



Using a polychoric correlation matrix with ordinal variables (MA = PM)

Swedish school children in grade 9 were asked questions about their attitudes on social issues in family, school, and society. Among the questions asked were the following eight items (Hasselrot & Lernberg, 1980).

For me, questions about...

- Human rights
- Equal conditions for all people
- Racial problems
- Equal value of all people
- Euthanasia
- Crime and punishment
- Conscientious objectors
- Guilt and bad conscience

are:

unimportant Not important important very important

In this example we use a subsample of 200 cases. Response to the eight questions were scored 1,2,3, and 4 (4 = very important). Missing values were scored zero. The data matrix consists of 200 rows and 8 columns. It is stored in data file **DATA.EX2**.

The PRELIS syntax file (**EX2_16.PRL**) is:

```
EXAMPLE 2: ATTITUDES OF MORALITY AND EQUALITY
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```
DA NI=8 NO=200 MI=0 TR=PA
```

```
LA
```

```
'Human Rights' 'Equal Conditions' 'Racial Problems' 'Equal Value' Euthanasia 'Crime&Punishment'  
'Consc. Objectors' Guilt
```

```
RA FI=DATA.EX2
```

```
OR ALL
```

```
OU MA=PM
```

Note:

While there is no space in the variable name Crime&Punishment, it is placed in quotes because the special character “&” is used. The same principle requires the use of single quotes for the name ‘Consc. Objectors’ as it has both a “.” and a space in the name.

Partial output for this analysis is shown below.

Correlations and Test Statistics

(PE=Pearson Product Moment, PC=Polychoric, PS=Polyserial)

Variable vs.	Variable	Test of Model				Test of Close Fit	
		Correlation	Chi-Squ.	D.F.	P-Value	RMSEA	P-Value
Equal Conditions vs.	Human Rights	0.418 (PC)	14.708	8	0.065	0.065	0.853
Racial Problems vs.	Human Rights	0.221 (PC)	10.872	8	0.209	0.043	0.950
Racial Problems vs.	Equal Conditions	0.202 (PC)	4.933	8	0.765	0.000	0.998
Equal Value vs.	Human Rights	0.373 (PC)	16.735	8	0.033	0.074	0.777
Equal Value vs.	Equal Conditions	0.635 (PC)	13.097	8	0.109	0.057	0.903
Equal Value vs.	Racial Problems	0.285 (PC)	10.408	8	0.238	0.039	0.958
Euthanasia vs.	Human Rights	0.442 (PC)	12.341	8	0.137	0.052	0.921
Euthanasia vs.	Equal Conditions	0.706 (PC)	9.872	8	0.274	0.034	0.968
Euthanasia vs.	Racial Problems	0.317 (PC)	7.348	8	0.500	0.000	0.990
Euthanasia vs.	Equal Value	0.692 (PC)	26.238	8	0.001	0.107	0.364
Crime&Punishment vs.	Human Rights	0.215 (PC)	12.460	8	0.132	0.053	0.918
Crime&Punishment vs.	Equal Conditions	0.236 (PC)	17.785	8	0.023	0.078	0.736
Crime&Punishment vs.	Racial Problems	0.282 (PC)	14.366	8	0.073	0.064	0.862
Crime&Punishment vs.	Equal Value	0.423 (PC)	13.672	8	0.091	0.060	0.889
Crime&Punishment vs.	Euthanasia	0.218 (PC)	13.103	8	0.108	0.056	0.905
Consc. Objectors vs.	Human Rights	0.190 (PC)	11.504	8	0.175	0.047	0.940
Consc. Objectors vs.	Equal Conditions	0.292 (PC)	10.694	8	0.220	0.041	0.955
Consc. Objectors vs.	Racial Problems	0.312 (PC)	6.467	8	0.595	0.000	0.994
Consc. Objectors vs.	Equal Value	0.340 (PC)	14.912	8	0.061	0.066	0.850
Consc. Objectors vs.	Euthanasia	0.224 (PC)	7.263	8	0.509	0.000	0.991
Consc. Objectors vs.	Crime&Punishment	0.312 (PC)	9.113	8	0.333	0.026	0.977
Guilt vs.	Human Rights	0.094 (PC)	17.361	8	0.027	0.077	0.749
Guilt vs.	Equal Conditions	0.314 (PC)	15.453	8	0.051	0.069	0.827
Guilt vs.	Racial Problems	0.239 (PC)	8.626	8	0.375	0.020	0.980
Guilt vs.	Equal Value	0.320 (PC)	7.392	8	0.495	0.000	0.990
Guilt vs.	Euthanasia	0.340 (PC)	8.500	8	0.386	0.018	0.983
Guilt vs.	Crime&Punishment	0.207 (PC)	7.595	8	0.474	0.000	0.989
Guilt vs.	Consc. Objectors	0.202 (PC)	12.879	8	0.116	0.055	0.909

Percentage of Tests Exceeding 0.5% Significance Level: 0.0%

Percentage of Tests Exceeding 1.0% Significance Level: 0.0%

Percentage of Tests Exceeding 5.0% Significance Level: 0.0%