```
1 . sem (cumdose1 -> cumdose2) (cumdose2 -> cumdose3) (whpsleep -> whpel) (whpsl
  > eep -> whppa) (goferw1 -> cumdose1) (goferw1 -> goferw2) (goferw1 -> aborw3)
  >  (goferw1 -> crhrw2) (aborw2) (aborw3 -> whppa) (crhrw1 -> goferw1) (crhrw1
  > -> aborw1) (crhrw1 -> crhrw2) (crhrw1 -> crhrw3) (crhrw2 -> crhrw3) (crhrw3
  > -> whpsleep) (crhrw3 -> whpel) (crhrw3 -> whppa) (whpel -> whppa) if gender=
  > =2, cov( e.cumdose2*e.cumdose3 e.goferw2*e.crhrw2 e.aborw3*e.crhrw3 e.crhrw2
  > *e.crhrw3) nocapslatent
  (2 observations with missing values excluded;
   specify option 'method(mlmv)' to use all observations)

  Endogenous variables

  Observed:  cumdose1 cumdose2 cumdose3 whpsleep whpel whppa goferw1 goferw2
             aborw3 crhrw2 aborw1 crhrw3

  Exogenous variables

  Observed:  aborw2 crhrw1

  Fitting target model:

  Iteration 0:   log likelihood = -11834.652  (not concave)
  Iteration 1:   log likelihood = -11414.583  (not concave)
  Iteration 2:   log likelihood = -11288.514  (not concave)
  Iteration 3:   log likelihood = -11180.256  (not concave)
  Iteration 4:   log likelihood = -11022.228
  Iteration 5:   log likelihood = -10985.843
  Iteration 6:   log likelihood =  -10972.56
  Iteration 7:   log likelihood = -10972.052
  Iteration 8:   log likelihood = -10972.044
  Iteration 9:   log likelihood = -10972.044

  Structural equation model                       Number of obs      =       361
  Estimation method  = ml
  Log likelihood     = -10972.044
```

	OIM				
	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural					
cumdo~1 <-					
goferw1	.0032023	.0007829	4.09	0.000	.0016679	.0047366
_cons	.2413505	.0366004	6.59	0.000	.169615	.313086
cumdo~2 <-					
cumdose1	2.18886	.0650405	33.65	0.000	2.061383	2.316337
_cons	.1616705	.0419252	3.86	0.000	.0794987	.2438424

cumdo~3 <-						
cumdose2	1.231229	.0130696	94.21	0.000	1.205613	1.256845
_cons	.0991724	.0196258	5.05	0.000	.0607066	.1376383
whpsl~p <-						
crhrw3	9.538629	1.752857	5.44	0.000	6.103092	12.97417
_cons	24.70858	1.592781	15.51	0.000	21.58679	27.83037
whpel <-						
whpsleep	.5418411	.0516632	10.49	0.000	.4405831	.6430991
crhrw3	4.486308	1.789785	2.51	0.012	.9783935	7.994222
_cons	16.95847	2.018407	8.40	0.000	13.00247	20.91448
whppa <-						
whpsleep	.2177445	.0336108	6.48	0.000	.1518686	.2836204
whpel	.2186883	.0298938	7.32	0.000	.1600975	.277279
aborw3	-4.971303	2.087643	-2.38	0.017	-9.063008	-.8795992
crhrw3	2.707541	1.02623	2.64	0.008	.6961675	4.718915
_cons	5.980459	1.288088	4.64	0.000	3.455854	8.505064
goferw1 <-						
crhrw1	5.61437	1.992054	2.82	0.005	1.710016	9.518724
_cons	28.91381	1.900004	15.22	0.000	25.18987	32.63775
goferw2 <-						
goferw1	.2005401	.0230763	8.69	0.000	.1553115	.2457688
_cons	2.160712	1.078869	2.00	0.045	.0461683	4.275256
aborw3 <-						
goferw1	-.001451	.000605	-2.40	0.016	-.0026367	-.0002652
_cons	.167684	.0283007	5.93	0.000	.1122156	.2231524
crhrw2 <-						
goferw1	.004843	.0008785	5.51	0.000	.0031213	.0065647
crhrw1	.6039286	.0342305	17.64	0.000	.5368381	.6710191
_cons	-.0514853	.0413489	-1.25	0.213	-.1325277	.029557
aborw1 <-						
crhrw1	.177193	.0493987	3.59	0.000	.0803733	.2740128
_cons	.250798	.0471161	5.32	0.000	.1584522	.3431438
crhrw3 <-						
crhrw2	1.232097	.0842987	14.62	0.000	1.066875	1.39732
crhrw1	-.2328631	.0557321	-4.18	0.000	-.342096	-.1236302
_cons	-.0085263	.0179436	-0.48	0.635	-.0436952	.0266426
Variance						
e.cumdose1	.2890055	.0215113			.2497751	.3343975

e.cumdose2	.4618044	.0343732			.3991179	.5343367
e.cumdose3	.0893406	.0067436			.0770546	.1035855
e.whpsleep	882.7846	65.70769			762.9532	1021.437
e.whpel	850.5979	63.31195			735.1356	984.1951
e.whppa	274.2456	20.41273			237.0188	317.3194
e.goferw1	1278.146	95.13534			1104.647	1478.895
e.goferw2	251.1142	18.69101			217.0273	290.5549
e.aborw3	.1729249	.0128712			.1494516	.200085
e.crhrw2	.3767427	.0279205			.3258082	.4356399
e.aborw1	.7859768	.0585021			.6792862	.9094244
e.crhrw3	.0942011	.0142414			.0700439	.1266898
Covariance						
e.cumdose2						
e.cumdose3	.0428724	.0124823	3.43	0.001	.0184076	.0673373
e.goferw2						
e.crhrw2	1.322992	.4937613	2.68	0.007	.3552381	2.290747
e.aborw3						
e.crhrw3	.0152666	.0062382	2.45	0.014	.00304	.0274931
e.crhrw2						
e.crhrw3	-.0734963	.0329222	-2.23	0.026	-.1380225	-.00897

LR test of model vs. saturated: chi2(**68**) = **75.81**, Prob > chi2 = **0.2411**

```
2 .
3 . (note: file /Users/robertyaffee/Documents/data/research/chwk/phase3/Htests/H
> 9-H16Path/H9H10H13H14/H9H10H13H14mod2.stsem not found)
sem (cumdose1 -> cumdose2) (cumdose2 -> cumdose3) (whpsleep -> whpel) (whpslee
> p -> whppa) (goferw1 -> cumdose1) (goferw1 -> goferw2) (goferw1 -> aborw3) (
> goferw1 -> crhrw2) (aborw2) (aborw3 -> whppa) (crhrw1 -> goferw1) (crhrw1 ->
>  aborw1) (crhrw1 -> crhrw2) (crhrw1 -> crhrw3) (crhrw2 -> crhrw3) (crhrw3 ->
>  whpsleep) (crhrw3 -> whpel) (crhrw3 -> whppa) (whpel -> whppa) if gender==2
> , cov( e.cumdose2*e.cumdose3 e.goferw2*e.crhrw2 e.aborw3*e.crhrw3 e.crhrw2*e
> .crhrw3) nocapslatent
(2 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  cumdose1 cumdose2 cumdose3 whpsleep whpel whppa goferw1 goferw2
           aborw3 crhrw2 aborw1 crhrw3

Exogenous variables

Observed:  aborw2 crhrw1
```

```
Fitting target model:

Iteration 0:   log likelihood = -11834.652  (not concave)
Iteration 1:   log likelihood = -11414.583  (not concave)
Iteration 2:   log likelihood = -11288.514  (not concave)
Iteration 3:   log likelihood = -11180.256  (not concave)
Iteration 4:   log likelihood = -11022.228
Iteration 5:   log likelihood = -10985.843
Iteration 6:   log likelihood =  -10972.56
Iteration 7:   log likelihood = -10972.052
Iteration 8:   log likelihood = -10972.044
Iteration 9:   log likelihood = -10972.044

Structural equation model                       Number of obs      =       361
Estimation method  = ml
Log likelihood     = -10972.044
```

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
cumdo~1 <-						
goferw1	.0032023	.0007829	4.09	0.000	.0016679	.0047366
_cons	.2413505	.0366004	6.59	0.000	.169615	.313086
cumdo~2 <-						
cumdose1	2.18886	.0650405	33.65	0.000	2.061383	2.316337
_cons	.1616705	.0419252	3.86	0.000	.0794987	.2438424
cumdo~3 <-						
cumdose2	1.231229	.0130696	94.21	0.000	1.205613	1.256845
_cons	.0991724	.0196258	5.05	0.000	.0607066	.1376383
whpsl~p <-						
crhrw3	9.538629	1.752857	5.44	0.000	6.103092	12.97417
_cons	24.70858	1.592781	15.51	0.000	21.58679	27.83037
whpel <-						
whpsleep	.5418411	.0516632	10.49	0.000	.4405831	.6430991
crhrw3	4.486308	1.789785	2.51	0.012	.9783935	7.994222
_cons	16.95847	2.018407	8.40	0.000	13.00247	20.91448
whppa <-						
whpsleep	.2177445	.0336108	6.48	0.000	.1518686	.2836204
whpel	.2186883	.0298938	7.32	0.000	.1600975	.277279
aborw3	-4.971303	2.087643	-2.38	0.017	-9.063008	-.8795992
crhrw3	2.707541	1.02623	2.64	0.008	.6961675	4.718915
_cons	5.980459	1.288088	4.64	0.000	3.455854	8.505064

goferw1 <-						
crhrw1	5.61437	1.992054	2.82	0.005	1.710016	9.518724
_cons	28.91381	1.900004	15.22	0.000	25.18987	32.63775
goferw2 <-						
goferw1	.2005401	.0230763	8.69	0.000	.1553115	.2457688
_cons	2.160712	1.078869	2.00	0.045	.0461683	4.275256
aborw3 <-						
goferw1	-.001451	.000605	-2.40	0.016	-.0026367	-.0002652
_cons	.167684	.0283007	5.93	0.000	.1122156	.2231524
crhrw2 <-						
goferw1	.004843	.0008785	5.51	0.000	.0031213	.0065647
crhrw1	.6039286	.0342305	17.64	0.000	.5368381	.6710191
_cons	-.0514853	.0413489	-1.25	0.213	-.1325277	.029557
aborw1 <-						
crhrw1	.177193	.0493987	3.59	0.000	.0803733	.2740128
_cons	.250798	.0471161	5.32	0.000	.1584522	.3431438
crhrw3 <-						
crhrw2	1.232097	.0842987	14.62	0.000	1.066875	1.39732
crhrw1	-.2328631	.0557321	-4.18	0.000	-.342096	-.1236302
_cons	-.0085263	.0179436	-0.48	0.635	-.0436952	.0266426
Variance						
e.cumdose1	.2890055	.0215113			.2497751	.3343975
e.cumdose2	.4618044	.0343732			.3991179	.5343367
e.cumdose3	.0893406	.0067436			.0770546	.1035855
e.whpsleep	882.7846	65.70769			762.9532	1021.437
e.whpel	850.5979	63.31195			735.1356	984.1951
e.whppa	274.2456	20.41273			237.0188	317.3194
e.goferw1	1278.146	95.13534			1104.647	1478.895
e.goferw2	251.1142	18.69101			217.0273	290.5549
e.aborw3	.1729249	.0128712			.1494516	.200085
e.crhrw2	.3767427	.0279205			.3258082	.4356399
e.aborw1	.7859768	.0585021			.6792862	.9094244
e.crhrw3	.0942011	.0142414			.0700439	.1266898
Covariance						
e.cumdose2						
e.cumdose3	.0428724	.0124823	3.43	0.001	.0184076	.0673373
e.goferw2						
e.crhrw2	1.322992	.4937613	2.68	0.007	.3552381	2.290747
e.aborw3						

e.crhrw3	.0152666	.0062382	2.45	0.014	.00304	.0274931
e.crhrw2 e.crhrw3	-.0734963	.0329222	-2.23	0.026	-.1380225	-.00897

LR test of model vs. saturated: chi2(68) = 75.81, Prob > chi2 = 0.2411

```
4 .
5 . estat stable
```

Stability analysis of simultaneous equation systems

Eigenvalue stability condition

Eigenvalue	Modulus
2.587e-18 + 2.641e-09*i*	2.6e-09
2.587e-18 - 2.641e-09*i*	2.6e-09
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0

stability index = 2.64e-09
All the eigenvalues lie inside the unit circle.
SEM satisfies stability condition.

```
6 . estat gof
```

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(68)	75.815	model vs. saturated
p > chi2	0.241	
chi2_bs(90)	3426.514	baseline vs. saturated
p > chi2	0.000	

```
7 . estat ic
```

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	**361**	.	**-10972.04**	**46**	**22036.09**	**22214.98**

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

```
8 . sem (cumdose1 -> cumdose2) (cumdose2 -> cumdose3) (whpsleep -> whpel) (whpsl
> eep -> whppa) (goferw1 -> cumdose1) (goferw1 -> goferw2) (goferw1 -> aborw3)
>  (goferw1 -> crhrw2) (aborw2) (aborw3 -> whppa) (crhrw1 -> goferw1) (crhrw1
> -> aborw1) (crhrw1 -> crhrw2) (crhrw1 -> crhrw3) (crhrw2 -> crhrw3) (crhrw3
> -> whpsleep) (crhrw3 -> whpel) (crhrw3 -> whppa) (whpel -> whppa) if gender=
> =2, vce(cluster id) cov( e.cumdose2*e.cumdose3 e.goferw2*e.crhrw2 e.aborw3*e
> .crhrw3 e.crhrw2*e.crhrw3) nocapslatent
(2 observations with missing values excluded;
 specify option 'method(mlmv)' to use all observations)

Endogenous variables

Observed:  cumdose1 cumdose2 cumdose3 whpsleep whpel whppa goferw1 goferw2
           aborw3 crhrw2 aborw1 crhrw3

Exogenous variables

Observed:  aborw2 crhrw1

Fitting target model:

Iteration 0:   log pseudolikelihood = -11834.652  (not concave)
Iteration 1:   log pseudolikelihood = -11414.583  (not concave)
Iteration 2:   log pseudolikelihood = -11288.514  (not concave)
Iteration 3:   log pseudolikelihood = -11180.256  (not concave)
Iteration 4:   log pseudolikelihood = -11022.228
Iteration 5:   log pseudolikelihood = -10985.843
Iteration 6:   log pseudolikelihood =  -10972.56
Iteration 7:   log pseudolikelihood = -10972.052
Iteration 8:   log pseudolikelihood = -10972.044
Iteration 9:   log pseudolikelihood = -10972.044

Structural equation model                       Number of obs      =       361
Estimation method  = ml
Log pseudolikelihood= -10972.044
```

(Std. Err. adjusted for **361** clusters in id)

	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
cumdo~1 <-						
goferw1	.0032023	.0011962	2.68	0.007	.0008578	.0055467
_cons	.2413505	.019026	12.69	0.000	.2040602	.2786408
cumdo~2 <-						
cumdose1	2.18886	.083603	26.18	0.000	2.025001	2.352719
_cons	.1616705	.0419462	3.85	0.000	.0794575	.2438836
cumdo~3 <-						
cumdose2	1.231229	.0359158	34.28	0.000	1.160835	1.301622
_cons	.0991724	.0305362	3.25	0.001	.0393226	.1590222
whpsl~p <-						
crhrw3	9.538629	1.764374	5.41	0.000	6.080519	12.99674
_cons	24.70858	1.502699	16.44	0.000	21.76334	27.65382
whpel <-						
whpsleep	.5418411	.053608	10.11	0.000	.4367713	.6469108
crhrw3	4.486308	1.788977	2.51	0.012	.9799771	7.992638
_cons	16.95847	1.92508	8.81	0.000	13.18539	20.73156
whppa <-						
whpsleep	.2177445	.0397755	5.47	0.000	.139786	.295703
whpel	.2186883	.0347415	6.29	0.000	.1505961	.2867804
aborw3	-4.971303	1.627593	-3.05	0.002	-8.161327	-1.78128
crhrw3	2.707541	.9684807	2.80	0.005	.809354	4.605729
_cons	5.980459	1.127836	5.30	0.000	3.769941	8.190978
goferw1 <-						
crhrw1	5.61437	2.038568	2.75	0.006	1.61885	9.60989
_cons	28.91381	1.885255	15.34	0.000	25.21877	32.60884
goferw2 <-						
goferw1	.2005401	.0311831	6.43	0.000	.1394224	.2616579
_cons	2.160712	.8104897	2.67	0.008	.5721816	3.749243
aborw3 <-						
goferw1	-.001451	.0005311	-2.73	0.006	-.0024918	-.0004101
_cons	.167684	.0340698	4.92	0.000	.1009085	.2344595
crhrw2 <-						
goferw1	.004843	.0008745	5.54	0.000	.003129	.0065571
crhrw1	.6039286	.0389059	15.52	0.000	.5276744	.6801828

_cons	-.0514853	.0410016	-1.26	0.209	-.1318471	.0288764
aborw1 <-						
crhrw1	.177193	.053689	3.30	0.001	.0719645	.2824215
_cons	.250798	.0411729	6.09	0.000	.1701006	.3314955
crhrw3 <-						
crhrw2	1.232097	.0746323	16.51	0.000	1.08582	1.378374
crhrw1	-.2328631	.0517469	-4.50	0.000	-.3342851	-.1314411
_cons	-.0085263	.0205142	-0.42	0.678	-.0487335	.0316808
Variance						
e.cumdose1	.2890055	.1001246			.1465586	.5699029
e.cumdose2	.4618044	.2566491			.1553819	1.372511
e.cumdose3	.0893406	.0337051			.0426501	.1871447
e.whpsleep	882.7846	66.52836			761.5643	1023.3
e.whpel	850.5979	59.92645			740.8927	976.5473
e.whppa	274.2456	26.72383			226.5659	331.9593
e.goferw1	1278.146	78.73348			1132.783	1442.163
e.goferw2	251.1142	40.29754			183.3474	343.9282
e.aborw3	.1729249	.0393756			.1106715	.2701962
e.crhrw2	.3767427	.0389928			.3075711	.4614707
e.aborw1	.7859768	.3754837			.3081529	2.004717
e.crhrw3	.0942011	.0178697			.064951	.1366239
Covariance						
e.cumdose2						
e.cumdose3	.0428724	.0752452	0.57	0.569	-.1046055	.1903504
e.goferw2						
e.crhrw2	1.322992	.440732	3.00	0.003	.4591737	2.186811
e.aborw3						
e.crhrw3	.0152666	.0117853	1.30	0.195	-.0078321	.0383652
e.crhrw2						
e.crhrw3	-.0734963	.0308841	-2.38	0.017	-.134028	-.0129645

```
 9 .
10 . estat teffects, standardized
```

Direct effects

(Std. Err. adjusted for **361** clusters in id)

	Coef.	Robust Std. Err.	z	P>|z|	Std. Coef.
Structural					
cumdo~1 <-					
goferw1	**.0032023**	**.0011962**	**2.68**	**0.007**	**.2104657**
crhrw1	**0**	(no path)			**0**
cumdo~2 <-					
cumdose1	**2.18886**	**.083603**	**26.18**	**0.000**	**.8708033**
goferw1	**0**	(no path)			**0**
crhrw1	**0**	(no path)			**0**
cumdo~3 <-					
cumdose1	**0**	(no path)			**0**
cumdose2	**1.231229**	**.0359158**	**34.28**	**0.000**	**.9679608**
goferw1	**0**	(no path)			**0**
crhrw1	**0**	(no path)			**0**
whpsl~p <-					
goferw1	**0**	(no path)			**0**
crhrw2	**0**	(no path)			**0**
crhrw3	**9.538629**	**1.764374**	**5.41**	**0.000**	**.2752395**
crhrw1	**0**	(no path)			**0**
whpel <-					
whpsleep	**.5418411**	**.053608**	**10.11**	**0.000**	**.4866844**
goferw1	**0**	(no path)			**0**
crhrw2	**0**	(no path)			**0**
crhrw3	**4.486308**	**1.788977**	**2.51**	**0.012**	**.1162758**
crhrw1	**0**	(no path)			**0**
whppa <-					
whpsleep	**.2177445**	**.0397755**	**5.47**	**0.000**	**.3148356**
whpel	**.2186883**	**.0347415**	**6.29**	**0.000**	**.3520356**
goferw1	**0**	(no path)			**0**
aborw3	**-4.971303**	**1.627593**	**-3.05**	**0.002**	**-.0974827**
crhrw2	**0**	(no path)			**0**
crhrw3	**2.707541**	**.9684807**	**2.80**	**0.005**	**.1129631**
crhrw1	**0**	(no path)			**0**
goferw1 <-					

crhrw1	5.61437	2.038568	2.75	0.006	.1467304
goferw2 <-					
goferw1	.2005401	.0311831	6.43	0.000	.4159421
crhrw1	0	(no path)			0
aborw3 <-					
goferw1	-.001451	.0005311	-2.73	0.006	-.1251167
crhrw1	0	(no path)			0
crhrw2 <-					
goferw1	.004843	.0008745	5.54	0.000	.2005052
crhrw1	.6039286	.0389059	15.52	0.000	.6534534
aborw1 <-					
crhrw1	.177193	.053689	3.30	0.001	.1855123
crhrw3 <-					
goferw1	0	(no path)			0
crhrw2	1.232097	.0746323	16.51	0.000	1.206125
crhrw1	-.2328631	.0517469	-4.50	0.000	-.2466478

Indirect effects

(Std. Err. adjusted for **361** clusters in id)

	Coef.	Robust Std. Err.	z	P>|z|	Std. Coef.
Structural					
cumdo~1 <-					
goferw1	0	(no path)			0
crhrw1	.0179787	.0098302	1.83	0.067	.0308817
cumdo~2 <-					
cumdose1	0	(no path)			0
goferw1	.0070093	.0026183	2.68	0.007	.1832742
crhrw1	.0393528	.0215862	1.82	0.068	.0268919
cumdo~3 <-					
cumdose1	2.694987	.1029344	26.18	0.000	.8429034
cumdose2	0	(no path)			0
goferw1	.00863	.0032237	2.68	0.007	.1774023
crhrw1	.0484522	.026715	1.81	0.070	.0260303
whpsl~p <-					
goferw1	.0569176	.0102779	5.54	0.000	.0665624
crhrw2	11.75252	.7118902	16.51	0.000	.3319733

crhrw3	0	(no path)			0
crhrw1	5.196043	1.033978	5.03	0.000	.1588086
whpel <-					
whpsleep	0	(no path)			0
goferw1	.0576104	.010403	5.54	0.000	.0605144
crhrw2	11.89556	.720555	16.51	0.000	.3018094
crhrw3	5.168421	.9560102	5.41	0.000	.1339547
crhrw1	5.259287	1.105219	4.76	0.000	.1443789
whppa <-					
whpsleep	.1184943	.0117234	10.11	0.000	.1713302
whpel	0	(no path)			0
goferw1	.0483614	.0079267	6.10	0.000	.0817745
aborw3	0	(no path)			0
crhrw2	8.49642	.5146573	16.51	0.000	.3470123
crhrw3	4.18836	.7221344	5.80	0.000	.1747452
crhrw1	3.796949	.7580768	5.01	0.000	.1677926
goferw1 <-					
crhrw1	0	(no path)			0
goferw2 <-					
goferw1	0	(no path)			0
crhrw1	1.125907	.4623233	2.44	0.015	.0610314
aborw3 <-					
goferw1	0	(no path)			0
crhrw1	-.0081462	.0040395	-2.02	0.044	-.0183584
crhrw2 <-					
goferw1	0	(no path)			0
crhrw1	.0271905	.0103472	2.63	0.009	.0294202
aborw1 <-					
crhrw1	0	(no path)			0
crhrw3 <-					
goferw1	.0059671	.0010775	5.54	0.000	.2418344
crhrw2	0	(no path)			0
crhrw1	.7776001	.0676029	11.50	0.000	.8236313

Total effects

(Std. Err. adjusted for **361** clusters in id)

	Coef.	Robust Std. Err.	z	P>|z|	Std. Coef.
Structural					
cumdo~1 <-					
goferw1	**.0032023**	**.0011962**	**2.68**	**0.007**	**.2104657**
crhrw1	**.0179787**	**.0098302**	**1.83**	**0.067**	**.0308817**
cumdo~2 <-					
cumdose1	**2.18886**	**.083603**	**26.18**	**0.000**	**.8708033**
goferw1	**.0070093**	**.0026183**	**2.68**	**0.007**	**.1832742**
crhrw1	**.0393528**	**.0215862**	**1.82**	**0.068**	**.0268919**
cumdo~3 <-					
cumdose1	**2.694987**	**.1029344**	**26.18**	**0.000**	**.8429034**
cumdose2	**1.231229**	**.0359158**	**34.28**	**0.000**	**.9679608**
goferw1	**.00863**	**.0032237**	**2.68**	**0.007**	**.1774023**
crhrw1	**.0484522**	**.026715**	**1.81**	**0.070**	**.0260303**
whpsl~p <-					
goferw1	**.0569176**	**.0102779**	**5.54**	**0.000**	**.0665624**
crhrw2	**11.75252**	**.7118902**	**16.51**	**0.000**	**.3319733**
crhrw3	**9.538629**	**1.764374**	**5.41**	**0.000**	**.2752395**
crhrw1	**5.196043**	**1.033978**	**5.03**	**0.000**	**.1588086**
whpel <-					
whpsleep	**.5418411**	**.053608**	**10.11**	**0.000**	**.4866844**
goferw1	**.0576104**	**.010403**	**5.54**	**0.000**	**.0605144**
crhrw2	**11.89556**	**.720555**	**16.51**	**0.000**	**.3018094**
crhrw3	**9.654728**	**2.058099**	**4.69**	**0.000**	**.2502305**
crhrw1	**5.259287**	**1.105219**	**4.76**	**0.000**	**.1443789**
whppa <-					
whpsleep	**.3362388**	**.0421143**	**7.98**	**0.000**	**.4861658**
whpel	**.2186883**	**.0347415**	**6.29**	**0.000**	**.3520356**
goferw1	**.0483614**	**.0079267**	**6.10**	**0.000**	**.0817745**
aborw3	**-4.971303**	**1.627593**	**-3.05**	**0.002**	**-.0974827**
crhrw2	**8.49642**	**.5146573**	**16.51**	**0.000**	**.3470123**
crhrw3	**6.895901**	**1.266333**	**5.45**	**0.000**	**.2877083**
crhrw1	**3.796949**	**.7580768**	**5.01**	**0.000**	**.1677926**
goferw1 <-					
crhrw1	**5.61437**	**2.038568**	**2.75**	**0.006**	**.1467304**
goferw2 <-					
goferw1	**.2005401**	**.0311831**	**6.43**	**0.000**	**.4159421**

crhrw1	1.125907	.4623233	2.44	0.015	.0610314
aborw3 <-					
goferw1	-.001451	.0005311	-2.73	0.006	-.1251167
crhrw1	-.0081462	.0040395	-2.02	0.044	-.0183584
crhrw2 <-					
goferw1	.004843	.0008745	5.54	0.000	.2005052
crhrw1	.6311191	.0394583	15.99	0.000	.6828736
aborw1 <-					
crhrw1	.177193	.053689	3.30	0.001	.1855123
crhrw3 <-					
goferw1	.0059671	.0010775	5.54	0.000	.2418344
crhrw2	1.232097	.0746323	16.51	0.000	1.206125
crhrw1	.5447369	.0442435	12.31	0.000	.5769835

11 . estat framework
(model contains no latent variables)

Endogenous variables on endogenous variables

	observed				
Beta	cumdose1	cumdose2	cumdose3	whpsleep	whpel
observed					
cumdose1	0	0	0	0	0
cumdose2	2.18886	0	0	0	0
cumdose3	0	1.231229	0	0	0
whpsleep	0	0	0	0	0
whpel	0	0	0	.5418411	0
whppa	0	0	0	.2177445	.2186883
goferw1	0	0	0	0	0
goferw2	0	0	0	0	0
aborw3	0	0	0	0	0
crhrw2	0	0	0	0	0
aborw1	0	0	0	0	0
crhrw3	0	0	0	0	0

Beta	observed whppa	goferw1	goferw2	aborw3	crhrw2
observed					
cumdose1	**0**	**.0032023**	**0**	**0**	**0**
cumdose2	**0**	**0**	**0**	**0**	**0**
cumdose3	**0**	**0**	**0**	**0**	**0**
whpsleep	**0**	**0**	**0**	**0**	**0**
whpel	**0**	**0**	**0**	**0**	**0**
whppa	**0**	**0**	**0**	**-4.971303**	**0**
goferw1	**0**	**0**	**0**	**0**	**0**
goferw2	**0**	**.2005401**	**0**	**0**	**0**
aborw3	**0**	**-.001451**	**0**	**0**	**0**
crhrw2	**0**	**.004843**	**0**	**0**	**0**
aborw1	**0**	**0**	**0**	**0**	**0**
crhrw3	**0**	**0**	**0**	**0**	**1.232097**

Beta	observed aborw1	crhrw3
observed		
cumdose1	**0**	**0**
cumdose2	**0**	**0**
cumdose3	**0**	**0**
whpsleep	**0**	**9.538629**
whpel	**0**	**4.486308**
whppa	**0**	**2.707541**
goferw1	**0**	**0**
goferw2	**0**	**0**
aborw3	**0**	**0**
crhrw2	**0**	**0**
aborw1	**0**	**0**
crhrw3	**0**	**0**

Exogenous variables on endogenous variables

Gamma	observed aborw2	crhrw1
observed		
cumdose1	**0**	**0**
cumdose2	**0**	**0**
cumdose3	**0**	**0**
whpsleep	**0**	**0**
whpel	**0**	**0**
whppa	**0**	**0**
goferw1	**0**	**5.61437**
goferw2	**0**	**0**
aborw3	**0**	**0**
crhrw2	**0**	**.6039286**
aborw1	**0**	**.177193**
crhrw3	**0**	**-.2328631**

Covariances of error variables

Psi	observed e.cumdo~1	e.cumdo~2	e.cumdo~3	e.whpsl~p	e.whpel
observed					
e.cumdose1	**.2890055**				
e.cumdose2	**0**	**.4618044**			
e.cumdose3	**0**	**.0428724**	**.0893406**		
e.whpsleep	**0**	**0**	**0**	**882.7846**	
e.whpel	**0**	**0**	**0**	**0**	**850.5979**
e.whppa	**0**	**0**	**0**	**0**	**0**
e.goferw1	**0**	**0**	**0**	**0**	**0**
e.goferw2	**0**	**0**	**0**	**0**	**0**
e.aborw3	**0**	**0**	**0**	**0**	**0**
e.crhrw2	**0**	**0**	**0**	**0**	**0**
e.aborw1	**0**	**0**	**0**	**0**	**0**
e.crhrw3	**0**	**0**	**0**	**0**	**0**

Psi	observed e.whppa	e.goferw1	e.goferw2	e.aborw3	e.crhrw2
observed					
e.whppa	**274.2456**				
e.goferw1	**0**	**1278.146**			
e.goferw2	**0**	**0**	**251.1142**		
e.aborw3	**0**	**0**	**0**	**.1729249**	
e.crhrw2	**0**	**0**	**1.322992**	**0**	**.3767427**
e.aborw1	**0**	**0**	**0**	**0**	**0**
e.crhrw3	**0**	**0**	**0**	**.0152666**	**-.0734963**

Psi	observed e.aborw1	e.crhrw3
observed		
e.aborw1	**.7859768**	
e.crhrw3	**0**	**.0942011**

Intercepts of endogenous variables

alpha	observed cumdose1	cumdose2	cumdose3	whpsleep	whpel
_cons	**.2413505**	**.1616705**	**.0991724**	**24.70858**	**16.95847**

alpha	observed whppa	goferw1	goferw2	aborw3	crhrw2
_cons	**5.980459**	**28.91381**	**2.160712**	**.167684**	**-.0514853**

alpha	observed aborw1	crhrw3
_cons	**.250798**	**-.0085263**

Covariances of exogenous variables

Phi	observed aborw2	crhrw1
observed		
aborw2	**.5283262**	
crhrw1	**.0055486**	**.8922183**

Means of exogenous variables

kappa	observed aborw2	crhrw1
mean	**.3213296**	**.1322862**