425
> 5      e.depagw2 |  213.1001   36.88705                151.7899   299.174
> 3      e.radhlw2 |  279.1774   44.9786                203.5834   382.84
> 1      e.BSIdcp |  7.791174   1.366722                5.524408  10.9880

```

Note: model was fit with `vce(cluster)`; only `stats(residuals)` valid

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	339	.	-10885.38	25	21820.77	21916.42

```
Estimation method = ml
```

Log pseudolikelihood= 10985.385

Standardized	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval
>]					

model 1-1

engaged	1	100100	0232573	3.07	0.000	0547756	161633
---------	---	--------	---------	------	-------	---------	--------

$$\leq 3$$

1	106515	0510300	22 45	0 000	1 006400	1 00650
---	--------	---------	-------	-------	----------	---------

1

denom:1	006	0415070	2 31	0 031	177354	01464
---------	-----	---------	------	-------	--------	-------

6

surrounds 1	1313074	0321037	4.66	0.000	0761406	126654
-------------	---------	---------	------	-------	---------	--------

$$\leq 1$$

rodabu1	6560025	0473061	13.80	0.000	5642743	740710
---------	---------	---------	-------	-------	---------	--------

cons	1666508	104068	1.45	0.000	3600173	672384
------	---------	--------	------	-------	---------	--------

✓ ? - |

```

> -
    depagw1 <- |
        radhlw1 | .3726129 .0478554 7.79 0.000 .2788181 .466407
> 7
        radchw1 | -.3006574 .0475347 -6.33 0.000 -.3938238 -.20749
> 1
        _cons | .4706877 .085052 5.53 0.000 .3039888 .637386
> 6
|-----|
> -
    depagw2 <- |
        depagw1 | .4441318 .0529472 8.39 0.000 .3403572 .547906
> 5
        BSIdcp | .167876 .0567623 2.96 0.003 .0566239 .27912
> 8
        _cons | -.1841456 .1385288 -1.33 0.184 -.4556572 .087365
> 9
|-----|
> -
    radhlw2 <- |
        radhlw1 | .8450919 .0262196 32.23 0.000 .7937025 .896481
> 3
        radchw2 | .2857235 .0555263 5.15 0.000 .1768939 .39455
> 3
        depagw2 | .0775296 .0265341 2.92 0.003 .0255236 .129535
> 5
        radchw1 | -.2354923 .0586208 -4.02 0.000 -.3503869 -.120597
> 7
        _cons | .171478 .05719 3.00 0.003 .0593876 .283568
> 4
|-----|
> -
    BSIdcp <- |
        radhlw2 | .2154313 .0567959 3.79 0.000 .1041135 .326749
> 2
        _cons | 2.552138 .1844933 13.83 0.000 2.190538 2.91373
> 8
|-----|
> -
Variance
    e.radhlw1 | .988293 .0058984 .9767996 .999921
> 6
    e.radchw2 | .5116286 .0538862 .4162016 .628935
> 1
    e.depagw1 | .7698433 .050567 .6768482 .875615
> 4
    e.depagw2 | .759363 .0448712 .6763187 .852604
> 2
    e.radhlw2 | .2179962 .0351032 .1589947 .298892

```

```

> 5      e.BSIdep |      .9482567      .0254173                      .8997258      .999405
> 4
-----
> -

```

19 . estat residuals

Residuals of observed variables

Mean residuals

	radhlw1	radchw2	depagw1	depagw2	radhlw2
raw	-0.000	-0.000	-0.000	0.000	-0.000

	BSIdep	avgcumd~1	radchw1
raw	-0.000	0.000	0.000

Covariance residuals

	radhlw1	radchw2	depagw1	depagw2	radhlw2
radhlw1	-0.000				
radchw2	-36.073	-2.344			
depagw1	-4.073	11.675	-2.625		
depagw2	-47.581	26.699	7.881	3.775	
radhlw2	-22.263	-25.483	39.797	-27.047	-32.582
BSIdep	-1.913	0.218	8.651	1.991	-0.562
avgcumdosew1	-0.000	-0.317	3.124	0.469	-2.936
radchw1	15.063	-0.493	4.854	-12.639	10.001

	BSIdep	avgcumd~1	radchw1
BSIdep	-0.010		
avgcumdosew1	-0.019	0.000	
radchw1	-2.679	0.000	0.000

20 . estat framework
(model contains no latent variables)

Endogenous variables on endogenous variables

	Beta	observed				
		radhlw1	radchw2	depagw1	depagw2	radhlw2
observed						
radhlw1		0	0	0	0	0
radchw2		0	0	-.1015498	0	0
depagw1		.3222346	0	0	0	0
depagw2		0	0	.2311921	0	0
radhlw2		.8126957	.300364	0	.1656212	0
BSIddep		0	0	0	0	.0172557

	Beta	observed BSIddep
observed		
radhlw1		0
radchw2		0
depagw1		0
depagw2		.9811087
radhlw2		0
BSIddep		0

Exogenous variables on endogenous variables

	Gamma	observed	
		avgcumd~1	radchw1
observed			
radhlw1		2.41282	0
radchw2		2.680468	.6250525
depagw1		0	-.2704084
depagw2		0	0
radhlw2		0	-.2355238
BSIddep		0	0

Covariances of error variables

	observed				
Psi	e.radhlw1	e.radchw2	e.depagw1	e.depagw2	e.radhlw2
observed					
e.radhlw1	1368.577				
e.radchw2	0	592.9015			
e.depagw1	0	0	797.2865		
e.depagw2	0	0	0	213.1001	
e.radhlw2	0	0	0	0	279.1774
e.BSIddep	0	0	0	0	0

	observed
Psi	e.BSIddep
observed	
e.BSIddep	7.791174

Intercepts of endogenous variables

	observed				
alpha	radhlw1	radchw2	depagw1	depagw2	radhlw2
_cons	44.52567	15.88568	15.14743	-3.084811	6.136548

	observed
alpha	BSIddep
_cons	7.315476

Covariances of exogenous variables

	observed	
Phi	avgcumd~1	radchw1
observed		
avgcumdosew1	2.78471	
radchw1	-2.269575	1280.311

Means of exogenous variables


```

    depagw2 <-
    depagw1 | .4441318 .0529472 8.39 0.000 .3403572 .547906
> 5
    BSIdep | .167876 .0567623 2.96 0.003 .0566239 .27912
> 8
    _cons | -.1841456 .1385288 -1.33 0.184 -.4556572 .087365
> 9
-----
> -
    radhlw2 <-
    radhlw1 | .8450919 .0262196 32.23 0.000 .7937025 .896481
> 3
    radchw2 | .2857235 .0555263 5.15 0.000 .1768939 .39455
> 3
    depagw2 | .0775296 .0265341 2.92 0.003 .0255236 .129535
> 5
    radchw1 | -.2354923 .0586208 -4.02 0.000 -.3503869 -.120597
> 7
    _cons | .171478 .05719 3.00 0.003 .0593876 .283568
> 4
-----
> -
    BSIdep <-
    radhlw2 | .2154313 .0567959 3.79 0.000 .1041135 .326749
> 2
    _cons | 2.552138 .1844933 13.83 0.000 2.190538 2.91373
> 8
-----
> -
Variance
    e.radhlw1 | .988293 .0058984 .9767996 .999921
> 6
    e.radchw2 | .5116286 .0538862 .4162016 .628935
> 1
    e.depagw1 | .7698433 .050567 .6768482 .875615
> 4
    e.depagw2 | .759363 .0448712 .6763187 .852604
> 2
    e.radhlw2 | .2179962 .0351032 .1589947 .298892
> 5
    e.BSIdep | .9482567 .0254173 .8997258 .999405
> 4
-----
> -

```

22 . estat teffects

Direct effects

(Std. Err. adjusted for 339 clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
radhlw1 <-							
avgcumdos~1		2.41282	.6121466	3.94	0.000	1.213035	3.61260
> 6							
> -							
radchw2 <-							
radhlw1	0 (no path)						
depagw1		-.1015498	.0423147	-2.40	0.016	-.184485	-.018614
> 5							
avgcumdos~1		2.680468	.5755574	4.66	0.000	1.552396	3.8085
> 4							
radchw1		.6250525	.0472639	13.22	0.000	.5324169	.717688
> 2							
> -							
depagw1 <-							
radhlw1		.3222346	.0481044	6.70	0.000	.2279517	.416517
> 4							
avgcumdos~1	0 (no path)						
radchw1		-.2704084	.0482875	-5.60	0.000	-.3650502	-.175766
> 5							
> -							
depagw2 <-							
radhlw1	0 (no path)						
radchw2	0 (no path)						
depagw1		.2311921	.037071	6.24	0.000	.1585343	.303849
> 9							
depagw2	0 (no path)						
radhlw2	0 (no path)						
BSIdep		.9811087	.2931539	3.35	0.001	.4065376	1.5556
> 8							
avgcumdos~1	0 (no path)						
radchw1	0 (no path)						

```

> -
  radhlw2 <-
    radhlw1 | .8126957 .0266565 30.49 0.000 .7604498 .864941
> 5
  radchw2 | .300364 .0601198 5.00 0.000 .1825312 .418196
> 7
  depagw1 | 0 (no path)
  depagw2 | .1656212 .0573098 2.89 0.004 .0532961 .277946
> 3
  radhlw2 | 0 (no path)
  BSIddep | 0 (no path)
  avgcumdos~1 | 0 (no path)
  radchw1 | -.2355238 .0600088 -3.92 0.000 -.3531388 -.117908
> 7

```

```

> -
  BSIddep <-
    radhlw1 | 0 (no path)
    radchw2 | 0 (no path)
    depagw1 | 0 (no path)
    depagw2 | 0 (no path)
    radhlw2 | .0172557 .0042348 4.07 0.000 .0089556 .025555
> 8
  BSIddep | 0 (no path)
  avgcumdos~1 | 0 (no path)
  radchw1 | 0 (no path)

```

```

> -

```

Indirect effects

(Std. Err. adjusted for 339 clusters in id

```

> )

```

```

> -

```

	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval
>]					

```

> -
Structural
  radhlw1 <-
  avgcumdos~1 | 0 (no path)

```

```

> -
  radchw2 <-
    radhlw1 | -.0327228 .004885 -6.70 0.000 -.0422973 -.023148
> 4
  depagw1 | 0 (no path)

```

```

    avgcumdos~1 | -.0789544 .0439027 -1.80 0.072 -.165002 .007093
> 3    radchw1 | .0274599 .0122859 2.24 0.025 .00338 .051539
> 8
-----
> -
    depagw1 <-
      radhlw1 | 0 (no path)
    avgcumdos~1 | .7774941 .2159943 3.60 0.000 .3541532 1.20083
> 5    radchw1 | 0 (no path)
-----
> -
    depagw2 <-
      radhlw1 | .0883381 .0111598 7.92 0.000 .0664652 .110210
> 9    radchw2 | .0050994 .0010207 5.00 0.000 .0030989 .007099
> 8    depagw1 | .0001322 .0002626 0.50 0.615 -.0003825 .00064
> 7    depagw2 | .0028118 .000973 2.89 0.004 .0009048 .004718
> 8    radhlw2 | .0169773 .0041665 4.07 0.000 .0088111 .025143
> 5    BSIdep | .0027587 .0008243 3.35 0.001 .0011431 .004374
> 3    avgcumdos~1 | .2268126 .0658751 3.44 0.001 .0976997 .355925
> 4    radchw1 | -.0633632 .0151111 -4.19 0.000 -.0929804 -.03374
> 6
-----
> -
    radhlw2 <-
      radhlw1 | .0048019 .0003868 12.41 0.000 .0040437 .005560
> 1    radchw2 | .0008446 .000169 5.00 0.000 .0005132 .001175
> 9    depagw1 | .0078103 .015513 0.50 0.615 -.0225945 .038215
> 1    depagw2 | .0004657 .0001611 2.89 0.004 .0001499 .000781
> 5    radhlw2 | .0028118 .0006901 4.07 0.000 .0014593 .004164
> 3    BSIdep | .1629493 .048689 3.35 0.001 .0675206 .25837
> 8    avgcumdos~1 | 2.779854 .5706969 4.87 0.000 1.661309 3.898
> 4    radchw1 | .1854969 .0409305 4.53 0.000 .1052746 .265719
> 2

```

```

> -
BSIdep <-
  radhlw1 | .0141065 .0004616 30.56 0.000 .0132017 .015011
> 3
  radchw2 | .0051976 .0010403 5.00 0.000 .0031586 .007236
> 6
  depagw1 | .0001348 .0002677 0.50 0.615 -.0003899 .000659
> 4
  depagw2 | .0028659 .0009917 2.89 0.004 .0009222 .004809
> 6
  radhlw2 | .0000485 .0000119 4.07 0.000 .0000252 .000071
> 9
  BSIdép | .0028118 .0008402 3.35 0.001 .0011651 .004458
> 5
  avgcumdos~1 | .0479682 .0157859 3.04 0.002 .0170284 .078908
> 1
  radchw1 | -.0008632 .0006182 -1.40 0.163 -.0020748 .000348
> 4

```

```

> -

```

Total effects

(Std. Err. adjusted for 339 clusters in id

```

> )

```

```

> -

```

```

> ]

```

```

> -
Structural
  radhlw1 <-
  avgcumdos~1 | 2.41282 .6121466 3.94 0.000 1.213035 3.61260
> 6

```

```

> -
  radchw2 <-
  radhlw1 | -.0327228 .004885 -6.70 0.000 -.0422973 -.023148
> 4
  depagw1 | -.1015498 .0423147 -2.40 0.016 -.184485 -.018614
> 5
  avgcumdos~1 | 2.601513 .5702648 4.56 0.000 1.483815 3.71921
> 2
  radchw1 | .6525125 .0416805 15.66 0.000 .5708202 .734204
> 7

```

```

> -
  depagw1 <- |
    radhlw1 | .3222346 .0481044 6.70 0.000 .2279517 .416517
> 4
  avgcumdos~1 | .7774941 .2159943 3.60 0.000 .3541532 1.20083
> 5
    radchw1 | -.2704084 .0482875 -5.60 0.000 -.3650502 -.175766
> 5


---


> -
  depagw2 <- |
    radhlw1 | .0883381 .0111598 7.92 0.000 .0664652 .110210
> 9
    radchw2 | .0050994 .0010207 5.00 0.000 .0030989 .007099
> 8
  depagw1 | .2313243 .0372312 6.21 0.000 .1583525 .304296
> 1
  depagw2 | .0028118 .000973 2.89 0.004 .0009048 .004718
> 8
    radhlw2 | .0169773 .0041665 4.07 0.000 .0088111 .025143
> 5
    BSIdcp | .9838674 .2939782 3.35 0.001 .4076807 1.56005
> 4
  avgcumdos~1 | .2268126 .0658751 3.44 0.001 .0976997 .355925
> 4
    radchw1 | -.0633632 .0151111 -4.19 0.000 -.0929804 -.03374
> 6


---


> -
  radhlw2 <- |
    radhlw1 | .8174976 .0267532 30.56 0.000 .7650623 .869932
> 8
    radchw2 | .3012085 .0602889 5.00 0.000 .1830445 .419372
> 6
  depagw1 | .0078103 .015513 0.50 0.615 -.0225945 .038215
> 1
  depagw2 | .1660869 .0574709 2.89 0.004 .0534459 .278727
> 9
    radhlw2 | .0028118 .0006901 4.07 0.000 .0014593 .004164
> 3
    BSIdcp | .1629493 .048689 3.35 0.001 .0675206 .25837
> 8
  avgcumdos~1 | 2.779854 .5706969 4.87 0.000 1.661309 3.898
> 4
    radchw1 | -.0500268 .0319619 -1.57 0.118 -.112671 .012617
> 3


---


> -
  BSIdcp <- |

```



```

27 .
28 . // sembuilder "/Users/robertyaffee/Documents/data/research/chwk/phase3/sem/B
    > SIdsepPathModel/FemDoseDepPthModel.stsem"
29 . // save "/Users/robertyaffee/Documents/data/research/chwk/phase3/sem/BSIdsepP
    > athModel/FemDoseDepPthModel.stsem", replace
30 . des avgcumdosew1 radhlw1 radchw1 radchw2 radhlw1 radhlw2 depagw1 depagw2 BS
    > Idep

```

variable name	storage type	display format	value label	variable label
avgcumdosew1	double	%8.0g		Cumulative external dose in mGy for wave 1
radhlw1	double	%8.0g		how much believed personal health is affected by radiation in 1986
radchw1	double	%8.0g		believed % of pollution due to Chornobyl in wave 1
radchw2	double	%8.0g		believed % of pollution due to Chornobyl in wave 2
radhlw1	double	%8.0g		how much believed personal health is affected by radiation in 1986
radhlw2	double	%8.0g		how much believed personal health is affected by radiation in 1996
depagw1	double	%9.0g		Self-reported depressive symptoms in wave 1 (1986)
depagw2	double	%9.0g		Self-reported depressive symptoms in wave 2 1987-1996 inc.
BSIdsep	double	%9.0g		Brief symptom inventory depression subscale score

```

31 . title4 "nonrobust"

```

```

nonrobust

```

```

32 . sem (avgcumdosew1 -> radhlw1) (avgcumdosew1 -> radchw2) (avgcumdosew1 -> rad
> hlw2) ///
>   (avgcumdosew1 -> BSIdew) (depagw1 -> radhlw1) (depagw1 -> depagw2) (radchw
> 1 -> depagw1) ///
>   (radchw1 -> radchw2) (radchw1 -> depagw2) (radchw1 -> radhlw2) (radhlw1 ->
> depagw1) ///
>   (radhlw1 -> radhlw2) (radhlw1 -> BSIdew) (radchw2 -> depagw2) (radchw2 ->
> radhlw2) ///
>   (depagw2 -> radhlw2) (depagw2 -> BSIdew) (radhlw2 -> BSIdew) if gender==2
> , ///
>   cov( e.radhlw2*e.radhlw1) nocapslatent nolog
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

```

Endogenous variables

Observed: **radhlw1 radchw2 radhlw2 BSIdew depagw1 depagw2**

Exogenous variables

Observed: **avgcumdosew1 radchw1**

```

Structural equation model                Number of obs      =       362
Estimation method   = ml
Log likelihood      = -11345.165

```

> -							
			OIM				
		Coef.	Std. Err.	z	P> z	[95% Conf. Interval	
>]							
> -							
Structural							
radhlw1 <-							
depagw1		-7.079177	3.80248	-1.86	0.063	-14.5319	.373546
> 4							
avgcumdos~1		101.3973	55.61255	1.82	0.068	-7.601308	210.395
> 9							
_cons		112.0013	32.6395	3.43	0.001	48.02903	175.973
> 5							
> -							
radchw2 <-							
avgcumdos~1		2.873174	2.322787	1.24	0.216	-1.679405	7.42575
> 3							
radchw1		.6309132	.0343033	18.39	0.000	.56368	.698146
> 5							
_cons		22.79068	2.544052	8.96	0.000	17.80443	27.7769

```

> 3
|-----|
> -
radhlw2 <-
radhlw1 | .7370445 .030814 23.92 0.000 .6766501 .797438
> 9
radchw2 | .4526271 .0409045 11.07 0.000 .3724558 .532798
> 4
depagw2 | .1144146 .0597722 1.91 0.056 -.0027368 .23156
> 6
avgcumdos~1 | 4.552042 1.809882 2.52 0.012 1.004738 8.09934
> 6
radchw1 | -.3397368 .0402277 -8.45 0.000 -.4185818 -.260891
> 9
_cons | 8.176407 2.50192 3.27 0.001 3.272734 13.0800
> 8
|-----|
> -
BSIdep <-
radhlw1 | -.0169352 .0078055 -2.17 0.030 -.0322336 -.001636
> 7
radhlw2 | .0368707 .0085546 4.31 0.000 .020104 .053637
> 3
depagw2 | .0297888 .0098485 3.02 0.002 .0104861 .049091
> 5
avgcumdos~1 | 1.003901 .3425978 2.93 0.003 .3324215 1.6753
> 8
_cons | 7.780477 .3994711 19.48 0.000 6.997528 8.56342
> 6
|-----|
> -
depagw1 <-
radhlw1 | 5.044272 3.147493 1.60 0.109 -1.1247 11.2132
> 4
radchw1 | -2.326271 1.436516 -1.62 0.105 -5.141791 .489249
> 9
_cons | -130.9285 93.32949 -1.40 0.161 -313.851 51.9939
> 3
|-----|
> -
depagw2 <-
radchw2 | .0814283 .0357344 2.28 0.023 .0113901 .151466
> 4
depagw1 | .3438149 .0308936 11.13 0.000 .2832645 .404365
> 2
radchw1 | -.0924591 .0325675 -2.84 0.005 -.1562902 -.028628
> 1
_cons | 6.09155 1.935454 3.15 0.002 2.29813 9.88496
> 9

```

```

> -
Variance
  e.radhlw1 | 37555.87  39345.32                4818.575  292709.
> 7
  e.radchw2 | 587.2238   43.648                507.6149  679.317
> 8
  e.radhlw2 | 348.7998  25.95109                301.4712  403.558
> 5
  e.BSIdep  | 12.3783   .9200721                10.7002  14.3195
> 9
  e.depagw1 | 28821.15  35053.02                2657.407  312582.
> 3
  e.depagw2 | 272.5456  20.25816                235.5971  315.288
> 8

```

```

> -
Covariance
  e.radhlw1
  e.radhlw2 | 185.2487  241.7796   0.77   0.444  -288.6306   659.12
> 8

```

```

> -
LR test of model vs. saturated: chi2(9)   =    11.91, Prob > chi2 = 0.2182

```

33 .

34 . title4 "cluster robust"

```
cluster robust
```

```

35 . sem (avgcumdosew1 -> radhlw1) (avgcumdosew1 -> radchw2) (avgcumdosew1 -> ra
> dhlw2) ///
> (avgcumdosew1 -> BSIdep) (depagw1 -> radhlw1) (depagw1 -> depagw2) (radchw
> 1 -> depagw1) ///
> (radchw1 -> radchw2) (radchw1 -> depagw2) (radchw1 -> radhlw2) (radhlw1 ->
> depagw1) ///
> (radhlw1 -> radhlw2) (radhlw1 -> BSIdep) (radchw2 -> depagw2) (radchw2 ->
> radhlw2) ///
> (depagw2 -> radhlw2) (depagw2 -> BSIdep) (radhlw2 -> BSIdep) if gender==2
> , ///
> cov( e.radhlw2*e.radhlw1) nocapslatent nolog vce(cluster id)
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

```

Endogenous variables

Observed: **radhlw1 radchw2 radhlw2 BSIdep depagw1 depagw2**

Exogenous variables

Observed: **avgcumdosew1 radchw1**

Structural equation model

Number of obs = **362**

Estimation method = **ml**

Log pseudolikelihood= **-11345.165**

(Std. Err. adjusted for **362** clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
radhlw1 <-							
depagw1		-7.079177	4.037319	-1.75	0.080	-14.99218	.833821
> 9							
avgcumdos~1		101.3973	62.0894	1.63	0.102	-20.2957	223.090
> 3							
_cons		112.0013	33.90253	3.30	0.001	45.55355	178.44
> 9							
> -							
radchw2 <-							
avgcumdos~1		2.873174	2.184521	1.32	0.188	-1.408409	7.15475
> 7							
radchw1		.6309132	.0417481	15.11	0.000	.5490884	.71273
> 8							
_cons		22.79068	3.362662	6.78	0.000	16.19998	29.3813
> 7							
> -							
radhlw2 <-							
radhlw1		.7370445	.034112	21.61	0.000	.6701862	.803902
> 8							
radchw2		.4526271	.058448	7.74	0.000	.3380712	.56718
> 3							
depagw2		.1144146	.0703453	1.63	0.104	-.0234598	.252288
> 9							
avgcumdos~1		4.552042	3.290513	1.38	0.167	-1.897245	11.0013
> 3							
radchw1		-.3397368	.0579504	-5.86	0.000	-.4533175	-.226156
> 1							
_cons		8.176407	2.403323	3.40	0.001	3.465981	12.8868
> 3							

```

> -
BSIdep <-
  radhlw1 | -.0169352 .0090695 -1.87 0.062 -.034711 .000840
> 7
  radhlw2 | .0368707 .0098539 3.74 0.000 .0175574 .056183
> 9
  depagw2 | .0297888 .0088121 3.38 0.001 .0125173 .047060
> 2
  avgcumdos~1 | 1.003901 .3661598 2.74 0.006 .2862408 1.72156
> 1
  _cons | 7.780477 .3698462 21.04 0.000 7.055592 8.50536
> 2

```

```

> -
depagw1 <-
  radhlw1 | 5.044272 3.33268 1.51 0.130 -1.487661 11.5762
> 1
  radchw1 | -2.326271 1.535252 -1.52 0.130 -5.335308 .682767
> 2
  _cons | -130.9285 97.56776 -1.34 0.180 -322.1578 60.3007
> 7

```

```

> -
depagw2 <-
  radchw2 | .0814283 .0376128 2.16 0.030 .0077085 .15514
> 8
  depagw1 | .3438149 .0575026 5.98 0.000 .2311118 .456517
> 9
  radchw1 | -.0924591 .0378049 -2.45 0.014 -.1665554 -.018362
> 9
  _cons | 6.09155 1.760725 3.46 0.001 2.640593 9.54250
> 7

```

```

> -
Variance
  e.radhlw1 | 37555.87 41182.72 4377.982 322167.
> 5
  e.radchw2 | 587.2238 61.23885 478.6696 720.396
> 4
  e.radhlw2 | 348.7998 39.91475 278.7207 436.498
> 8
  e.BSIdep | 12.3783 1.466825 9.812825 15.6145
> 1
  e.depagw1 | 28821.15 37161.41 2302.443 360772.
> 7
  e.depagw2 | 272.5456 43.332 199.5753 372.19
> 6

```

```

> -
Covariance
  e.radhlw1
    e.radhlw2 | 185.2487   318.3273    0.58   0.561   -438.6614   809.158
> 8

```

```
> -
```

36 . sem, standardized

```

Structural equation model                Number of obs      =       362
Estimation method  = ml
Log pseudolikelihood= -11345.165

```

(Std. Err. adjusted for 362 clusters in id

```
> )
```

```

> -
Standardized |          Coef.      Robust          z    P>|z|    [95% Conf. Interval
> ]

```

```

> -
Structural
  radhlw1 <-
    depagw1 | -5.359203    3.0539    -1.75    0.079    -11.34474    .626330
> 5
  avgcumdos~1 | 1.497274    .9145728    1.64    0.102    -.2952559    3.28980
> 4
    _cons | 3.011654    .9085135    3.31    0.001         1.231    4.79230
> 7

```

```

> -
  radchw2 <-
  avgcumdos~1 | .0466455    .0354793    1.31    0.189    -.0228925    .116183
> 6
    radchw1 | .6935713    .0395686   17.53    0.000    .6160183    .771124
> 4
    _cons | .6737713    .1086125    6.20    0.000    .4608947    .886647
> 9

```

```

> -
  radhlw2 <-
    radhlw1 | .7873412    .0362879   21.70    0.000    .7162181    .858464
> 2
  radchw2 | .4397811    .0557972    7.88    0.000    .3304207    .549141
> 5
  depagw2 | .0636565    .0395222    1.61    0.107    -.0138057    .141118
> 6

```

```

    avgcumdos~1 | .0718043 .0518681 1.38 0.166 -.0298553 .173463
> 9
    radchw1 | -.3628776 .0603758 -6.01 0.000 -.4812121 -.244543
> 1
    _cons | .2348626 .0713384 3.29 0.001 .0950418 .374683
> 4
-----
> -
    BSIddep <-
    radhlw1 | -.166915 .0896574 -1.86 0.063 -.3426403 .008810
> 4
    radhlw2 | .3401868 .0840975 4.05 0.000 .1753588 .505014
> 8
    depagw2 | .1529152 .0440032 3.48 0.001 .0666705 .239159
> 8
    avgcumdos~1 | .1461072 .053518 2.73 0.006 .0412139 .251000
> 5
    _cons | 2.062026 .1493905 13.80 0.000 1.769226 2.35482
> 6
-----
> -
    depagw1 <-
    radhlw1 | 6.663173 4.402105 1.51 0.130 -1.964795 15.2911
> 4
    radchw1 | -3.072494 2.03028 -1.51 0.130 -7.051769 .906781
> 4
    _cons | -4.650491 3.472501 -1.34 0.180 -11.45647 2.15548
> 6
-----
> -
    depagw2 <-
    radchw2 | .1422034 .0648478 2.19 0.028 .015104 .269302
> 7
    depagw1 | .4997469 .0827092 6.04 0.000 .3376398 .661853
> 9
    radchw1 | -.1775031 .0698297 -2.54 0.011 -.3143669 -.040639
> 4
    _cons | .314498 .088434 3.56 0.000 .1411705 .487825
> 4
-----
> -
Variance
    e.radhlw1 | 27.15451 29.68976 3.185436 231.480
> 8
    e.radchw2 | .5132326 .0552041 .4156786 .633681
> 1
    e.radhlw2 | .287792 .0327407 .2302723 .359679
> 5
    e.BSIddep | .8694347 .0342599 .8048141 .939243

```

```

> 9
    e.depawg1 |    36.36139    46.92553                2.898262    456.187
> 4
    e.depawg2 |    .7264727    .0587847                .6199288    .851327
> 8
-----
> -
Covariance
    e.radhlw1
    e.radhlw2 |    .0511833    .0774877    0.66    0.509    -.1006898    .203056
> 4
-----
> -

```

37 . estat gof

Note: model was fit with vce(cluster); only stats(residuals) valid.

38 . estat ic

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	362	.	-11345.16	29	22748.33	22861.19

Note: N=Obs used in calculating BIC; see [\[R\] BIC note](#)

39 . estat framework

(model contains no latent variables)

Endogenous variables on endogenous variables

	Beta	observed				
		radhlw1	radchw2	radhlw2	BSIdep	depawg1
observed						
radhlw1		0	0	0	0	-7.079177
radchw2		0	0	0	0	0
radhlw2		.7370445	.4526271	0	0	0
BSIdep		-.0169352	0	.0368707	0	0
depawg1		5.044272	0	0	0	0
depawg2		0	.0814283	0	0	.3438149

Beta	observed depagw2
observed	
radhlw1	0
radchw2	0
radhlw2	.1144146
BSIdep	.0297888
depagw1	0
depagw2	0

Exogenous variables on endogenous variables

Gamma	observed avgcumd~1	radchw1
observed		
radhlw1	101.3973	0
radchw2	2.873174	.6309132
radhlw2	4.552042	-.3397368
BSIdep	1.003901	0
depagw1	0	-2.326271
depagw2	0	-.0924591

Covariances of error variables

Psi	observed e.radhlw1	e.radchw2	e.radhlw2	e.BSIdep	e.depagw1
observed					
e.radhlw1	37555.87				
e.radchw2	0	587.2238			
e.radhlw2	185.2487	0	348.7998		
e.BSIdep	0	0	0	12.3783	
e.depagw1	0	0	0	0	28821.15
e.depagw2	0	0	0	0	0

Psi	observed e.depagw2
observed	
e.depagw2	272.5456

Intercepts of endogenous variables

	observed				
alpha	radhlw1	radchw2	radhlw2	BSIdep	depagw1
_cons	112.0013	22.79068	8.176407	7.780477	-130.9285

	observed
alpha	depagw2
_cons	6.09155

Covariances of exogenous variables

	observed	
Phi	avgcumd~1	radchw1
observed		
avgcumdosew1	.3015684	
radchw1	1.120499	1382.714

Means of exogenous variables

	observed	
kappa	avgcumd~1	radchw1
mean	.336224	61.29006

40 . estat teffects

Direct effects

(Std. Err. adjusted for **362** clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
radhlw1 <-							
radhlw1	0 (no path)						
depagw1		-7.079177	4.037319	-1.75	0.080	-14.99218	.833821
> 9							
avgcumdos~1		101.3973	62.0894	1.63	0.102	-20.2957	223.090

```

> 3      radchw1 |              0 (no path)
-----|-----
> -
radchw2 <-    |
avgcumdos~1   |      2.873174      2.184521      1.32      0.188      -1.408409      7.15475
> 7      radchw1 |      .6309132      .0417481      15.11      0.000      .5490884      .71273
> 8
-----|-----
> -
radhlw2 <-    |
radhlw1       |      .7370445      .034112      21.61      0.000      .6701862      .803902
> 8      radchw2 |      .4526271      .058448      7.74      0.000      .3380712      .56718
> 3      depagw1 |              0 (no path)
depagw2       |      .1144146      .0703453      1.63      0.104      -.0234598      .252288
> 9      avgcumdos~1 |      4.552042      3.290513      1.38      0.167      -1.897245      11.0013
> 3      radchw1 |     -.3397368      .0579504      -5.86      0.000      -.4533175      -.226156
> 1
-----|-----
> -
BSIddep <-    |
radhlw1       |     -.0169352      .0090695      -1.87      0.062      -.034711      .000840
> 7      radchw2 |              0 (no path)
radhlw2       |      .0368707      .0098539      3.74      0.000      .0175574      .056183
> 9      depagw1 |              0 (no path)
depagw2       |      .0297888      .0088121      3.38      0.001      .0125173      .047060
> 2      avgcumdos~1 |      1.003901      .3661598      2.74      0.006      .2862408      1.72156
> 1      radchw1 |              0 (no path)
-----|-----
> -
depagw1 <-    |
radhlw1       |      5.044272      3.33268      1.51      0.130      -1.487661      11.5762
> 1      depagw1 |              0 (no path)
avgcumdos~1   |              0 (no path)
radchw1       |     -2.326271      1.535252      -1.52      0.130      -5.335308      .682767
> 2
-----|-----
> -
depagw2 <-    |

```

```

      radhlw1 |          0 (no path)
      radchw2 |   .0814283   .0376128    2.16   0.030   .0077085   .15514
> 8
      depagw1 |   .3438149   .0575026    5.98   0.000   .2311118   .456517
> 9
      avgcumdos~1 |          0 (no path)
      radchw1 |  -.0924591   .0378049   -2.45   0.014  -.1665554  -.018362
> 9

```

```

> -

```

Indirect effects

(Std. Err. adjusted for 362 clusters in id

```

> )

```

	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
Structural						
radhlw1 <- radhlw1	-.9727589	.6426882	-1.51	0.130	-2.232405	.286886
> 8						
depagw1	6.886333	3.927338	1.75	0.080	-.8111077	14.5837
> 7						
avgcumdos~1	-98.63511	63.00405	-1.57	0.117	-222.1208	24.8505
> 5						
radchw1	.4486079	.0486718	9.22	0.000	.353213	.544002
> 9						
radchw2 <- avgcumdos~1						
radchw1	0	(no path)				
radhlw2 <- radhlw1						
radhlw1	-.7115612	.4701185	-1.51	0.130	-1.632977	.209854
> 2						
radchw2	.0093166	.0043035	2.16	0.030	.000882	.017751
> 2						
depagw1	-.1410632	.1028314	-1.37	0.170	-.342609	.060482
> 6						
depagw2	0	(no path)				
avgcumdos~1	3.91118	1.516112	2.58	0.010	.9396537	6.88270
> 5						

```

      radchw1 | .6090189 .0542571 11.22 0.000 .502677 .715360
> 8
-----
> -
    BSidep <-
      radhlw1 | .0188208 .0057751 3.26 0.001 .0075017 .030139
> 8
      radchw2 | .0194578 .0023684 8.22 0.000 .0148158 .024099
> 9
      radhlw2 | 0 (no path)
      depagw1 | -.0016562 .0077838 -0.21 0.831 -.0169122 .013599
> 7
      depagw2 | .0042185 .0025937 1.63 0.104 -.000865 .009302
> 1
    avgcumdos~1 | .4149367 .1526858 2.72 0.007 .115678 .714195
> 4
      radchw1 | .0004585 .0026449 0.17 0.862 -.0047254 .005642
> 3
-----
> -
    depagw1 <-
      radhlw1 | -4.906861 3.241894 -1.51 0.130 -11.26086 1.44713
> 5
      depagw1 | -.9727589 .5547732 -1.75 0.080 -2.060094 .114576
> 6
    avgcumdos~1 | 13.93313 4.690783 2.97 0.003 4.739366 23.126
> 9
      radchw1 | 2.2629 1.563247 1.45 0.148 -.8010073 5.32680
> 8
-----
> -
    depagw2 <-
      radhlw1 | .047244 .0312135 1.51 0.130 -.0139332 .108421
> 3
      radchw2 | 0 (no path)
      depagw1 | -.334449 .1907393 -1.75 0.080 -.7082911 .039393
> 1
    avgcumdos~1 | 5.024375 1.653994 3.04 0.002 1.782607 8.26614
> 3
      radchw1 | .0295866 .0256854 1.15 0.249 -.0207559 .079929
> 1
-----
> -

```

Total effects

(Std. Err. adjusted for 362 clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
radhlw1 <-							
	radhlw1	-.9727589	.6426882	-1.51	0.130	-2.232405	.286886
> 8							
	depagw1	-.1928443	.1099808	-1.75	0.080	-.4084027	.022714
> 2							
	avgcumdos~1	2.762169	2.069389	1.33	0.182	-1.29376	6.81809
> 8							
	radchw1	.4486079	.0486718	9.22	0.000	.353213	.544002
> 9							
> -							
radchw2 <-							
	avgcumdos~1	2.873174	2.184521	1.32	0.188	-1.408409	7.15475
> 7							
	radchw1	.6309132	.0417481	15.11	0.000	.5490884	.71273
> 8							
> -							
radhlw2 <-							
	radhlw1	.0254833	.4745358	0.05	0.957	-.9045898	.955556
> 4							
	radchw2	.4619437	.0580817	7.95	0.000	.3481057	.575781
> 7							
	depagw1	-.1410632	.1028314	-1.37	0.170	-.342609	.060482
> 6							
	depagw2	.1144146	.0703453	1.63	0.104	-.0234598	.252288
> 9							
	avgcumdos~1	8.463221	3.410302	2.48	0.013	1.779151	15.1472
> 9							
	radchw1	.2692821	.0457087	5.89	0.000	.1796947	.358869
> 5							
> -							
BSIdep <-							
	radhlw1	.0018856	.0108651	0.17	0.862	-.0194096	.023180
> 8							
	radchw2	.0194578	.0023684	8.22	0.000	.0148158	.024099
> 9							

```

> 9      radhlw2 |      .0368707      .0098539      3.74      0.000      .0175574      .056183
> 7      depagw1 |     -.0016562      .0077838     -0.21      0.831     -.0169122      .013599
> 8      depagw2 |      .0340073      .0092535      3.68      0.000      .0158708      .052143
> 4      avgcumdos~1 |      1.418837      .4091025      3.47      0.001      .6170114      2.22066
> 3      radchw1 |      .0004585      .0026449      0.17      0.862     -.0047254      .005642
> 3
+-----+
> -
>      depagw1 <-
>      radhlw1 |      .1374113      .0907857      1.51      0.130     -.0405254      .31534
> 8      depagw1 |     -.9727589      .5547732     -1.75      0.080     -2.060094      .114576
> 6      avgcumdos~1 |      13.93313      4.690783      2.97      0.003      4.739366      23.126
> 9      radchw1 |     -.0633701      .0355125     -1.78      0.074     -.1329734      .006233
> 2
+-----+
> -
>      depagw2 <-
>      radhlw1 |      .047244      .0312135      1.51      0.130     -.0139332      .108421
> 3      radchw2 |      .0814283      .0376128      2.16      0.030      .0077085      .15514
> 8      depagw1 |      .0093659      .1970046      0.05      0.962     -.376756      .395487
> 8      avgcumdos~1 |      5.024375      1.653994      3.04      0.002      1.782607      8.26614
> 3      radchw1 |     -.0628725      .0279973     -2.25      0.025     -.1177462     -.007998
> 9
+-----+
> -

```

```
45 . title "Perceived heath risk summary score depression models"
```

```
46 . title "Male dose summary Chornobyl threat score depression path model"
```

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

```
47 . title4 "nonrobust male depression path model"
```

```
nonrobust male depression path model
```

```
48 . // sembuilder "/Users/robertyaffee/Documents/data/research/chwk/phase3/sem/B
> SIdepPathModel/MaleDoseSumScrDepPthmodel.stsem"
49 . // save "/Users/robertyaffee/Documents/data/research/chwk/phase3/sem/BSIdepP
> athModel/MaleDoseSumScrDepPthmodel.stsem", replace
50 . sem (avgcumdosew1 -> radchw2) (avgcumdosew1 -> crhtw2) ///
> (depagw1 -> radchw2) (depagw1 -> depagw2) ///
> (radchw1 -> depagw1) (radchw1 -> radchw2) ///
> (radchw1 -> crhtw2) (crhtw1 -> depagw1) ///
> (crhtw1 -> crhtw2) (radchw2 -> crhtw2) ///
> (depagw2 -> crhtw2) (depagw2 -> BSIdep) ///
> (crhtw2 -> BSIdep) if gender==1, nocapslatent nolog
```

Endogenous variables

Observed: **radchw2 crhtw2 depagw1 depagw2 BSIdep**

Exogenous variables

Observed: **avgcumdosew1 radchw1 crhtw1**

```
Structural equation model                Number of obs      =      339
Estimation method  = ml
Log likelihood      = -8393.8297
```

> -						
	OIM					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval	
>]						
> -						
Structural						
radchw2 <-						
depagw1	-.1015498	.0433431	-2.34	0.019	-.1865007	-.016598
> 9						
avgcumdos~1	2.680468	.79736	3.36	0.001	1.117671	4.24326

```

> 5      radchw1 |      .6250525      .0387244      16.14      0.000      .5491542      .700950
> 9      _cons  |     15.88568      2.704211       5.87      0.000     10.58553     21.1858
> 4
-----
> -
      crhtw2 <-
      radchw2 |      .0098726      .0009769      10.11      0.000      .0079578      .011787
> 3
      depagw2 |      .0089195      .0014498       6.15      0.000      .006078      .011761
> 1
      avgcumdos~1 |     -.0295446      .0145978      -2.02      0.043     -.0581558     -.000933
> 4
      radchw1 |     -.0081225      .0009344      -8.69      0.000     -.0099538     -.006291
> 1
      crhtw1 |      .8109274      .0261773      30.98      0.000      .7596209      .862233
> 9
      _cons  |     -.1807124      .048756      -3.71      0.000     -.2762724     -.085152
> 4
-----
> -
      depagw1 <-
      radchw1 |     -.2796966      .0425625      -6.57      0.000     -.3631175     -.196275
> 7
      crhtw1 |     13.44711      1.640368       8.20      0.000     10.23205     16.6621
> 7
      _cons  |     32.23328      2.739164     11.77      0.000     26.86462     37.6019
> 4
-----
> -
      depagw2 <-
      depagw1 |      .2458306      .0251767       9.76      0.000      .1964852      .295176
> 1
      _cons  |      4.656015      .8982338       5.18      0.000      2.895509      6.41652
> 1
-----
> -
      BSIddep <-
      crhtw2 |      .7005313      .1666619       4.20      0.000      .37388      1.02718
> 3
      depagw2 |      .0318522      .0090961       3.50      0.000      .0140242      .049680
> 3
      _cons  |      7.980278      .172561     46.25      0.000      7.642064      8.31849
> 1
-----
> -
Variance
      e.radchw2 |     592.9015     45.54049
                                510.0375     689.22

```

```

> 8      e.crhtw2 |      .1932635      .0148445                      .166253      .224662
> 3      e.depawg1 |      785.3806      60.32472                      675.6157      912.978
> 5      e.depawg2 |      221.9766      17.04992                      190.9532      258.040
> 4      e.BSIdep  |      7.300579      .5607541                      6.28025      8.48667
> 8

```

```

> -
LR test of model vs. saturated: chi2(12) =      9.10, Prob > chi2 = 0.6946

```

51 . sem, standardized

```

Structural equation model                      Number of obs      =      339
Estimation method = ml
Log likelihood      = -8393.8297

```

	Standardized	Coef.	OIM Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
radchw2 <-							
depawg1		-.0958973	.0408272	-2.35	0.019	-.1759171	-.015877
> 5							
avgcumdos~1		.1314235	.0386393	3.40	0.001	.0556919	.207155
> 1							
radchw1		.657123	.0291434	22.55	0.000	.6000029	.71424
> 3							
_cons		.4667435	.0889148	5.25	0.000	.2924737	.641013
> 3							
> -							
crhtw2 <-							
radchw2		.3621168	.0365184	9.92	0.000	.2905421	.433691
> 5							
depawg2		.162107	.0266088	6.09	0.000	.1099547	.214259
> 2							
avgcumdos~1		-.0531325	.0262095	-2.03	0.043	-.1045022	-.001762
> 7							
radchw1		-.3132107	.0350583	-8.93	0.000	-.3819237	-.244497
> 6							
crhtw1		.8113662	.0149357	54.32	0.000	.7820928	.840639
> 5							

```

      _cons |   -.194751   .0527543   -3.69   0.000   -.2981475   -.091354
> 4
-----
> -
      depagw1 <-
      radchw1 |   -.3113795   .0441035   -7.06   0.000   -.3978207   -.224938
> 3
      crhtw1 |   .3884341   .0421688    9.21   0.000   .3057847   .471083
> 5
      _cons |   1.002881   .0794831   12.62   0.000   .8470974   1.15866
> 5
-----
> -
      depagw2 <-
      depagw1 |   .4685137   .0422568   11.09   0.000   .385692   .551335
> 5
      _cons |   .2760869   .0568858    4.85   0.000   .1645928   .38758
> 1
-----
> -
      BSIddep <-
      crhtw2 |   .2267098   .0523144    4.33   0.000   .1241755   .329244
> 2
      depagw2 |   .1873452   .0527232    3.55   0.000   .0840097   .290680
> 8
      _cons |   2.783251   .1254218   22.19   0.000   2.537429   3.02907
> 3
-----
> -
Variance
      e.radchw2 |   .5118319   .0339639               .4494109   .582922
> 7
      e.crhtw2 |   .224457   .0171386               .1932585   .260691
> 8
      e.depagw1 |   .7602743   .0379344               .6894441   .838381
> 2
      e.depagw2 |   .7804949   .0395958               .7066221   .862090
> 5
      e.BSIddep |   .8880268   .0321339               .8272271   .953295
> 3
-----
> -
LR test of model vs. saturated: chi2(12) =      9.10, Prob > chi2 = 0.6946

```

52 . estat gof

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(12)	9.098	model vs. saturated
p > chi2	0.695	
chi2_bs(25)	953.171	baseline vs. saturated
p > chi2	0.000	

53 . estat ic

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	339	.	-8393.83	23	16833.66	16921.66

Note: N=Obs used in calculating BIC; see [\[R\] BIC note](#)

54 . estat framework
(model contains no latent variables)

Endogenous variables on endogenous variables

	Beta	observed				
		radchw2	crhtw2	depagw1	depagw2	BSIdep
observed						
radchw2		0	0	-.1015498	0	0
crhtw2		.0098726	0	0	.0089195	0
depagw1		0	0	0	0	0
depagw2		0	0	.2458306	0	0
BSIdep		0	.7005313	0	.0318522	0

Exogenous variables on endogenous variables

Gamma	observed		
	avgcumd~1	radchw1	crhtw1
observed			
radchw2	2.680468	.6250525	0
crhtw2	-.0295446	-.0081225	.8109274
depagw1	0	-.2796966	13.44711
depagw2	0	0	0
BSIdep	0	0	0

Covariances of error variables

Psi	observed				
	e.radchw2	e.crhtw2	e.depagw1	e.depagw2	e.BSIdep
observed					
e.radchw2	592.9015				
e.crhtw2	0	.1932635			
e.depagw1	0	0	785.3806		
e.depagw2	0	0	0	221.9766	
e.BSIdep	0	0	0	0	7.300579

Intercepts of endogenous variables

alpha	observed				
	radchw2	crhtw2	depagw1	depagw2	BSIdep
_cons	15.88568	-.1807124	32.23328	4.656015	7.980278

Covariances of exogenous variables

Phi	observed		
	avgcumd~1	radchw1	crhtw1
observed			
avgcumdosew1	2.78471		
radchw1	-2.269575	1280.311	
crhtw1	.1344321	1.114084	.861959

Means of exogenous variables

	observed		
kappa	avgcumd~1	radchw1	crhtw1
mean	.4300973	53.0413	-.1421184

55 . estat residuals

Residuals of observed variables

Mean residuals

	radchw2	crhtw2	depagw1	depagw2	BSIdep
raw	-0.000	0.000	-0.000	-0.000	0.000

	avgcumd~1	radchw1	crhtw1
raw	0.000	0.000	0.000

Covariance residuals

	radchw2	crhtw2	depagw1	depagw2	BSIdep
radchw2	-1.884				
crhtw2	-0.263	-0.014			
depagw1	9.276	0.655	-0.000		
depagw2	32.685	-0.173	-0.000	-0.000	
BSIdep	2.023	-0.015	-0.408	-0.121	-0.015
avgcumdosew1	-0.351	0.002	3.461	0.644	0.022
radchw1	-0.000	-0.089	-0.000	-9.930	0.192
crhtw1	-0.674	-0.013	-0.000	-0.687	-0.107

	avgcumd~1	radchw1	crhtw1
avgcumdosew1	0.000		
radchw1	0.000	0.000	
crhtw1	0.000	0.000	0.000

56 . estat summarize

Estimation sample **sem**

Number of obs = **339**

Variable	Mean	Std. Dev.	Min	Max
radchw2	48.61947	34.05773	0	100
crhtw2	-.1840074	.9217839	-1.81998	1.19525
depagw1	15.48673	32.18818	0	100
depagw2	8.463127	16.88924	0	100
BSIddep	8.120944	2.868953	5	27
avgcumdosew1	.4300973	1.671212	.0147	27.9862
radchw1	53.0413	35.83433	0	100
crhtw1	-.1421184	.9297899	-1.50154	1.24757

57 .

58 . title4 "robust male depression path model"

robust male depression path model

```

59 . sem (avgcumdosew1 -> radchw2) (avgcumdosew1 -> crhtw2) ///
> (depagw1 -> radchw2) (depagw1 -> depagw2) ///
> (radchw1 -> depagw1) (radchw1 -> radchw2) ///
> (radchw1 -> crhtw2) (crhtw1 -> depagw1) ///
> (crhtw1 -> crhtw2) (radchw2 -> crhtw2) ///
> (depagw2 -> crhtw2) (depagw2 -> BSIddep) ///
> (crhtw2 -> BSIddep) if gender==1, nocapslatent nolog vce(cluster id)

```

Endogenous variables

Observed: **radchw2 crhtw2 depagw1 depagw2 BSIddep**

Exogenous variables

Observed: **avgcumdosew1 radchw1 crhtw1**

Structural equation model

Number of obs

=

339

Estimation method = **ml**

Log pseudolikelihood= **-8393.8297**

(Std. Err. adjusted for 339 clusters in id

>)

> -		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
>]							
> -							
Structural							
radchw2 <-							
depagw1		-.1015498	.0423147	-2.40	0.016	-.184485	-.018614
> 5							
avgcumdos~1		2.680468	.5755574	4.66	0.000	1.552396	3.8085
> 4							
radchw1		.6250525	.0472639	13.22	0.000	.5324169	.717688
> 2							
_cons		15.88568	3.505764	4.53	0.000	9.01451	22.7568
> 5							
> -							
crhtw2 <-							
radchw2		.0098726	.0015787	6.25	0.000	.0067783	.012966
> 8							
depagw2		.0089195	.0013667	6.53	0.000	.0062409	.011598
> 2							
avgcumdos~1		-.0295446	.0099938	-2.96	0.003	-.0491321	-.009957
> 2							
radchw1		-.0081225	.0015666	-5.18	0.000	-.011193	-.005051
> 9							
crhtw1		.8109274	.0264141	30.70	0.000	.7591567	.862698
> 1							
_cons		-.1807124	.0531546	-3.40	0.001	-.2848936	-.076531
> 3							
> -							
depagw1 <-							
radchw1		-.2796966	.0481504	-5.81	0.000	-.3740697	-.185323
> 5							
crhtw1		13.44711	1.897476	7.09	0.000	9.728125	17.1660
> 9							
_cons		32.23328	3.551726	9.08	0.000	25.27202	39.1945
> 3							
> -							
depagw2 <-							
depagw1		.2458306	.0365588	6.72	0.000	.1741768	.317484
> 5							
_cons		4.656015	.6972411	6.68	0.000	3.289448	6.02258

```

> 3
> -
BSIdep <-
  crhtw2 | .7005313 .1745123 4.01 0.000 .3584935 1.04256
> 9
  depagw2 | .0318522 .0123239 2.58 0.010 .0076978 .056006
> 7
  _cons | 7.980278 .1737475 45.93 0.000 7.639739 8.32081
> 6
> -
Variance
  e.radchw2 | 592.9015 66.29016 476.2256 738.16
> 3
  e.crhtw2 | .1932635 .0278806 .1456645 .256416
> 5
  e.depagw1 | 785.3806 79.30772 644.3559 957.2
> 7
  e.depagw2 | 221.9766 36.65741 160.5976 306.814
> 2
  e.BSIdep | 7.300579 1.276708 5.182045 10.2852
> 2
> -

```

60 . estat gof

Note: model was fit with vce(cluster); only stats(residuals) valid.

61 . estat ic

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	339	.	-8393.83	23	16833.66	16921.66

Note: N=Obs used in calculating BIC; see [\[R\] BIC note](#)

62 . sem, standardized

```

Structural equation model          Number of obs      =       339
Estimation method   = ml
Log pseudolikelihood= -8393.8297

```

(Std. Err. adjusted for **339** clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
Standardized							
>]							
> -							
Structural							
radchw2 <-							
depagw1		-.0958973	.0413972	-2.32	0.021	-.1770344	-.014760
> 2							
avgcumdos~1		.1314235	.0281972	4.66	0.000	.0761579	.18668
> 9							
radchw1		.657123	.0472796	13.90	0.000	.5644567	.749789
> 2							
_cons		.4667435	.1050143	4.44	0.000	.2609193	.672567
> 6							
> -							
crhtw2 <-							
radchw2		.3621168	.0568656	6.37	0.000	.2506622	.473571
> 4							
depagw2		.162107	.0253335	6.40	0.000	.1124542	.211759
> 7							
avgcumdos~1		-.0531325	.0179483	-2.96	0.003	-.0883106	-.017954
> 4							
radchw1		-.3132107	.0600489	-5.22	0.000	-.4309044	-.19551
> 7							
crhtw1		.8113662	.0253111	32.06	0.000	.7617573	.860975
> 1							
_cons		-.194751	.057225	-3.40	0.001	-.30691	-.08259
> 2							
> -							
depagw1 <-							
radchw1		-.3113795	.0476398	-6.54	0.000	-.4047518	-.218007
> 2							
crhtw1		.3884341	.045534	8.53	0.000	.299189	.477679
> 2							
_cons		1.002881	.0791764	12.67	0.000	.8476985	1.15806
> 4							

```

> -
  depagw2 <-
    depagw1 | .4685137 .0512601 9.14 0.000 .3680459 .568981
> 6
    _cons | .2760869 .037724 7.32 0.000 .2021493 .350024
> 5
> -
  BSIddep <-
    crhtw2 | .2267098 .0612237 3.70 0.000 .1067135 .346706
> 1
    depagw2 | .1873452 .0606097 3.09 0.002 .0685524 .30613
> 8
    _cons | 2.783251 .2149622 12.95 0.000 2.361933 3.20456
> 9
> -
Variance
  e.radchw2 | .5118319 .0539201 .4163471 .62921
> 5
  e.crhtw2 | .224457 .0312528 .1708497 .294884
> 5
  e.depagw1 | .7602743 .049931 .668448 .864714
> 9
  e.depagw2 | .7804949 .0480321 .6918097 .880548
> 9
  e.BSIddep | .8880268 .0308503 .8295739 .950598
> 4
> -

```

```

63 . estat framework
    (model contains no latent variables)

```

Endogenous variables on endogenous variables

	observed				
Beta	radchw2	crhtw2	depagw1	depagw2	BSIddep
observed					
radchw2	0	0	-.1015498	0	0
crhtw2	.0098726	0	0	.0089195	0
depagw1	0	0	0	0	0
depagw2	0	0	.2458306	0	0
BSIddep	0	.7005313	0	.0318522	0

Exogenous variables on endogenous variables

	observed		
Gamma	avgcumd~1	radchw1	crhtw1
observed			
radchw2	2.680468	.6250525	0
crhtw2	-.0295446	-.0081225	.8109274
depagw1	0	-.2796966	13.44711
depagw2	0	0	0
BSIdep	0	0	0

Covariances of error variables

	observed				
Psi	e.radchw2	e.crhtw2	e.depagw1	e.depagw2	e.BSIdep
observed					
e.radchw2	592.9015				
e.crhtw2	0	.1932635			
e.depagw1	0	0	785.3806		
e.depagw2	0	0	0	221.9766	
e.BSIdep	0	0	0	0	7.300579

Intercepts of endogenous variables

	observed				
alpha	radchw2	crhtw2	depagw1	depagw2	BSIdep
_cons	15.88568	-.1807124	32.23328	4.656015	7.980278

Covariances of exogenous variables

	observed		
Phi	avgcumd~1	radchw1	crhtw1
observed			
avgcumdosew1	2.78471		
radchw1	-2.269575	1280.311	
crhtw1	.1344321	1.114084	.861959

Means of exogenous variables

kappa	observed		
	avgcumd~1	radchw1	crhtw1
mean	.4300973	53.0413	-.1421184

64 . matlist e(b_std)

	radchw2	depagw1	avgcumd~1	radchw1	_cons	crhtw2	radchw2
r1	-.0958973	.1314235	.657123	.4667435	.3621168		
	crhtw2	depagw2	avgcumd~1	radchw1	crhtw1	_cons	
r1	.162107	-.0531325	-.3132107	.8113662	-.194751		
	depagw1	radchw1	crhtw1	_cons	depagw2	depagw1	_cons
r1	-.3113795	.3884341	1.002881	.4685137	.2760869		
	BSIdcp	crhtw2	depagw2	_cons	var(e.~2)	var(e.~2)	var(e.~2)
r1	.2267098	.1873452	2.783251	.5118319	.224457		
	var(e.~1)	_cons	var(e.~2)	_cons	var(e.B~)	_cons	
r1	.7602743	.7804949	.8880268				

65 . estat teffects

Direct effects

(Std. Err. adjusted for 339 clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
radchw2 <-							
depagw1		-.1015498	.0423147	-2.40	0.016	-.184485	-.018614

```

> 5
  avgcumdos~1 | 2.680468 .5755574 4.66 0.000 1.552396 3.8085
> 4
  radchw1 | .6250525 .0472639 13.22 0.000 .5324169 .717688
> 2
  crhtw1 | 0 (no path)


---


> -
  crhtw2 <-
  radchw2 | .0098726 .0015787 6.25 0.000 .0067783 .012966
> 8
  depagw1 | 0 (no path)
  depagw2 | .0089195 .0013667 6.53 0.000 .0062409 .011598
> 2
  avgcumdos~1 | -.0295446 .0099938 -2.96 0.003 -.0491321 -.009957
> 2
  radchw1 | -.0081225 .0015666 -5.18 0.000 -.011193 -.005051
> 9
  crhtw1 | .8109274 .0264141 30.70 0.000 .7591567 .862698
> 1


---


> -
  depagw1 <-
  radchw1 | -.2796966 .0481504 -5.81 0.000 -.3740697 -.185323
> 5
  crhtw1 | 13.44711 1.897476 7.09 0.000 9.728125 17.1660
> 9


---


> -
  depagw2 <-
  depagw1 | .2458306 .0365588 6.72 0.000 .1741768 .317484
> 5
  radchw1 | 0 (no path)
  crhtw1 | 0 (no path)


---


> -
  BSIdcp <-
  radchw2 | 0 (no path)
  crhtw2 | .7005313 .1745123 4.01 0.000 .3584935 1.04256
> 9
  depagw1 | 0 (no path)
  depagw2 | .0318522 .0123239 2.58 0.010 .0076978 .056006
> 7
  avgcumdos~1 | 0 (no path)
  radchw1 | 0 (no path)
  crhtw1 | 0 (no path)


---


> -

```

Indirect effects

(Std. Err. adjusted for 339 clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
radchw2 <-							
depagw1		0	(no path)				
avgcumdos~1		0	(no path)				
radchw1		.0284031	.0126529	2.24	0.025	.0036038	.053202
> 5							
crhtw1		-1.365551	.6565657	-2.08	0.038	-2.652396	-.078705
> 8							
> -							
crhtw2 <-							
radchw2		0	(no path)				
depagw1		.0011901	.000594	2.00	0.045	.0000259	.002354
> 4							
depagw2		0	(no path)				
avgcumdos~1		.0264631	.0068534	3.86	0.000	.0130306	.039895
> 5							
radchw1		.005838	.0011588	5.04	0.000	.0035668	.008109
> 2							
crhtw1		.0160039	.008369	1.91	0.056	-.000399	.032406
> 8							
> -							
depagw1 <-							
radchw1		0	(no path)				
crhtw1		0	(no path)				
> -							
depagw2 <-							
depagw1		0	(no path)				
radchw1		-.068758	.0157082	-4.38	0.000	-.0995455	-.037970
> 5							
crhtw1		3.305711	.5535558	5.97	0.000	2.220762	4.39066
> 1							
> -							
BSIdep <-							
radchw2		.006916	.001106	6.25	0.000	.0047484	.009083

```

> 7      crhtw2 |           0 (no path)
      depagw1 |    .008664    .0014971    5.79    0.000    .0057297    .011598
> 3      depagw2 |    .0062484    .0009574    6.53    0.000    .0043719    .008124
> 9      avgcumdos~1 |   -.0021587    .007319    -0.29    0.768    -.0165036    .012186
> 2      radchw1 |   -.0037904    .0010388    -3.65    0.000    -.0058264    -.001754
> 4      crhtw1 |    .6845855    .1338693    5.11    0.000    .4222065    .946964
> 5

```

```
> -
```

Total effects

(Std. Err. adjusted for 339 clusters in id

```
> )
```

	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]
> -					
>]					
> -					
Structural					
radchw2 <-					
depagw1	-.1015498	.0423147	-2.40	0.016	-.184485 - .018614
> 5					
avgcumdos~1	2.680468	.5755574	4.66	0.000	1.552396 3.8085
> 4					
radchw1	.6534557	.0415116	15.74	0.000	.5720945 .734816
> 9					
crhtw1	-1.365551	.6565657	-2.08	0.038	-2.652396 -.078705
> 8					

```
> -
```

crhtw2 <-					
radchw2	.0098726	.0015787	6.25	0.000	.0067783 .012966
> 8					
depagw1	.0011901	.000594	2.00	0.045	.0000259 .002354
> 4					
depagw2	.0089195	.0013667	6.53	0.000	.0062409 .011598
> 2					
avgcumdos~1	-.0030816	.0104233	-0.30	0.768	-.0235109 .017347
> 8					
radchw1	-.0022845	.0008493	-2.69	0.007	-.003949 -.000619
> 9					

```

      crhtw1 | .8269313 .0267338 30.93 0.000 .7745339 .879328
> 6
-----
> -
      depagw1 <-
      radchw1 | -.2796966 .0481504 -5.81 0.000 -.3740697 -.185323
> 5
      crhtw1 | 13.44711 1.897476 7.09 0.000 9.728125 17.1660
> 9
-----
> -
      depagw2 <-
      depagw1 | .2458306 .0365588 6.72 0.000 .1741768 .317484
> 5
      radchw1 | -.068758 .0157082 -4.38 0.000 -.0995455 -.037970
> 5
      crhtw1 | 3.305711 .5535558 5.97 0.000 2.220762 4.39066
> 1
-----
> -
      BSIdcp <-
      radchw2 | .006916 .001106 6.25 0.000 .0047484 .009083
> 7
      crhtw2 | .7005313 .1745123 4.01 0.000 .3584935 1.04256
> 9
      depagw1 | .008664 .0014971 5.79 0.000 .0057297 .011598
> 3
      depagw2 | .0381006 .0123692 3.08 0.002 .0138574 .062343
> 8
      avgcumdos~1 | -.0021587 .007319 -0.29 0.768 -.0165036 .012186
> 2
      radchw1 | -.0037904 .0010388 -3.65 0.000 -.0058264 -.001754
> 4
      crhtw1 | .6845855 .1338693 5.11 0.000 .4222065 .946964
> 5
-----
> -

```

```
66 .  
67 .  
68 .  
69 .  
70 . title "Female Dose Summary Chornobyl health Threat score depression model"  
  
*****  
> *  
*****  
> *  
***** ****  
> *  
***** ****  
> *  
***** Female Dose Summary Chornobyl health Threat score depression model ****  
> *  
***** ****  
> *  
***** ****  
> *  
***** 31 Jul 2012 03:54:57 ****  
> *  
*****  
> *  
*****  
> *  
*****  
  
71 . // sembuilder "/Users/robertyaffee/Documents/data/research/chwk/phase3/sem/B  
> SIdepPathModel/FemDoseSumScrDepPthmodel.stsem"  
72 . // save "/Users/robertyaffee/Documents/data/research/chwk/phase3/sem/BSIdepP  
> athModel/FemDoseSumScrDepPthmodel.stsem", replaceset more off  
73 . title4 "nonrobust model"
```

```
74 . des avgcumdosew1 crhtw1 depagw1 depagw2 radchw1 radchw2 radchw3
```

variable name	storage type	display format	value label	variable label
avgcumdosew1	double	%8.0g		Cumulative external dose in mGy for wave 1
crhtw1	float	%9.0g		Chornobyl related health threat alpha = .796
depagw1	double	%9.0g		Self-reported depressive symptoms in wave 1 (1986)
depagw2	double	%9.0g		Self-reported depressive symptoms in wave 2 1987-1996 inc.
radchw1	double	%8.0g		believed % of pollution due to Chornobyl in wave 1
radchw2	double	%8.0g		believed % of pollution due to Chornobyl in wave 2
radchw3	double	%8.0g		believed % of pollution due to Chornobyl in wave 3

```
75 . set more off
```

```
76 . sem (avgcumdosew1 -> depagw1) (avgcumdosew1 -> BSIdcp) (avgcumdosew1 -> age)
> ///
> (depagw1 -> depagw2) (radchw1 -> depagw1) (radchw1 -> crhtw1) ///
> (radchw1 -> radchw2) (radchw1 -> crhtw2) (crhtw1 -> depagw2) ///
> (crhtw1 -> crhtw2) (crhtw1 -> BSIdcp) (radchw2 -> crhtw2) ///
> (radchw2 -> BSIdcp) (depagw2 -> radchw2) (depagw2 -> crhtw2) ///
> (depagw2 -> BSIdcp) (crhtw2 -> BSIdcp) (age -> depagw1) (age -> crhtw1) //
> /
> (age -> crhtw2) (age -> BSIdcp) if gender==2, nocapslatent nolog
(1 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)
```

Endogenous variables

Observed: **depagw1 BSIdcp age depagw2 crhtw1 radchw2 crhtw2**

Exogenous variables

Observed: **avgcumdosew1 radchw1**

```
Structural equation model      Number of obs      =      362
Estimation method = ml
Log likelihood      = -10064.647
```

> -							
		OIM					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval		
>]							
> -							
Structural							
depagw1 <-							
age	.265543	.1224322	2.17	0.030	.0255803	.505505	
> 8							
avgcumdos~1	13.03686	2.613895	4.99	0.000	7.913719	18.1	
> 6							
radchw1	-.0786365	.0383214	-2.05	0.040	-.1537451	-.003527	
> 8							
_cons	-.2884023	6.351879	-0.05	0.964	-12.73786	12.1610	
> 5							
> -							
BSIdep <-							
age	.0657521	.0160964	4.08	0.000	.0342038	.097300	
> 5							
depagw2	.0197734	.0098494	2.01	0.045	.0004689	.03907	
> 8							
crhtw1	-.6106943	.2748287	-2.22	0.026	-1.149349	-.072040	
> 1							
radchw2	-.0117596	.005857	-2.01	0.045	-.023239	-.000280	
> 1							
crhtw2	1.482689	.316986	4.68	0.000	.8614079	2.1039	
> 7							
avgcumdos~1	.8141524	.3343399	2.44	0.015	.1588583	1.46944	
> 6							
_cons	6.451681	.884747	7.29	0.000	4.717608	8.18575	
> 3							
> -							
age <-							
avgcumdos~1	3.928799	1.11227	3.53	0.000	1.74879	6.10880	
> 9							
_cons	48.94976	.7161976	68.35	0.000	47.54604	50.3534	
> 8							
> -							
depagw2 <-							
depagw1	.3469208	.0307885	11.27	0.000	.2865765	.407265	
> 1							
crhtw1	-2.725531	.9192624	-2.96	0.003	-4.527252	-.9238	
> 1							
_cons	5.831444	.9590293	6.08	0.000	3.951781	7.71110	

```

> 7
-----
> -
    crhtw1 <-
      age |      .0156495      .003653      4.28      0.000      .0084899      .022809
> 2
    radchw1 |      .0111706      .0011612      9.62      0.000      .0088948      .013446
> 5
      _cons |     -1.338271      .1923661      -6.96      0.000     -1.715302     -.961240
> 5
-----
> -
    radchw2 <-
      depagw2 |      .1381542      .065934      2.10      0.036      .0089259      .267382
> 4
    radchw1 |      .6415708      .0343485     18.68      0.000      .5742491      .708892
> 6
      _cons |     21.74291     2.603748      8.35      0.000     16.63966     26.8461
> 6
-----
> -
    crhtw2 <-
      age |      .0061808      .0022412      2.76      0.006      .0017881      .010573
> 5
    depagw2 |      .0072639      .0013433      5.41      0.000      .004631      .009896
> 8
    crhtw1 |      .7144429      .0315123     22.67      0.000      .65268      .776205
> 8
    radchw2 |      .0147294      .0010532     13.99      0.000      .0126653      .016793
> 6
    radchw1 |     -.0122293      .0010444    -11.71      0.000     -.0142764     -.010182
> 2
      _cons |     -.4749309      .1229251      -3.86      0.000     -.7158597     -.234002
> 1
-----
> -
Variance
    e.depagw1 |      720.3633     53.54418
> 4
    e.BSIdep |      11.55687     .8590153
> 2
    e.age |      135.0564     10.03866
> 2
    e.depagw2 |      272.1402     20.22802
> 7
    e.crhtw1 |      .6619999     .0492061
> 9
    e.radchw2 |      582.6394     43.30724
> 4
    e.radchw1 |
    e._cons |

```


Observed: depagw1 BSIdep age depagw2 crhtw1 radchw2 crhtw2

Exogenous variables

Observed: avgcumdosew1 radchw1

Structural equation model Number of obs = 362

Estimation method = ml

Log pseudolikelihood= -10064.647

(Std. Err. adjusted for 362 clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
depagw1 <-							
age		.265543	.1245006	2.13	0.033	.0215263	.509559
> 8							
avgcumdos~1		13.03686	4.856171	2.68	0.007	3.51894	22.5547
> 8							
radchw1		-.0786365	.0431478	-1.82	0.068	-.1632047	.005931
> 8							
_cons		-.2884023	5.082497	-0.06	0.955	-10.24991	9.67310
> 9							
> -							
BSIdep <-							
age		.0657521	.0147984	4.44	0.000	.0367478	.094756
> 4							
depagw2		.0197734	.0095985	2.06	0.039	.0009607	.038586
> 2							
crhtw1		-.6106943	.3188835	-1.92	0.055	-1.235695	.014305
> 8							
radchw2		-.0117596	.0063636	-1.85	0.065	-.0242321	.000712
> 9							
crhtw2		1.482689	.358085	4.14	0.000	.7808554	2.18452
> 3							
avgcumdos~1		.8141524	.4235437	1.92	0.055	-.015978	1.64428
> 3							
_cons		6.451681	.7954758	8.11	0.000	4.892577	8.01078
> 4							
> -							
age <-							

```

    avgcumdos~1 |    3.928799    1.115207    3.52    0.000    1.743034    6.11456
> 4      _cons |    48.94976    .7401591    66.13    0.000    47.49908    50.4004
> 5
-----
> -
    depagw2 <-
      depagw1 |    .3469208    .0576615    6.02    0.000    .2339063    .459935
> 4
      crhtw1 |   -2.725531    1.025888    -2.66    0.008   -4.736236   -.714826
> 7
      _cons |    5.831444    .768957    7.58    0.000    4.324316    7.33857
> 2
-----
> -
      crhtw1 <-
        age |    .0156495    .0037127    4.22    0.000    .0083727    .022926
> 3
      radchw1 |    .0111706    .0012103    9.23    0.000    .0087985    .013542
> 7
      _cons |   -1.338271    .1914047   -6.99    0.000   -1.713417   -.963124
> 8
-----
> -
      radchw2 <-
        depagw2 |    .1381542    .0663012    2.08    0.037    .0082061    .268102
> 2
      radchw1 |    .6415708    .0419538   15.29    0.000    .559343    .723798
> 7
      _cons |   21.74291    3.415033    6.37    0.000   15.04957   28.4362
> 5
-----
> -
      crhtw2 <-
        age |    .0061808    .0020948    2.95    0.003    .002075    .010286
> 6
      depagw2 |    .0072639    .0013714    5.30    0.000    .0045759    .009951
> 8
      crhtw1 |    .7144429    .0359837   19.85    0.000    .6439161    .784969
> 7
      radchw2 |    .0147294    .0013612   10.82    0.000    .0120616    .017397
> 3
      radchw1 |   -.0122293    .0013853   -8.83    0.000   -.0149445   -.009514
> 1
      _cons |   -.4749309    .1174283   -4.04    0.000   -.7050862   -.244775
> 6
-----
> -
Variance |

```

```

      e.depawg1 |    720.3633    92.22052                560.5072    925.810
> 1
      e.BSIdep |    11.55687    1.327249                9.227496    14.4742
> 6
      e.age |    135.0564    8.338223                119.6638    152.428
> 9
      e.depawg2 |    272.1402    42.39661                200.5323    369.318
> 5
      e.crhtw1 |     .6619999    .0414378                .5855677    .748408
> 5
      e.radchw2 |    582.6394    61.3243                474.0331    716.128
> 6
      e.crhtw2 |     .2324073    .0244519                .1891009    .285631
> 5

```

```

> -

```

```

80 .
81 . estat gof
    Note: model was fit with vce(cluster); only stats(residuals) valid.
82 . estat ic

```

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	362	.	-10064.65	35	20199.29	20335.5

Note: N=Obs used in calculating BIC; see [\[R\] BIC note](#)

```

83 . sem, standardized

```

```

Structural equation model                Number of obs      =      362
Estimation method = ml
Log pseudolikelihood= -10064.647

```

(Std. Err. adjusted for 362 clusters in id

```

> )

```

```

> -

```

Standardized	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval
>]					

```

> -
Structural
  depawg1 <-
    age |    .1112665    .0511284    2.18    0.030    .0110567    .211476
> 4

```

```

    avgcumdos~1 | .2537932 .0923486 2.75 0.006 .0727932 .434793
> 1
    radchw1 | -.1036583 .0554636 -1.87 0.062 -.212365 .005048
> 3
    _cons | -.0102238 .1801997 -0.06 0.955 -.3634087 .342961
> 1
-----
> -
    BSIdep <-
    age | .2070023 .043339 4.78 0.000 .1220595 .291945
> 2
    depagw2 | .1019597 .0492393 2.07 0.038 .0054525 .198466
> 9
    crhtw1 | -.1517423 .0804909 -1.89 0.059 -.3095015 .00601
> 7
    radchw2 | -.1060184 .0591056 -1.79 0.073 -.2218632 .009826
> 5
    crhtw2 | .3492541 .077488 4.51 0.000 .1973805 .501127
> 8
    avgcumdos~1 | .1190826 .0621663 1.92 0.055 -.0027612 .240926
> 3
    _cons | 1.718393 .2426677 7.08 0.000 1.242773 2.19401
> 3
-----
> -
    age <-
    avgcumdos~1 | .1825312 .0507828 3.59 0.000 .0829987 .282063
> 7
    _cons | 4.141283 .137592 30.10 0.000 3.871608 4.41095
> 8
-----
> -
    depagw2 <-
    depagw1 | .5054982 .0585016 8.64 0.000 .3908373 .620159
> 2
    crhtw1 | -.1313371 .0465273 -2.82 0.005 -.222529 -.040145
> 2
    _cons | .301217 .0405807 7.42 0.000 .2216803 .380753
> 6
-----
> -
    crhtw1 <-
    age | .1982821 .0487468 4.07 0.000 .1027402 .293824
> 1
    radchw1 | .4452565 .0464343 9.59 0.000 .3542468 .536266
> 1
    _cons | -1.434535 .2039809 -7.03 0.000 -1.83433 -1.0347
> 4
-----

```

```

> -
    radchw2 <-
        depagw2 |      .079017   .0374634    2.11   0.035      .00559   .15244
> 4
    radchw1 |      .7048081   .0397999   17.71   0.000   .6268017   .782814
> 6
    _cons |      .642359   .109613    5.86   0.000   .4275214   .857196
> 5
-----
> -
    crhtw2 <-
        age |      .0826073   .0290108    2.85   0.004   .0257471   .139467
> 5
    depagw2 |      .1590097   .034062    4.67   0.000   .0922495    .2257
> 7
    crhtw1 |      .7536309   .0353243   21.33   0.000   .6843966   .822865
> 2
    radchw2 |      .563747   .050545   11.15   0.000   .4646807   .662813
> 3
    radchw1 |     -.5141928   .0548935   -9.37   0.000   -.6217821   -.406603
> 5
    _cons |     -.5370177   .1324656   -4.05   0.000   -.7966454   -.277389
> 9
-----
> -
Variance
    e.depagw1 |      .905273   .0514775                .8097981   1.01200
> 4
    e.BSIdep |      .8198595   .033853                .7561226   .88896
> 9
    e.age |      .9666824   .0185389                .9310212   1.00370
> 9
    e.depagw2 |      .7261046   .0570797                .6224229   .847057
> 4
    e.crhtw1 |      .7606624   .0412545                .6839543   .845973
> 5
    e.radchw2 |      .508534   .0554247                .4107222   .629639
> 2
    e.crhtw2 |      .2971434   .0310995                .2420349   .364799
> 5
-----
> -

```

84 . estat framework
(model contains no latent variables)

Endogenous variables on endogenous variables

	Beta	observed				
		depagw1	BSIdep	age	depagw2	crhtw1
observed						
depagw1		0	0	.265543	0	0
BSIdep		0	0	.0657521	.0197734	-.6106943
age		0	0	0	0	0
depagw2		.3469208	0	0	0	-2.725531
crhtw1		0	0	.0156495	0	0
radchw2		0	0	0	.1381542	0
crhtw2		0	0	.0061808	.0072639	.7144429

	Beta	observed	
		radchw2	crhtw2
observed			
depagw1		0	0
BSIdep		-.0117596	1.482689
age		0	0
depagw2		0	0
crhtw1		0	0
radchw2		0	0
crhtw2		.0147294	0

Exogenous variables on endogenous variables

	Gamma	observed	
		avgcumd~1	radchw1
observed			
depagw1		13.03686	-.0786365
BSIdep		.8141524	0
age		3.928799	0
depagw2		0	0
crhtw1		0	.0111706
radchw2		0	.6415708
crhtw2		0	-.0122293

Covariances of error variables

	observed				
Psi	e.depawg1	e.BSIdep	e.age	e.depawg2	e.crhtw1
observed					
e.depawg1	720.3633				
e.BSIdep	0	11.55687			
e.age	0	0	135.0564		
e.depawg2	0	0	0	272.1402	
e.crhtw1	0	0	0	0	.6619999
e.radchw2	0	0	0	0	0
e.crhtw2	0	0	0	0	0

	observed	
Psi	e.radchw2	e.crhtw2
observed		
e.radchw2	582.6394	
e.crhtw2	0	.2324073

Intercepts of endogenous variables

	observed				
alpha	depawg1	BSIdep	age	depawg2	crhtw1
_cons	-.2884023	6.451681	48.94976	5.831444	-1.338271

	observed	
alpha	radchw2	crhtw2
_cons	21.74291	-.4749309

Covariances of exogenous variables

	observed	
Phi	avgcumd~1	radchw1
observed		
avgcumdosew1	.3015684	
radchw1	1.120499	1382.714

Means of exogenous variables

kappa	observed	
	avgcumdos~1	radchw1
mean	.336224	61.29006

85 . estat teffects

Direct effects

(Std. Err. adjusted for 362 clusters in id

>)

> -							
		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
>]							
> -							
Structural							
depagw1 <-							
age		.265543	.1245006	2.13	0.033	.0215263	.509559
> 8							
avgcumdos~1		13.03686	4.856171	2.68	0.007	3.51894	22.5547
> 8							
radchw1		-.0786365	.0431478	-1.82	0.068	-.1632047	.005931
> 8							
> -							
BSIdep <-							
depagw1		0 (no path)					
age		.0657521	.0147984	4.44	0.000	.0367478	.094756
> 4							
depagw2		.0197734	.0095985	2.06	0.039	.0009607	.038586
> 2							
crhtw1		-.6106943	.3188835	-1.92	0.055	-1.235695	.014305
> 8							
radchw2		-.0117596	.0063636	-1.85	0.065	-.0242321	.000712
> 9							
crhtw2		1.482689	.358085	4.14	0.000	.7808554	2.18452
> 3							
avgcumdos~1		.8141524	.4235437	1.92	0.055	-.015978	1.64428
> 3							
radchw1		0 (no path)					
> -							
age <-							
avgcumdos~1		3.928799	1.115207	3.52	0.000	1.743034	6.11456
> 4							

```

> -
  depagw2 <-
    depagw1 | .3469208 .0576615 6.02 0.000 .2339063 .459935
> 4
    age | 0 (no path)
    crhtw1 | -2.725531 1.025888 -2.66 0.008 -4.736236 -.714826
> 7
    avgcumdos~1 | 0 (no path)
    radchw1 | 0 (no path)

```

```

> -
  crhtw1 <-
    age | .0156495 .0037127 4.22 0.000 .0083727 .022926
> 3
    avgcumdos~1 | 0 (no path)
    radchw1 | .0111706 .0012103 9.23 0.000 .0087985 .013542
> 7

```

```

> -
  radchw2 <-
    depagw1 | 0 (no path)
    age | 0 (no path)
    depagw2 | .1381542 .0663012 2.08 0.037 .0082061 .268102
> 2
    crhtw1 | 0 (no path)
    avgcumdos~1 | 0 (no path)
    radchw1 | .6415708 .0419538 15.29 0.000 .559343 .723798
> 7

```

```

> -
  crhtw2 <-
    depagw1 | 0 (no path)
    age | .0061808 .0020948 2.95 0.003 .002075 .010286
> 6
    depagw2 | .0072639 .0013714 5.30 0.000 .0045759 .009951
> 8
    crhtw1 | .7144429 .0359837 19.85 0.000 .6439161 .784969
> 7
    radchw2 | .0147294 .0013612 10.82 0.000 .0120616 .017397
> 3
    avgcumdos~1 | 0 (no path)
    radchw1 | -.0122293 .0013853 -8.83 0.000 -.0149445 -.009514
> 1

```

```

> -

```

Indirect effects

(Std. Err. adjusted for 362 clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
depagw1 <-							
age		0	(no path)				
avgcumdos~1		1.043265	.5903554	1.77	0.077	-.1138101	2.20034
> 1							
radchw1		0	(no path)				
> -							
BSIdcp <-							
depagw1		.0110793	.0018415	6.02	0.000	.00747	.014688
> 5							
age		.0177645	.0035596	4.99	0.000	.0107877	.024741
> 2							
depagw2		.0121626	.0019232	6.32	0.000	.0083932	.01593
> 2							
crhtw1		.972254	.0625957	15.53	0.000	.8495686	1.09493
> 9							
radchw2		.0218392	.0020182	10.82	0.000	.0178836	.025794
> 7							
crhtw2		0	(no path)				
avgcumdos~1		.472559	.1325485	3.57	0.000	.2127687	.732349
> 4							
radchw1		-.0084979	.0043979	-1.93	0.053	-.0171176	.000121
> 9							
> -							
age <-							
avgcumdos~1		0	(no path)				
> -							
depagw2 <-							
depagw1		0	(no path)				
age		.0494692	.0444675	1.11	0.266	-.0376856	.136623
> 9							
crhtw1		0	(no path)				
avgcumdos~1		4.717112	1.810717	2.61	0.009	1.168172	8.26605
> 3							
radchw1		-.0577265	.0206586	-2.79	0.005	-.0982165	-.017236
> 4							

> -							
crhtw1 <-							
age	0	(no path)					
avgcumdos~1	.0614838	.0227395	2.70	0.007	.0169152	.106052	
> 4							
radchw1	0	(no path)					
> -							
radchw2 <-							
depagw1	.0479286	.0079662	6.02	0.000	.0323151	.06354	
> 2							
age	.0068344	.0061434	1.11	0.266	-.0052064	.018875	
> 2							
depagw2	0	(no path)					
crhtw1	-.3765434	.1417308	-2.66	0.008	-.6543306	-.098756	
> 3							
avgcumdos~1	.6516887	.3779793	1.72	0.085	-.0891372	1.39251	
> 5							
radchw1	-.0079752	.0050024	-1.59	0.111	-.0177797	.001829	
> 4							
> -							
crhtw2 <-							
depagw1	.003226	.0005362	6.02	0.000	.0021751	.004276	
> 9							
age	.0116407	.0025855	4.50	0.000	.0065732	.016708	
> 1							
depagw2	.0020349	.0009766	2.08	0.037	.0001209	.00394	
> 9							
crhtw1	-.0253442	.0095395	-2.66	0.008	-.0440414	-.00664	
> 7							
radchw2	0	(no path)					
avgcumdos~1	.1120733	.0303691	3.69	0.000	.052551	.171595	
> 7							
radchw1	.016894	.0013811	12.23	0.000	.014187	.019600	
> 9							
> -							

Total effects

(Std. Err. adjusted for 362 clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval	
> -							
>]							
> -							
Structural							
depagw1 <-							
	age	.265543	.1245006	2.13	0.033	.0215263	.509559
> 8							
avgcumdos~1		14.08012	4.784791	2.94	0.003	4.702106	23.4581
> 4							
	radchw1	-.0786365	.0431478	-1.82	0.068	-.1632047	.005931
> 8							
> -							
BSIdep <-							
	depagw1	.0110793	.0018415	6.02	0.000	.00747	.014688
> 5							
	age	.0835166	.0151968	5.50	0.000	.0537313	.113301
> 9							
	depagw2	.0319361	.0100264	3.19	0.001	.0122847	.051587
> 4							
	crhtw1	.3615596	.3356866	1.08	0.281	-.296374	1.01949
> 3							
	radchw2	.0100796	.0065337	1.54	0.123	-.0027262	.022885
> 4							
	crhtw2	1.482689	.358085	4.14	0.000	.7808554	2.18452
> 3							
	avgcumdos~1	1.286711	.3902202	3.30	0.001	.5218938	2.05152
> 9							
	radchw1	-.0084979	.0043979	-1.93	0.053	-.0171176	.000121
> 9							
> -							
age <-							
	avgcumdos~1	3.928799	1.115207	3.52	0.000	1.743034	6.11456
> 4							
> -							
depagw2 <-							
	depagw1	.3469208	.0576615	6.02	0.000	.2339063	.459935
> 4							
	age	.0494692	.0444675	1.11	0.266	-.0376856	.136623
> 9							

```

      crhtw1 | -2.725531  1.025888  -2.66  0.008  -4.736236  -.714826
> 7
    avgcumdos~1 |  4.717112  1.810717   2.61  0.009   1.168172   8.26605
> 3
      radchw1 | -.0577265  .0206586  -2.79  0.005  -.0982165  -.017236
> 4
-----
> -
      crhtw1 <-
        age |  .0156495  .0037127   4.22  0.000   .0083727   .022926
> 3
    avgcumdos~1 |  .0614838  .0227395   2.70  0.007   .0169152   .106052
> 4
      radchw1 |  .0111706  .0012103   9.23  0.000   .0087985   .013542
> 7
-----
> -
    radchw2 <-
      depagw1 |  .0479286  .0079662   6.02  0.000   .0323151   .06354
> 2
        age |  .0068344  .0061434   1.11  0.266  -.0052064   .018875
> 2
      depagw2 |  .1381542  .0663012   2.08  0.037   .0082061   .268102
> 2
      crhtw1 | -.3765434  .1417308  -2.66  0.008  -.6543306  -.098756
> 3
    avgcumdos~1 |  .6516887  .3779793   1.72  0.085  -.0891372   1.39251
> 5
      radchw1 |  .6335957  .0416212  15.22  0.000   .5520196   .715171
> 8
-----
> -
    crhtw2 <-
      depagw1 |  .003226  .0005362   6.02  0.000   .0021751   .004276
> 9
        age |  .0178215  .0033813   5.27  0.000   .0111942   .024448
> 8
      depagw2 |  .0092988  .0014016   6.63  0.000   .0065517   .01204
> 6
      crhtw1 |  .6890987  .0372223  18.51  0.000   .6161443   .762053
> 1
    radchw2 |  .0147294  .0013612  10.82  0.000   .0120616   .017397
> 3
    avgcumdos~1 |  .1120733  .0303691   3.69  0.000   .052551   .171595
> 7
      radchw1 |  .0046647  .0011284   4.13  0.000   .002453   .006876
> 3
-----
> -

```

86 .
87 .
88 .