

**Table 31-2 Exploratory Factor Analysis: Measures of Chronic Pain Behavior**

```
FACTOR
/VARIABLES Complains ChangePosition Groans RubsBack Isolation MoveStiffly
WalkStiffly
/MISSING LISTWISE
/ANALYSIS Complains ChangePosition Groans RubsBack Isolation MoveStiffly
WalkStiffly
/PRINT INITIAL EXTRACTION ROTATION
/PLOT EIGEN
/CRITERIA MINEIGEN(1) ITERATE(25)
/EXTRACTION PAF
/CRITERIA ITERATE(25)
/ROTATION VARIMAX
/METHOD=CORRELATION.
```

## Factor Analysis

Run using Dimension Reduction > Factor / Extraction: Principal axis factoring

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.651
Bartlett's Test of Sphericity	Approx. Chi-Square	582.054
	df	21
	Sig.	.000

### Communalities

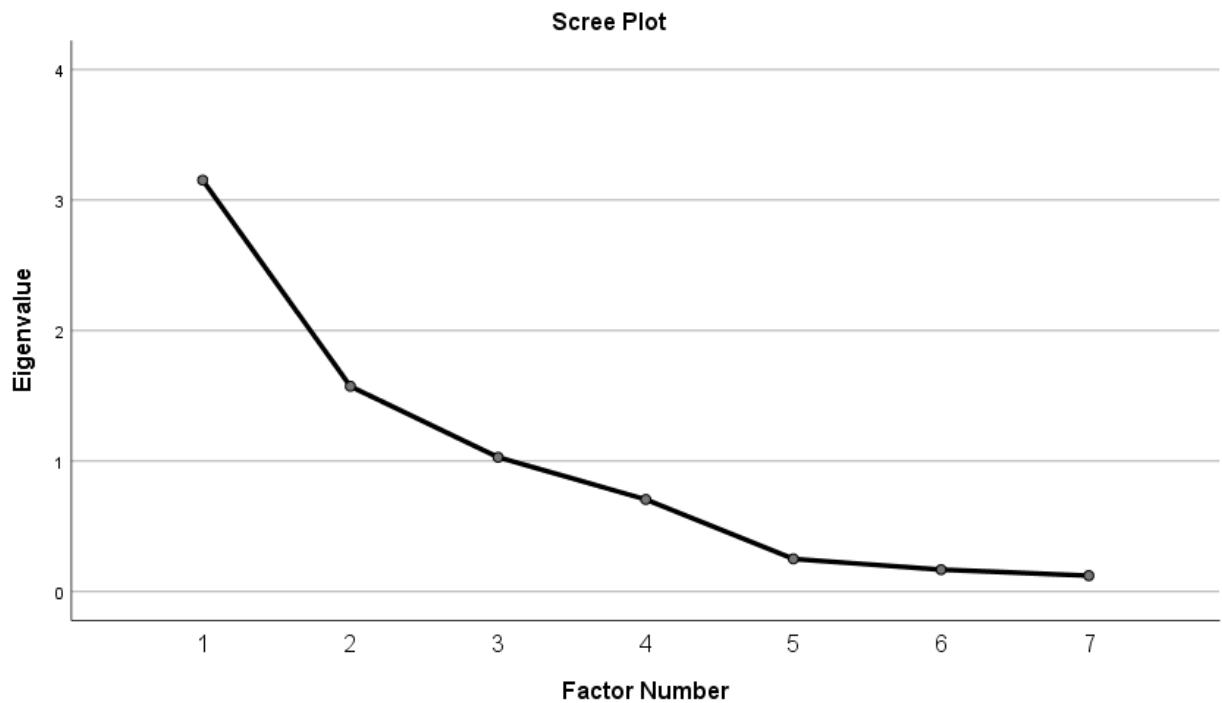
	Initial	Extraction
Complains about pain	.629	.982
Changes position	.778	.968
Groans	.557	.550
Rubs back	.780	.795
Isolates oneself	.087	.041
Moves stiffly	.689	.933
Walks stiffly	.683	.719

Extraction Method: Principal Axis Factoring.

### Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.152	45.033	45.033	2.994	42.769	42.769	1.858	26.545	26.545
2	1.572	22.463	67.496	1.390	19.852	62.621	1.704	24.341	50.886
3	1.029	14.705	82.201	.603	8.608	71.230	1.424	20.343	71.230
4	.706	10.081	92.282						
5	.250	3.574	95.856						
6	.168	2.400	98.256						
7	.122	1.744	100.000						

Extraction Method: Principal Axis Factoring.



The scree plot shows how variance decreases with successive factors. After three factors, there is little new variance being accounted for. It is another way to determine how many factors are reasonable to extract from the data.

### Factor Matrix<sup>a</sup>

	Factor		
	1	2	3
Complains about pain	.823	-.241	.497
Changes position	-.864	.225	.414
Groans	.608	-.324	.274
Rubs back	-.820	.202	.284
Isolates oneself	.116	-.039	-.162
Moves stiffly	.506	.821	.050
Walks stiffly	.509	.677	.016

Extraction Method: Principal Axis Factoring.<sup>a</sup>

a. Attempted to extract 3 factors. More than 25 iterations required. (Convergence=.008). Extraction was terminated.

### Rotated Factor Matrix<sup>a</sup>

	Factor		
	1	2	3
Complains about pain	.965	.181	-.133
Changes position	-.430	-.157	.871
Groans	.712	-.002	-.205
Rubs back	-.470	-.167	.739
Isolates oneself	-.004	.007	-.202
Moves stiffly	.062	.962	-.062
Walks stiffly	.099	.833	-.123

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 4 iterations.

### Factor Transformation Matrix

Factor	1	2	3
1	.690	.445	-.571
2	-.387	.893	.229
3	.612	.063	.788

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.