

Matrix

Notes

Output Created	07-JUN-2022 18:33:58
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'net'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:01.86
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.1 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 1
 Y : promis
 X : net
 W : msl

Covariates:

age emp inc

Sample

Size: 1985

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6307	.3978	74.4356	217.7623	6.0000	1978.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	75.4565	1.4509	52.0063	.0000	72.6110	78.3020
net	.1940	.1560	1.2436	.2138	-.1120	.5000
msl	-7.2183	.7783	-9.2741	.0000	-8.7448	-5.6919
Int_1	.0346	.0976	.3547	.7229	-.1569	.2261
age	-.2000	.0175	-11.4196	.0000	-.2343	-.1656
emp	-.8823	.0657	-13.4275	.0000	-1.0112	-.7534
inc	-.5798	.0791	-7.3280	.0000	-.7350	-.4247

Product terms key:

Int_1 : net x msl

Covariance matrix of regression parameter estimates:

	constant	net	msl	Int_1	age	emp	inc
constant	2.1051	-.1732	-.8727	.1032	-.0126	.0170	-.0231
net	-.1732	.0243	.0987	-.0145	.0002	-.0001	-.0004
msl	-.8727	.0987	.6058	-.0646	-.0004	-.0054	-.0027
Int_1	.1032	-.0145	-.0646	.0095	-.0001	.0001	.0004
age	-.0126	.0002	-.0004	-.0001	.0003	-.0004	.0001
emp	.0170	-.0001	-.0054	.0001	-.0004	.0043	-.0010
inc	-.0231	-.0004	-.0027	.0004	.0001	-.0010	.0063

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0000     .1258    1.0000  1978.0000     .7229
-----
      Focal predict: net      (X)
      Mod var: ms1      (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  net      ms1      promis   .
BEGIN DATA.
  2.8543    1.0000    54.1222
  6.8453    1.0000    55.0347
  10.8364   1.0000    55.9473
  2.8543    2.0000    47.0027
  6.8453    2.0000    48.0535
  10.8364   2.0000    49.1042
END DATA.
GRAPH/SCATTERPLOT=
  net      WITH      promis   BY      ms1   .
***** ANALYSIS NOTES AND ERRORS *****

```

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:30:36
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'density'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:01.99
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : density
 W : ms1

Covariates:

age emp inc

Sample

Size: 1896

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6235	.3888	75.2727	200.2737	6.0000	1889.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	77.7563	2.0813	37.3600	.0000	73.6744	81.8381
density	-1.0474	2.5417	-.4121	.6803	-6.0323	3.9375
ms1	-7.2495	1.2655	-5.7286	.0000	-9.7314	-4.7676
Int_1	.3885	1.6104	.2413	.8094	-2.7699	3.5470
age	-.2059	.0180	-11.4273	.0000	-.2413	-.1706
emp	-.8591	.0679	-12.6513	.0000	-.9922	-.7259
inc	-.5921	.0815	-7.2637	.0000	-.7520	-.4322

Product terms key:

Int_1 : density x ms1

Covariance matrix of regression parameter estimates:

	constant	density	ms1	Int_1	age	emp	inc
constant	4.3317	-4.6903	-2.2725	2.8491	-.0121	.0169	-.0240
density	-4.6903	6.4604	2.8501	-3.8823	.0000	.0012	-.0043
ms1	-2.2725	2.8501	1.6015	-1.9208	-.0011	-.0046	-.0030
Int_1	2.8491	-3.8823	-1.9208	2.5935	-.0003	-.0007	.0038
age	-.0121	.0000	-.0011	-.0003	.0003	-.0004	.0001
emp	.0169	.0012	-.0046	-.0007	-.0004	.0046	-.0011
inc	-.0240	-.0043	-.0030	.0038	.0001	-.0011	.0066

Test(s) of highest order unconditional interaction(s):

R2-chng	F	df1	df2	p
X*W .0000	.0582	1.0000	1889.0000	.8094

Focal predict: density (X)
Mod var: ms1 (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
density ms1 promis .
BEGIN DATA.
.4916 1.0000 55.2004
.7401 1.0000 55.0366
.9887 1.0000 54.8728
.4916 2.0000 48.1418
.7401 2.0000 48.0747
.9887 2.0000 48.0075
END DATA.
GRAPH/SCATTERPLOT=
density WITH promis BY ms1 .

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

----- END MATRIX -----
```

Notes

Output Created	07-JUN-2022 21:31:39
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'constraint'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:01.96
	Elapsed Time	00:00:02.00

Matrix

Notes

Output Created	07-JUN-2022 21:34:00
Comments	
Input	Data /Users/shruthivenkatesh/ Downloads/PNQ_Data. .sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```

MATRIX.
compute
wnames='xxxxx'.
compute
znames='xxxxx'.
compute mcerpt=0.
compute wiscov=0.
compute ziscov=0.
compute tooman=0.
compute errcode=make
(100,1,0).
compute
notecode=make
(100,1,0).
compute model = trunc(
1).
compute iterate = abs
(trunc( 100 )).
compute converge = abs
( 0.00001 ).
compute itprobtg=0.
compute v2tag=0.
compute ydich=0.
compute maxwwarn=0.
compute minwwarn=0.
compute maxzwarn=0.
compute minzwarn=0.
compute toomany=0.
compute wdich=0.
compute zdich=0.
compute wnotev=0.
compute znotev=0.
compute nxpval=1.
compute nwpval=1.
compute nzpval=1.
compute errs=1.
compute notes=1.
compute criterr=0.
compute novar=0.
compute adjust=0.
compute ncs=0.
compute serial=0.
compute sobelok=0.
compute hasw=0.
compute hasz=0.
compute printw=0.
compute printz=0.
compute counterf=0.
compute wmodcust=0.
compute zmodcust=0.
compute booting=0.
compute bootiter=0.
compute itermod=0.
compute cov = 'age emp
inc'.
compute varorder=( 0
<> 0).
compute nws=0.
compute w= 'ms1'.
compute nzs=0.
compute z = 'xxxxx'.
compute nms=0.
compute m = 'xxxxx'.
compute nys=0.
compute y = 'promis'.
compute nxz=0.
compute x = 'const'.
compute v = 'xxxxx'.
compute q = 'xxxxx'.
compute linsum={ -999
}.

```

Notes

Resources	Processor Time	00:00:02.16
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : const
 W : ms1

Covariates:

age emp inc

Sample

Size: 1896

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6259	.3918	74.9086	202.7772	6.0000	1889.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	80.4977	2.1775	36.9682	.0000	76.2272	84.7682
const	-.0672	.0363	-1.8504	.0644	-.1384	.0040
ms1	-8.1230	1.3298	-6.1084	.0000	-10.7311	-5.5150
Int_1	.0223	.0227	.9853	.3246	-.0221	.0668
age	-.2048	.0180	-11.3894	.0000	-.2400	-.1695
emp	-.8566	.0677	-12.6452	.0000	-.9895	-.7238
inc	-.5871	.0813	-7.2228	.0000	-.7465	-.4277

Product terms key:

Int_1 : const x ms1

Covariance matrix of regression parameter estimates:

	constant	const	ms1	Int_1	age	emp	inc
constant	4.7414	-.0710	-2.5238	.0425	-.0107	.0173	-.0269
const	-.0710	.0013	.0431	-.0008	.0000	.0000	.0000
ms1	-2.5238	.0431	1.7684	-.0286	-.0022	-.0045	.0004
Int_1	.0425	-.0008	-.0286	.0005	.0000	.0000	.0000
age	-.0107	.0000	-.0022	.0000	.0003	-.0004	.0001
emp	.0173	.0000	-.0045	.0000	-.0004	.0046	-.0011
inc	-.0269	.0000	.0004	.0000	.0001	-.0011	.0066

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0003     .9709    1.0000  1889.0000     .3246
-----
      Focal predict: const      (X)
      Mod var: ms1      (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  const      ms1      promis   .
BEGIN DATA.
  37.8320    1.0000   55.7780
  55.4918    1.0000   54.9856
  73.1516    1.0000   54.1933
  37.8320    2.0000   48.4995
  55.4918    2.0000   48.1014
  73.1516    2.0000   47.7032
END DATA.
GRAPH/SCATTERPLOT=
  const      WITH      promis   BY      ms1   .

```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:34:57
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'effsize'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.12
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : effsize
 W : msl

Covariates:

age emp inc

Sample

Size: 1896

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6261	.3920	74.8758	203.0042	6.0000	1889.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	75.2835	1.6203	46.4624	.0000	72.1057	78.4612
effsize	.4228	.3811	1.1095	.2673	-.3245	1.1701
msl	-6.7619	.8842	-7.6473	.0000	-8.4960	-5.0277
Int_1	-.0177	.2468	-.0719	.9427	-.5018	.4663
age	-.2038	.0180	-11.3206	.0000	-.2391	-.1685
emp	-.8565	.0678	-12.6406	.0000	-.9894	-.7236
inc	-.5843	.0813	-7.1886	.0000	-.7437	-.4249

Product terms key:

Int_1 : effsize x msl

Covariance matrix of regression parameter estimates:

	constant	effsize	msl	Int_1	age	emp	inc
constant	2.6254	-.4965	-1.1365	.2966	-.0135	.0197	-.0285
effsize	-.4965	.1452	.2861	-.0890	.0004	-.0006	.0003
msl	-1.1365	.2861	.7818	-.1915	-.0006	-.0066	.0001
Int_1	.2966	-.0890	-.1915	.0609	-.0002	.0005	.0000
age	-.0135	.0004	-.0006	-.0002	.0003	-.0004	.0001
emp	.0197	-.0006	-.0066	.0005	-.0004	.0046	-.0011
inc	-.0285	.0003	.0001	.0000	.0001	-.0011	.0066

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0000     .0052    1.0000  1889.0000     .9427
-----
      Focal predict: effsize  (X)
      Mod var: ms1       (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  effsize    ms1      promis   .
BEGIN DATA.
  1.5532    1.0000   54.3091
  3.1881    1.0000   54.9713
  4.8230    1.0000   55.6335
  1.5532    2.0000   47.5196
  3.1881    2.0000   48.1528
  4.8230    2.0000   48.7860
END DATA.
GRAPH/SCATTERPLOT=
  effsize WITH      promis   BY      ms1   .

```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:35:19
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'max'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.22
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : max
 W : ms1

Covariates:

age emp inc

Sample

Size: 1896

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6278	.3941	74.6162	204.8057	6.0000	1889.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	73.3066	1.7256	42.4825	.0000	69.9224	76.6908
max	.7838	.3084	2.5414	.0111	.1789	1.3886
ms1	-5.6986	.9621	-5.9230	.0000	-7.5856	-3.8117
Int_1	-.2695	.1960	-1.3753	.1692	-.6539	.1148
age	-.2066	.0180	-11.4886	.0000	-.2419	-.1714
emp	-.8563	.0676	-12.6602	.0000	-.9890	-.7237
inc	-.5666	.0814	-6.9608	.0000	-.7262	-.4070

Product terms key:

Int_1 : max x ms1

Covariance matrix of regression parameter estimates:

	constant	max	ms1	Int_1	age	emp	inc
constant	2.9776	-.4429	-1.3609	.2655	-.0135	.0193	-.0289
max	-.4429	.0951	.2553	-.0573	.0003	-.0004	.0004
ms1	-1.3609	.2553	.9257	-.1696	-.0002	-.0065	-.0009
Int_1	.2655	-.0573	-.1696	.0384	-.0003	.0003	.0002
age	-.0135	.0003	-.0002	-.0003	.0003	-.0004	.0001
emp	.0193	-.0004	-.0065	.0003	-.0004	.0046	-.0011
inc	-.0289	.0004	-.0009	.0002	.0001	-.0011	.0066

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0006    1.8914    1.0000  1889.0000    .1692
-----
      Focal predict: max      (X)
      Mod var: ms1      (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  max      ms1      promis   .
BEGIN DATA.
  2.4180    1.0000    53.9487
  4.4525    1.0000    54.9950
  6.4870    1.0000    56.0412
  2.4180    2.0000    47.5984
  4.4525    2.0000    48.0962
  6.4870    2.0000    48.5941
END DATA.
GRAPH/SCATTERPLOT=
  max      WITH      promis      BY      ms1      .

```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:35:42
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'mean'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.27
	Elapsed Time	00:00:03.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : mean
 W : ms1

Covariates:

age emp inc

Sample

Size: 1896

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6252	.3909	75.0112	202.0694	6.0000	1889.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	74.5867	1.6383	45.5260	.0000	71.3736	77.7998
mean	.7089	.3800	1.8655	.0623	-.0364	1.4541
ms1	-6.0162	.9113	-6.6014	.0000	-7.8035	-4.2288
Int_1	-.2818	.2363	-1.1925	.2332	-.7452	.1817
age	-.2069	.0180	-11.4795	.0000	-.2422	-.1715
emp	-.8573	.0678	-12.6470	.0000	-.9902	-.7244
inc	-.5840	.0815	-7.1660	.0000	-.7438	-.4242

Product terms key:

Int_1 : mean x ms1

Covariance matrix of regression parameter estimates:

	constant	mean	ms1	Int_1	age	emp	inc
constant	2.6841	-.5047	-1.2041	.2999	-.0130	.0176	-.0256
mean	-.5047	.1444	.2919	-.0854	.0003	.0000	-.0004
ms1	-1.2041	.2919	.8306	-.1910	-.0006	-.0052	-.0023
Int_1	.2999	-.0854	-.1910	.0558	-.0002	.0000	.0006
age	-.0130	.0003	-.0006	-.0002	.0003	-.0004	.0001
emp	.0176	.0000	-.0052	.0000	-.0004	.0046	-.0011
inc	-.0256	-.0004	-.0023	.0006	.0001	-.0011	.0066

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0005     1.4220    1.0000  1889.0000     .2332
-----
      Focal predict: mean      (X)
      Mod var: ms1      (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  mean      ms1      promis   .
BEGIN DATA.
  1.7536    1.0000   54.3320
  3.4445    1.0000   55.0541
  5.1354    1.0000   55.7762
  1.7536    2.0000   47.8216
  3.4445    2.0000   48.0673
  5.1354    2.0000   48.3129
END DATA.
GRAPH/SCATTERPLOT=
  mean      WITH      promis      BY      ms1      .

```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:36:12
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'kin'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.28
	Elapsed Time	00:00:03.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : kin
 W : msl

Covariates:

age emp inc

Sample

Size: 1927

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6248	.3904	75.3437	204.8958	6.0000	1920.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	76.7566	1.4737	52.0846	.0000	73.8664	79.6468
kin	-.2343	2.2025	-.1064	.9153	-4.5538	4.0852
msl	-6.4091	.8598	-7.4543	.0000	-8.0954	-4.7229
Int_1	-.9240	1.3927	-.6635	.5071	-3.6555	1.8074
age	-.1983	.0179	-11.0695	.0000	-.2335	-.1632
emp	-.8765	.0675	-12.9935	.0000	-1.0088	-.7442
inc	-.5944	.0809	-7.3507	.0000	-.7530	-.4358

Product terms key:

Int_1 : kin x msl

Covariance matrix of regression parameter estimates:

	constant	kin	msl	Int_1	age	emp	inc
constant	2.1718	-2.4711	-.9786	1.5181	-.0114	.0166	-.0274
kin	-2.4711	4.8510	1.5344	-2.9100	-.0010	.0012	.0015
msl	-.9786	1.5344	.7392	-1.0442	-.0016	-.0040	.0002
Int_1	1.5181	-2.9100	-1.0442	1.9397	.0005	-.0014	-.0014
age	-.0114	-.0010	-.0016	.0005	.0003	-.0004	.0001
emp	.0166	.0012	-.0040	-.0014	-.0004	.0046	-.0011
inc	-.0274	.0015	.0002	-.0014	.0001	-.0011	.0065

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0001     .4402    1.0000  1920.0000     .5071
-----
      Focal predict: kin      (X)
      Mod var: ms1      (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  kin      ms1      promis   .
BEGIN DATA.
  .2494    1.0000   55.3654
  .5359    1.0000   55.0335
  .8224    1.0000   54.7017
  .2494    2.0000   48.7258
  .5359    2.0000   48.1292
  .8224    2.0000   47.5326
END DATA.
GRAPH/SCATTERPLOT=
  kin      WITH      promis   BY      ms1   .

```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:36:45
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'age_sd'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.35
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : age_sd
 W : ms1

Covariates:

age emp inc

Sample

Size: 1321

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6199	.3843	72.2327	136.7045	6.0000	1314.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	76.1247	1.8192	41.8454	.0000	72.5558	79.6935
age_sd	-.0190	.1219	-.1558	.8762	-.2582	.2202
ms1	-7.0758	1.0418	-6.7917	.0000	-9.1196	-5.0320
Int_1	.0023	.0760	.0308	.9755	-.1467	.1514
age	-.2025	.0205	-9.8923	.0000	-.2427	-.1624
emp	-.8027	.0803	-9.9946	.0000	-.9602	-.6451
inc	-.5104	.0958	-5.3298	.0000	-.6982	-.3225

Product terms key:

Int_1 : age_sd x ms1

Covariance matrix of regression parameter estimates:

	constant	age_sd	ms1	Int_1	age	emp	inc
constant	3.3094	-.1767	-1.5109	.1054	-.0158	.0210	-.0291
age_sd	-.1767	.0149	.1055	-.0088	.0000	.0001	-.0003
ms1	-1.5109	.1055	1.0854	-.0696	-.0015	-.0045	-.0035
Int_1	.1054	-.0088	-.0696	.0058	.0000	-.0002	.0002
age	-.0158	.0000	-.0015	.0000	.0004	-.0006	.0000
emp	.0210	.0001	-.0045	-.0002	-.0006	.0064	-.0014
inc	-.0291	-.0003	-.0035	.0002	.0000	-.0014	.0092

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0000     .0009    1.0000  1314.0000     .9755
-----
      Focal predict: age_sd   (X)
      Mod var: ms1       (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  age_sd    ms1      promis   .
BEGIN DATA.
  5.8960    1.0000   54.6400
  12.0745   1.0000   54.5372
  18.2530   1.0000   54.4343
  5.8960    2.0000   47.5780
  12.0745   2.0000   47.4896
  18.2530   2.0000   47.4012
END DATA.
GRAPH/SCATTERPLOT=
  age_sd WITH promis BY ms1   .

***** ANALYSIS NOTES AND ERRORS *****

```

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:37:13
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'IQVsex'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.45
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : IQVsex
 W : ms1

Covariates:

age emp inc

Sample

Size: 1921

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6218	.3867	75.3601	201.1067	6.0000	1914.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	76.1296	1.7659	43.1118	.0000	72.6664	79.5928
IQVsex	.9151	2.0558	.4451	.6563	-3.1168	4.9470
ms1	-6.7416	1.0331	-6.5253	.0000	-8.7678	-4.7154
Int_1	-.3510	1.3124	-.2674	.7892	-2.9248	2.2229
age	-.1980	.0179	-11.0454	.0000	-.2332	-.1628
emp	-.8786	.0676	-12.9909	.0000	-1.0112	-.7459
inc	-.6020	.0814	-7.3993	.0000	-.7616	-.4425

Product terms key:

Int_1 : IQVsex x ms1

Covariance matrix of regression parameter estimates:

	constant	IQVsex	ms1	Int_1	age	emp	inc
constant	3.1183	-3.0559	-1.4929	1.8450	-.0129	.0183	-.0252
IQVsex	-3.0559	4.2265	1.8266	-2.5565	.0013	-.0015	-.0022
ms1	-1.4929	1.8266	1.0674	-1.2393	-.0008	-.0057	-.0036
Int_1	1.8450	-2.5565	-1.2393	1.7224	-.0008	.0013	.0041
age	-.0129	.0013	-.0008	-.0008	.0003	-.0004	.0001
emp	.0183	-.0015	-.0057	.0013	-.0004	.0046	-.0011
inc	-.0252	-.0022	-.0036	.0041	.0001	-.0011	.0066

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0000     .0715    1.0000  1914.0000     .7892
-----
      Focal predict: IQVsex   (X)
      Mod var: ms1       (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  IQVsex    ms1      promis   .
BEGIN DATA.
  .4168     1.0000   54.9310
  .7194     1.0000   55.1017
  1.0000    1.0000   55.2600
  .4168     2.0000   48.0431
  .7194     2.0000   48.1076
  1.0000    2.0000   48.1674
END DATA.
GRAPH/SCATTERPLOT=
  IQVsex WITH promis BY ms1   .

***** ANALYSIS NOTES AND ERRORS *****

```

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:37:49
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'IQVrace'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.53
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : IQVrace
 W : ms1

Covariates:

age emp inc

Sample

Size: 1906

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6214	.3861	74.5337	199.0846	6.0000	1899.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	76.1454	.9966	76.4083	.0000	74.1909	78.0998
IQVrace	8.7881	3.7624	2.3358	.0196	1.4093	16.1670
ms1	-6.7223	.4444	-15.1270	.0000	-7.5938	-5.8507
Int_1	-5.8783	2.5546	-2.3010	.0215	-10.8885	-.8681
age	-.1952	.0180	-10.8554	.0000	-.2305	-.1599
emp	-.8501	.0674	-12.6121	.0000	-.9823	-.7179
inc	-.6009	.0808	-7.4377	.0000	-.7593	-.4424

Product terms key:

Int_1 : IQVrace x ms1

Covariance matrix of regression parameter estimates:

	constant	IQVrace	ms1	Int_1	age	emp	inc
constant	.9931	-1.0648	-.2126	.6103	-.0123	.0168	-.0266
IQVrace	-1.0648	14.1556	.5530	-9.0640	.0028	.0041	.0018
ms1	-.2126	.5530	.1975	-.3840	-.0013	-.0045	-.0002
Int_1	.6103	-9.0640	-.3840	6.5262	-.0004	-.0042	-.0036
age	-.0123	.0028	-.0013	-.0004	.0003	-.0004	.0001
emp	.0168	.0041	-.0045	-.0042	-.0004	.0045	-.0010
inc	-.0266	.0018	-.0002	-.0036	.0001	-.0010	.0065

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0017	5.2947	1.0000	1899.0000	.0215

Focal predict: IQVrace (X)
Mod var: ms1 (W)

Conditional effects of the focal predictor at values of the moderator(s):

ms1	Effect	se	t	p	LLCI	ULCI
1.0000	2.9099	1.5981	1.8209	.0688	-.2243	6.0441
2.0000	-2.9684	2.0011	-1.4834	.1381	-6.8930	.9562

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
    IQVrace    ms1      promis   .
BEGIN DATA.
    .0000    1.0000    54.9711
    .0634    1.0000    55.1556
    .2227    1.0000    55.6191
    .0000    2.0000    48.2489
    .0634    2.0000    48.0607
    .2227    2.0000    47.5879
END DATA.
GRAPH/SCATTERPLOT=
    IQVrace WITH promis BY ms1   .

***** ANALYSIS NOTES AND ERRORS *****
```

Level of confidence for all confidence intervals in output:
95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:38:14
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'weakfre'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.67
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : weakfre
 W : ms1

Covariates:

age emp inc

Sample

Size: 1927

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6233	.3885	75.5719	203.3105	6.0000	1920.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	76.9181	1.0610	72.4975	.0000	74.8373	78.9988
weakfre	-.5473	2.9608	-.1848	.8534	-6.3540	5.2594
ms1	-7.0698	.5239	-13.4943	.0000	-8.0973	-6.0423
Int_1	.3287	1.9046	.1726	.8630	-3.4067	4.0641
age	-.1989	.0181	-11.0061	.0000	-.2344	-.1635
emp	-.8801	.0675	-13.0306	.0000	-1.0125	-.7476
inc	-.5967	.0810	-7.3687	.0000	-.7556	-.4379

Product terms key:

Int_1 : weakfre x ms1

Covariance matrix of regression parameter estimates:

	constant	weakfre	ms1	Int_1	age	emp	inc
constant	1.1257	-1.3680	-.3202	.8667	-.0116	.0174	-.0265
weakfre	-1.3680	8.7663	.9072	-5.3354	-.0029	.0002	-.0010
ms1	-.3202	.9072	.2745	-.5959	-.0015	-.0048	-.0006
Int_1	.8667	-5.3354	-.5959	3.6276	.0006	.0000	.0000
age	-.0116	-.0029	-.0015	.0006	.0003	-.0005	.0001
emp	.0174	.0002	-.0048	.0000	-.0005	.0046	-.0011
inc	-.0265	-.0010	-.0006	.0000	.0001	-.0011	.0066

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0000     .0298    1.0000  1920.0000     .8630
-----
      Focal predict: weakfre  (X)
      Mod var: ms1       (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  weakfre    ms1      promis   .
BEGIN DATA.
  .0000     1.0000    55.1063
  .1643     1.0000    55.0704
  .3729     1.0000    55.0248
  .0000     2.0000    48.0365
  .1643     2.0000    48.0546
  .3729     2.0000    48.0776
END DATA.
GRAPH/SCATTERPLOT=
  weakfre WITH      promis   BY      ms1   .

```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:38:32
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'weakdur'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.76
	Elapsed Time	00:00:03.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : weakdur
 W : ms1

Covariates:
 age emp inc

Sample
 Size: 1927

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6238	.3892	75.4914	203.8684	6.0000	1920.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	77.4044	1.1250	68.8012	.0000	75.1979	79.6108
weakdur	-3.8205	2.8636	-1.3342	.1823	-9.4365	1.7956
ms1	-7.4049	.5000	-14.8085	.0000	-8.3856	-6.4242
Int_1	2.7439	1.9034	1.4416	.1496	-.9891	6.4770
age	-.1989	.0188	-10.5726	.0000	-.2358	-.1620
emp	-.8790	.0676	-13.0088	.0000	-1.0115	-.7465
inc	-.5970	.0810	-7.3746	.0000	-.7558	-.4383

Product terms key:

Int_1 : weakdur x ms1

Covariance matrix of regression parameter estimates:

	constant	weakdur	ms1	Int_1	age	emp	inc
constant	1.2657	-1.5368	-.2970	.7861	-.0145	.0190	-.0258
weakdur	-1.5368	8.2000	.7549	-5.1170	.0059	-.0051	-.0017
ms1	-.2970	.7549	.2500	-.5182	-.0012	-.0051	-.0006
Int_1	.7861	-5.1170	-.5182	3.6231	-.0002	.0016	-.0001
age	-.0145	.0059	-.0012	-.0002	.0004	-.0005	.0001
emp	.0190	-.0051	-.0051	.0016	-.0005	.0046	-.0011
inc	-.0258	-.0017	-.0006	-.0001	.0001	-.0011	.0066

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0007     2.0781    1.0000  1920.0000     .1496
-----
      Focal predict: weakdur (X)
      Mod var: ms1   (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  weakdur    ms1      promis   .
BEGIN DATA.
  .0000     1.0000    55.2586
  .1493     1.0000    55.0979
  .3625     1.0000    54.8683
  .0000     2.0000    47.8537
  .1493     2.0000    48.1027
  .3625     2.0000    48.4582
END DATA.
GRAPH/SCATTERPLOT=
  weakdur WITH promis BY ms1   .

***** ANALYSIS NOTES AND ERRORS *****

```

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:38:47
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'fardist'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.87
	Elapsed Time	00:00:03.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : fardist
 W : ms1

Covariates:

age emp inc

Sample

Size: 1927

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6270	.3931	75.0033	207.2774	6.0000	1920.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	78.7386	1.3092	60.1437	.0000	76.1710	81.3062
fardist	-5.4335	2.2827	-2.3803	.0174	-9.9104	-.9567
ms1	-8.5717	.6654	-12.8820	.0000	-9.8767	-7.2667
Int_1	4.6616	1.4534	3.2074	.0014	1.8112	7.5120
age	-.2007	.0179	-11.2115	.0000	-.2358	-.1656
emp	-.8710	.0673	-12.9368	.0000	-1.0031	-.7390
inc	-.5961	.0807	-7.3882	.0000	-.7544	-.4379

Product terms key:

Int_1 : fardist x ms1

Covariance matrix of regression parameter estimates:

	constant	fardist	ms1	Int_1	age	emp	inc
constant	1.7139	-2.0489	-.6166	1.2009	-.0128	.0179	-.0252
fardist	-2.0489	5.2107	1.1508	-3.1451	.0023	-.0019	-.0030
ms1	-.6166	1.1508	.4428	-.7500	-.0009	-.0055	-.0011
Int_1	1.2009	-3.1451	-.7500	2.1123	-.0012	.0022	.0015
age	-.0128	.0023	-.0009	-.0012	.0003	-.0004	.0001
emp	.0179	-.0019	-.0055	.0022	-.0004	.0045	-.0011
inc	-.0252	-.0030	-.0011	.0015	.0001	-.0011	.0065

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0033	10.2873	1.0000	1920.0000	.0014

Focal predict: fardist (X)
Mod var: ms1 (W)

Conditional effects of the focal predictor at values of the moderator(s):

ms1	Effect	se	t	p	LLCI	ULCI
1.0000	-.7720	1.0163	-.7596	.4476	-2.7652	1.2213
2.0000	3.8896	1.0392	3.7431	.0002	1.8516	5.9276

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
fardist    ms1      promis   .
BEGIN DATA.
.0855     1.0000   55.3095
.3600     1.0000   55.0976
.6345     1.0000   54.8857
.0855     2.0000   47.1364
.3600     2.0000   48.2041
.6345     2.0000   49.2718
END DATA.
GRAPH/SCATTERPLOT=
fardist WITH promis BY ms1 .
```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:39:14
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'drink'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.92
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : drink
 W : msl

Covariates:

age emp inc

Sample

Size: 1927

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6260	.3919	75.1497	206.2506	6.0000	1920.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	77.4783	1.0314	75.1160	.0000	75.4554	79.5012
drink	-5.6785	2.3368	-2.4300	.0152	-10.2615	-1.0956
msl	-7.6883	.4772	-16.1109	.0000	-8.6242	-6.7524
Int_1	4.6970	1.5521	3.0263	.0025	1.6531	7.7410
age	-.1959	.0180	-10.9028	.0000	-.2311	-.1606
emp	-.8828	.0674	-13.1068	.0000	-1.0149	-.7507
inc	-.5816	.0810	-7.1795	.0000	-.7404	-.4227

Product terms key:

Int_1 : drink x msl

Covariance matrix of regression parameter estimates:

	constant	drink	msl	Int_1	age	emp	inc
constant	1.0639	-.8873	-.2507	.4920	-.0122	.0169	-.0271
drink	-.8873	5.4608	.5199	-3.4231	.0004	.0025	-.0011
msl	-.2507	.5199	.2277	-.3569	-.0014	-.0046	-.0010
Int_1	.4920	-3.4231	-.3569	2.4089	.0006	-.0016	.0039
age	-.0122	.0004	-.0014	.0006	.0003	-.0004	.0001
emp	.0169	.0025	-.0046	-.0016	-.0004	.0045	-.0011
inc	-.0271	-.0011	-.0010	.0039	.0001	-.0011	.0066

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0029	9.1585	1.0000	1920.0000	.0025

Focal predict: drink (X)
Mod var: ms1 (W)

Conditional effects of the focal predictor at values of the moderator(s):

ms1	Effect	se	t	p	LLCI	ULCI
1.0000	-.9815	1.0117	-.9702	.3321	-2.9656	1.0026
2.0000	3.7155	1.1849	3.1357	.0017	1.3917	6.0394

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  drink      ms1      promis   .
BEGIN DATA.
  .0000    1.0000    55.2443
  .1515    1.0000    55.0956
  .4100    1.0000    54.8419
  .0000    2.0000    47.5561
  .1515    2.0000    48.1190
  .4100    2.0000    49.0795
END DATA.
GRAPH/SCATTERPLOT=
  drink WITH promis BY ms1   .

***** ANALYSIS NOTES AND ERRORS *****
```

Level of confidence for all confidence intervals in output:
95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:39:29
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'smoke'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:02.93
	Elapsed Time	00:00:02.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : smoke
 W : ms1

Covariates:

age emp inc

Sample

Size: 1927

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6300	.3969	74.5389	210.5630	6.0000	1920.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	77.5285	.9773	79.3297	.0000	75.6118	79.4451
smoke	-7.7238	3.8108	-2.0268	.0428	-15.1977	-.2500
ms1	-6.9455	.4599	-15.1016	.0000	-7.8475	-6.0435
Int_1	1.1359	2.3388	.4857	.6272	-3.4510	5.7228
age	-.2079	.0180	-11.5305	.0000	-.2433	-.1726
emp	-.8625	.0674	-12.7952	.0000	-.9947	-.7303
inc	-.5851	.0805	-7.2711	.0000	-.7429	-.4273

Product terms key:

Int_1 : smoke x ms1

Covariance matrix of regression parameter estimates:

	constant	smoke	ms1	Int_1	age	emp	inc
constant	.9551	-.9047	-.2098	.4968	-.0116	.0165	-.0263
smoke	-.9047	14.5225	.6652	-8.4900	-.0053	.0151	.0016
ms1	-.2098	.6652	.2115	-.4522	-.0018	-.0036	-.0002
Int_1	.4968	-8.4900	-.4522	5.4701	.0048	-.0127	-.0028
age	-.0116	-.0053	-.0018	.0048	.0003	-.0005	.0001
emp	.0165	.0151	-.0036	-.0127	-.0005	.0045	-.0010
inc	-.0263	.0016	-.0002	-.0028	.0001	-.0010	.0065

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0001     .2359    1.0000  1920.0000     .6272
-----
      Focal predict: smoke      (X)
      Mod var: ms1      (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  smoke      ms1      promis   .
BEGIN DATA.
  .0000     1.0000    55.5230
  .0815     1.0000    54.9860
  .2527     1.0000    53.8586
  .0000     2.0000    48.5775
  .0815     2.0000    48.1330
  .2527     2.0000    47.2000
END DATA.
GRAPH/SCATTERPLOT=
  smoke      WITH      promis      BY      ms1      .

```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:40:11
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'exercise'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:03.06
	Elapsed Time	00:00:03.00

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.1 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
*****
```

Model : 1
 Y : promis
 X : exercise
 W : msl

Covariates:

age emp inc

Sample

Size: 1927

```
*****
```

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6254	.3912	75.2424	205.6019	6.0000	1920.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	78.4075	1.2541	62.5216	.0000	75.9480	80.8670
exercise	-3.5080	2.0743	-1.6911	.0910	-7.5761	.5602
msl	-7.4345	.6617	-11.2358	.0000	-8.7321	-6.1368
Int_1	1.1163	1.3080	.8534	.3935	-1.4491	3.6816
age	-.2041	.0180	-11.3218	.0000	-.2395	-.1688
emp	-.8827	.0674	-13.0956	.0000	-1.0149	-.7505
inc	-.5926	.0808	-7.3302	.0000	-.7512	-.4341

Product terms key:

Int_1 : exercise x msl

Covariance matrix of regression parameter estimates:

	constant	exercise	msl	Int_1	age	emp	inc
constant	1.5727	-1.6857	-.5533	.9728	-.0120	.0176	-.0272
exercise	-1.6857	4.3028	1.0047	-2.5729	-.0002	-.0009	.0023
msl	-.5533	1.0047	.4378	-.6708	-.0018	-.0053	.0004
Int_1	.9728	-2.5729	-.6708	1.7110	.0010	.0011	-.0025
age	-.0120	-.0002	-.0018	.0010	.0003	-.0004	.0001
emp	.0176	-.0009	-.0053	.0011	-.0004	.0045	-.0011
inc	-.0272	.0023	.0004	-.0025	.0001	-.0011	.0065

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0002     .7283    1.0000  1920.0000     .3935
-----
      Focal predict: exercise (X)
      Mod var: ms1      (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  exercise   ms1      promis   .
BEGIN DATA.
  .0848     1.0000    55.7905
  .3876     1.0000    55.0662
  .6905     1.0000    54.3420
  .0848     2.0000    48.4507
  .3876     2.0000    48.0645
  .6905     2.0000    47.6783
END DATA.
GRAPH/SCATTERPLOT=
  exercise WITH      promis   BY      ms1   .

```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:40:30
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'diet'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:03.22
	Elapsed Time	00:00:03.00

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.1 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 1
 Y : promis
 X : diet
 W : msl

Covariates:

age emp inc

Sample

Size: 1927

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6280	.3943	74.8517	208.3454	6.0000	1920.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	77.6047	1.0837	71.6136	.0000	75.4795	79.7300
diet	-1.6332	2.1880	-.7464	.4555	-5.9244	2.6579
msl	-6.7264	.5319	-12.6454	.0000	-7.7696	-5.6832
Int_1	-.9722	1.4244	-.6826	.4950	-3.7658	1.8213
age	-.2101	.0180	-11.6503	.0000	-.2454	-.1747
emp	-.8792	.0672	-13.0792	.0000	-1.0110	-.7473
inc	-.5923	.0806	-7.3485	.0000	-.7503	-.4342

Product terms key:

Int_1 : diet x msl

Covariance matrix of regression parameter estimates:

	constant	diet	msl	Int_1	age	emp	inc
constant	1.1743	-1.1274	-.3201	.6508	-.0123	.0177	-.0260
diet	-1.1274	4.7875	.6716	-2.9447	.0010	-.0018	-.0015
msl	-.3201	.6716	.2829	-.4699	-.0015	-.0050	-.0006
Int_1	.6508	-2.9447	-.4699	2.0289	.0006	.0011	.0005
age	-.0123	.0010	-.0015	.0006	.0003	-.0004	.0001
emp	.0177	-.0018	-.0050	.0011	-.0004	.0045	-.0011
inc	-.0260	-.0015	-.0006	.0005	.0001	-.0011	.0065

```

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W     .0001     .4659    1.0000  1920.0000     .4950
-----
      Focal predict: diet      (X)
      Mod var: ms1      (W)

```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  diet      ms1      promis   .
BEGIN DATA.
  .0000    1.0000   55.6334
  .2289    1.0000   55.0370
  .5070    1.0000   54.3123
  .0000    2.0000   48.9070
  .2289    2.0000   48.0881
  .5070    2.0000   47.0930
END DATA.
GRAPH/SCATTERPLOT=
  diet      WITH      promis      BY      ms1      .

```

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

----- END MATRIX -----

Matrix

Notes

Output Created	07-JUN-2022 21:40:46
Comments	
Input Data	/Users/shruthivenkatesh/Downloads/PNQ_Data.sav
Active Dataset	DataSet1
Filter	<none>
Weight	<none>
Split File	<none>
N of Rows in Working Data File	2383

Notes

Syntax

```
MATRIX.  
compute  
wnames='xxxxx'.  
compute  
znames='xxxxx'.  
compute mcerpt=0.  
compute wiscov=0.  
compute ziscov=0.  
compute tooman=0.  
compute errcode=make  
(100,1,0).  
compute  
notecode=make  
(100,1,0).  
compute model = trunc(  
1 ).  
compute iterate = abs  
(trunc( 100 )).  
compute converge = abs  
( 0.00001 ).  
compute itprobtg=0.  
compute v2tag=0.  
compute ydich=0.  
compute maxwwarn=0.  
compute minwwarn=0.  
compute maxzwarn=0.  
compute minzwarn=0.  
compute toomany=0.  
compute wdich=0.  
compute zdich=0.  
compute wnotev=0.  
compute znotev=0.  
compute nxpval=1.  
compute nwpval=1.  
compute nzpval=1.  
compute errs=1.  
compute notes=1.  
compute criterr=0.  
compute novar=0.  
compute adjust=0.  
compute ncs=0.  
compute serial=0.  
compute sobelok=0.  
compute hasw=0.  
compute hasz=0.  
compute printw=0.  
compute printz=0.  
compute counterf=0.  
compute wmodcust=0.  
compute zmodcust=0.  
compute booting=0.  
compute bootiter=0.  
compute itermod=0.  
compute cov = 'age emp  
inc'.  
compute varorder=( 0  
<> 0 ).  
compute nws=0.  
compute w= 'ms1'.  
compute nzs=0.  
compute z = 'xxxxx'.  
compute nms=0.  
compute m = 'xxxxx'.  
compute nys=0.  
compute y = 'promis'.  
compute nxz=0.  
compute x = 'health'.  
compute v = 'xxxxx'.  
compute q = 'xxxxx'.  
compute linsum={ -999  
}.
```

Notes

Resources	Processor Time	00:00:03.14
	Elapsed Time	00:00:03.00

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.1 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 1
 Y : promis
 X : health
 W : ms1

Covariates:

age emp inc

Sample

Size: 1927

OUTCOME VARIABLE:
 promis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6361	.4047	73.5769	217.4995	6.0000	1920.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	80.6416	1.2051	66.9178	.0000	78.2781	83.0050
health	-11.0281	2.1461	-5.1386	.0000	-15.2370	-6.8191
ms1	-8.5908	.6388	-13.4486	.0000	-9.8436	-7.3380
Int_1	4.4271	1.3469	3.2870	.0010	1.7856	7.0686
age	-.1991	.0177	-11.2505	.0000	-.2338	-.1644
emp	-.8857	.0666	-13.2890	.0000	-1.0164	-.7550
inc	-.5589	.0801	-6.9795	.0000	-.7159	-.4018

Product terms key:

Int_1 : health x ms1

Covariance matrix of regression parameter estimates:

	constant	health	ms1	Int_1	age	emp	inc
constant	1.4522	-1.6159	-.5192	.9679	-.0115	.0163	-.0230
health	-1.6159	4.6058	.9897	-2.7443	-.0003	.0021	-.0085
ms1	-.5192	.9897	.4081	-.6559	-.0014	-.0043	-.0018
Int_1	.9679	-2.7443	-.6559	1.8141	.0002	-.0012	.0036
age	-.0115	-.0003	-.0014	.0002	.0003	-.0004	.0001
emp	.0163	.0021	-.0043	-.0012	-.0004	.0044	-.0011
inc	-.0230	-.0085	-.0018	.0036	.0001	-.0011	.0064

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0034	10.8041	1.0000	1920.0000	.0010

Focal predict: health (X)
Mod var: ms1 (W)

Conditional effects of the focal predictor at values of the moderator(s):

ms1	Effect	se	t	p	LLCI	ULCI
1.0000	-6.6009	.9650	-6.8402	.0000	-8.4935	-4.7083
2.0000	-2.1738	.9407	-2.3109	.0209	-4.0186	-.3290

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  health    ms1      promis   .
BEGIN DATA.
  .0707    1.0000   56.9694
  .3612    1.0000   55.0518
  .6517    1.0000   53.1343
  .0707    2.0000   48.6914
  .3612    2.0000   48.0599
  .6517    2.0000   47.4284
END DATA.
GRAPH/SCATTERPLOT=
  health WITH promis BY ms1   .

***** ANALYSIS NOTES AND ERRORS *****
Level of confidence for all confidence intervals in output:
  95.0000
----- END MATRIX -----

```