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Mplus Program to Obtain Descriptive Statistics

Mplus offers a separate program type (BASIC) for generating descriptive statistics for the variables used in an analysis. The relevant syntax for the social phobia example of Chapter 11 appears in Table 1.

Table 11.1: Mplus Syntax for Social Phobia Example

```
TITLE: EXAMPLE CHAPTER 11 BASIC ;
DATA: FILE IS c:\mplus\ret\newchap11\chap11M.txt ;
 VARIABLE:
    NAMES ARE ID CR1 SPAI1 SPIN1 CR3 SPAI3 SPIN3
      NEGAPP2 PSKILLS2 EXTERN2 NEGAPP1 PSKILLS1 EXTERN1
      HYPER SEX TREAT ;
    USEVARIABLES ARE CR1 SPAI1 SPIN1 CR3 SPAI3 SPIN3
      NEGAPP2 PSKILLS2 EXTERN2 NEGAPP1 PSKILLS1 EXTERN1
      HYPER SEX TREAT ;
  MISSING ARE ALL (-9999) ;
 ANALYSIS:
   TYPE = BASIC ;
  OUTPUT:
```

All of the syntax is explained in Chapter 11 except the analysis type is set to BASIC and I use the defaults for the OUTPUT line. The program generates missing data analyses (see Chapter X), the estimated means, covariances, and correlations between all of the variables, and a set of descriptive statistics that are routinely reported on Mplus output as follows:

```
UNIVARIATE SAMPLE STATISTICS

    UNIVARIATE HIGHER-ORDER MOMENT DESCRIPTIVE STATISTICS

        Variable/         Mean/     Skewness/   Minimum/ % with                Percentiles
      Sample Size      Variance    Kurtosis    Maximum  Min/Max      20%/60%    40%/80%    Median

    CR1                   3.101       0.055       1.070    0.30%       2.460      2.850      3.040
           333.000        0.549      -0.430       4.930    0.30%       3.310      3.790
    SPAI1                 3.082       0.107       1.140    0.30%       2.490      2.830      3.070
           333.000        0.536      -0.392       5.170    0.30%       3.240      3.730
    SPIN1                 3.088       0.178       1.290    0.30%       2.470      2.840      3.070
           333.000        0.587      -0.161       5.470    0.30%       3.280      3.760
    CR3                   2.281       0.161       0.000    5.11%       1.040      1.910      2.190
           333.000        1.846      -0.827       5.000    1.20%       2.520      3.540
    SPAI3                 2.228       0.185       0.000    5.11%       0.980      1.810      2.190
```

	333.000	1.793	-0.604	6.000	0.60%	2.670	3.420	
SPIN3		2.227	0.241	0.000	6.01%	0.870	1.670	2.150
	333.000	1.943	-0.815	6.000	0.30%	2.570	3.610	
NEGAPP2		0.430	-0.099	-1.850	0.30%	-0.270	0.160	0.420
	333.000	0.617	-0.431	2.440	0.30%	0.690	1.180	
PSKILLS2		-0.419	0.015	-2.200	0.30%	-1.140	-0.740	-0.470
	333.000	0.595	-0.979	1.220	0.30%	-0.140	0.360	
EXTERN2		0.820	-0.026	-0.890	0.30%	0.350	0.690	0.840
	333.000	0.290	-0.108	2.730	0.30%	0.970	1.290	
NEGAPP1		1.020	-0.030	-0.390	0.30%	0.630	0.900	1.020
	333.000	0.201	-0.036	2.260	0.30%	1.120	1.400	
PSKILLS1		-0.985	0.197	-2.360	0.30%	-1.320	-1.110	-1.000
	333.000	0.199	0.700	0.570	0.30%	-0.900	-0.650	
EXTERN1		1.006	0.125	0.000	0.60%	0.650	0.880	0.990
	333.000	0.188	-0.166	2.320	0.30%	1.120	1.350	
HYPER		-0.042	0.198	-1.330	0.30%	-0.390	-0.170	-0.070
	333.000	0.200	0.271	1.420	0.30%	0.050	0.320	
SEX		0.526	-0.102	0.000	47.45%	0.000	0.000	1.000
	333.000	0.249	-1.990	1.000	52.55%	1.000	1.000	
TREAT		0.486	0.054	0.000	51.35%	0.000	0.000	0.000
	333.000	0.250	-1.997	1.000	48.65%	1.000	1.000	

Each variable listed on the left has two rows. The labels at the top of the table described the values in the first row (`Mean, Skewness, Minimum, % with Minimum Score, 20th percentile, 40th percentile, Median`) followed by a / and then what values are in the second row for that varianle (`Sample Size, Variance, Kurtosis, Maximum, % with Maximum Score, 60th percentile, 80th percentile`). The program is useful to obtain descriptive statistics outside the context of your more formal modeling efforts, although much of it is also printed on the output for your Mplus model analysis.