

The FACTOR Procedure

Input Data Type	Raw Data
Number of Records Read	77
Number of Records Used	77
N for Significance Tests	77

Means and Standard Deviations from 77 Observations		
Variable	Mean	Std Dev
Murder	4.14286	3.75820
Rape	22.77922	14.22898
Robbery	173.63636	111.05344
Assault	266.18182	181.31883
Burglary	140.03896	70.35501
Larceny	561.67532	342.97209
LarcenyOfAutomotives	70.51948	48.80617

Correlations							
	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Murder	1.00000	0.53700	0.60212	0.68244	0.36494	-0.17977	0.49105
Rape	0.53700	1.00000	0.80282	0.82650	0.66399	0.15433	0.76894
Robbery	0.60212	0.80282	1.00000	0.92278	0.72017	0.21652	0.65762
Assault	0.68244	0.82650	0.92278	1.00000	0.63220	0.06931	0.67583
Burglary	0.36494	0.66399	0.72017	0.63220	1.00000	0.45800	0.65453
Larceny	-0.17977	0.15433	0.21652	0.06931	0.45800	1.00000	0.08488
LarcenyOfAutomotives	0.49105	0.76894	0.65762	0.67583	0.65453	0.08488	1.00000

The FACTOR Procedure
Initial Factor Method: Principal Factors

Inverse Correlation Matrix							
	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Murder	2.09519	0.19092	-0.07150	-1.38123	-0.07711	0.50967	-0.18793
Rape	0.19092	4.43513	-0.43302	-2.17593	-0.19151	-0.18139	-1.60801
Robbery	-0.07150	-0.43302	8.94126	-7.01300	-1.58467	-0.69765	0.32415
Assault	-1.38123	-2.17593	-7.01300	9.95969	0.45965	0.71611	-0.12942
Burglary	-0.07711	-0.19151	-1.58467	0.45965	3.19498	-1.04416	-1.08599
Larceny	0.50967	-0.18139	-0.69765	0.71611	-1.04416	1.66479	0.40615
LarcenyOfAutomotives	-0.18793	-1.60801	0.32415	-0.12942	-1.08599	0.40615	2.87937

Partial Correlations Controlling all other Variables							
	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Murder	1.00000	-0.06263	0.01652	0.30237	0.02980	-0.27290	0.07651
Rape	-0.06263	1.00000	0.06876	0.32739	0.05088	0.06675	0.44997
Robbery	0.01652	0.06876	1.00000	0.74316	0.29649	0.18083	-0.06388
Assault	0.30237	0.32739	0.74316	1.00000	-0.08148	-0.17587	0.02417
Burglary	0.02980	0.05088	0.29649	-0.08148	1.00000	0.45275	0.35805
Larceny	-0.27290	0.06675	0.18083	-0.17587	0.45275	1.00000	-0.18550
LarcenyOfAutomotives	0.07651	0.44997	-0.06388	0.02417	0.35805	-0.18550	1.00000

Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.82123646						
Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
0.89598584	0.89145042	0.80727529	0.78385956	0.83167944	0.45956061	0.85170523

The FACTOR Procedure
Initial Factor Method: Principal Factors

Prior Communality Estimates: MAX						
Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
0.68244416	0.82649560	0.92277807	0.92277807	0.72017458	0.45799658	0.76893751

Eigenvalues of the Reduced Correlation Matrix: Total = 5.30160458 Average = 0.75737208				
	Eigenvalue	Difference	Proportion	Cumulative
1	4.22931536	3.38292578	0.7977	0.7977
2	0.84638958	0.58011556	0.1596	0.9574
3	0.26627402	0.16483731	0.0502	1.0076
4	0.10143672	0.10569064	0.0191	1.0267
5	-.00425392	0.02348985	-0.0008	1.0259
6	-.02774378	0.08206963	-0.0052	1.0207
7	-.10981340		-0.0207	1.0000

3 factors will be retained by the PROPORTION criterion.

Eigenvectors			
	1	2	3
Murder	0.31765	-0.49697	0.16183
Rape	0.43259	0.00387	-0.27738
Robbery	0.45434	0.03181	0.45281
Assault	0.45351	-0.18695	0.33205
Burglary	0.37432	0.43439	-0.05804
Larceny	0.09120	0.72685	0.20627
LarcenyOfAutomotives	0.38916	-0.00609	-0.73189

Factor Pattern			
	Factor1	Factor2	Factor3
Murder	0.65326	-0.45721	0.08351
Rape	0.88962	0.00356	-0.14313
Robbery	0.93436	0.02926	0.23366
Assault	0.93265	-0.17199	0.17134
Burglary	0.76980	0.39964	-0.02995
Larceny	0.18755	0.66869	0.10644
LarcenyOfAutomotives	0.80032	-0.00560	-0.37767

The FACTOR Procedure
Initial Factor Method: Principal Factors

Variance Explained by Each Factor		
Factor1	Factor2	Factor3
4.2293154	0.8463896	0.2662740

Final Communality Estimates: Total = 5.341979						
Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
0.64276245	0.81193107	0.92847715	0.92877361	0.75320923	0.49365702	0.78316844

The FACTOR Procedure
Initial Factor Method: Principal Factors

Scoring Coefficients Estimated by Regression

Squared Multiple Correlations of the Variables with Each Factor		
Factor1	Factor2	Factor3
0.96640037	0.71765592	0.61491767

Standardized Scoring Coefficients			
	Factor1	Factor2	Factor3
Murder	0.06936	-0.41075	0.02180
Rape	0.16798	0.10125	-0.49915
Robbery	0.29043	0.39732	0.79435
Assault	0.28276	-0.63112	0.37532
Burglary	0.12185	0.49385	-0.06723
Larceny	0.02108	0.31642	0.08330
LarcenyOfAutomotives	0.17346	-0.06661	-0.74366

Residual Correlations With Uniqueness on the Diagonal							
	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Murder	0.35724	-0.03057	-0.01439	-0.01976	0.04729	-0.00544	-0.00279
Rape	-0.03057	0.18807	0.00494	0.02193	-0.02656	0.00034	0.00292
Robbery	-0.01439	0.00494	0.07152	0.01635	-0.00379	-0.00316	-0.00175
Assault	-0.01976	0.02193	0.01635	0.07123	-0.01189	-0.00884	-0.00683
Burglary	0.04729	-0.02656	-0.00379	-0.01189	0.24679	0.04957	0.02937
Larceny	-0.00544	0.00034	-0.00316	-0.00884	0.04957	0.50634	-0.02127
LarcenyOfAutomotives	-0.00279	0.00292	-0.00175	-0.00683	0.02937	-0.02127	0.21683

Root Mean Square Off-Diagonal Residuals: Overall = 0.02110943						
Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
0.02518481	0.01894671	0.00936273	0.01529996	0.03270274	0.02246300	0.01517231

Partial Correlations Controlling Factors							
	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Murder	1.00000	-0.11796	-0.09000	-0.12388	0.15925	-0.01279	-0.01002
Rape	-0.11796	1.00000	0.04255	0.18944	-0.12327	0.00109	0.01447
Robbery	-0.09000	0.04255	1.00000	0.22903	-0.02856	-0.01658	-0.01405
Assault	-0.12388	0.18944	0.22903	1.00000	-0.08968	-0.04653	-0.05498
Burglary	0.15925	-0.12327	-0.02856	-0.08968	1.00000	0.14023	0.12696

The FACTOR Procedure
Initial Factor Method: Principal Factors

Partial Correlations Controlling Factors							
	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Larceny	-0.01279	0.00109	-0.01658	-0.04653	0.14023	1.00000	-0.06420
LarcenyOfAutomotives	-0.01002	0.01447	-0.01405	-0.05498	0.12696	-0.06420	1.00000

Root Mean Square Off-Diagonal Partials: Overall = 0.10304121						
Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
0.10245851	0.10568645	0.10299937	0.13959234	0.11916340	0.06632072	0.06294298

The FACTOR Procedure

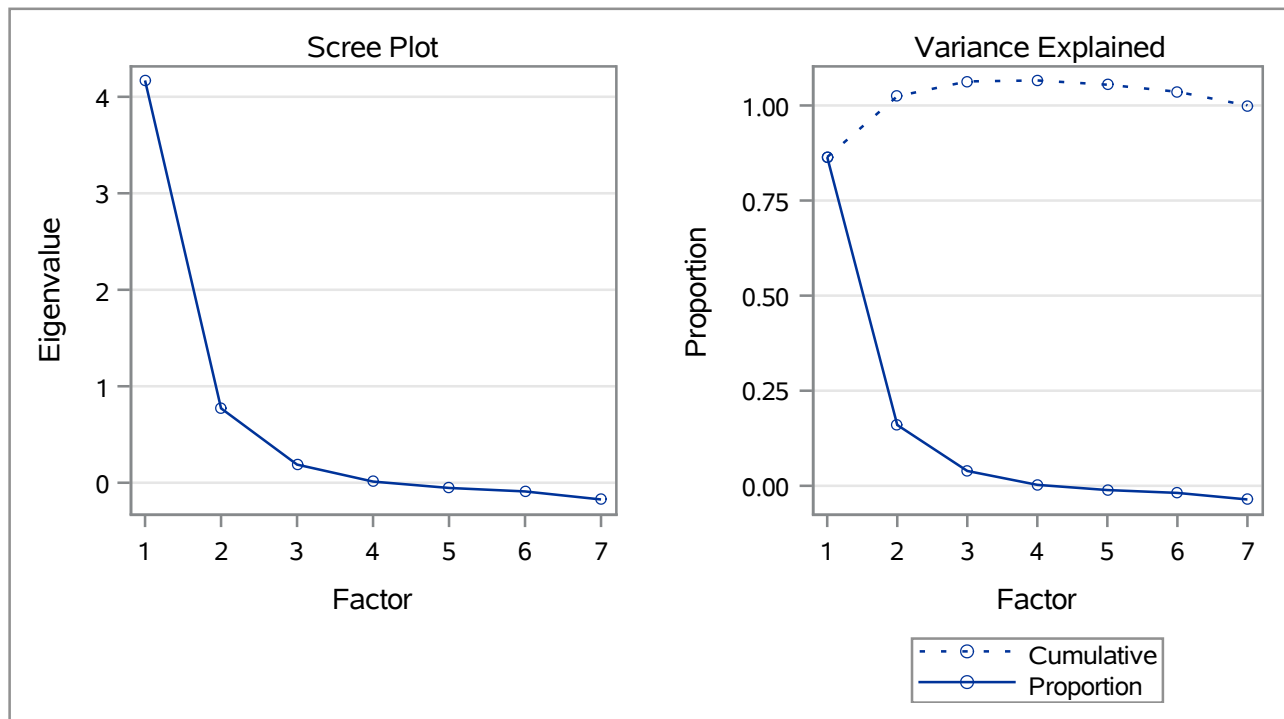
Input Data Type	Raw Data
Number of Records Read	77
Number of Records Used	77
N for Significance Tests	77

The FACTOR Procedure
Initial Factor Method: Principal Factors

Prior Communality Estimates: SMC						
Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
0.52271654	0.77452727	0.88815893	0.89959527	0.68700881	0.39932298	0.65270237

Eigenvalues of the Reduced Correlation Matrix: Total = 4.82403217 Average = 0.68914745				
	Eigenvalue	Difference	Proportion	Cumulative
1	4.16931551	3.39801859	0.8643	0.8643
2	0.77129692	0.58305985	0.1599	1.0242
3	0.18823707	0.17609374	0.0390	1.0632
4	0.01214333	0.06586833	0.0025	1.0657
5	-.05372500	0.03630030	-0.0111	1.0546
6	-.09002530	0.08318506	-0.0187	1.0359
7	-.17321036		-0.0359	1.0000

2 factors will be retained by the NFACTOR criterion.



Factor Pattern		
	Factor1	Factor2
Murder	0.63257	-0.39857
Rape	0.88487	-0.00897
Robbery	0.93369	0.01911
Assault	0.93401	-0.18551

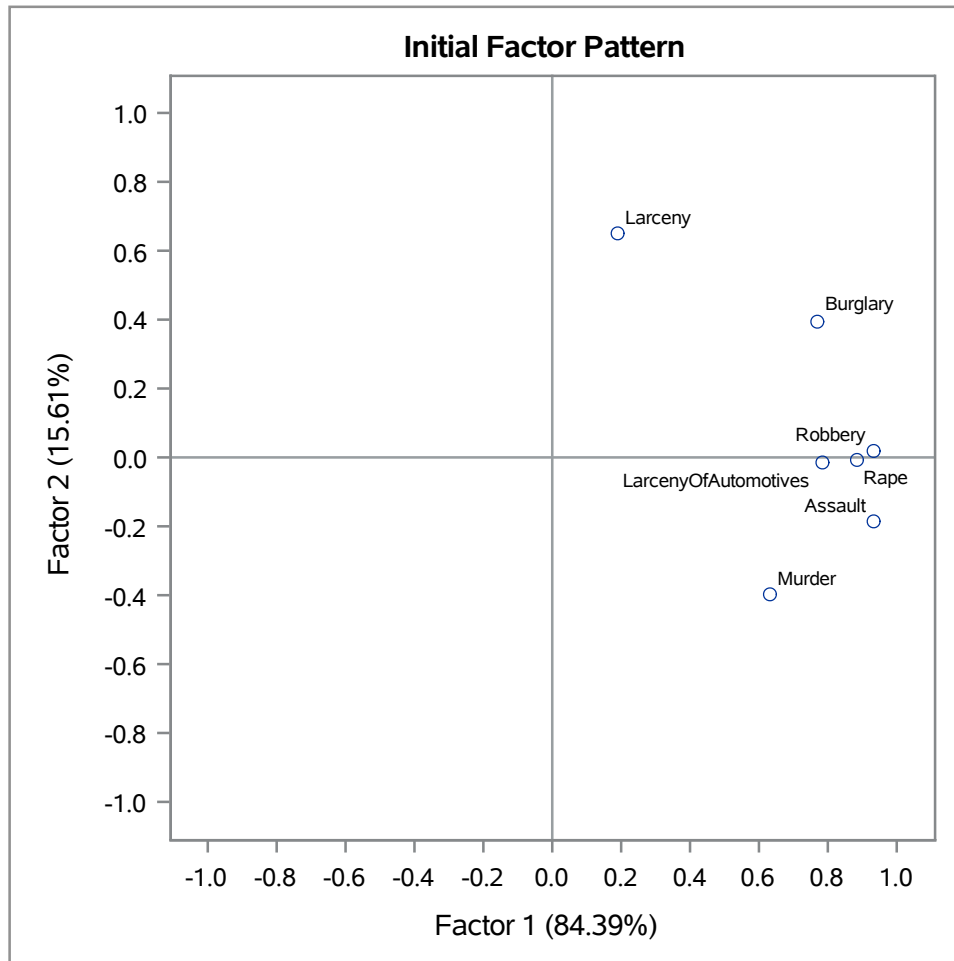
The FACTOR Procedure
Initial Factor Method: Principal Factors

Factor Pattern		
	Factor1	Factor2
Burglary	0.76971	0.39525
Larceny	0.18801	0.64898
LarcenyOfAutomotives	0.78372	-0.01373

Variance Explained by Each Factor	
Factor1	Factor2
4.1693155	0.7712969

Final Communality Estimates: Total = 4.940612						
Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
0.55899864	0.78308187	0.87214586	0.90677985	0.74867981	0.45652057	0.61440583

The FACTOR Procedure
Initial Factor Method: Principal Factors



The FACTOR Procedure
Rotation Method: Varimax

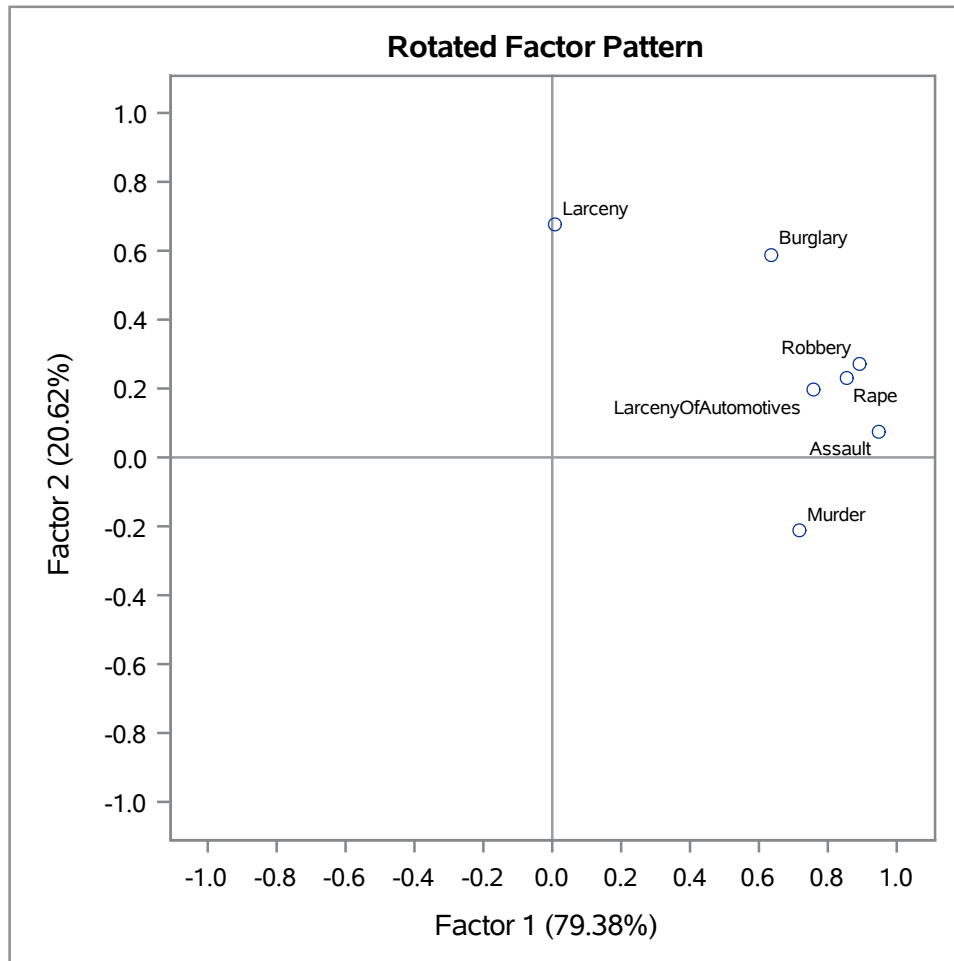
Orthogonal Transformation Matrix		
	1	2
1	0.96288	0.26994
2	-0.26994	0.96288

Rotated Factor Pattern		
	Factor1	Factor2
Murder	0.71667	-0.21302
Rape	0.85445	0.23022
Robbery	0.89387	0.27044
Assault	0.94941	0.07350
Burglary	0.63445	0.58835
Larceny	0.00585	0.67564
LarcenyOfAutomotives	0.75833	0.19833

Variance Explained by Each Factor	
Factor1	Factor2
3.9217186	1.0188939

Final Communality Estimates: Total = 4.940612						
Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
0.55899864	0.78308187	0.87214586	0.90677985	0.74867981	0.45652057	0.61440583

The FACTOR Procedure
Rotation Method: Varimax



The FACTOR Procedure
Rotation Method: Varimax

