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A/Form S Comparisons

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16PF Personality Profiles for Social Workers:
Form A / Form S Comparisons

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Abstract

The goal of this report was to identify the distinguishing features of 16PF personality profiles for social workers that have been collected with Experimental Form S (prototype of Fifth Edition 16PF Questionnaire). In the analysis, the new profile was compared against known profiles for social workers reported in Cattell et al. (1970). Gender differences in personality scores for these groups were noted. The relevance of the 16PF Empathy composite was discussed.

Introduction

An empathetic person is able to take on the cognitive perspective of another person and to vicariously experience another person's emotional reaction. Empathy has been studied as an important variable for social services volunteers (Guastello, Choi, Rieke, & Billings, 1992), some types of sales work (Guastello & Rieke, 1992; Lambert, 1979), and social skills more generally (Riggio, Tucker, & Coffaro, 1989).

Empathy can be expressed as a linear composite of 16PF traits (Guastello et al., 1992): social boldness (H+), imagination (M+), group dependence (Q2-), sensitivity (I+), abstract thought (B+), low tension (Q4-), low pretentiousness (N-), interpersonal trust (L-), cheerfulness and optimism (F+), and impulsiveness (Q3-). Table 1 shows a set of validity coefficients for the application of the Empathy equation to date, which are interpretable as cross-validity coefficients. The original equation was found to characterize 16PF profiles of psychologists, psychiatric technicians, and social workers, school counselors, service volunteers in an education setting (Guastello et al., 1992). The Empathy composite was significantly correlated with work performance of service volunteers (Guastello et al., 1992) and salespersons (Guastello & Rieke, 1992). Although empathy was not the only personality characteristic linked

to these occupational profiles or work performance of service volunteers or salespersons, it makes a good focal point to organize and interpret the contents of new profiles of social service employees.

Table 1
Cross-Validity Coefficients for Empathy Composite with
Group Membership and Performance Criteria

Source	N	Occupation	Criterion	Mean	r
1	75	Psychiatric technicians	GM	6.7	.50
1	107	Psychologists, male	GM	7.5	.71
1	36	Psychology graduate students	GM	6.8	.53
1	98	School counselors, female	GM	7.0	.60
1	154	School counselors, male	GM	7.0	.61
1	73	Social workers, female	GM	6.7	.51
1	81	Social workers, male	GM	7.2	.65
2	89	Service volunteers	GM	6.1	.46
2	53	Service volunteers	Perf		.37
3	23	Salespersons, corporate	Perf-a	5.5	.59
3			Perf-b		.42

NOTE: Means are calibrated in sten scores. Correlation coefficients for group membership (GM) were converted from one-sample z or t tests using the omega-squared method. Perf-a = customer service, Perf-b = development of new business, Sources: 1 = Cattell et al. (1970), 2 = Guastello et al. (1992), 3 = Guastello (1992).

Method

A new sample of 59 social workers was collected from the Western United States who completed the 16PF, Form S. All participants were employed social workers who were enrolled in a university program to obtain a masters degree in social work.

The following analyses were performed on the data. First, gender differences in personality scores were assessed. Second, scores were compared to general population values by one-sample t tests.

Third, sample-population comparisons and gender differences were assessed for the two samples of social workers found in the 16PF handbook Cattell et al. (1970). One of the two comparison samples was composed of 73 females, and the other was composed of 81 males.

Fourth, the scores for the new sample were compared against those obtained in two samples reported in The three samples were compared by one-way analysis of variance with Tukey HSD post-hoc tests. Because of the large number of one-way tests made, a critical alpha level of .01 was adopted for the main effects tests. Post hoc comparisons were tested at the .05 level of significance.

Results

New Sample Characteristics

The profile of mean scores for the new sample appears in Table 2. The one-sample t tests showed that the group differed from the general population on seven primary traits: seriousness (F-), expediency (G-), practicality (M-), insecurity (O+), openmindedness (Q1+), self-sufficiency (Q2+), impulsiveness (Q3-). The average Empathy score for this sample was 4.6, which was significantly less than the population mean ($t = 4.4$, $df = 58$, $p < .001$). The sample-population contrast for Empathy converted to a point-biserial correlation of $-.49$, and was the opposite of the expected findings. The significant traits leading to a high empathy score were consistent on only one out of eight traits (Q3-), in the opposite direction for three traits (F, M, Q2), and missing for the remaining four traits (B, H, I, L).

No gender differences at the .01 level of significance were identified.

Handbook Samples

The profile of mean scores for the two Handbook samples were pooled together and appear in Table 2. The one-sample t tests showed that the group differed from the general population on almost every trait. Four gender differences were obtained at the .001 level of significance. The males scored higher on A ($t = 3.60$), lower on G ($t = 3.69$), higher on I ($t = 5.75$), and lower on Q2 ($t = 6.53$) than their female counterparts.

Comparison of Three Groups

A comparison of the results for the three groups appears in Table 3. One-way analysis of variance identified significant differences on twelve out of 16 traits. Post hoc tests showed that most of the observed differences were between the new sample and the two from the Handbook.

The three profiles are pooled in the last three columns of Table 3. One-sample t tests on the resulting means showed significance for most scales. The net results of pooling the groups is that all scale means remain on the high on low side of the population mean as they appeared in the two Handbook samples. Statistical significance was lost, however, on M, O, and Q2.

Table 2
16PF Profiles for Social Workers: New Sample and
Two Samples Pooled from Handbook

Trait	New Sample (N = 59)			Handbook Samples (N = 154)		
	Mean	Std. Dev.	t(pop)	Mean	Std. Dev.	t(pop)
A	5.1	1.7	-1.81	7.4	2.1	11.19**
B	5.1	3.0	1.02	6.4	2.1	5.51**
C	5.5	1.6	0.00	6.2	2.2	3.68**
E	5.7	1.6	0.96	6.0	1.9	2.95*
F	4.8	1.6	-3.36**	5.4	1.4	1.00
G	4.3	1.7	-5.42**	4.6	1.9	-5.95**
H	5.6	1.5	0.51	6.3	1.7	5.35**
I	5.6	2.1	0.37	6.5	1.7	7.40**
L	5.5	1.9	0.00	4.2	1.7	9.78**
M	4.7	2.0	-3.07**	6.0	1.7	3.67**
N	5.6	2.2	0.35	5.7	1.7	1.06
O	6.4	1.9	3.64**	4.7	1.9	5.79**
Q1	7.2	2.0	6.52**	6.3	1.8	5.20**
Q2	6.7	1.8	5.12**	5.0	1.8	3.34*
Q3	4.1	2.0	-5.38**	5.5	1.5	0.41
Q4	5.8	1.7	1.49	4.6	1.7	6.54**

*p < .01

**p < .001

Table 3
Analysis of Variance Comparing Three Samples of Social
Workers with Pooled Profile of Means

Trait	F(2,210)	Post Hoc Comparisons			Pooled Profile (N=213)		
		1v2	1v3	2v3	Mean	Std.Dev.	t(pop)
A	37.00**	X	X	X	6.8	2.3	8.26**
B	7.19**		X	X	6.1	2.4	3.32**
C	2.17				6.0	2.1	3.33**
E	0.45				5.9	1.8	3.04*
F	5.18*		X		5.2	1.5	-2.72*
G	7.61**	X		X	4.5	1.9	7.86**
H	3.27				6.1	1.7	4.89**
I	19.64**	X		X	6.3	1.8	6.19**
L	12.09**		X	X	4.6	1.8	7.58**
M	11.28**		X	X	5.6	1.9	1.09
N	0.07				5.6	1.9	1.09
O	17.57**		X	X	5.1	2.1	2.54
Q1	5.67*		X	X	6.5	1.9	7.76**
Q2	42.03**	X	X	X	5.5	2.0	0.15
Q3	14.09**		X	X	5.1	1.8	3.48**
Q4	11.69**		X	X	4.9	1.8	4.62**

NOTE: Sample 1 = 73 females, 2 = 81 males, 3 = 59 new.

X: Post hoc p < .05 *p < .01 **p < .001

Discussion

The results of the analyses showed that the new sample of social workers was different from the two Handbook samples in most major respects. The new sample was less warm, less intelligent, more serious, less sensitive (but not tough-minded), less trusting, less imaginative, more insecure, more self-sufficient, and less relaxed. They scored below the population mean on empathy when the opposite would be valuable for their line of work. They score strongly in the direction of past social workers on two traits: There were more expedient and less persistent (G-) and more open minded (Q1).

Definitive explanations for the differences in scores between the 1970 and 1992 samples are beyond the scope of the available data. Three possible explanations can be offered, however. First, the differences may be attributable to differences in the 16PF form used. Second, the sample may be unusual for social workers. Third, the results may signify a societal trend that has taken place over the past twenty years. As more people enter the profession, the group profile becomes more average, and as a result, the personality characteristics that predict success become less frequent among job incumbents.

The first explanation, differences in 16PF forms, can be ruled out. Research in progress on test form equivalence shows that the two forms of the test are too similar to produce such gross differences. Furthermore, other validity research shows that the profile and performance results for other samples are consistently in the predicted direction.

The latter two explanations may have some merit. The second, unusual sample, may be a result of testing professional who return to school; they may be substantially different from others in the profession. That explanation, and the third alternative, society trend, require further investigation.

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