



Public
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16PF[®] Protective Services Report

General Information

The 16PF[®] Fifth Edition Questionnaire Protective Services Report (PSR[™]) provides insight regarding the personality of job candidates seeking positions in the protective services industry such as police officers, firefighters, security guards, EMTs, corrections officers and similar occupations. This assessment tool is based upon the test-takers' responses to 185-items of normal personality and includes the 16 Primary Factor scales as well as the five Global Factor scales from the 16PF Fifth Edition. It also features four critical job-relevant Protective Services Dimensions that have been validated for use in employment suitability evaluation contexts. Unlike the Protective Services Report *Plus* (PSR *Plus*[™]), which contains an additional 140 items focused on pathology, and thus can only be used as the post-conditional offer stage of evaluation, a qualified professional can use the 16PF PSR at the pre-conditional offer as well.

The PSR is designed for administration to adults (aged 16 and older), individually or in a group setting. Administration is via paper-and-pencil or computer using IPAT's online service or OnSite Pro software. The questionnaire has an overall readability estimated at the fifth grade level. The items have a three-choice response format, wherein the middle response choice is always a question mark (?), except for the Factor B items. The (?) response option implies "uncertainty, cannot decide, or don't know." The 15 Factor B items, which assess reasoning ability, are grouped together at the end of the assessment, and have definitive right and wrong answer options.

The PSR is appropriate for either pre-job-offer or post-job-offer screening because the items do not contain content that would be considered being out of compliance with the Americans with Disabilities Act of 1990 (ADA). Under the ADA, an employer is prohibited from asking disability-related questions or giving a medical examination (including a psychological test that is designed to identify a mental disorder or impairment) before making a conditional offer of employment. In situations whereby an assessment that evaluates for pathology is desired, professionals can utilize the PsychEval Personality Questionnaire Protective Services Report *Plus*, or alternatively consider pairing the 16PF PSR with an instrument that measures for pathological conditions.

Scales of the PSR

16 Primary Factors

The Primary Factor scales are comprehensive measures of the basic factors underlying normal personality for use in employment, educational, clinical counseling, and research settings. Table 1 lists the 16 Primary Factor scale names and descriptors.

Table 1: 16 Primary Factor Scale Names and Descriptors

Descriptors of Low Range	Primary Factor Scales	Descriptors of High Range
Reserved, Impersonal, Distant	Warmth	Warm, Outgoing, Attentive to Others
Concrete	Reasoning	Abstract
Reactive, Emotionally Changeable	Emotional Stability	Emotionally Stable, Adaptive, Mature
Deferential, Cooperative, Avoids Conflict	Dominance	Dominant, Forceful, Assertive
Serious, Restrained, Careful	Liveliness	Lively, Animated, Spontaneous
Expedient, Nonconforming	Rule-Consciousness	Rule-Conscious, Dutiful
Shy, Threat-Sensitive, Timid	Social Boldness	Socially Bold, Venturesome, Thick-Skinned
Utilitarian, Objective, Unsentimental	Sensitivity	Sensitive, Aesthetic, Sentimental
Trusting, Unsuspecting, Accepting	Vigilance	Vigilant, Suspicious, Skeptical, Wary
Grounded, Practical, Solution-Oriented	Abstractedness	Abstracted. Imaginative, Idea-Oriented
Forthright, Genuine	Privateness	Private, Discreet, Non-Disclosing
Self-Assured, Unworried, Complacent	Apprehension	Apprehensive, Self-Doubting, Worried
Traditional, Attached to Familiar	Openness to Change	Open to Change, Experimenting
Group-Oriented, Affiliative	Self-Reliance	Self-Reliant, Solitary, Individualistic
Tolerates disorder,, Unexacting, Flexible	Perfectionism	Perfectionistic, Organized, Self-Disciplined
Relaxed, Placid, Patient	Tension	Tense, High Energy, Driven

Protective Services Dimensions

The Protective Services Dimensions are the foundation of the PSR. The four criterion validated dimensions include Emotional Stability, Integrity/Control, Intellectual Efficiency and Interpersonal Relations. Each of these dimensions is a composite of the 16PF Fifth Edition Questionnaire's Primary Factors and a critical aspect of performance in a protective service role. Table 2 describes the Protective Services Dimensions of the PSR Plus.

Table 2: Protective Services Dimensions and Descriptors

Description of Low Scorers	Dimension Name	Description of High Scorers
Reacts strongly to adverse situations; lacks internal resources necessary to cope with high pressure situations	Emotional Adjustment	More relaxed and tends not to get upset in stressful situations; self-confident and emotionally resilient
Willing to bend rules, may not possess a well developed internal code of conduct	Integrity/Control	Reports a deep respect for rules, well-developed internal standards of discipline; abides by procedures and policies
More comfortable with concrete examples and may take more time coming to a decision; may be uncomfortable making decisions on their own	Intellectual Efficiency	Understands abstract problems and tends to be quick and decisive; comfortable making decisions on their own
Preference for working alone; tend not to enjoy being around others; shy and withdrawn	Interpersonal Relations	Preference for working with others and developing cooperative relationships; outgoing and confident

Response Style Indices

The PSR provides an examinee's scores on three response style indices including: Impression Management (IM), Infrequency (INF), and Acquiescence (ACQ). These indices measure particular test-taking attitudes that may influence how an examinee responds to items on the assessment. Values beyond the average range indicate that test scores may reflect a particular response bias rather than "pure" personality traits. A high score on any of the three indices or a low score on IM should prompt the professional to consider response bias.

Development of the 16PF Fifth Edition and PSR

The 16PF Questionnaire, first published in 1949, was developed by the esteemed Dr. Raymond Cattell and was the first personality assessment developed using systematic scientific research. Through factor-analyzing every English-language adjective describing human behavior, Cattell was able to identify 16 primary components of personality resulting in the 16 Primary Factor Scales. Numerous studies have since been published replicating his results (Cattell & Krug, 1986). Since its initial release the 16PF has undergone a number of updates and revisions to reflect the times, and is currently in its fifth edition. Normative data was updated and released in 2002 to reflect the 2000 United States Census.

As a comprehensive measure of personality, the 16PF is used to generate an assortment of reports that are useful in a variety of settings to predict a wide range of life behaviors. Most commonly the 16PF is used in employment contexts for selection and development purposes. One of the more prevalent 16PF reports, the Protective Services Report, was developed in 2003, specifically for the purpose of evaluating individuals vying for protective services positions. It was developed in response to the changing roles and responsibilities of protective services workers and first responders in a post-9/11 era.

Scoring and Interpretation Information

The 16PF PSR provides sten scores ranging from one to ten. A sten score of one through three is considered "low", four through seven "average", and eight through ten "high". The 16 Primary Factor scales and 5 Global Factor Scales are bipolar in nature meaning that low and high scores both have meaning and that the relative value of each score (i.e., favorable or unfavorable) in an employment screening context, is dependent upon the specific aspects and responsibilities of the job. Average scores typically represent flexible behavior in that how a person thinks, feels, and responds is dependent upon the context of the situation at hand. Alternatively, the four Protective Services Dimension scores, which are validated job-performance predictors, are weighted composite scores of various combinations of the 16 Primary Factors and have distinct meaning (i.e., higher scores are considered more favorable and lower scores are considered less favorable).

Normative Group

The 16PF® Fifth Edition Questionnaire norms are based on a sample of 10,261 individuals, which is the standardization sample from the most recent re-norming of the 16PF Fifth Edition Questionnaire in 2001. The standardization sample was created through a random sampling procedure described below. The sample was stratified on gender, race, age, and education level to approximate the 2000 census. The norm sample is 50.1% female, and predominantly Caucasian. The mean age for the norm sample is 32.7 years, ranging from 16 to 82 years of age. Years-of-education ranges from "less than ninth grade" to "having a doctorate", with the majority having at least some college education.

Gender & Racial Differences

Mean differences between males and females on the scales were compared. Females tend to score higher than males on Warmth, Sensitivity and Apprehension. No significant gender differences were found for the other 13 Primary Factor scales. Mean differences for race were also compared for the scales. Caucasians scored approximately one standard deviation higher than African Americans and approximately one half of one standard deviation higher than Hispanics on the Reasoning scale (Factor B). No significant racial differences were found for the other 14 Primary Factor scales.

Legal Issues

The United States Civil Rights Act of 1991 prohibits employers from using scoring adjustments or different scoring procedures based on the test taker's demographics (e.g., gender, race, etc.). To remain in compliance with this law, all test takers must be compared using the same 16PF Fifth Edition Questionnaire combined-sex general population norms.

To the best of the publisher's knowledge, neither the 16PF Fifth Edition nor the PSR has been the subject of litigation.

Psychometrics: Reliability

For the 16PF Fifth Edition Questionnaire, internal consistency averages .76, test-retest reliabilities average .80 for two-week interval and .70 for two month interval.

The Protective Services Dimensions are linear composites of the 16PF Primary Factors and, therefore, the typical methods of calculating internal consistency are not appropriate. As a result, the reliability estimates were computed using the formula for estimating the reliability of a linear composite. These estimates are presented in Table 3.

Table 3: Reliability of the Protective Services Dimensions

Protective Services Dimensions	Reliability for a Linear Composite	Seven Month Test-Retest Correlations
Emotional Adjustment	.76	.83
Integrity/Control	.83	.77
Intellectual Efficiency	.83	.71
Interpersonal Relations	.89	.78

Psychometrics: Validity

The sten score means and standard deviations for the Protective Services Dimensions are presented separately for the general population and the protective services sample in Table 4. Table 4 does suggest that individuals applying for and working in a public safety capacity do tend to be more homogenous than the general population.

Table 4: Means and Standard Deviations for the Protective Services Dimensions

	General Population (N=1,763)		Protective Services (N=1,606)		
	Mean	SD	Mean	SD	<i>d</i>
Emotional Adjustment	5.71	2.07	7.13	1.98	.69
Integrity/Control	5.49	1.78	6.43	1.68	.53
Intellectual Efficiency	5.49	1.72	5.03	1.62	-.27
Interpersonal Relations	5.68	1.86	6.13	1.83	.24

Note. *d* = Cohen's (1988) effect size for mean differences

Criterion-Related Validity

The validity of the Protective Services Dimensions for use in the protective services industry is supported by evidence from four studies. The samples in each study represent different occupations and contexts (military members, sheriff's department applicants and deputies, correctional officers and incumbent police officers) which highlight the versatility of the Protective Services Dimensions for use in a broad spectrum of protective services roles. A more thorough description of these samples can be found in the *Protective Services Reports Manual*. The means and standard deviations of the Protective Services Dimensions for each sample are presented in Table 5.

Table 5: Means and Standard Deviations for the PSR Composite Dimensions for Each of the Validity Samples

	Emotional Adjustment		Integrity/Control		Intellectual Efficiency		Interpersonal Relations	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Sample A								
Unit Commanders (n=34)	7.76	1.57	7.31	1.17	4.92	1.41	5.80	1.54
Unit Members (n=871)	6.40	1.86	6.02	1.66	4.77	1.49	6.00	1.74
Sample B								
Applicants Sample (n=290)	8.40	1.53	7.11	1.47	5.49	1.73	6.73	1.79
Hired Deputies (n=71)	8.88	1.15	7.26	1.43	5.98	1.51	7.04	1.66
Sample C (n=52)	5.28	1.83	5.90	1.68	3.75	1.67	5.33	1.94
Sample D (n=260)	6.69	1.75	6.19	1.49	5.26	1.58	5.09	1.74

The Protective Services Dimensions have been shown to predict a number of meaningful outcomes such as work behaviors, job-specific behaviors and relations with other officers. Higher scores on Emotional Adjustment indicate a better ability to work in groups, better performance in training academies and a higher probability of being rated as suitable for the job. Individuals with high scores on Integrity/Control have been shown to successfully complete structured training programs and be subsequently hired. High Intellectual Efficiency scores have positive correlations with good hires, academic achievement markers such as GPA, and job-specific knowledge. Intellectual Efficiency tends to account for suitability ratings that look for good judgment, proper-decision making skills, cognitive flexibility, and along with Integrity/Control, helps to decide on level of impulsivity. Finally, high scores on the Interpersonal Relations dimension are shown to be related to others' willingness to work or serve on assignment with that individual, particularly when that individual is in a position of authority.

Detailed information about the 16PF® Fifth Edition Questionnaire and the Protective Services Report can be found in the *16PF® Fifth Edition Questionnaire Manual* and the *Protective Services Reports Manual*.

References

Cattell, R. B., & Krug, S. E. (1986). The number of factors in the 16PF: A review of the evidence with special emphasis on methodological problems. *Educational and Psychological Measurement, 46*, 509–522.

EEOC. (1991). The Civil Rights Act of 1991, Pub L. No. 102-166, 105 Stat 1071 (codified in various sections of 42 U.S.C. (Supp. III 1992)). Retrieved August 6, 2012, from <http://www.eeoc.com/policy/laws/civil-rights-act-of-1991/>

EEOC. (1995) *ADA Enforcement Guide: Preemployment Disability-Related Questions and Medical Examinations* (Number 915.002). Retrieved April 3, 2007, from <http://www.eeoc.gov/policy/docs/preemp.html>.

EEOC. (1997). *EEOC Enforcement Guidance on the Americans with Disabilities Act and Psychiatric Disabilities* (Number 915.002). Retrieved April 3, 2007, from <http://www.ipmaac.org/files/eeoc-psych.pdf>.

EEOC. (2000). *Enforcement Guidance: Disability-Related Inquiries and Medical Examinations of Employees Under the Americans with Disabilities Act (ADA)* (Number 915.002). Retrieved April 3, 2007, from <http://www.eeoc.gov/policy/docs/guidance-inquiries.html>.

IPAT Staff. (2007) *Protective Services Reports Manual*. Champaign, IL: Institute for Personality and Ability Testing, Inc.

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