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Traits Associated with Personality Disorders and Adjustment to Military Life: Predictive Validity of Self and Peer Reports

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Abstract

This study demonstrated that traits and features associated with several types of personality disorders are related to work performance and the ability to conform to requirements of military life. The Schedule for Nonadaptive and Adaptive Personality and a peer nomination procedure were used to assess traits associated with 10 types of personality disorders in a sample of 1.080 Air Force recruits (57% male) at the end of basic military training. Correlations between self-report and peer nomination scores for each set of traits ranged from 0.24 to 0.13, indicating only modest convergence. Follow-up data, collected 2 years later, indicated that several scores from the Schedule for Nonadaptive and Adaptive Personality and the peer nomination procedure were significantly related to early discharge from the military. Peers provide useful information that is not redundant with that provided by the individual. When possible, assessment of personality problems should be considered from information obtained from peers or other informants.

Introduction

People who exhibit maladaptive personality traits presumably encounter difficulty in a career that requires both interpersonal cooperation and self-autonomy. Mount et al.[1] reported the results of a meta-analysis in which conscientiousness, agreeableness, and emotional stability were found to be positively related to successful performance in jobs that require frequent interpersonal interactions. Similarly, Tokar et al.[2] found that conscientiousness was consistently related to performance indicators across jobs and measures. Salgado[3] concluded that conscientiousness and emotional stability had generalized validity across criteria in civil and military occupations. These personality traits added approximately 10 to 11% incremental validity over mental ability in predicting job performance. It follows that pathological personality traits, such as emotional instability, should interfere with job

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success, especially in a stressful military environment. Similarly, antisocial personality traits would run counter to the military's emphases on obedience and compliance with rules.

The distinction between technical proficiency and contextual performance is useful when considering the potential influence of maladaptive personality traits on work performance. Hogan et al.[4] defined contextual performance as building and maintaining "the social and organizational structure" (p 190). Contextual performance has five components including enthusiastic persistence, volunteering for extra work tasks not formally a part of one's job, helpful cooperation, obedience to rules, and support of organizational objectives.

Contextual performance emphasizes successful involvement with the larger organizational mission and other individuals. A high level of contextual performance is expected in many jobs, including the military. The prototype military member is expected to exert whatever effort is needed to get the job done, volunteer as needed, work well with others, obey orders, meticulously follow rules and procedures, and identify with and support the military's objectives. In the military, failure to exhibit such good citizenship behaviors can result in serious consequences, including supervisory job counseling, written documentation, and even separation from the military.[5,6]

Although full-blown personality disorders (PDs) are clearly dysfunctional, the existence of some mild features that are associated with PDs might be helpful for advancement in an organization if those traits support the ideals of the organization. For example, someone who exhibits some features of obsessive-compulsive PD may have characteristics that align with the military ideals of devotion to work, conscientiousness, attention to detail, and perfectionism. In addition, the structure of military life would be of benefit to the underlying anxiety and intolerance of uncertainty that is often found in an individual with mild obsessive-compulsive PD.[7]

Another example of a pathological personality trait that may be beneficial in the work world is narcissism. Hogan et al.[4] found that when contextual performance is linked to advancement, ambitious employees show this behavior. Narcissistic individuals with high ambition may comply behaviorally with the military's belief in contextual performance. A narcissistic person would comply not because of an inherent belief in teamwork or volunteerism, but rather for reasons of personal advancement and ambition.

In contrast, the excessive interpersonal sensitivity of those with avoidant and dependent PDs is incompatible with jobs requiring clear communication and self-sufficiency under stress. Some additional traits, such as those found in antisocial and schizotypal PDs, are also incompatible with a work environment that emphasizes contextual performance and obedience.

Several challenging methodological issues are involved in the assessment of personality traits and disorders.[8,9] One important problem has been the tendency for clinicians and investigators to rely heavily on the use of self-report instruments. Information about personality pathology can be obtained from the person's own subjective perspective or from informants who know the person well. Most assessment procedures place primary emphasis on the former. Agreement between self and informant reports with regard to PDs has

typically been modest at best.[10] To the extent that humans seldom see themselves as others see them, there will often be important discrepancies between self and informant judgments.

Mount et al.[1] concluded that personality ratings from other people added significant incremental variance in performance criteria beyond that accounted for by self-ratings. Borman et al.[11] have also demonstrated that peer reports are significant predictors of job performance, whereas Seibert et al.[12] found that both self-report and others' ratings showed consistent relations with measures of job performance.

Self and others' ratings complement each other, and a complete understanding of the person requires information from both perspectives. Peer ratings may be more accurate in predicting ratings by supervisors, whereas self-report measures undoubtedly provide the only view of the individual's own subjective experience. Significant differences between self-reports and the perceptions of others do not suggest that one approach is more valid than the other, but they do imply that peer and self-report measures capture different perspectives.[13] The current study allowed for a unique opportunity to study the ability of a self-report questionnaire and peer nominations for traits and characteristic features of PDs to predict adjustment and job success among Air Force recruits after the successful completion of basic military training. We used one general measure of this outcome: whether or not the person was separated from the Air Force within the first 2 years of service. We expected that both self-report and peer-report measures of personality problems would be associated with the probability of a successful adaptation to military life.

In DSM-IV, PDs are defined in terms of sets of enduring personality traits and characteristic features that lead to clinically significant distress or impairment in social or occupational adjustment. The current study focused on the presence of the traits and features associated with each of these disorders. We did not collect information or make clinical judgments about the length of time for which these traits might have been present or the extent to which these traits interfered with the person's life. Therefore, it would not be appropriate to suggest that we were able to determine whether our participants met the diagnostic criteria for a PD. Nevertheless, it does seem reasonable to expect that some of the people in this sample would have qualified for a diagnosis if we had been able to conduct a more complete assessment. A systematic review of epidemiological data indicates that approximately 13% of adults in the general population would meet the diagnostic criteria for at least one type of PD in DSM-IV.[14]

Methods

Participants

Participants in this study were 1,080 military recruits who were tested at the end of 6 weeks of U.S. Air Force basic training and for whom follow-up data were available. The recruits were members of groups (or "flights") of between 40 and 50 people who had gone through training together.

Most of the flights that we tested included both men and women. For the 901 individuals who reported their sex, 57% were men and 43% women. Age range was 17 to 34 years

(mean, 20 ± 2.6 years) with 72% of the participants being 21 years of age or younger. Average percentile score on the Armed Forces Qualifying Test was 65 ± 16. Almost all participants were high school graduates (99%). The racial and ethnic composition of the sample was: 66% Caucasian, 17% African American, 3% Asian, 3% Hispanic, 1% Native American, and 10% Other.

The prevalence of PDs in this sample was estimated by conducting semistructured diagnostic interviews with 20% of the recruits. Approximately one-third of these people were selected for interviews because they produced high scores on a self-report measure, one-third were selected because their peers nominated them for exhibiting traits associated with PDs, and the remaining one-third were chosen at random from those who were left in each flight. We used the Structured Interview for DSM-IV Personality.[14] Fifteen percent of the people who were interviewed met the diagnostic criteria for at least one PD. Therefore, for this particular subset of our sample, we can say that some recruits did meet diagnostic criteria for a PD.

Although the members of mixed-sex flights were separated into dormitory rooms for men and women, these recruits knew each other well. They worked, ate, and took their breaks together for 6 weeks within the strict discipline of military training. All had successfully survived the same stressful transition from civilian to military life.

Measures

We used two measures to identify the presence of traits and features that define PDs. One was based on the person's self-report and the other was based on information provided by other members of the person's training flight.

The Schedule for Non-Adaptive and Adaptive Personality (SNAP)[15] is a factor analytically derived, a 375-item self-report questionnaire in which the person is asked to evaluate himself or herself on those traits that are associated with each of the PDs. The SNAP is designed to assess trait dimensions in the domain of PDs. Categorical and dimensional scores can be obtained on 34 scales: 12 trait scales, 3 temperament scales, 6 validity scales, and 13 diagnostic scales. Although the entire SNAP was administered to each recruit, in this study we will report only dimensional scores on the 10 diagnostic scales, which correspond to the DSM-III-R definitions of PDs.

The Peer Inventory for Personality Disorders (PIPD) is composed of 103 items, including 79 items based on the features of 10 PDs listed in DSM-IV as well as 24 supplementary items based on additional personality traits (mostly positive characteristics, such as "trustworthy and reliable," "agreeable and cooperative," and "articulate and persuasive"). The items are presented to participants in a quasirandom order. For each item, the participant is asked to nominate members of his or her group who exhibit the characteristic in question. Information regarding the psychometric properties and concurrent validity of the PIPD have been described elsewhere.[13,16]

Items for the PIPD were constructed by translating the DSM-IV criterion sets for PDs into lay language. Each of the DSM-IV PD features was rewritten into words that avoided the

use of technical psychopathological terms and psychiatric jargon. One item ("Has little, if any, interest in having sexual experiences with another person") was excluded from the PIPD presented to recruits due to military regulations. Only the remaining 78 items are included in analyses presented throughout this study.

The PIPD is presented on a computer screen. For each item, the personality trait or feature is listed at the top of the screen. The names of all other members of the group (excluding the name of the participant completing the PIPD) appear below the trait description. The numbers "0" (never like this), "1" (sometimes like this), "2" (usually like this), and "3" (always like this) are listed to the right of each person's name, with the default selection being "0." Instructions tell the participants. "We are interested in your perceptions of other people in your group. You will be presented with descriptions of various personal characteristics. For each characteristic, you will be asked to click the mouse button when the cursor is pointing to the names of the people in your group who best fit that description. You may click as many names as you want, but you must select at least one person for each characteristic. Participants used the full range of the scale, with approximately 50% of the nominations being rated "1," 25% rated "2," and 25% rated "3."

Initial Screening Procedure

Screening for traits and features of PDs was completed on the next-to-last day of basic military training. The members of each flight were brought to a testing facility at Lackland Air Force Base so that they could be surveyed simultaneously. Each participant was seated at a separate computer terminal, where he or she gave written informed consent to participate in the study. The informed consent was explained to the participants without the presence of military training instructors, and basic military authority figures were not allowed in the laboratory or hallways. Proctors and interviewers were all civilian. The role of an indirect military expectation for compliance in encouraging participation cannot be measured, but there were no direct pressures to conform from military instructors.

After giving consent, they were administered the battery of computerized measures. They first completed a demographic questionnaire, then the SNAP, and finally the PIPD. The battery took an average of 2 hours to complete. Dividers between workstations prevented participants from seeing the computer screens of those around them. After the SNAP and PIPD had been completed, a few members of each flight were invited to complete die Structured Interview for DSM-IV Personality interview. They were told that we had invited a variety of people to participate in interviews and that these people represented a full range of different personality styles and characteristics.

Follow-Up Procedure

Two years after the personality data were collected, we examined the job status of all participants. They were divided into two groups: (1) those still engaged in active duty employment and (2) those who had been given an early discharge from the military (after completion of basic training but before the end of their expected 4-year tour of duty). An early discharge is typically granted by a superior officer on an involuntary basis and is most

often justified by repeated disciplinary problems, serious interpersonal difficulties, a poor performance record, or some combination of these considerations.

Within 2 years, 57 of the 1,080 recruits were discharged for the following reasons: character or behavior disorder, pattern of minor disciplinary infractions, unsatisfactory performance, unqualified for active duty, misconduct (reason unknown), or commission of a serious offense. Only separations that were given a code indicating poor performance were used in this study. Individuals separated through a no fault separation, who had parenthood-related issues, medical, or other nonbehavioral reasons were not included in the separation number.

In the Air Force, basic training is a time when some recruits show patterns incompatible with military life and these individuals are separated for various reasons, including a no-fault separation. These basic training separations account for a large number of first-term enlistment separations. Because data collection occurred at the end of basic training, individuals who were discharged during basic training were not included in this study. Otherwise, the number of separated individuals would have been much higher.

Results

We used dimensional scores on each of the SNAP diagnostic scales because they are more reliable than categorical scores. Each recruit received a score based on the number of items that he or she endorsed in the pathological direction for each scale. For the peer nomination measure, we added scores for a given PD feature across all judges and divided by the number of members in the group. We calculated reliabilities using the median (across groups) of coefficient α for each trait or feature. The median peer reliability across all PD features was 0.74, which indicates that the recruits did reach meaningful agreement regarding the people in their training flight who exhibited specific traits and features of PDs.

Correlations between SNAP diagnostic scores and peer nominations for specific PD categories were all relatively modest but statistically significant. The correlations between peer nomination totals and SNAP diagnostic scales for specific categories were (in descending order): antisocial ($r = 0.24$), histrionic ($r = 0.24$), borderline ($r = 0.23$), dependent ($r = 0.21$), schizoid ($r = 0.21$), schizotypal ($r = 0.21$), narcissistic ($r = 0.19$), avoidant ($r = 0.18$), paranoid ($r = 0.17$), and obsessive compulsive ($r = 0.13$). All of these correlations were statistically significant ($p < 0.0001$). There is some convergence between sources of information, but peers clearly provide information that is not redundant with that provided by the self.

Those individuals who had completed basic training, but who were discharged from the military within the first 2 years of military service, received a significantly higher number of nominations (totaled across all categories) from their peers for traits and features of PDs ($F = 9.479$; $p < 0.002$). They also produced higher scores (totaled across all categories) on the SNAP diagnostic scales ($F = 8.111$; $p < 0.004$) than those still employed as active duty military.

The base rate of attrition was 5%. A predictive model of attrition using this 0.05 classification cutoff was computed for the peer nomination data and for self-report data from

the SNAP. Results show that the peer nomination model correctly classified 65% of the cases, whereas the self-report model correctly classified 57% of the cases. Peer nominations correctly classified 66% of the people who were still on active duty, compared with 57% correctly classified by the SNAP. However, the SNAP correctly classified 61% of the discharges compared with 51% correctly classified by peer nominations (Table I).

Scores on the SNAP diagnostic scales and peer nomination scores were significantly higher for people who had been discharged than for active duty personnel for paranoid, borderline, and avoidant PDs. Peer nominations also showed significant differences between people still on active duty and people who had been discharged for traits associated with antisocial, schizoid, schizotypal, histrionic, and dependent PD (Tables II and III). Neither peer nominations nor SNAP diagnostic scales were significantly different between active duty and discharged airmen for traits associated with obsessive compulsive or narcissistic PDs.

Discussion

This study demonstrates that the traits and features associated with PDs have a negative impact on adjustment to military life. Both self-report and peer-report measures of personality problems were correlated with impaired occupational functioning. On the basis of the semistructured diagnostic interviews that were conducted with a subset of our participants, we believe that some recruits would meet DSM-IV criteria for a PD, but we did not collect complete diagnostic information from the full sample. The SNAP questionnaire and the peer nomination procedure are not sufficient for that purpose. Therefore, our conclusions are focused on traits and features associated with PDs rather than the actual disorder.

The peer nomination scores did better overall in job status classification and in predicting who remained on active duty, but self-report scores had a lower error rate in predicting discharge status. With regard to traits associated with specific types of PDs, people who received a higher number of peer nominations on 8 of the 10 categories showed an increased risk of receiving an early separation from the Air Force. Only obsessive-compulsive traits and narcissistic traits were unrelated to job status when the assessment information was collected from peers. The self-report questionnaire (SNAP) also found differences between those who were eventually discharged and those who remained on active duty with significant effects being associated with the diagnostic scales for borderline PD, avoidant PD, and paranoid PD.

Previous studies have demonstrated that personality pathology is associated with impairment in occupational and social functioning.[17] The present study is important, in part, because most evidence regarding this issue has been obtained using patients in treatment for psychiatric disorders. Our data indicate that features of PDs lead to adjustment problems even in a nonclinical population.

The relatively modest but significant correlations between self-report scores and peer nominations for features of PDs indicate that these methods reflect different perspectives, both of which are useful.[13] Peer nominations reflect what others perceive, and self-report

measures provide a more accurate picture of the person's inner experience. Unfortunately, most studies of personality pathology focus exclusively on sell-report measures. The fact that self- and peer-report measures are not highly correlated makes it tempting to conclude that the peer measures are in error. Our follow-up data indicate, however, that the peers did provide meaningful information about a number of maladaptive personality traits that were significantly related to occupational impairment.

The finding that peer nominations for antisocial and paranoid traits were significantly higher for discharged participants reflects the highly negative impact that these traits have on others who must work as a cohesive and disciplined team.[18] Routine disregard for teammates, manipulation of the system to further one's own self interests at the cost of the larger organization, excessive distrust of others, and malevolent interpretation of other's motives are incompatible with the cohesion and loyalty expected of military personnel. It may be particularly useful to collect information about these characteristics from peers (rather than relying on self-report) because paranoid PD and antisocial PD are defined, in part, by traits such as deceitfulness and reluctance to confide in others.

The significantly higher attrition rate of those individuals exhibiting features associated with borderline PD is consistent with earlier findings regarding the importance of emotional stability and successful job performance.[2,3] In this instance, both self-report and peer-report measures were able to identify people who were discharged early. The SNAP provides a rich description of subjective emotional experience as well as motivational issues. Our data are consistent with earlier reports indicating that recruits who experience high levels of dysphoria and are poorly motivated to adjust during basic training are dearly at risk for early separation from the military.[19,20]

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TABLE I

CROSS-TABULATION OF JOB STATUS BY PEER NOMINATION OR SELF-REPORT ASSESSMENT OF PERSONALITY DISORDER SYMPTOMS

	Peer Nomination			Self-Report (SNAP)		
Observed	**Active duty**	**Discharged**	**% Correct**	**Active duty**	**Discharged**	**% Correct**
Active duty	675	348	66% active duty	580	483	57% active duty
Discharged	28	29	51% discharged	21	36	61% discharged
			65% total correct			57% total correct

TABLE II

PEER NOMINATION SCORES BY PD TYPE AND JOB STATUS AT FOLLOW-UP

Peer Nominations	Job Status at Follow-Up	Mean	*F*	*P*
Paranoid	Active duty	0.62	9.98	0.002
	Discharged	0.88		
Schizoid	Active duty	0.77	4.41	0.036
	Discharged	0.94		
Schizotypal	Active duty	0.85	6.16	0.036
	Discharged	1.16		
Antisocial	Active duty	0.65	7.48	0.006
	Discharged	0.93		
Borderline	Active duty	0.75	14.76	0.000
	Discharged	1.17		
Histrionic	Active duty	0.90	4.86	0.028
	Discharged	1.17		
Narcissism	Active duty	1.32	1.77	0.184
	Discharged	1.60		
Avoidant	Active duty	0.57	9.91	0.002
	Discharged	0.86		
Dependent	Active duty	0.65	15.05	0.000
	Discharged	1.11		
Obsessive-compulsive	Active duty	0.89	0.15	0.702
	Discharged	0.85		

TABLE III

SNAP (SELF-REPORT) SCORES BY PD TYPE AND JOB STATUS AT FOLLOW-UP

SNAP Diagnostic Scale	Job Status at Follow-Up	Mean	*F*	*P*
Paranoid	Active duty	7.93	3.84	0.050
	Discharged	9.21		
Schizoid	Active duty	7.69	1.43	0.232
	Discharged	8.40		
Schizotypal	Active duty	4.28	0.02	0.897
	Discharged	4.33		
Antisocial	Active duty	5.96	3.38	0.066
	Discharged	7.04		
Borderline	Active duty	5.19	6.74	0.010
	Discharged	6.63		
Histrionic	Active duty	9.70	0.36	0.549
	Discharged	10.02		
Narcissism	Active duty	7.61	2.73	0.099
	Discharged	8.46		
Avoidant	Active duty	5.94	7.12	0.008
	Discharged	7.26		
Dependent	Active duty	4.96	3.05	0.081
	Discharged	5.82		
Obsessive-compulsive	Active duty	10.68	0.02	0.877
	Discharged	10.74		