#### The FACTOR Procedure

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

### **Project STA 9705: NYC Felony**

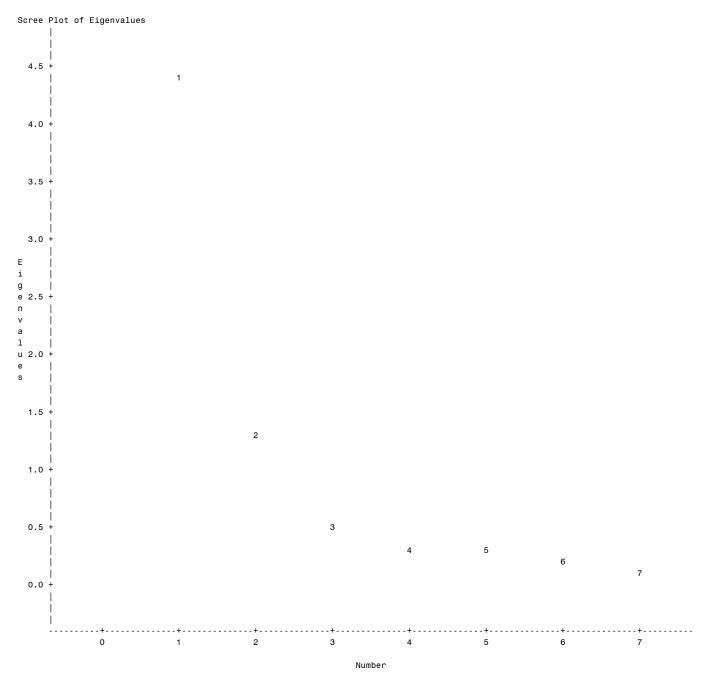
# The FACTOR Procedure Initial Factor Method: Principal Components

**Prior Communality Estimates: ONE** 

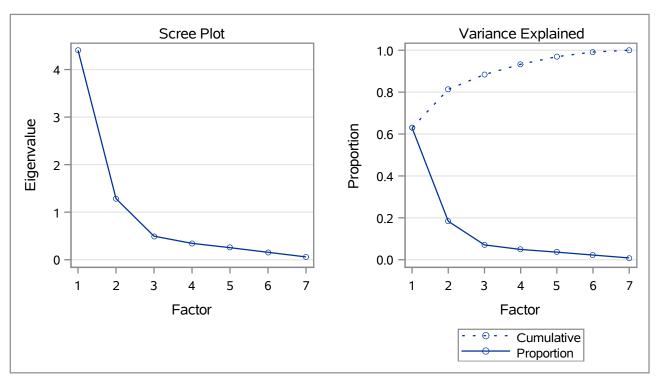
Eigenvalues of the Correlation Matrix: Total = 7 Average = 1								
	Eigenvalue	Difference	Proportion	Cumulative				
1	4.40664476	3.12148176	0.6295	0.6295				
2	1.28516300	0.78989844	0.1836	0.8131				
3	0.49526456	0.15127287	0.0708	0.8839				
4	0.34399169	0.09035705	0.0491	0.9330				
5	0.25363464	0.09753931	0.0362	0.9692				
6	0.15609533	0.09688932	0.0223	0.9915				
7	0.05920601		0.0085	1.0000				

2 factors will be retained by the NFACTOR criterion.

#### **The FACTOR Procedure Initial Factor Method: Principal Components**



# The FACTOR Procedure Initial Factor Method: Principal Components



Eigenvectors				
	1	2		
X1	0.32780	-0.44115		
X2	0.43203	-0.01413		
Х3	0.44341	0.01530		
X4	0.44227 -0.1395			
X5	0.38451	0.35650		
X6	0.10098	0.81071		
X7	0.39450	-0.03368		

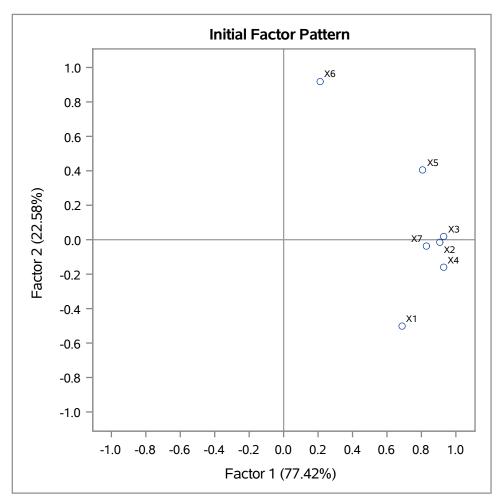
Factor Pattern				
	Factor2			
X1	0.68812	-0.50011		
X2	0.90693	-0.01602		
хз	0.93081 0.017			
X4	0.92841	-0.15823		
X5	0.80717	0.40415		
Х6	0.21198	0.91906		
Х7	0.82813	-0.03818		

# The FACTOR Procedure Initial Factor Method: Principal Components

Variance Explained by Each Factor		
Factor1	Factor2	
4.4066448	1.2851630	

Final Communality Estimates: Total = 5.691808						
X1 X2 X3 X4 X5 X6 X						
0.72362102	0.82277140	0.86671474	0.88698747	0.81485485	0.88959800	0.68726028

# The FACTOR Procedure Initial Factor Method: Principal Components



#### The FACTOR Procedure **Rotation Method: Varimax**

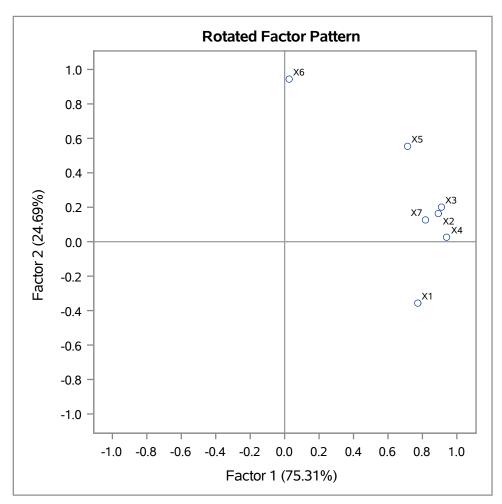
Orthogonal Transformation Matrix				
	1	2		
1	0.98059 0.19			
2	-0.19608	9608 0.98059		

Rotated Factor Pattern					
	Factor2				
X1	0.77283	-0.35547			
X2	0.89246	0.16212			
хз	0.90934	0.19953			
X4	0.94142	0.02689			
Х5	0.71225	0.55458			
Х6	0.02765	0.94278			
Х7	0.81954	0.12495			

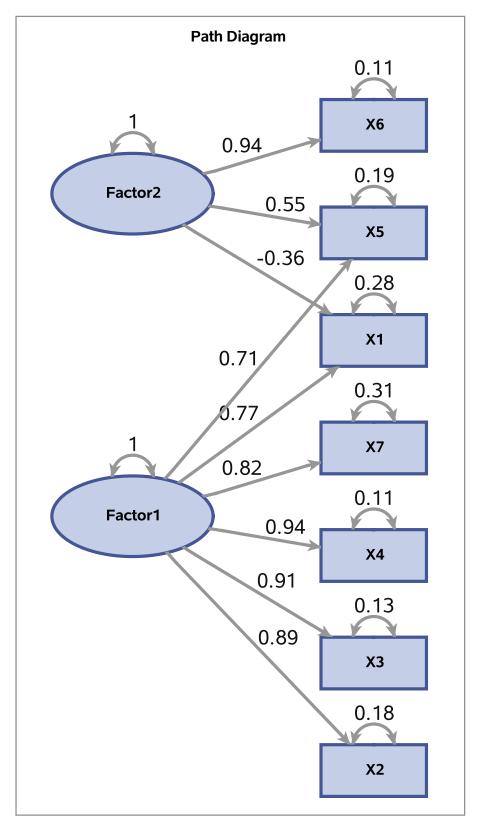
Variance Explained by Each Factor		
Factor1	Factor2	
4.2866277	1.4051801	

Final Communality Estimates: Total = 5.691808						
X1 X2 X3 X4 X5 X6 X7						
0.72362102	0.82277140	0.86671474	0.88698747	0.81485485	0.88959800	0.68726028

## The FACTOR Procedure Rotation Method: Varimax



The FACTOR Procedure Rotation Method: Varimax



#### The FACTOR Procedure

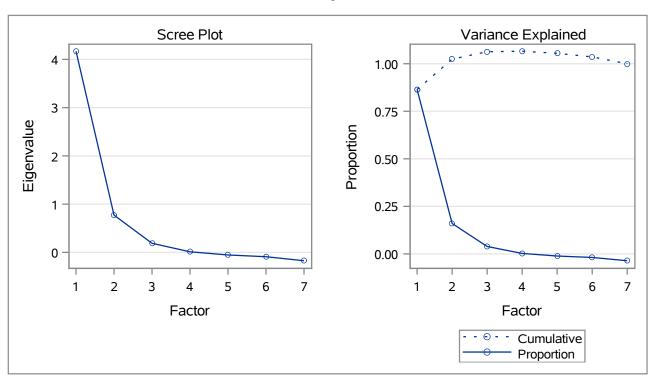
Input Data Type	Raw Data
Number of Records Read	77
Number of Records Used	77
N for Significance Tests	77

#### **The FACTOR Procedure Initial Factor Method: Principal Factors**

	Prior Communality Estimates: SMC						
X1 X2 X3 X4 X5 X6						X7	
	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 Cumulativ								
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					
X1	0.63257	-0.39857			
<b>X2</b> 0.88487		-0.00897			
<b>X3</b> 0.93369		0.01911			
X4	0.93401	-0.18551			

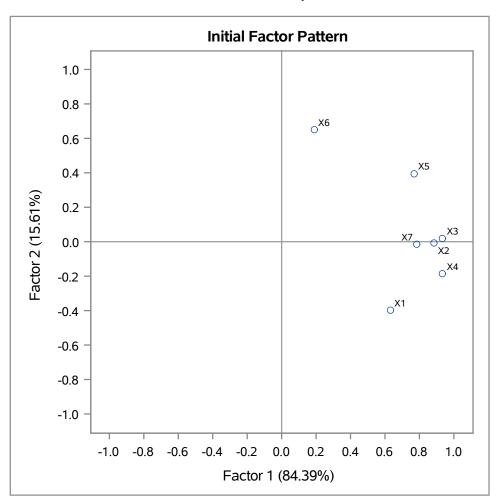
#### The FACTOR Procedure **Initial Factor Method: Principal Factors**

Factor Pattern					
	Factor1 Factor2				
X5	0.76971	0.39525			
<b>X6</b> 0.18801		0.64898			
X7	0.78372	-0.01373			

Variance Explained by Each Factor			
Factor1	Factor2		
4.1693155	0.7712969		

Final Communality Estimates: Total = 4.940612						
X1 X2 X3 X4 X5 X6 X						Х7
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**

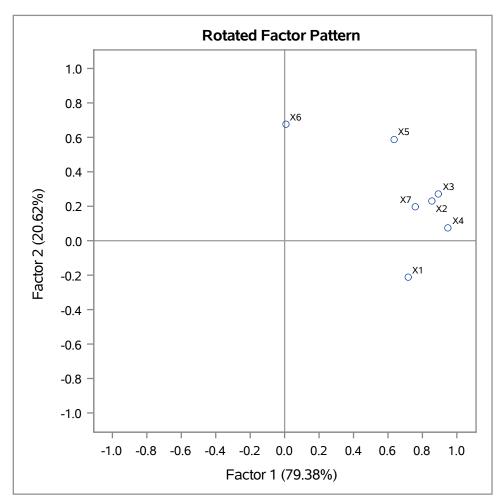
Orthogonal Transformation Matrix				
	1			
1	0.96288	0.26994		
2	-0.26994	0.96288		

Rotated Factor Pattern					
	Factor1 Factor2				
X1	0.71667	-0.21302			
X2	0.85445	0.23022			
хз	0.89387	0.27044			
X4	0.94941	0.07350			
Х5	0.63445	0.58835			
Х6	0.00585	0.67564			
<b>X7</b> 0.75833		0.19833			

Variance Explained by Each Factor			
Factor1	Factor2		
3.9217186	1.0188939		

Final Communality Estimates: Total = 4.940612						
X1 X2 X3 X4 X5 X6 X						Х7
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**

