```
. . sem  (Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen  Sehstrungen  MagenDarmBeschwerd
> muscle)

Endogenous variables

Measurement:  Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen Sehstrungen MagenDarmBeschwe

Exogenous variables

Latent:       muscle

Fitting target model:

Iteration 0:   log likelihood = -2559.2357
Iteration 1:   log likelihood =  -2558.524
Iteration 2:   log likelihood = -2558.5137
Iteration 3:   log likelihood = -2558.5137

Structural equation model                       Number of obs      =       745
Estimation method  = ml
Log likelihood     = -2558.5137

 ( 1)  [Muskelprobleme]muscle = 1
```

	OIM					
	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Measurement						
Muskelprobleme <-						
muscle	1	(constrained)				
_cons	.8684564	.0123831	70.13	0.000	.8441859	.8927269
GrippehnlicheSymptome <-						
muscle	.794638	.1262927	6.29	0.000	.5471088	1.042167
_cons	.7610738	.0156231	48.71	0.000	.7304531	.7916945
Atemprobleme <-						
muscle	1.783214	.1848704	9.65	0.000	1.420874	2.145553
_cons	.6657718	.0172825	38.52	0.000	.6318988	.6996449
HerzKreislaufProbleme <-						
muscle	1.363959	.1450495	9.40	0.000	1.079667	1.64825
_cons	.8161074	.0141931	57.50	0.000	.7882894	.8439254
Temperregulierungsstrungen <-						
muscle	1.319325	.1447272	9.12	0.000	1.035665	1.602986
_cons	.7946309	.0148004	53.69	0.000	.7656227	.823639
Sehstrungen <-						
muscle	1.499513	.172979	8.67	0.000	1.16048	1.838546
_cons	.6348993	.0176393	35.99	0.000	.600327	.6694717
MagenDarmBeschwerden <-						
muscle	1.477645	.1674358	8.83	0.000	1.149477	1.805813
_cons	.704698	.0167131	42.16	0.000	.6719409	.737455
Variance						
e.Muskelprobleme	.0881172	.0051784			.0785303	.0988743
e.GrippehnlicheSymptome	.1653453	.0089307			.148736	.1838092
e.Atemprobleme	.1394532	.0095246			.1219809	.1594284
e.HerzKreislaufProbleme	.1014778	.006497			.0895105	.115045
e.Temperregulierungsstrungen	.1177229	.0072209			.1043877	.1327615
e.Sehstrungen	.1730641	.0104007			.1538339	.1946983
e.MagenDarmBeschwerden	.1510614	.0092416			.133992	.1703054
muscle	.0261227	.0044902			.0186512	.0365874

```
LR test of model vs. saturated: chi2(14)  =     36.90, Prob > chi2 = 0.0008

. estat gof, stats(all)
```

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(14)	36.898	model vs. saturated
p > chi2	0.001	
chi2_bs(21)	691.587	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.047	Root mean squared error of approximation
90% CI, lower bound	0.029	
upper bound	0.066	
pclose	0.579	Probability RMSEA <= 0.05
Information criteria		
AIC	5159.027	Akaike's information criterion
BIC	5255.908	Bayesian information criterion
Baseline comparison		
CFI	0.966	Comparative fit index
TLI	0.949	Tucker-Lewis index
Size of residuals		
SRMR	0.028	Standardized root mean squared residual
CD	0.720	Coefficient of determination

```
. logit Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen  Sehstrungen  MagenDarmBeschwerden

Iteration 0:   log likelihood = -290.03638
Iteration 1:   log likelihood = -245.31397
Iteration 2:   log likelihood = -234.19867
Iteration 3:   log likelihood = -234.09052
Iteration 4:   log likelihood =  -234.0904
Iteration 5:   log likelihood =  -234.0904

Logistic regression                             Number of obs   =        745
                                                LR chi2(6)      =     111.89
                                                Prob > chi2     =     0.0000
Log likelihood =  -234.0904                     Pseudo R2       =     0.1929

------------------------------------------------------------------------------
Muskelprobleme |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------+--------------------------------------------------------------
GrippehnlicheSymptome |   .8595748   .2526976     3.40   0.001     .3642967    1.354853
Atemprobleme |   1.095088   .2731731     4.01   0.000     .5596781    1.630497
HerzKreislaufProbleme |   .6339456   .2753535     2.30   0.021     .0942627    1.173629
Temperregulierungsstrungen |   .7775468   .2691299     2.89   0.004     .2500619    1.305032
Sehstrungen |    .480488   .2635875     1.82   0.068    -.0361341      .99711
MagenDarmBeschwerden |     .19567   .2702333     0.72   0.469    -.3339776    .7253176
_cons |  -.6322744   .2680381    -2.36   0.018    -1.157619   -.1069295
------------------------------------------------------------------------------

. pwcorr Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen  Sehstrungen  MagenDarmBeschwerden

             | Muskel~e Gripp~me Atempr~e HerzKr~e Temper~n Sehstr~n MagenD~n
-------------+---------------------------------------------------------------
Muskelprob~e |   1.0000
Grippehnli~e |   0.2103   1.0000
Atemprobleme |   0.2967   0.1102   1.0000
HerzKreisl~e |   0.2766   0.1809   0.3688   1.0000
Temperregu~n |   0.2740   0.1827   0.3019   0.3162   1.0000
 Sehstrungen |   0.2163   0.1112   0.3611   0.2517   0.2218   1.0000
MagenDarmB~n |   0.2095   0.2031   0.2961   0.2776   0.2973   0.3158   1.0000

. tetrachoric Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen  Sehstrungen  MagenDarmBeschwerden
(obs=745)

             | Muskel~e Gripp~me Atempr~e HerzKr~e Temper~n Sehstr~n MagenD~n
-------------+---------------------------------------------------------------
Muskelprob~e |   1.0000
Grippehnli~e |   0.3943   1.0000
Atemprobleme |   0.5387   0.1902   1.0000
HerzKreisl~e |   0.5008   0.3262   0.6056   1.0000
Temperregu~n |   0.4949   0.3236   0.4997   0.5326   1.0000
 Sehstrungen |   0.4078   0.1908   0.5492   0.4352   0.3789   1.0000
MagenDarmB~n |   0.3917   0.3427   0.4674   0.4717   0.4922   0.4941   1.0000
```

```
. factor Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen  Sehstrungen  MagenDarmBeschwerden, factors(7)
(obs=745)

Factor analysis/correlation                      Number of obs    =        745
    Method: principal factors                    Retained factors =          3
    Rotation: (unrotated)                        Number of params =         18
```

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	1.74427	1.64231	1.3065	1.3065
Factor2	0.10195	0.09303	0.0764	1.3829
Factor3	0.00892	0.06578	0.0067	1.3895
Factor4	-0.05686	0.04714	-0.0426	1.3470
Factor5	-0.10399	0.07274	-0.0779	1.2691
Factor6	-0.17673	0.00577	-0.1324	1.1367
Factor7	-0.18250	.	-0.1367	1.0000

```
    LR test: independent vs. saturated:  chi2(21) =  688.65 Prob>chi2 = 0.0000

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

Variable	Factor1	Factor2	Factor3	Uniqueness
Muskelprob~e	0.4747	0.1004	-0.0349	0.7633
Grippehnli~e	0.3123	0.2096	0.0298	0.8577
Atemprobleme	0.5846	-0.1334	-0.0291	0.6396
HerzKreisl~e	0.5489	0.0145	-0.0339	0.6973
Temperregu~n	0.5174	0.0741	-0.0086	0.7267
Sehstrungen	0.4930	-0.1561	0.0318	0.7315
MagenDarmB~n	0.5172	-0.0087	0.0612	0.7287

```
. rotate, varimax

Factor analysis/correlation                      Number of obs    =        745
    Method: principal factors                    Retained factors =          3
    Rotation: orthogonal varimax (Kaiser off)    Number of params =         18
```

Factor	Variance	Difference	Proportion	Cumulative
Factor1	1.35951	0.87572	1.0183	1.0183
Factor2	0.48379	0.47195	0.3624	1.3807
Factor3	0.01184	.	0.0089	1.3895

```
    LR test: independent vs. saturated:  chi2(21) =  688.65 Prob>chi2 = 0.0000

Rotated factor loadings (pattern matrix) and unique variances
```

Variable	Factor1	Factor2	Factor3	Uniqueness
Muskelprob~e	0.3679	0.3180	-0.0141	0.7633
Grippehnli~e	0.1711	0.3331	0.0453	0.8577
Atemprobleme	0.5768	0.1661	-0.0070	0.6396
HerzKreisl~e	0.4743	0.2784	-0.0112	0.6973
Temperregu~n	0.4172	0.3147	0.0136	0.7267
Sehstrungen	0.5059	0.1001	0.0498	0.7315
MagenDarmB~n	0.4550	0.2399	0.0821	0.7287

```
Factor rotation matrix
```

	Factor1	Factor2	Factor3
Factor1	0.8751	0.4822	0.0409
Factor2	-0.4831	0.8755	0.0134
Factor3	-0.0293	-0.0315	0.9991

```
. bysort praemenopausal: sem  (Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen  Sehstrungen
>  if Geschlecht== 1 &  praemenopausal==1), method(ml) latent (muscle)

-------------------------------------------------------------------------------------------------------------------------------------------------
-> praemenopausal = 0
no observations

-------------------------------------------------------------------------------------------------------------------------------------------------
-> praemenopausal = 1

Endogenous variables

Measurement:  Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen Sehstrungen MagenDarmBeschwer

Exogenous variables

Latent:       muscle

Fitting target model:

Iteration 0:   log likelihood = -1113.6983
Iteration 1:   log likelihood =  -1112.371
Iteration 2:   log likelihood =  -1112.343
Iteration 3:   log likelihood =  -1112.343

Structural equation model                       Number of obs      =       349
Estimation method  = ml
Log likelihood     =  -1112.343

 ( 1)  [Muskelprobleme]muscle = 1
```

		OIM				
	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Measurement						
Muskelprobleme <-						
muscle	1	(constrained)				
_cons	.8882521	.0168646	52.67	0.000	.8551982	.9213061
GrippehnlicheSymptome <-						
muscle	.8358379	.1797721	4.65	0.000	.483491	1.188185
_cons	.8137536	.020839	39.05	0.000	.7729098	.8545973
Atemprobleme <-						
muscle	1.596366	.259208	6.16	0.000	1.088327	2.104404
_cons	.6819484	.0249294	27.36	0.000	.6330877	.7308091
HerzKreislaufProbleme <-						
muscle	1.403836	.2078037	6.76	0.000	.996548	1.811123
_cons	.8280802	.020197	41.00	0.000	.7884949	.8676656
Temperregulierungsstrungen <-						
muscle	1.306038	.2051163	6.37	0.000	.904017	1.708058
_cons	.8223496	.0204597	40.19	0.000	.7822494	.8624498
Sehstrungen <-						
muscle	1.533626	.2531274	6.06	0.000	1.037505	2.029747
_cons	.6504298	.0255243	25.48	0.000	.600403	.7004566
MagenDarmBeschwerden <-						
muscle	1.25838	.2332985	5.39	0.000	.8011234	1.715637
_cons	.7191977	.0240554	29.90	0.000	.6720501	.7663453
Variance						
e.Muskelprobleme	.0743866	.0065897			.06253	.0884913
e.GrippehnlicheSymptome	.1341813	.0107647			.1146579	.1570289
e.Atemprobleme	.1535069	.0141516			.1281317	.1839074
e.HerzKreislaufProbleme	.0933433	.0092012			.0769444	.1132373
e.Temperregulierungsstrungen	.1036627	.0095157			.0865938	.1240962
e.Sehstrungen	.1688676	.0151898			.1415728	.2014247
e.MagenDarmBeschwerden	.1625643	.0138085			.137633	.1920117
muscle	.0248737	.0060387			.0154557	.0400306

```
LR test of model vs. saturated: chi2(14)  =     28.66, Prob > chi2 = 0.0116

. estat gof, stats(all)
```

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(14)	28.660	model vs. saturated
p > chi2	0.012	
chi2_bs(21)	311.961	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.055	Root mean squared error of approximation
90% CI, lower bound	0.025	
upper bound	0.083	
pclose	0.355	Probability RMSEA <= 0.05
Information criteria		
AIC	2266.686	Akaike's information criterion
BIC	2347.642	Bayesian information criterion
Baseline comparison		
CFI	0.950	Comparative fit index
TLI	0.924	Tucker-Lewis index
Size of residuals		
SRMR	0.037	Standardized root mean squared residual
CD	0.706	Coefficient of determination

```
.
```

```
. bysort menopausal: sem  (Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen  Sehstrungen
> Geschlecht== 1 &  menopausal==1), method(ml) latent (muscle)

-------------------------------------------------------------------------------------------------------------------------------------------
-> menopausal = 0
no observations

-------------------------------------------------------------------------------------------------------------------------------------------
-> menopausal = 1

Endogenous variables

Measurement:  Muskelprobleme GrippehnlicheSymptome Atemprobleme HerzKreislaufProbleme Temperregulierungsstrungen Sehstrungen MagenDarmBeschw

Exogenous variables

Latent:       muscle

Fitting target model:

Iteration 0:   log likelihood = -887.39113
Iteration 1:   log likelihood = -885.68305
Iteration 2:   log likelihood = -885.43593
Iteration 3:   log likelihood = -885.42885
Iteration 4:   log likelihood = -885.42879

Structural equation model                       Number of obs      =       259
Estimation method  = ml
Log likelihood     = -885.42879

 ( 1)  [Muskelprobleme]muscle = 1
```

		OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Measurement							
Muskelprobleme <-							
	muscle	1	(constrained)				
	_cons	.8532819	.0219856	38.81	0.000	.8101909	.8963728
GrippehnlicheSymptome <-							
	muscle	.6545609	.234924	2.79	0.005	.1941182	1.115003
	_cons	.7065637	.0282932	24.97	0.000	.65111	.7620174
Atemprobleme <-							
	muscle	1.829434	.3439372	5.32	0.000	1.15533	2.503539
	_cons	.7142857	.0280706	25.45	0.000	.6592683	.7693031
HerzKreislaufProbleme <-							
	muscle	1.242047	.2613272	4.75	0.000	.7298556	1.754239
	_cons	.8455598	.0224544	37.66	0.000	.80155	.8895697
Temperregulierungsstrungen <-							
	muscle	1.463291	.2910142	5.03	0.000	.892914	2.033669
	_cons	.8108108	.0243365	33.32	0.000	.7631122	.8585094
Sehstrungen <-							
	muscle	1.604487	.3410952	4.70	0.000	.935953	2.273022
	_cons	.6370656	.0298783	21.32	0.000	.5785052	.695626
MagenDarmBeschwerden <-							
	muscle	1.534415	.324343	4.73	0.000	.8987142	2.170115
	_cons	.7181467	.0279555	25.69	0.000	.6633548	.7729386
Variance							
	e.Muskelprobleme	.1019882	.0099317			.0842674	.1234357
	e.GrippehnlicheSymptome	.19739	.0177385			.1655128	.2354065
	e.Atemprobleme	.1264239	.0152649			.0997819	.1601793
	e.HerzKreislaufProbleme	.094793	.0099485			.0771689	.1164421
	e.Temperregulierungsstrungen	.1037131	.0115539			.0833696	.1290207
	e.Sehstrungen	.1714787	.017881			.1397819	.210363
	e.MagenDarmBeschwerden	.1477813	.0154508			.1203996	.1813903
	muscle	.0232033	.0076825			.0121261	.0443994

```
LR test of model vs. saturated: chi2(14)  =     31.56, Prob > chi2 = 0.0046

. estat gof, stats(all)
```

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(14)	31.563	model vs. saturated
p > chi2	0.005	
chi2_bs(21)	242.641	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.070	Root mean squared error of approximation
90% CI, lower bound	0.037	
upper bound	0.102	
pclose	0.144	Probability RMSEA <= 0.05
Information criteria		
AIC	1812.858	Akaike's information criterion
BIC	1887.551	Bayesian information criterion
Baseline comparison		
CFI	0.921	Comparative fit index
TLI	0.881	Tucker-Lewis index
Size of residuals		
SRMR	0.046	Standardized root mean squared residual
CD	0.712	Coefficient of determination

```
.
```