Factor Analysis using method = minres

Call: fa(r = data, nfactors = 5, rotate = "varimax")

Standardized loadings (pattern matrix) based upon correlation matrix

MR1 MR2 MR3 MR5 MR4 h2 u2 com

d1 0.79 0.17 0.23 0.16 0.25 0.79 0.21 1.6

d2 0.74 0.22 0.30 0.21 0.12 0.75 0.25 1.8

d3 0.72 0.25 0.24 0.18 0.22 0.72 0.28 1.9

d4 0.35 0.03 0.12 0.18 0.06 0.17 0.83 1.8

d5 0.53 0.20 0.21 0.22 0.27 0.48 0.52 2.7

d6 0.80 0.22 0.25 0.19 0.16 0.81 0.19 1.6

d7 0.66 0.19 0.18 0.22 0.15 0.57 0.43 1.7

f1 0.05 0.21 0.11 0.06 0.62 0.45 0.55 1.3

f2 0.16 0.10 0.05 0.15 0.59 0.41 0.59 1.4

f3 0.21 0.18 0.11 0.16 0.55 0.42 0.58 1.8

f4 0.16 0.11 0.17 0.03 0.42 0.25 0.75 1.8

h1 0.19 0.21 0.47 0.10 0.01 0.31 0.69 1.9

h2 0.23 0.07 0.64 0.12 0.10 0.49 0.51 1.4

h3 0.11 0.00 0.41 0.09 0.23 0.24 0.76 1.9

h4 0.16 0.09 0.57 0.06 0.14 0.39 0.61 1.4

h5 0.19 0.11 0.50 0.13 0.01 0.31 0.69 1.6

h6 0.09 0.14 0.62 0.12 0.11 0.43 0.57 1.3

n1 0.43 0.20 0.35 0.62 0.15 0.76 0.24 2.9

n2 0.37 0.24 0.16 0.56 0.25 0.59 0.41 2.9

n3 0.23 0.09 0.24 0.23 0.11 0.18 0.82 3.7

n4 0.37 0.36 0.19 0.48 0.13 0.56 0.44 3.3

n5 0.21 0.34 0.17 0.46 0.22 0.45 0.55 3.2

n6 0.34 0.22 0.24 0.75 0.13 0.80 0.20 1.9

s1 0.17 0.68 0.18 0.20 0.28 0.64 0.36 1.8

s2 0.27 0.63 0.14 0.21 0.18 0.56 0.44 1.9

s3 0.09 0.67 0.11 0.17 0.18 0.53 0.47 1.4

s4 0.31 0.69 0.19 0.09 0.15 0.64 0.36 1.7

MR1 MR2 MR3 MR5 MR4

SS loadings 4.30 2.64 2.59 2.26 1.90

Proportion Var 0.16 0.10 0.10 0.08 0.07

Cumulative Var 0.16 0.26 0.35 0.44 0.51

Proportion Explained 0.31 0.19 0.19 0.16 0.14

Cumulative Proportion 0.31 0.51 0.70 0.86 1.00

Mean item complexity = 2

Test of the hypothesis that 5 factors are sufficient.

df null model = 351 with the objective function = 14.76 with Chi Square = 2689.2

df of the model are 226 and the objective function was 1.58

The root mean square of the residuals (RMSR) is 0.03

The df corrected root mean square of the residuals is 0.04

The harmonic n.obs is 193 with the empirical chi square 128.32 with prob < 1

The total n.obs was 193 with Likelihood Chi Square = 283.17 with prob < 0.0058

Tucker Lewis Index of factoring reliability = 0.961

RMSEA index = 0.036 and the 90 % confidence intervals are 0.021 0.049

BIC = -906.19

Fit based upon off diagonal values = 0.99

Measures of factor score adequacy

MR1 MR2 MR3 MR5 MR4

Correlation of (regression) scores with factors 0.93 0.87 0.84 0.88 0.81

Multiple R square of scores with factors 0.86 0.76 0.70 0.78 0.65

Minimum correlation of possible factor scores 0.72 0.53 0.41 0.56 0.30