

Validity Study

Relationships Between NEO PI-R Personality Measures And Job Performance Ratings of Inbound Call Center Employees

Thomas A. Timmerman
Tennessee Technological University

Two hundred three (203) inbound call center employees completed the NEO PI-R (Costa & McRae, 1992) and received job performance ratings from their immediate supervisors. Among the "Big Five" personality dimensions, conscientiousness ($r = .16$) and agreeableness ($r = .16$) were significantly and positively correlated with performance ratings. At the facet level, five facets were significantly correlated with performance: excitement seeking ($r = -.14$), trust ($r = .16$), competence ($r = .18$), dutifulness ($r = .18$), achievement striving ($r = .15$).

Sample

The sample consisted of 203 call center employees in Jacksonville, Florida who received customer service inquiries from around the United States. The sample consisted of 75.9% women, 65.0% White, 27.1% African-American, 3.9% Hispanic, and 4.0% other race. The mean age was 33.3 years with a standard deviation of 11.6.

Predictor Information

The NEO PI-R (Costa & McRae, 1992) is a commercially published 240-item questionnaire that measures five dimensions of personality: Neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Within each dimension, the NEO PI-R also measures six facets of personality.

Criterion Information

The job performance criterion consisted of a single item with 7 response options completed by the supervisor. Supervisors were asked to use a 7-point scale (1 = completely disagree 7 = completely agree) to rate the extent to which the employee's "overall performance always exceeds the job's requirements." Although multiple criteria are preferable and the wording of this scale was not ideal, this measure was the one used for personnel decisions in the organization.

Table 1
Correlations Between Personality Dimensions and Performance Ratings

| | Mean | S.D. | 1 | 2 | 3 | 4 | 5 | 6 |
|---------------------------|--------|-------|------|--------|-------|-------|-------|-------|
| 1. Performance Rating | 4.93 | 1.44 | | | | | | |
| 2. Neuroticism | 76.64 | 22.79 | .01 | (.84) | | | | |
| 3. Extraversion | 119.19 | 22.21 | .00 | -.36** | (.80) | | | |
| 4. Openness to Experience | 121.76 | 19.62 | -.03 | -.33** | .44** | (.75) | | |
| 5. Agreeableness | 123.87 | 18.11 | .16* | -.33** | .04 | .07 | (.73) | |
| 6. Conscientiousness | 126.61 | 20.72 | .16* | -.44** | .29** | .13 | .32** | (.87) |

Note: Cronbach's α in parentheses. * $p < .05$, ** $p < .01$

Validity Information

Among the Big Five personality dimensions (see Table 1), conscientiousness and agreeableness were significantly correlated with job performance ratings ($r = .16$ for both dimensions). At the facet level (see Table 2), one aspect of extraversion (i.e., excitement-seeking) was negatively related to performance ratings. Within the agreeableness dimension, only trust was positively related to performance ($r = .16$). High scorers on this facet tend to believe that others are honest and well-meaning. Within the conscientiousness dimension, competence ($r = .18$), dutifulness ($r = .18$), and achievement-striving ($r = .15$) were significantly and positively correlated with performance ratings. High scorers on these dimensions tend to have high self-esteem, a strong perceived moral obligation to fulfill duties, and high aspiration levels.

Reference

Costa, P.T., Jr., & McCrae, R.R. (1992). *Revised NEO Personality Inventory and Five-Factor Inventory Professional Manual*. Odessa, Fl: Psychological Assessment Resources.

Table 2
Correlations between personality facets and performance ratings

| NEO PI-R Scale | Mean | S.D. | Cronbach's α | Correlation with Performance Rating |
|--------------------------|-------|------|---------------------|-------------------------------------|
| N1: Anxiety | 14.56 | 5.55 | .78 | .01 |
| N2: Angry Hostility | 12.07 | 5.44 | .75 | -.08 |
| N3: Depression | 11.94 | 5.85 | .81 | .01 |
| N4: Self-consciousness | 13.72 | 4.88 | .68 | .08 |
| N5: Impulsiveness | 15.50 | 4.30 | .70 | .00 |
| N6: Vulnerability | 8.99 | 4.27 | .77 | .04 |
| E1: Warmth | 23.45 | 4.42 | .73 | .12 |
| E2: Gregariousness | 18.40 | 5.76 | .72 | -.13 |
| E3: Assertiveness | 17.54 | 4.95 | .77 | .13 |
| E4: Activity | 18.71 | 4.06 | .63 | .09 |
| E5: Excitement-seeking | 19.09 | 5.70 | .65 | -.14* |
| E6: Positive Emotions | 22.66 | 4.85 | .73 | .09 |
| O1: Fantasy | 18.71 | 5.31 | .76 | -.13 |
| O2: Aesthetics | 20.76 | 5.58 | .76 | -.04 |
| O3: Feelings | 22.43 | 4.37 | .66 | .09 |
| O4: Actions | 17.70 | 4.39 | .58 | -.01 |
| O5: Ideas | 21.61 | 5.28 | .80 | .01 |
| O6: Values | 20.64 | 4.34 | .67 | -.02 |
| A1: Trust | 19.56 | 5.48 | .79 | .16* |
| A2: Straightforwardness | 20.80 | 5.16 | .71 | .06 |
| A3: Altruism | 25.26 | 3.63 | .75 | .12 |
| A4: Compliance | 18.38 | 4.80 | .59 | .08 |
| A5: Modesty | 17.93 | 4.96 | .67 | .07 |
| A6: Tender-mindedness | 21.95 | 3.55 | .56 | .11 |
| C1: Competence | 23.26 | 3.65 | .67 | .18* |
| C2: Order | 19.22 | 4.54 | .66 | .08 |
| C3: Dutifulness | 22.99 | 4.19 | .62 | .18* |
| C4: Achievement-striving | 20.02 | 4.59 | .67 | .15* |
| C5: Self-discipline | 22.97 | 4.70 | .75 | .12 |
| C6: Deliberation | 18.09 | 4.97 | .71 | .07 |

* $p < .05$

Author Notes

Questions about this study should be addressed to the author:

Thomas A. Timmerman, Ph.D.
Department of Decision Sciences and Management
Tennessee Technological University
Cookeville, TN 38505
Phone: 931-372-3895
Email: ttimmerman@tntech.edu