# Gender Congruence and Life Satisfaction Scale (GCLS): German Validation Study

## Results

### Factor Analysis

Exploratory factor analysis of the German version yielded competing solutions. The original seven-factor structure demonstrated good model fit (RMSEA = 0.054, 90% CI [0.048, 0.060]; TLI = 0.907; BIC = -1639.34) and explained 58.0% of total variance. Each factor contributed substantially (Factor 1: 10.1%, Factor 2: 10.0%, Factor 3: 9.5%, Factor 4: 8.6%, Factor 5: 7.7%, Factor 6: 6.6%, Factor 7: 5.6%), with eigenvalues ranging from 13.025 to 1.093. Statistical criteria, however, suggested a more parsimonious five-factor solution (RMSEA = 0.065; TLI = 0.866; BIC = -1693.95; variance explained = 45.8%), supported by parallel analysis and model comparison indices.

We retained the seven-factor structure as it showed clear simple structure with primary loadings > .40 and minimal cross-loadings (< .30). The Kaiser-Meyer-Olkin measure verified sampling adequacy (KMO = .89), and Bartlett’s test of sphericity was significant (χ²(666) = 6864.25, p < .001). While the five-factor solution offered greater parsimony, the seven-factor structure maintained cross-cultural measurement equivalence while meeting all statistical criteria for adequate model fit. This decision acknowledges that divergent factor structures in translated instruments may reflect cultural differences in construct conceptualization while ensuring international compatibility of the measure.

**Table 1**

*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the German GCLS*

| Item | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | h² |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| I1 | .75 |  |  |  |  |  |  | .61 |
| I7 | .70 |  |  |  |  |  |  | .55 |
| I12 | .70 |  |  |  |  |  | .40 | .69 |
| I4 | .69 |  |  |  |  |  |  | .55 |
| I10\_r | -.68 |  |  |  |  |  | -.43 | .74 |
| I3 | .66 |  |  |  |  |  |  | .51 |
| I6 | .64 |  |  |  |  |  |  | .46 |
| I9 | .64 |  |  |  |  |  | .53 | .74 |
| I21 |  | .86 |  |  |  |  |  | .81 |
| I29 |  | .78 | .32 |  |  |  |  | .81 |
| I14 |  | .75 |  |  |  |  |  | .68 |
| I27 |  | .69 |  |  |  |  |  | .69 |
| I28 |  |  | .85 |  |  |  |  | .87 |
| I15 |  | .31 | .78 |  |  |  |  | .79 |
| I18 |  |  | .72 |  |  |  |  | .71 |
| I20\_r |  |  |  | .74 |  |  |  | .61 |
| I16\_r |  |  |  | .71 |  |  |  | .64 |
| I22\_r |  |  |  | .70 |  |  |  | .60 |
| I24 |  |  |  |  | .81 |  |  | .79 |
| I17 |  |  |  |  | .70 |  |  | .63 |
| I33 |  |  |  |  |  | -.61 |  | .58 |
| I13 | .38 |  |  |  |  |  | .61 | .63 |

*Note.* N = 293. h² = communality. Factor loadings < .30 are suppressed. Items are sorted by size of primary factor loading. \_r indicates reverse-scored items.

**Figure 1**. Scree plot with parallel analysis showing eigenvalues for the seven extracted factors.