



Public  
Safety &  
Security

## Protective Services Report Plus

### General Information

The Protective Services Report Plus (PSR Plus™) 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. The PSR Plus provides a broad picture of personnel in high-risk occupations by including information regarding a person's normal personality as well as pathology-oriented information.

The PSR Plus is based upon the test-taker's responses to the 325-item PsychEval Personality Questionnaire (PEPQ™). Part I of the PEPQ uses the 185 normal personality items from the 16PF® Fifth Edition Questionnaire. Thus, the PEPQ includes the 16 Primary Factor scales as well as the five Global Factor scales from the 16PF Fifth Edition. Part II of the PEPQ, which contains 140 items, focuses on pathology. Thus, because the PSR Plus includes information about both normal personality and pathology, it is a more comprehensive view of the individual.

The PSR Plus 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. Items on the PEPQ have a three-choice response format. For the normal personality items in Part I (the 16PF Fifth Edition), 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 Part I, following the items assessing normal personality.

The PSR Plus is appropriate for post-job-offer screening because of 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.

### Scales of the PSR Plus

#### 16 Primary Factors

The Primary Factor scales in Part I of the PEPQ (the 16PF Fifth Edition) are comprehensive measures of the basic factors underlying normal personality for use in employment, educational, clinical counseling, and research settings. These scales include Warmth, Reasoning, Emotional Stability, Dominance, Liveliness, Rule-

Consciousness, Social Boldness, Sensitivity, Vigilance, Abstractedness, Privatness, Apprehension, Openness to Change, Self-Reliance, Perfectionism, and Tension. Table 1 lists the 16 Primary Factor scale names and descriptors.

**Table 1: 16 Primary Factor Scale Names and Descriptors**

<b>Descriptors of Low Range</b>	<b>Primary Factor Scales</b>	<b>Descriptors of High Range</b>
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 Plus. The four 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

## Pathology-Oriented Scales

The pathology-oriented scales in Part II of the PEPQ were developed to assess those behaviors, thought patterns, and feelings that extend beyond the normal personality domain. These scales include Psychological Inadequacy, Health Concerns, Suicidal Thinking, Anxious Depression, Low Energy State, Self-Reproach, Apathetic Withdrawal, Paranoid Ideation, Obsessional Thinking, Alienation and Perceptual Distortion, Thrill Seeking, and Threat Immunity. Table 3 lists the PEPQ pathology-oriented scale names and descriptors.

**Table 3: Pathology-Oriented Scale Names and Descriptors**

Descriptors of Low Range	Pathology-Oriented Scales	Descriptors of High Range
Self-Confident	Psychological Inadequacy (PS)	Low self-worth, Demoralized, Impaired Confidence and Coping
Few somatic complaints; feels healthy	Health Concerns (HC)	Poor Physical Well-Being, Numerous Non-Specific Complaints
Contented	Suicidal Thinking (ST)	Despondent, Self-Destructive, Morbid
Composed, Controlled	Anxious Depression (AD)	Anxious, Overwhelmed, Worried
Energetic, Active	Low Energy State (LE)	Exhausted, Lethargic, Lonesome
Untroubled, Self-Assured	Self-Reproach (SR)	Self-Condemning, Feelings of Guilt
Socially Engaged, Enjoys Life	Apathetic Withdrawal (AW)	Socially Withdrawn, Anhedonic
Trusting	Paranoid Ideation (PI)	Irrational Suspicion, Resentful, Feels Persecuted
Relaxed, Confident	Obsessional Thinking (OT)	Unreasonable Fears, Excessive Doubt and Worry
Conventional Reality Testing	Alienation and Perceptual Distortion (AP)	Impaired Reality Testing, Feels Socially Isolated
Avoids Stimulation and Risk	Thrill-Seeking (TS)	Stimulation-Seeking, Impulsive
Hyper-Sensitive to Threats	Threat Immunity (TI)	Immune to Disapproval or Danger, Enjoys Conflicts, Disregards Limits

### Response Style Indices

The PSR Plus provides an examinee's scores on three response style indices that are measured only in the normal-range part of the test: Impression Management (IM), Infrequency (INF), and Acquiescence (ACQ). These indices measure particular test-taking attitudes that may influence how an examinee responds to the 16PF normal personality items. 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 PEPQ and PSR Plus

The PEPQ was developed in 1999 by a team of writers including IPAT staff psychologists and other experts in the field. The PEPQ is a revised version of the Clinical Analysis Questionnaire which was developed by Raymond Cattell and his colleagues in the 1960s. The most recently published version of the 16PF Questionnaire (the 16PF Fifth Edition) was used for Part I, the set of normal personality scales. The original pathology-oriented scales of the CAQ, developed by Cattell and his colleagues, were revised and restandardized to make up Part II.

The PSR Plus 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 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, for the four Protective Service Dimensions, high sten scores are considered favorable, and for the 12 pathology-oriented scales, high sten scores are considered unfavorable.

## Normative Group

Part I 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.

Part II norms are based on a sample of 1,763 individuals. The sample was stratified on gender, race, age, and education level to approximate the 2000 census. The sample is predominantly Caucasian and 52.5% female. Age ranged from 15 to 84 with a mean for the norm sample of 35.8 and a standard deviation of 13.5. Approximately 28.2% of the sample had obtained a bachelor's degree while an additional 36.1% reported having either obtained an associate degree or having had some college education.

## Gender Differences

Mean differences between males and females on the normal and pathology-oriented scales were compared. Females tend to score higher than males on three of the normal scales: Warmth, Sensitivity and Apprehension. Males tend to score higher on Threat Immunity, a pathology-oriented scale.

## Race Differences

Mean differences for race were compared for both the normal and pathology-oriented scales. For the normal personality 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). For the pathology-oriented scales, these analyses were only performed for Caucasian, African American, and Hispanic groups, due to insufficient sample size of the remaining racial groups. None of the pathology-oriented scales showed significant differences among racial groups.

## 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 taker’s must be compared using the same PEPQ combined-sex general population norms.

To the best of the publisher’s knowledge, neither the PEPQ nor the PSR Plus has been the subject of litigation.

## Psychometrics: Reliability

For Part I (normal personality scales) internal consistency averages .76, test-retest reliabilities average .80 for two-week interval and .70 for two month interval. For the pathology-oriented scales, internal consistency averages .79. Test-retest reliabilities average .67 for four-week 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 4.

**Table 4: 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 5. Table 5 does suggest that individuals applying for and working in a public safety capacity do tend to be more homogenous than the general population.

**Table 5: 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 6.

**Table 6: 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
<b>Sample A</b>								
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
<b>Sample B</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
<b>Sample C (n=52)</b>	5.28	1.83	5.90	1.68	3.75	1.67	5.33	1.94
<b>Sample D (n=260)</b>	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. For example, 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.

### **Pathology-Oriented Scales**

Correlations between the PEPQ pathology-oriented scales and the MMPI-2 indicate that the measures converge in predictable ways to suggest construct validity. For example, nearly all of the PEPQ scales correlate positively with the MMPI-2 F scale (which generally indicates the presence of psychiatric disturbance) and negatively with the K scale (low scores indicate moderate to severe disturbance, low ego strength, and inadequate defenses); these are known to indicate distress. In addition, specific scale correlations between the two measures are as expected.

Additional evidence points toward the validity of the pathology-oriented scales as well. Individuals in a clinical research group (individuals with a diagnosis) were compared with a normal standardization sample. The clinical group obtained higher mean scores on all of the depression-related scales: Health Concerns, Suicidal Thinking, Anxious Depression, Low Energy State, Self-Reproach and Apathetic Withdrawal. The clinical group also had a higher mean score on the Psychological Inadequacy scale, the best overall indicator of self-worth on the test.

Detailed information about the PEPQ and PSR Plus can be found in the *PsychEval Personality Questionnaire Manual*, the *Protective Services Reports Manual*, and the *16PF Fifth Edition Questionnaire Manual*. All three manuals are available from the publisher, IPAT, Inc.

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