

The Development of a Psychological Screening Program for Sniper Selection

*Major D.C. Scholtz, M.Sc., Captain M.L. Girard, M.A
and Lieutenant(N) M.A. Vanderpool, M.Sc*

Director Human Resources Research and Evaluation
National Defence Headquarters
Ottawa, Ontario, Canada
scholtz.dc@forces.gc.ca

INTRODUCTION

Background

Recent international events, such as the terrorist attacks of September 11, 2001, have resulted in an increase in the deployment of Canadian Forces (CF) personnel on combat operations. Snipers have proven to be a critical resource in support of these operations. In light of these developments, there are plans in the CF to increase the present size of sniper detachments from 7 to 16 personnel. This renewed reliance on snipers highlights the importance of selecting the best individuals for this unique and demanding specialty.

The Infantry Sniping Manual identifies the requirement of “Emotional Balance and Mental Condition” as a selection requirement for snipers. In particular, the personality traits of low anxiety and low susceptibility to feelings of remorse are suggested. In addition, the Occupation Specialty Specification (OSS) Report, identifies the selection criteria for basic sniper training as follows:

“Personnel must meet the following requirements to be selected for this specialty:

- a. volunteer for sniper training;
- b. be psychologically screened and assessed for suitability for employment as a sniper;
- c. show aptitude for sniper employment;
- d. be qualified Reconnaissance Patrolman; and
- e. be medically and physically fit”

Presently, the CF selects volunteers based on the above requirements with one exception. There is no psychological screening process in place to assess the emotional stability or psychological suitability for employment as a basic sniper.

Given the nature of the training provided to snipers and subsequent exposure to highly stressful situations on operations, the absence of proper psychological screening could have serious consequences. These consequences include decreased operational effectiveness, endangering the safety of the detachment, and possibly the general public. Furthermore, proper psychological screening will also benefit the candidates by identifying those individuals who may be susceptible to stress or may not possess the psychological robustness to withstand the emotionally demanding challenges inherent in sniper duties.

The aim of this project is to develop a valid and legally defensible psychological screening process for sniper selection.

Personality and Psychological Screening Measures as Predictors of Job Performance

There is a general consensus among psychologists that an individual's personality can be defined using five domains: Neuroticism, Extroversion, Openness to Experience, Agreeableness, and Conscientiousness. This "Big- Five" taxonomy has provided a common framework with which to organize personality research (Digman, 1990).

Recently, considerable evidence has emerged supporting the use of Neuroticism and Conscientiousness as valid predictors of job performance across all jobs (e.g., Barrick, Mount & Judge, 1999; Salgado, 1997, 1998). Conversely, the remaining domains are more relevant to specific jobs or narrower criteria.

Neuroticism (the opposite of Emotional Stability) is the most pervasive trait across personality measures (Costa & McCrae, 1988). It includes being anxious, depressed, angry, embarrassed, insecure, emotional and worried (Barrick & Mount, 1991). Individuals who score high on Neuroticism are more likely to experience a variety of problems, including negative moods (anxiety, fear, irritability and depression) and physical symptoms.

Workers who score high on Conscientiousness are predisposed to be organized, disciplined, diligent, dependable, methodical, and purposeful. Thus, they are more likely than low-conscientiousness workers to thoroughly and correctly perform work tasks, to use their initiative, solve problems, remain committed to work performance and to stay focused on tasks (Costa & McCrae, 1992).

Psychological Screening and Performance

The research and literature on pre-employment psychological screening has focused mainly on police selection. The screening for misconduct and deviant behaviours such as abuse of authority, and antisocial behaviours is now mandatory for U.S. police forces (Arrigo & Claussen, 2003; Cortina et al, 1992; Sarichone, Cuttler, Muchinsky & Nelson-Gray, 1998). The research evidence suggests that psychological testing can identify individuals who are likely to engage in antisocial acts and misconduct (Cortina et al., 1992).

The New Zealand, Australian and the U.S. militaries have examined the effectiveness of large-scale peace keeping pre-deployment psychological screening programs (Wright, Huffman, Adler & Castro, 2002). For example, the U.S. has conducted pre-deployment psychological screening for recent peace keeping missions using self-report psychological screening measures and a follow-up interview with mental health staff. The process effectively identified soldiers requiring referral.

The U.S. Army selection criteria for the Special Operations Target Interdiction Course includes a psychological evaluation to assess each candidate's suitability. Personality traits related to successful performance include discipline, reliability, initiative, rationality, loyalty, emotional stability and low susceptibility to remorse or anxiety. The psychological evaluation includes the use of self-report personality measures and predominately focuses on screening out those deemed unsuitable. Applicants with signs of psychological unsuitability undergo face-to-face interviews to determine the cause of their psychological maladjustment. Applicants that are screened out at this point are advised to reapply for training in the future.

The validity of personality and psychological screening measures for selection purposes has been examined in the CF (e.g., Scholtz, 2003). Recently, the Holden Psychological Screening Inventory (HPSI, Holden, 1996) and NEO Personality Inventory-Revised (NEO PI-R;

Costa & McCrae, 1992) Neuroticism and Conscientiousness scales were found to be predictive of both training and job performance and workplace deviant behaviours in a combat arms sample. Specifically, the NEO PI-R Conscientiousness and Neuroticism scales were recommended for implementation in the prediction of overall job performance (Scholtz, 2003).

METHOD

Participants

In February 2004, Regular Force non-commissioned soldiers serving in sniper positions were asked to participate in the study (N = 25). The sample consisted of available qualified snipers located in Edmonton, AB and Gagetown, NB. The participants varied in rank from Corporal to Warrant Officer, ten were qualified Advanced Sniper, and 15 of the snipers had deployed on operational missions in the sniper role, including recent deployments to Afghanistan. The participants were all male, which is a reflection of the current gender representation in this occupational specialty. The Infantry School Sniper Subject Matter Experts (SMEs) were included in this sample.

Procedure

SMEs participated in a job analysis, which involved participation in a focus group as well as completing a job analysis questionnaire. In addition, SMEs completed two psychological screening measures to collect normative data.

Job Analysis

Focus Group. A focus group approach was used to link sniper knowledge, skills and abilities (KSAs) and task statements to personality traits considered essential for effective sniper performance. Although the job analysis used in this study was based on the Functional Job Analysis (FJA) model, it was modified to assist in classifying personality traits related to sniper tasks. The existing sniper job analysis report, which lists the tasks, knowledge and skills was used as a starting point. Prior to the focus group, sniper SMEs were asked to review existing KSAs and task statements for correctness and applicability to the present sniper function. During the course of the focus group, participants generated those personality traits they felt were best linked to the individual OSS task statements.

Personality-Related Position Requirements Form (PPRF). The PPRF (Raymark & Schmit, 1997) is a paper and pencil job analysis measure designed to identify personality traits relevant to job performance. The PPRF uses the Big Five personality factors and facets as a framework to link the job characteristics to personality traits. Participants provided responses to 107 items arranged in 12 sets designed to tap each of the Big Five domains. Responses were provided along a three-point scale as to whether specific items were “not required” (0), “helpful” (1) or “essential” (2).

Psychological Screening Measures

Holden Psychological Screening Inventory (HPSI). The HPSI (Holden, 1996) is a 36 item self-report inventory designed to measure higher order factors of psychopathology. Items are responded to on a 5-point Likert-type rating scale. The HPSI primary scales are (a) Psychiatric Symptomatology, (b) Social Symptomatology and (c) Depression. In addition, an

overall Total Psychopathology score, obtained by summing the scores on the HPSI's three primary scales, is also used as validity (faking) index for the inventory (Holden, 1996). Under honest responding, the three HPSI primary scales are relatively independent. When faking is present, the three scales become substantially correlated, yielding extraordinary Total Psychopathology Scores (Holden, 1996).

The Psychiatric Symptomatology scale deals with general maladjustment, including somatic complaints, emotional upset, anxiety, fear and panic. Under stress, high scorers may manifest thinking problems. Hallucinations, delusions and other cognitive impairments may also be evident. The Social Symptomatology scale reflects psychopathic and antisocial tendencies. High scorers have a low threshold for displaying negative reactions towards others, are impulsive, and may respond aggressively when frustrated (Holden, 1996). The Depression scale focuses on low self-efficacy, low self-esteem, feelings of worthlessness and incompetence. High scorers may appear hopeless and suicidal tendencies may be present.

NEO PI-R. The NEO PI-R (Costa & McCrae, 1992) is a valid and reliable measure of the five major dimensions of personality, based on the five-factor conceptual model (FFM; Digman, 1990). The five domain scales and 30 facet scales are designed to provide a comprehensive assessment of adult personality. The NEO PI-R measures the following domains; (a) Neuroticism, (b) Extraversion, (c) Openness, (d) Agreeableness, and (e) Conscientiousness. Responses to these scales range from 1 (strongly agree) to 5 (strongly disagree). The domain scales consist of 48 items, with 8 items per facet scale.

RESULTS

Job Analysis Results

Using the test manuals, personality traits identified by the participants during the job analysis were matched to individual NEO PI-R and HPSI domains/facets. For example if participants indicated that firing a sniper rifle requires a sniper to be "patient", this was matched to the NEO PI-R facet Impulsiveness (low score, N5) and the HPSI Social Symptomatology scale.

An examination of the individual facets demonstrates that while all of the NEO PI-R domains can be linked to specific OSS task statements a preponderance of the facets are from the Neuroticism and Conscientiousness domains. The HPSI Social and Psychiatric Symptomatology scales were more widely linked to OSS task statement compared to the Depression scale.

Analysis of the PPRF data illustrate that 'adherence to work ethic', 'emotional stability' and 'thoroughness and attentiveness to detail' are the most important personality-related dimensions related to sniper performance (see Table 1). Correspondingly, the above three dimensions were related to the NEO PI-R Neuroticism and Conscientiousness domains.

Given the greater representation of Neuroticism and Conscientiousness facets in both the PPRF and job analysis data, it was decided that these two domains demonstrated the greatest impact on sniper performance. Therefore, cutoff scores should be developed for these two personality factors only. For the HPSI, the results and the literature suggest that cutoffs for all three scales should have utility for sniper screening.

The exception to the above would be the NEO PI-R facet "Tender Mindedness" (from the Agreeableness scale) where incumbents would be expected to score lower in comparison to the general population. In discussion with participants during the job analysis it was widely agreed

that a successful sniper has to be able to demonstrate “emotional detachment” from a soft target. This supports the Sniping Manual’s position that snipers should be less susceptible to feelings of remorse. As such, it was decided that a cutoff for this facet be used as part of the selection process.

Psychological Screening Results

Based on the job analysis findings and the personality – job performance literature, the personality traits of Neuroticism, Conscientiousness and Tender-mindedness are related to successful job performance as a sniper. Specifically, those snipers that are psychologically fit for sniping should score low on neuroticism, antisocial and tender-mindedness characteristics, and score high on their level of conscientiousness.

The differences between the manual published normative data and the scores based on the sniper sample indicate that the published manual norms may not be appropriate for use with the sniper population.

Proposed Model Overview

Based on the results of the job analysis and psychological testing, a psychological screening model for sniper selection was developed (Figure 1). This model was developed through consultation with clinical and Industrial/Organizational Psychologists, both internal and external to the CF. The model was presented to the unit snipers and leadership for feedback purposes, and the recommendations were incorporated into the final selection model.

A review of the selection criteria as stated in the OSS indicates that while the technical competencies and medical prerequisites can be assessed through battalion resources, proper psychological screening is beyond the scope of the units. As such, the proposed model represents a logical division of responsibility in selecting snipers who are both technically competent to attend training and psychologically fit to be employed in the sniper role.

Once the volunteer has been screened at the battalion level and found to be technically and medically suitable to attend training, the member is referred to a Personnel Selection Officer (PSO) for the psychological screening. The following documentation will be forwarded to the PSO:

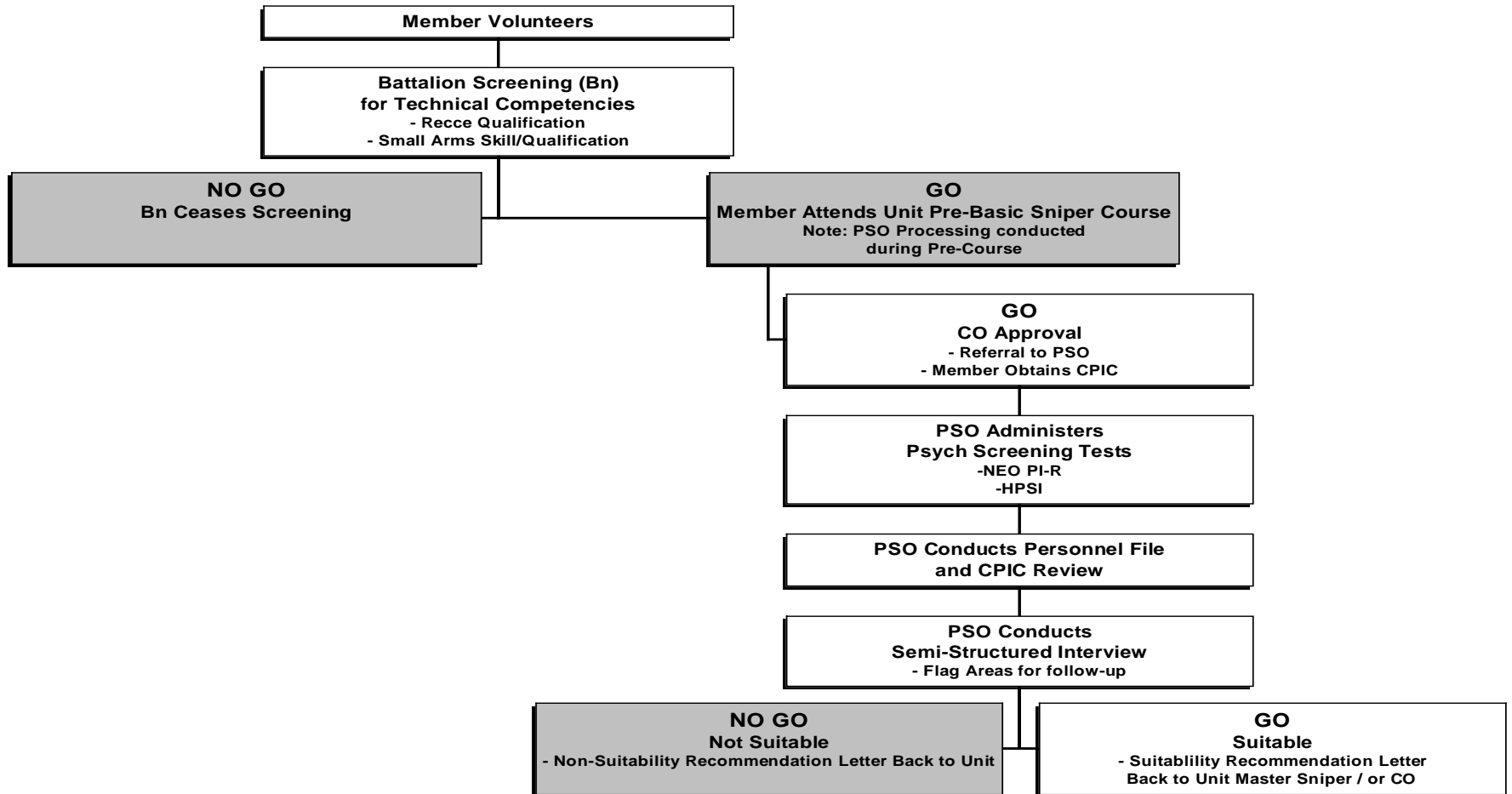
- a. battalion screening form with Commanding Officer’s (CO) approval;
- b. PSO referral form;
- c. member’s personnel file; and
- d. member’s Canadian Police Information Centre (CPIC) report.

CPIC

The CPIC provides accurate and current information regarding the member’s criminal record and related activities. While all CF members are screened on enrolment, civilian criminal charges that occur after enrolment are not always recorded on the conduct sheet or known to the unit. The PSO will review this report in conjunction with the personnel file and psychological tests to identify any patterns of antisocial/deviant behaviours. It is the member’s responsibility to obtain the CPIC from a civilian police agency. This document should be delivered directly to the PSO for privacy/confidentiality purposes.

Figure 1

Proposed Sniper Psychological Screening Model



Psychological Screening Measures

The PSO will administer, score and interpret the psychological screening measures. The member's scores will be assessed against predetermined cutoff scores, based on sniper normative data. The cutoff scores will be used to 'red flag' individuals on the traits that are related to successful performance as a Sniper, as identified in the job analyses. Individuals will not be 'selected-out' based solely on their psychological testing results.

Personnel File and CPIC Review

The PSO will conduct a review of the members personnel file, conduct sheet (if applicable) and CPIC to assess the member's psychological adjustment for employment as a sniper. Specifically, the files will be assessed for evidence of antisocial and deviant behaviours, low tolerance to anxiety and stress, depression, anger/hostility, impulsiveness, conscientiousness and overall emotional stability.

Semi Structured Interview

The purpose of the interview is to follow-up areas of concern (i.e., red flag) as identified by the testing, personnel file, and CPIC review. The PSO will be provided with standard questions and scoring guidance for this step. The intent of the interview is to discuss any circumstances or recent events that may be contributing to elevated scores on critical scales (e.g., a death in the family). A "select-out" decision will be based on the preponderance of evidence, and not solely on one isolated incident or score that exceeds criteria.

Recommendation to Unit

Upon completion of the psychological screening, the PSO will send a suitability recommendation letter to the Unit Master Sniper for inclusion in the member's personnel file. If a member is found to be not suitable, the letter will state "*Member is found suitable for continued employment in present occupation but was not found suitable for sniper training or employment at this time as he did not meet some of the critical attributes*". To ensure confidentiality and to protect the individual from any further career ramifications, the results of the psychological screening will not be provided to the Unit Chain of Command. The member will be briefed on the results of their screening and the recommendation by the PSO at the end of the interview.

DISCUSSION

The advantages of the proposed screening model include the use of unbiased qualified assessors, the use of measures with demonstrated reliability and validity, and the use of multiple sources of information with which to assess each candidate.

The results of the study suggest that the personality traits of Neuroticism, Conscientiousness and Tender-mindedness were most related to successful performance as a sniper. As such, the use of these personality traits and related scales should be incorporated as 'select-out' criteria into the proposed psychological screening model. Similarly, previous studies and the current findings both support the use of the HPSI scales for screening purposes. Cutoff scores should be developed based on the normative data collected from the sniper sample.

Although the psychological screening process will have an associated financial cost and increase the workload of the Army PSOs, the cost of not selecting the 'right' individuals can

be very costly to the organization on a multitude of levels. In the end, the processing costs are minimal compared to the benefits that will be realized in terms of the increased operational effectiveness and the screening out of those individuals who are not suited for sniper duties.

REFERENCES

- Arrigo, B.A. & Claussen, N. (2003). Police corruption and psychological testing: A strategy for preemployment screening. International Journal of offender Therapy and Comparative Criminology, 47(3), 272-290.
- Barrick, M.R. & Mount, M.K. (1991). The big five personality dimensions and job performance: A meta-analysis. Personnel Psychology, 44, 1-26.
- Barrick, M.R., Mount, M.K. & Judge, T.A. (1999, April). The FFM personality dimensions and job performance: A meta-analysis of meta-analyses. Paper presented at the 14th annual conference of the Society for Industrial Organizational Psychology, Atlanta, GA.
- Cortina, J.M., Doherty, M.L., Schmitt, N., Kaufman, G. & Smith, R.G. (1992). The "Big Five" Personality factors in the IPI and MMPI: Predictors of Police Performance. Personnel Psychology, 45, 119-133.
- Costa P.T., Jr. & McCrae, R.R. (1988). Personality in adulthood: A six-year longitudinal study of self-reports and personality ratings on the NEO Personality Inventory. Journal of Personality and Social Psychology, 54, 853-863.
- Costa P.T., Jr. & McCrae, R.R. (1992). Revised NEO personality inventory and five-factor model inventory professional manual. Odessa, FL: Psychological Assessment Resources.
- Digman, J.M. (1990). Personality structure: Emergence of the five-factor model. Annual Review of Psychology, 41, 417-440.
- Holden, R.R. (1996). Holden Psychological Screening Inventory. North Tonawanda, NY: Multi-Health Systems.
- Raymark, P.H. & Schmit, M.J. (1997). Identifying potentially useful personality constructs for employee selection. Personnel Psychology, 50, 723-737.
- Salgado, J.F. (1997). The five factor model of personality and job performance in the European Community. Journal of Applied Psychology, 82, 30-43.
- Salgado, J.F. (1998). Big five personality dimensions and job performance in army and civil occupations: A European perspective. Human Performance, 11, 271-288.
- Sarichone, C.D., Cuttler, M.J., Muchinsky, P.M. & Nelson-Gray, R.O. (1998). Prediction of dysfunctional job behaviours among law enforcement officers. Journal of Applied Psychology, 83, 904-912.
- Scholtz, D.C. (2003). The Validity of psychological screening measures across the performance domain in the Canadian Forces. Sponsor Research Report 2003-03. Director Human Resources Research and Evaluation, National Defence Headquarters, Ottawa, Ontario, Canada.
- Wright, K.M., Huffman, A.H., Adler, A.B. & Castro, C.A. (2002). Psychological screening program overview. Military Medicine, 167, 853-861.

Table 1

Sniper: Personality Related Position Requirements (PPRF) – Results

PPRF Dimensions	Mean Score	Related NEO PI-R Facets ¹	Related Tasks
Set 8: Adherence to Work Ethic	1.84	<ul style="list-style-type: none"> a. Anxiety (N1) b. Depression (N3) c. Vulnerability (N6) d. Order (C2) e. Dutifulness (C3) f. Self-discipline (C5) g. Deliberation (C6) 	<ul style="list-style-type: none"> a. Fires sniper rifle (operations/non operations) b. Occupy sniper hides c. Locate sniper targets d. Indicate sniper targets e. Index sniper targets f. Select sniper lines of advance g. Conceal personnel and equipment h. Site sniper hides i. Construct sniper hides j. Track a target
Set 10: Emotional Stability	1.80	<ul style="list-style-type: none"> a. Anxiety (N1) b. Anger Hostility (N2) c. Vulnerability (N6) 	<ul style="list-style-type: none"> a. Fires sniper rifle (operations/non operations) b. Occupy sniper hides c. Locate sniper targets d. Indicate sniper targets e. Index sniper targets f. Select sniper lines of advance g. Track a target h. Conceal personnel and equipment i. Construct sniper hides

¹ Only the identified primary NEO facets are indicated, secondary facets are not.

Personality Related Position Requirements (PPRF) – Results (cont)

PPRF Dimensions	Mean Score	Related NEO PI-R Facets ⁴	Related Tasks
Set 9: Thoroughness and Attentiveness to Detail	1.76	<ul style="list-style-type: none"> a. Competence (C1) b. Order (C2) c. Dutifulness (C3) d. Deliberation (C6) 	<ul style="list-style-type: none"> a. Site sniper hides b. Construct sniper hides c. Occupy sniper hides d. Track a target e. Locate sniper targets f. Indicate sniper targets g. Index sniper targets h. Select sniper lines of advance
Set 3: Ambition	1.73	<ul style="list-style-type: none"> a. Achievement-Striving (C4) b. Self-discipline (C5) c. Assertiveness (E3) d. Activity (E4) 	Same as set 8
Set 6: Cooperative or Collaborative Work Tendency	1.72	<ul style="list-style-type: none"> a. Trust (A1) b. Altruism (A3) c. Compliance (A4) d. Modesty (A5) e. Tender-Mindedness (A6) f. Competence (C1) g. Dutifulness (C3) h. Achievement Striving (C4) i. Deliberation (C6) 	Same as set 8
Set 12: Tendency to Think Things Through	1.72	<ul style="list-style-type: none"> a. Actions (O4) b. Ideas (O5) c. Values (O6) 	<ul style="list-style-type: none"> a. Occupy sniper hides b. Site sniper hides c. Construct sniper hides d. Select sniper lines of advance e. Construct a sniper suit

Marks natural break in data used to establish a cutoff for PPRF dimensions of importance.

PPRF Dimensions	Mean Score	Related NEO PI-R Facets ⁴	Related Tasks
Set 1: General Leadership	1.53	<ul style="list-style-type: none"> a. Warmth (E1) b. Gregariousness (E2) c. Assertiveness (E3) d. Activity (E4) e. Ideas (O5) 	<ul style="list-style-type: none"> a. Site sniper hides b. Construct sniper hides c. Occupy sniper hides
Set 7: General Trustworthiness	1.36	<ul style="list-style-type: none"> a. Dutifulness (C3) b. Self-discipline (C5) c. Deliberation (C6) 	<ul style="list-style-type: none"> a. Site sniper hides b. Construct sniper hides c. Occupy sniper hides d. Fires sniper rifle e. Locate sniper targets f. Indicate sniper targets g. Index sniper targets
Set 11: Desire to Generate Ideas	1.33	<ul style="list-style-type: none"> a. Actions (O4) b. Ideas (O5) c. Values (O6) 	<ul style="list-style-type: none"> a. Occupy sniper hides b. Site sniper hides c. Construct sniper hides d. Select sniper lines of advance e. Construct sniper suits
Set 2: Interest in Negotiation	1.25	<ul style="list-style-type: none"> a. Warmth (E1) b. Gregariousness (E2) c. Assertiveness (E3) d. Activity (E4). e. Excitement Seeking (E5) f. Ideas (O5) g. Values (O6) 	<ul style="list-style-type: none"> a. Occupy sniper hides b. Site sniper hides c. Construct sniper hides
Set 5: Sensitivity to Interests of Others	1.08	<ul style="list-style-type: none"> a. Trust (A1) b. Straightforwardness (A2) c. Altruism (A3) 	<ul style="list-style-type: none"> a. Occupy sniper hides b. Site sniper hides c. Construct sniper hides

		d. Modesty (A5) e. Tender-Mindedness (A6)	
Set 4: Friendly Disposition	0.89	a. Trust (A1) b. Straightforwardness (A2) c. Altruism (A3) d. Compliance (A4) e. Modesty (A5) f. Tender-Mindedness (A6)	a. Occupy sniper hides b. Site sniper hides c. Construct sniper hides