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**Navy Computerized Adaptive Personality Scales
(NCAPS) and Self-Description Inventory (SDI)
Wind Down and Merger with Tailored Adaptive
Personality Assessment System (TAPAS)**

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1.0 SUMMARY

This technical report describes a comprehensive review of three personality assessments currently and historically used across the United States military services for personnel selection and/or placement. The purpose of this project was to improve testing and test evaluation within the military, and specifically the consolidation of personality assessments developed by various services over the past decade. These were the Tailored Adaptive Personality Assessment System (TAPAS), Navy Computerized Adaptive Personality Scales (NCAPS), and Self-Description Inventory (SDI).

The report is divided into the following sections: (1) archival research review of previously conducted research studies on the TAPAS, NCAPS, and/or SDI (Section 4.0 of this report), (2) a description of mapping analyses conducted between the TAPAS with the NCAPS and SDI (Section 5.0), (3) a description of the approach used for analysis of the shared variance between the TAPAS, SDI, and/or NCAPS and/or with other variables (Section 6.0), (4) results of the analysis between the TAPAS and SDI (Study 1; Section 7.0), (5) results of the analysis between the TAPAS, SDI, and NCAPS with other variables (Study 2; Section 8.0), (6) a description of the comparisons across both studies (Section 9.0), (7) meta-analysis of validity results (Section 10.0), and (8) a summary of all findings and recommendations (Section 11.0). Each section provides detailed results and descriptions of processes used to examine the degree of overlap between the three focal assessments and the extent to which the NCAPS and SDI exhibit commonalities with the TAPAS. Detailed results are also presented that inform open questions about overlap. In general, many of the assessments exhibit conceptual and empirical overlap. Some concerns exist regarding the operational performance of the assessments and suggestions are provided for how the military may improve the extent to which a combined approach to personality assessment under the TAPAS framework may improve job selection and/or placement decisions.

2.0 INTRODUCTION

The consensus of the Manpower Accession Policy Working Group (MAPWG) is that the TAPAS framework and methodology should serve as the basis for future efforts to measure personality in US military enlisted applicants. To determine the best methods for merging features of the NCAPS and SDI with TAPAS, the military was interested in a summarized view of the research to date on each assessment, understanding the shared variance between conceptually similar scales across the assessments, and a meta-analytic view of the validity of constructs measured by the assessments. The goal of this work was to understand constructs measured by NCAPS and SDI that were worthy of consideration in the TAPAS framework, ways in which item content were similar across scales of similar constructs, and to understand how the TAPAS could be improved in terms of psychometric characteristics with the inclusion of NCAPS or SDI scales.

The project began with a thorough research review with a focus on uncovering the psychometric characteristics of each assessment, including scale reliabilities, scale validities, scale subgroup differences, and faking evidence. In total, 50 studies were reviewed and summarized. Studies that reported criterion-related validity evidence were coded according to a criterion taxonomy, including (1) performance ratings, (2) promotion/job selection, (3) grades/job knowledge, (4) attrition, (5) fitness, (6) training outcomes, (7) counterproductive work behaviors.

For each criterion domain, patterns of effect sizes for predictor-criterion relationships were evaluated and summarized across studies. Only the TAPAS was examined across all indicated criterion domains as it has been subject to more validation research. The patterns of effect sizes across criteria tended to show a few individual TAPAS scales had moderate relationships with particular outcomes. However, these effects varied substantially across samples and criteria.

The TAPAS, NCAPS, and SDI were also evaluated for racial/ethnic and gender subgroup differences. Findings for only the TAPAS were reported in the set of studies reviewed. Results showed patterns of zero to small effect size differences, with some non-zero effects favoring the minority groups. Similarly, some research has been conducted on the TAPAS and NCAPS that explores the degree to which scores can be “faked.” Results showed little evidence of faking on both assessments.

Following the literature review, the conceptual and empirical overlap between the three focal personality assessments was examined. A mapping of the scales and facets measured across the three assessments was conducted to help develop expectations about what should demonstrate some degree of relationship. Scales and facets that subject matter experts (SMEs) indicated a strong mapping between were expected to demonstrate robust relationships. The mappings were used to initially interpret the correlations obtained from data analysis of two samples of data containing TAPAS and SDI (Sample 1) and TAPAS, SDI, and NCAPS (Sample 2). Preliminary mappings were finalized as part of the examination of item content overlap between the three assessments.

3.0 METHODS, ASSUMPTIONS, AND PROCEDURES

An overview of data analysis methods and results is provided here; please see Sections 7.0 and 8.0 for further detail.

3.1 Study 1: TAPAS-SDI Data Analysis

The TAPAS and SDI were evaluated for construct validity and subgroup differences using a sample of data collected in 2018 from 2,142 Air Force members. The TAPAS and SDI were administered under operational conditions (i.e., TAPAS and SDI were administered at Military Enlisted Processing Stations (MEPS) as part of accession to the services). Subgroup difference analyses were conducted for Black/African Americans, Asians, Hispanics/Latinos, and Females. The overall pattern of results suggested zero to small effect sizes between subgroups that often favor the minority group. These results are consistent with extant literature indicating small effects for non-cognitive constructs like personality traits (Foldes, Duehr, & Ones, 2008).

There were several moderate-sized correlations (i.e., greater than $\pm.30$) between TAPAS and SDI domains and facets. Of the 26 final expected mappings of SDI to TAPAS (and those included in Study 1), correlations of .30 or above (or -.30 or below) were found for 15. Eleven mappings could not be examined because the TAPAS scales were not included in the dataset.

3.2 Study 2: TAPAS-NCAPS-SDI Data Analysis

The TAPAS, NCAPS, and SDI were evaluated for construct validity, criterion-related validity, reliability, and faking, race/ethnicity, and gender subgroup differences using a sample of data collected in 2018 from 1,089 Air Force enlisted trainees. The TAPAS, NCAPS, and SDI were administered for research purposes (i.e., they were administered specifically for use in this research project). Participants were tested under both Honest (N = 576) and Fake Good (N = 513) conditions.

Sufficient data were available to conduct racial/ethnicity and gender subgroup difference analyses for Blacks/African Americans and Females. Of the 128 calculated effects, 41 (32%) were non-zero effects, with 39 effects considered small (i.e., between 0.20 and 0.50) and 2 considered medium (i.e., between 0.50 and 0.80). Favorable effects were found across TAPAS, NCAPS, and SDI more frequently than unfavorable effects for Blacks/African Americans (7 vs. 4) and Females (21 vs. 9).

Correlations were analyzed to assess whether they aligned with expected mappings. Of the 15 expected mappings of SDI to TAPAS (that were included in Study 2), correlations of $\pm.30$ or were found for 14. Eleven mappings could not be examined because the TAPAS scales were not included in the dataset. Of the 11 final expected mappings of the NCAPS to TAPAS (that were included in Study 2), correlations of $\pm.30$ were found for 10. Nine mappings could not be examined because the TAPAS scales were not included in the dataset.

The TAPAS, NCAPS, and SDI demonstrated at least some robust correlations with multiple self-rated performance dimensions: likelihood to sexually harass (LTSH), communication, decision making, leading others, professionalism, and unethical decisions. All scales demonstrated at least one correlation meeting or exceeding the $\pm.10$ threshold. In general, the pattern and magnitude of correlations were highest for the SDI. This is likely due to the similarity of the response format used to measure predictor and criterion (i.e., common method variance). That is, both the SDI predictor and criteria were assessed using a single-stimulus/rating scale approach where

participants indicated their level of agreement with descriptive statements about their personality and performance. Bias present in the predictor measure was likely also present in the criterion measure. The generally smaller pattern of correlations for the TAPAS and NCAPS is likely due to a difference in format in which the predictor and criteria were measured.

A series of multiple regression analyses to determine the combined influence of the TAPAS, NCAPS, and SDI in the prediction of the self-rating areas. Multiple regression analyses were run on the full TAPAS model, NCAPS model, and SDI model for each of the six criterion variables. The TAPAS explained between 7 and 21% of the variance in self-ratings of performance, with the most consistent findings across criteria for Achievement, Attention Seeking, Even-Tempered, Self-Control, and Tolerance. The NCAPS explained between 9 and 29% of the variance in self-ratings of performance, with the most consistent prediction for Achievement, Dutifulness, Adaptability/Flexibility, Stress Tolerance, and Dependability. The SDI-D explained between 8 and 41% of the variance self-ratings of performance, with all scales except for Agreeableness being consistent predictors. The SDI-F explained between 12 and 48% of the variance in self-ratings of performance, with consistent prediction for Deliberation, Self-Discipline, and Reflective. The common method variance associated with the SDI predictor and criteria ratings likely explains the larger amount of variance explained relative to the other assessments.

Next, a series of hierarchical regression analyses were conducted. Given the robust prediction of the SDI for each of the rating areas, the SDI was entered first followed by NCAPS and TAPAS to determine the presence of incremental prediction. The NCAPS added significant incremental prediction beyond SDI-Domains for 5 of 6 criterion areas. It also added significant incremental prediction beyond SDI-Facets for 4 of 6 criterion areas. Dutifulness and Stress Tolerance were the most robust and consistent predictors across criteria areas. TAPAS added significant incremental prediction beyond SDI-Domains and NCAPS for 4 of 6 criterion areas. TAPAS added significant incremental prediction beyond SDI-Facets and NCAPS for 1 of 6 criterion areas. Physical Conditioning was shown to be a unique and robust predictor, which matches the results of the mapping analysis. Some of the most robust SDI predictors (Achievement Striving, Self Discipline, and Deliberation) are mapped to TAPAS scales, indicating less possibility for unique measurement.

Of all three assessments, the TAPAS demonstrated the fewest faking differences, with the least amount of differences, even when respondents faked their responses to be desirable. The TAPAS may therefore be less sensitive to participants faking.

Following the analysis of the two datasets, the archival validity studies were subjected to a quantitative meta-analysis to understand aggregate views of the validity of the TAPAS, NCAPS, and SDI scales for various criteria measures.

4.0 ARCHIVAL RESEARCH REVIEW

In order to identify any useful updates to the TAPAS framework, an in-depth analysis of TAPAS, the NCAPS, and the SDI was completed. The first step in the review process was to identify relevant archival studies for review. PDRI utilized several sources to collect studies for this project. Several studies were provided by the Air Force based upon their review of existing files and documentation. Additional studies were identified using Google Scholar, Google, and PsycInfo. A third source of studies was Drasgow Consulting Group (DCG). DCG provided a list of studies, specifically regarding the TAPAS, for potential inclusion. This resulted in 86 studies that examined at least one of the personality measures of interest.

Each of the 86 studies were reviewed and coded to determine if they covered results of interest to the current review. Information about each study was entered into a spreadsheet to track the relevant results (See Table 1). There were several psychometric characteristics that were deemed critical for the review: scale reliabilities, scale validities, scale subgroup differences, and faking evidence. The presence of one of these psychometric characteristics resulted in the inclusion of a particular report in the review. If a study did not include one of these measures, it was excluded from further review. Once the list of included and excluded studies was completed, this list was reviewed and vetted by Subject Matter Experts (SME) within the military. This process resulted in the removal of 36 studies from the list, with a remaining 50 studies deemed valuable for further review.

Table 1. Study Coding Characteristics

Coded Study Elements	
Report Number	Focal Assessment(s)
File Name	Scale(s) included
Report Name	Presence of scale reliabilities
Author(s)	Presence of scale validities
Report Type	Criteria measures and criterion taxonomy code
Report Date	Presences of race/ethnicity subgroup differences
Study Date	Presence of faking differences

In order to conduct the in-depth review, criteria for inclusion within the studies list, along with other important descriptors, were utilized to create a template for a thorough review of each article. A good deal of the data within the spreadsheet used to categorize the studies were also included in the thorough review at a more detailed level. This template was then used to record information from each study that was important to the review of the psychometric characteristics of the three focal assessments (TAPAS, NCAPS, and SDI). The study design and performance measure(s) (i.e., scale reliabilities, scale validities, criterion validities, subgroup differences, and faking evidence) results were recorded. Specifically, each study was examined in regards to the sample, sample size, type of study (i.e., field or lab), research design, and the specific reliability, validity, subgroup differences, and/or faking results. These results were then logged within the template. PDRI carried out a peer review after completion of the in-depth review, where team members reviewed each other's work to ensure consistency and accuracy in the recording of study results.

After the peer review, the studies were summarized to obtain a picture of the pattern of psychometric characteristics of the three assessments. The study results for each assessment were compiled by type of psychometric characteristic. The results were reported as follows: race/ethnicity subgroup differences with effect sizes of at least 0.20; criterion-related validity coefficients of at least -0.10 or 0.10; faking mean difference effect sizes of at least -0.10 or 0.10; and the value of 0.10 was selected to recognize the potential for incremental validity when scales are combined into composites. It is also important to note that many studies included multiple samples. Sample sizes with an $N > 200$ were included in the summaries. Results of individual studies that contributed to the criterion-related validity summary review are reported in Appendix A.

To assist with the reporting of validity coefficients, a criterion taxonomy was established to facilitate the interpretation of effect sizes across similar criteria. The following outcomes comprised the taxonomy used to summarize validity coefficients:

- Performance Ratings (peer or supervisor)
- Promotion or selection for a job role
- Grade or job knowledge
- Fitness
- Training outcomes or success
- Counterproductive work behaviors (CWB)
- Attrition

Table 2 shows the patterns of results for criterion-related validity studies for TAPAS, for the most commonly studied scales. The cells in the table indicate the number of results showing at least a modest positive result (i.e., at least 0.10 in the expected direction), the number of negative results (at least 0.10 in the unexpected direction), and the number of zero magnitude results. One individual TAPAS scale (Physical Conditioning) was substantially related to multiple criteria. In general, most scales demonstrated some at least modest (positive and/or negative) effects along with multiple zero-sized effects. The following scales demonstrated more robust relationships, with at least more positive than zero effect sizes:

- Dominance relating to Fitness outcomes
- Intellectual Efficiency relating to Grades/Job Knowledge outcomes
- Physical Conditioning relating to Promotion/Job Selection, Fitness, and Training outcomes

Table 2. Literature Review Criterion-Related Validity Summary for TAPAS Scales

	Performance Ratings	Promotion/ Job Selection	Grades/ Job Knowledge	Fitness	Training	CWBs	Attrition
	+/-/0	+/-/0	+/-/0	+/-/0	+/-/0	+/-/0	+/-/0
Can Do Composite	0/0/0	0/0/0	0/0/0	0/0/0	2/0/5	0/0/0	0/1/14
Will Do Composite	0/0/0	0/0/0	0/0/0	0/0/0	2/0/5	0/0/0	0/4/11
Achievement	16/0/44	1/0/4	7/1/28	8/0/12	9/2/17	0/3/4	1/4/26
Adjustment	2/0/50	1/0/4	3/1/18	0/0/12	1/1/10	1/0/6	0/0/15
Attention Seeking	4/5/46	0/1/4	0/0/22	1/0/11	1/0/9	0/0/7	0/0/19
Cooperation	6/5/52	0/0/3	0/1/23	0/3/11	0/0/12	0/1/6	0/2/17
Dominance	8/8/45	1/0/4	1/1/22	7/0/7	3/1/8	0/1/6	0/1/21
Even Tempered	9/0/53	0/1/4	2/1/21	0/1/13	1/0/11	0/4/3	1/1/18
Generosity/ Selflessness	3/5/39	0/1/3	0/4/16	0/1/9	1/2/7	0/1/6	0/0/16
Intellectual Efficiency	3/1/57	0/1/4	22/0/2	0/0/14	3/0/7	1/1/5	0/0/21
Non-Delinquency	5/5/50	1/1/3	3/1/32	0/5/15	3/2/23	0/3/4	3/0/20
Optimism	5/1/55	2/0/3	2/0/22	1/0/13	0/1/11	0/1/6	0/2/16
Order	3/1/52	1/0/3	7/0/15	0/0/12	1/0/11	0/1/6	0/0/21
Physical Conditioning	21/0/40	3/1/1	1/2/33	20/0/0	18/3/7	1/1/5	0/10/17
Self-Control	4/0/44	1/0/3	0/1/19	0/0/10	0/0/12	0/4/3	0/1/14
Sociability	4/3/40	1/1/2	0/4/16	0/0/10	1/0/10	0/0/7	0/0/16
Tolerance	3/1/57	0/0/5	1/2/21	0/0/14	1/1/10	0/1/6	1/0/19

Table 3 shows the patterns of results for criterion-related validity studies for NCAPS, for the most commonly studied scales. The cells in the table indicate the number of results showing at least a modest positive result (i.e., at least 0.10 in the expected direction), the number of negative results (at least 0.10 in the unexpected direction), and the number of zero magnitude results. The following scales demonstrated more robust relationships, with more positive than zero effect sizes:

- Achievement
- Social Orientation
- Attention to Detail
- Vigilance
- Leadership Orientation
- Perceptiveness/Depth of Thought
- Self-Control

The following scales have not been subject to any criterion-related validation research: Innovation, Initiative, and Empathy.

Table 3. Literature Review Criterion-Related Validity Summary for NCAPS

	Peer Ratings	Supervisor Ratings
	+/-/0	+/-/0
Achievement	11/0/0	38/0/22
Adaptability/Flexibility	6/0/5	18/0/31
Social Orientation	8/0/3	26/0/24
Stress Tolerance	9/0/2	22/0/28
Attention to Detail	11/0/0	22/0/19
Dependability	10/0/1	21/0/28
Dutifulness/Integrity	8/0/3	18/0/32
Self-Reliance	2/0/9	6/4/40
Willingness to Learn	2/0/9	11/6/24
Vigilance	9/0/2	21/0/20
Leadership Orientation	0/0/0	16/2/11
Perceptiveness/Depth of Thought	0/0/0	18/2/9
Self-Control/Impulsivity	0/0/0	14/0/6

The SDI has been subject to minimal criterion-related validation research, with validities for the SDI domains (rather than facets) being the focus of reported validation research. The SDI has been studied most extensively in the context of prediction of promotion (i.e., stratifications). Table 4 shows the summary of SDI validation.

The cells in the table indicate the number of results showing at least a modest positive result (i.e., at least 0.10 in the expected direction), the number of negative results (at least 0.10 in the unexpected direction), and the number of zero magnitude results. The following scales demonstrated more robust relationships, with more positive than zero effect sizes:

- Neuroticism (for counterproductive work behaviors only)
- Conscientiousness

Table 4. Literature Review Criterion-Related Validity Summary for SDI

	Grade or job knowledge	Training outcomes or success	Promotion or selection for a job role	Performance Ratings (peer or supervisor)	Counterproductive work behaviors	Fitness
	+/-/0	+/-/0	+/-/0	+/-/0	+/-/0	+/-/0
Agreeableness	1/0/1	1/1/8	6/0/6	16/0/18	0/12/0	1/1/2
Neuroticism	0/2/0	0/6/4	0/6/6	0/10/24	12/0/0	0/0/4
Extroversion	0/0/2	0/0/10	5/0/7	11/1/22	0/0/12	0/0/4
Conscientiousness	2/0/0	7/0/3	7/0/5	32/0/2	0/12/0	0/0/4
Openness	0/1/1	0/3/7	1/2/9	8/0/26	0/6/6	0/0/4
Machiavellianism	0/0/2	0/1/6	2/2/6	0/0/0	0/0/0	2/0/2

4.1 Subgroup Differences

Race/ethnicity and gender subgroup differences were also summarized for the studies reviewed. Table 5 shows the number of studies for the TAPAS showing non-zero results favoring the majority group (indicated by a “-”), the number of studies favoring the minority group (indicated by “+”), and the number of studies showing zero effect size differences (indicated by “0”).

Table 5. Summary of Historical Subgroup Differences Results for TAPAS

Scale Name	Male-Female (k=5)	White-Black (k=5)	Non-Hispanic-Hispanic (k=5)
	+/-/0	+/-/0	+/-/0
Achievement	0/0/5	0/0/5	0/1/4
Adjustment	0/2/1	0/0/3	0/0/3
Attention Seeking	0/0/3	0/0/3	0/0/3
Cooperation	1/0/4	1/0/4	0/0/5
Curiosity	0/0/2	0/0/2	0/0/2
Dominance	2/0/3	1/0/4	0/0/5
Even Tempered	0/0/5	1/0/4	0/1/4
Intellectual Efficiency	0/3/2	0/1/4	0/0/5
Non-Delinquency	3/0/2	1/0/4	0/0/5
Optimism	0/0/5	0/0/5	0/0/5
Order	2/0/2	2/0/2	0/0/4
Physical Conditioning	0/4/1	0/1/4	0/0/5
Responsibility	0/0/1	0/0/1	0/0/1
Self-Control	0/0/2	2/0/0	0/0/2
Selflessness/Generosity	2/0/0	0/0/2	0/0/2
Sociability	0/0/2	0/0/2	0/0/2
Tolerance	5/0/0	4/0/1	4/0/1

The extent to which the TAPAS demonstrated score differences indicative of faking was also examined. In one study, mean score differences between honest and fake good testing conditions were assessed. With the exception of one scale ($d = -.13$ for Attention Seeking), all between subject mean differences were negligible (d 's ranged from $-.05$ to $.08$). These results indicate that, when directed to fake, TAPAS scores are not substantially different from scores obtained from the honest condition.

In one study, TAPAS was administered pre- and post-accession with the post-accession condition utilizing a faking study design. Correlations obtained from assessments administered pre- and post-accession for the honest condition ranged from $.28$ (Optimism) to $.63$ (Sociability). Correlations obtained from assessments administered pre- and post-accession for the faking condition ranged from $.19$ (Optimism) to $.61$ (Physical Conditioning). These findings indicate moderate consistency across time and conditions.

One study (Underhill, Bearden, & Chen, 2008) examined the fakeability of NCAPS. The NCAPS and a traditionally formatted version (using single stimulus items) were administered in a directed faking study. For the adaptive NCAPS, with the exception of one scale ($d = .25$ for Vigilance), all between subject mean differences were negligible (d 's ranged from $-.15$ to $.12$). For the traditionally formatted NCAPS, all effect sizes were large favoring the faking condition. Taken together, this evidence indicates that adaptive NCAPS showed little evidence of faking compared to a traditionally formatted version.

4.2 Summary of Historical Research on TAPAS, NCAPS, and SDI

The TAPAS has been subject to many investigations of its psychometric characteristics, particularly in terms of criterion-related validation research. In contrast, NCAPS and SDI were the focus of relatively fewer research inquiries. The large number of validity studies in particular for TAPAS allows for aggregation of findings by criteria. While some TAPAS scales

demonstrate robust correlations in some cases, there is often considerable variability in the pattern of results across both samples and criteria. Some at least modest effects were found for most scales, alongside some zero-sized effects. In sum, not all TAPAS scales are related to all criteria, which is consistent with the research on non-cognitive predictors of workplace attitudes and behavior (Hough & Oswald, 2008). In the few studies where criterion-related validity was examined for NCAPS and SDI, the results demonstrated mostly positive effects for supervisor ratings and promotion criteria.

Consistent with the broader literature on non-cognitive assessment (e.g., Hough, Oswald, & Ployhart, 2001), TAPAS scales demonstrated little to no potential for adverse impact against minority groups. Patterns of subgroup differences tended to be zero-to-small. Also consistent with the broader literature and innovations in personality assessment that utilize forced choice item types (Stark, Chernyshenko, Drasgow, Nye, White, Heffner, & Farmer, 2014, TAPAS and NCAPS demonstrated little potential for faking when used for higher-stakes testing purposes.

In the next section, empirical evaluations of TAPAS, NCAPS, and SDI were conducted using data provided or collected for the explicit purposes of evaluating the relative and absolute psychometric characteristics of each assessment.

5.0 APPROACH TO ANALYSIS OF TAPAS, NCAPS, AND SDI DATA

Given the focus of this project on (1) comparing and contrasting the characteristics of TAPAS, NCAPS, and SDI, (2) the objective to understand the value of aspects of NCAPS and SDI for potential inclusion in the TAPAS framework, and (3) the need to interpret a large amount of information on these multi-scale instruments, we created an organizing framework for understanding the similarities and differences in these assessments. The use of an organizing framework was designed to provide a basis for expectations about the degree of relatedness of scales across the three assessments, considering the different heritage, approach, and methodology used to develop and administer each instrument. We recognized at the outset of this project that while these multi-factor personality assessments are likely to share several commonalities, they differ in meaningful ways that may influence the results and associated interpretations of the data analysis tasks for this project.

This section (1) provides a description of each of the focal assessments under investigation, (2) describes the assessment features that characterize the assessments and provide the basis for the organizing framework, (3) compares and contrasts the three assessments along the dimensions identified in the organizing framework, and (4) summarizes relevant similar literature that investigated the extent to which personality assessments that differ in design characteristics exhibit construct and criterion-related validity.

5.1 Descriptions of the Focal Assessments

The assessments under investigation included three personality instruments each currently or historically used by one or more branch of the United States military. Descriptions of each are as follows.

TAPAS

The TAPAS is a personality measurement tool originally developed by DCG under the Army's Small Business Innovation Research (SBIR) program. The system builds on the foundational work of the Assessment of Individual Motivation ([AIM]; White & Young, 1998) by incorporating features designed to promote resistance to faking and by measuring narrow personality constructs (i.e., facets) that are known to predict outcomes in work settings. The TAPAS uses methods from item response theory (IRT) to construct and score items. It can be administered in multiple formats: (a) as a fixed length, *non-adaptive test* where examinees respond to the same sequence of items or (b) as an *adaptive test* where each examinee responds to a unique sequence of items selected to maximize measurement accuracy for that specific examinee.

The TAPAS uses an IRT model for multidimensional pairwise preference (MDPP) items (Stark, Chernyshenko, & Drasgow, 2005) as the basis for constructing, administering, and scoring personality tests that are designed to reduce response distortion (i.e., faking) and yield normative scores even with tests of high dimensionality (Stark, Chernyshenko, & Drasgow, 2012). TAPAS items consist of pairs of personality statements for which a respondent's task is to choose the one that is "more like me." The two statements constituting each item are matched in terms of social desirability and statement location (extremity), and often represent different personality facets. This approach makes it more difficult for examinees to determine which answers are better from the Army's perspective, and thus it is harder to "fake good" on all facets throughout the course of a test than it is with a single-statement Likert-type personality test.

Different versions of the TAPAS may assess varying sets of personality scales depending on the purpose of the assessment and the specific samples in which it will be used. In total, the TAPAS can assess up to 32 personality scales. Table 6 summarizes the scales most commonly measured in TAPAS.

Table 6. TAPAS Scales and Definitions

TAPAS Scale	Definition
Achievement	High scoring individuals are seen as hard working, ambitious, confident, and resourceful.
Adjustment	High scoring individuals are worry free, and handle stress well; low scoring individuals are generally high strung, self-conscious, and apprehensive.
Adventure Seeking	High scoring individuals enjoy participating in extreme sports and outdoor activities.
Aesthetics	High scoring individuals appreciate various forms of art and music and participate in art-related activities more than most people.
Attention Seeking	Individuals scoring high on this scale tend to engage in behaviors that attract social attention; they are loud, talkative, entertaining, and even boastful.
Commitment to Serve	High scoring individuals identify with the military and have a strong desire to serve their country.
Consideration	High scoring individuals are affectionate, compassionate, sensitive, and caring.
Cooperation	High scoring individuals tend to engage in activities and desire to maintain their physical fitness and are more likely to participate in vigorous sports or exercise.
Courage	High scoring individuals stand up to challenges and are not afraid to face dangerous situations.
Curiosity	High scoring individuals are inquisitive and perceptive; they are interested in learning new information and attend courses and workshops whenever they can.
Dominance	High scoring individuals are domineering, "take charge" and are often referred to by their peers as "natural leaders."
Even Tempered	High scoring individuals tend to be calm and stable. They don't often exhibit anger, hostility, or aggression.
Ingenuity	High scoring individuals are inventive and can think "outside of the box."
Intellectual Efficiency	Individuals scoring high on this scale are able to process information quickly and would be described by others as knowledgeable, astute, and intellectual.
Non-Delinquency	High scoring individuals tend to comply with rules, customs, norms, and expectations, and they tend to not challenge authority.
Optimism	High scoring individuals have a positive outlook on life and tend to experience joy and a sense of well-being.
Order	High scoring individuals tend to organize tasks and activities and desire to maintain neat and clean surroundings.
Physical Conditioning	High scoring individuals tend to engage in activities and desire to maintain their physical fitness and are more likely to participate in vigorous sports or exercise.
Responsibility	High scoring individuals are dependable, reliable, and make every effort to keep their promises.
Self-Control	Individuals scoring high on this scale tend to be cautious, levelheaded, able to delay gratification, and patient.
Situational Awareness	High scoring individuals pay attention to their surroundings and rarely get lost or surprised.
Sociability	High scoring individuals are domineering, "take charge" and are often referred to by their peers as "natural leaders."
Team Orientation	High scoring individuals prefer working in teams and make people work together better.

TAPAS Scale	Definition
Tolerance	Individuals scoring high on this scale are interested in other cultures and opinions that may differ from their own.
Virtue	High scoring individuals strive to adhere to standards of honesty, morality, and “good Samaritan” behavior.

Navy Computer Adaptive Personality Scales

The NCAPS is based on the Computer Adaptive Rating Scale (CARS) methodology developed by Borman and his colleagues within the performance rating domain (Borman, Buck, Hanson, Motowidlo, Stark, & Drasgow, 2001). NCAPS initially presents item-pairs representing two levels of a trait, one below the scale midpoint and the other above it. The paired-comparison approach was used to provide a better approximation of interval-level measurement than traditional personality instruments, which arguably provide only ordinal level data (Thurstone, 1927). Depending on which item an examinee chooses as more self-descriptive, NCAPS revises the examinee's estimated trait level using Bayes modal estimation (Stark & Drasgow, 1998), and then selects two additional items that assess levels of the latent trait that are above and below the revised trait estimates and maximize the IRT information functions. The examinee's selection of the more self-descriptive item for the second paired-comparison results in further revision of the examinee's estimated trait level and the selection of two more statements that once again bracket the (now updated) estimate of the examinee's trait level, and maximize information. Up to 15 item-pairs are presented per trait.

Similar to TAPAS, different versions of NCAPS may assess varying sets of personality scales depending on the purpose of the assessment and the specific samples in which it will be used. In total, NCAPS can assess up to 16 personality scales as defined in Table 7.

Table 7. NCAPS Scales and Definitions

NCAPS Scale Name	Definition
Achievement	High scores sets challenging goals; strives for excellence; Low scores avoid challenging projects; gives up easily.
Social Orientation	High scores outgoing, warm, likeable, sociable, values connections with others; Low scores shy reserved, aloof, prefers to be alone; creates friction when around others.
Stress Tolerance	High scores maintains composure and thinks clearly under stress; can easily put aside worries; Lows scores becomes indecisive or makes poor decisions under stress; prone to worry.
Adaptability/Flexibility	High scores willing to change approach; likes variety at work; Low scores difficulty adjusting to new situations and people.
Attention to Detail	High scores exacting, precise, accurate; spots minor error, dislike clutter; Low scores sloppy, imprecise; misses important details; makes careless errors, state of disarray.
Dependability	High scores reliable, well organized, orderly, plans well; Low scores unreliable, falls behind in duties, misses deadlines.
Dutifulness/Integrity	High scores strong moral sense of duty and integrity; Low scores rebellious, contemptuous; not accountable for own actions.
Self-Reliance	High scores self-sufficient, resourceful, likes to make own decisions; Low scores relies on others to get things done; depends on others.

NCAPS Scale Name	Definition
Willingness to Learn	High scores learns from mistakes; seeks learning opportunities; takes advice; Low scores avoids training opportunities; does not seek clarification; narrow range of interests.
Vigilance	High scores alert to environment; Low scores experiences lapses in attention.
Leadership Orientation	High scores willing to lead, take charge, offer opinions, and direction, and to mobilize others; is confident, forceful, firm, and decisive; Low scores prefers to let others assume leadership roles; is indecisive; does not enjoy being the center of attention; is submissive and readily falls into the role of "follower".
Perceptiveness/Depth of Thought	High scores interested in pursuing topics in depth and enjoys abstract thought; has a need to understand how things work; seeks to understand the big picture; Low scores takes little time for reflection; is not comfortable engaging in abstract thought; has little desire to think things through in depth or to probe for new insights; takes a shortsighted, shallow view of things.
Self-Control/Impulsivity	High scores tend to act on the "spur of the moment," speaks and vents emotions and engages in behaviors without thinking through possible consequences; Low scores suppresses negative emotions and inappropriate behaviors, even in situations where it is difficult to do so; thinks before acting.
Innovation	Is able to come up with new ideas for, and answers to, work-related problems; doesn't stick to old approaches simply because things have always been done that way; look at old things in new ways; in open to new ideas and alternate ways of thinking; is inventive and imaginative.
Initiative	Takes action at one's own discretion; willing to take on responsibilities and challenges; persists in the face of obstacles and overcome barriers; volunteers for tasks outside one's regular duties.
Empathy	Recognizes and understands other's states of mind or emotions; demonstrates compassion toward others; takes care of others in need; provides sympathy and comfort, helps others.

Self-Description Inventory

The SDI (Manley, 2011; Manley & Weissmuller, 2017) is a trait-based measure that assesses the Big Five domains of Neuroticism, Extroversion, Openness, Agreeableness, and Conscientiousness. It also includes a measure of Machiavellianism. It is administered as an Air Force Officer Qualifying Test (AFOQT) subtest. Unlike the AFOQT composites, on which minimum scores are required for commissioning and aircrew training, there are no required minimum SDI scores. Internal consistency reliabilities for the Big Five domain scores ranged from .89 to .97 (.75 for Machiavellianism) for a sample of about 60,000 officer applicants (Manley, 2011).

Table 8. SDI Domain and Facet Scales

SDI Scale	Definition
Agreeableness	The kinds of interactions an individual prefers ranging from compassion to antagonism.
Team Player	The tendency to work well with others to reach a common goal.
Pleasant	Having an agreeable manner and appearance to others, pleasing to be around.
Considerate	The tendency to treat others with kindness and consideration.
Helpful Altruistic	The level of active concern for the welfare of others.
Hyper-Competitive	Being very competitive in nature without concern for others.
Neuroticism	The chronic level of emotional adjustment and instability.
Stress Under Pressure	The chronic level of emotional adjustment and instability.
Temperamental	The extent to which one is easily upset emotionally and erratic in behavior.
Worry	The level of anxious concern for things, especially those that have not yet happened.
Extroversion	The quantity and intensity of preferred interpersonal interactions, activity level, need for stimulation, and capacity for joy.
Unassertive	Lacking social ascendancy and forcefulness of expression.
Sociable	Enjoying or requiring the company of others, fondness of companionship.
Dominance	Having social ascendancy and forcefulness of expression.
Conscientiousness	The degree of organization, persistence, control, and motivation in goal-directed behavior.
Achievement Striving	The extent to which one has need for personal achievement and sense of direction for goal attainment.
Order	The extent to which one has need for personal achievement and sense of direction for goal attainment.
Openness	The active seeking and appreciation of experiences for one's own sake.
Creative	Extent of intellectual curiosity and innovative thinking.
Reflective	The level of receptivity to one's own inner feelings, emotions, and thoughts.
Scientific Interest	The level of receptivity to one's own inner feelings, emotions, and thoughts.
Cultured	Level of appreciation for art and beauty.
Machiavellianism	The level in which one engages in deceit, craftiness, and duplicity to expedite control.
Envious	Resentment towards others due to their success or achievement.
Individualistic	Resentment towards others due to their success or achievement.
Self-Serving	Tendency to serve one's own selfish interests, especially at the expense of others.

Note. These are the SDI scales for AFOQT Form S (Manley, 2011). The version of the SDI on AFOQT Form T (Manley & Weissmuller, 2017) has a different set of scales.

5.2 Assessment Design Characteristics

The origins of each of the three assessments are rooted in distinct philosophies, methodologies, and approaches. While the TAPAS, NCAPS, and SDI were designed to be assessments of normal personality characteristics, they differ in several meaningful ways, which we describe below.

- **Breadth/specificity of the measurement taxonomy.** Personality assessments can differ dramatically in terms of the number and type of personality traits/tendencies that are measured. While the five factor model (FFM) of personality has been found in the research literature to underlie personality models and taxonomies, most applied personality assessments used for employment purposes use a broader framework in order

to adequately capture the array of job requirements needed to distinguish between jobs. While a FFM representation may underlie personality assessments used for employment purposes, these aren't the specific factors specified in most measurement taxonomies. Furthermore, some personality assessments focus on multiple levels of measurement; one that focuses on a five factor type model and one that includes underlying facets. The specificity of the measurement models has implications for the degree to which similar personality traits may be related across assessments. While a variety of terms have been used to describe various levels of measurement in personality instruments, we adopt the use of "factors" to describe the broadest level of measurement (often associated with the Big 5 domain level), "dimensions" to describe a middle level of measurement, and "facets" to describe an even more granular/specific level of measurement.

- **Scoring model.** Personality assessments can subscribe to different models for scoring self-reported statements and include dominance and ideal point modes. A dominance model assumes respondents endorse items when their standing on some trait is above the standing of that item on the same trait, and respondents will not endorse items when their standing on some trait is below the standing of that item on the same trait (Coombs, 1964). An ideal point model assumes an individual will endorse an item to the degree that the item reflects their own standing on the attribute of interest and will not endorse an item to the degree that the item does not reflect their own standing on the attribute of interest. Disagreement with an item can occur for two reasons: from above the item and from below the item. When disagreeing from above an item, the individual possesses more of the attribute than the item represents. Alternatively, when disagreeing from below an item, the individual possesses less of the attribute than the item represents. The approach used to develop and score items is another way in which personality assessments differ and can have implications for the degree of relatedness across assessment of similar constructs.
- **Item format.** Personality assessments have historically relied on Likert-type response formats (also called single stimulus) where examinees indicate responses on an agreement scale. In recent years, there has been a surge of interest and use of alternative item types, most notably including the forced choice item types. Forced choice item types are purported to overcome a chief concern historically associated with personality assessments, namely the degree to which responses can be faked or manipulated in socially desirable ways, particularly in high stakes testing situations. There are various forced choice item types in use. In unidimensional pairwise preference (UPP) items, multiple statements from the same trait are presented in an item block and examinees are asked to choose which statement is most and/or least descriptive). In multidimensional forced choice (MFC) items, multiple statements from different traits are presented in an item block and examinees are asked which statement is most and/or least descriptive).
- **Test type.** Assessments historically have been administered as fixed form, static assessments in which all examinees are presented with the same assessment items. With the rise of online assessment techniques, the use of computer adaptive testing (CAT) has been developed to support a range of high stakes employment assessments. CATs are supported by large item banks and are often scored using sophisticated IRT scoring methodologies that result in more precise and efficient assessment scores. CAT is

particularly useful in unproctored and/or high stakes testing situations as the large item banks help to mitigate test security risks and concerns.

- **Fixed or variable length CAT.** For assessments that use CAT techniques, different design characteristics underlie the implementation of personality CATs. One important design characteristic is whether the assessment is fixed in length (such that all examinees are administered the same number of items) or variable in length (such that the assessment is designed to terminate once a pre-defined level of score precision is reached).
- **Faking susceptibility.** Somewhat related to the use of various item types is the degree to which personality assessments are vulnerable to faking or impression management. The degree to which items within forced-choice blocks are matched on their social desirability may influence the overall fakability of the assessment and construct measurement.

5.3 Comparing TAPAS, NCAPS, and SDI on Assessment Design Characteristics

The assessment characteristics defined above were used to evaluate the TAPAS, NCAPS, and SDI. The evaluation is summarized in Table 9. The TAPAS and NCAPS are similar in meaningful ways (similar level of breadth/specificity of the taxonomy, use of ideal point measurement approach) but differ in others (item format, fixed/variable length CAT). SDI is most dissimilar from TAPAS or NCAPS and is expected to demonstrate the least overlap across assessments.

Table 9. Organizing Framework Summarizing TAPAS, NCAPS, and SDI

Assessment Characteristic	TAPAS	SDI	NCAPS
Breadth/specificity of taxonomy	Dimensions (mid-level)	Factors (broad) with facets (narrow)	Dimensions (mid-level)
Scoring model	Ideal point	Dominance	Ideal point
Item format	MFC pairs	Single stimulus	UFC pairs
Test type	CAT	Fixed form	CAT
Fixed or variable length CAT	Fixed length	N/A	Variable length
Faking susceptibility	Minimal – statements in pairs matched on social desirability	High	Moderate – statements are presented in pairs that represent a fairly narrow range of the construct but represent higher vs. lower levels of a focal trait

5.4 Relevant Research Comparing Multi-Factor Personality Assessments

The extent to which different personality assessments demonstrate convergent and discriminant validity has been shown to differ dramatically as a function of their assessment design characteristics like the ones described above. For example, Anderson and Ones (2003) examined the construct validity of three entry-level personality inventories: one that used various item types (Likert-type, dichotomous true-false, and trichotomous yes-unsure-no) and found very low intercorrelations among seemingly similar constructs. While correlations across assessments were very low, correlations within assessment were substantially higher. This indicates there is a method factor that may limit the degree of overlap observed across assessments. Even for

assessments that use the same item format (e.g., Likert-type) but different scales (5 point vs. 7 point), correlations for the same traits may be lower than traditional concepts of parallel forms. For instance, Gosling, Rentfrow, and Swann (2003) found that correlations between the same constructs across two forms which differed only on the number of points on the rating scale ranged from 0.48 to 0.80.

Other concepts for establishing construct validity have been proposed, aside from methods of assessing overlap in similarly defined constructs vis a vis intercorrelations. Abma, Rovers, and van der Wees (2016) suggested that convergent validity is considered adequate if at least 75% of hypotheses are correct, or if a correlation across assessments measuring the same construct is at least 0.50.

Given the variability observed in previous research in the magnitude of correlations obtained across multi-factor personality assessments and the likely influence of method factors that reflect differences in assessment characteristics, we adopted the following thresholds for interpreting the large amount of correlational data that was produced through the analysis of multiple data sets using TAPAS, NCAPS, and/or SDI scales. We adopted the effect size of 0.30 as an indicator of a robust effect size for correlations representing conceptually mapped personality characteristics. While this value is lower than traditional indicators of convergent validity, the value of 0.30 represents the various method effects that attenuate expectations for convergent validity. We also developed a set of hypotheses regarding which scales across TAPAS, NCAPS, and SDI should demonstrate convergent validity based on similarity of operational scale definitions, as determined through an expert rating task. Per the suggestion by Abma et al. (2016), we set the threshold that 75% of hypothesized correlations achieving a minimum effect size of 0.30 should be obtained in order to achieve high levels of convergent validation across the three assessments. Setting predefined thresholds and evaluating the large amount of correlational data using these guidelines was expected to help identify unique scales not well accounted for by the TAPAS framework or signal the need to further investigate the nature of lower than expected relationships.

6.0 MAPPING TAPAS TO NCAPS AND SDI

In order to create a framework that could aid in the interpretation of the correlations between the three focal assessments, PDRI created preliminary mappings that rated the extent to which the scales measured in each assessment were likely to relate to each other. Four SMEs, with either a master’s or a PhD and 5 to 15 years of experience in Industrial-Organizational Psychology, mapped the NCAPS and SDI scales to the TAPAS scales. The TAPAS scales were also mapped to NCAPS and SDI. All NCAPS scales were included, and all facets were included for SDI. Each mapped construct was rated as at least “Moderately Related” to the TAPAS construct with a range of 0 to 3: 0) “Unrelated” 1) “Moderately Related,” 2) “Very Related,” 3) “Nearly Identical.”

All NCAPS and SDI constructs mapped to the TAPAS framework to varying degrees. This suggests good coverage of the TAPAS framework for capturing constructs included in the NCAPS and SDI. NCAPS scales that were less strongly mapped included Adaptability/Flexibility, Attention to Detail, and Willingness to Learn. SDI facets that were less strongly mapped included Stress Under Pressure, Reflective, Imagination, Creative, Cynical View, and Envious. These results suggest potential unique scales measured by the NCAPS or SDI that are not well-represented within the TAPAS framework.

For TAPAS, all constructs were *at least* “Moderately Related” with at least one NCAPS or SDI construct. Adventure Seeking, Commitment, Consideration, Courage, Selflessness/Generosity, Physical Conditioning, and Tolerance each were less strongly mapped to the SDI and NCAPS scales. None of these TAPAS scales reached the “Very Related” threshold. These results suggested that there are TAPAS scales not well-represented within the NCAPS or SDI frameworks.

Strong preliminary relationships between the TAPAS and NCAPS and between the TAPAS and SDI scales are shown in the following tables.

Table 10. Preliminary Strong Mapped Relationships between TAPAS and NCAPS

TAPAS Scale	NCAPS Scale
Achievement	Achievement
	Initiative
	Self-Reliance
Adjustment	Stress Tolerance
Consideration	Empathy
Cooperation	Social Orientation
Curiosity	Innovation
	Perceptiveness/Depth of Thought
Dominance	Leadership Orientation
Ingenuity	Innovation
Non-Delinquency	Dutifulness/Integrity
Order	Dependability
Responsibility	Dependability
	Self-Reliance
Self-Control	Self-Control/Impulsivity

TAPAS Scale	NCAPS Scale
Situational Awareness	Vigilance
Sociability	Social Orientation
Virtue	Dutifulness/Integrity
<i>Note.</i> The relationships defined as “strong” were those that had a mean mapping greater than or equal to 2, indicating the constructs were at least “Very Related.”	

Table 11. Preliminary Strong Mapped Relationships between TAPAS and SDI

TAPAS Scale	SDI Facet
Achievement	Achievement Striving
	Self-Discipline
Adjustment	Angry Hostile (-)
	Worry (-)
Adventure Seeking	Excitement Seeking
Aesthetics	Cultured
Attention Seeking	Activity
	Dominance Leader
	High Intensity
	Reserved (-)
Cooperation	Angry Hostile (-)
	Independent (-)
	Interpersonal Tactics (-)
	Pleasant
	Team Player
Dominance	Dominance Leader
	Influence Tactics
	Reserved (-)
Even Tempered	Angry Hostile (-)
	Temperamental (-)
Selflessness/Generosity	Helpful Altruistic
Intellectual Efficiency	Scientific Interest
Non-Delinquency	Influence Tactics (-)
	Interpersonal Tactics (-)
	Unconventional (-)
Optimism	Optimist
	Pleasant
Order	Deliberation
	Order
	Unconventional (-)
Responsibility	Deliberation
	Self-Discipline
	Spontaneous Variety (-)
	Well Adjusted
TAPAS Scale	SDI Facet
Self-Control	Deliberation

	Excitement Seeking (-)
	High Intensity (-)
	Self-Discipline
	Spontaneous Variety (-)
Selflessness/Generosity	Helpful Altruistic
Sociability	Independent (-)
	Reserved (-)
	Well Adjusted
Team Orientation	Independent (-)
	Team Player
Virtue	Well Adjusted
<i>Note.</i> The relationships defined as “strong” were those that had a mean mapping greater than or equal to 2, indicating the constructs were at least “Very Related.” (-) indicates expected negative relationships.	

Full results are presented in the tables below, which show the mean ratings given by SMEs for each mapping.

Table 12. NCAPS Mappings to TAPAS

	Ach	Adj	Adv	Aes	Att	Com	Con	Coop	Cou	Cur	Dom	Even	Ing
Achievement	2.75								1				
Adaptability/ Flexibility													
Attention to Detail													
Dependability													
Dutifulness/ Integrity						1.5							
Empathy							2.75	1					
Initiative	2								1.33		1.5		
Innovation										2			2.75
Leadership Orientation	1								1		2.5		
Perceptiveness/ Depth of Thought				1						2.5			
Self-Control/ Impulsivity			1		1							1.67	
Self-Reliance	2							1					
Social Orientation					1.25			2					
Stress Tolerance		2.75							1			1.33	
Vigilance													
Willingness to Learn										1.5			

Note. Constructs were rated on a 1 to 3 scale with 3 meaning "Nearly Identical" and 1 meaning "Moderately Related." Scales that were not at least "Moderately Related" to the TAPAS construct were not mapped. Ach = Achievement, Adj = Adjustment, Adv = Adventure Seeking, Aes = Aesthetics, Att = Attention Seeking, Com = Commitment, Con = Consideration, Coop = Cooperation, Cou = Courage, Cur = Curiosity, Dom = Dominance, Even = Even Tempered, Ing = Ingenuity.

Table 12 (Continued): NCAPS Mappings to TAPAS

	IntE	Non	Opt	Ord	Phys	Res	SC	Selfl	Sit	Soc	Team	Tol	Vir
Achievement													
Adaptability/ Flexibility												1	
Attention to Detail				1.67									
Dependability				2.75		3							
Dutifulness/ Integrity		2.5											2.25
Empathy								1.5			1	1	1
Initiative						1		1					
Innovation												1.33	
Leadership Orientation													
Perceptiveness/ Depth of Thought	1.5												
Self-Control/ Impulsivity							2.5						
Self-Reliance						2					1		
Social Orientation										2.25	1.25		
Stress Tolerance													
Vigilance									2.33				
Willingness to Learn												1	

Note. Constructs were rated on a 1 to 3 scale with 3 meaning “Nearly Identical” and 1 meaning “Moderately Related.” Scales that were not at least “Moderately Related” to the TAPAS construct were not mapped. IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, Res = Responsibility, SC = Self-Control, Selfl = Selfness/Generosity, Sit = Situational Awareness, Soc = Sociability, Team = Team Oriented, Tol = Tolerance, Vir = Virtue.

Table 13. SDI Mappings to TAPAS

	Ach	Adj	Adv	Aes	Att	Com	Con	Coop	Cou	Cur	Dom	Even	Ing
Achievement Striving	2.25												
Activity	1				2								
Angry Hostile		2						2				2.75	
Creative										1.5			1.75
Cultured				3									
Cynical View							1	1.33					
Deliberation		1											
Dominance Leader					2						2.5		
Envious							1						
Excitement Seeking			2.25		1								
Helpful Altruistic					1		1.5	1					
High Intensity			1		2								
Imagination										1			1.5
Independent								2					
Influence Tactics							1				2		
Interpersonal Tactics								2			1		
Optimist		1.67											
Order						1							
Pleasant								2					
Reflective													
Reserved					3								
Scientific Interest											2.5		
Self-Discipline	2									1			
Spontaneous Variety													
Stress Under Pressure									1			1	

	Ach	Adj	Adv	Aes	Att	Com	Con	Coop	Cou	Cur	Dom	Even	Ing
Team Player								3					
Temperamental												2.67	
Unconventional													
Well Adjusted		1					1						
Worry		2							1			1	

Note. Constructs were rated on a 1 to 3 scale with 3 meaning "Nearly Identical" and 1 meaning "Moderately Related." Scales that were not at least "Moderately Related" to the TAPAS construct were not mapped. Ach = Achievement, Adj = Adjustment, Adv = Adventure Seeking, Aes = Aesthetics, Att = Attention Seeking, Com = Commitment, Con = Consideration, Cou = Cooperation, Cur = Curiosity, Dom = Dominance, Even = Even Tempered, Ing = Ingenuity

Table 13 (Continued): SDI Mapapings to TAPAS

	IntE	Non	Opt	Ord	Phys	Res	SC	SelfI	Sit	Soc	Team	Tol	Vir
Achievement Striving													
Activity					1.67								
Angry Hostile													
Creative	1.67												
Cultured												1.5	
Cynical View								1					
Deliberation			2			2	2						
Dominance Leader													
Envious													
Excitement Seeking							2						
Helpful Altruistic								2					1.5
High Intensity							3						
Imagination	1												
Independent								1		3	2.33		
Influence Tactics		2								1			1
Interpersonal Tactics		2						1		1			1.5
Optimist			3										
Order		1		3		1	1						

	IntE	Non	Opt	Ord	Phys	Res	SC	SelfI	Sit	Soc	Team	Tol	Vir
Pleasant			3										
Reflective	1						1						
Reserved										2			
Scientific Interest	2												
Self-Discipline				1		2	2						
Spontaneous Variety				1.5		2	2						
Stress Under Pressure							1						
Team Player								1.5			2.75		
Temperamental							1						
Unconventional		2.33		2									
Well Adjusted						2		1		2			2
Worry							1						

Note. Constructs were rated on a 1 to 3 scale with 3 meaning "Nearly Identical" and 1 meaning "Moderately Related." Scales that were not at least "Moderately Related" to the TAPAS construct were not mapped. IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, Res = Responsibility, SC = Self-Control, SelfI = Selfness/Generosity, Sit = Situational Awareness, Soc = Sociability, Team = Team Oriented, Tol = Tolerance, Vir = Virtue.

Following these initial mappings, correlational results from two Air Force studies were compared with expected mapping results. For study 1, a sample of data collected in 2018 from 2,142 Air Force members included both TAPAS and SDI. Both assessments were administered under operational conditions (i.e., TAPAS and SDI were administered at MEPS to newly enlisted recruits as part of accession). After data cleaning, the final participant count was 2106. For study 2, a sample of data collected in 2018 from 1,089 Air Force enlisted Trainees included TAPAS, NCAPS, and SDI. These three assessments were administered for research purposes (i.e., they were administered specifically for use in this research project). Participants were tested under both Honest (N = 576) and Fake Good (N = 513) conditions. After data cleaning, the final participant counts for Honest and Fake Good conditions were 551 and 505, respectively. For the purposes of correlational analyses, only Honest condition data were used.

6.1 TAPAS and SDI Correlations Compared to Expected Mapping across Studies

TAPAS' preliminary expected mappings with SDI were compared to the results of both studies. The following table presents the correlations for each expected TAPAS/SDI mapping.

Table 14. TAPAS and SDI Corrected Correlations Compared to Preliminary Expected Mappings across Studies

TAPAS Scale	Expected SDI Facet Mapping	Study 1 Corrected Correlation	Study 2 Corrected Correlation
Achievement	Achievement Striving	0.36	0.63
	Self-Discipline	0.38	0.61
Adjustment	Angry Hostile (-)	-0.30	-0.32
	Worry (-)	-0.46	-0.67
Adventure Seeking	Excitement Seeking	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>
Aesthetics	Cultured	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>
Attention Seeking	Activity	0.29	0.30
	Dominance Leader	0.40	0.40
	High Intensity	0.40	0.52
	Reserved (-)	-0.46	-0.57
Cooperation	Angry Hostile (-)	-0.18	-0.34
	Independent (-)	-0.08	-0.27
	Interpersonal Tactics (-)	-0.20	-0.28
	Pleasant	0.25	0.37
	Team Player	0.04	0.22
Dominance	Dominance Leader	0.58	0.64
	Influence Tactics	0.25	0.21
	Reserved (-)	-0.46	-0.43
Even Tempered	Angry Hostile (-)	-0.41	-0.67
	Temperamental (-)	-0.39	-0.59
Intellectual Efficiency	Scientific Interest	0.30	0.30
Non-Delinquency	Influence Tactics (-)	-0.22	-0.37
	Interpersonal Tactics (-)	-0.19	-0.33
	Unconventional (-)	-0.46	-0.68
Optimism	Optimist	0.22	0.28
	Pleasant	0.20	0.25
Order	Deliberation	0.19	0.31
	Order	0.59	0.73
	Unconventional (-)	-0.12	-0.17
Responsibility	Deliberation	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>
	Self-Discipline	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>
	Spontaneous Variety (-)	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>
	Well Adjusted	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>
Self-Control	Deliberation	0.38	0.48
	Excitement Seeking (-)	-0.15	-0.07

TAPAS Scale	Expected SDI Facet Mapping	Study 1 Corrected Correlation	Study 2 Corrected Correlation
	High Intensity (-)	-0.14	-0.15
	Self-Discipline	0.23	0.46
	Spontaneous Variety (-)	-0.30	-0.37
Selflessness/Generosity	Helpful Altruistic	0.28	0.38
Sociability	Independent (-)	-0.22	-0.17
	Reserved (-)	-0.56	-0.63
	Well Adjusted	0.21	0.16
Team Orientation	Independent (-)	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>
	Team Player	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>
Virtue	Well Adjusted	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>

Based on relevant research described in Section 4.0, we adopted the effect size of .30 as an indicator of a robust effect size for correlations representing conceptually mapped personality characteristics. While this value is lower than traditional indicators of convergent validity, the value of .30 represents the various method effects that attenuate expectations for convergent validity. The ± 0.30 threshold was achieved for 17 of the 36 mappings in both studies. TAPAS Dominance had a positive correlation with SDI Dominance Leader and a negative correlation with SDI Reserved. TAPAS Achievement had positive correlations with SDI Achievement Striving and SDI Self-Discipline. TAPAS Adjustment had negative correlations with SDI Angry Hostile and SDI Worry. TAPAS Attention Seeking had positive correlations with SDI Dominance Leader and SDI High Intensity and a negative correlation with SDI Reserved. TAPAS Dominance had a positive correlation with SDI Dominance Leader and a negative correlation with SDI Reserved. TAPAS Even Tempered had negative correlations with SDI Angry Hostile and SDI Temperamental. TAPAS Intellectual Efficiency had a positive correlation with SDI Scientific Interest. TAPAS Non-Delinquency had a negative correlation with SDI Unconventional. TAPAS Order had a positive correlation with SDI Order. TAPAS Self-Control had a positive correlation with SDI Deliberation and a negative correlation with SDI Spontaneous Variety. TAPAS Sociability had a negative correlation with SDI Reserved. In general, Study 2 showed slightly stronger corrected correlations with a range of correlations between -0.68 and 0.73 compared to -0.56 and 0.59 in Study 1. Due to this, the ± 0.30 threshold was hit for eight additional mappings for Study 2. These included positive correlations for TAPAS Attention Seeking and SDI Activity, TAPAS Cooperation and SDI Pleasant, TAPAS Order and SDI Deliberation, TAPAS Self-Control and SDI Self-Discipline, and TAPAS Selflessness/Generosity and SDI Helpful Altruistic and negative correlations for TAPAS Cooperation and SDI Angry Hostile and TAPAS Non-Delinquency with SDI Influence Tactics and SDI Interpersonal Tactics.

Following the initial comparison of the expected mappings to the correlational results, seven SMEs reviewed item content in a day long workshop. Each SME was an expert in the field of IO psychology and was familiar with the TAPAS, NCAPS, and/or SDI measure. This review was done with the intended purpose of updating the expected mappings based on similarity of item content between measures. Final updated mappings based on similarity of item content and correlations are presented in the tables below.

Table 15. Final/Updated Mappings and Corrected Correlations

TAPAS	SDI	Study 1 Corrected Correlation	Study 2 Corrected Correlation	NCAPS	Study 2 Corrected Correlation
Achievement	Achievement Striving	.36	.63	Achievement (except Persists Despite Obstacles facet)	.57
	Self-Discipline	.38	.61	Dependability (ONLY Doesn't Procrastinate facet)	.59
Adjustment	Stress Under Pressure (-)	-.43	-.67	Self-Reliance (ONLY Self-Sufficient/Resourceful facet)	.30
	Worry (-)	-.46	-.67	Stress Tolerance	.54
Adventure Seeking	Excitement Seeking***	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>		
Aesthetics	Cultured***	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>		
Consideration	Helpful Altruistic***	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>	Empathy***	<i>NCAPS scale not in dataset</i>
Cooperation	Pleasant	.25	.37	Social Orientation (ONLY Agreeable facet)	.23
Curiosity				Willingness to Learn (ONLY Willing to Learn /Actively Seeks Learning Opportunities facet)***	<i>TAPAS scale not in dataset</i>
Depth*	Reflective	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>	Perceptiveness/Depth of Thought***	<i>TAPAS and NCAPS scales not in dataset</i>
Dominance	Dominance Leader	.58	.64	Leadership Orientation***	<i>NCAPS scale not in dataset</i>
	Reserved (-)	-.46	-.43		
Even Tempered	Angry Hostile (-)	-.41	-.67	Stress Tolerance (ONLY Accepts Criticism and Composure facets)	.40
	Temperamental (-)	-.39	-.59		
Ingenuity	Creative	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>	Adaptability/Flexibility (ONLY Willing to Change Task/Project Approach facet)	<i>TAPAS scale not in dataset</i>
	Spontaneous Variety	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>	Innovation***	<i>TAPAS scale not in dataset</i>
	Imagination***	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>	Willingness to Learn (ONLY Willing to Learn/Actively Seeks Learning Opportunities facet)***	<i>TAPAS scale not in dataset</i>

TAPAS	SDI	Study 1 Corrected Correlation	Study 2 Corrected Correlation	NCAPS	Study 2 Corrected Correlation
Machiavellianism*	Influence Tactics	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>		
	Interpersonal Tactics	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>		
Non-Delinquency	Unconventional (-)	-.46	-.68	Dutifulness/Integrity (ONLY Sense of Duty/Moral Obligations and Accepts Authority facets)	.43
Optimism	Optimist	.22	.28		
Order	Deliberation	.19	.31	Attention to Detail (except Exacting/Precise facet)	.50
	Order	.59	.73	Dependability (ONLY Orderly/Planful/Prioritizes facet)	.36
Persistence				Achievement (ONLY Persists Despite Obstacles facet)***	<i>TAPAS scale not in dataset</i>
				Initiative (ONLY Persistent/Overcomes Barriers facet)***	<i>TAPAS and NCAPS scales not in dataset</i>
Responsibility***	Well-Adjusted (ONLY Dependability part of scale)	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>	Dependability (ONLY Reliable/Efficient with Time facet)***	<i>TAPAS scale not in dataset</i>
				Dutifulness/Integrity (ONLY Honest/Trustworthy/Fulfill s Obligations and Accepts Responsibility facets)***	<i>TAPAS scale not in dataset</i>
Self-Control	Impulsiveness**	<i>SDI scale not in dataset/current test form</i>	<i>SDI scale not in dataset/current test form</i>	Dependability (ONLY Not Easily Distracted/Bored facet)	.49
	Self-Discipline	.23	.46	Self-Control/Impulsivity (except Control Behaviors)***	<i>NCAPS scale not in dataset</i>
Situational Awareness				Vigilance***	<i>TAPAS and NCAPS scales not in dataset</i>
Sociability	Reserved (-)	-.56	-.63	Social Orientation (ONLY Affiliation facet)	.45
Team Orientation	Independent (-)	<i>TAPAS scale not in dataset</i>	<i>TAPAS scale not in dataset</i>	Social Orientation (ONLY Team Player facet)***	<i>TAPAS scale not in dataset</i>

* Not included in our review of TAPAS but the scale exists according to DCG

TAPAS	SDI	Study 1 Corrected Correlation	Study 2 Corrected Correlation	NCAPS	Study 2 Corrected Correlation
** This is a composite scale					
*** Potential for overlap judged by item content similarity only					

The main adjustments made were to include or exclude mappings at the facet level due to lack of overlap between the two scales. For instance, TAPAS Cooperation overlaps with NCAPS Social Orientation but only on the Agreeableness facet, and TAPAS Achievement overlaps with NCAPS Achievement, but does not include the Persists despite Obstacles facet. Also, during this review, three additional TAPAS scales were included that had not been previously identified, including Depth, Machiavellianism, and Persistence. Because these were not available in Studies 1 and 2, these were mapped during the meeting based on item content similarity only.

Of the 15 final expected mappings of SDI to TAPAS (that were included in Study 2), correlations of .30 or above (or -.30 or below) were found for 14 (93%). This satisfies the criterion established by Abma et al. (2016) for evidence of convergent validity. Eleven mappings could not be examined because the TAPAS scales were not included in the dataset.

Of the 11 final expected mappings of NCAPS to TAPAS (that were included in Study 2), correlations of .30 or above (or -.30 or below) were found for 10 (91%). Again, this satisfies the criterion established by Abma et al. (2016) for evidence of convergent validity. Nine mappings could not be examined because the TAPAS scales were not included in the dataset.

Based on the SME review process, the following areas were identified as unique to NCAPS and SDI. During the review meeting, particular emphasis was given to reviewing conceptual facets underlying the NCAPS scales. While they do not produce specific scores, the NCAPS item banks include a specific conceptual facet “tag” that was used during development to ensure sufficient coverage of the broader construct.

- NCAPS Initiative (except the Persistent/Overcome Barriers facet)
- NCAPS Self-Control/Impulsivity (ONLY the Control Behaviors facet)
- NCAPS Self-Reliance (except the Self-Sufficient/Resourceful facet)
- NCAPS Sociability (ONLY the Team player facet)
- NCAPS Willingness to Learn (except Willing to Learn/Actively Seeks Learning Opportunities facet)
- SDI Activity
- SDI Cynical View
- SDI Envious
- SDI Helpful Altruistic
- SDI High Intensity
- SDI Imagination
- SDI Scientific Interest
- SDI Well-Adjusted (the “Happy” related items)

7.0 TAPAS-SDI DATA ANALYSIS (STUDY 1)

The TAPAS and SDI were evaluated for construct validity and subgroup differences using data collected in 2018 from 2,142 Air Force members. The TAPAS and SDI were administered under operational conditions (i.e., TAPAS and SDI were administered at MEPS to newly enlisted recruits as part of accession). After data cleaning, the final participant count was 2,106.

7.1 Data Cleaning

For the purposes of data cleaning, the data were analyzed for careless responding. While item level data were not present for either instrument in the dataset, domain and facet average scores were available for the SDI data. The pattern of averages was inspected for careless responding. Specifically, each participant's SDI data was examined to see if they consistently had the same average score across domains and facets. A participant with the same average score across multiple SDI domains and facets was likely to have chosen the same response option for each item. This examination led to the removal of three participants who had the same average score (i.e., three) on all SDI domains and facets. The TAPAS data were not examined for patterned responding because average scores were not available. Both instruments were analyzed for extreme responding. Specifically, TAPAS scale thetas and SDI domain and facet means were examined. Those who scored more than two standard deviations (SDs) above or below the mean on 8 of 15 TAPAS scales were eliminated. Those who scored more than two SDs above or below the mean on three of six SDI domains were eliminated. Those who scored more than two SDs above or below the mean on 15 of 30 SDI facets were eliminated. This resulted in the removal of 33 participants.

After data cleaning, the final participant count was 2,106.

7.2 Descriptives

TAPAS, SDI domain, and SDI facet descriptives are presented in the following tables.

Table 16. TAPAS Descriptives

TAPAS Scale	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Achievement	2106	0.36	0.48	-1.67	2.26	0.05	0.48	0.01
Adjustment	2106	0.08	0.39	-1.62	2.07	0.09	1.49	0.01
Attention Seeking	2106	-0.42	0.57	-2.20	1.42	0.03	0.15	0.01
Cooperation	2106	0.24	0.52	-1.47	2.31	0.64	0.85	0.01
Dominance	2106	0.51	0.51	-1.67	1.91	-0.22	0.69	0.01
Even-Tempered	2106	0.37	0.45	-1.90	2.16	0.26	1.70	0.01
Intellectual Efficiency	2106	0.20	0.54	-1.63	7.55	1.19	15.89	0.01
Non-Delinquency	2106	0.21	0.50	-1.50	2.22	0.02	0.22	0.01
Optimism	2106	0.39	0.44	-1.15	2.20	0.22	0.99	0.01
Order	2106	-0.14	0.55	-2.08	1.97	0.03	0.45	0.01
Physical Conditioning	2106	0.29	0.63	-2.22	2.25	0.22	0.16	0.01
Self-Control	2106	-0.17	0.47	-1.60	1.80	0.28	0.34	0.01

TAPAS Scale	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Selflessness/ Generosity	2106	0.10	0.44	-1.37	6.27	1.31	17.64	0.01
Sociability	2106	-0.31	0.58	-1.86	1.78	-0.12	-0.20	0.01
Tolerance	2106	0.13	0.53	-1.71	2.20	0.10	0.42	0.01

Table 17. SDI Domain Descriptives

SDI Domain	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Agreeableness	2106	4.43	0.34	2.85	5.00	-0.44	-0.30	0.01
Conscientiousness	2106	4.32	0.42	2.75	5.00	-0.48	-0.23	0.01
Extroversion	2106	3.43	0.50	1.44	4.92	-0.17	0.06	0.01
Neuroticism	2106	1.79	0.51	1.00	3.84	0.68	0.18	0.01
Openness	2106	3.65	0.52	1.88	5.00	-0.19	-0.11	0.01
Machiavellianism	2106	2.35	0.44	1.20	4.00	0.23	0.16	0.01

Table 18. SDI Facet Descriptives

SDI Facet	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Team Player	2106	4.69	0.29	3.38	5.00	-1.03	1.01	0.01
Stress Under Pressure	2106	1.69	0.58	1.00	3.88	0.85	0.37	0.01
Reserved	2106	2.34	0.84	1.00	5.00	0.50	-0.33	0.02
Achievement Striving	2106	4.50	0.43	2.88	5.00	-0.74	0.03	0.01
Creative	2106	4.25	0.55	1.88	5.00	-0.62	0.12	0.01
Interpersonal Tactics	2106	1.79	0.60	1.00	4.75	0.81	0.67	0.01
Pleasant	2106	4.47	0.47	2.25	5.00	-0.82	0.24	0.01
Temperamental	2106	1.61	0.52	1.00	3.63	0.78	0.11	0.01
Dominance Leader	2106	3.64	0.71	1.13	5.00	-0.36	0.01	0.02
Order	2106	4.23	0.61	1.75	5.00	-0.87	0.50	0.01
Reflective	2106	3.55	0.67	1.13	5.00	-0.05	-0.29	0.01
Cynical View	2106	2.56	0.71	1.00	5.00	0.07	-0.01	0.02
Helpful-Altruistic	2106	4.27	0.51	2.25	5.00	-0.39	-0.30	0.01
Worry	2106	2.44	0.86	1.00	5.00	0.44	-0.32	0.02
Excitement Seeking	2106	3.86	0.93	1.00	5.00	-0.78	-0.02	0.02
Self-Discipline	2106	4.39	0.51	1.63	5.00	-0.77	0.30	0.01
Scientific Interest	2106	3.59	1.01	1.00	5.00	-0.54	-0.45	0.02
Envious	2106	1.83	0.69	1.00	5.00	0.79	0.43	0.02
Independent	2106	2.78	0.66	1.00	5.00	0.03	0.02	0.01
Angry-Hostile	2106	1.42	0.50	1.00	4.50	1.61	3.31	0.01
High Intensity	2106	2.82	0.96	1.00	5.00	0.15	-0.65	0.02
Deliberation	2106	4.36	0.53	2.00	5.00	-0.78	0.61	0.01
Cultured	2106	3.59	0.88	1.00	5.00	-0.46	-0.14	0.02
Influence Tactics	2106	2.80	0.66	1.00	5.00	0.15	-0.07	0.01

SDI Facet	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Optimist	2106	4.07	0.58	1.00	5.00	-0.53	0.31	0.01
Unconventional	2106	1.91	0.62	1.00	4.13	0.47	-0.36	0.01
Spontaneous Variety	2106	2.88	0.66	1.00	5.00	0.10	0.09	0.01
Activity	2106	3.73	0.68	1.00	5.00	-0.24	-0.16	0.01
Well-Adjusted	2106	4.63	0.32	3.00	5.00	-0.97	0.82	0.01
Imagination	2106	3.28	0.78	1.00	5.00	-0.01	-0.34	0.02

7.3 Reliability

Internal consistency analyses were not conducted for either the TAPAS or SDI because item level data were not present in the dataset.

7.4 Subgroup Differences

In order to analyze subgroup differences, the data needed to be further cleaned. Specifically, the data were examined to ensure that self-reported race, ethnicity, and gender agreed between the instruments as an indicator of data quality. After this examination, 1,699 participants remained for race subgroup difference analyses, 1,008 participants remained for ethnicity subgroup difference analyses, and 2,070 remained for gender subgroup difference analyses. Subgroup differences were analyzed using Cohen's *d*. The subgroups of Blacks/African Americans, Asians, Hispanics/Latinos, and Females were the only groups with large enough sample sizes (approximately 100) to conduct analyses.

7.4.1 TAPAS

Following the general guidelines established by Cohen (1988), where effects less than 0.20 are considered negligible and effects between 0.2 and 0.5 are considered small, the vast majority of the subgroup differences observed for the TAPAS across both race and gender were negligible. In fact, 48 of the 72 comparisons were negligible (below .20) while the remaining 24 effects were small. Small negative effects were seen where Black/African Americans scored lower on the Can Do, Persistence, and Will Do composites, and the Physical Conditioning scale. Small positive effects were seen where Blacks/African Americans scored higher on Attention Seeking and Selflessness/Generosity. Small negative effects were seen where Asians scored lower on the Can Do, Persistence, and Will Do composites, and the Achievement, Adjustment, Dominance, Even-Tempered, Non-Delinquency, and Optimism scales. A small positive effect was seen where Asians scored higher on Order. No effects were found for Hispanics/Latinos. For gender, small effects were observed, where females scored lower than males for the Can Do and Persistence composites, and for the Adjustment and Physical Conditioning scales. Small positive effects were seen for females on Cooperation, Order, Selflessness/Generosity, and Tolerance.

Complete results of the subgroup analyses for the TAPAS are presented in the following table.

Table 19. TAPAS Subgroup Differences

TAPAS	Black/African American	Asian	Hispanic/Latino	Female
Can Do Composite	-0.22	-0.33	0.15	-0.25
Persistence Composite*	-0.40	-0.30	0.02	-0.34
Will Do Composite	-0.30	-0.33	0.01	-0.12
Achievement	-0.13	-0.32	-0.09	0.14
Adjustment	-0.05	-0.29	-0.03	-0.29
Attention Seeking	0.26	-0.04	0.01	-0.07
Cooperation	0.13	0.01	0.13	0.25
Dominance	-0.08	-0.32	-0.13	-0.07
Even-Tempered	-0.04	-0.27	0.14	-0.04
Intellectual Efficiency	-0.12	-0.09	-0.01	-0.19
Non-Delinquency	0.04	-0.24	0.00	0.12
Optimism	0.03	-0.20	-0.02	0.08
Order	0.18	0.29	0.03	0.24
Physical Conditioning	-0.36	-0.10	0.05	-0.27
Self-Control	0.16	0.16	0.08	0.09
Selflessness/ Generosity	0.24	0.14	0.03	0.29
Sociability	0.10	-0.03	-0.19	-0.01
Tolerance	0.17	0.07	0.16	0.23

Note. White N = 1264, Black/African American N = 289, Asian N = 92, Non-Hispanic/Latino N = 888, Hispanic/Latino N = 120, Male N = 1459, and Female N = 611.
 *164 scores were missing for the Persistence Composite. This resulted in the following sample sizes for this composite: White N = 1166, Black/African American N = 263, Asian N = 88, Non-Hispanic/Latino N = 759, Hispanic/Latino N = 101, Male N = 1332, and Female N = 574.

7.4.2 SDI Domains

For the SDI domains, 15 of the 24 comparisons showed negligible differences across both race and gender while the remaining effects were all considered small (i.e., less than 0.50). No negative effects were seen for Black/African Americans. Small positive effects were seen where Blacks/African Americans scored higher on Agreeableness, Conscientiousness, and Openness. No negative effects were found for Asians. A small positive effect was seen where Asians scored higher on Openness. Small positive effects were also seen where Asians scored higher on Neuroticism and Machiavellianism, but this is considered to be unfavorable given that these are negative domain areas. No negative effects were found for Hispanics/Latinos. A small positive effect was seen where Hispanics/Latinos scored higher on Conscientiousness. A small negative effect where females scored lower than males was present for Machiavellianism, but this is considered to be favorable given this is a negative domain area. A small positive effect was seen for females on Conscientiousness.

Complete results of the subgroup analyses for SDI domains are presented in the following table.

Table 20. SDI Domains Subgroup Differences

SDI Domain	Black/African American	Asian	Hispanic/Latino	Female
Agreeableness	0.21	-0.05	0.14	0.10
Conscientiousness	0.27	0.01	0.25	0.20
Extroversion	0.01	-0.15	0.05	0.02
Neuroticism	-0.07	0.45	-0.13	0.12
Openness	0.29	0.42	0.16	-0.19
Machiavellianism	-0.07	0.30	-0.18	-0.26
<i>Note.</i> White N = 1264, Black/African American N = 289, Asian N = 92, Non-Hispanic/Latino N = 888, Hispanic/Latino N = 120, Male N = 1459, and Female N = 611.				

7.4.3 SDI Facets

For the SDI facets, 76 of 120 comparisons across both race and gender were considered negligible while nearly all of the remaining effects were small. A small negative effect was seen where Blacks/African Americans scored lower on Excitement Seeking. A small negative effect was also seen where Black/African Americans scored lower on Temperamental, but this is considered to be favorable given that this is a negative facet. Additionally, a medium negative effect (a Cohen's *d* between .50 and .80) was seen where Blacks/African Americans scored lower on Envious, but this is considered to be favorable given that this is a negative facet. Small positive effects were seen where Blacks/African Americans scored higher on Creative, Pleasant, Order, Reflective, Helpful Altruistic, Deliberation, Cultured, and Spontaneous Variety.

For the Asian subgroup, a small negative effect was seen where Asians scored lower on Well Adjusted. Small positive effects were seen where Asians scored higher on Reserved, Reflective, Helpful Altruistic, Scientific Interest, Independent, Deliberation, and Cultured. Small positive effects were also seen where Asians scored higher on Stress Under Pressure, Interpersonal Tactics, Temperamental, Cynical View, Envious, and Angry Hostile, but these are considered to be unfavorable given that these are negative facets. Additionally, a medium positive effect was seen where Asians scored higher on Worry, but this is considered to be unfavorable given that this is a negative facet.

For the Hispanics/Latino subgroup, a small negative effect was seen where Hispanics/Latinos scored lower on Unconventional. Small negative effects were also seen where Hispanics/Latinos scored lower on Interpersonal Tactics, Temperamental, Envious, and Angry Hostile, but this is considered to be favorable given that these are negative facets. Small positive effects were seen where Hispanics/Latinos scored higher on Team Player, High Intensity, Deliberation, and Cultured.

Finally, small negative effects were observed for gender where females scored lower than males for Excitement Seeking, Scientific Interest, and Unconventional. Small negative effects were seen where females scored lower than males on Interpersonal Tactics, Envious, and Influence Tactics. However, this is considered to be favorable given that these are negative facets. Small positive effects were seen for females on Reserved, Order, and Cultured.

Complete results of the subgroup analyses for SDI facets are presented in the following table.

Table 21. SDI Facets Subgroup Differences

SDI Facet	Black/African American	Asian	Hispanic/Latino	Female
Team Player - A	0.08	-0.10	0.30	0.04
Stress Under Pressure - N	-0.04	0.35	-0.09	0.35
Reserved - E	0.10	0.38	0.07	-0.10
Achievement Striving - C	0.13	-0.03	0.19	0.11
Creative - O	0.20	0.18	0.10	-0.18
Interpersonal Tactics - M	0.09	0.25	-0.25	-0.29
Pleasant - A	0.20	-0.08	0.14	0.10
Temperamental - N	-0.20	0.32	-0.22	-0.03
Dominance Leader - E	0.11	-0.16	0.03	-0.02
Order - C	0.26	0.10	0.08	0.28
Reflective - O	0.39	0.28	0.08	-0.12
Cynical View - M	0.07	0.23	0.02	-0.14
Helpful Altruistic - A	0.22	0.21	0.13	0.13
Worry - N	0.08	0.51	0.02	0.08
Excitement Seeking - E	-0.25	-0.07	-0.08	-0.21
Self-Discipline - C	0.15	-0.08	0.17	0.11
Scientific Interest - O	-0.10	0.37	0.06	-0.42
Envious - M	-0.55	0.24	-0.25	-0.21
Independent - A	0.05	0.20	0.01	-0.01
Angry Hostile - N	-0.15	0.24	-0.22	-0.02
High Intensity - E	0.12	-0.13	0.27	0.09
Deliberation - C	0.34	0.25	0.28	0.03
Cultured - O	0.49	0.43	0.26	0.25
Influence Tactics - M	0.09	0.05	-0.15	-0.22
Optimist - A	0.19	-0.11	0.07	0.05
Unconventional - C	-0.16	0.17	-0.24	-0.23
Spontaneous Variety - E	0.22	0.14	-0.01	0.01
Activity - E	-0.02	0.12	0.02	0.16
Well Adjusted - A	0.04	-0.20	-0.02	0.04
Imagination - O	0.07	0.06	0.03	-0.16

Note. White N = 1264, Black/African American N = 289, Asian N = 92, Non-Hispanic/Latino N = 888, Hispanic/Latino N = 120, Male N = 1459, and Female N = 611.

Small favorable effects were found across TAPAS and SDI more frequently than small unfavorable effects¹ for Blacks/African Americans (15 vs. 5), Hispanics/Latinos (9 vs. 1), and females (11 vs. 8). The opposite was found for Asians (9 vs. 19). Unfavorable effects for Asians occurred at a more frequent rate for the TAPAS than the SDI facets. There were unfavorable effects for Asians on 9 of 18 (50.0%) TAPAS scales and composites compared to 8 of 30 (26.7%) SDI facets. Unfortunately, the Asian sample size in Study 2 was not large enough to analyze for subgroup differences. Therefore, it is unclear whether these effects are study-specific or if they generalize across samples. In any case, all but one (i.e., the Worry facet on the SDI) of these unfavorable effects were small effects, which are not uncommon to find. Future studies should monitor subgroup differences, particularly for TAPAS to make sure that Asians are not at a disadvantage.

7.5 Intercorrelation Analysis

Correlational analyses for the TAPAS with SDI domains and facets were conducted in order to evaluate construct validity between the measures. Construct validity is indicated when two measures purporting to assess the same construct show a high degree of relationship (convergent validity) or when two measures purporting to assess dissimilar constructs show no relationship (discriminant validity). Given the sample size and number of correlations generated as part of this analysis, in addition to expectations about the degree of relationship between the three assessments given the noted differences in assessment design, a threshold of $r = \pm .30$ was selected as an indication of convergent validity and was used to interpret the results.

Full results are presented in the tables below. Additional tables are presented for correlations corrected for reliability attenuation. Reliabilities reported by Carretta and Ree (2018) were used as reliability estimates. Intercorrelations within assessments were also examined and are reported in Appendix B.

7.5.1 TAPAS and SDI Domains

For the SDI domains, the TAPAS scale of Adjustment correlated negatively with Neuroticism ($r = -0.35$). The TAPAS scales of Attention Seeking, Dominance, and Sociability correlated with the SDI domain of Extroversion ($r = .43, .34, .36$, respectively). These correlations provide some evidence of convergent validity for TAPAS, that it is measuring the same intended constructs as some of the SDI domains.

Complete results are presented in the following table.

¹ Unfavorable effects are those where the minority group (i.e., Blacks/African Americans, Asians, Hispanic/Latinos) or females scored lower than the majority group (i.e., Whites or Non-Hispanic/Latinos) or Males on positive domains or facets. Additionally, unfavorable effects include those where the minority group or Females scored higher than the majority group or Males on negative domains (i.e., Neuroticism and Machiavellianism) or facets (Stress Under Pressure, Interpersonal Tactics, Temperamental, Cynical, Worry, Envious, Angry Hostile, and Influence Tactics).

Table 22. TAPAS and SDI Domains Uncorrected Correlations

TAPAS	Agree	Cons	Extro	Neur	Open	Mach
Can Do Composite	-0.01	-0.01	-0.04	-0.17	0.09	0.00
Persistence Composite*	0.01	-0.12	0.04	-0.09	0.01	0.01
Will Do Composite	0.18	0.16	0.29	-0.22	-0.05	-0.06
Achievement	0.16	0.25	0.16	-0.17	-0.06	-0.11
Adjustment	0.05	0.00	0.11	-0.35	-0.02	-0.06
Attention-Seeking	0.24	0.08	0.43	-0.18	0.09	0.01
Cooperation	0.14	0.10	-0.12	-0.05	0.01	-0.17
Dominance	0.15	0.13	0.34	-0.20	0.00	-0.01
Even-Tempered	0.13	0.10	-0.03	-0.26	0.03	-0.17
Integrity	0.05	0.06	0.11	-0.22	0.18	0.01
Non-Delinquency	0.07	0.23	-0.10	-0.08	-0.06	-0.17
Optimism	0.11	0.04	0.05	-0.20	-0.06	-0.14
Order	0.01	0.28	-0.05	-0.01	-0.04	0.00
Physical Conditioning	0.07	0.00	0.20	-0.07	-0.03	0.05
Self-Control	0.01	0.24	-0.12	-0.10	0.04	-0.13
Selflessness/Generosity	0.13	0.05	0.07	0.01	0.05	-0.14
Sociability	0.26	0.08	0.36	-0.14	0.03	-0.07
Tolerance	0.07	0.03	0.09	-0.08	0.22	-0.12

Note. All correlations $\geq \pm 0.04$ are significant at $p < 0.05$. $N = 2,106$. Agree = Agreeableness, Cons = Conscientiousness, Extro = Extroversion, Neur = Neuroticism, Open = Openness, Mach = Machiavellianism.

*164 scores were missing for the Persistence Composite. This resulted in an N of 1942 for correlations involving this composite.

Table 23. TAPAS and SDI Domains Correlations Corrected for Reliability Attenuation

TAPAS	Agree	Cons	Extro	Neur	Open	Mach
Achievement	0.22	0.34	0.22	-0.23	-0.08	-0.15
Adjustment	0.07	0.00	0.15	-0.46	-0.03	-0.08
Attention-Seeking	0.30	0.10	0.55	-0.23	0.12	0.01
Cooperation	0.18	0.13	-0.15	-0.06	0.01	-0.22
Dominance	0.19	0.16	0.43	-0.25	0.00	-0.01
Even-Tempered	0.18	0.14	-0.04	-0.36	0.04	-0.24
Integrity	0.06	0.08	0.14	-0.29	0.24	0.01
Non-Delinquency	0.09	0.31	-0.14	-0.11	-0.08	-0.24
Optimism	0.16	0.06	0.08	-0.30	-0.09	-0.21
Order	0.01	0.35	-0.06	-0.01	-0.05	0.00
Physical Conditioning	0.09	0.00	0.25	-0.09	-0.04	0.06
Self-Control	0.01	0.35	-0.18	-0.15	0.06	-0.19
Selflessness/Generosity	0.17	0.06	0.09	0.01	0.07	-0.18
Sociability	0.31	0.10	0.44	-0.17	0.04	-0.09
Tolerance	0.09	0.04	0.12	-0.10	0.29	-0.16

Note. $N = 2106$. Agree = Agreeableness, Cons = Conscientiousness, Extro = Extroversion, Neur = Neuroticism, Open = Openness, Mach = Machiavellianism.

7.5.2 TAPAS and SDI Facets

TAPAS Adjustment correlated negatively with SDI Stress Under Pressure ($r = -.31$) and Worry ($r = -.34$); TAPAS Attention Seeking correlated negatively with Reserved ($r = -.36$) and positively with Dominance Leader ($r = .31$) and High Intensity ($r = .31$); TAPAS Dominance correlated negatively with Reserved ($r = -.36$) and positively with Dominance Leader ($r = .45$); TAPAS Non-Delinquency correlated negatively with Unconventional ($r = -.32$); TAPAS Order correlated with SDI Order ($r = .46$); and TAPAS Sociability correlated negatively with Reserved ($r = -.46$) and positively with Dominance Leader ($r = .30$). Finally, the TAPAS Will Do composite correlated with Dominance Leader ($r = .31$). The majority of these relationships provide some evidence of convergent validity indicating that the TAPAS and SDI facets are measuring the same constructs. Each TAPAS scale also showed multiple zero to small sized correlations with SDI scales, which provides some evidence of discriminant validity. Complete results are presented in the following table.

Table 24. TAPAS and SDI Facets Uncorrected Correlations

TAPAS	Tea	SUP	Res	AS	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc
Can	0.07	-0.21	0.08	0.06	0.10	-0.05	-0.06	-0.09	0.02	-0.13	0.00	-0.06	-0.02	-0.16	0.06
Pers*	0.01	-0.12	0.03	-0.05	-0.05	0.00	-0.02	-0.03	-0.03	-0.22	-0.02	0.00	-0.02	-0.09	0.17
Will	0.18	-0.27	-0.27	0.19	0.09	0.01	0.12	-0.15	0.31	0.11	-0.09	-0.14	0.08	-0.18	0.22
Ach	0.16	-0.20	-0.17	0.25	0.10	-0.05	0.10	-0.15	0.21	0.19	-0.08	-0.17	0.13	-0.11	0.07
Adj	0.04	-0.31	-0.13	0.01	0.05	0.00	0.06	-0.23	0.11	-0.03	-0.10	-0.08	-0.05	-0.34	0.11
Att	0.10	-0.20	-0.36	0.09	0.16	0.09	0.20	-0.14	0.31	0.05	0.03	-0.12	0.13	-0.14	0.18
Coop	0.03	0.02	0.05	0.03	-0.02	-0.15	0.19	-0.09	-0.14	0.06	0.01	-0.09	0.15	0.01	-0.11
Dom	0.15	-0.24	-0.36	0.16	0.17	0.06	0.11	-0.16	0.45	0.08	-0.07	-0.09	0.06	-0.14	0.16
Even	0.08	-0.19	-0.02	0.06	0.05	-0.12	0.16	-0.27	-0.01	0.02	-0.02	-0.15	0.08	-0.16	-0.01
IntE	0.10	-0.26	-0.06	0.11	0.21	0.01	0.00	-0.13	0.16	0.00	0.05	-0.09	0.02	-0.20	0.11
Non	0.07	-0.06	0.00	0.14	-0.04	-0.13	0.09	-0.10	0.00	0.14	-0.06	-0.11	0.10	-0.02	-0.13
Opt	0.08	-0.17	-0.10	0.02	-0.01	-0.10	0.13	-0.14	0.09	0.03	-0.08	-0.15	0.00	-0.19	0.00
Ord	0.07	0.01	0.04	0.18	0.02	0.02	0.02	-0.03	0.04	0.46	0.00	0.01	0.01	0.01	-0.09
Phys	0.06	-0.13	-0.13	0.06	0.00	0.07	0.04	-0.01	0.14	0.01	-0.03	0.00	0.01	-0.08	0.22
SC	0.08	-0.06	0.05	0.18	0.09	-0.08	0.01	-0.13	-0.02	0.17	0.03	-0.10	0.04	-0.05	-0.10
Selfl	0.04	0.07	-0.06	0.05	0.04	-0.11	0.08	-0.04	-0.01	0.03	0.09	-0.12	0.21	0.01	0.02
Soc	0.09	-0.15	-0.46	0.06	0.14	0.01	0.25	-0.13	0.30	0.05	-0.04	-0.15	0.15	-0.08	0.11
Tol	0.04	-0.04	-0.05	0.04	0.12	-0.08	0.06	-0.10	0.02	-0.04	0.13	-0.12	0.10	-0.04	0.02

Table 24 (Continued): TAPAS and SDI Facets Uncorrected Correlations

TAPAS	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	We	Img
Can	0.05	0.19	-0.04	0.06	-0.09	-0.08	0.03	-0.05	0.08	-0.01	0.01	-0.08	0.00	0.01	0.03
Pers*	-0.05	0.07	0.03	-0.02	-0.04	0.00	-0.07	-0.08	0.02	0.01	0.07	0.02	-0.03	0.05	0.06
Will	0.20	0.02	-0.09	-0.08	-0.12	0.08	0.07	-0.08	0.14	0.18	-0.06	0.04	0.18	0.17	-0.09
Ach	0.27	0.01	-0.14	-0.04	-0.11	0.03	0.12	-0.04	0.05	0.14	-0.16	-0.03	0.19	0.09	-0.15
Adj	0.05	0.07	-0.14	-0.07	-0.22	0.01	-0.03	-0.04	0.12	0.11	0.00	0.04	0.04	0.03	-0.07
Att	0.13	0.03	-0.07	-0.11	-0.12	0.31	0.08	0.09	0.26	0.27	0.03	0.23	0.21	0.19	0.02
Coop	0.05	-0.04	-0.09	-0.06	-0.14	-0.03	0.07	0.09	-0.18	0.08	-0.15	-0.11	-0.03	0.02	0.00
Dom	0.16	0.03	-0.06	-0.10	-0.12	0.11	0.09	-0.02	0.19	0.15	-0.04	0.05	0.17	0.14	-0.07
Even	0.10	0.08	-0.16	-0.10	-0.29	-0.01	0.09	0.06	-0.01	0.12	-0.11	-0.11	-0.01	0.02	-0.07

TAPAS	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	We	Img
IntE	0.12	0.23	-0.09	0.04	-0.11	0.00	0.07	0.05	0.18	0.06	0.03	0.01	0.09	0.05	0.04
Non	0.15	-0.01	-0.11	-0.05	-0.11	-0.07	0.13	0.00	-0.15	0.02	-0.32	-0.16	-0.02	-0.03	-0.12
Opt	0.06	-0.05	-0.13	-0.06	-0.16	0.04	0.02	-0.01	0.00	0.14	-0.04	-0.06	0.01	0.08	-0.04
Ord	0.17	-0.05	-0.07	0.06	-0.03	-0.04	0.15	0.02	-0.02	-0.03	-0.09	-0.09	0.05	-0.03	-0.12
Phys	0.04	0.03	0.02	-0.01	0.00	0.06	-0.02	-0.10	0.09	0.08	0.07	0.10	0.09	0.12	0.01
SC	0.15	0.06	-0.14	-0.03	-0.09	-0.09	0.25	0.06	-0.05	-0.01	-0.18	-0.19	0.01	-0.10	-0.10
Selfl	0.02	-0.04	-0.09	-0.09	-0.03	0.06	0.03	0.11	-0.05	0.09	-0.06	0.04	0.08	0.06	0.00
Soc	0.11	0.00	-0.08	-0.17	-0.13	0.16	0.05	0.08	0.16	0.29	-0.04	0.16	0.21	0.17	-0.04
Tol	0.05	0.11	-0.13	-0.07	-0.09	0.10	0.06	0.28	0.02	0.06	-0.03	0.05	0.07	0.00	0.09

Note. All correlations $\geq \pm 0.05$ are significant at $p < 0.05$. N = 2,106. Can = Can Do Composite, Pers = Persistence Composite, Will = Will Do Composite, Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, Selfl = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance, Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, AS = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.
*164 scores were missing for the Persistence Composite. This resulted in an N of 1942 for correlations involving this composite.

Table 25. TAPAS and SDI Facets Correlations Corrected for Reliability Attenuation

TAPAS	Tea	SUP	Res	AS	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc
Ach	0.23	-0.29	-0.24	0.36	0.14	-0.07	0.14	-0.21	0.30	0.27	-0.12	-0.24	0.18	-0.15	0.10
Adj	0.06	-0.43	-0.18	0.01	0.07	0.00	0.08	-0.32	0.15	-0.04	-0.14	-0.11	-0.07	-0.46	0.15
Att	0.13	-0.27	-0.46	0.12	0.21	0.12	0.26	-0.18	0.40	0.06	0.04	-0.16	0.17	-0.18	0.23
Coop	0.04	0.03	0.07	0.04	-0.03	-0.20	0.25	-0.12	-0.18	0.08	0.01	-0.12	0.20	0.01	-0.14
Dom	0.20	-0.31	-0.46	0.21	0.22	0.08	0.14	-0.21	0.58	0.10	-0.09	-0.12	0.08	-0.18	0.20
Even	0.12	-0.28	-0.03	0.09	0.07	-0.18	0.23	-0.39	-0.01	0.03	-0.03	-0.22	0.12	-0.23	-0.01
IntE	0.14	-0.36	-0.08	0.15	0.29	0.01	0.00	-0.18	0.22	0.00	0.07	-0.12	0.03	-0.26	0.15
Non	0.10	-0.09	0.00	0.20	-0.06	-0.19	0.13	-0.14	0.00	0.19	-0.09	-0.16	0.14	-0.03	-0.18
Opt	0.13	-0.27	-0.15	0.03	-0.02	-0.16	0.20	-0.22	0.14	0.05	-0.13	-0.24	0.00	-0.29	0.00
Ord	0.09	0.01	0.05	0.24	0.03	0.03	0.03	-0.04	0.05	0.59	0.00	0.01	0.01	0.01	-0.11
Phys	0.08	-0.17	-0.16	0.08	0.00	0.09	0.05	-0.01	0.18	0.01	-0.04	0.00	0.01	-0.10	0.28
SC	0.12	-0.09	0.07	0.28	0.14	-0.12	0.02	-0.20	-0.03	0.25	0.05	-0.15	0.06	-0.07	-0.15
Selfl	0.05	0.09	-0.08	0.07	0.05	-0.15	0.11	-0.05	-0.01	0.04	0.12	-0.16	0.28	0.01	0.03
Soc	0.11	-0.19	-0.56	0.08	0.18	0.01	0.31	-0.16	0.37	0.06	-0.05	-0.19	0.19	-0.10	0.13
Tol	0.06	-0.05	-0.07	0.05	0.16	-0.11	0.08	-0.14	0.03	-0.05	0.18	-0.16	0.13	-0.05	0.03

TAPAS	Tea	SUP	Res	AS	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc
<i>Note.</i> N = 2106. Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, Selfl = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance, Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, AS = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.															

Table 25 (Continued). TAPAS and SDI Facets Correlations Corrected for Reliability Attenuation

TAPAS	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel	Img
Ach	0.38	0.01	-0.20	-0.06	-0.15	0.04	0.17	-0.06	0.07	0.20	-0.23	-0.04	0.28	0.13	-0.22
Adj	0.07	0.09	-0.19	-0.10	-0.30	0.01	-0.04	-0.05	0.17	0.15	0.00	0.06	0.06	0.04	-0.10
Att	0.17	0.04	-0.09	-0.15	-0.15	0.40	0.10	0.12	0.35	0.35	0.04	0.32	0.29	0.25	0.03
Coop	0.07	-0.05	-0.12	-0.08	-0.18	-0.04	0.09	0.12	-0.25	0.11	-0.20	-0.15	-0.04	0.03	0.00
Dom	0.21	0.04	-0.08	-0.13	-0.15	0.14	0.12	-0.03	0.25	0.19	-0.05	0.07	0.23	0.18	-0.09
Even	0.15	0.11	-0.23	-0.15	-0.41	-0.01	0.13	0.09	-0.02	0.17	-0.16	-0.17	-0.02	0.03	-0.10
IntE	0.16	0.30	-0.12	0.06	-0.15	0.00	0.09	0.07	0.25	0.08	0.04	0.01	0.13	0.07	0.05
Non	0.21	-0.01	-0.15	-0.07	-0.15	-0.10	0.18	0.00	-0.22	0.03	-0.46	-0.24	-0.03	-0.04	-0.17
Opt	0.09	-0.08	-0.20	-0.10	-0.24	0.06	0.03	-0.02	0.00	0.22	-0.06	-0.10	0.02	0.13	-0.06
Ord	0.22	-0.06	-0.09	0.08	-0.04	-0.05	0.19	0.03	-0.03	-0.04	-0.12	-0.12	0.07	-0.04	-0.16
Phys	0.05	0.04	0.03	-0.01	0.00	0.08	-0.03	-0.13	0.12	0.10	0.09	0.13	0.12	0.16	0.01
SC	0.23	0.09	-0.21	-0.05	-0.13	-0.14	0.38	0.09	-0.08	-0.02	-0.28	-0.30	0.02	-0.15	-0.15
Selfl	0.03	-0.05	-0.12	-0.12	-0.04	0.08	0.04	0.14	-0.07	0.12	-0.08	0.06	0.11	0.08	0.00
Soc	0.14	0.00	-0.10	-0.22	-0.16	0.20	0.06	0.10	0.21	0.36	-0.05	0.21	0.27	0.21	-0.05
Tol	0.07	0.14	-0.17	-0.10	-0.12	0.13	0.08	0.37	0.03	0.08	-0.04	0.07	0.10	0.00	0.12
<i>Note.</i> N = 2106. Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, Selfl = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance, Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, AS = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.															

7.5.3 TAPAS and SDI Facets Correlations Compared to Expected Mappings

Correlations were reviewed in light of the TAPAS and SDI mapping results to assess whether they aligned with the conceptual mappings. Of the 27 expected mappings of SDI to TAPAS, correlations of .30 or above (or -.30 or below) were found for 15. Twelve mappings could not be examined because the TAPAS scales were not included in the dataset. Overall, the proportion of expected TAPAS-SDI correlations that met the threshold of +/- .30 was 100%, providing evidence of excellent construct validity. Full results are presented in the table below.

Table 26. TAPAS and SDI Facets Corrected Correlations Compared to Expected Mappings

TAPAS	SDI	Study 1 Corrected Correlation
Achievement	Achievement Striving	0.36
	Self-Discipline	0.38
Adjustment	Stress Under Pressure (-)	-0.43
	Worry (-)	-0.46
Adventure Seeking	Excitement Seeking	TAPAS scale not in dataset
Aesthetics	Cultured	TAPAS scale not in dataset
Consideration	Helpful Altruistic	TAPAS scale not in dataset
Cooperation	Pleasant	0.25
Depth*	Reflective	TAPAS scale not in dataset
Dominance	Dominance Leader	0.58
	Reserved (-)	-0.46
Even Tempered	Angry Hostile (-)	-0.41
	Temperamental (-)	-0.39
Ingenuity	Creative	TAPAS scale not in dataset
	Spontaneous Variety	
	Imagination	TAPAS scale not in dataset
Machiavellianism*	Influence Tactics	TAPAS scale not in dataset
	Interpersonal Tactics	TAPAS scale not in dataset
Non-Delinquency	Unconventional (-)	-0.46
Optimism	Optimist	0.22
Order	Deliberation	0.19
	Order	0.59
Responsibility	Well-Adjusted (ONLY Dependability part of scale)	TAPAS scale not in dataset
Self-Control	Impulsiveness	TAPAS scale not in dataset
	Self-Discipline	0.23
Sociability	Reserved (-)	-0.56
Team Orientation	Independent (-)	TAPAS scale not in dataset

8.0 TAPAS-NCAPS-SDI DATA ANALYSIS (STUDY 2)

The TAPAS, NCAPS, and SDI were evaluated for construct validity, criterion-related validity, reliability, and faking, racial/ethnicity, and gender subgroup differences using data collected in 2018 from 1,089 Air Force enlisted trainees. The TAPAS, NCAPS, and SDI were administered specifically for use in this research project. Participants were tested under both Honest (N = 576) and Fake Good (N = 513) conditions, with randomized presentations of the order of the NCAPS, TAPAS, and SDI. Criterion variable composites were created based on SDI self-rating data.

8.1 Data Cleaning

For the purposes of data cleaning, the data were analyzed for careless responding. The patterns of responses, as well as the overall score on a composite variable known as “Unlikely Virtues” were inspected for evidence of careless responses. For each observation, the length of the maximum uninterrupted string of identical responses was inspected. This resulted in an average of 12 items in a row having identical responses with a SD of 24. For the purposes of removing careless responders, those who had a maximum length of 60 uninterrupted identical responses were removed. This resulted in the removal of 15 participants. The variable of Unlikely Virtues was also inspected for careless responding. Unlikely Virtues consists of statements that are unlikely to be true of anyone such as, “I never make mistakes,” and, “I have never eaten junk food.” For this reason, it was chosen as an additional indicator of careless responding. For Honest conditions, those who scored greater than two SDs above the mean on the Unlikely Virtues variable were removed from the sample. For Fake Good conditions, those who scored more than two SDs below the mean were removed from the sample. This resulted in the removal of 18 participants from the Honest condition and zero participants from the Fake Good condition.

After data cleaning, the final participant counts for Honest and Fake Good conditions were 551 and 505, respectively.

8.2 Descriptive Statistics

Table 27. TAPAS Honest Condition Descriptives

TAPAS	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Achievement	518	0.14	0.48	-1.57	1.39	-0.12	0.09	0.02
Adjustment	518	0.04	0.46	-1.58	1.91	0.15	0.87	0.02
Attention Seeking	518	-0.39	0.57	-1.84	1.24	0.06	-0.21	0.03
Cooperation	518	0.24	0.52	-1.20	1.85	0.40	0.03	0.02
Dominance	518	0.11	0.53	-2.08	1.51	-0.34	0.94	0.02
Even-Tempered	518	0.23	0.47	-1.44	2.35	0.12	1.50	0.02
Intellectual Efficiency	518	-0.02	0.52	-1.64	1.61	-0.11	0.46	0.02
Non-Delinquency	518	0.18	0.54	-1.80	1.80	-0.19	0.67	0.02
Optimism	518	0.29	0.42	-1.03	1.81	0.14	0.18	0.02
Order	518	-0.08	0.54	-2.09	1.61	-0.16	0.73	0.02
Physical Conditioning	518	0.10	0.54	-1.44	1.84	0.25	0.15	0.02
Self-Control	518	-0.20	0.44	-1.58	1.55	0.28	0.72	0.02

TAPAS	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Selflessness/ Generosity	518	0.17	0.42	-1.39	1.56	-0.10	0.80	0.02
Sociability	518	-0.20	0.56	-1.81	1.26	-0.16	-0.04	0.02
Tolerance	518	0.16	0.51	-1.79	1.83	0.03	0.27	0.02

Table 28. TAPAS Fake-Good Condition Descriptives

TAPAS	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Achievement	471	0.29	0.45	-1.33	1.84	0.04	0.31	0.02
Adjustment	471	0.12	0.37	-1.25	1.83	0.24	1.76	0.02
Attention Seeking	471	-0.37	0.57	-2.03	1.49	0.11	0.34	0.03
Cooperation	471	0.34	0.52	-1.20	2.31	0.51	0.40	0.02
Dominance	471	0.20	0.49	-1.61	1.74	-0.12	1.47	0.02
Even-Tempered	471	0.28	0.45	-1.66	1.91	-0.10	1.44	0.02
Intellectual Efficiency	471	0.06	0.47	-1.65	1.92	0.08	0.81	0.02
Non- Delinquency	471	0.34	0.48	-1.14	1.57	-0.12	-0.05	0.02
Optimism	471	0.29	0.41	-1.05	1.69	0.01	0.27	0.02
Order	471	0.08	0.46	-1.53	1.50	0.05	0.45	0.02
Physical Conditioning	471	0.08	0.50	-1.48	1.75	0.41	1.03	0.02
Self-Control	471	-0.05	0.46	-1.43	1.72	0.49	0.45	0.02
Selflessness/ Generosity	471	0.20	0.42	-1.34	1.67	0.14	1.00	0.02
Sociability	471	-0.22	0.47	-1.82	0.96	-0.35	0.20	0.02
Tolerance	471	0.18	0.51	-1.35	1.91	0.00	0.39	0.02

Table 29. NCAPS Honest Condition Descriptives

NCAPS	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Stress Tolerance	499	5.69	0.91	2.96	7.41	-0.18	-0.59	0.04
Achievement	499	5.87	0.70	2.99	7.26	-0.58	1.14	0.03
Social Orientation	499	5.65	0.76	3.02	7.25	-0.47	0.80	0.03
Adaptability/ Flexibility	499	5.61	0.84	2.87	7.38	-0.60	0.13	0.04
Willingness to Learn	499	6.07	0.82	3.48	7.40	-0.67	-0.21	0.04
Dependability	499	5.88	0.95	3.17	7.47	-0.32	-0.66	0.04
Attention to Detail	499	5.94	0.88	2.79	7.36	-0.72	-0.23	0.04
Dutifulness	499	6.28	0.67	3.69	7.32	-1.28	2.05	0.03
Self-Reliance	499	5.34	0.70	3.08	7.44	-0.10	-0.06	0.03
Vigilance	499	5.88	0.91	2.84	7.52	-0.25	-0.23	0.04

Table 30. NCAPS Fake-Good Condition Descriptives

NCAPS	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Stress Tolerance	456	6.21	0.92	2.87	7.43	-0.91	0.68	0.04
Achievement	456	6.19	0.70	3.01	7.41	-0.78	1.82	0.03
Social Orientation	456	5.89	0.72	2.89	7.29	-0.61	1.89	0.03
Adaptability/ Flexibility	456	5.96	0.79	3.02	7.25	-0.77	0.91	0.04
Willingness to Learn	456	6.39	0.74	3.31	7.40	-0.98	1.02	0.03
Dependability	456	6.51	0.82	2.71	7.49	-1.14	1.32	0.04
Attention to Detail	456	6.45	0.71	3.15	7.50	-1.14	1.40	0.03
Dutifulness	456	6.55	0.59	3.10	7.35	-1.37	3.65	0.03
Self-Reliance	456	5.40	0.68	3.26	7.39	-0.08	0.45	0.03
Vigilance	456	6.41	0.84	2.86	7.51	-0.88	1.00	0.04

Table 31. SDI Domains Honest Condition Descriptives

SDI	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Agreeableness	549	4.16	0.46	1.75	5.00	-0.67	1.30	0.02
Neuroticism	549	2.40	0.66	1.00	4.47	0.23	-0.36	0.03
Extroversion	549	3.34	0.53	1.62	4.83	-0.10	0.03	0.02
Conscientiousness	549	3.89	0.55	1.75	5.00	-0.18	-0.24	0.02
Openness	549	3.65	0.56	1.77	5.00	-0.06	-0.22	0.02
Machiavellianism	549	2.73	0.49	1.00	4.38	-0.10	0.25	0.02

Table 32. SDI Domains Fake-Good Condition Descriptives

SDI	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Agreeableness	499	4.39	0.46	1.86	5.00	-1.25	2.83	0.02
Neuroticism	499	1.91	0.69	1.00	4.64	0.77	0.46	0.03
Extroversion	499	3.43	0.52	1.54	4.85	-0.15	0.26	0.02
Conscientiousness	499	4.34	0.57	1.37	5.00	-1.07	1.35	0.03
Openness	499	3.79	0.57	2.03	5.00	-0.16	-0.46	0.03
Machiavellianism	499	2.40	0.56	1.00	3.90	0.13	-0.50	0.03

Table 33. SDI Facets Honest Condition Descriptives

SDI Facet	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Team Player	549	4.44	0.48	1.25	5.00	-1.30	3.84	0.02
Stress Under Pressure	549	2.45	0.77	1.00	5.00	0.18	-0.61	0.03
Reserved	549	2.75	0.91	1.00	5.00	0.07	-0.58	0.04
Achievement Striving	549	4.04	0.61	1.67	5.00	-0.46	0.07	0.03
Creative	549	3.93	0.66	1.38	5.00	-0.34	0.05	0.03

SDI Facet	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Interpersonal Tactics	549	2.22	0.73	1.00	5.00	0.29	-0.30	0.03
Pleasant	549	4.13	0.64	1.75	5.00	-0.62	0.04	0.03
Temperamental	549	2.14	0.71	1.00	4.25	0.43	-0.37	0.03
Dominance	549	3.04	0.87	1.00	5.00	0.07	-0.27	0.04
Order	549	3.81	0.76	1.00	5.00	-0.45	-0.19	0.03
Reflective	549	3.71	0.66	1.12	5.00	-0.36	0.27	0.03
Cynical View	549	3.23	0.69	1.00	5.00	-0.30	0.43	0.03
Helpful-Altruistic	549	4.05	0.62	1.00	5.00	-0.70	1.42	0.03
Worry	549	3.05	0.94	1.00	5.00	-0.15	-0.54	0.04
Excitement Seeking	549	3.92	0.88	1.00	5.00	-1.06	0.94	0.04
Self-Discipline	549	3.95	0.66	1.50	5.00	-0.28	-0.30	0.03
Scientific Interest	549	3.32	1.03	1.00	5.00	-0.23	-0.66	0.04
Envious	549	2.28	0.84	1.00	4.67	0.27	-0.64	0.04
Independent	549	3.18	0.70	1.00	5.00	0.08	0.44	0.03
Angry-Hostile	549	1.95	0.80	1.00	4.75	0.83	0.21	0.03
High Intensity	549	3.27	0.92	1.00	5.00	-0.32	-0.35	0.04
Deliberation	549	3.88	0.72	1.25	5.00	-0.47	0.09	0.03
Cultured	549	3.63	0.88	1.00	5.00	-0.35	-0.47	0.04
Influence Tactics	549	2.74	0.71	1.00	5.00	0.16	0.15	0.03
Optimist	549	3.68	0.70	1.00	5.00	-0.35	0.31	0.03
Unconventional	549	2.22	0.73	1.00	4.88	0.23	-0.45	0.03
Spontaneous Variety	549	3.15	0.68	1.00	5.00	-0.17	0.18	0.03
Activity	549	3.42	0.71	1.12	5.00	-0.03	-0.06	0.03
Well-Adjusted	549	4.51	0.47	1.62	5.00	-1.57	4.40	0.02
Imagination	549	3.67	0.81	1.00	5.00	-0.45	-0.21	0.03

Table 34. SDI Facets Fake-Good Condition Descriptives

SDI Facet	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Team Player	499	4.66	0.44	1.57	5.00	-2.22	7.96	0.02
Stress Under Pressure	499	1.92	0.81	1.00	5.00	0.84	0.46	0.04
Reserved	499	2.40	0.95	1.00	5.00	0.46	-0.46	0.04
Achievement Striving	499	4.44	0.59	1.14	5.00	-1.26	2.27	0.03
Creative	499	4.27	0.66	1.25	5.00	-0.81	0.33	0.03
Interpersonal Tactics	499	1.95	0.74	1.00	4.75	0.69	-0.07	0.03
Pleasant	499	4.42	0.57	2.14	5.00	-0.97	0.41	0.03
Temperamental	499	1.69	0.70	1.00	4.71	1.12	1.17	0.03
Dominance	499	3.44	0.96	1.00	5.00	-0.25	-0.52	0.04
Order	499	4.30	0.68	1.43	5.00	-1.11	1.05	0.03
Reflective	499	3.71	0.75	1.00	5.00	-0.39	0.00	0.03

SDI Facet	N	Mean	SD	Min	Max	Skew	Kurtosis	SE
Cynical View	499	2.85	0.91	1.00	5.00	-0.11	-0.46	0.04
Helpful-Altruistic	499	4.34	0.62	1.29	5.00	-1.11	1.65	0.03
Worry	499	2.52	0.99	1.00	5.00	0.26	-0.75	0.04
Excitement Seeking	499	3.95	0.86	1.00	5.00	-0.83	0.22	0.04
Self-Discipline	499	4.39	0.64	1.14	5.00	-1.22	1.63	0.03
Scientific Interest	499	3.83	1.05	1.00	5.00	-0.65	-0.51	0.05
Envious	499	1.85	0.81	1.00	4.38	0.84	-0.01	0.04
Independent	499	2.78	0.81	1.00	5.00	-0.08	-0.42	0.04
Angry-Hostile	499	1.53	0.69	1.00	5.00	1.68	3.20	0.03
High Intensity	499	2.95	1.02	1.00	5.00	-0.02	-0.66	0.05
Deliberation	499	4.36	0.67	1.29	5.00	-1.02	0.80	0.03
Cultured	499	3.84	0.94	1.00	5.00	-0.66	-0.12	0.04
Influence Tactics	499	2.57	0.77	1.00	5.00	0.36	-0.24	0.03
Optimist	499	4.01	0.75	1.00	5.00	-0.86	0.89	0.03
Unconventional	499	1.78	0.73	1.00	4.14	0.91	0.29	0.03
Spontaneous Variety	499	2.88	0.75	1.00	5.00	0.09	-0.13	0.03
Activity	499	3.74	0.81	1.25	5.00	-0.33	-0.32	0.04
Well-Adjusted	499	4.53	0.47	1.50	5.00	-1.45	3.74	0.02
Imagination	499	3.31	0.94	1.00	5.00	-0.13	-0.75	0.04

8.3 Reliability

Cronbach's alpha analyses were run only for SDI because item level data were not present for either the NCAPS or TAPAS. Results are presented in the tables below. The reliability estimates for the SDI domains ranged from .68 (for Machiavellianism) to .85 (for Conscientiousness). The reliability estimate for Machiavellianism is less than .70, indicating lack of adequate reliability for this scale. The reliability of the SDI facets all exceeded .70 and are typically higher than the SDI domains, which is expected given that the facets represent narrowly measured constructs while the domains are composites of the facets and thus broader in nature.

Table 35. SDI Domains Cronbach's Alpha

SDI	Cronbach's Alpha
Agreeableness	0.84
Neuroticism	0.83
Extroversion	0.70
Conscientiousness	0.85
Openness	0.72
Machiavellianism	0.68

Table 36. SDI Facets Cronbach's Alpha

SDI Domain	SDI Facet	Cronbach's Alpha
Agreeableness	Team Player	0.79
	Pleasant	0.85
	Helpful Altruistic	0.84
	Optimist	0.83
	Well-Adjusted	0.78
Neuroticism	Stress Under Pressure	0.83
	Temperamental	0.84
	Worry	0.89
	Angry-Hostility	0.90
Extroversion	Reserved	0.88
	Dominance-Leader	0.89
	Excitement Seeking	0.86
	High Intensity Pleasure	0.85
	Activity	0.79
	Spontaneous-Variety	0.73
Conscientiousness	Achievement Striving	0.85
	Order	0.88
	Self-Discipline	0.84
	Deliberation	0.88
	Unconventional	0.82
Openness	Creative	0.83
	Reflective	0.77
	Scientific Interest	0.91
	Cultured	0.87
	Imagination	0.83
Machiavellianism	Interpersonal Tactics	0.82
	Cynical View	0.82
	Envious	0.88
	Influence Tactics	0.78
	Independent	0.78

8.4 Subgroup Differences

Race and gender subgroup differences were analyzed using Cohen's *d* on the Honest condition sample only. Because candidates were instructed to “fake good” in half of the sample, this half of the sample was not considered relevant to the subgroup differences analyses as the scores were presumably obscured by the faking manipulation.

8.4.1 TAPAS

For the TAPAS, the subgroups of Blacks/African Americans (N = 95) and females (N = 275) were the only groups with large enough sample sizes to conduct analyses.

Following the general guidelines established by Cohen (1988), where effects less than .20 are considered negligible and effects between .20 and .50 are considered small, 23 of the 36 comparisons across race and gender were negligible. In contrast, small negative effects were seen where Blacks/African Americans scored slightly lower on the Persistence composite, and

the Non-Delinquency, Optimism, and Physical Conditioning facets. The extent to which different personality assessments demonstrate convergent and discriminant validity has been shown to differ dramatically as a function of their assessment design characteristics like the ones described above. For example, Anderson and Ones (2003) examined the construct validity of three entry-level personality inventories: one that used various item types (Likert-type, dichotomous true-false, and trichotomous yes-unsure-no) and found very low intercorrelations among seemingly similar constructs. While correlations across assessments were very low, correlations within assessment were substantially higher. This indicates there is a method factor that may limit the degree of overlap observed across assessments. Even for assessments that use the same item format (e.g., Likert-type) but different scales (5 point vs. 7 point), correlations for the same traits may be lower than traditional concepts of parallel forms. For instance, Gosling, Rentfrow, and Swann (2003) found that correlations between the same constructs across two forms which differed only on the number of points on the rating scale ranged from .48 to .80.

Fourteen effects were considered to be negligible for Blacks/African Americans. For gender, small effects where females scored lower than males were present for the Can Do and Persistence composites, and the Adjustment, Intellectual Efficiency, and Physical Conditioning facets. Small positive effects were observed for females on the scales of Tolerance, Non-Delinquency, and Cooperation while a medium effect was observed for Selflessness/Generosity. Nine gender effects were considered negligible.

Complete results of these analyses are presented in the following table.

Table 37. TAPAS Subgroup Differences

TAPAS	Black/African American	Female
Can Do Composite	0.03	-0.33
Persistence Composite	-0.26	-0.24
Will Do Composite	-0.16	-0.12
Achievement	0.11	0.15
Adjustment	-0.08	-0.27
Attention Seeking	0.11	-0.03
Cooperation	-0.02	0.21
Dominance	0.08	0.01
Even-Tempered	-0.12	0.00
Intellectual Efficiency	0.09	-0.28
Non-Delinquency	-0.25	0.22
Optimism	-0.25	-0.13
Order	-0.04	0.13
Physical Conditioning	-0.28	-0.25
Self-Control	0.10	0.11
Selflessness/Generosity	0.08	0.62
Sociability	0.09	-0.02
Tolerance	0.08	0.37
<i>Note.</i> White N = 369, Black/African American N = 95, Male N = 276, and Female N = 275.		

8.4.2 NCAPS

For NCAPS, the subgroups of Black/African Americans (N = 95) and females (N = 275) were the only groups large enough to conduct analyses.

For the NCAPS, 14 of the 20 comparisons were considered negligible. No small negative effect size differences were seen for either Blacks/African Americans or females. For Blacks/African Americans, small positive effect sizes were seen on the scales of Adaptability/Flexibility and Self-Reliance. There were eight negligible effect sizes observed for Black or African Americans. For females, small positive effects were present on the Willingness to Learn, Dependability, Attention to Detail, and Dutifulness scales. Six negligible effects were observed for gender.

Complete results of these analyses are presented in the following table.

Table 38. NCAPS Subgroup Differences

NCAPS	Black/African American	Female
Stress Tolerance	0.07	-0.07
Achievement	-0.06	0.17
Social Orientation	0.03	0.11
Adaptability/Flexibility	0.28	0.12
Willingness to Learn	0.07	0.26
Dependability	0.01	0.23
Attention to Detail	0.10	0.37
Dutifulness	-0.05	0.35
Self-Reliance	0.24	0.02
Vigilance	-0.02	0.10
<i>Note.</i> White N = 369, Black/African American N = 95, Male N = 276, and Female N = 275.		

8.4.3 SDI Domains

For the SDI, the subgroups of Blacks/African Americans (N = 95) and females (N = 275) were the only groups large enough to conduct analyses.

For the SDI domains, 9 of the 12 comparisons were negligible. No small negative effects were observed for Blacks/African Americans. All 6 effects were considered to be negligible in magnitude. For Females, small positive effects were seen for Conscientiousness and Agreeableness. A small negative effect was observed for Machiavellianism, but this is considered to be favorable given Machiavellianism is a negative domain area. Neuroticism, Extroversion, and Openness showed negligible effects for gender.

Complete results of these analyses are presented in the following table.

Table 39. SDI Domains Subgroup Differences

SDI	Black/African American	Female
Agreeableness	0.02	0.26
Neuroticism	-0.05	0.11
Extroversion	-0.05	0.15
Conscientiousness	0.14	0.31
Openness	0.15	-0.14
Machiavellianism	-0.14	-0.37
<i>Note.</i> White N = 369, Black/African American N = 95, Male N = 276, and Female N = 275.		

8.4.4 SDI Facets

For the SDI Facets, 41 of the 60 mean score comparisons were negligible. Small negative effects were observed Interpersonal Tactics, Scientific Interest, Unconventional, and Imagination for females. For Blacks/African Americans, small negative effects were observed for Excitement Seeking. There were 25 negligible effects observed for Blacks/African Americans. Additional negative effects for females were seen on Influence Tactics, Envious, Cynical View, and Interpersonal Tactics, but these are all considered positive given their domain areas are Neuroticism and Machiavellianism. There were 16 negligible effects observed for gender. Females showed small positive effects on Order, Helpful Altruistic, Deliberation, Cultured, Activity, and Well-Adjusted. Blacks/African Americans showed a medium negative effects on Envious. Blacks/African Americans showed favorable effects on Reflective, Deliberation, and Cultured.

Complete results of these analyses are presented in the following table.

Table 40. SDI Facets Subgroup Differences

SDI Facets	Black/African American	Female
Team Player - A	0.07	0.14
Stress Under Pressure - N	-0.10	0.36
Reserved - E	0.16	-0.10
Achievement Striving - C	0.08	0.15
Creative - O	0.15	-0.16
Interpersonal Tactics - M	0.05	-0.32
Pleasant - A	-0.01	0.16
Temperamental - N	-0.09	0.00
Dominance Leader - E	0.11	0.02
Order - C	0.17	0.31
Reflective - O	0.25	-0.10
Cynical View - M	0.10	-0.33
Helpful Altruistic - A	0.05	0.29
Worry - N	0.01	0.12
Excitement Seeking - E	-0.30	-0.03
Self-Discipline - C	0.08	0.17
Scientific Interest - O	-0.16	-0.36
Envious - M	-0.75	-0.29
Independent - A	0.14	-0.02

SDI Facets	Black/African American	Female
Angry Hostile - N	-0.02	-0.11
High Intensity - E	-0.04	0.15
Deliberation - C	0.22	0.25
Cultured - O	0.30	0.45
Influence Tactics - M	0.09	-0.23
Optimist - A	0.01	0.19
Unconventional - C	-0.01	-0.33
Spontaneous Variety - E	0.14	0.03
Activity - E	0.14	0.31
Well Adjusted – A	-0.01	0.22
Imagination - O	0.05	-0.29
<i>Note.</i> White N = 369, Black/African American N = 95, Male N = 276, and Female N = 275.		

8.4.5 Summary of Subgroup Differences

The overall pattern of race and gender subgroup differences for the TAPAS, NCAPS, and SDI generally indicated negligible or small effect size differences between subgroups. This is consistent with the broader literature (e.g., Foldes et al., 2008) showing that non-cognitive assessments do not tend to have strong potential for adverse impact.

The TAPAS and SDI each had a small number of scales that showed small and/or medium effect sizes with minority groups scoring lower than majority groups. Only the NCAPS demonstrated no unfavorable score differences for either Blacks/African Americans or females. The NCAPS and SDI had multiple scales where Blacks/African Americans and females outperformed the reference groups. TAPAS also had multiple scales where females outperformed males, but this result was not achieved for Black/African American subgroup differences.

8.5 Predictor Intercorrelation Analysis

Correlational analyses for the TAPAS with both the NCAPS and SDI were conducted in order to evaluate construct validity across the measures. Construct validity is indicated when two measures purporting to assess the same construct show a high degree of relationship (convergent validity) or when two measures purporting to assess dissimilar constructs show no relationship (discriminant validity). Given the sample size and number of correlations generated for this analysis, and expectations about the degree of relationship between the three assessments given the noted differences in assessment design, a threshold of $r = \pm .30$ was used as an indication of convergent validity and to interpret the results.

Full results are presented in the tables below, including uncorrected correlations and correlations corrected for predictor reliability attenuation. Reliability estimates reported by Carretta and Ree (2018) were used for the TAPAS and SDI. Intercorrelations within measure were also conducted and are reported in Appendix C. Results are primarily interpreted for the uncorrected correlations.

8.5.1 TAPAS and NCAPS

For the NCAPS, the TAPAS scale of Achievement correlated with the NCAPS scales of Achievement, Dependability, and Vigilance. TAPAS Adjustment correlated with Stress Tolerance. TAPAS Order correlated with Attention to Detail. TAPAS Self-Control correlated

with Dependability and TAPAS Sociability with Social Orientation. These correlations provide some evidence of convergent validity indicating that TAPAS and NCAPS are measuring the same or similar constructs. Each TAPAS scale also showed multiple zero to small sized correlations with the NCAPS scales, which provides some evidence of discriminant validity.

Complete results are presented in the following tables.

Table 41. TAPAS and NCAPS Uncorrected Correlations

TAPAS	ST	AV	SO	ADF	WTL	DEP	ADL	DUT	SRL	VIG
Can Do	0.16	0.22	-0.07	0.12	0.11	0.18	0.06	0.06	0.21	0.16
Persistence	0.09	0.04	-0.09	-0.02	0.01	0.05	-0.10	-0.04	0.07	0.01
Will Do	0.18	0.33	0.12	0.18	0.17	0.32	0.15	0.10	0.07	0.20
Achievement	0.19	0.41	0.12	0.24	0.23	0.42	0.29	0.27	0.06	0.31
Adjustment	0.40	0.15	0.07	0.18	0.13	0.16	0.08	0.02	0.22	0.21
Attention-Seeking	0.16	0.22	0.28	0.17	0.10	0.05	0.05	-0.04	0.02	0.06
Cooperation	0.11	0.02	0.18	0.12	0.14	0.18	0.15	0.14	-0.13	0.11
Dominance	0.10	0.21	0.14	0.17	0.13	0.11	0.07	0.04	0.08	0.12
Even-Tempered	0.28	0.08	0.14	0.14	0.13	0.20	0.20	0.21	0.05	0.18
Intellectual Efficiency	0.19	0.28	0.08	0.25	0.18	0.26	0.18	0.10	0.20	0.22
Non-Delinquency	0.09	0.15	0.03	0.05	0.14	0.29	0.27	0.31	-0.08	0.24
Optimism	0.18	0.07	0.13	0.08	0.10	0.11	0.05	0.11	-0.03	0.04
Order	0.03	0.10	0.01	0.02	0.04	0.28	0.39	0.12	0.01	0.15
Physical Conditioning	0.03	0.13	-0.01	0.02	0.02	0.12	-0.01	-0.08	0.04	0.02
Self-Control	0.14	0.20	0.06	0.13	0.12	0.33	0.28	0.21	-0.04	0.27
Selflessness/Generosity	0.05	0.12	0.18	0.15	0.16	0.10	0.05	0.19	-0.09	0.09
Sociability	0.09	0.08	0.37	0.22	0.09	-0.00	-0.02	0.04	-0.09	0.02
Tolerance	0.09	0.03	0.10	0.22	0.19	0.06	0.08	0.18	-0.01	0.06

Note. N = 551. All correlations $\geq \pm 0.09$ are significant at $p < 0.05$. Can Do = Can Do Composite; Persistence = Persistence Composite; Will Do = Will Do Composite; ST = Stress Tolerance, AV = Achievement, SO = Social Orientation, ADF = Adaptability/Flexibility, WTL = Willingness to Learn, DEP = Dependability, ADL = Attention to Detail, DUT = Dutifulness, SRL = Self-Reliance.

Table 42. TAPAS and NCAPS Correlations Corrected for Reliability Attenuation

TAPAS	ST	AV	SO	ADF	WTL	DEP	ADL	DUT	SRL	VIG
Achievement	0.27	0.57	0.17	0.34	0.32	0.59	0.41	0.38	0.08	0.43
Adjustment	0.54	0.20	0.09	0.24	0.18	0.22	0.11	0.03	0.30	0.28

TAPAS	ST	AV	SO	ADF	WTL	DEP	ADL	DUT	SRL	VIG
Attention-Seeking	0.21	0.28	0.36	0.22	0.13	0.06	0.06	-0.05	0.03	0.08
Cooperation	0.14	0.03	0.23	0.16	0.18	0.23	0.20	0.18	-0.17	0.14
Dominance	0.13	0.27	0.18	0.22	0.17	0.14	0.09	0.05	0.10	0.15
Even-Tempered	0.40	0.11	0.20	0.20	0.19	0.29	0.29	0.30	0.07	0.26
Intellectual Efficiency	0.25	0.37	0.11	0.33	0.24	0.35	0.24	0.13	0.27	0.29
Non-Delinquency	0.12	0.21	0.04	0.07	0.19	0.40	0.37	0.43	-0.11	0.33
Optimism	0.28	0.11	0.20	0.12	0.15	0.17	0.08	0.17	-0.05	0.06
Order	0.04	0.13	0.01	0.03	0.05	0.36	0.50	0.15	0.01	0.19
Physical Conditioning	0.04	0.16	-0.01	0.03	0.03	0.15	-0.01	-0.10	0.05	0.03
Self-Control	0.21	0.30	0.09	0.19	0.18	0.49	0.42	0.31	-0.06	0.40
Selflessness/Generosity	0.07	0.16	0.24	0.20	0.21	0.13	0.07	0.25	-0.12	0.12
Sociability	0.11	0.10	0.45	0.27	0.11	0.00	-0.02	0.05	-0.11	0.02
Tolerance	0.12	0.04	0.13	0.29	0.25	0.08	0.11	0.24	-0.01	0.08

Note. N = 551. ST = Stress Tolerance, AV = Achievement, SO = Social Orientation, ADF = Adaptability/Flexibility, WTL = Willingness to Learn, DEP = Dependability, ADL = Attention to Detail, DUT = Dutifulness, SRL = Self-Reliance.

8.5.2 TAPAS and SDI Domains

The TAPAS scales of Achievement, Non-Delinquency, Order, and Self-Control were correlated with the SDI domain of Conscientiousness. TAPAS Adjustment and Even-Tempered correlated negatively with Neuroticism (as expected), and TAPAS Attention Seeking, Dominance, and Sociability correlated with Extroversion. These correlations provide some evidence indicating that the TAPAS and SDI are measuring the same or similar constructs. Each TAPAS scale also showed multiple zero to small sized correlations with SDI domain scales, which provides some evidence of discriminant validity.

Complete results are presented in the following tables.

Table 43. TAPAS and SDI Domains Uncorrected Correlations

TAPAS	Agree	Neur	Extro	Cons	Open	Mach
Can Do Composite	0.02	-0.17	-0.03	0.07	0.09	0.03
Persistence Composite	-0.01	-0.15	-0.07	-0.06	-0.02	0.06
Will Do Composite	0.21	-0.18	0.28	0.25	0.05	-0.01
Achievement	0.27	-0.18	0.18	0.43	0.11	-0.18
Adjustment	0.08	-0.47	0.18	0.04	-0.02	-0.01
Attention-Seeking	0.20	-0.12	0.50	0.05	0.05	0.07
Cooperation	0.24	-0.16	-0.07	0.23	0.08	-0.28
Dominance	0.12	-0.07	0.35	0.11	0.01	0.04
Even-Tempered	0.16	-0.42	-0.05	0.21	0.08	-0.16
Intellectual Efficiency	0.12	-0.18	0.18	0.16	0.20	0.06
Non-Delinquency	0.10	-0.09	-0.19	0.32	0.01	-0.25
Optimism	0.16	-0.24	0.05	0.09	0.04	-0.15

TAPAS	Agree	Neur	Extro	Cons	Open	Mach
Order	0.05	-0.05	-0.04	0.35	0.07	-0.04
Physical Conditioning	0.03	-0.04	0.14	0.02	-0.02	0.14
Self-Control	0.10	-0.17	-0.06	0.36	0.04	-0.24
Selflessness/Generosity	0.19	-0.02	0.04	0.10	0.07	-0.25
Sociability	0.22	-0.06	0.47	-0.02	0.01	0.01
Tolerance	0.17	-0.12	0.08	0.10	0.28	-0.14

Note. N = 551. All correlations $\geq \pm 0.09$ are significant at $p < 0.05$. Agree = Agreeableness, Neur = Neuroticism, Extro = Extroversion, Cons = Conscientiousness, Open = Openness, Mach = Machiavellianism.

Table 44. TAPAS and SDI Correlations Corrected for Reliability Attenuation

TAPAS	Agree	Neur	Extro	Cons	Open	Mach
Achievement	0.37	-0.25	0.25	0.59	0.15	-0.25
Adjustment	0.11	-0.62	0.24	0.05	-0.03	-0.01
Attention-Seeking	0.25	-0.15	0.64	0.06	0.06	0.09
Cooperation	0.30	-0.20	-0.09	0.29	0.10	-0.36
Dominance	0.15	-0.09	0.44	0.14	0.01	0.05
Even-Tempered	0.22	-0.59	-0.07	0.29	0.11	-0.23
Intellectual Efficiency	0.16	-0.23	0.24	0.21	0.26	0.08
Non-Delinquency	0.14	-0.12	-0.26	0.43	0.01	-0.35
Optimism	0.24	-0.36	0.08	0.13	0.06	-0.23
Order	0.06	-0.06	-0.05	0.44	0.09	-0.05
Physical Conditioning	0.04	-0.05	0.17	0.02	-0.03	0.18
Self-Control	0.15	-0.25	-0.09	0.52	0.06	-0.36
Selflessness/ Generosity	0.24	-0.03	0.05	0.13	0.09	-0.33
Sociability	0.26	-0.07	0.57	-0.02	0.01	0.01
Tolerance	0.22	-0.16	0.11	0.13	0.37	-0.19

Note. N = 551. Agree = Agreeableness, Neur = Neuroticism, Extro = Extroversion, Cons = Conscientiousness, Open = Openness, Mach = Machiavellianism.

8.5.3 TAPAS and SDI Facets

For the SDI facets, the TAPAS scale of Achievement correlated with Team Player, Achievement Striving, Creative, and Self-Discipline. TAPAS Adjustment negatively correlated with Stress Under Pressure and Worry. TAPAS Attention Seeking correlated with Dominance Leader and High Intensity. TAPAS Dominance correlated with Reserved and Dominance Leader. TAPAS Even-Tempered correlated negatively with Temperamental and Angry Hostile. TAPAS Intellectual Efficiency correlated with Creative. TAPAS Order correlated with the SDI facet of Order. TAPAS Physical Conditioning correlated with Deliberation and Unconventional; and TAPAS Tolerance correlated with Cultured. The majority of these correlations provide some evidence indicating that the TAPAS and SDI facets are measuring the same or similar constructs. Each TAPAS scale also showed multiple zero to small sized correlations with SDI facets, which provides some evidence of discriminant validity.

Complete results are presented in the following tables.

Table 45. TAPAS and SDI Facets Uncorrected Correlations

TAPAS	Tea	SUP	Res	Ach	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc
Can	0.12	-0.22	0.07	0.14	0.18	-0.06	-0.03	-0.13	0.12	-0.10	-0.01	0.05	-0.00	-0.11	-0.02
Pers	0.05	-0.12	0.15	0.04	-0.01	0.03	0.05	-0.12	-0.03	-0.17	-0.05	0.11	-0.07	-0.08	0.03
Will	0.26	-0.25	-0.20	0.33	0.24	0.04	0.17	-0.12	0.38	0.20	-0.02	-0.06	0.08	-0.12	0.11
Ach	0.33	-0.23	-0.15	0.44	0.30	-0.17	0.17	-0.18	0.26	0.29	0.02	-0.15	0.20	-0.06	0.07
Adj	0.05	-0.48	-0.22	0.09	0.06	0.05	0.05	-0.28	0.18	0.02	-0.11	0.00	-0.05	-0.50	0.04
Att	0.09	-0.18	-0.44	0.12	0.11	0.11	0.17	-0.05	0.31	0.11	-0.00	-0.08	0.05	-0.14	0.21
Coop	0.16	-0.05	0.00	0.09	0.10	-0.21	0.28	-0.24	-0.07	0.14	0.07	-0.18	0.24	-0.02	-0.03
Dom	0.12	-0.16	-0.34	0.15	0.20	0.09	0.07	-0.03	0.50	0.07	-0.01	-0.03	0.07	-0.05	0.06
Eve	0.12	-0.29	-0.02	0.13	0.11	-0.15	0.22	-0.41	-0.03	0.10	0.00	-0.06	0.11	-0.23	-0.04
IntE	0.17	-0.27	-0.13	0.21	0.30	0.01	0.03	-0.13	0.28	0.11	0.06	-0.02	0.08	-0.15	-0.01
Non	0.17	-0.08	0.11	0.18	0.08	-0.23	0.06	-0.12	-0.07	0.12	0.01	-0.12	0.11	0.01	-0.14
Opt	0.07	-0.20	-0.14	0.08	0.08	-0.09	0.16	-0.17	0.09	0.01	-0.05	-0.18	0.08	-0.23	-0.02
Ord	0.09	-0.05	0.03	0.22	0.12	0.02	0.01	-0.05	0.05	0.57	0.11	-0.07	0.05	-0.04	-0.06
Phys	0.10	-0.09	-0.02	0.13	0.05	0.17	0.05	0.01	0.16	0.08	-0.03	0.09	-0.07	-0.04	0.09
SC	0.18	-0.17	-0.03	0.26	0.13	-0.15	0.06	-0.18	0.04	0.25	0.04	-0.13	0.09	-0.09	-0.05
Selfl	0.11	0.06	-0.03	0.09	0.07	-0.24	0.11	-0.08	-0.04	-0.01	0.04	-0.20	0.29	0.00	0.05
Soc	0.06	-0.09	-0.51	-0.00	0.12	0.09	0.20	-0.04	0.31	0.04	-0.05	-0.11	0.11	-0.07	0.14
Tol	0.13	-0.08	-0.04	0.13	0.18	-0.14	0.11	-0.12	-0.01	-0.02	0.16	-0.12	0.20	-0.09	-0.03

Note. N = 551. All correlations $\geq \pm 0.09$ are significant at $p < 0.05$. LTSH = Likelihood to Sexually Harass, Com = Communication, DM = Decision Making, LO = Leading Others, Pro = Professionalism, UD = Unethical Decision Making, Can Do = Can Do Composite, Pers = Persistence Composite, Will Do = Will Do Composite, Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, Selfl = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance.

Table 45 (continued). TAPAS and SDI Facets Uncorrected Correlations

TAPAS	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel	Img
Can	0.11	0.22	-0.05	0.13	-0.09	-0.17	0.08	-0.06	0.05	-0.01	-0.06	-0.04	0.09	0.03	-0.02
Pers	0.03	0.11	0.02	0.08	-0.17	-0.08	-0.03	-0.08	-0.04	-0.02	0.06	-0.01	-0.02	-0.06	-0.06
Will	0.30	0.09	-0.13	0.06	-0.09	0.05	0.13	-0.01	0.08	0.18	-0.06	0.11	0.25	0.14	-0.12
Ach	0.43	0.12	-0.25	0.01	-0.13	-0.05	0.25	0.07	-0.03	0.16	-0.31	-0.01	0.26	0.24	-0.12
Adj	0.08	0.07	-0.15	-0.05	-0.24	0.00	0.04	-0.04	0.13	0.18	0.05	0.16	0.10	0.04	-0.06
Att	0.06	-0.03	-0.02	-0.04	-0.02	0.40	0.02	0.01	0.29	0.25	0.12	0.28	0.22	0.20	0.10
Coop	0.24	0.04	-0.17	-0.20	-0.26	-0.07	0.22	0.14	-0.18	0.13	-0.22	-0.12	0.01	0.11	-0.06
Dom	0.14	-0.02	-0.06	0.02	0.01	0.08	0.05	-0.03	0.16	0.11	-0.02	0.15	0.22	0.10	-0.08
Eve	0.22	0.17	-0.18	-0.06	-0.47	-0.12	0.18	0.04	-0.05	0.12	-0.18	-0.08	0.05	0.02	-0.08
IntE	0.16	0.23	-0.09	0.13	-0.03	-0.01	0.14	0.08	0.17	0.12	-0.02	0.07	0.23	0.09	0.01
Non	0.26	0.02	-0.13	-0.11	-0.12	-0.17	0.23	0.02	-0.25	0.03	-0.47	-0.24	0.00	0.05	-0.10
Opt	0.12	0.10	-0.11	-0.11	-0.15	-0.03	0.11	0.01	0.01	0.18	-0.06	0.01	-0.00	0.11	-0.01
Ord	0.21	0.02	-0.11	0.06	-0.03	-0.05	0.24	0.11	-0.02	0.01	-0.13	-0.12	0.08	0.02	-0.09
Phys	0.06	0.03	0.04	0.11	0.00	0.07	-0.02	-0.06	0.07	0.06	0.14	0.10	0.11	-0.02	-0.08
SC	0.30	0.06	-0.24	-0.09	-0.14	-0.10	0.32	0.08	-0.16	0.03	-0.30	-0.23	0.04	0.03	-0.16
Selfl	0.10	-0.01	-0.14	-0.10	-0.07	0.03	0.11	0.20	-0.13	0.11	-0.14	-0.01	0.11	0.13	-0.05

TAPAS	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel	Img
Soc	0.02	-0.07	-0.03	-0.13	0.01	0.30	-0.05	0.03	0.21	0.29	0.07	0.28	0.22	0.13	0.05
Tol	0.12	0.17	-0.16	-0.01	-0.10	0.11	0.11	0.38	-0.00	0.12	-0.07	0.08	0.10	0.10	0.06

Note. N = 551. All correlations $\geq \pm 0.09$ are significant at $p < 0.05$. LTSH = Likelihood to Sexually Harass, Com = Communication, DM = Decision Making, LO = Leading Others, Pro = Professionalism, UD = Unethical Decision Making, Can Do = Can Do Composite, Pers = Persistence Composite, Will Do = Will Do Composite, Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, Selfl = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance.

Table 46. TAPAS and SDI Facets Correlations Corrected for Reliability Attenuation

TAPAS	Tea	SUP	Res	Ach	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc
Ach	0.48	-0.33	-0.21	0.63	0.43	-0.24	0.24	-0.26	0.37	0.41	0.03	-0.22	0.28	-0.08	0.10
Adj	0.07	-0.67	-0.30	0.12	0.08	0.07	0.07	-0.39	0.25	0.03	-0.16	0.00	-0.07	-0.67	0.05
Att	0.12	-0.24	-0.57	0.16	0.15	0.15	0.22	-0.07	0.40	0.14	0.00	-0.11	0.07	-0.18	0.27
Coop	0.22	-0.07	0.00	0.12	0.13	-0.28	0.37	-0.32	-0.09	0.18	0.10	-0.24	0.32	-0.03	-0.04
Dom	0.16	-0.21	-0.43	0.20	0.26	0.12	0.09	-0.04	0.64	0.09	-0.01	-0.04	0.09	-0.06	0.08
Eve	0.18	-0.43	-0.03	0.19	0.16	-0.22	0.32	-0.59	-0.04	0.14	0.00	-0.09	0.16	-0.33	-0.06
IntE	0.23	-0.37	-0.17	0.29	0.41	0.01	0.04	-0.18	0.38	0.15	0.08	-0.03	0.11	-0.20	-0.01
Non	0.24	-0.11	0.15	0.26	0.11	-0.33	0.08	-0.17	-0.10	0.17	0.01	-0.17	0.15	0.01	-0.19
Opt	0.11	-0.31	-0.21	0.13	0.13	-0.14	0.25	-0.26	0.14	0.02	-0.08	-0.28	0.12	-0.35	-0.03
Ord	0.12	-0.07	0.04	0.29	0.16	0.03	0.01	-0.07	0.06	0.73	0.15	-0.09	0.06	-0.05	-0.08
Phys	0.13	-0.12	-0.03	0.17	0.06	0.22	0.06	0.01	0.20	0.10	-0.04	0.12	-0.09	-0.05	0.11
SC	0.28	-0.26	-0.04	0.40	0.20	-0.23	0.09	-0.27	0.06	0.37	0.06	-0.20	0.14	-0.13	-0.07
Selfl	0.15	0.08	-0.04	0.12	0.09	-0.32	0.14	-0.11	-0.05	-0.01	0.05	-0.27	0.38	0.00	0.07
Soc	0.08	-0.11	-0.63	0.00	0.15	0.11	0.25	-0.05	0.38	0.05	-0.06	-0.14	0.14	-0.09	0.17
Tol	0.18	-0.11	-0.05	0.18	0.25	-0.19	0.15	-0.16	-0.01	-0.03	0.22	-0.16	0.27	-0.12	-0.04

Note. N = 551. Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, Selfl = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance, Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, Ach = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.

Table 46 (continued). TAPAS and SDI Facets Correlations Corrected for Reliability Attenuation

TAPAS	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel	Img
Ach	0.61	0.17	-0.35	0.01	-0.18	-0.07	0.35	0.10	-0.04	0.23	-0.45	-0.01	0.39	0.35	-0.17
Adj	0.11	0.09	-0.20	-0.07	-0.32	0.00	0.05	-0.05	0.19	0.25	0.07	0.23	0.14	0.06	-0.08
Att	0.08	-0.04	-0.03	-0.05	-0.03	0.52	0.03	0.01	0.39	0.33	0.16	0.39	0.30	0.27	0.13
Coop	0.32	0.05	-0.22	-0.27	-0.34	-0.09	0.29	0.18	-0.25	0.17	-0.30	-0.17	0.01	0.15	-0.08
Dom	0.18	-0.03	-0.08	0.03	0.01	0.10	0.06	-0.04	0.21	0.14	-0.03	0.20	0.30	0.13	-0.10
Eve	0.32	0.24	-0.26	-0.09	-0.67	-0.17	0.26	0.06	-0.08	0.17	-0.27	-0.12	0.08	0.03	-0.12

TAPAS	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel	Img
IntE	0.22	0.30	-0.12	0.18	-0.04	-0.01	0.19	0.11	0.24	0.16	-0.03	0.10	0.32	0.12	0.01
Non	0.37	0.03	-0.18	-0.16	-0.17	-0.24	0.32	0.03	-0.37	0.04	-0.68	-0.36	0.00	0.07	-0.14
Opt	0.19	0.15	-0.17	-0.18	-0.23	-0.05	0.17	0.02	0.02	0.28	-0.09	0.02	0.00	0.17	-0.02
Ord	0.27	0.03	-0.14	0.08	-0.04	-0.06	0.31	0.14	-0.03	0.01	-0.17	-0.16	0.11	0.03	-0.12
Phys	0.08	0.04	0.05	0.14	0.00	0.09	-0.03	-0.08	0.09	0.08	0.18	0.13	0.15	-0.03	-0.10
SC	0.46	0.09	-0.36	-0.14	-0.21	-0.15	0.48	0.12	-0.25	0.05	-0.46	-0.37	0.06	0.05	-0.25
Selfl	0.13	-0.01	-0.18	-0.14	-0.09	0.04	0.14	0.26	-0.18	0.15	-0.19	-0.01	0.15	0.18	-0.07
Soc	0.02	-0.08	-0.04	-0.17	0.01	0.37	-0.06	0.04	0.27	0.36	0.09	0.37	0.29	0.16	0.06
Tol	0.16	0.22	-0.21	-0.01	-0.13	0.15	0.15	0.51	0.00	0.16	-0.10	0.11	0.14	0.14	0.08

Note. N = 551. Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, Selfl = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance, Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, Ach = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.

8.5.4 TAPAS, NCAPS, SDI Facet Correlations Compared to Expected Mappings

Correlations were reviewed in light of the TAPAS, NCAPS, and SDI mapping results to assess whether they aligned with the conceptual mappings. Of the 27 expected mappings of SDI to TAPAS, correlations of .30 or above (or -.30 or below) were found for 15. Twelve mappings could not be examined because the TAPAS scales were not included in the dataset. Overall, the proportion of expected TAPAS-SDI correlations that met the threshold of $\pm .30$ was 100%, providing evidence of excellent construct validity.

For the NCAPS, of the 20 expected mappings to TAPAS, correlations of .30 or above (or -.30 or below) were found for 11. Nine mappings could not be examined because either the TAPAS or NCAPS scales were not included in the dataset. Overall, the proportion of expected TAPAS-NCAPS correlations that met the threshold of $\pm .30$ was 100%, providing evidence of excellent construct validity.

Full results for TAPAS mappings to both SDI and NCAPS are presented in the table below.

Table 47. TAPAS, NCAPS, and SDI Corrected Correlations Compared to Expected Mappings

TAPAS	SDI	Study 2 Corrected Correlation	NCAPS	Study 2 Corrected Correlation
Achievement	Achievement Striving	0.63	Achievement (except Persists Despite Obstacles facet)	0.57

TAPAS	SDI	Study 2 Corrected Correlation	NCAPS	Study 2 Corrected Correlation
	Self-Discipline	0.61	Dependability (ONLY Doesn't Procrastinate facet)	0.59
Adjustment	Stress Under Pressure (-)	-0.67	Self-Reliance (ONLY Self-Sufficient/Resourceful facet)	0.30
	Worry (-)	-0.67	Stress Tolerance	0.54
Adventure Seeking	Excitement Seeking	TAPAS scale not in dataset	None	
Aesthetics	Cultured	TAPAS scale not in dataset	None	
Consideration	Helpful Altruistic	TAPAS scale not in dataset	Empathy	NCAPS scale not in dataset
Cooperation	Pleasant	0.37	Social Orientation (ONLY Agreeable facet)	0.23
Depth*	Reflective	TAPAS scale not in dataset	Perceptiveness/Depth of Thought	NCAPS and TAPAS scale not in dataset
Dominance	Dominance Leader	0.64	Leadership Orientation	NCAPS scale not in dataset
	Reserved (-)	-0.43		
Even Tempered	Angry Hostile (-)	-0.67	Stress Tolerance (ONLY Accepts Criticism and Composure facets)	0.40
	Temperamental (-)	-0.59		
Ingenuity	Creative Spontaneous Variety	TAPAS scale not in dataset	Adaptability/Flexibility (ONLY Willing to Change Task/Project Approach facet)	TAPAS scale not in dataset
	Imagination	TAPAS scale not in dataset	Innovation	TAPAS scale not in dataset
Machiavellianism*	Influence Tactics	TAPAS scale not in dataset	None	
	Interpersonal Tactics	TAPAS scale not in dataset		
Non-Delinquency	Unconventional (-)	-0.68	Dutifulness/Integrity (ONLY Sense of Duty/Moral Obligations and Accepts Authority facets)	0.43
Optimism	Optimist	0.28	None	
Order	Deliberation	0.31	Attention to Detail (except Exacting/Precise facet)	0.50
	Order	0.73	Dependability (ONLY Orderly/Planful/Prioritizes facet)	0.36
Responsibility	Well-Adjusted (ONLY Dependability part of scale)	TAPAS scale not in dataset	Dependability (ONLY Reliable/Efficient with Time facet)	TAPAS scale not in dataset

TAPAS	SDI	Study 2 Corrected Correlation	NCAPS	Study 2 Corrected Correlation
			Dutifulness/Integrity (ONLY Honest/Trustworthy/Fulfills Obligations and Accepts Responsibility facets)	TAPAS scale not in dataset
Self-Control	Impulsiveness	TAPAS scale not in dataset	Dependability (ONLY Not Easily Distracted/Bored facet)	0.49
	Self-Discipline	0.46	Self-Control/Impulsivity (except Control Behaviors facet)	NCAPS scale not in dataset
Sociability	Reserved (-)	-0.63	Social Orientation (ONLY Affiliation facet)	0.45
Team Orientation	Independent (-)	TAPAS scale not in dataset	Social Orientation (ONLY Team Player facet)	TAPAS scale not in dataset

8.6 Correlational Analyses with Criterion Variables

The TAPAS, NCAPS, and SDI were evaluated in terms of their relationships with self-ratings of performance along several dimensions. Participants in this study completed an evaluation form regarding their performance in the areas of: likelihood to sexually harass, communication, decision making, leading others, professionalism, and unethical decision making. Ratings were provided on a scale of 1 to 5 scale. For the likelihood to sexually harass and unethical decisions making scales, participants completed scenario-based items describing situations in which elicit judgments about these constructs following guidance from Pryor (1987) and Detert, Trevino, and Sweitzer (2008). For the remaining four areas, participants completed ratings of using definitions established by Lentz, Horgen, Borman, Dullaghan, and Smith (2009). Definitions of the rating areas are provided in the table below.

Table 48. Definitions of Criterion Rating Areas

TAPAS	Rating Area Definition
Likelihood to Sexually Harass	This criterion measure was a modified version of the scenario-based Likelihood to Sexually Harass (LSH) scale (Pryor, 1987). This instrument includes scenarios related to sexual harassment.
Communication	Practicing meaningful two-way communication (i.e., speaking and writing clearly, listening attentively and clarifying information); providing timely and relevant information up and down the chain of command; tailoring presentations to the level of the audience; expressing opinions when appropriate; expressing oneself in a manner that produces a productive and harmonious environment; ability to evaluate the importance of information being communicated. (Lentz et al., 2009)
Decision Making	Managing resources efficiently and effectively; ensuring deadlines are met through planning, and effectively utilizing resources; gathering information, identifying risks and goals, and assessing available resources to complete projects on time and within budget; prioritizing tasks; sorting through large quantities of information efficiently; focusing on multiple tasks and requirements; making sound decisions; appropriately considering relevant sides of an issue; remaining focused and decisive in stressful situations. (Lentz et al., 2009)
Leading Other	Effectively building and leading individual and team activities; persuading, inspiring, and motivating others, regardless of their relative positions in the hierarchy; creating a sense of enthusiasm and purpose in own team; demonstrating a positive attitude, and team spirit to inspire subordinates; effectively adopting different leadership styles as appropriate to individuals and settings. (Lentz et al., 2009)
Professionalism	Displaying uncompromising commitment to the Air Force core values; always maintaining ethical principles and telling the truth, regardless of consequences; accepting responsibility for own and subordinates' actions; maintaining sharp military appearance and physical health/fitness; supporting Air Force mission and goals; having a thorough understanding of military regulations and initiatives and carrying them out in accordance with Air Force standards; following policies, regulations, and orders, and defending them to others; understanding the chain of command, and accepting and respecting the decisions of superiors; displaying appropriate courtesies to others; understanding how policies and actions fit into the overall mission scheme. (Lentz et al., 2009)
Unethical Decision Making	This criterion measure was a scenario-based, self-report unethical decision-making instrument that was based on the work of Detert et al. (2008). The instrument includes scenarios related to theft, work-related rule violations, dishonesty, and cheating.

8.6.1 TAPAS and Criterion Variables

Prior to conducting regression analyses, correlational analyses were conducted between the TAPAS, NCAPS, SDI, and the criterion related validity variables. Definitions of the criterion related validity variables are included in the table below. Given the large number of correlations produced in this set of analyses and the sample size, a threshold of $\pm .10$ was adopted as an indicator of a meaningful correlation.

The TAPAS results showed several correlations at or near zero across rating areas. Notable TAPAS scales that demonstrated the most robust correlations with multiple positive rating areas of Communication, Decision Making, Leading Others, and Professionalism included five of the 18 scales, including the Will Do Composite, Achievement, Even-Tempered, Intellectual Efficiency, and Self-Control. Other variables that negatively correlated with the undesirable rating areas of Likelihood to Sexually Harass and Unethical Decisions included Achievement, Non-Delinquency, and Self-Control. All of the TAPAS scales demonstrated at least one correlation with a rating area at or above the $\pm .10$ threshold. Results are presented in the following table. A table of correlations corrected for reliability attenuation are also presented.

Table 49. TAPAS and Criterion Variables Uncorrected Correlations

TAPAS	Can Do	Pers	Will Do	Ach	Adj	Att	Coop	Dom	Even	IntE	Non	Opt	Ord	Phys	SC	SelfI	Soc	Tol
LTSH	0.02	0.05	-0.03	-0.10	0.04	0.09	-0.00	0.03	-0.04	0.00	-0.08	-0.14	-0.06	0.06	-0.05	-0.09	0.01	-0.13
Com	0.12	0.02	0.22	0.20	0.20	0.19	0.08	0.22	0.18	0.27	0.05	0.06	0.12	0.08	0.20	-0.01	0.16	0.17
DM	0.14	0.10	0.29	0.28	0.19	0.11	0.09	0.14	0.20	0.22	0.16	0.09	0.18	0.14	0.25	0.08	0.03	0.13
LO	0.02	0.02	0.23	0.19	0.07	0.23	0.17	0.21	0.15	0.15	0.03	0.04	0.06	0.11	0.17	0.09	0.25	0.10
Pro	0.04	0.06	0.15	0.24	0.06	0.07	0.22	0.02	0.20	0.08	0.17	0.06	0.04	0.02	0.16	0.16	0.06	0.23
UD	-0.03	0.08	-0.10	-0.28	-0.01	0.09	-0.10	-0.03	-0.13	-0.07	-0.31	-0.13	-0.13	0.09	-0.26	-0.18	0.00	-0.16

Note: All correlations $\geq \pm 0.10$ are significant at $p < 0.05$. N = 551. LTSH = Likelihood to Sexually Harass, Com = Communication, DM = Decision Making, LO = Leading Others, Pro = Professionalism, UD = Unethical Decision Making, Can Do = Can Do Composite, Pers = Persistence Composite, Will Do = Will Do Composite, Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, SelfI = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance.

Table 50. TAPAS and Criterion Variables Correlations Corrected for Reliability Attenuation

TAPAS	Ach	Adj	Att	Coop	Dom	Even	IntE	Non	Opt	Ord	Phys	SC	SelfI	Soc	Tol
LTSH	-0.14	0.05	0.12	0.00	0.04	-0.06	0.00	-0.11	-0.22	-0.08	0.08	-0.08	-0.12	0.01	-0.18
Communication	0.30	0.29	0.27	0.11	0.30	0.28	0.39	0.08	0.10	0.17	0.11	0.33	-0.01	0.21	0.25
Decision Making	0.41	0.27	0.15	0.12	0.19	0.30	0.31	0.23	0.14	0.24	0.19	0.39	0.11	0.04	0.18
Leading Others	0.29	0.10	0.32	0.24	0.29	0.23	0.22	0.05	0.07	0.08	0.15	0.28	0.13	0.33	0.14
Professionalism	0.36	0.09	0.10	0.31	0.03	0.31	0.11	0.25	0.10	0.05	0.03	0.26	0.23	0.08	0.33
Unethical Decision Making	-0.42	-0.01	0.12	-0.14	-0.04	-0.20	-0.10	-0.46	-0.21	-0.18	0.12	-0.41	-0.25	0.00	-0.23

Note: N = 551. LTSH = Likelihood to Sexually Harass, Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, SelfI = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance.

8.6.2 NCAPS and Criterion Variables

For the NCAPS, notable scales that demonstrated the most robust correlations with multiple desirable rating areas of Communication, Decision Making, Leading Others, and Professionalism included five of the 10 scales including Stress Tolerance, Achievement, Adaptability/Flexibility, Dependability, and Vigilance. For the undesirable criterion variables of Likelihood to Sexually Harass and Unethical Decision Making, Dutifulness and Dependability demonstrated robust negative correlations. All NCAPS scales demonstrated at least one correlation with a rating area at or above the ± 0.10 threshold, with the majority exceeding ± 0.20 . Results are presented in the table below. Additionally, a table of results showing correlations corrected for reliability attenuation are presented.

Table 51. NCAPS and Criterion Variables Uncorrected Correlations

NCAPS	ST	AV	SO	ADF	WTL	DEP	ADL	DUT	SRL	VIG
LTSH	-0.02	-0.03	-0.08	-0.12	-0.09	-0.13	-0.10	-0.27	0.02	-0.11
Communication	0.28	0.35	0.19	0.33	0.26	0.31	0.24	0.21	0.13	0.31
Decision Making	0.34	0.40	0.11	0.33	0.29	0.48	0.37	0.32	0.17	0.37
Leading Others	0.30	0.30	0.32	0.34	0.23	0.30	0.20	0.21	0.05	0.27
Professionalism	0.36	0.29	0.17	0.30	0.24	0.33	0.24	0.35	0.02	0.27
Unethical Decision Making	-0.26	-0.29	-0.14	-0.28	-0.29	-0.40	-0.34	-0.41	-0.00	-0.33

Note. All correlations $\geq \pm 0.10$ are significant at $p < 0.05$. N = 551. LTSH = Likelihood to Sexually Harass, ST = Stress Tolerance, AV = Achievement, SO = Social Orientation, ADF = Adaptability/Flexibility, WTL = Willingness to Learn, DEP = Dependability, ADL = Attention to Detail, DUT = Dutifulness, SRL = Self-Reliance.

Table 52. NCAPS and Criterion Variables Correlations Corrected for Reliability Attenuation

NCAPS	ST	AV	SO	ADF	WTL	DEP	ADL	DUT	SRL	VIG
LTSH	-0.02	-0.03	-0.09	-0.13	-0.10	-0.14	-0.11	-0.30	0.02	-0.12
Communication	0.33	0.42	0.23	0.39	0.31	0.37	0.29	0.25	0.16	0.37
Decision Making	0.39	0.46	0.13	0.38	0.34	0.56	0.43	0.37	0.20	0.43
Leading Others	0.36	0.36	0.38	0.41	0.27	0.36	0.24	0.25	0.06	0.32
Professionalism	0.42	0.34	0.20	0.35	0.28	0.39	0.28	0.41	0.02	0.32
Unethical Decision Making	-0.30	-0.34	-0.16	-0.33	-0.34	-0.47	-0.40	-0.48	0.00	-0.38

Note. N = 551. LTSH = Likelihood to Sexually Harass, ST = Stress Tolerance, AV = Achievement, SO = Social Orientation, ADF = Adaptability/Flexibility, WTL = Willingness to Learn, DEP = Dependability, ADL = Attention to Detail, DUT = Dutifulness, SRL = Self-Reliance.

8.6.3 SDI Domains and Criterion Variables

For the SDI, the domains that demonstrated the most robust correlations with multiple desirable rating areas of Communication, Decision Making, Leading Others, and Professionalism included Agreeableness, Conscientiousness, and Neuroticism (negative). For the undesirable criterion

variables of Likelihood to Sexually Harass and Unethical Decision Making, Conscientiousness (negative) and Machiavellianism (positive) both were correlated respectably. All of the SDI domains demonstrated at least one correlation with a rating area at or above the ± 0.10 threshold, with the majority exceeding ± 0.20 . Results are presented in the following table. A table showing correlations corrected for reliability attenuation is also presented.

Table 53. SDI Domains and Criterion Variables Uncorrected Correlations

SDI	Agree	Neur	Extro	Cons	Open	Mach
LTSH	-0.18	0.16	0.01	-0.23	-0.10	0.22
Communication	0.45	-0.38	0.35	0.45	0.35	-0.09
Decision Making	0.43	-0.42	0.24	0.60	0.32	-0.19
Leading Others	0.53	-0.32	0.40	0.42	0.22	-0.15
Professionalism	0.50	-0.36	0.15	0.51	0.33	-0.27
Unethical Decisions	-0.27	0.35	0.03	-0.50	-0.13	0.42

Note. All correlations $\geq \pm 0.10$ are significant at $p < 0.05$. N = 551. LTSH = Likelihood to Sexually Harass, Agree = Agreeableness, Neur = Neuroticism, Extro = Extroversion, Cons = Conscientiousness, Open = Openness.

Table 54. SDI Domains and Criterion Variables Correlations Corrected for Reliability Attenuation

SDI	Agree	Neur	Extro	Cons	Open	Mach
LTSH	-0.19	0.17	0.01	-0.25	-0.11	0.24
Communication	0.52	-0.44	0.41	0.52	0.42	-0.11
Decision Making	0.48	-0.48	0.27	0.68	0.37	-0.22
Leading Others	0.62	-0.37	0.47	0.49	0.26	-0.18
Professionalism	0.57	-0.42	0.17	0.59	0.39	-0.32
Unethical Decisions	-0.31	0.40	0.03	-0.57	-0.15	0.49

Note. N = 551. LTSH = Likelihood to Sexually Harass, Agree = Agreeableness, Neur = Neuroticism, Extro = Extroversion, Cons = Conscientiousness, Open = Openness.

For the SDI, the facets demonstrated the most robust correlations with multiple desirable rating areas of Communication, Decision Making, Leading Others, and Professionalism included Team Player, Achievement, Creative, Temperamental (negative), Helpful-Altruistic, Self-Discipline, Deliberation, and Optimist. For the undesirable criterion variables of Likelihood to Sexually Harass and Unethical Decision Making, the variables of Interpersonal Tactics, Temperamental, Self-Discipline (negative), Envious, and Unconventional all correlated respectably. All of the SDI facets demonstrated at least one correlation with a rating area at or above the ± 0.10 threshold, with the majority exceeding ± 0.20 . Results are presented in the following table. A table showing correlations corrected for reliability attenuation is also presented.

Table 55. SDI Facets with Criterion Variables Uncorrected Correlations

Crit	Tea	SUP	Res	Ach	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc
LTS	-0.18	0.12	0.05	-0.13	-0.15	0.25	-0.10	0.18	0.01	-0.13	-0.03	0.09	-0.17	0.08	-0.02
Com	0.43	-0.40	-0.33	0.48	0.47	-0.10	0.32	-0.36	0.45	0.27	0.25	-0.04	0.36	-0.21	0.11
DM	0.45	-0.42	-0.17	0.58	0.45	-0.16	0.28	-0.39	0.31	0.41	0.24	-0.10	0.36	-0.22	0.08
LO	0.41	-0.28	-0.34	0.40	0.36	-0.05	0.47	-0.37	0.42	0.30	0.18	-0.11	0.38	-0.13	0.17
Pro	0.45	-0.30	-0.10	0.48	0.39	-0.27	0.40	-0.43	0.18	0.27	0.24	-0.12	0.44	-0.13	0.06
UD	-0.30	0.31	0.09	-0.34	-0.28	0.35	-0.20	0.38	-0.08	-0.28	-0.05	0.26	-0.24	0.19	-0.01

Note. All correlations $\geq \pm 0.09$ are significant at $p < 0.05$. N = 551. LTS = Likelihood to Sexually Harass, Com = Communication, DM = Decision Making, LO = Leading Others, Pro = Professionalism, UD = Unethical Decision Making, Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, Ach = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.

Table 55 (continued). SDI Facets with Criterion Variables Uncorrected Correlations

Crit	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel	Img
LTS	-0.20	-0.06	0.17	0.09	0.17	0.05	-0.20	-0.13	0.12	-0.11	0.26	0.07	-0.04	-0.16	0.02
Com	0.42	0.26	-0.27	0.01	-0.30	0.08	0.44	0.27	0.16	0.35	-0.20	0.07	0.28	0.27	-0.00
DM	0.56	0.24	-0.36	0.02	-0.37	0.04	0.56	0.27	0.01	0.35	-0.30	-0.00	0.33	0.23	-0.06
LO	0.41	0.10	-0.28	-0.13	-0.29	0.15	0.41	0.23	0.11	0.45	-0.16	0.12	0.31	0.27	-0.05
Pro	0.50	0.23	-0.33	-0.07	-0.36	0.03	0.49	0.32	-0.07	0.36	-0.33	-0.04	0.22	0.31	-0.01
UD	-0.46	-0.14	0.37	0.15	0.30	0.18	-0.40	-0.20	0.23	-0.16	0.51	0.23	-0.12	-0.14	0.22

Note. All correlations $\geq \pm 0.10$ are significant at $p < 0.05$. N = 551. LTS = Likelihood to Sexually Harass, Com = Communication, DM = Decision Making, LO = Leading Others, Pro = Professionalism, UD = Unethical Decision Making, Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, Ach = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.

Table 56. SDI Facets with Criterion Variables Corrected for Reliability Attenuation

Crit	Tea	SUP	Res	Ach	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc
LTS	-0.21	0.14	0.06	-0.15	-0.17	0.29	-0.11	0.20	0.01	-0.14	-0.03	0.10	-0.19	0.09	-0.02
Com	0.53	-0.49	-0.39	0.59	0.57	-0.12	0.38	-0.44	0.54	0.32	0.31	-0.05	0.43	-0.25	0.13
DM	0.54	-0.50	-0.20	0.69	0.53	-0.19	0.33	-0.46	0.36	0.47	0.29	-0.12	0.42	-0.25	0.09
LO	0.51	-0.34	-0.41	0.49	0.44	-0.06	0.56	-0.45	0.51	0.36	0.23	-0.14	0.46	-0.15	0.20
Pro	0.55	-0.36	-0.12	0.58	0.47	-0.33	0.47	-0.52	0.21	0.32	0.30	-0.15	0.52	-0.15	0.07
UD	-0.36	0.37	0.10	-0.41	-0.33	0.42	-0.23	0.45	-0.09	-0.33	-0.06	0.31	-0.28	0.22	-0.01

Note. N = 551. LTS = Likelihood to Sexually Harass, Com = Communication, DM = Decision Making, LO = Leading Others, Pro = Professionalism, UD = Unethical Decision Making, Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, Ach = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.

Table 56 (continued). SDI Facets with Criterion Variables Corrected for Reliability Attenuation

Crit	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel	Img
LTS	-0.23	-0.07	0.19	0.10	0.19	0.06	-0.22	-0.14	0.14	-0.12	0.30	0.08	-0.05	-0.18	0.02
Com	0.51	0.31	-0.32	0.01	-0.36	0.10	0.53	0.32	0.20	0.43	-0.25	0.09	0.35	0.33	0.00
DM	0.66	0.27	-0.42	0.02	-0.43	0.05	0.65	0.31	0.01	0.41	-0.36	0.00	0.40	0.27	-0.07
LO	0.50	0.12	-0.33	-0.16	-0.35	0.18	0.49	0.27	0.14	0.55	-0.20	0.15	0.39	0.33	-0.06
Pro	0.60	0.27	-0.39	-0.09	-0.42	0.04	0.58	0.38	-0.09	0.43	-0.40	-0.05	0.28	0.38	-0.01
UD	-0.54	-0.16	0.43	0.18	0.35	0.21	-0.47	-0.23	0.28	-0.19	0.61	0.29	-0.15	-0.17	0.26

Note. N = 551. LTS = Likelihood to Sexually Harass, Com = Communication, DM = Decision Making, LO = Leading Others, Pro = Professionalism, UD = Unethical Decision Making, Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, Ach = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.

8.6.4 Summary of Correlations for TAPAS, NCAPS, and SDI with Self-Ratings of Performance

As noted, the TAPAS, NCAPS, and SDI demonstrated at least some robust correlations with multiple performance areas, and all scales demonstrated at least one correlation meeting or exceeding the ± 0.10 threshold. In general, the pattern and magnitude of correlations were highest for SDI. This is likely due to the similarity of the response format used to measure the predictor and criterion (i.e., common method variance). That is, both the SDI predictor and criteria were assessed using a single-stimulus/rating scale approach where participants indicated their level of

agreement with descriptive statements about their personality and performance. Bias present in the predictor measure was likely also present in the criterion measure. The generally smaller pattern of correlations for the TAPAS and NCAPS is likely due to a difference in format in which the predictor and criteria were measured.

8.7 Multiple Regression Analyses for TAPAS, NCAPS, and SDI with Self-Ratings of Performance

Next, we conducted a series of multiple regression analyses to determine the combined influence of the TAPAS, NCAPS, and SDI in the prediction of the self-rating areas. This set of analyses permitted exploration of incremental validity to examine whether there was unique prediction captured by the NCAPS or SDI above and beyond the TAPAS and vice versa.

The first regression analysis was run on the full TAPAS model, NCAPS model, and SDI model for each of the six criterion variables of: Likelihood to Sexually Harass (LTSH), Communication, Decision Making, Leading Others, Professionalism, and Unethical Decisions.

Estimates reported in the following tables represent the strength of the relationship between each predictor and the criterion, such that if the predictor changed by one unit, the criterion would change by the value of the estimate.

8.7.1. Likelihood to Sexually Harass

The criterion variable of LTSH was significantly negatively predicted by the following TAPAS scales (in order of most to least predictive): Optimism and Tolerance. However, none of the predictors demonstrated a large positive prediction of LTSH. The overall prediction model predicted 7% of the variance associated with LTSH ($R^2 = .07$). Overall, these results indicate that TAPAS is not a robust predictor of LTSH.

For NCAPS, LTSH was significantly negatively predicted by Dutifulness and Achievement. The overall prediction model predicted 9% of the variance associated with LTSH. Overall, these results indicate that NCAPS is only a slightly better predictor of LTSH than TAPAS.

For the SDI domains, LTSH was significantly positively predicted by Machiavellianism and negatively predicted by Conscientiousness. The overall prediction model predicted 8% of the variance associated with LTSH. For the facets, no facet individually significantly predicted LTSH, but the overall model was significant and explained 12% of the variance associated with LTSH. This indicates the SDI at the facet level is the most robust predictor of LTSH.

Table 57. Likelihood to Sexually Harass TAPAS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.12		0.02	52.22	<0
Achievement	-0.05	-0.10	0.03	-1.84	0.07
Adjustment	0.04	0.06	0.03	1.18	0.24
Attention Seeking	0.04	0.08	0.02	1.45	0.15

	B	Beta	SE	t-value	Significance
Cooperation	0.03	0.07	0.03	1.33	0.19
Dominance	0.01	0.03	0.03	0.57	0.57
Even-Tempered	-0.01	-0.02	0.03	-0.46	0.65
Intellectual Efficiency	0.01	0.02	0.03	0.41	0.68
Non-Delinquency	-0.01	-0.02	0.03	-0.30	0.76
Optimism	-0.09	-0.14	0.03	-2.73	0.01
Order	-0.02	-0.05	0.02	-1.04	0.30
Physical Conditioning	0.04	0.08	0.02	1.60	0.11
Self-Control	-0.01	-0.01	0.03	-0.28	0.78
Selflessness	-0.01	-0.02	0.03	-0.45	0.65
Sociability	0.00	0.00	0.02	-0.07	0.94
Tolerance	-0.06	-0.12	0.03	-2.31	0.02
R	R²	SE	F	df	p-value
0.26	0.07	0.26	2.04	15, 425	0.01

Table 58. Likelihood to Sexually Harass NCAPS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.64		0.17	9.54	<0
Stress Tolerance	0.02	0.09	0.02	1.59	0.11
Achievement	0.05	0.12	0.02	2.01	0.05
Social Orientation	-0.01	-0.03	0.02	-0.59	0.55
Adaptability/Flexibility	-0.02	-0.08	0.02	-1.30	0.19
Willingness to Learn	0.00	0.00	0.02	-0.02	0.98
Dependability	-0.02	-0.07	0.02	-1.04	0.30
Attention to Detail	0.01	0.04	0.02	0.68	0.50
Dutifulness	-0.11	-0.29	0.02	-5.11	0.00
Self-Reliance	0.00	0.01	0.02	0.21	0.83
Vigilance	-0.01	-0.02	0.02	-0.36	0.72
R	R²	SE	F	df	p-value
0.30	0.09	0.25	4.25	10, 418	0.00

Table 59. Likelihood to Sexually Harass SDI Domain Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.21		0.17	6.96	<0
Agreeableness	-0.03	-0.06	0.04	-0.87	0.39
Neuroticism	0.00	0.01	0.02	0.20	0.84
Extroversion	0.02	0.04	0.03	0.81	0.42
Conscientiousness	-0.06	-0.13	0.03	-2.10	0.04
Openness	-0.01	-0.02	0.02	-0.36	0.72
Machiavellianism	0.07	0.14	0.03	2.42	0.02
R	R²	SE	F	df	p-value
0.28	0.08	0.25	6.31	6, 462	0.00

Table 60. Likelihood to Sexually Harass SDI Facets Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.06		0.21	5.11	<0
Team Player - A	0.01	0.02	0.04	0.19	0.85
Stress Under Pressure - N	0.00	-0.01	0.02	-0.17	0.87
Reserved - E	0.00	0.02	0.02	0.24	0.81
Achievement Striving - C	0.06	0.14	0.04	1.65	0.10
Creative – O	-0.03	-0.08	0.03	-0.98	0.33
Interpersonal Tactics - M	0.05	0.13	0.02	1.97	0.05
Pleasant - A	0.05	0.13	0.03	1.84	0.07
Temperamental - N	0.00	0.01	0.03	0.15	0.88
Dominance Leader - E	0.01	0.05	0.02	0.73	0.47
Order - C	-0.02	-0.05	0.02	-0.90	0.37
Reflective - O	0.03	0.08	0.03	1.25	0.21
Cynical View - M	-0.01	-0.03	0.02	-0.49	0.62
Helpful Altruistic - A	-0.02	-0.05	0.03	-0.73	0.47
Worry - N	0.00	0.01	0.02	0.19	0.85
Excitement Seeking - E	0.00	-0.01	0.02	-0.12	0.90
Self-Discipline - C	-0.03	-0.07	0.03	-0.94	0.35
Scientific Interest - O	0.00	0.02	0.01	0.36	0.72

	B	Beta	SE	t-value	Significance
Envious - M	-0.01	-0.04	0.02	-0.70	0.49
Independent - A	0.01	0.03	0.02	0.48	0.63
Angry Hostile - N	0.01	0.05	0.03	0.57	0.57
High Intensity - E	0.01	0.03	0.02	0.49	0.62
Deliberation - C	-0.03	-0.07	0.03	-0.97	0.33
Cultured - O	-0.02	-0.06	0.02	-0.97	0.33
Influence Tactics - M	0.00	0.00	0.02	0.05	0.96
Optimist - A	-0.02	-0.04	0.02	-0.68	0.50
Unconventional - C	0.04	0.11	0.02	1.58	0.11
Spontaneous Variety - E	0.00	-0.01	0.02	-0.11	0.92
Activity - E	-0.01	-0.01	0.02	-0.24	0.81
Well Adjusted - A	-0.06	-0.11	0.04	-1.59	0.11
Imagination - O	0.01	0.02	0.02	0.39	0.70
R	R²	SE	F	df	p-value
0.34	0.12	0.25	1.90	30, 438	0.00

8.7.2 Communication

The Communication criterion was significantly positively predicted by several TAPAS scales (in order of most to least predictive): Tolerance, Self-Control, Dominance, Attention Seeking, Even-Tempered, and Intellectual Efficiency. Selflessness/Generosity significantly negatively predicted Communication. The overall prediction model was statistically significant and robust ($R^2 = .21$).

For the NCAPS, Communication was significantly predicted by Achievement and Adaptability/Flexibility. The overall model predicted 18% of the variance associated with Communication. Overall, these results indicate that the TAPAS is a better predictor of Communication than NCAPS.

For the SDI domains, Communication was significantly predicted by Conscientiousness, Extroversion, Neuroticism (-), Openness, and Machiavellianism. The overall prediction model predicted 33% of the variance associated with Communication. For the facets, Reflective, Dominance Leader, Reserved (-), Achievement Striving, Deliberation, Stress under Pressure (-), and Order (-) significantly predicted Communication. The overall model was significant and explained 44% of the variance associated with Communication. This indicates the SDI at the facet level was the most robust predictor of Communication.

Table 61. Communication TAPAS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	3.90		0.04	92.53	<0
Achievement	0.09	0.07	0.06	1.55	0.12
Adjustment	0.09	0.07	0.06	1.56	0.12
Attention Seeking	0.16	0.15	0.05	3.32	0.00
Cooperation	0.02	0.02	0.05	0.42	0.68
Dominance	0.17	0.14	0.05	3.36	0.00
Even-Tempered	0.16	0.12	0.06	2.75	0.01
Intellectual Efficiency	0.13	0.11	0.05	2.53	0.01
Non-Delinquency	0.00	0.00	0.05	-0.09	0.93
Optimism	-0.04	-0.03	0.06	-0.61	0.54
Order	0.07	0.06	0.05	1.46	0.14
Physical Conditioning	0.02	0.01	0.05	0.33	0.74
Self-Control	0.19	0.13	0.06	3.06	0.00
Selflessness	-0.14	-0.10	0.06	-2.24	0.03
Sociability	0.06	0.05	0.05	1.15	0.25
Tolerance	0.20	0.17	0.05	3.98	0.00
R	R²	SE	F	df	p-value
0.46	0.21	0.55	9.04	15, 501	0.00

Table 62. Communication NCAPS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.16		0.35	3.27	<0
Stress Tolerance	0.05	0.07	0.03	1.51	0.13
Achievement	0.14	0.16	0.05	2.96	0.00
Social Orientation	0.03	0.04	0.04	0.88	0.38
Adaptability/Flexibility	0.10	0.14	0.04	2.68	0.01
Willingness to Learn	0.01	0.02	0.04	0.38	0.71
Dependability	0.04	0.06	0.04	0.92	0.36
Attention to Detail	-0.01	-0.01	0.04	-0.18	0.86
Dutifulness	0.01	0.01	0.04	0.20	0.85
Self-Reliance	0.03	0.04	0.04	0.84	0.40
Vigilance	0.06	0.09	0.04	1.62	0.11
R	R²	SE	F	df	p-value
0.43	0.18	0.56	10.95	10, 487	0.00

Table 63. Communication SDI Domains Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.30		0.33	3.98	<0
Agreeableness	0.03	0.03	0.07	0.47	0.64
Neuroticism	-0.21	-0.22	0.04	-5.05	0.00
Extroversion	0.25	0.22	0.05	5.16	0.00
Conscientiousness	0.29	0.26	0.06	5.26	0.00
Openness	0.16	0.15	0.05	3.53	0.00
Machiavellianism	0.12	0.09	0.06	2.16	0.03
<i>R</i>	<i>R</i> ²	<i>SE</i>	<i>F</i>	<i>df</i>	p-value
0.58	0.33	0.51	44.72	6, 541	0.00

Table 64. Communication SDI Facets Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	2.21		0.37	5.99	<0
Team Player - A	0.10	0.08	0.08	1.22	0.22
Stress Under Pressure - N	-0.09	-0.11	0.04	-2.13	0.03
Reserved - E	-0.13	-0.19	0.03	-3.96	0.00
Achievement Striving - C	0.13	0.13	0.06	2.12	0.03
Creative - O	0.02	0.02	0.05	0.29	0.77
Interpersonal Tactics - M	0.05	0.06	0.04	1.24	0.22
Pleasant - A	-0.02	-0.02	0.05	-0.48	0.63
Temperamental - N	0.00	0.00	0.05	-0.04	0.97
Dominance Leader - E	0.15	0.21	0.03	4.25	0.00
Order - C	-0.09	-0.12	0.04	-2.58	0.01
Reflective - O	0.15	0.16	0.04	3.28	0.00
Cynical View - M	0.05	0.06	0.04	1.43	0.15
Helpful Altruistic - A	0.07	0.07	0.05	1.43	0.15
Worry - N	-0.01	-0.02	0.03	-0.50	0.62
Excitement Seeking - E	-0.02	-0.03	0.03	-0.88	0.38
Self-Discipline - C	0.04	0.04	0.05	0.76	0.45
Scientific Interest - O	0.04	0.07	0.02	1.68	0.09
Envious - M	-0.03	-0.04	0.03	-0.94	0.35
Independent - A	-0.01	-0.01	0.04	-0.15	0.88
Angry Hostile - N	-0.03	-0.04	0.04	-0.64	0.52
High Intensity - E	0.00	0.01	0.03	0.13	0.90
Deliberation - C	0.13	0.16	0.05	2.81	0.01
Cultured - O	0.04	0.05	0.03	1.29	0.20
Influence Tactics - M	0.03	0.04	0.04	0.91	0.36
Optimist - A	0.00	0.00	0.04	-0.06	0.95
Unconventional - C	0.00	0.01	0.04	0.12	0.91
Spontaneous Variety - E	0.04	0.04	0.04	1.04	0.30
Activity - E	-0.05	-0.06	0.04	-1.44	0.15
Well Adjusted - A	-0.10	-0.07	0.07	-1.44	0.15
Imagination - O	-0.05	-0.07	0.04	-1.52	0.13
<i>R</i>	<i>R</i> ²	<i>SE</i>	<i>F</i>	<i>df</i>	p-value
0.66	0.44	0.47	13.43	30, 517	0.00

8.7.3. Decision Making

Decision Making was significantly positively predicted by the TAPAS scales: Self-Control, Achievement, Attention Seeking, Even Tempered, Order, Tolerance, Adjustment, and Physical Conditioning. It was not significantly negatively predicted by any of the TAPAS scales. The overall prediction model was statistically significant and robust ($R^2 = 0.20$).

For the NCAPS, Decision Making was significantly predicted by Dependability, Achievement, Stress Tolerance, and Adaptability/Flexibility. The overall prediction model accounted for 29% of the variance associated with Decision Making. Overall, these results indicate that the NCAPS is a better predictor of Decision Making than TAPAS.

For the SDI domains, Decision Making was significantly predicted by Conscientiousness, Neuroticism (-), Extroversion, and Openness. The overall prediction model accounted for 41% of the variance associated with Decision Making. For the facets, Self-Discipline, Deliberation, Well-Adjusted (-), and Pleasant (-) significantly predicted Decision Making. The overall model was significant and explained 48% of the variance associated with Decision Making. This indicates the SDI at the facet level was the most robust predictor of Decision Making.

Table 65. Decision Making TAPAS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	4.00		0.04	102.05	<0
Achievement	0.15	0.13	0.05	2.74	0.01
Adjustment	0.12	0.10	0.05	2.16	0.03
Attention Seeking	0.14	0.14	0.05	3.01	0.00
Cooperation	-0.01	-0.01	0.05	-0.29	0.77
Dominance	0.07	0.07	0.05	1.50	0.13
Even-Tempered	0.14	0.12	0.05	2.65	0.01
Intellectual Efficiency	0.06	0.06	0.05	1.28	0.20
Non-Delinquency	0.08	0.07	0.05	1.58	0.12
Optimism	-0.01	-0.01	0.06	-0.16	0.88
Order	0.13	0.12	0.04	2.88	0.00
Physical Conditioning	0.09	0.09	0.04	2.09	0.04
Self-Control	0.17	0.13	0.06	2.90	0.00
Selflessness	0.01	0.01	0.06	0.25	0.80
Sociability	-0.07	-0.07	0.05	-1.58	0.11
Tolerance	0.13	0.12	0.05	2.74	0.01
R	R²	SE	F	df	p-value
0.45	0.20	0.51	8.55	15, 501	0.00

Table 66. Decision Making NCAPS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.23		0.31	4.01	<0
Stress Tolerance	0.08	0.12	0.03	2.69	0.01
Achievement	0.09	0.11	0.04	2.24	0.03
Social Orientation	-0.06	-0.08	0.03	-1.78	0.08
Adaptability/Flexibility	0.07	0.10	0.03	2.09	0.04
Willingness to Learn	0.00	-0.01	0.03	-0.14	0.89
Dependability	0.14	0.24	0.03	4.24	0.00
Attention to Detail	0.04	0.06	0.03	1.16	0.25
Dutifulness	0.06	0.07	0.04	1.46	0.14
Self-Reliance	0.03	0.04	0.03	1.06	0.29
Vigilance	0.03	0.05	0.03	0.89	0.37
R	R²	SE	F	df	p-value
0.54	0.29	0.48	20.20	10, 487	0.00

Table 67. Decision Making SDI Domains Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.76		0.28	6.23	<0
Agreeableness	-0.10	-0.08	0.06	-1.53	0.13
Neuroticism	-0.16	-0.19	0.04	-4.67	0.00
Extroversion	0.14	0.13	0.04	3.37	0.00
Conscientiousness	0.53	0.52	0.05	11.06	0.00
Openness	0.08	0.08	0.04	2.13	0.03
Machiavellianism	0.08	0.07	0.05	1.63	0.10
R	R²	SE	F	df	p-value
0.64	0.41	0.44	61.47	6, 541	0.00

Table 68. Decision Making SDI Facets Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	2.25		0.33	6.89	<0
Team Player - A	0.05	0.04	0.07	0.69	0.49
Stress Under Pressure - N	-0.06	-0.08	0.04	-1.53	0.13
Reserved - E	-0.03	-0.05	0.03	-1.11	0.27
Achievement Striving - C	0.19	0.21	0.06	3.47	0.00
Creative - O	-0.05	-0.05	0.05	-0.98	0.33
Interpersonal Tactics - M	0.05	0.07	0.04	1.47	0.14
Pleasant - A	-0.11	-0.12	0.04	-2.43	0.02
Temperamental - N	0.01	0.02	0.05	0.28	0.78
Dominance Leader - E	0.04	0.07	0.03	1.44	0.15
Order - C	-0.02	-0.02	0.03	-0.51	0.61
Reflective - O	0.08	0.09	0.04	1.95	0.05
Cynical View - M	0.01	0.02	0.03	0.41	0.68
Helpful Altruistic - A	0.02	0.02	0.04	0.36	0.72
Worry - N	-0.02	-0.03	0.03	-0.65	0.51

	B	Beta	SE	t-value	Significance
Excitement Seeking - E	-0.01	-0.02	0.02	-0.59	0.56
Self-Discipline - C	0.21	0.24	0.05	4.40	0.00
Scientific Interest - O	0.01	0.02	0.02	0.55	0.58
Envious - M	-0.04	-0.06	0.03	-1.32	0.19
Independent - A	0.00	0.01	0.03	0.15	0.88
Angry Hostile - N	-0.05	-0.07	0.04	-1.29	0.20
High Intensity - E	0.03	0.04	0.02	1.15	0.25
Deliberation - C	0.17	0.22	0.04	4.10	0.00
Cultured - O	0.03	0.04	0.03	1.02	0.31
Influence Tactics - M	-0.03	-0.04	0.03	-0.83	0.41
Optimist - A	0.06	0.08	0.04	1.62	0.11
Unconventional - C	0.02	0.02	0.04	0.47	0.64
Spontaneous Variety - E	0.04	0.04	0.03	1.08	0.28
Activity - E	0.02	0.03	0.03	0.66	0.51
Well Adjusted – A	-0.15	-0.13	0.06	-2.60	0.01
Imagination - O	-0.03	-0.04	0.03	-0.84	0.40
R	R²	SE	F	df	p-value
0.69	0.48	0.42	15.64	30, 517	0.00

8.7.4 Leading Others

The Leading Others criterion was significantly positively predicted by the following TAPAS scales: Attention Seeking, Sociability, Self-Control, Even-Tempered, Cooperation, and Dominance. It was not significantly negatively predicted by any of the variables. The overall prediction model was statistically significant and meets the threshold for a small effect size ($R^2 = .19$).

For the NCAPS, Leading Others was significantly predicted by Social Orientation, Adaptability/Flexibility, Achievement, and Stress Tolerance. The overall prediction model accounted for 21% of the variance associated with Leading Others. Overall, these results indicate that the NCAPS was a slightly better predictor of Leading Others than the TAPAS.

For the SDI domains, Leading Others was significantly predicted by Agreeableness, Extroversion, and Conscientiousness. The overall prediction model accounted for 33% of the variance associated with Leading Others. For the facets, Pleasant, Well-Adjusted (-), Temperamental (-), Dominance Leader, Interpersonal Tactics, Deliberation, Self-Discipline, Reflective, and Optimist significantly predicted Leading Others. The overall model was significant and explained 44% of the variance associated with Leading Others. This indicates the SDI at the facet level was the most robust predictor of Leading Others.

Table 69. Leading Others TAPAS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	4.00		0.05	87.41	<0
Achievement	0.09	0.07	0.06	1.47	0.14
Adjustment	-0.06	-0.04	0.06	-0.93	0.35
Attention Seeking	0.21	0.19	0.05	4.04	0.00
Cooperation	0.16	0.12	0.06	2.78	0.01
Dominance	0.15	0.12	0.05	2.70	0.01
Even-Tempered	0.17	0.12	0.06	2.62	0.01
Intellectual Efficiency	0.04	0.03	0.06	0.72	0.47
Non-Delinquency	-0.03	-0.03	0.06	-0.60	0.55
Optimism	-0.04	-0.02	0.07	-0.54	0.59
Order	0.00	0.00	0.05	0.07	0.94
Physical Conditioning	0.08	0.06	0.05	1.51	0.13
Self-Control	0.18	0.12	0.07	2.63	0.01
Selflessness	-0.03	-0.02	0.07	-0.37	0.71
Sociability	0.18	0.15	0.05	3.33	0.00
Tolerance	0.09	0.07	0.05	1.73	0.08
R	R²	SE	F	df	p-value
0.44	0.19	0.60	7.84	15, 497	0.00

Table 70. Leading Others NCAPS Criterion Related Validity

	Estimate		SE	t-value	Significance
(Intercept)	1.08		0.38	2.85	<0
Stress Tolerance	0.08	0.11	0.03	2.33	0.02
Achievement	0.10	0.11	0.05	1.97	0.05
Social Orientation	0.17	0.19	0.04	4.31	0.00
Adaptability/Flexibility	0.11	0.15	0.04	2.86	0.00
Willingness to Learn	-0.02	-0.03	0.04	-0.57	0.57
Dependability	0.07	0.10	0.04	1.63	0.10
Attention to Detail	-0.03	-0.04	0.04	-0.65	0.51
Dutifulness	0.00	0.00	0.05	0.08	0.94
Self-Reliance	-0.01	-0.01	0.04	-0.32	0.75
Vigilance	0.03	0.04	0.04	0.71	0.48
R	R²	SE	F	df	p-value
0.45	0.21	0.59	12.45	10, 483	0.00

Table 71. Leading Others SDI Domains Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	0.78		0.35	2.21	<0
Agreeableness	0.39	0.28	0.08	4.95	0.00
Neuroticism	-0.07	-0.07	0.04	-1.65	0.10
Extroversion	0.30	0.24	0.05	5.68	0.00
Conscientiousness	0.22	0.19	0.06	3.74	0.00
Openness	-0.05	-0.04	0.05	-1.06	0.29
Machiavellianism	0.01	0.00	0.06	0.09	0.93
R	R²	SE	F	df	p-value
0.57	0.33	0.54	43.66	6, 536	0.00

Table 72. Leading Others SDI Facets Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.24		0.39	3.15	<0
Team Player - A	0.11	0.08	0.08	1.29	0.20
Stress Under Pressure - N	0.08	0.09	0.05	1.76	0.08
Reserved - E	-0.06	-0.08	0.03	-1.65	0.10
Achievement Striving - C	0.05	0.04	0.07	0.70	0.49
Creative - O	-0.08	-0.08	0.06	-1.41	0.16
Interpersonal Tactics - M	0.14	0.16	0.04	3.20	0.00
Pleasant - A	0.20	0.20	0.05	3.80	0.00
Temperamental - N	-0.17	-0.18	0.06	-2.92	0.00
Dominance Leader - E	0.16	0.21	0.04	4.30	0.00
Order - C	-0.03	-0.04	0.04	-0.86	0.39
Reflective - O	0.10	0.10	0.05	2.02	0.04
Cynical View - M	0.00	0.00	0.04	0.10	0.92
Helpful Altruistic - A	0.07	0.06	0.05	1.28	0.20
Worry - N	0.01	0.02	0.03	0.38	0.71
Excitement Seeking - E	0.00	0.00	0.03	0.08	0.94
Self-Discipline - C	0.12	0.12	0.06	2.03	0.04
Scientific Interest - O	-0.02	-0.03	0.03	-0.63	0.53
Envious - M	-0.06	-0.08	0.04	-1.69	0.09
Independent - A	-0.07	-0.08	0.04	-1.88	0.06
Angry Hostile - N	0.05	0.06	0.05	1.02	0.31
High Intensity - E	0.02	0.03	0.03	0.69	0.49
Deliberation - C	0.13	0.14	0.05	2.57	0.01
Cultured - O	0.03	0.04	0.03	0.97	0.33
Influence Tactics - M	0.00	0.00	0.04	-0.10	0.92
Optimist - A	0.10	0.10	0.05	2.16	0.03
Unconventional - C	0.02	0.02	0.04	0.46	0.65
Spontaneous Variety - E	0.06	0.07	0.04	1.59	0.11
Activity - E	-0.01	-0.01	0.04	-0.14	0.89

	B	Beta	SE	t-value	Significance
Well Adjusted – A	-0.17	-0.13	0.07	-2.46	0.01
Imagination - O	-0.04	-0.05	0.04	-1.01	0.31
R	R²	SE	F	df	p-value
0.66	0.44	0.51	13.46	30, 512	0.00

8.7.5 Professionalism

Professionalism was significantly positively predicted by the following TAPAS scales: Tolerance, Achievement, Even-Tempered, Cooperation, and Attention-Seeking. It was not significantly negatively predicted by any of the TAPAS scales. The overall prediction model was statistically significant and meets the threshold for a small effect ($R^2 = .17$).

For the NCAPS, Professionalism was significantly predicted by Dutifulness, Stress Tolerance, Adaptability/Flexibility, and Dependability. The overall prediction model accounted for 22% of the variance associated with Professionalism. Overall, these results indicate that the NCAPS was a slightly better predictor of Professionalism than TAPAS.

For the SDI domains, Professionalism was significantly predicted by Agreeableness, Conscientiousness, and Openness. The overall prediction model accounted for 32% of the variance associated with Professionalism. For the facets, Self-Discipline, Temperamental (-), Deliberation, Order (-), and Cultured significantly predicted Professionalism. The overall model was significant and explained 38% of the variance associated with Professionalism. This indicates the SDI at the facet level was the most robust predictor of Professionalism.

Table 73. Professionalism TAPAS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	4.25		0.04	114.67	<0
Achievement	0.19	0.17	0.05	3.61	0.00
Adjustment	0.02	0.02	0.05	0.42	0.67
Attention Seeking	0.10	0.11	0.04	2.45	0.01
Cooperation	0.11	0.11	0.05	2.52	0.01
Dominance	-0.03	-0.03	0.04	-0.67	0.50
Even-Tempered	0.12	0.11	0.05	2.36	0.02
Intellectual Efficiency	-0.04	-0.04	0.05	-0.77	0.44
Non-Delinquency	0.07	0.08	0.05	1.63	0.10
Optimism	-0.04	-0.03	0.05	-0.76	0.45
Order	-0.01	-0.01	0.04	-0.13	0.90
Physical Conditioning	0.01	0.01	0.04	0.33	0.74
Self-Control	0.06	0.05	0.05	1.07	0.28
Selflessness	0.05	0.04	0.06	0.92	0.36
Sociability	0.00	0.00	0.04	0.02	0.98
Tolerance	0.21	0.20	0.04	4.64	0.00
R	R²	SE	F	df	p-value
0.41	0.17	0.48	6.52	15,494	0.00

Table 74. Professionalism NCAPS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	2.14		0.30	7.12	<0
Stress Tolerance	0.12	0.21	0.03	4.40	0.00
Achievement	0.04	0.05	0.04	1.02	0.31
Social Orientation	-0.01	-0.01	0.03	-0.24	0.81
Adaptability/Flexibility	0.07	0.12	0.03	2.26	0.02
Willingness to Learn	-0.01	-0.02	0.03	-0.40	0.69
Dependability	0.07	0.13	0.03	2.22	0.03
Attention to Detail	-0.03	-0.05	0.03	-0.86	0.39
Dutifulness	0.15	0.19	0.04	3.96	0.00
Self-Reliance	-0.04	-0.06	0.03	-1.38	0.17
Vigilance	0.00	0.00	0.03	0.00	1.00
R	R²	SE	F	df	p-value
0.47	0.22	0.47	13.44	10,480	0.00

Table 75. Professionalism SDI Domains Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	2.27		0.28	8.04	0.00
Agreeableness	0.27	0.24	0.06	4.27	0.00
Neuroticism	-0.07	-0.08	0.04	-1.89	0.06
Extroversion	-0.02	-0.02	0.04	-0.57	0.57
Conscientiousness	0.25	0.27	0.05	5.27	0.00
Openness	0.08	0.09	0.04	2.13	0.03
Machiavellianism	-0.05	-0.04	0.05	-0.98	0.33
R	R²	SE	F	df	p-value
0.57	0.32	0.43	42.36	6,533	0.00

Table 76. Professionalism SDI Facets Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	2.41		0.33	7.26	0.00
Team Player - A	0.01	0.01	0.07	0.17	0.87
Stress Under Pressure - N	0.02	0.03	0.04	0.50	0.62
Reserved - E	0.03	0.06	0.03	1.20	0.23
Achievement Striving - C	0.09	0.11	0.06	1.57	0.12
Creative - O	-0.08	-0.10	0.05	-1.57	0.12
Interpersonal Tactics - M	0.03	0.05	0.04	0.88	0.38
Pleasant - A	0.06	0.07	0.05	1.28	0.20
Temperamental - N	-0.14	-0.19	0.05	-2.82	0.00
Dominance Leader - E	0.04	0.06	0.03	1.20	0.23
Order - C	-0.10	-0.14	0.03	-2.87	0.00
Reflective - O	0.03	0.04	0.04	0.69	0.49
Cynical View - M	0.00	0.00	0.03	0.11	0.91
Helpful Altruistic - A	0.09	0.10	0.05	1.85	0.07
Worry - N	0.01	0.02	0.03	0.51	0.61
Excitement Seeking - E	-0.03	-0.04	0.02	-1.08	0.28
Self-Discipline - C	0.17	0.21	0.05	3.50	0.00

	B	Beta	SE	t-value	Significance
Scientific Interest - O	0.01	0.03	0.02	0.59	0.56
Envious - M	-0.01	-0.02	0.03	-0.43	0.67
Independent - A	-0.02	-0.03	0.03	-0.62	0.53
Angry Hostile - N	0.02	0.04	0.04	0.61	0.54
High Intensity - E	0.02	0.04	0.02	0.99	0.32
Deliberation - C	0.13	0.18	0.04	3.10	0.00
Cultured - O	0.06	0.09	0.03	2.08	0.04
Influence Tactics - M	-0.03	-0.04	0.03	-0.81	0.42
Optimist - A	0.05	0.07	0.04	1.34	0.18
Unconventional - C	-0.02	-0.03	0.04	-0.66	0.51
Spontaneous Variety - E	0.02	0.03	0.03	0.59	0.56
Activity - E	0.00	0.01	0.03	0.13	0.90
Well Adjusted - A	-0.02	-0.02	0.06	-0.29	0.77
Imagination - O	-0.01	-0.02	0.03	-0.36	0.72
R	R²	SE	F	df	p-value
0.62	0.38	0.42	10.57	30,509	0.00

8.7.6 Unethical Decisions

Finally, the undesirable criterion of Unethical Decisions was significantly positively predicted by TAPAS Physical Conditioning. It was significantly, negatively predicted by Achievement, Self-Control, Non-Delinquency, and Tolerance. The overall prediction model was statistically significant and robust ($R^2 = .21$).

For NCAPS, Unethical Decisions was significantly predicted by Dutifulness (-) and Dependability (-). The overall prediction model accounted for 24% of the variance associated with Unethical Decisions. Overall, these results indicate that the NCAPS is a slightly better predictor of Unethical Decisions than the TAPAS.

For the SDI domains, Unethical Decisions was significantly predicted by Conscientiousness (-), Machiavellianism, and Neuroticism. The overall prediction model predicted 31% of the variance associated with Unethical Decisions. For the facets, Unconventional, Self-Discipline (-), Imagination, and Cultured (-) significantly predicted Unethical Decisions. The overall model was significant and explained 38% of the variance associated with Unethical Decisions. This indicates the SDI at the facet level was the most robust predictor of Unethical Decisions.

Table 77. Unethical Decisions TAPAS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	2.00		0.04	50.86	<0
Achievement	-0.24	-0.20	0.05	-4.30	0.00
Adjustment	0.00	0.00	0.06	0.08	0.93
Attention Seeking	0.04	0.04	0.05	0.97	0.33
Cooperation	0.06	0.05	0.05	1.17	0.24
Dominance	0.00	0.00	0.05	0.09	0.93
Even-Tempered	-0.03	-0.03	0.05	-0.59	0.56
Intellectual Efficiency	0.03	0.03	0.05	0.64	0.53
Non-Delinquency	-0.19	-0.18	0.05	-3.96	0.00
Optimism	-0.10	-0.08	0.06	-1.83	0.07
Order	-0.07	-0.07	0.04	-1.59	0.11
Physical Conditioning	0.14	0.13	0.04	3.09	0.00
Self-Control	-0.20	-0.15	0.06	-3.42	0.00
Selflessness	-0.10	-0.07	0.06	-1.68	0.09
Sociability	0.00	0.00	0.05	-0.07	0.95
Tolerance	-0.12	-0.11	0.05	-2.57	0.01
R	R²	SE	F	df	p-value
0.46	0.21	0.52	8.91	15, 502	0.00

Table 78. Unethical Decisions NCAPS Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	4.36		0.32	13.80	<0
Stress Tolerance	-0.04	-0.06	0.03	-1.30	0.19
Achievement	0.00	0.00	0.04	0.09	0.93
Social Orientation	0.03	0.03	0.03	0.78	0.44
Adaptability/Flexibility	-0.05	-0.07	0.03	-1.36	0.18
Willingness to Learn	-0.03	-0.04	0.03	-0.74	0.46
Dependability	-0.10	-0.17	0.04	-2.95	0.00
Attention to Detail	-0.04	-0.06	0.03	-1.17	0.24
Dutifulness	-0.19	-0.23	0.04	-4.85	0.00
Self-Reliance	0.06	0.08	0.03	1.82	0.07
Vigilance	-0.04	-0.07	0.03	-1.24	0.22
<i>R</i>	<i>R</i> ²	<i>SE</i>	<i>F</i>	<i>df</i>	<i>p-value</i>
0.49	0.24	0.50	15.77	10, 488	0.00

Table 79. Unethical Decisions SDI Domains Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	2.08		0.31	6.81	0.00
Agreeableness	0.13	0.10	0.07	1.82	0.07
Neuroticism	0.08	0.10	0.04	2.15	0.03
Extroversion	0.03	0.03	0.05	0.62	0.54
Conscientiousness	-0.44	-0.43	0.05	-8.53	0.00
Openness	0.01	0.01	0.04	0.22	0.82
Machiavellianism	0.26	0.22	0.05	4.94	0.00
<i>R</i>	<i>R</i> ²	<i>SE</i>	<i>F</i>	<i>df</i>	<i>p-value</i>
0.56	0.31	0.47	41.28	6, 542	0.00

Table 80. Unethical Decisions SDI Facets Criterion Related Validity

	B	Beta	SE	t-value	Significance
(Intercept)	1.26		0.36	3.50	0.00
Team Player - A	0.02	0.02	0.08	0.31	0.76
Stress Under Pressure - N	0.00	0.00	0.04	0.00	1.00
Reserved - E	0.02	0.04	0.03	0.75	0.45
Achievement Striving - C	0.00	0.00	0.06	0.02	0.98
Creative – O	-0.03	-0.03	0.05	-0.57	0.57
Interpersonal Tactics - M	0.01	0.01	0.04	0.24	0.81
Pleasant - A	0.04	0.05	0.05	0.87	0.38
Temperamental - N	0.07	0.08	0.05	1.24	0.21
Dominance Leader - E	0.02	0.02	0.03	0.48	0.63
Order - C	0.02	0.03	0.04	0.68	0.49
Reflective - O	-0.01	-0.01	0.04	-0.15	0.88
Cynical View - M	0.04	0.05	0.03	1.28	0.20
Helpful Altruistic - A	0.01	0.01	0.05	0.17	0.86
Worry - N	0.01	0.02	0.03	0.44	0.66

	B	Beta	SE	t-value	Significance
Excitement Seeking - E	-0.04	-0.06	0.03	-1.54	0.13
Self-Discipline - C	-0.18	-0.21	0.05	-3.54	0.00
Scientific Interest - O	0.00	0.01	0.02	0.12	0.91
Envious - M	0.00	0.01	0.03	0.15	0.88
Independent - A	0.02	0.02	0.03	0.59	0.56
Angry Hostile - N	-0.02	-0.03	0.04	-0.55	0.58
High Intensity - E	0.05	0.08	0.03	1.80	0.07
Deliberation - C	-0.05	-0.07	0.05	-1.14	0.26
Cultured - O	-0.06	-0.10	0.03	-2.14	0.03
Influence Tactics - M	0.04	0.05	0.04	1.14	0.26
Optimist - A	0.00	0.00	0.04	0.05	0.96
Unconventional - C	0.20	0.26	0.04	5.16	0.00
Spontaneous Variety - E	0.04	0.04	0.04	0.98	0.33
Activity - E	-0.05	-0.06	0.04	-1.36	0.17
Well Adjusted – A	0.04	0.04	0.06	0.70	0.49
Imagination - O	0.09	0.13	0.03	2.58	0.01
R	R²	SE	F	df	p-value
0.61	0.38	0.46	10.43	30, 518	0.00

8.8 Hierarchical Regression Results

Next, three-stage hierarchical regression analyses were conducted for each of the six rating areas. First, mappings were made between each of the TAPAS scales, NCAPS scales, and SDI domains and facets and each rating area. This was done to evaluate theoretically related predictor composites in relation to the criterion rating areas. This process was completed by two SMEs with advanced degrees in I/O Psychology with 4 and 10 years of experience. SMEs rated the relatedness of the predictors to the criterion rating areas. Next, the conceptually linked TAPAS scales were entered into the model first with the conceptually linked NCAPS scales entered second and the SDI domains and facets entered third in order to determine incremental validity of each measure. Theoretical mappings and results of the hierarchical regression analyses are reported in the tables below.

Table 81. TAPAS Theoretical Linkages to Criterion Variables

TAPAS	LTSH	Communication	Decision Making	Leading Others	Professionalism	Unethical Decisions
Achievement		X	X	X	X	
Adjustment						
Attention Seeking						
Cooperation		X		X	X	
Dominance			X	X		
Even Tempered						
Intellectual Efficiency			X			
Non-Delinquency	X					X

TAPAS	LTSH	Communication	Decision Making	Leading Others	Professionalism	Unethical Decisions
Optimism						
Order						
Physical Conditioning						
Self-Control	X					X
Selflessness/ Generosity						
Sociability		X		X		
Tolerance	X			X	X	

Table 82. NCAPS Theoretical Linkages to Criterion Variables

NCAPS	LTSH	Communication	Decision Making	Leading Others	Professionalism	Unethical Decisions
Stress Tolerance			X			
Achievement		X	X	X	X	
Social Orientation		X		X		
Adaptability/ Flexibility				X		
Willingness to Learn					X	
Dependability					X	
Attention to Detail					X	
Dutifulness	X					X
Self-Reliance			X		X	
Vigilance						

Table 83. SDI Domains Theoretical Linkages to Criterion Variables

SDI Domains	LTSH	Communication	Decision Making	Leading Others	Professionalism	Unethical Decisions
Agreeableness		X			X	
Conscientiousness					X	
Extroversion		X				
Neuroticism	X					X
Openness		X		X		
Machiavellianism	X					X

Table 84. SDI Facets Theoretical Linkages to Criterion Variables

SDI Facet	LTSH	Communication	Decision Making	Leading Others	Professionalism	Unethical Decisions
Team Player - A		X		X		
Stress Under Pressure - N			X	X	X	
Reserved - E		X				
Achievement Striving - C	X	X	X	X	X	X
Creative - O						
Interpersonal Tactics - M	X					X
Pleasant - A						
Temperamental - N						X
Dominance Leader - E			X	X		
Order - C		X	X	X	X	
Reflective - O						
Cynical View - M	X					X
Helpful Altruistic - A		X	X	X	X	
Worry - N						
Excitement Seeking - E		X				
Self-Discipline - C					X	
Scientific Interest - O						
Envious - M	X					X
Independent - A				X		
Angry Hostile - N	X					X
High Intensity - E		X				
Deliberation - C			X	X		
Cultured - O						
Influence Tactics - M	X					X
Optimist - A						
Unconventional - C						
Spontaneous Variety - E		X				
Activity - E		X				
Well Adjusted - A		X	X	X	X	
Imagination - O						

8.8.1 Likelihood to Sexually Harass

The hierarchical multiple regression for the Likelihood to Sexually Harass criterion revealed that at Stage 1 (TAPAS only), the TAPAS scales accounted for 3% of the variance. Of the three TAPAS scales included, only Tolerance demonstrated a significant (negative) relationship with LTSH. Introducing the NCAPS scale of Dutifulness in Stage 2 significantly explained an additional 6% of the variance, with Dutifulness demonstrating a significant negative relationship with LTSH. Introducing the SDI domains in Stage 3 explained an additional, significant 1% of the variance. Of these two additional variables, Machiavellianism demonstrated a significant, positive relationship with LTSH.

When introducing the SDI facets instead of the SDI domains in Stage 3, the SDI facets explained an additional 3% of the variance in LTSH. Of these facet scales, Interpersonal Tactics demonstrated a significant, positive relationship with LTSH; none of the other facets demonstrated significant relationships with LTSH.

Table 85. Likelihood to Sexually Harass Regression Results with SDI Domains

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS+SD)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.10		0.02	66.47	0.00	1.75		0.13	13.81	0.00	1.43		0.18	8.03	0.00
Non-Delinquency	-0.03	-0.07	0.02	-1.40	0.16	-0.01	-0.01	0.02	-0.25	0.80	0.00	0.00	0.02	0.00	1.00
Self-Control	-0.01	-0.02	0.03	-0.35	0.73	0.02	0.03	0.03	0.50	0.62	0.03	0.04	0.03	0.82	0.41
Tolerance	-0.07	-0.14	0.03	-2.98	0.00	-0.05	-0.10	0.02	-2.19	0.03	-0.05	-0.09	0.02	-1.98	0.05
Dutifulness (NCAPS)						-0.10	-0.26	0.02	-5.17	0.00	-0.08	-0.21	0.02	-3.97	0.00
Neuroticism (SDI)										0.00	0.01	0.03	0.02	0.62	0.53
Machiavellianism (SDI)											0.06	0.12	0.03	2.08	0.04
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.03	0.26	0.03	3.88	0.01	0.09	0.25	0.06	26.72	0.00	0.10	0.25	0.01	3.30	0.04

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 86. Likelihood to Sexually Harass Regression Results with SDI Facets

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.10		0.02	66.47	0.00	1.75		0.13	13.81	0.00	1.50		0.19	7.97	0.00
Non-Delinquency	-0.03	-0.07	0.02	-1.40	0.16	-0.01	-0.01	0.02	-0.25	0.80	0.01	0.02	0.03	0.31	0.76
Self-Control	-0.01	-0.02	0.03	-0.35	0.73	0.02	0.03	0.03	0.50	0.62	0.02	0.03	0.03	0.65	0.51
Tolerance	-0.07	-0.14	0.03	-2.98	0.00	-0.05	-0.10	0.02	-2.19	0.03	-0.05	-0.09	0.02	-1.90	0.06
Dutifulness (NCAPS)						-0.10	-0.26	0.02	-5.17	0.00	-0.08	-0.20	0.02	-3.68	0.00
Achievement Striving (SDI)											-0.01	-0.03	0.02	-0.53	0.60
Interpersonal Tactics (SDI)											0.05	0.14	0.02	2.43	0.02

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Cynical View (SDI)											-0.01	-0.01	0.02	-0.27	0.79
Envious (SDI)											-0.01	-0.03	0.02	-0.57	0.57
Angry-Hostile (SDI)											0.02	0.06	0.02	1.01	0.31
Influence Tactics (SDI)											0.02	0.04	0.02	0.75	0.45
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.03	0.26	0.03	3.88	0.01	0.09	0.25	0.06	26.72	0.00	0.12	0.25	0.03	2.16	0.05

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

8.8.2 Communication

The hierarchical multiple regression for the Communication criterion revealed that at Stage 1, the TAPAS scales accounted for 7% of the variance in Communication. Specifically, both Achievement and Sociability demonstrated a significant, positive, relationship with Communication. Introducing the NCAPS scales of Achievement and Social Orientation in Stage 2 explained an additional 9% of the variance in Communication. Of these, only Achievement demonstrated a significant (positive) relationship with Communication. Introducing the SDI domains in Stage 3 explained an additional 14% of the variance. All three SDI domains introduced (Agreeableness, Extroversion, and Openness) demonstrated significant, positive relationships with Communication.

When introducing the SDI facets instead of the SDI domains in Stage 3, the SDI facets explained an additional 20% of the variance in Communication. Of these facets, Team Player, Achievement Striving, and Helpful-Altruistic demonstrated significant positive relationships with Communication, while Reserved and Well-Adjusted demonstrated significant negative relationships with the criterion.

Table 87. Communication Regression Results with SDI Domains

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	3.84		0.03	119.81	0.00	1.99		0.29	6.85	0.00	0.45		0.31	1.44	0.15
Achievement	0.25	0.19	0.06	4.35	0.00	0.09	0.07	0.06	1.45	0.15	0.04	0.03	0.06	0.75	0.46
Cooperation	0.06	0.05	0.05	1.11	0.27	0.06	0.05	0.05	1.11	0.27	0.01	0.01	0.05	0.30	0.77
Sociability	0.15	0.14	0.05	3.10	0.00	0.11	0.10	0.05	2.14	0.03	0.04	0.04	0.05	0.82	0.41
Achievement (NCAPS)						0.26	0.30	0.04	6.41	0.00	0.17	0.20	0.04	4.45	0.00
Social Orientation (NCAPS)						0.05	0.07	0.04	1.43	0.15	-0.01	-0.01	0.04	-0.23	0.81
Agreeableness (SDI)											0.28	0.21	0.07	4.04	0.00
Extroversion (SDI)											0.14	0.12	0.06	2.36	0.02
Openness (SDI)											0.21	0.20	0.05	4.50	0.00
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.07	0.59	0.07	11.34	0.00	0.15	0.57	0.09	24.31	0.00	0.29	0.52	0.14	30.18	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 88. Communication Regression Results with SDI Facets

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	3.84		0.03	119.81	0.00	1.99		0.29	6.85	0.00	1.86		0.39	4.80	0.00
Achievement	0.25	0.19	0.06	4.35	0.00	0.09	0.07	0.06	1.45	0.15	-0.08	-0.06	0.06	-1.40	0.16
Cooperation	0.06	0.05	0.05	1.11	0.27	0.06	0.05	0.05	1.11	0.27	0.03	0.03	0.05	0.64	0.53
Sociability	0.15	0.14	0.05	3.10	0.00	0.11	0.10	0.05	2.14	0.03	0.03	0.02	0.05	0.53	0.60
Achievement (NCAPS)						0.26	0.30	0.04	6.41	0.00	0.09	0.10	0.04	2.32	0.02
Social Orientation (NCAPS)						0.05	0.07	0.04	1.43	0.15	-0.01	-0.01	0.04	-0.25	0.80
Team Player (SDI)											0.19	0.15	0.08	2.32	0.02
Reserved (SDI)											-0.16	-0.24	0.03	-5.03	0.00
Achievement Striving (SDI)											0.37	0.37	0.06	5.92	0.00
Order (SDI)											-0.04	-0.05	0.04	-1.11	0.27
Helpful-Altruistic (SDI)											0.14	0.14	0.05	2.83	0.00
Excitement Seeking (SDI)											-0.03	-0.04	0.03	-1.05	0.29
High Intensity (SDI)											-0.01	-0.01	0.03	-0.27	0.79
Spontaneous Variety (SDI)											0.06	0.06	0.04	1.47	0.14
Well Adjusted (SDI)											-0.18	-0.14	0.07	-2.57	0.01
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.07	0.59	0.07	11.34	0.00	0.15	0.57	0.09	24.31	0.00	0.36	0.50	0.20	16.66	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

8.8.3 Decision Making

The hierarchical multiple regression for the Decision Making criterion revealed that at Stage 1, the TAPAS scales accounted for 10% of the variance. Specifically of these TAPAS scales, Achievement and Intellectual Efficiency demonstrated significant, positive, relationships with Decision Making. Introducing the NCAPS scales of Stress Tolerance, Achievement and Self-Reliance in Stage 2 explained an additional 13% of the variance. Of these, only Stress Tolerance and Achievement demonstrated significant (positive) relationships with Decision Making. No SDI domains were introduced in Stage 3 as none were conceptually linked to this rating area. The breadth of the SDI domains was viewed as a mismatch with this criterion area, while some of the SDI facets were conceptually matched to the specificity of this criterion.

Introducing the SDI facets in Stage 3 explained an additional 24% of the variance in Decision Making. Of these facets, Achievement Striving, Helpful-Altruistic, and Deliberation demonstrated significant positive relationships with Decision Making, while Well-Adjusted demonstrated a significant negative relationship with the criterion.

Table 89. Decision Making Regression Results

Variable	Model 1 (TAPAS Only)					Model 2 (TAPAS + NCAPS)				
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	3.98		0.03	151.37	0.00	1.78		0.27	6.62	0.00
Achievement	0.27	0.23	0.05	4.91	0.00	0.13	0.11	0.05	2.44	0.02
Dominance	0.07	0.06	0.05	1.44	0.15	0.03	0.03	0.04	0.69	0.49
Intellectual Efficiency	0.14	0.13	0.05	2.89	0.00	0.06	0.05	0.05	1.19	0.24
Stress Tolerance (NCAPS)						0.13	0.21	0.03	4.90	0.00
Achievement (NCAPS)						0.21	0.25	0.04	5.35	0.00
Self Reliance (NCAPS)						0.05	0.06	0.03	1.36	0.17
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.10	0.54	0.10	17.97	0.00	0.23	0.50	0.13	27.89	0.00

Note. F = F for change in R

Table 90. Decision Making Regression Results with SDI Facets

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	3.98	0.03	0.03	151.12	0.00	1.77	0.27	0.27	6.59	0.00	1.18	0.37	0.37	3.16	0.00
Achievement	0.27	0.05	0.05	4.88	0.00	0.13	0.05	0.05	2.41	0.02	-0.03	0.05	0.05	-0.55	0.58
Dominance	0.07	0.05	0.05	1.46	0.14	0.03	0.04	0.04	0.71	0.48	0.02	0.04	0.04	0.57	0.57
Intellectual Efficiency	0.14	0.05	0.05	2.84	0.00	0.05	0.05	0.05	1.14	0.25	0.04	0.04	0.04	0.90	0.37
Stress Tolerance (NCAPS)						0.13	0.03	0.03	4.87	0.00	0.07	0.03	0.03	2.57	0.01
Achievement (NCAPS)						0.21	0.04	0.04	5.35	0.00	0.07	0.03	0.03	2.02	0.04
Self Reliance (NCAPS)						0.05	0.03	0.03	1.40	0.16	0.05	0.03	0.03	1.58	0.12
Stress Under Pressure (SDI)											-0.04	0.03	0.03	-1.22	0.22
Achievement Striving (SDI)											0.26	0.05	0.05	4.72	0.00
Dominance (SDI)											0.03	0.03	0.03	1.07	0.28
Order (SDI)											0.04	0.03	0.03	1.24	0.22
Helpful-Altruistic (SDI)											0.09	0.04	0.04	2.24	0.03
Deliberation (SDI)											0.20	0.04	0.04	5.12	0.00
Well-Adjusted (SDI)											-0.12	0.05	0.05	-2.26	0.02
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.10	0.54	0.10	17.68	0.00	0.23	0.50	0.13	27.83	0.00	0.47	0.42	0.24	30.46	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

8.8.4 Leading Others

The hierarchical multiple regression for the Leading Others criterion revealed that at Stage 1, the TAPAS scales accounted for 13% of the variance. Specifically of these TAPAS scales, Achievement, Cooperation, Dominance, and Sociability demonstrated significant positive relationships with Leading Others. Introducing the NCAPS scales of Achievement, Social Orientation, and Adaptability/Flexibility in Stage 2 explained an additional 9% of the variance in Leading Others. Of these, all three demonstrated significant, positive relationships with Leading Others. Introducing the SDI domain of Openness in Stage 3 explained an additional 2% of the variance, and demonstrated a significant, positive relationship with Leading Others.

When introducing the SDI facets instead of the SDI domains in Stage 3, the SDI facets explained an additional 14% of the variance in Leading Others. Of these facets, Social Orientation, Dominance, Helpful-Altruistic, and Deliberation demonstrated significant positive relationships with Leading Others, while Independent demonstrated a significant negative relationship with the criterion.

Table 91. Leading Others Regression Results with SDI Domains

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	3.90		0.04	111.42	0.00	1.64		0.31	5.27	0.00	1.16		0.33	3.49	0.00
Achievement	0.16	0.12	0.06	2.62	0.01	0.02	0.02	0.06	0.38	0.70	0.02	0.02	0.06	0.34	0.73
Cooperation	0.18	0.15	0.05	3.38	0.00	0.14	0.11	0.05	2.66	0.01	0.13	0.11	0.05	2.57	0.01
Dominance	0.17	0.14	0.06	3.08	0.00	0.12	0.10	0.05	2.35	0.02	0.13	0.11	0.05	2.52	0.01
Sociability	0.24	0.20	0.05	4.61	0.00	0.14	0.12	0.05	2.61	0.01	0.15	0.12	0.05	2.77	0.01
Tolerance	0.07	0.05	0.05	1.28	0.20	0.02	0.01	0.05	0.33	0.74	-0.03	-0.02	0.05	-0.52	0.60
Achievement (NCAPS)						0.15	0.16	0.05	3.31	0.00	0.14	0.15	0.04	3.03	0.00
Social Orientation (NCAPS)						0.13	0.16	0.04	3.32	0.00	0.14	0.16	0.04	3.56	0.00
Adaptability/Flexibility (NCAPS)						0.11	0.15	0.04	3.05	0.00	0.09	0.12	0.04	2.46	0.01
Openness (SDI)											0.18	0.16	0.05	3.64	0.00
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.13	0.61	0.13	14.56	0.00	0.22	0.58	0.09	18.64	0.00	0.25	0.57	0.02	13.27	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 92. Leading Others Regression Results with SDI Facets

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	3.90		0.04	111.42	0.00	1.64		0.31	5.27	0.00	0.86		0.43	1.98	0.05
Achievement	0.16	0.12	0.06	2.62	0.01	0.02	0.02	0.06	0.38	0.70	-0.10	-0.07	0.06	-1.66	0.10
Cooperation	0.18	0.15	0.05	3.38	0.00	0.14	0.11	0.05	2.66	0.01	0.08	0.06	0.05	1.49	0.14
Dominance	0.17	0.14	0.06	3.08	0.00	0.12	0.10	0.05	2.35	0.02	0.04	0.04	0.05	0.83	0.41
Sociability	0.24	0.20	0.05	4.61	0.00	0.14	0.12	0.05	2.61	0.01	0.14	0.12	0.05	2.73	0.01
Tolerance	0.07	0.05	0.05	1.28	0.20	0.02	0.01	0.05	0.33	0.74	0.01	0.01	0.05	0.17	0.86
Achievement (NCAPS)						0.15	0.16	0.05	3.31	0.00	0.05	0.05	0.04	1.17	0.24
Social Orientation (NCAPS)						0.13	0.16	0.04	3.32	0.00	0.08	0.09	0.04	2.09	0.04
Adaptability/Flexibility (NCAPS)						0.11	0.15	0.04	3.05	0.00	0.05	0.06	0.04	1.31	0.19
Team Player (SDI)											0.18	0.13	0.09	1.97	0.05
Stress Under Pressure (SDI)											0.03	0.03	0.04	0.66	0.51
Achievement Striving (SDI)											0.09	0.09	0.08	1.20	0.23
Dominance (SDI)											0.15	0.19	0.04	3.93	0.00
Order (SDI)											0.04	0.05	0.04	0.96	0.34
Helpful-Altruistic (SDI)											0.11	0.11	0.05	2.14	0.03
Independent (SDI)											-0.09	-0.10	0.04	-2.44	0.02
Deliberation (SDI)											0.12	0.13	0.05	2.25	0.03
Well-Adjusted (SDI)											-0.08	-0.06	0.07	-1.08	0.28
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.13	0.61	0.13	14.56	0.00	0.22	0.58	0.09	18.64	0.00	0.36	0.53	0.14	11.39	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

8.8.5 Professionalism

The hierarchical multiple regression for the Professionalism criterion revealed that at Stage 1, the TAPAS scales accounted for 13% of the variance. Specifically, Achievement, Cooperation, and Tolerance demonstrated significant, positive, relationships with Professionalism. Introducing the NCAPS scales in Stage 2 explained an additional 7% of the variance in Professionalism. Of these, only Achievement and Dependability demonstrated a significant (positive) relationship with Professionalism. Introducing the SDI domains in Stage 3 explained an additional 17% of the variance. Both SDI domains introduced (Agreeableness and Conscientiousness) demonstrated significant, positive relationships with Professionalism.

When introducing the SDI facets instead of the SDI domains in Stage 3, they explained an additional 16% of the variance in Professionalism. Of these facets, Achievement Striving, Helpful-Altruistic, and Self-Discipline demonstrated significant positive relationships with Professionalism.

Table 93. Professionalism Regression Results with SDI Domains

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	4.22		0.03	162.29	0.00	2.98		0.27	11.22	0.00	1.68		0.28	6.08	0.00
Achievement	0.23	0.21	0.05	4.85	0.00	0.08	0.08	0.05	1.62	0.11	-0.02	-0.02	0.05	-0.40	0.69
Cooperation	0.16	0.16	0.04	3.64	0.00	0.13	0.13	0.04	3.09	0.00	0.06	0.06	0.04	1.50	0.13
Tolerance	0.21	0.20	0.04	4.73	0.00	0.19	0.19	0.04	4.43	0.00	0.16	0.16	0.04	4.18	0.00
Achievement (NCAPS)						0.10	0.14	0.04	2.48	0.01	0.04	0.06	0.04	1.19	0.23
Willingness to Learn (NCAPS)						0.03	0.05	0.03	0.94	0.35	0.00	0.00	0.03	-0.04	0.96
Dependability (NCAPS)						0.10	0.17	0.03	2.92	0.00	0.05	0.08	0.03	1.52	0.13
Attention to Detail (NCAPS)						0.01	0.01	0.03	0.22	0.83	-0.04	-0.07	0.03	-1.33	0.18
Self-Reliance (NCAPS)						-0.02	-0.03	0.03	-0.63	0.53	0.00	0.00	0.03	-0.10	0.92
Agreeableness (SDI)											0.27	0.24	0.06	4.89	0.00
Conscientiousness (SDI)											0.31	0.33	0.06	5.53	0.00
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.13	0.49	0.13	23.42	0.00	0.20	0.47	0.07	8.38	0.00	0.37	0.42	0.17	61.70	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 94. Professionalism Regression Results with SDI Facets

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	4.22		0.03	162.29	0.00	2.98		0.27	11.22	0.00	2.04		0.37	5.47	0.00
Achievement	0.23	0.21	0.05	4.85	0.00	0.08	0.08	0.05	1.62	0.11	-0.04	-0.04	0.05	-0.88	0.38
Cooperation	0.16	0.16	0.04	3.64	0.00	0.13	0.13	0.04	3.09	0.00	0.08	0.08	0.04	1.99	0.05
Tolerance	0.21	0.20	0.04	4.73	0.00	0.19	0.19	0.04	4.43	0.00	0.13	0.13	0.04	3.32	0.00
Achievement (NCAPS)						0.10	0.14	0.04	2.48	0.01	0.02	0.02	0.04	0.47	0.64
Willingness to Learn (NCAPS)						0.03	0.05	0.03	0.94	0.35	0.01	0.01	0.03	0.26	0.79
Dependability (NCAPS)						0.10	0.17	0.03	2.92	0.00	0.04	0.08	0.03	1.41	0.16
Attention to Detail (NCAPS)						0.01	0.01	0.03	0.22	0.83	0.00	0.00	0.03	0.01	0.99
Self-Reliance (NCAPS)						-0.02	-0.03	0.03	-0.63	0.53	-0.02	-0.02	0.03	-0.51	0.61
Stress Under Pressure (SDI)											-0.02	-0.02	0.03	-0.50	0.62
Achievement Striving (SDI)											0.18	0.21	0.05	3.44	0.00
Order (SDI)											-0.04	-0.06	0.04	-1.11	0.27
Helpful-Altruistic (SDI)											0.14	0.16	0.04	3.15	0.00
Self Discipline (SDI)											0.18	0.22	0.05	3.67	0.00
Well-Adjusted (SDI)											0.02	0.02	0.05	0.43	0.66
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.13	0.49	0.13	23.42	0.00	0.20	0.47	0.07	8.38	0.00	0.36	0.42	0.16	19.83	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

8.8.6 Unethical Decisions

The hierarchical multiple regression for the Unethical Decisions criterion revealed that at Stage 1, the TAPAS scales accounted for 13% of the variance. Specifically, both Non-Delinquency and Self-Control demonstrated significant negative relationships with Unethical Decisions. Introducing the NCAPS scale of Dutifulness in Stage 2 explained an additional 10% of the variance in Unethical Decisions. Dutifulness demonstrated a significant, negative relationship with Unethical Decisions. Introducing the SDI domains in Stage 3 explained an additional 9% of the variance. Both SDI domains introduced (Neuroticism and Machiavellianism) demonstrated significant, positive relationships with Unethical Decisions.

When introducing the SDI facets instead of the SDI domains in Stage 3, they explained an additional 11% of the variance in Unethical Decisions. Of these facets, Cynical View demonstrated a significant positive relationship with Unethical Decisions, while Achievement Striving demonstrated a significant negative relationship with the criterion.

Table 95. Unethical Decisions Regression Results with SDI Domains

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.92		0.03	65.59	0.00	3.66		0.23	16.13	0.00	2.04		0.30	6.77	0.00
Non-Delinquency	-0.28	-0.26	0.05	-5.98	0.00	-0.19	-0.17	0.05	-4.03	0.00	-0.17	-0.16	0.04	-3.76	0.00
Self-Control	-0.23	-0.18	0.06	-4.05	0.00	-0.18	-0.14	0.06	-3.24	0.00	-0.11	-0.09	0.05	-2.14	0.03
Dutifulness (NCAPS)						-0.28	-0.33	0.04	-7.71	0.00	-0.18	-0.22	0.04	-5.04	0.00
Neuroticism (SDI)											0.14	0.16	0.04	3.67	0.00
Machiavellianism (SDI)											0.26	0.22	0.05	4.94	0.00
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.13	0.53	0.13	35.90	0.00	0.22	0.51	0.10	59.46	0.00	0.31	0.48	0.09	29.98	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 96. Unethical Decisions Regression Results with SDI Facets

Variable	Model 1 (TAPAS Only)				Model 2 (TAPAS + NCAPS)				Model 3 (TAPAS + NCAPS + SDI)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.92		0.03	65.59	0.00	3.66		0.23	16.13	0.00	2.55		0.33	7.76	0.00
Non-Delinquency	-0.28	-0.26	0.05	-5.98	0.00	-0.19	-0.17	0.05	-4.03	0.00	-0.15	-0.14	0.04	-3.34	0.00
Self-Control	-0.23	-0.18	0.06	-4.05	0.00	-0.18	-0.14	0.06	-3.24	0.00	-0.08	-0.06	0.05	-1.55	0.12
Dutifulness (NCAPS)						-0.28	-0.33	0.04	-7.71	0.00	-0.15	-0.18	0.04	-4.03	0.00
Achievement Striving (SDI)											-0.15	-0.16	0.04	-3.62	0.00
Interpersonal Tactics (SDI)											0.06	0.07	0.04	1.50	0.13
Temperamental (SDI)											0.09	0.11	0.05	1.68	0.09
Cynical View (SDI)											0.09	0.11	0.03	2.72	0.01
Envious (SDI)											0.05	0.08	0.03	1.57	0.12
Angry-Hostile (SDI)											0.00	0.00	0.04	-0.01	0.99
Influence Tactics (SDI)											0.07	0.08	0.04	1.90	0.06
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.13	0.53	0.13	35.90	0.00	0.22	0.51	0.10	59.46	0.00	0.34	0.47	0.11	11.61	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

8.8.7 Hierarchical Regression with All Scales from All Measures.

In an effort to ascertain whether TAPAS could provide incremental validity above and beyond that explained by SDI and NCAPS, a final set of regressions were done for the criterion measures. In these regressions, SDI was entered first, NCAPS second, and TAPAS third.

For LTSH (see Tables 97 and 98), the hierarchical multiple regression revealed that TAPAS explained 4% of the variance associated with LTSH over and above that of the SDI domains and NCAPS. Cooperation and Optimism showed the strongest relationships with the criterion after the SDI and NCAPS had been added. With the SDI facets entered first, TAPAS showed similar results to the first analysis explaining 4% of variance associated with LTSH above and beyond SDI and NCAPS. In the model, in addition to Cooperation and Optimism, Tolerance also had a significant relationship with LTSH.

Table 97. LTSH Regression Results with SDI Domains

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.32	0.00	0.19	6.93	0.00	1.41	0.00	0.29	4.90	0.00	1.37	0.00	0.31	4.43	0.00
Agreeableness	-0.05	-0.08	0.04	-1.08	0.28	-0.04	-0.07	0.04	-0.89	0.38	-0.03	-0.06	0.05	-0.71	0.48
Neuroticism	0.00	0.01	0.02	0.09	0.93	0.03	0.07	0.03	1.00	0.32	0.04	0.10	0.03	1.23	0.22
Extroversion	0.02	0.04	0.03	0.70	0.48	0.01	0.02	0.03	0.31	0.76	0.01	0.01	0.04	0.19	0.85
Conscientiousness	-0.06	-0.13	0.03	-2.01	0.05	-0.06	-0.13	0.04	-1.60	0.11	-0.08	-0.16	0.04	-1.77	0.08
Openness	-0.02	-0.04	0.03	-0.63	0.53	-0.01	-0.02	0.03	-0.28	0.78	0.01	0.01	0.03	0.19	0.85
Machiavellianism	0.07	0.13	0.03	2.10	0.04	0.04	0.07	0.03	1.09	0.28	0.03	0.05	0.04	0.79	0.43
Stress Tolerance						0.04	0.13	0.02	2.12	0.03	0.04	0.14	0.02	2.14	0.03
Achievement						0.05	0.13	0.02	2.12	0.03	0.06	0.15	0.03	2.21	0.03
Social Orientation						0.00	-0.01	0.02	-0.24	0.81	-0.01	-0.04	0.02	-0.62	0.53
Adaptability/Flexibility						-0.02	-0.06	0.02	-0.89	0.37	-0.02	-0.05	0.02	-0.81	0.42
Willingness to Learn						0.01	0.03	0.02	0.46	0.64	0.01	0.04	0.02	0.63	0.53
Dependability						-0.01	-0.03	0.02	-0.42	0.68	-0.01	-0.04	0.02	-0.60	0.55

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Attention to Detail						0.02	0.07	0.02	1.01	0.32	0.02	0.06	0.02	0.94	0.35
Dutifulness						-0.10	-0.24	0.02	-4.13	0.00	-0.09	-0.22	0.02	-3.71	0.00
Self-Reliance						0.00	-0.01	0.02	-0.12	0.91	0.00	0.01	0.02	0.22	0.82
Vigilance						0.00	0.00	0.02	-0.01	0.99	0.00	-0.02	0.02	-0.25	0.80
Achievement											-0.02	-0.04	0.03	-0.62	0.54
Adjustment											0.02	0.03	0.04	0.50	0.62
Attention Seeking											0.02	0.05	0.03	0.86	0.39
Cooperation											0.06	0.13	0.03	2.33	0.02
Dominance											0.01	0.03	0.03	0.56	0.57
Even-Tempered											0.01	0.03	0.03	0.47	0.64
Intellectual Efficiency											0.00	0.00	0.03	0.08	0.93
Non-Delinquency											0.01	0.02	0.03	0.38	0.70
Optimism											-0.07	-0.11	0.03	-2.19	0.03
Order											0.00	-0.01	0.03	-0.16	0.87
Physical Conditioning											0.01	0.01	0.02	0.25	0.80
Self-Control											0.03	0.04	0.03	0.83	0.41
Selflessness											0.00	-0.01	0.03	-0.15	0.88
Sociability											0.00	0.01	0.03	0.15	0.88
Tolerance											-0.05	-0.09	0.03	-1.74	0.08
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.08	0.25	0.08	5.92	0.00	0.13	0.25	0.05	2.54	0.01	0.17	0.25	0.04	1.23	0.25

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 98. LTSH Regression Results with SDI Facets

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.20		0.23	5.28	0.00	1.33		0.34	3.88	0.00	1.31		0.36	3.66	0.00
Team Player - A	0.00	0.00	0.05	-0.01	0.99	-0.02	-0.03	0.05	-0.34	0.73	-0.02	-0.04	0.05	-0.37	0.71
Stress Under Pressure - N	-0.01	-0.02	0.03	-0.24	0.81	0.01	0.04	0.03	0.50	0.62	0.01	0.04	0.03	0.42	0.68
Reserved - E	0.00	0.00	0.02	0.04	0.97	0.00	0.01	0.02	0.15	0.88	0.00	0.00	0.02	0.06	0.95
Achievement Striving - C	0.05	0.12	0.04	1.36	0.17	0.05	0.12	0.04	1.27	0.20	0.07	0.17	0.04	1.78	0.08
Creative - O	-0.04	-0.10	0.03	-1.18	0.24	-0.04	-0.09	0.03	-1.04	0.30	-0.04	-0.09	0.03	-1.07	0.29
Interpersonal Tactics - M	0.04	0.11	0.03	1.59	0.11	0.03	0.09	0.03	1.22	0.22	0.03	0.08	0.03	1.07	0.29
Pleasant - A	0.06	0.14	0.03	1.88	0.06	0.06	0.14	0.03	1.82	0.07	0.05	0.13	0.03	1.65	0.10
Temperamental - N	0.00	-0.01	0.03	-0.12	0.90	0.01	0.03	0.03	0.30	0.77	0.02	0.05	0.03	0.51	0.61
Dominance Leader - E	0.01	0.04	0.02	0.49	0.62	0.01	0.02	0.02	0.27	0.78	0.00	0.00	0.02	0.01	0.99
Order - C	-0.01	-0.04	0.02	-0.63	0.53	-0.02	-0.07	0.02	-0.92	0.36	-0.03	-0.08	0.03	-1.00	0.32
Reflective - O	0.03	0.08	0.03	1.06	0.29	0.02	0.04	0.03	0.56	0.57	0.01	0.04	0.03	0.51	0.61
Cynical View - M	-0.01	-0.01	0.02	-0.25	0.80	-0.01	-0.04	0.02	-0.63	0.53	-0.02	-0.06	0.02	-0.91	0.37
Helpful Altruistic - A	-0.03	-0.06	0.03	-0.88	0.38	-0.01	-0.02	0.03	-0.25	0.80	-0.01	-0.01	0.03	-0.19	0.85
Worry - N	0.01	0.03	0.02	0.45	0.65	0.01	0.04	0.02	0.60	0.55	0.01	0.04	0.02	0.62	0.53
Excitement Seeking - E	0.00	-0.02	0.02	-0.29	0.77	-0.01	-0.03	0.02	-0.47	0.64	-0.01	-0.03	0.02	-0.45	0.65
Self-Discipline - C	-0.04	-0.09	0.03	-1.08	0.28	-0.03	-0.08	0.03	-0.91	0.36	-0.03	-0.07	0.03	-0.83	0.41
Scientific Interest - O	0.01	0.03	0.01	0.50	0.61	0.00	0.02	0.01	0.30	0.76	0.01	0.04	0.02	0.62	0.54
Envious - M	-0.02	-0.08	0.02	-1.15	0.25	-0.02	-0.07	0.02	-1.06	0.29	-0.03	-0.09	0.02	-1.29	0.20
Independent - A	0.01	0.04	0.02	0.66	0.51	0.01	0.03	0.02	0.54	0.59	0.02	0.05	0.02	0.82	0.41
Angry Hostile - N	0.02	0.07	0.03	0.79	0.43	0.01	0.04	0.03	0.41	0.68	0.02	0.06	0.03	0.69	0.49
High Intensity - E	0.02	0.06	0.02	1.01	0.31	0.02	0.07	0.02	1.19	0.24	0.02	0.07	0.02	1.14	0.26

Variable	Model 1 (SDI Only)					Model 2 (SDI + NCAPS)					Model 3 (SDI + NCAPS + TAPAS)				
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Deliberation - C	-0.01	-0.03	0.03	-0.42	0.68	0.00	-0.01	0.03	-0.17	0.87	-0.02	-0.05	0.03	-0.58	0.56
Cultured - O	-0.02	-0.07	0.02	-1.11	0.27	-0.02	-0.05	0.02	-0.86	0.39	-0.01	-0.03	0.02	-0.43	0.67
Influence Tactics - M	0.01	0.03	0.02	0.41	0.68	0.02	0.04	0.02	0.63	0.53	0.01	0.04	0.02	0.56	0.58
Optimist - A	-0.02	-0.05	0.03	-0.71	0.48	-0.02	-0.06	0.03	-0.80	0.43	-0.01	-0.04	0.03	-0.51	0.61
Unconventional - C	0.03	0.10	0.03	1.39	0.17	0.02	0.05	0.03	0.75	0.45	0.03	0.08	0.03	0.97	0.33
Spontaneous Variety - E	0.00	-0.01	0.02	-0.18	0.86	0.00	0.00	0.02	-0.05	0.96	0.00	0.01	0.02	0.19	0.85
Activity - E	-0.01	-0.04	0.02	-0.60	0.55	-0.01	-0.03	0.02	-0.46	0.65	-0.02	-0.05	0.03	-0.72	0.47
Well Adjusted - A	-0.07	-0.12	0.04	-1.60	0.11	-0.07	-0.13	0.04	-1.63	0.10	-0.07	-0.13	0.04	-1.59	0.11
Imagination - O	0.01	0.03	0.02	0.38	0.70	0.01	0.04	0.02	0.56	0.58	0.01	0.03	0.02	0.47	0.64
Stress Tolerance						0.04	0.13	0.02	2.02	0.04	0.04	0.14	0.02	2.09	0.04
Achievement						0.04	0.10	0.03	1.50	0.14	0.04	0.10	0.03	1.39	0.16
Social Orientation						-0.02	-0.04	0.02	-0.68	0.50	-0.02	-0.06	0.02	-0.88	0.38
Adaptability/Flexibility						-0.01	-0.04	0.02	-0.61	0.54	-0.01	-0.04	0.02	-0.62	0.53
Willingness to Learn						0.01	0.03	0.02	0.56	0.57	0.02	0.05	0.02	0.83	0.41
Dependability						-0.01	-0.02	0.02	-0.32	0.75	-0.01	-0.04	0.02	-0.55	0.59
Attention to Detail						0.02	0.07	0.02	0.92	0.36	0.02	0.08	0.02	1.02	0.31
Dutifulness						-0.09	-0.23	0.02	-3.71	0.00	-0.09	-0.22	0.03	-3.52	0.00
Self-Reliance						0.00	-0.01	0.02	-0.13	0.90	0.00	0.00	0.02	-0.07	0.95
Vigilance						0.01	0.02	0.02	0.26	0.79	0.00	0.00	0.02	-0.05	0.96
Achievement											-0.02	-0.04	0.04	-0.56	0.57
Adjustment											0.02	0.03	0.04	0.50	0.62
Attention Seeking											0.01	0.03	0.03	0.47	0.64
Cooperation											0.07	0.13	0.03	2.32	0.02

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Dominance						0.02	0.04	0.03	0.64		0.01	0.01	0.03	0.22	0.82
Even-Tempered											0.02	0.03	0.03	0.59	0.56
Intellectual Efficiency											0.01	0.03	0.03	0.46	0.64
Non-Delinquency											-0.07	-0.12	0.03	-2.15	0.03
Optimism											-0.01	-0.02	0.03	-0.26	0.80
Order											-0.01	-0.02	0.03	-0.30	0.76
Physical Conditioning											0.02	0.04	0.03	0.71	0.48
Self-Control											0.00	0.00	0.04	0.01	0.99
Selflessness											0.01	0.01	0.03	0.23	0.82
Sociability											-0.06	-0.12	0.03	-2.10	0.04
Tolerance															
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.12	0.26	0.12	1.81	0.01	0.17	0.25	0.04	1.99	0.03	0.21	0.25	0.04	1.30	0.20

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

For Communication (see Tables 99 and 100), the hierarchical multiple regression revealed that TAPAS explained 5% of the variance associated with Communication over and above that of the SDI domains and NCAPS. Selflessness/Generosity (-), Dominance, and Tolerance showed the strongest relationships with the criterion after the SDI and NCAPS had been added. With the SDI facets entered first, TAPAS showed less incremental validity explaining only 2% of variance associated with Communication above and beyond the SDI and NCAPS. In this model, Even-Tempered was the only TAPAS scale to have a significant relationship with Communication.

Table 99. Communication Regression Results with SDI Domains

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.25	0.00	0.35	3.59	0.00	0.73	0.00	0.53	1.37	0.17	0.95	0.00	0.57	1.67	0.10
Agreeableness	0.06	0.05	0.08	0.79	0.43	0.08	0.06	0.08	1.03	0.30	0.17	0.13	0.08	2.04	0.04
Neuroticism	-0.19	-0.21	0.04	-4.43	0.00	-0.16	-0.17	0.05	-3.02	0.00	-0.08	-0.09	0.06	-1.37	0.17

Variable	Model 1 (SDI Only)					Model 2 (SDI + NCAPS)					Model 3 (SDI + NCAPS + TAPAS)				
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Extroversion	0.22	0.19	0.05	4.28	0.00	0.17	0.15	0.06	3.08	0.00	0.07	0.06	0.07	1.12	0.26
Conscientiousness	0.30	0.27	0.06	5.09	0.00	0.23	0.21	0.07	3.31	0.00	0.23	0.21	0.08	2.88	0.00
Openness	0.17	0.15	0.05	3.51	0.00	0.16	0.15	0.05	3.36	0.00	0.14	0.13	0.05	2.76	0.01
Machiavellianism	0.11	0.09	0.06	1.94	0.05	0.11	0.09	0.06	1.82	0.07	0.06	0.05	0.07	0.96	0.34
Stress Tolerance						0.00	0.00	0.03	-0.05	0.96	-0.01	-0.01	0.03	-0.16	0.87
Achievement						0.08	0.09	0.04	1.73	0.08	0.08	0.09	0.05	1.69	0.09
Social Orientation						0.00	-0.01	0.04	-0.13	0.90	-0.02	-0.02	0.04	-0.44	0.66
Adaptability/Flexibility						0.03	0.04	0.04	0.92	0.36	0.01	0.02	0.04	0.38	0.70
Willingness to Learn						0.00	0.00	0.04	-0.10	0.92	0.00	0.00	0.04	-0.01	0.99
Dependability						0.02	0.03	0.04	0.45	0.65	0.01	0.02	0.04	0.31	0.75
Attention to Detail						-0.02	-0.03	0.04	-0.59	0.56	-0.03	-0.04	0.04	-0.73	0.47
Dutifulness						-0.01	-0.01	0.04	-0.22	0.82	0.00	0.01	0.04	0.12	0.91
Self-Reliance						0.01	0.01	0.04	0.21	0.83	0.01	0.01	0.04	0.27	0.78
Vigilance						0.04	0.06	0.03	1.12	0.26	0.04	0.06	0.03	1.11	0.27
Achievement											-0.06	-0.04	0.06	-0.93	0.35
Adjustment											0.05	0.04	0.06	0.74	0.46
Attention Seeking											0.03	0.03	0.05	0.66	0.51
Cooperation											-0.01	-0.01	0.05	-0.24	0.81
Dominance											0.13	0.11	0.05	2.71	0.01
Even-Tempered											0.08	0.06	0.06	1.38	0.17
Intellectual Efficiency											0.08	0.07	0.05	1.50	0.13
Non-Delinquency											-0.05	-0.04	0.05	-0.99	0.32
Optimism											-0.08	-0.05	0.06	-1.31	0.19
Order											0.00	0.00	0.05	0.01	0.99

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Physical Conditioning											0.02	0.01	0.05	0.37	0.71
Self-Control											0.12	0.08	0.06	1.92	0.06
Selflessness											-0.14	-0.10	0.06	-2.28	0.02
Sociability											0.06	0.06	0.05	1.20	0.23
Tolerance											0.10	0.09	0.05	2.07	0.04
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.33	0.50	0.33	39.31	0.00	0.34	0.50	0.01	1.05	0.40	0.39	0.50	0.04	2.11	0.01

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 100. Communication Regression Results with SDI Facets

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	2.14		0.39	5.45	0.00	1.61		0.60	2.71	0.01	1.58		0.62	2.56	0.01
Team Player - A	0.06	0.04	0.09	0.65	0.51	0.05	0.04	0.09	0.57	0.57	0.06	0.05	0.09	0.70	0.48
Stress Under Pressure - N	-0.09	-0.11	0.05	-1.97	0.05	-0.08	-0.10	0.05	-1.71	0.09	-0.05	-0.06	0.05	-0.99	0.32
Reserved - E	-0.13	-0.19	0.03	-3.80	0.00	-0.13	-0.19	0.04	-3.61	0.00	-0.12	-0.17	0.04	-2.98	0.00
Achievement Striving - C	0.17	0.17	0.07	2.50	0.01	0.15	0.15	0.07	2.19	0.03	0.17	0.17	0.07	2.29	0.02
Creative - O	0.08	0.08	0.06	1.32	0.19	0.08	0.08	0.06	1.32	0.19	0.06	0.07	0.06	1.09	0.28
Interpersonal Tactics - M	0.05	0.06	0.04	1.15	0.25	0.05	0.06	0.04	1.10	0.27	0.03	0.04	0.04	0.73	0.47
Pleasant - A	0.01	0.01	0.05	0.20	0.84	0.02	0.02	0.06	0.39	0.69	0.03	0.03	0.06	0.54	0.59
Temperamental - N	0.01	0.01	0.06	0.12	0.91	0.02	0.02	0.06	0.35	0.73	0.05	0.05	0.06	0.75	0.46
Dominance Leader - E	0.12	0.16	0.04	3.16	0.00	0.12	0.16	0.04	3.07	0.00	0.12	0.18	0.04	3.10	0.00
Order - C	-0.09	-0.11	0.04	-2.33	0.02	-0.10	-0.12	0.04	-2.25	0.03	-0.15	-0.18	0.05	-2.91	0.00
Reflective - O	0.13	0.14	0.05	2.78	0.01	0.13	0.14	0.05	2.71	0.01	0.12	0.13	0.05	2.45	0.01

Variable	Model 1 (SDI Only)					Model 2 (SDI + NCAPS)					Model 3 (SDI + NCAPS + TAPAS)				
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Cynical View - M	0.04	0.05	0.04	1.16	0.25	0.05	0.05	0.04	1.21	0.23	0.03	0.04	0.04	0.81	0.42
Helpful Altruistic - A	0.10	0.10	0.05	1.90	0.06	0.10	0.10	0.05	1.94	0.05	0.13	0.06	0.06	2.36	0.02
Worry - N	-0.01	-0.02	0.03	-0.42	0.68	-0.01	-0.01	0.03	-0.28	0.78	0.01	0.03	0.03	0.16	0.87
Excitement Seeking - E	-0.03	-0.04	0.03	-0.94	0.35	-0.02	-0.03	0.03	-0.76	0.45	-0.01	0.03	0.03	-0.35	0.72
Self-Discipline - C	0.01	0.01	0.06	0.24	0.81	0.00	0.00	0.06	-0.06	0.96	0.01	0.06	0.06	0.12	0.90
Scientific Interest - O	0.04	0.06	0.03	1.42	0.16	0.04	0.06	0.03	1.36	0.17	0.03	0.03	0.03	1.00	0.32
Envious - M	-0.05	-0.07	0.04	-1.43	0.15	-0.05	-0.07	0.04	-1.36	0.17	-0.06	0.04	0.04	-1.55	0.12
Independent - A	0.02	0.02	0.04	0.54	0.59	0.02	0.02	0.04	0.50	0.62	0.01	0.04	0.04	0.33	0.74
Angry Hostile - N	-0.01	-0.01	0.05	-0.13	0.90	-0.01	-0.02	0.05	-0.30	0.77	0.00	0.05	0.05	0.00	1.00
High Intensity - E	0.01	0.02	0.03	0.36	0.72	0.01	0.01	0.03	0.21	0.84	-0.01	0.03	0.03	-0.29	0.77
Deliberation - C	0.14	0.16	0.05	2.73	0.01	0.13	0.16	0.05	2.63	0.01	0.12	0.05	0.05	2.30	0.02
Cultured - O	0.04	0.06	0.03	1.25	0.21	0.04	0.05	0.03	1.13	0.26	0.04	0.03	0.03	1.07	0.29
Influence Tactics - M	0.03	0.03	0.04	0.63	0.53	0.03	0.03	0.04	0.63	0.53	0.02	0.04	0.04	0.49	0.63
Optimist - A	-0.02	-0.02	0.04	-0.40	0.69	-0.02	-0.03	0.05	-0.53	0.59	-0.02	0.05	0.05	-0.39	0.69
Unconventional - C	0.02	0.03	0.04	0.49	0.63	0.03	0.04	0.05	0.72	0.47	0.02	0.05	0.05	0.46	0.65
Spontaneous Variety - E	0.04	0.04	0.04	0.97	0.33	0.03	0.03	0.04	0.75	0.46	0.02	0.04	0.04	0.52	0.60
Activity - E	-0.07	-0.08	0.04	-1.76	0.08	-0.08	-0.10	0.04	-1.98	0.05	-0.08	0.04	0.04	-1.86	0.06
Well Adjusted - A	-0.11	-0.08	0.07	-1.54	0.12	-0.10	-0.07	0.07	-1.34	0.18	-0.07	0.07	0.07	-0.98	0.33
Imagination - O	-0.06	-0.09	0.04	-1.74	0.08	-0.06	-0.08	0.04	-1.50	0.13	-0.06	0.04	0.04	-1.48	0.14
Stress Tolerance						0.01	0.02	0.03	0.31	0.76	0.01	0.03	0.03	0.36	0.72
Achievement						0.04	0.04	0.04	0.81	0.42	0.05	0.05	0.05	1.06	0.29
Social Orientation						0.00	0.01	0.04	0.13	0.90	0.00	0.04	0.04	-0.12	0.91
Adaptability/Flexibility						0.00	0.00	0.03	-0.06	0.95	-0.01	0.03	0.03	-0.20	0.84

Variable	Model 1 (SDI Only)					Model 2 (SDI + NCAPS)					Model 3 (SDI + NCAPS + TAPAS)				
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Willingness to Learn						0.00	-0.01	0.03	-0.14	0.89	0.01	0.01	0.03	0.28	0.78
Dependability						0.01	0.01	0.04	0.16	0.87	0.00	0.00	0.04	-0.07	0.94
Attention to Detail						0.02	0.03	0.04	0.49	0.62	0.00	0.00	0.04	0.04	0.97
Dutifulness						0.01	0.01	0.04	0.19	0.85	0.01	0.01	0.04	0.30	0.77
Self-Reliance						0.00	0.00	0.04	0.07	0.95	0.01	0.01	0.04	0.16	0.87
Vigilance						0.02	0.02	0.03	0.46	0.64	0.01	0.01	0.03	0.23	0.82
Achievement											-0.05	-0.04	0.06	-0.90	0.37
Adjustment											0.06	0.04	0.06	0.88	0.38
Attention Seeking											0.04	0.04	0.05	0.82	0.41
Cooperation											0.00	0.00	0.05	0.03	0.98
Dominance											0.01	0.01	0.05	0.12	0.90
Even-Tempered											0.12	0.09	0.06	2.10	0.04
Intellectual Efficiency											0.04	0.03	0.05	0.78	0.44
Non-Delinquency											-0.02	-0.01	0.05	-0.30	0.76
Optimism											-0.10	-0.07	0.06	-1.68	0.09
Order											0.09	0.08	0.06	1.69	0.09
Physical Conditioning											0.02	0.02	0.05	0.44	0.66
Self-Control											0.09	0.07	0.06	1.63	0.10
Selflessness											-0.12	-0.08	0.06	-1.91	0.06
Sociability											0.02	0.02	0.05	0.47	0.64
Tolerance											0.06	0.05	0.05	1.24	0.21
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.44	0.47	0.44	12.05	0.00	0.45	0.48	0.00	0.33	0.97	0.47	0.47	0.03	1.47	0.11

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

For Decision Making (see Tables 101 and 102), the hierarchical multiple regression revealed that the TAPAS explained 2% of the variance over and above that of the SDI domains and NCAPS. Achievement (-) and Physical Conditioning showed the strongest relationships with the criterion after the SDI and NCAPS had been added. With the SDI facets entered first, TAPAS showed less incremental validity explaining only 1% of variance above and beyond SDI and NCAPS. In this model, Even-Tempered was the only TAPAS scale to have a significant relationship with Decision Making.

Table 101. Decision Making Regression Results with SDI Domains

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.49	0.00	0.30	4.97	0.00	0.68	0.00	0.45	1.52	0.13	0.44	0.00	0.49	0.91	0.36
Agreeableness	-0.06	-0.05	0.07	-0.89	0.37	0.03	0.02	0.07	0.45	0.65	0.05	0.04	0.07	0.76	0.45
Neuroticism	-0.15	-0.17	0.04	-4.01	0.00	-0.07	-0.08	0.04	-1.60	0.11	-0.01	-0.01	0.05	-0.14	0.89
Extroversion	0.13	0.12	0.04	2.93	0.00	0.11	0.10	0.05	2.40	0.02	0.09	0.08	0.06	1.60	0.11
Conscientiousness	0.55	0.54	0.05	11.03	0.00	0.42	0.41	0.06	7.00	0.00	0.47	0.45	0.07	6.85	0.00
Openness	0.08	0.08	0.04	2.06	0.04	0.09	0.09	0.04	2.07	0.04	0.07	0.07	0.04	1.69	0.09
Machiavellianism	0.08	0.07	0.05	1.65	0.10	0.06	0.05	0.05	1.10	0.27	0.03	0.02	0.06	0.48	0.63
Stress Tolerance						0.05	0.08	0.03	1.78	0.08	0.05	0.07	0.03	1.55	0.12
Achievement						0.04	0.05	0.04	1.01	0.32	0.03	0.04	0.04	0.88	0.38
Social Orientation						-0.08	-0.10	0.03	-2.48	0.01	-0.07	-0.10	0.03	-2.29	0.02
Adaptability/Flexibility						0.03	0.04	0.03	0.87	0.38	0.02	0.03	0.03	0.76	0.45
Willingness to Learn						-0.02	-0.03	0.03	-0.62	0.54	-0.02	-0.03	0.03	-0.66	0.51
Dependability						0.09	0.15	0.03	2.98	0.00	0.09	0.15	0.03	2.77	0.01
Attention to Detail						-0.01	-0.01	0.03	-0.19	0.85	0.00	0.01	0.03	0.15	0.88
Dutifulness						0.02	0.02	0.04	0.50	0.62	0.02	0.03	0.04	0.64	0.52
Self-Reliance						0.03	0.04	0.03	0.98	0.33	0.03	0.04	0.03	0.94	0.35
Vigilance						0.00	0.00	0.03	0.05	0.96	0.00	0.00	0.03	-0.05	0.96
Achievement											-0.10	-0.08	0.05	-1.98	0.05
Adjustment											0.08	0.06	0.05	1.44	0.15

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Attention Seeking						0.01	0.01	0.04	0.23	0.82					
Cooperation						-0.04	-0.04	0.04	-1.07	0.29					
Dominance						0.03	0.03	0.04	0.72	0.47					
Even-Tempered						0.06	0.05	0.05	1.24	0.21					
Intellectual Efficiency						0.02	0.02	0.04	0.40	0.69					
Non-Delinquency						0.00	0.00	0.04	-0.06	0.95					
Optimism						-0.03	-0.02	0.05	-0.61	0.54					
Order						-0.04	-0.04	0.04	-0.90	0.37					
Physical Conditioning						0.10	0.09	0.04	2.56	0.01					
Self-Control						0.04	0.03	0.05	0.70	0.48					
Selflessness						0.03	0.02	0.05	0.55	0.58					
Sociability						-0.01	-0.01	0.04	-0.13	0.89					
Tolerance						0.04	0.04	0.04	1.06	0.29					
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.43	0.43	0.43	59.59	0.00	0.47	0.42	0.04	3.49	0.00	0.49	0.42	0.02	1.11	0.35

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 102. Decision Making Regression Results with SDI Facets

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	2.00		0.35	5.76	0.00	1.07		0.52	2.08	0.04	0.95		0.54	1.76	0.08
Team Player - A	0.05	0.04	0.08	0.61	0.54	0.03	0.02	0.08	0.34	0.73	0.01	0.01	0.08	0.10	0.92
Stress Under Pressure - N	-0.04	-0.06	0.04	-1.10	0.27	-0.01	-0.01	0.04	-0.20	0.84	0.02	0.02	0.04	0.35	0.73
Reserved - E	-0.04	-0.07	0.03	-1.41	0.16	-0.05	-0.08	0.03	-1.62	0.10	-0.06	-0.09	0.03	-1.70	0.09

Variable	Model 1 (SDI Only)					Model 2 (SDI + NCAPS)					Model 3 (SDI + NCAPS + TAPAS)				
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Achievement Striving - C	0.22	0.24	0.06	3.76	0.00	0.21	0.23	0.06	3.46	0.00	0.21	0.23	0.06	3.28	0.00
Creative - O	-0.02	-0.03	0.05	-0.46	0.65	-0.02	-0.02	0.05	-0.35	0.73	-0.02	-0.02	0.05	-0.37	0.71
Interpersonal Tactics - M	0.04	0.06	0.04	1.15	0.25	0.03	0.04	0.04	0.88	0.38	0.03	0.04	0.04	0.74	0.46
Pleasant - A	-0.10	-0.11	0.05	-2.11	0.04	-0.06	-0.06	0.05	-1.14	0.26	-0.05	-0.05	0.05	-0.92	0.36
Temperamental - N	0.02	0.03	0.05	0.48	0.63	0.05	0.07	0.05	1.05	0.29	0.06	0.08	0.05	1.15	0.25
Dominance Leader - E	0.02	0.03	0.03	0.68	0.50	0.03	0.04	0.03	0.79	0.43	0.03	0.04	0.04	0.82	0.41
Order - C	-0.01	-0.01	0.03	-0.22	0.83	-0.03	-0.04	0.04	-0.72	0.47	-0.02	-0.03	0.04	-0.46	0.64
Reflective - O	0.09	0.10	0.04	2.10	0.04	0.08	0.10	0.04	1.99	0.05	0.08	0.09	0.04	1.84	0.07
Cynical View - M	0.03	0.03	0.03	0.76	0.45	0.03	0.04	0.03	0.93	0.35	0.02	0.02	0.04	0.52	0.60
Helpful Altruistic - A	0.02	0.02	0.05	0.39	0.69	0.04	0.04	0.05	0.76	0.45	0.05	0.05	0.05	1.03	0.31
Worry - N	-0.02	-0.03	0.03	-0.58	0.56	-0.01	-0.01	0.03	-0.21	0.83	0.01	0.02	0.03	0.39	0.70
Excitement Seeking - E	-0.01	-0.02	0.03	-0.43	0.67	-0.01	-0.01	0.03	-0.24	0.81	-0.01	-0.01	0.03	-0.19	0.85
Self-Discipline - C	0.20	0.24	0.05	4.11	0.00	0.18	0.20	0.05	3.48	0.00	0.19	0.22	0.05	3.70	0.00
Scientific Interest - O	0.02	0.04	0.02	0.88	0.38	0.02	0.05	0.02	1.07	0.29	0.02	0.04	0.02	0.90	0.37
Envious - M	-0.03	-0.05	0.03	-1.09	0.28	-0.03	-0.04	0.03	-0.85	0.39	-0.03	-0.05	0.03	-1.01	0.31
Independent - A	-0.01	-0.01	0.03	-0.36	0.72	-0.03	-0.04	0.04	-0.94	0.35	-0.04	-0.05	0.04	-1.02	0.31
Angry Hostile - N	-0.05	-0.07	0.04	-1.15	0.25	-0.05	-0.07	0.04	-1.22	0.22	-0.04	-0.06	0.04	-0.96	0.34
High Intensity - E	0.03	0.05	0.02	1.16	0.25	0.03	0.05	0.03	1.27	0.20	0.02	0.04	0.03	0.85	0.40
Deliberation - C	0.18	0.23	0.04	4.07	0.00	0.17	0.22	0.04	3.87	0.00	0.17	0.21	0.05	3.64	0.00
Cultured - O	0.02	0.03	0.03	0.78	0.43	0.01	0.01	0.03	0.24	0.81	0.01	0.01	0.03	0.19	0.85
Influence Tactics - M	-0.03	-0.03	0.04	-0.73	0.46	-0.02	-0.02	0.04	-0.50	0.62	-0.02	-0.02	0.04	-0.43	0.67
Optimist - A	0.06	0.07	0.04	1.49	0.14	0.05	0.06	0.04	1.17	0.24	0.04	0.06	0.04	1.10	0.27
Unconventional - C	0.03	0.04	0.04	0.71	0.48	0.04	0.05	0.04	0.92	0.36	0.02	0.03	0.04	0.53	0.59

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Spontaneous Variety - E	0.04	0.05	0.04	1.11	0.27	0.03	0.03	0.04	0.75	0.45	0.02	0.03	0.04	0.65	0.51
Activity - E	0.01	0.01	0.04	0.30	0.76	0.00	-0.01	0.04	-0.13	0.89	-0.01	-0.01	0.04	-0.16	0.87
Well Adjusted – A	-0.15	-0.12	0.06	-2.31	0.02	-0.12	-0.09	0.06	-1.84	0.07	-0.10	-0.08	0.07	-1.57	0.12
Imagination - O	-0.05	-0.07	0.03	-1.43	0.15	-0.03	-0.04	0.03	-0.93	0.35	-0.02	-0.04	0.03	-0.74	0.46
Stress Tolerance						0.06	0.10	0.03	2.19	0.03	0.06	0.10	0.03	2.08	0.04
Achievement						0.01	0.01	0.04	0.23	0.82	0.01	0.01	0.04	0.20	0.84
Social Orientation						-0.05	-0.07	0.03	-1.57	0.12	-0.05	-0.07	0.03	-1.55	0.12
Adaptability/Flexibility						0.01	0.02	0.03	0.44	0.66	0.02	0.02	0.03	0.54	0.59
Willingness to Learn						-0.03	-0.04	0.03	-0.93	0.35	-0.02	-0.03	0.03	-0.79	0.43
Dependability						0.06	0.10	0.03	1.89	0.06	0.06	0.09	0.03	1.72	0.09
Attention to Detail						0.03	0.05	0.03	1.00	0.32	0.03	0.05	0.03	0.92	0.36
Dutifulness						0.02	0.03	0.04	0.65	0.52	0.03	0.03	0.04	0.79	0.43
Self-Reliance						0.04	0.04	0.03	1.09	0.28	0.04	0.04	0.03	1.05	0.29
Vigilance						-0.01	-0.02	0.03	-0.50	0.62	-0.02	-0.03	0.03	-0.62	0.54
Achievement											-0.09	-0.07	0.05	-1.64	0.10
Adjustment											0.07	0.06	0.06	1.32	0.19
Attention Seeking											0.01	0.01	0.04	0.19	0.85
Cooperation											-0.05	-0.05	0.04	-1.17	0.24
Dominance											0.00	0.00	0.04	-0.09	0.93
Even-Tempered											0.06	0.05	0.05	1.09	0.28
Intellectual Efficiency											0.03	0.03	0.05	0.61	0.54
Non-Delinquency											0.02	0.02	0.05	0.45	0.65
Optimism											-0.04	-0.03	0.05	-0.79	0.43
Order											0.00	0.00	0.05	0.00	1.00

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Physical Conditioning											0.08	0.08	0.04	2.09	0.04
Self-Control											0.02	0.01	0.05	0.31	0.75
Selfnessness											0.03	0.02	0.05	0.57	0.57
Sociability											-0.02	-0.02	0.05	-0.48	0.63
Tolerance											0.01	0.01	0.04	0.32	0.75
	R^2	SE	Delta R^2	F	p-value	R^2	SE	Delta R^2	F	p-value	R^2	SE	Delta R^2	F	p-value
	0.50	0.42	0.50	15.14	0.00	0.52	0.41	0.02	2.03	0.03	0.53	0.41	0.01	0.76	0.72

Note. F = F for change in R. Bolded p-values indicate significance $p < .05$.

For Leading Others (see Tables 103 and 104), the hierarchical multiple regression revealed that TAPAS explained 4% of the variance associated with Leading Others over and above that of the SDI domains and NCAPS. Dominance and Sociability showed the strongest relationships with the criterion after the SDI and NCAPS had been added. With the SDI facets entered first, TAPAS showed less incremental validity explaining only 2% of variance associated with Leading Others above and beyond SDI and NCAPS. In this model, none of the TAPAS scales had a statistically significant relationship with Leading Others.

Table 103. Leading Others Regression Results with SDI Domains

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	0.84	0.00	0.37	2.24	0.03	-0.21	0.00	0.57	-0.36	0.72	-0.03	0.00	0.61	-0.04	0.97
Agreeableness	0.40	0.28	0.08	4.85	0.00	0.38	0.27	0.09	4.36	0.00	0.40	0.29	0.09	4.49	0.00
Neuroticism	-0.05	-0.06	0.05	-1.18	0.24	0.03	0.03	0.06	0.52	0.60	0.07	0.07	0.06	1.05	0.30
Extroversion	0.27	0.22	0.06	4.94	0.00	0.20	0.16	0.06	3.37	0.00	0.10	0.08	0.07	1.42	0.16
Conscientiousness	0.23	0.20	0.06	3.67	0.00	0.22	0.19	0.08	2.88	0.00	0.24	0.21	0.09	2.88	0.00
Openness	-0.05	-0.04	0.05	-0.95	0.34	-0.04	-0.04	0.05	-0.84	0.40	-0.04	-0.04	0.05	-0.81	0.42
Machiavellianism	-0.02	-0.01	0.06	-0.30	0.76	0.01	0.01	0.07	0.21	0.84	-0.02	-0.01	0.07	-0.24	0.81
Stress Tolerance						0.07	0.10	0.04	2.05	0.04	0.08	0.11	0.04	2.22	0.03
Achievement						0.01	0.01	0.05	0.19	0.85	0.01	0.01	0.05	0.27	0.79

Variable	Model 1 (SDI Only)					Model 2 (SDI + NCAPS)					Model 3 (SDI + NCAPS + TAPAS)				
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Social Orientation						0.07	0.08	0.04	1.77	0.08	0.03	0.04	0.04	0.82	0.41
Adaptability/Flexibility						0.06	0.07	0.04	1.51	0.13	0.04	0.06	0.04	1.14	0.26
Willingness to Learn						-0.02	-0.03	0.04	-0.66	0.51	-0.03	-0.03	0.04	-0.72	0.47
Dependability						0.04	0.05	0.04	0.89	0.38	0.04	0.06	0.04	0.96	0.34
Attention to Detail						-0.04	-0.05	0.04	-0.90	0.37	-0.03	-0.04	0.04	-0.81	0.42
Dutifulness						-0.01	-0.01	0.04	-0.12	0.91	0.01	0.01	0.05	0.22	0.82
Self-Reliance						0.00	0.00	0.04	-0.07	0.94	0.01	0.01	0.04	0.31	0.76
Vigilance						0.02	0.03	0.04	0.51	0.61	0.03	0.04	0.04	0.73	0.47
Achievement											-0.11	-0.08	0.06	-1.74	0.08
Adjustment											-0.08	-0.06	0.07	-1.21	0.23
Attention Seeking											0.06	0.05	0.05	1.16	0.25
Cooperation											0.06	0.05	0.05	1.12	0.26
Dominance											0.11	0.09	0.05	2.24	0.03
Even-Tempered											0.12	0.08	0.06	1.88	0.06
Intellectual Efficiency											0.01	0.01	0.05	0.26	0.80
Non-Delinquency											-0.06	-0.05	0.05	-1.19	0.24
Optimism											-0.10	-0.06	0.06	-1.61	0.11
Order											-0.06	-0.05	0.05	-1.05	0.30
Physical Conditioning											0.08	0.07	0.05	1.66	0.10
Self-Control											0.09	0.06	0.06	1.47	0.14
Selflessness											-0.09	-0.06	0.06	-1.41	0.16
Sociability											0.13	0.11	0.05	2.31	0.02
Tolerance											0.04	0.03	0.05	0.78	0.44
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
	0.32	0.54	0.32	37.81	0.00	0.35	0.54	0.03	1.83	0.05	0.39	0.53	0.04	2.13	0.01

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 104. Leading Others Regression Results with SDI Facets

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.24		0.42	2.93	0.00	-0.02		0.64	-0.03	0.98	0.00		0.66	0.00	1.00
Team Player - A	0.09	0.06	0.09	0.94	0.35	0.08	0.06	0.09	0.88	0.38	0.05	0.04	0.10	0.58	0.57
Stress Under Pressure - N	0.09	0.11	0.05	1.92	0.06	0.13	0.16	0.05	2.62	0.01	0.16	0.19	0.05	2.91	0.00
Reserved - E	-0.06	-0.08	0.04	-1.56	0.12	-0.06	-0.08	0.04	-1.52	0.13	-0.02	-0.03	0.04	-0.55	0.58
Achievement Striving - C	0.05	0.05	0.07	0.69	0.49	0.07	0.06	0.08	0.87	0.39	0.07	0.06	0.08	0.83	0.41
Creative - O	-0.06	-0.06	0.06	-0.94	0.35	-0.05	-0.05	0.06	-0.87	0.39	-0.07	-0.07	0.06	-1.13	0.26
Interpersonal Tactics - M	0.13	0.15	0.05	2.79	0.01	0.13	0.14	0.05	2.71	0.01	0.11	0.13	0.05	2.37	0.02
Pleasant - A	0.22	0.22	0.06	3.82	0.00	0.22	0.22	0.06	3.67	0.00	0.22	0.22	0.06	3.65	0.00
Temperamental - N	-0.16	-0.18	0.06	-2.62	0.01	-0.13	-0.14	0.06	-2.06	0.04	-0.13	-0.14	0.07	-2.00	0.05
Dominance Leader - E	0.14	0.19	0.04	3.58	0.00	0.13	0.17	0.04	3.25	0.00	0.12	0.16	0.04	2.75	0.01
Order - C	-0.01	-0.01	0.04	-0.21	0.84	0.02	0.02	0.05	0.43	0.67	0.04	0.05	0.05	0.75	0.45
Reflective - O	0.09	0.09	0.05	1.80	0.07	0.10	0.11	0.05	1.99	0.05	0.09	0.09	0.05	1.69	0.09
Cynical View - M	0.01	0.01	0.04	0.22	0.83	0.02	0.02	0.04	0.38	0.71	0.01	0.01	0.04	0.16	0.87
Helpful Altruistic - A	0.08	0.08	0.06	1.45	0.15	0.07	0.06	0.06	1.18	0.24	0.09	0.09	0.06	1.54	0.13
Worry - N	0.01	0.02	0.03	0.38	0.71	0.04	0.05	0.03	1.07	0.29	0.03	0.04	0.04	0.76	0.45
Excitement Seeking - E	-0.01	-0.01	0.03	-0.19	0.85	0.00	0.00	0.03	0.05	0.96	0.01	0.01	0.03	0.22	0.83
Self-Discipline - C	0.11	0.12	0.06	1.89	0.06	0.11	0.11	0.06	1.73	0.08	0.12	0.12	0.06	1.88	0.06

Variable	Model 1 (SDI Only)					Model 2 (SDI + NCAPS)					Model 3 (SDI + NCAPS + TAPAS)				
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Scientific Interest - O	-0.01	-0.01	0.03	-0.33	0.74	-0.01	-0.01	0.03	-0.29	0.77	-0.01	-0.01	0.03	-0.27	0.79
Envious - M	-0.06	-0.08	0.04	-1.63	0.10	-0.06	-0.08	0.04	-1.55	0.12	-0.06	-0.08	0.04	-1.58	0.12
Independent - A	-0.08	-0.09	0.04	-2.05	0.04	-0.09	-0.10	0.04	-2.04	0.04	-0.09	-0.10	0.04	-2.05	0.04
Angry Hostile - N	0.05	0.06	0.05	0.99	0.32	0.05	0.06	0.05	0.87	0.38	0.06	0.07	0.05	1.05	0.29
High Intensity - E	0.03	0.04	0.03	0.89	0.37	0.01	0.02	0.03	0.34	0.73	-0.01	-0.02	0.03	-0.39	0.70
Deliberation - C	0.13	0.14	0.05	2.35	0.02	0.11	0.13	0.05	2.10	0.04	0.12	0.13	0.06	2.15	0.03
Cultured - O	0.02	0.03	0.03	0.65	0.52	0.01	0.01	0.03	0.25	0.80	0.01	0.01	0.04	0.19	0.85
Influence Tactics - M	-0.01	-0.01	0.04	-0.12	0.90	-0.01	-0.01	0.04	-0.15	0.88	-0.01	-0.01	0.04	-0.13	0.89
Optimist - A	0.07	0.08	0.05	1.54	0.12	0.07	0.07	0.05	1.42	0.16	0.07	0.07	0.05	1.35	0.18
Unconventional - C	0.02	0.02	0.05	0.37	0.71	0.03	0.04	0.05	0.71	0.48	0.03	0.04	0.05	0.66	0.51
Spontaneous Variety - E	0.07	0.07	0.04	1.63	0.10	0.05	0.06	0.04	1.23	0.22	0.04	0.04	0.04	0.90	0.37
Activity - E	-0.01	-0.01	0.04	-0.31	0.76	-0.03	-0.04	0.04	-0.77	0.44	-0.04	-0.05	0.04	-0.98	0.33
Well Adjusted - A	-0.17	-0.12	0.08	-2.24	0.03	-0.17	-0.12	0.08	-2.17	0.03	-0.13	-0.09	0.08	-1.65	0.10
Imagination - O	-0.04	-0.05	0.04	-1.04	0.30	-0.03	-0.04	0.04	-0.84	0.40	-0.03	-0.04	0.04	-0.68	0.49
Stress Tolerance						0.07	0.10	0.04	2.09	0.04	0.08	0.11	0.04	2.12	0.03
Achievement						0.01	0.01	0.05	0.11	0.91	0.00	0.00	0.05	-0.01	0.99
Social Orientation						0.05	0.06	0.04	1.19	0.23	0.03	0.03	0.04	0.64	0.52
Adaptability/Flexibility						0.04	0.06	0.04	1.17	0.24	0.03	0.04	0.04	0.87	0.38
Willingness to Learn						-0.03	-0.04	0.04	-0.95	0.34	-0.03	-0.04	0.04	-0.93	0.35
Dependability						0.01	0.02	0.04	0.28	0.78	0.02	0.02	0.04	0.41	0.68
Attention to Detail						-0.05	-0.07	0.04	-1.34	0.18	-0.05	-0.06	0.04	-1.13	0.26
Dutifulness						0.04	0.04	0.04	0.86	0.39	0.04	0.04	0.05	0.93	0.35
Self-Reliance						0.04	0.04	0.04	1.03	0.31	0.05	0.05	0.04	1.18	0.24

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Vigilance						0.03	0.04	0.04	0.74	0.46	0.03	0.04	0.04	0.81	0.42
Achievement											-0.08	-0.06	0.07	-1.18	0.24
Adjustment											-0.04	-0.03	0.07	-0.65	0.52
Attention Seeking											0.08	0.07	0.05	1.48	0.14
Cooperation											0.00	0.00	0.05	0.05	0.96
Dominance											0.06	0.05	0.05	1.09	0.28
Even-Tempered											0.08	0.06	0.06	1.25	0.21
Intellectual Efficiency											0.05	0.04	0.06	0.98	0.33
Non-Delinquency											0.00	0.00	0.06	0.04	0.97
Optimism											-0.11	-0.07	0.06	-1.79	0.07
Order											-0.08	-0.07	0.06	-1.33	0.18
Physical Conditioning											0.05	0.05	0.05	1.11	0.27
Self-Control											0.07	0.05	0.06	1.20	0.23
Selflessness											-0.06	-0.04	0.07	-0.94	0.35
Sociability											0.09	0.08	0.06	1.70	0.09
Tolerance											0.04	0.03	0.05	0.70	0.48
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.43	0.51	0.43	11.34	0.00	0.45	0.51	0.02	1.55	0.12	0.47	0.50	0.02	1.29	0.20

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

For Professionalism (see Tables 105 and 106), the hierarchical multiple regression revealed that TAPAS explained 4% of the variance associated with Professionalism over and above that of the SDI domains and NCAPS. Tolerance and Order (-) showed the strongest relationships with the criterion after the SDI and NCAPS had been added. With the SDI facets entered first, TAPAS showed less incremental validity explaining only 3% of variance associated with Professionalism above and beyond SDI and NCAPS. In this model, Tolerance and Order (-) maintained their significant relationships with Professionalism.

Table 105. Professionalism Regression Results with SDI Domains

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	2.10	0.00	0.30	7.10	0.00	1.02	0.00	0.44	2.31	0.02	1.06	0.00	0.48	2.23	0.03
Agreeableness	0.28	0.25	0.06	4.37	0.00	0.31	0.27	0.07	4.52	0.00	0.26	0.23	0.07	3.72	0.00
Neuroticism	-0.05	-0.06	0.04	-1.28	0.20	0.05	0.07	0.04	1.21	0.23	0.06	0.08	0.05	1.23	0.22
Extroversion	-0.03	-0.03	0.04	-0.71	0.48	-0.05	-0.05	0.05	-1.01	0.32	-0.06	-0.06	0.06	-1.07	0.29
Conscientiousness	0.27	0.29	0.05	5.59	0.00	0.25	0.27	0.06	4.26	0.00	0.32	0.35	0.07	4.88	0.00
Openness	0.09	0.09	0.04	2.14	0.03	0.07	0.08	0.04	1.72	0.09	0.04	0.05	0.04	0.97	0.33
Machiavellianism	-0.05	-0.04	0.05	-0.93	0.35	-0.03	-0.02	0.05	-0.49	0.62	0.00	0.00	0.05	0.07	0.94
Stress Tolerance						0.12	0.21	0.03	4.33	0.00	0.12	0.21	0.03	4.35	0.00
Achievement						0.00	0.00	0.04	0.10	0.92	0.02	0.02	0.04	0.41	0.68
Social Orientation						-0.03	-0.05	0.03	-1.14	0.25	-0.05	-0.07	0.03	-1.47	0.14
Adaptability/Flexibility						0.04	0.06	0.03	1.26	0.21	0.02	0.04	0.03	0.81	0.42
Willingness to Learn						-0.02	-0.03	0.03	-0.73	0.46	-0.04	-0.06	0.03	-1.26	0.21
Dependability						0.02	0.04	0.03	0.79	0.43	0.03	0.05	0.03	0.95	0.34
Attention to Detail						-0.05	-0.08	0.03	-1.56	0.12	-0.03	-0.06	0.03	-1.09	0.28
Dutifulness						0.09	0.12	0.03	2.65	0.01	0.08	0.10	0.04	2.13	0.03
Self-Reliance						-0.02	-0.02	0.03	-0.50	0.62	-0.01	-0.01	0.03	-0.33	0.74
Vigilance						-0.01	-0.02	0.03	-0.33	0.74	-0.01	-0.01	0.03	-0.27	0.78
Achievement											0.01	0.01	0.05	0.14	0.89
Adjustment											0.00	0.00	0.05	-0.04	0.97
Attention Seeking											0.04	0.05	0.04	1.06	0.29
Cooperation											0.05	0.05	0.04	1.27	0.20
Dominance											-0.03	-0.03	0.04	-0.85	0.39
Even-Tempered											0.06	0.05	0.05	1.26	0.21

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Intellectual Efficiency											-0.05	-0.05	0.04	-1.14	0.25
Non-Delinquency											0.01	0.01	0.04	0.19	0.85
Optimism											-0.09	-0.07	0.05	-1.91	0.06
Order											-0.09	-0.10	0.04	-2.27	0.02
Physical Conditioning											0.04	0.04	0.04	1.09	0.28
Self-Control											-0.03	-0.03	0.05	-0.64	0.52
Selflessness											0.01	0.01	0.05	0.22	0.83
Sociability											0.04	0.04	0.04	0.90	0.37
Tolerance											0.15	0.14	0.04	3.61	0.00
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.34	0.43	0.34	41.08	0.00	0.39	0.41	0.05	3.65	0.00	0.43	0.41	0.04	1.98	0.02

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 106. Professionalism Regression Results with SDI Facets

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	2.18		0.35	6.24	0.00	1.07		0.52	2.07	0.04	1.03		0.54	1.92	0.06
Team Player - A	0.03	0.03	0.08	0.38	0.70	0.03	0.03	0.08	0.38	0.71	0.02	0.02	0.08	0.25	0.81
Stress Under Pressure - N	0.03	0.04	0.04	0.67	0.50	0.07	0.10	0.04	1.56	0.12	0.08	0.11	0.04	1.74	0.08
Reserved - E	0.04	0.07	0.03	1.27	0.21	0.03	0.05	0.03	0.98	0.33	0.05	0.08	0.03	1.34	0.18
Achievement Striving - C	0.13	0.15	0.06	2.08	0.04	0.13	0.15	0.06	2.08	0.04	0.09	0.10	0.06	1.37	0.17
Creative - O	-0.07	-0.09	0.05	-1.39	0.17	-0.07	-0.09	0.05	-1.34	0.18	-0.07	-0.08	0.05	-1.26	0.21
Interpersonal Tactics - M	0.03	0.04	0.04	0.69	0.49	0.02	0.02	0.04	0.46	0.65	0.01	0.02	0.04	0.28	0.78
Pleasant - A	0.09	0.11	0.05	1.79	0.07	0.11	0.14	0.05	2.23	0.03	0.11	0.14	0.05	2.21	0.03

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Temperamental - N	-0.11	-0.15	0.05	-2.16	0.03	-0.05	-0.07	0.05	-0.97	0.33	-0.05	-0.07	0.05	-0.96	0.34
Dominance Leader - E	0.03	0.05	0.03	0.91	0.37	0.03	0.05	0.03	0.95	0.34	0.06	0.10	0.03	1.75	0.08
Order - C	-0.08	-0.12	0.03	-2.36	0.02	-0.07	-0.11	0.04	-1.96	0.05	-0.05	-0.07	0.04	-1.01	0.31
Reflective - O	0.03	0.04	0.04	0.77	0.44	0.04	0.05	0.04	0.97	0.33	0.04	0.05	0.04	0.86	0.39
Cynical View - M	0.00	0.00	0.03	0.05	0.96	0.00	0.00	0.03	0.09	0.93	0.01	0.01	0.03	0.18	0.85
Helpful Altruistic - A	0.09	0.10	0.05	1.77	0.08	0.09	0.11	0.05	1.93	0.05	0.09	0.10	0.05	1.70	0.09
Worry - N	0.01	0.02	0.03	0.47	0.64	0.04	0.06	0.03	1.26	0.21	0.03	0.05	0.03	0.95	0.34
Excitement Seeking - E	-0.03	-0.04	0.03	-0.98	0.33	-0.02	-0.03	0.03	-0.78	0.44	-0.02	-0.03	0.03	-0.64	0.52
Self-Discipline - C	0.15	0.20	0.05	3.08	0.00	0.16	0.20	0.05	3.09	0.00	0.16	0.20	0.05	3.13	0.00
Scientific Interest - O	0.02	0.04	0.02	0.79	0.43	0.02	0.04	0.02	0.86	0.39	0.03	0.05	0.02	1.16	0.25
Envious - M	-0.01	-0.02	0.03	-0.46	0.64	-0.01	-0.02	0.03	-0.36	0.72	-0.01	-0.01	0.03	-0.26	0.79
Independent - A	-0.04	-0.05	0.03	-1.19	0.24	-0.05	-0.06	0.04	-1.31	0.19	-0.04	-0.05	0.04	-1.12	0.27
Angry Hostile - N	0.02	0.03	0.04	0.46	0.65	0.01	0.02	0.04	0.28	0.78	0.03	0.04	0.05	0.63	0.53
High Intensity - E	0.04	0.07	0.03	1.54	0.12	0.03	0.05	0.03	1.19	0.23	0.01	0.01	0.03	0.20	0.84
Deliberation - C	0.14	0.19	0.04	3.08	0.00	0.12	0.17	0.04	2.74	0.01	0.15	0.21	0.05	3.27	0.00
Cultured - O	0.05	0.08	0.03	1.71	0.09	0.02	0.04	0.03	0.81	0.42	-0.01	-0.01	0.03	-0.25	0.80
Influence Tactics - M	-0.01	-0.01	0.04	-0.19	0.85	0.00	0.00	0.04	0.01	0.99	0.00	0.00	0.04	0.06	0.95
Optimist - A	0.03	0.04	0.04	0.73	0.47	0.02	0.03	0.04	0.53	0.60	0.02	0.02	0.04	0.39	0.70
Unconventional - C	-0.02	-0.03	0.04	-0.64	0.52	-0.01	-0.02	0.04	-0.28	0.78	0.00	0.00	0.04	-0.05	0.96
Spontaneous Variety - E	0.02	0.03	0.04	0.54	0.59	0.01	0.01	0.04	0.28	0.78	-0.02	-0.02	0.04	-0.45	0.65
Activity - E	-0.01	-0.02	0.04	-0.31	0.75	-0.02	-0.03	0.04	-0.66	0.51	-0.03	-0.05	0.04	-0.92	0.36
Well Adjusted - A	-0.03	-0.03	0.06	-0.47	0.64	-0.03	-0.03	0.06	-0.51	0.61	0.00	0.00	0.06	0.02	0.98
Imagination - O	-0.02	-0.03	0.03	-0.60	0.55	-0.01	-0.02	0.03	-0.34	0.74	-0.01	-0.01	0.03	-0.21	0.84

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Stress Tolerance						0.13	0.22	0.03	4.36	0.00	0.12	0.22	0.03	4.29	0.00
Achievement						-0.01	-0.02	0.04	-0.31	0.76	0.00	0.00	0.04	-0.03	0.97
Social Orientation						-0.04	-0.05	0.03	-1.14	0.25	-0.05	-0.08	0.03	-1.58	0.12
Adaptability/Flexibility						0.04	0.06	0.03	1.24	0.21	0.03	0.04	0.03	0.87	0.39
Willingness to Learn						-0.03	-0.05	0.03	-1.11	0.27	-0.04	-0.06	0.03	-1.37	0.17
Dependability						0.01	0.02	0.03	0.28	0.78	0.02	0.04	0.03	0.60	0.55
Attention to Detail						-0.01	-0.01	0.03	-0.20	0.84	0.00	-0.01	0.03	-0.14	0.89
Dutifulness						0.08	0.10	0.04	2.12	0.03	0.07	0.10	0.04	2.03	0.04
Self-Reliance						0.01	0.01	0.03	0.16	0.87	0.01	0.01	0.03	0.23	0.81
Vigilance						-0.02	-0.03	0.03	-0.69	0.49	-0.02	-0.03	0.03	-0.58	0.56
Achievement											0.02	0.02	0.05	0.34	0.74
Adjustment											0.03	0.02	0.06	0.49	0.63
Attention Seeking											0.06	0.07	0.04	1.44	0.15
Cooperation											0.03	0.03	0.04	0.63	0.53
Dominance											-0.06	-0.06	0.04	-1.34	0.18
Even-Tempered											0.04	0.04	0.05	0.77	0.44
Intellectual Efficiency											-0.04	-0.04	0.04	-0.95	0.34
Non-Delinquency											0.02	0.02	0.05	0.45	0.65
Optimism											-0.10	-0.08	0.05	-2.11	0.04
Order											-0.05	-0.06	0.05	-1.15	0.25
Physical Conditioning											0.03	0.03	0.04	0.81	0.42
Self-Control											-0.04	-0.04	0.05	-0.85	0.40
Selflessness											0.01	0.01	0.05	0.13	0.89
Sociability											0.06	0.06	0.04	1.27	0.21
Tolerance											0.14	0.14	0.04	3.31	0.00

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
	R ²	SE	Delta	F	p-value	R ²	SE	Delta	F	p-value	R ²	SE	Delta	F	p-value
	0.40	0.42	0.40	10.05	0.00	0.44	0.41	0.04	2.95	0.00	0.47	0.40	0.03	1.56	0.08

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

For Unethical Decisions (see Tables 107 and 108), the hierarchical multiple regression revealed that TAPAS explained 5% of the variance associated with Unethical Decisions over and above that of the SDI domains and NCAPS. Attention Seeking, Cooperation, and Physical Conditioning showed the strongest relationships with the criterion after the SDI and NCAPS had been added. With the SDI facets entered first, TAPAS showed less incremental validity explaining only 3% of variance associated with Unethical Decisions above and beyond SDI and NCAPS. In this model, only Cooperation maintained its significant relationships with Unethical Decisions.

Table 107. Unethical Decisions Regression Results with SDI Domains

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	2.26	0.00	0.32	6.98	0.00	3.36	0.00	0.49	6.92	0.00	3.02	0.00	0.52	5.83	0.00
Agreeableness	0.10	0.08	0.07	1.36	0.17	0.07	0.06	0.07	0.95	0.34	0.11	0.09	0.08	1.39	0.16
Neuroticism	0.07	0.08	0.04	1.67	0.10	0.02	0.03	0.05	0.45	0.65	0.12	0.14	0.06	2.14	0.03
Extroversion	0.04	0.04	0.05	0.93	0.35	0.09	0.08	0.05	1.77	0.08	0.05	0.05	0.06	0.87	0.38
Conscientiousness	-0.46	-0.45	0.05	-8.48	0.00	-0.36	-0.35	0.06	-5.58	0.00	-0.35	-0.34	0.07	-4.89	0.00
Openness	0.01	0.01	0.04	0.12	0.90	0.02	0.02	0.04	0.41	0.68	0.03	0.03	0.05	0.65	0.51
Machiavellianism	0.26	0.22	0.05	4.80	0.00	0.20	0.17	0.06	3.60	0.00	0.12	0.11	0.06	2.10	0.04
Stress Tolerance						-0.02	-0.03	0.03	-0.58	0.56	-0.03	-0.04	0.03	-0.90	0.37
Achievement						-0.02	-0.02	0.04	-0.46	0.65	-0.02	-0.02	0.04	-0.38	0.70
Social Orientation						0.01	0.01	0.03	0.19	0.85	0.00	-0.01	0.03	-0.13	0.90
Adaptability/Flexibility						-0.05	-0.08	0.03	-1.71	0.09	-0.04	-0.06	0.03	-1.34	0.18

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Willingness to Learn						-0.01	-0.02	0.03	-0.40	0.69	0.00	0.00	0.03	-0.02	0.98
Dependability						-0.04	-0.06	0.03	-1.05	0.29	-0.05	-0.08	0.03	-1.34	0.18
Attention to Detail						0.02	0.03	0.03	0.53	0.59	0.00	0.00	0.03	0.07	0.95
Dutifulness						-0.11	-0.13	0.04	-2.75	0.01	-0.06	-0.07	0.04	-1.44	0.15
Self-Reliance						0.03	0.04	0.03	1.02	0.31	0.04	0.05	0.03	1.21	0.23
Vigilance						-0.03	-0.04	0.03	-0.81	0.42	-0.02	-0.03	0.03	-0.62	0.54
Achievement											-0.07	-0.06	0.05	-1.36	0.18
Adjustment											0.11	0.09	0.06	1.84	0.07
Attention Seeking											0.09	0.09	0.04	2.09	0.04
Cooperation											0.11	0.10	0.04	2.39	0.02
Dominance											0.00	0.00	0.04	0.01	0.99
Even-Tempered											0.08	0.06	0.05	1.49	0.14
Intellectual Efficiency											0.01	0.01	0.05	0.20	0.84
Non-Delinquency											-0.09	-0.08	0.05	-1.95	0.05
Optimism											-0.08	-0.06	0.05	-1.52	0.13
Order											0.06	0.06	0.05	1.40	0.16
Physical Conditioning											0.09	0.08	0.04	2.17	0.03
Self-Control											-0.03	-0.02	0.05	-0.55	0.58
Selflessness											-0.07	-0.05	0.05	-1.33	0.18
Sociability											-0.03	-0.03	0.05	-0.64	0.52
Tolerance											-0.07	-0.06	0.04	-1.50	0.14
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value

Variable	Model 1 (SDI Only)			Model 2 (SDI + NCAPS)			Model 3 (SDI + NCAPS + TAPAS)								
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
	0.33	0.47	0.33	39.98	0.00	0.37	0.46	0.04	2.86	0.00	0.42	0.45	0.05	2.50	0.00

Note. F = F for change in R. Bolded p-values indicate significance p < .05.

Table 108. Unethical Decisions Regression Results with SDI Facets

Variable	Model 1 (SDI Only)			Model 2 (SDI + NCAPS)			Model 3 (SDI + NCAPS + TAPAS)								
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
(Intercept)	1.57		0.38	4.12	0.00	2.59		0.56	4.59	0.00	2.50		0.58	4.28	0.00
Team Player - A	-0.06	-0.05	0.08	-0.75	0.46	-0.07	-0.06	0.08	-0.81	0.42	-0.06	-0.05	0.08	-0.69	0.49
Stress Under Pressure - N	-0.02	-0.03	0.04	-0.52	0.60	-0.03	-0.04	0.05	-0.61	0.54	-0.03	-0.04	0.05	-0.55	0.59
Reserved - E	0.01	0.01	0.03	0.24	0.81	0.01	0.01	0.03	0.17	0.86	0.00	0.00	0.04	-0.08	0.93
Achievement Striving - C	-0.01	-0.01	0.07	-0.20	0.84	0.01	0.01	0.07	0.17	0.86	0.05	0.06	0.07	0.74	0.46
Creative - O	-0.04	-0.04	0.06	-0.67	0.50	-0.04	-0.04	0.06	-0.70	0.48	-0.05	-0.06	0.06	-0.86	0.39
Interpersonal Tactics - M	0.01	0.01	0.04	0.27	0.79	0.01	0.02	0.04	0.29	0.77	0.01	0.01	0.04	0.23	0.82
Pleasant - A	0.04	0.05	0.05	0.83	0.41	0.02	0.02	0.05	0.34	0.74	-0.01	-0.01	0.05	-0.15	0.88
Temperamental - N	0.05	0.06	0.06	0.84	0.40	0.01	0.02	0.06	0.25	0.80	0.04	0.06	0.06	0.77	0.44
Dominance Leader - E	0.03	0.05	0.04	0.83	0.41	0.03	0.04	0.04	0.80	0.43	0.03	0.04	0.04	0.69	0.49
Order - C	0.03	0.04	0.04	0.88	0.38	0.03	0.05	0.04	0.85	0.39	-0.01	-0.01	0.05	-0.16	0.87
Reflective - O	-0.03	-0.03	0.05	-0.57	0.57	-0.04	-0.05	0.05	-0.90	0.37	-0.05	-0.06	0.05	-1.09	0.28
Cynical View - M	0.07	0.08	0.04	1.90	0.06	0.07	0.08	0.04	1.84	0.07	0.05	0.06	0.04	1.24	0.22
Helpful Altruistic - A	-0.01	-0.01	0.05	-0.12	0.90	0.01	0.01	0.05	0.19	0.85	0.03	0.03	0.05	0.58	0.57

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Worry - N	0.02	0.04	0.03	0.81	0.42	0.02	0.03	0.03	0.59	0.56	0.03	0.03	0.03	0.97	0.33
Excitement Seeking - E	-0.04	-0.07	0.03	-1.57	0.12	-0.06	-0.09	0.03	-2.13	0.03	-0.06	-0.10	0.03	-2.22	0.03
Self-Discipline - C	-0.17	-0.20	0.05	-3.21	0.00	-0.14	-0.17	0.06	-2.61	0.01	-0.14	-0.16	0.06	-2.44	0.02
Scientific Interest - O	0.00	0.01	0.03	0.12	0.91	0.00	0.00	0.02	0.10	0.92	0.00	0.01	0.03	0.14	0.89
Envious - M	-0.01	-0.01	0.04	-0.19	0.85	0.00	-0.01	0.04	-0.10	0.92	-0.02	-0.03	0.04	-0.54	0.59
Independent - A	0.03	0.04	0.04	0.91	0.36	0.00	0.00	0.04	-0.03	0.97	0.00	0.00	0.04	0.08	0.93
Angry Hostile - N	-0.01	-0.02	0.05	-0.24	0.81	-0.01	-0.01	0.05	-0.13	0.89	0.02	0.03	0.05	0.48	0.63
High Intensity - E	0.06	0.09	0.03	2.14	0.03	0.08	0.13	0.03	2.83	0.00	0.07	0.12	0.03	2.48	0.01
Deliberation - C	-0.05	-0.07	0.05	-1.09	0.28	-0.03	-0.04	0.05	-0.64	0.52	-0.05	-0.06	0.05	-0.92	0.36
Cultured - O	-0.04	-0.06	0.03	-1.28	0.20	-0.02	-0.03	0.03	-0.59	0.56	0.00	0.00	0.03	-0.02	0.99
Influence Tactics - M	0.03	0.04	0.04	0.75	0.46	0.02	0.03	0.04	0.58	0.56	0.02	0.02	0.04	0.41	0.69
Optimist - A	0.02	0.02	0.04	0.44	0.66	0.03	0.03	0.04	0.63	0.53	0.03	0.04	0.04	0.78	0.44
Unconventional - C	0.22	0.28	0.04	5.14	0.00	0.18	0.23	0.04	4.21	0.00	0.15	0.19	0.05	3.20	0.00
Spontaneous Variety - E	0.01	0.01	0.04	0.20	0.84	0.03	0.03	0.04	0.74	0.46	0.03	0.04	0.04	0.79	0.43
Activity - E	-0.06	-0.07	0.04	-1.54	0.12	-0.04	-0.05	0.04	-1.02	0.31	-0.03	-0.04	0.04	-0.84	0.40
Well Adjusted - A	0.07	0.06	0.07	0.98	0.33	0.05	0.04	0.07	0.77	0.44	0.06	0.05	0.07	0.92	0.36
Imagination - O	0.09	0.13	0.04	2.63	0.01	0.08	0.12	0.04	2.25	0.02	0.08	0.12	0.04	2.32	0.02
Stress Tolerance						-0.03	-0.05	0.03	-0.90	0.37	-0.03	-0.05	0.03	-0.97	0.33
Achievement						-0.02	-0.02	0.04	-0.42	0.68	-0.02	-0.03	0.04	-0.57	0.57
Social Orientation						-0.01	-0.01	0.04	-0.14	0.89	-0.01	-0.01	0.04	-0.21	0.83
Adaptability/Flexibility						-0.03	-0.05	0.03	-0.95	0.34	-0.03	-0.04	0.03	-0.92	0.36

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
Willingness to Learn						-0.01	-0.02	0.03	-0.35	0.72	0.00	0.00	0.03	-0.01	0.99
Dependability						-0.04	-0.07	0.03	-1.29	0.20	-0.05	-0.09	0.04	-1.50	0.13
Attention to Detail						0.00	0.01	0.04	0.10	0.92	0.01	0.01	0.04	0.22	0.82
Dutifulness						-0.09	-0.10	0.04	-2.23	0.03	-0.06	-0.07	0.04	-1.56	0.12
Self-Reliance						0.06	0.08	0.04	1.75	0.08	0.06	0.07	0.04	1.63	0.10
Vigilance						-0.01	-0.01	0.03	-0.21	0.83	-0.01	-0.02	0.03	-0.36	0.72
Achievement											-0.06	-0.05	0.06	-1.03	0.30
Adjustment											0.06	0.05	0.06	0.94	0.35
Attention Seeking											0.04	0.04	0.05	0.92	0.36
Cooperation											0.12	0.11	0.05	2.60	0.01
Dominance											0.01	0.01	0.05	0.15	0.88
Even-Tempered											0.08	0.07	0.06	1.51	0.13
Intellectual Efficiency											0.01	0.01	0.05	0.16	0.87
Non-Delinquency											-0.07	-0.06	0.05	-1.35	0.18
Optimism											-0.09	-0.07	0.05	-1.70	0.09
Order											0.03	0.02	0.05	0.48	0.63
Physical Conditioning											0.08	0.08	0.04	1.91	0.06
Self-Control											-0.03	-0.02	0.05	-0.51	0.61
Selflessness											-0.05	-0.03	0.06	-0.79	0.43
Sociability											-0.03	-0.03	0.05	-0.65	0.51
Tolerance											-0.08	-0.07	0.05	-1.68	0.09
	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value	R²	SE	Delta R²	F	p-value
	0.40	0.46	0.40	10.09	0.00	0.43	0.45	0.03	2.20	0.02	0.46	0.45	0.03	1.72	0.04

Variable	Model 1 (SDI Only)				Model 2 (SDI + NCAPS)				Model 3 (SDI + NCAPS + TAPAS)						
	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value	B	Beta	SE	Statistic	p-value
<p>Note: F = F for change in R. Bolded p-values indicate significance $p < .05$.</p>															

8.8.8 Hierarchical Regression Summary

A variety of multiple regression analyses were conducted to determine the absolute and relative contribution of the TAPAS, NCAPS, and SDI in the prediction of six self-rated performance areas. The within-assessment multiple regression results indicated that the SDI accounted for the most variance across the rating areas, as SDI-Facets explained between 12 and 48% of the variance, SDI-Domains explained between 8 and 41%, NCAPS explained between 9 and 29%, and finally TAPAS explained between 7 and 21%. In this regard, SDI was the most predictive assessment, though we caution the interpretation of this finding. It is also important to point out that the criterion variables align well with the SDI method of measurement (i.e. self-reported ratings on a Likert-type scale).

The conceptually-oriented hierarchical regression analyses showed that there was substantial and significant incremental prediction of NCAPS and SDI-Domains and SDI-Facets over TAPAS. Accounting for all three assessments in the prediction models often increased the prediction three to five times compared to the amount of variance accounted for by TAPAS alone.

Finally, the hierarchical regression analyses using all scales from all three measures and entering SDI first given that it demonstrates the highest correlations with the performance rating areas showed that NCAPS and TAPAS often added some incremental prediction, but the effect is more subtle compared to the conceptually-oriented hierarchical regression results. NCAPS added an additional 1 to 5% of variance explained beyond the SDI-Domains or SDI-Facets. Dutifulness and Stress Tolerance were the most robust and consistent predictors across criteria areas. Similarly, TAPAS added another 1 to 5% of the variance explained beyond SDI-Domains and NCAPS, and another 1-4% of the variance explained beyond SDI-Facets and NCAPS. Physical Conditioning was shown to be a unique and robust predictor, which matches the results of the mapping analysis.

Despite the results indicating overlap between the three assessments, the results of the regression analyses show unique prediction of the three assessments for these ratings of performance. Some of the regression results, particularly the conceptually-oriented hierarchical approach are complicated by the often substantial observed correlations between similar predictor constructs. This limited the amount of incremental variance that could be observed in this approach. We felt this was an important analysis to conduct, however, as it illustrates the process of selecting conceptually-oriented predictors based on criteria measures, which is a common and recommended validation strategy.

The interpretation of these results is also complicated by the high correlations observed between SDI-Facets and SDI-Domains with the performance rating areas. We believe these results are explained by the high degree of similarity in rating format and the simultaneous collection of these ratings, an indication of common method variance. The following section will show that TAPAS is the most resistant to faking, while NCAPS and SDI show moderate levels of fakability. Therefore, it is possible that the lower criterion related validity estimates for TAPAS are due to common method variance with both NCAPS and SDI, as well as fakability. It is our recommendation that future analyses should include more robust criterion measures including

supervisor and/or peer ratings in order to draw more firm conclusions about the validity of the TAPAS variables.

8.9 Faking Results

Differences between respondents in the Fake-Good and the Honest conditions were analyzed using the Cohen's *d* statistic. Effect sizes are based on Cohen's (1988) suggestion that a small effect is between 0.20 and 0.50, a medium effect is between 0.50 and 0.80, and a large effect is 0.80 and above. The *d* statistic represents the difference between two subgroups at a time in terms of standard deviations; for example, a *d* score of 0.50 would indicate that the groups differ by half a standard deviation unit. Results of these analyses are presented in the following tables.

Following the general guidelines established by Cohen (1988), where a small effect is considered to be between 0.20 and 0.50, small negative effects were seen in TAPAS where honest test-takers scored slightly lower than fake-good test-takers on Achievement, Non-Delinquency, Order, and Self-Control. No other notable differences were found between the honest and fake-good conditions for the TAPAS.

Table 109. TAPAS Honest vs. Faking Differences

TAPAS	Cohen's D
Can Do Composite	0.10
Persistence Composite	-0.10
Will Do Composite	0.16
Achievement	0.32
Adjustment	0.19
Attention-Seeking	0.03
Cooperation	0.19
Dominance	0.19
Even-Tempered	0.11
Intellectual Efficiency	0.17
Non-Delinquency	0.30
Optimism	-0.01
Order	0.31
Physical Conditioning	-0.05
Self-Control	0.35
Selflessness/Generosity	0.07
Sociability	-0.05
Tolerance	0.04
<i>Note.</i> N = 1056. A positive Cohen's <i>d</i> indicates the faking group scored higher than the honest group.	

For the NCAPS, small differences were found between Honest and Fake-Good test takers, with Honest test takers scoring slightly lower in Achievement, Social Orientation, Adaptability/Flexibility, Willingness to Learn, and Dutifulness. Medium subgroup differences were found for Stress Tolerance, Dependability, Attention to Detail, and Vigilance, with honest test-takers again scoring lower than fake-good test-takers. These more frequent and generally

higher subgroup difference scores suggest that faking good may have a bigger impact on the scores for NCAPS than for TAPAS.

Table 110. NCAPS Honest vs. Faking Differences

NCAPS	Cohen's D
Stress Tolerance	0.57
Achievement	0.46
Social Orientation	0.32
Adaptability Flexibility	0.42
Willingness to Learn	0.41
Dependability	0.72
Attention to Detail	0.64
Dutifulness	0.42
Self-Reliance	0.09
Vigilance	0.60
<i>Note.</i> N = 1056. A positive Cohen's d indicates the faking group scored higher than the honest group.	

The SDI domains demonstrated more sizable subgroup differences among most variables. Small subgroup differences were found for Openness, with honest test-takers scoring slightly lower than fake-good test-takers. Moderate/medium subgroup differences were found for Agreeableness, Neuroticism, and Machiavellianism. Honest test takers scored higher on Neuroticism and Machiavellianism (both socially undesirable domains), and lower on Agreeableness, than fake-good responders. A large subgroup difference was found for Conscientiousness, with honest test-takers scoring well below the fake-good test takers. Again, the more frequent subgroup differences between the honest and fake-good conditions for the SDI than the TAPAS suggests that the SDI domain-level items may be more sensitive to faking than the TAPAS scores.

Table 111. SDI Honest vs. Faking Differences

SDI	Cohen's D
Agreeableness	0.52
Neuroticism	-0.72
Extroversion	0.16
Conscientiousness	0.81
Openness	0.25
Machiavellianism	-0.62
<i>Note.</i> N = 1056. A positive Cohen's d indicates the faking group scored higher than the honest group.	

The SDI facets also demonstrated numerous score differences in the faking to honest conditions. Small subgroup differences were found, with honest respondents scoring lower, for Team Player, Pleasant, Dominance Leader, Helpful-Altruistic, Cultured, Optimist, and Activity. Honest respondents scored higher on Reserved, Interpersonal Tactics, Cynical View, High Intensity, Influence Tactics, Spontaneous Variety, and Imagination. Moderate differences were found, with honest respondents scoring lower, for Achievement Striving, Creative, Order, Self-Discipline,

Scientific Interest, and Deliberation. Moderate differences were found with honest respondents scoring higher for Stress Under Pressure, Temperamental, Worry, Envious, Independent, Angry-Hostile, and Unconventional. Again, it appears that most of the SDI facets may be moderately sensitive to faking.

Table 112. SDI Facets Honest vs. Faking Differences

SDI	Cohen's D
Team Player	0.49
Stress Under Pressure	-0.68
Reserved	-0.38
Achievement Striving	0.67
Creative	0.51
Interpersonal Tactics	-0.37
Pleasant	0.48
Temperamental	-0.65
Dominance Leader	0.44
Order	0.67
Reflective	0.01
Cynical View	-0.47
Helpful Altruistic	0.48
Worry	-0.54
Excitement Seeking	0.04
Self-Discipline	0.69
Scientific Interest	0.50
Envious	-0.52
Independent	-0.52
Angry Hostile	-0.56
High Intensity	-0.33
Deliberation	0.69
Cultured	0.23
Influence Tactics	-0.22
Optimist	0.46
Unconventional	-0.60
Spontaneous Variety	-0.38
Activity	0.42
Well Adjusted	0.04
Imagination	-0.41
<i>Note.</i> N = 1056. A positive Cohen's d indicates the faking group scored higher than the honest group.	

Of all three assessments, the TAPAS demonstrated the fewest faking to honest mean score differences, with the least amount of differences, even when respondents faked their responses to be desirable. The TAPAS may therefore be less sensitive to participants faking.

9.0 STUDY COMPARISONS

Study 1 and Study 2 differed in a few ways. For example, Study 1 was conducted under operational conditions while Study 2 was conducted for research purposes and included Honest and Faking conditions; Study 2 included NCAPS while Study 1 did not. Despite these differences, there were several areas in which they could be compared. Specifically, subgroup difference analyses for Blacks/African Americans and females were conducted as well as intercorrelations between the TAPAS and SDI. The below sections show how the results of these analyses compared between studies.

9.1 Subgroup Differences

Study 1 had enough minority participants to perform subgroup difference analyses for Blacks/African Americans, Asians, Hispanics/Latinos, and females while Study 2 only had enough participants to perform analyses for Blacks/African Americans and females. The following tables present how the results of the subgroup difference analyses for Blacks/African Americans and females compared between studies 1 and 2 for the TAPAS and SDI. The values in parentheses in Tables 113 through 118 are *d* values.

9.1.1 TAPAS

Table 113. TAPAS Subgroup Differences across Studies – Black/African American

Study 1	Study 2	Both
Attention Seeking (0.26)		
Can Do Composite (-0.22)		
	Non-Delinquency (-0.25)	
	Optimism (-0.25)	
		Persistence Composite (-0.40, -0.26)
		Physical Conditioning (-0.36, -0.28)
Selflessness/Generosity (0.24)		
Will Do Composite (-0.30)		
<i>Note.</i> Study 1 <i>N</i> = 289 (Black/African American); <i>N</i> (White) = 1264. Study 2 <i>N</i> (Black/African American) = 95; <i>N</i> (White) = 369.		

For TAPAS, small negative effects were seen in both studies where Blacks/African Americans scored lower on the Persistence Composite and Physical Conditioning.

Table 114. TAPAS Subgroup Differences across Studies – Female

Study 1	Study 2	Both
		Adjustment (-0.29, -0.27)
		Can Do Composite (-0.25, -0.33)
		Cooperation (0.25, 0.21)
	Intellectual Efficiency (-0.28)	
Order (0.24)		

Study 1	Study 2	Both
		Persistence Composite (-0.34, -0.24)
		Physical Conditioning (-0.36, -0.25)
		Selflessness/Generosity (0.29, 0.62)*
		Tolerance (0.23, 0.37)
<i>Note.</i> Study 1 female <i>N</i> = 611, male <i>N</i> = 275. Study 2 female <i>N</i> = 275, male <i>N</i> = 276. *A <i>small</i> positive effect was found in Study 1 while a <i>medium</i> positive effect was found in Study 2.		

For the TAPAS, small negative effects were seen in both studies where females scored lower on Can Do, Persistence Composite, Adjustment, and Physical Conditioning. Small positive effects were seen in both studies where females scored higher on Cooperation and Tolerance. A small positive effect was seen in Study 1 where females scored higher on Selflessness/Generosity while a medium positive effect was found in Study 2.

9.1.2 SDI

Table 115. SDI Domains Subgroup Differences across Studies – Black/African American

Study 1	Study 2	Both
Agreeableness (0.21)		
Conscientiousness (0.27)		
Openness (0.29)		
<i>Note.</i> Study 1 <i>N</i> = 289 (Black/African American); <i>N</i> (White) = 1264.		

For SDI domains, there were no shared effects across studies for Black or African Americans.

Table 116. SDI Domains Subgroup Differences across Studies – Female

Study 1	Study 2	Both
	Agreeableness (0.26)	
		Conscientiousness (0.20, 0.31)
		Machiavellianism (-0.26, -0.36)
<i>Note.</i> Study 1 female <i>N</i> = 611, male <i>N</i> = 275. Study 2 female <i>N</i> = 275, male <i>N</i> = 276.		

For the SDI domains, a small negative effect was seen in both studies where females scored lower on Machiavellianism. However, this is considered favorable given that Machiavellianism is a negative domain area. A small positive effect was seen in both studies where females scored higher on Conscientiousness.

Table 117. SDI Facets Subgroup Differences across Studies – Black/African American

Study 1	Study 2	Both
Creative (0.20)		
		Cultured (0.49, 0.30)
		Deliberation (0.34, 0.22)
		Envious (-0.55, -0.75)*
		Excitement Seeking (-0.25, -0.30)
Helpful Altruistic (0.22)		
Order (0.26)		
Pleasant (0.20)		
		Reflective (0.39, 0.25)
Spontaneous Variety (0.22)		
Temperamental (-0.20)		
<i>Note.</i> Study 1 <i>N</i> = 289 (Black/African American); <i>N</i> (White) = 1264. Study 2 <i>N</i> (Black/African American) = 95; *Medium negative effects were found in both studies.		

For the SDI facets, a small negative effect was seen in both studies where Black/African Americans scored lower on Excitement Seeking. A medium negative effect was seen in both studies where Blacks/African Americans scored lower on Envious. However, this is seen as favorable given that Envious is a negative facet. Small positive effects were seen in both studies where Black/African Americans scored higher on Reflective, Deliberation, and Cultured.

Table 118. SDI Facets Subgroup Differences across Studies – Female

Study 1	Study 2	Both
	Activity (0.31)	
		Cultured (0.25, 0.45)
	Cynical View (-0.33)	
	Deliberation (0.25)	
		Envious (-0.21, -0.29)
Excitement Seeking (-0.21)		
	Helpful Altruistic (0.29)	
	Imagination (-0.29)	
		Influence Tactics (-0.22, -0.23)
		Interpersonal Tactics (-0.29, -0.32)
		Order (0.28, 0.31)
		Scientific Interest (-0.42, -0.36)
		Stress Under Pressure (0.35, 0.36)
		Unconventional (-0.23, -0.33)
	Well Adjusted (0.22)	
<i>Note.</i> Study 1 female <i>N</i> = 611, male <i>N</i> = 275. Study 2 female <i>N</i> = 275, male <i>N</i> = 276.		

For the SDI facets, small negative effects were seen in both studies where females scored lower on Scientific Interest and Unconventional. Small negative effects were also seen in both studies where Females scored lower on Interpersonal Tactics, Envious, and Influence Tactics. However,

this is considered favorable given that Interpersonal Tactics, Envious, and Influence Tactics are negative facets. Small positive effects were seen in both studies where females scored higher on Order and Culture. A small positive effect was also seen in both studies where Females scored higher on Stress Under Pressure. However, this is considered unfavorable given that Stress Under Pressure is a negative facet.

In sum, about half (24 of 49 effects) of the subgroup differences were found in both studies. There were slightly more unique subgroup difference findings (i.e., subgroup differences that were only found in one study) in Study 1 (15 unique effects) than in Study 2 (10 unique effects). Additionally, there were more unique subgroup difference findings for Blacks/African Americans in Study 1 (13 unique effects) than in Study 2 (2 unique effects). The opposite was true for Females where more unique subgroup differences were found in Study 2 (8 unique effects) than in Study 1 (2 unique effects).

9.2 Intercorrelations

Intercorrelations were calculated between the TAPAS and SDI in both studies. The following tables present how the intercorrelations compared between studies. Only intercorrelations less than or equal to -.30 or greater than or equal to .30 are included.

Table 119. Comparison of TAPAS and SDI Domains Corrected Correlations across Studies

Study 1	Study 2	Both
	Achievement-Agreeableness (0.37)	
		Achievement-Conscientiousness (0.34, 0.59)
		Adjustment-Neuroticism (-0.46, -0.62)
Attention-Seeking-Agreeableness (0.30)		
		Attention-Seeking-Extroversion (0.55, 0.64)
	Cooperation-Agreeableness (0.30)	
	Cooperation-Machiavellianism (-0.36)	
		Dominance-Extroversion (0.43, 0.44)
		Even-Tempered-Neuroticism (-0.36, -0.59)
		Non-Delinquency-Conscientiousness (0.43)
	Non-Delinquency-Machiavellianism (-0.35)	
		Optimism-Neuroticism (-0.30, -0.36)
		Order-Conscientiousness (0.35, 0.44)

Study 1	Study 2	Both
		Self-Control-Conscientiousness (0.35, 0.52)
	Self-Control-Machiavellianism (-0.36)	
	Selflessness/Generosity-Machiavellianism (-0.33)	
Sociability-Agreeableness (0.31)		
		Sociability-Extroversion (0.44, 0.57)
	Tolerance-Openness (0.37)	

Ten correlations less than or equal to $-.30$ or greater than or equal to $.30$ were found in both studies when correlating TAPAS facets and composites with SDI domains.

Table 120. Comparison of TAPAS and SDI Facets Corrected Correlations across Studies

Study 1	Study 2	Both
		Achievement-Achievement Striving (0.36, 0.63)
	Achievement-Activity (0.39)	
	Achievement-Creative (0.43)	
	Achievement-Deliberation (0.35)	
		Achievement-Dominance Leader (0.30, 0.37)
	Achievement-Envious (-0.35)	
	Achievement-Order (0.41)	
		Achievement-Self-Discipline (0.38, 0.61)
	Achievement-Stress Under Pressure (-0.33)	
	Achievement-Team Player (0.48)	
	Achievement-Unconventional (-0.45)	
	Achievement-Well Adjusted (0.35)	
		Adjustment-Angry-Hostile (-0.30, -0.32)
	Adjustment-Reserved (-0.30)	
		Adjustment-Stress Under Pressure (-0.43, -0.67)
		Adjustment-Temperamental (-0.32, -0.39)
		Adjustment-Worry (-0.46, -0.67)
	Attention Seeking-Activity (0.30)	
		Attention Seeking-Dominance Leader (0.40, 0.40)
		Attention Seeking-High Intensity (0.40, 0.52)
		Attention Seeking-Influence Tactics (0.35, 0.39)
		Attention Seeking-Optimist (0.35, 0.33)
		Attention Seeking-Reserved (-0.46, -0.57)
		Attention Seeking-Spontaneous (0.32, 0.39)
	Cooperation-Angry-Hostile (-0.34)	
	Cooperation-Helpful Altruistic (0.32)	
	Cooperation-Self-Discipline (0.32)	
	Cooperation-Pleasant (0.37)	
	Cooperation-Temperamental (-0.32)	
	Cooperation-Unconventional (-0.30)	

Study 1	Study 2	Both
	Dominance-Activity (0.30)	
		Dominance-Dominance Leader (0.58, 0.64)
		Dominance-Reserved (-0.46, -0.43)
	Dominance-Resilience (-0.43)	
		Even-Tempered-Angry Hostile (-0.41, -0.67)
	Even-Tempered-Pleasant (0.32)	
	Even-Tempered-Self-Discipline (0.32)	
	Even-Tempered-Stress Under Pressure (-0.43)	
		Even-Tempered-Temperamental (-0.39, -0.59)
	Even-Tempered-Worry (-0.33)	
	Intellectual Efficiency-Activity (0.32)	
	Intellectual Efficiency-Creative (0.41)	
	Intellectual Efficiency-Dominance Leader (0.38)	
		Intellectual Efficiency-Scientific Interest (0.30, 0.30)
		Intellectual Efficiency-Stress Under Pressure (-0.36, -0.37)
	Non-Delinquency-Deliberation (0.32)	
	Non-Delinquency-Influence Tactics (-0.37)	
	Non-Delinquency-Interpersonal Tactics (-0.33)	
	Non-Delinquency-Self-Discipline (0.37)	
	Non-Delinquency-Spontaneous (-0.36)	
		Non-Delinquency-Unconventional (-0.46, -0.68)
	Optimism-Stress Under Pressure (-0.31)	
	Optimism-Worry (-0.35)	
	Order-Deliberation (0.31)	
		Order-Order (0.59, 0.73)
	Self-Control-Achievement Striving (0.40)	
		Self-Control-Deliberation (0.38, 0.48)
	Self-Control-Envious (-0.36)	
	Self-Control-Order (0.37)	
	Self-Control-Self Discipline (0.46)	

Study 1	Study 2	Both
		Self-Control-Spontaneous (-0.30, -0.37)
	Self-Control-Unconventional (-0.46)	
	Selflessness/Generosity-Helpful Altruistic (0.38)	
	Selflessness/Generosity-Interpersonal Tactics (-0.32)	
		Sociability-Dominance Leader (0.37, 0.38)
	Sociability-High Intensity (0.37)	
		Sociability-Optimist (0.36, 0.36)
Sociability-Pleasant (0.31)		
		Sociability-Reserved (-0.56, -0.63)
	Sociability-Spontaneous (0.37)	
		Tolerance-Cultured (0.37, 0.51)

Twenty-seven correlations less than or equal to $-.30$ or greater than or equal to $.30$ were found in both studies when correlating the TAPAS scales and composites with the SDI facets.

In sum, about two-fifths (37 of 91) of the correlations less than or equal to $-.30$ or greater than or equal to $.30$ were found in both studies. More unique correlations (i.e., correlations between two variables that were only found in one study) were found in Study 2 (51 unique correlations) than Study 1 (3 unique correlations). For correlations between the TAPAS scales and composites and the SDI domains, Study 1 had two unique correlations compared to Study 2's seven unique correlations. The difference was even starker for correlations between the TAPAS scales and composites and the SDI facets. Study 1 had one unique correlation compared to Study 2's 44 unique correlations.

One possible explanation for these study differences may be that Study 1 was conducted under operational conditions, while Study 2 was conducted under research only conditions. Typically in an operational context, it is considered higher stakes and there is some incentive for faking (i.e. because scores will be directly linked to a promotion or being hired for a job, people are more likely to respond in the most socially desirable way). In fact, the faking results for Study 2 show that while the TAPAS is less vulnerable to faking than either the NCAPS or SDI, there are still small faking effect sizes for the most socially desirable traits of Achievement, Order, Non-Delinquency, and Self-Control, with Dominance being right on the line. More importantly, the faking effects sizes were larger for NCAPS and SDI, which would have had a more substantial effect on the correlations.

Additionally, a Cohen's d analysis of the means across Study 1 and Study 2 showed that Study 1 generally had higher means than Study 2 (see Table 121). Small to medium effect sizes, indicating Study 1 means were higher than honest condition means in Study 2, were seen on the scales of Achievement, Dominance, Even-Tempered, Intellectual Efficiency, and Physical Conditioning. When comparing Study 1 means to the fake-good condition means in Study 2, many of these effects dropped in size with the exception of Physical Conditioning, which remained roughly the same. This would suggest that the fake-good conditions in Study 2 resulted

in more similar scores to Study 1, indicating that there may in fact be more socially desirable responding present in the operational conditions of Study 1.

In addition to the TAPAS results, mean comparisons of the SDI scores in Study 1 versus Study 2 showed evidence of score inflation in Study 1. At the domain level, medium to large effect size differences were seen for Agreeableness, Conscientiousness, Neuroticism, and Machiavellianism, likely indicating indirect evidence of faking (i.e. lower on Neuroticism and Machiavellianism and higher on Agreeableness and Conscientiousness). Facet level analyses showed a similar pattern of results. Cohen's *d* results are presented in the table below.

Table 121. TAPAS Study 1 Means Compared with Study 2 Honest and Fake Good Means

TAPAS	Cohen's <i>d</i> Honest	Cohen's <i>d</i> Fake Good
Achievement	0.37	0.12
Adjustment	0.08	-0.09
Attention-Seeking	-0.04	-0.07
Cooperation	0.00	-0.16
Dominance	0.63	0.50
Even-Tempered	0.25	0.16
Intellectual Efficiency	0.34	0.22
Non-Delinquency	0.05	-0.22
Optimism	0.19	0.19
Order	-0.09	-0.34
Physical Conditioning	0.26	0.29
Self-Control	0.05	-0.21
Selflessness/Generosity	-0.13	-0.19
Sociability	-0.16	-0.13
Tolerance	-0.05	-0.08

Note. N = 2,624 for Honest Conditions and N = 2,577 for Fake Good Conditions. A positive Cohen's *d* indicates the Study 1 group scored higher than the Study 2 group.

Table 122. SDI Study 1 Means Compared with Study 2 Means

SDI	Cohen's <i>d</i>
Agreeableness	0.57
Conscientiousness	0.75
Extroversion	0.14
Neuroticism	-0.88
Openness	0.00
Machiavellianism	-0.68

Note. N = 2,655. A positive Cohen's *d* indicates the Study 1 group scored higher than the Study 2 group.

Table 123. SDI Facet Study 1 Means Compared with Study 2 Means

SDI Facets	Cohen's <i>d</i>
Team Player	0.56
Stress Under Pressure	-0.96
Reserved	-0.39
Achievement Striving	0.76
Creative	0.44
Interpersonal Tactics	-0.54
Pleasant	0.52
Temperamental	-0.73
Dominance	0.64
Order	0.52
Reflective	-0.20
Cynical View	-0.78
Helpful-Altruistic	0.33
Worry	-0.56
Excitement Seeking	-0.05
Self-Discipline	0.64
Scientific Interest	0.22
Envious	-0.49
Independent	-0.48
Angry-Hostile	-0.70
High Intensity	-0.39
Deliberation	0.65
Cultured	-0.04
Influence Tactics	0.07
Optimist	0.51
Unconventional	-0.38
Spontaneous Variety	-0.33
Activity	0.37
Well-Adjusted	0.26
Imagination	-0.40
<i>Note.</i> N = 2,655. A positive Cohen's <i>d</i> indicates the Study 1 group scored higher than the Study 2 group.	

In an attempt to understand whether the small to large mean differences between Study 1 and Study 2 could be explained by differences in factor structure that could arise given the different instructions provided to participants in Study 2 and different conditions (operational vs. research), a series of factor analyses were conducted using scale scores from each assessment to determine the underlying factor structure. Results from Study 1 showed more delineation between components than those in Study 2. For instance, the TAPAS in Study 1 showed approximately 10 factors as opposed to Study 2 which showed between 1 and 3 main factors. The SDI facet analyses showed more similar results across studies with approximately 9-10 factors in each study. Each assessment showed between 1 and 10 main underlying factors, with several scales loading on their own factors. The NCAPS from Study 2 was the only measure to show adequate coverage when a five-factor model was forced on each of the measures ($X^2(73, N$

= 518) = 3633.91, $p < .05$). Scree plots for the principal components analysis and eigenvalue loadings when forcing a five-factor model are presented below for Studies 1 and 2. Overall, it seems that the condition and/or instruction related differences between Studies 1 and 2 contributed to differences in the participant response process and resulted in different underlying assessment factor structures.

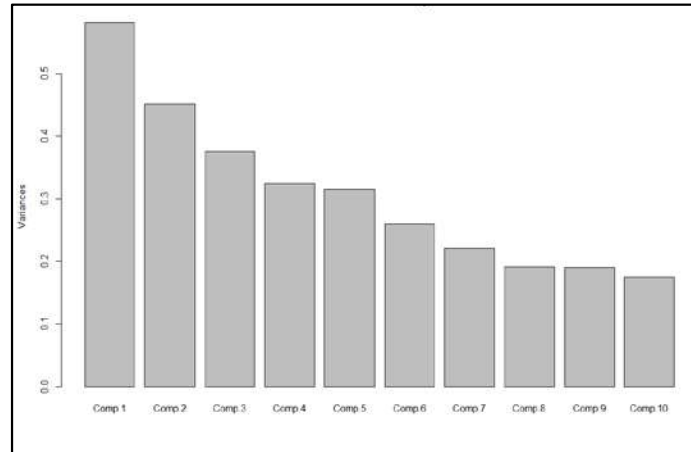


Figure 1. Study 1: TAPAS Principal Components Factor Analysis Scree Plot

Table 124. Study 1: TAPAS Forced Five-Factor Model Eigenvalues and Chi-Square Test

TAPAS	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Achievement			-0.15		
Adjustment			0.54	0.35	
Attention-Seeking	0.57			0.19	-0.16
Cooperation			0.33	-0.40	0.30
Dominance	0.36			0.45	
Even-Tempered			0.53		0.17
Intellectual Efficiency			0.20	0.41	
Non-Delinquency			0.11	-0.16	0.37
Optimism	0.10		0.30		
Order					0.38
Physical Conditioning	0.12			0.21	-0.10
Self-Control	-0.14		0.19		0.46
Selflessness/Generosity	0.23	0.12		-0.19	0.20
Sociability	0.68				
Tolerance	0.12	0.98	0.15		
SS loadings	1.03	1.00	0.93	0.81	0.71
Proportion Var	0.07	0.07	0.06	0.05	0.05
Cumulative Var	0.07	0.14	0.20	0.25	0.30
Test of the hypothesis that 5 factors are sufficient.					
The chi square statistic is 117.08 on 40 degrees of freedom.					

TAPAS	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
The p-value is 0					
Note. Factor Analysis included a forced five-factor model using varimax rotation.					

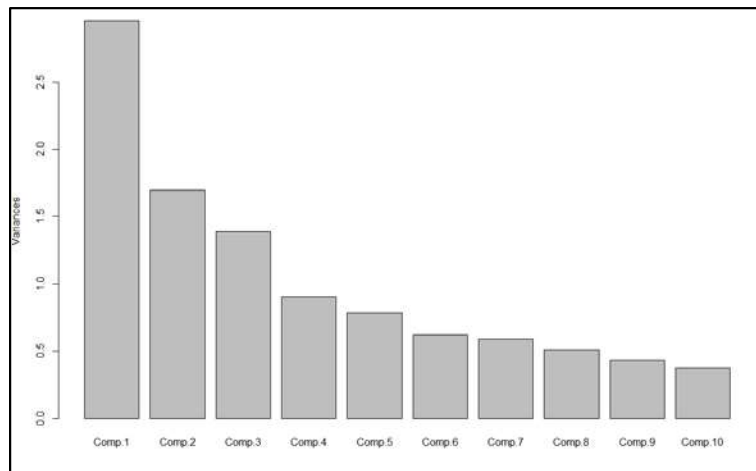


Figure 2. Study 1: SDI Principal Components Factor Analysis Scree Plot

Table 125. Study 1: SDI Forced Five-Factor Model Eigenvalues and Chi-Square Test

SDI Facets	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Team Player - A	0.60	-0.26	0.17	-0.22	0.25
Stress Under Pressure - N	-0.33	0.72	-0.19		
Reserved - E	-0.21	0.28	-0.57	0.26	0.23
Achievement Striving - C	0.87	-0.18			0.15
Creative - O	0.46	-0.22	0.25		0.44
Interpersonal Tactics - M		0.19	0.23	0.66	
Pleasant - A	0.35	-0.34	0.36	-0.41	0.13
Temperamental - N	-0.27	0.82		0.24	
Dominance Leader - E	0.43	-0.20	0.56		-0.10
Order - C	0.62	-0.13			
Reflective - O	0.14	0.14		0.12	0.78
Cynical View - M	-0.18	0.30		0.46	
Helpful Altruistic - A	0.45		0.26	-0.40	0.30
Worry - N		0.60	-0.14	0.13	0.15
Excitement Seeking - E			0.46		
Self-Discipline - C	0.72	-0.38		-0.19	
Scientific Interest - O	0.16	-0.15			0.24
Envious - M	-0.25	0.51		0.35	
Independent - A		0.24	-0.16	0.43	0.13
Angry Hostile - N	-0.21	0.74		0.24	
High Intensity - E	-0.11		0.46		
Deliberation - C	0.73	-0.19		-0.13	0.24

SDI Facets	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Cultured - O	0.17			-0.15	0.44
Influence Tactics - M	0.11		0.44	0.45	0.11
Optimist - A	0.32	-0.33	0.48	-0.29	0.15
Unconventional - C	-0.44	0.24	0.22	0.49	
Spontaneous Variety - E	-0.22		0.48	0.17	0.16
Activity - E	0.35		0.47		0.10
Well Adjusted – A	0.28	-0.10	0.43	-0.26	0.26
Imagination - O	-0.17	0.20	0.11	0.12	0.68
SS loadings	4.31	3.40	2.64	2.28	2.06
Proportion Var	0.14	0.11	0.09	0.08	0.07
Cumulative Var	0.14	0.26	0.35	0.42	0.49
Test of the hypothesis that 5 factors are sufficient.					
The chi square statistic is 3681.5 on 295 degrees of freedom.					
The p-value is 0					
<i>Note.</i> Factor Analysis included a forced five-factor model using varimax rotation.					

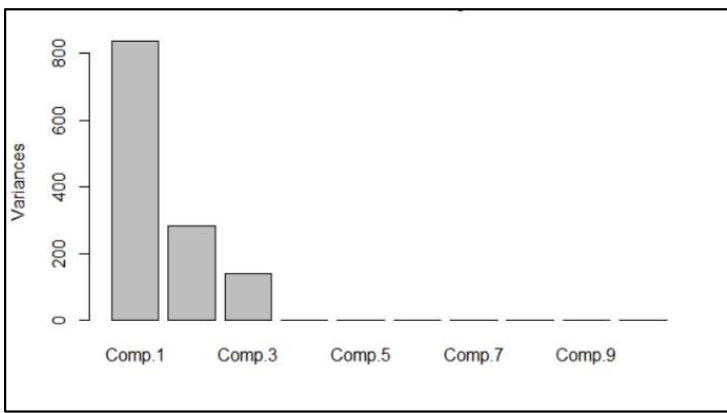


Figure 3. Study 2: TAPAS Principal Components Factor Analysis Scree Plot

Table 126. Study 2: TAPAS Forced Five-Factor Model Eigenvalues and Chi-Square Test

TAPAS	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Achievement	0.15	0.27	0.75	-0.16	0.17
Adjustment		0.24	0.13		
Attention-Seeking			0.11	0.31	
Cooperation			0.12	-0.12	
Dominance	0.11	0.16	0.55	0.22	
Even-Tempered		0.18	0.12	-0.35	
Intellectual Efficiency		0.98		0.10	0.17
Non-Delinquency			0.21	-0.17	0.14

TAPAS	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Optimism			0.44		
Order					1.00
Physical Conditioning	0.99				
Self-Control		0.18	0.14	-0.15	0.16
Selflessness/Generosity			0.25	0.11	
Sociability			0.21	0.82	
Tolerance	-0.14			0.41	
SS loadings	2.15	1.98	1.68	1.59	1.38
Proportion Var	0.12	0.11	0.09	0.09	0.08
Cumulative Var	0.12	0.23	0.32	0.41	0.49
Test of the hypothesis that 5 factors are sufficient.					
The chi square statistic is 3633.91 on 73 degrees of freedom.					
The p-value is 0					
<i>Note.</i> Factor Analysis included a forced five-factor model using varimax rotation.					

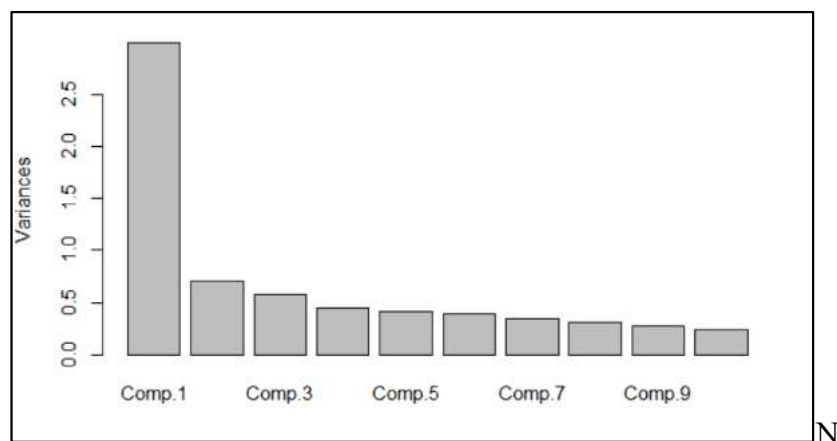


Figure 4. Study 2: NCAPS Principal Components Factor Analysis Scree Plot

Table 127. Study 2: NCAPS Forced Five-Factor Model Eigenvalues and Chi-Square Test

NCAPS	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Stress Tolerance	0.30	0.51	0.17	0.14	0.11
Achievement	0.54	0.30	0.16	0.16	0.19
Social Orientation	0.14	0.47	-0.11	0.17	
Adaptability/Flexibility	0.29	0.38		0.87	
Willingness to Learn	0.49	0.40		0.18	
Dependability	0.64	0.21	0.11		0.73
Attention to Detail	0.69			0.17	0.17
Dutifulness	0.55	0.24			
Self-Reliance			0.92		
Vigilance	0.60	0.31	0.14	0.11	0.15

NCAPS	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
SS loadings	2.28	1.07	0.95	0.92	0.65
Proportion Var	0.23	0.11	0.10	0.09	0.07
Cumulative Var	0.23	0.34	0.43	0.52	0.59
Test of the hypothesis that 5 factors are sufficient.					
The chi square statistic is 2.57 on 5 degrees of freedom.					
The p-value is 0.767					
<i>Note.</i> Factor Analysis included a forced five-factor model using varimax rotation.					

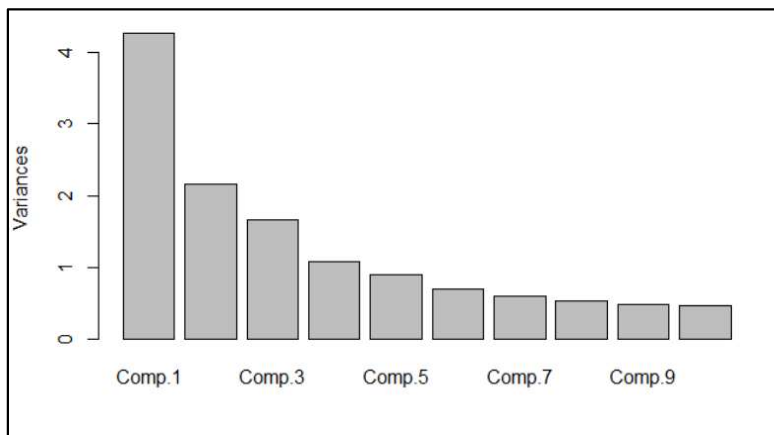


Figure 5. Study 2: SDI Principal Components Factor Analysis Scree Plot

Table 128. Study 2: SDI Forced Five-Factor Model Eigenvalues and Chi-Square Test

SDI Facets	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Team Player - A	0.68	-0.22	0.27	-0.24	0.25
Stress Under Pressure - N	-0.35	0.69	-0.10		0.15
Reserved - E	-0.10	0.24	-0.60	0.12	0.34
Achievement Striving - C	0.84	-0.22	0.11		0.12
Creative - O	0.67	-0.20	0.23		0.32
Interpersonal Tactics - M	-0.28	0.20	0.17	0.61	-0.17
Pleasant - A	0.35	-0.33	0.46	-0.34	0.14
Temperamental - N	-0.32	0.77		0.29	
Dominance Leader - E	0.40		0.50	0.27	-0.31
Order - C	0.65	-0.10			
Reflective - O	0.36			0.12	0.64
Cynical View - M	-0.12	0.15		0.37	0.21
Helpful Altruistic - A	0.51	-0.13	0.31	-0.27	0.32
Worry - N		0.63			0.17
Excitement Seeking - E			0.47		0.11
Self-Discipline - C	0.72	-0.32		-0.18	
Scientific Interest - O	0.27	-0.28		0.17	0.33

SDI Facets	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Envious - M	-0.37	0.43		0.35	
Independent - A	0.12	0.16		0.48	0.21
Angry Hostile - N	-0.25	0.74		0.26	-0.14
High Intensity - E		0.17	0.52		0.12
Deliberation - C	0.76	-0.20		-0.15	0.14
Cultured - O	0.35				0.41
Influence Tactics - M			0.44	0.54	
Optimist - A	0.31	-0.33	0.49	-0.11	
Unconventional - C	-0.53	0.16	0.23	0.46	
Spontaneous Variety - E	-0.15		0.51	0.26	0.10
Activity - E	0.40		0.41	0.23	
Well Adjusted – A	0.44		0.48	-0.27	0.31
Imagination - O		0.17	0.24	0.13	0.66
SS loadings	5.30	3.06	2.79	2.18	2.00
Proportion Var	0.18	0.10	0.09	0.07	0.07
Cumulative Var	0.18	0.28	0.37	0.44	0.51
Test of the hypothesis that 5 factors are sufficient.					
The chi square statistic is 1084.79 on 295 degrees of freedom.					
The p-value is 0					
<i>Note.</i> Factor Analysis included a forced five-factor model using varimax rotation.					

10.0 META-ANALYSIS OF VALIDITY RESULTS

10.1 Meta-Analysis Method

Section 4 in this technical report described the review of archival psychometric studies conducted on the TAPAS, NCAPS, and SDI. Given the large number of criterion-related validity studies conducted on these assessments, meta-analysis was identified as the best way to quantitatively summarize the results across studies for similar criteria and where the mapping described in Section 6 (Table 15) allowed for aggregation of predictor constructs. In addition to the qualitative summary described in Section 4, it was intended that this method of aggregation across studies would permit a more robust view of the relative performance of the constructs and assessment scales against outcomes of interest to the military. In this section, we describe our approach to meta-analysis and the validity results for conceptually similar constructs measured across TAPAS, NCAPS, and SDI assessments and assessment scale-specific validity results.

Meta-analysis is a process of combining validity data from multiple studies into a single analysis (Hunter & Schmidt, 2004). Because most validation studies typically involve relatively small samples, the validity estimates from a single study are susceptible to sampling error and the effects of statistical outliers. Meta-analysis combines the studies into one very large sample that reduces sampling error and lessens the impact of statistical outliers. Therefore, the validity estimates generated by the meta-analysis will more accurately represent true relationships in the general population.

A validation study must include at least one focal assessment and at least one criterion measure to be included in the meta-analysis. A criterion measure is considered generalizable if it was something measured across multiple studies. As noted in Section 4, multiple studies were conducted on a core set of criterion measures, including the following: (1) peer and supervisor performance ratings, (2) promotion/job selection, (3) grades/job knowledge, (4) attrition, (5) fitness, (6) training outcomes, and (7) counterproductive work behaviors. In addition to this inclusion criterion, some studies were excluded from the meta-analysis if they did not report Pearson product-moment correlations. Some studies reviewed as part of the qualitative literature review reported alternative statistical analyses. No study was excluded from the meta-analysis due to unfavorable results.

The input to the meta-analysis was the set of observed predictor-criterion correlation coefficients reported in each individual study. As part of the meta-analysis process, observed correlations are statistically corrected for unreliability in the criteria measures. For rating based criteria measures (i.e., peer and supervisor ratings of performance), conservative default criterion reliability estimates of .60 were used to make statistical corrections for unreliability in the supervisor ratings. This value is based on various sources, including average intraclass correlations (ICCs) across time intervals and published results (e.g., Viswesvaran, Ones, & Schmidt, 1996). For objective metrics (e.g., fitness, attrition, training, promotion), a value of .80 was used. The meta-analysis process also incorporated the sample sizes associated with observed validity coefficients. The aggregation of validity results across studies involves weighting validity coefficients by their associated sample size (N). The correlations included in the meta-analysis have not been corrected for range restriction.

Additional analyses were conducted to determine the extent to which other variables may contribute to the meta-analysis results. The percent of variance attributable to sampling error was calculated to determine the extent to which unknown artifacts influence the predictor-criterion relationship. Hunter, Schmidt, and Jackson (1982) suggested that if more than 75% of the variance can be attributable to statistical artifacts, then it can be reasonably concluded that results are generalizable rather than situation-specific. In addition, the 80% credibility interval was calculated to represent the range of correlations an organization may expect for a given assessment scale. Note that for correlations based on only one study, the credibility interval is based on the study's sampling error as it is not possible to compute the percent of variance accounted for by sampling error or other moderators.

Each cell in the meta-analytic matrix represents an independent meta-analysis where the values for k (number of studies) and N (number of cases) refer to the subset of studies contributing to the meta-analysis for that pair of variables. For any one cell, the computations of the meta-analytic validity coefficient, variance due to sampling error, and the credibility or confidence interval are calculated using established methods of meta-analysis (Hunter & Schmidt, 2004).

Most meta-analyses in the literature focus on the relationship between one pair of constructs. In the validation of selection/evaluation tools, this usually involves the pairing of one predictor construct and one type of criterion variable. Our use of meta-analytic techniques is not particularly unusual in that each cell in the full matrix is treated as an independent meta-analysis. For purposes of evaluating the practical utility of the focal assessments for military purposes, however, the meta-analysis would increase in usefulness by estimating concurrent relationships

of multiple assessment scales used in practice (e.g., sets of assessment scales for TAPAS) that are used for evaluation for particular branches or for particular jobs. This type of meta-analysis was not feasible for the current analysis, however, as the particular scales used for evaluation purposes in the military was not known/provided. The studies gathered and coded as part of the individual scale meta-analyses could be used for estimation of meta-analytic composite validities in the future.

10.2 Meta-Analysis of Validity Evidence for the TAPAS, NCAPS, and SDI

Identification of Validation Studies

Criterion-related validity studies involving 52 samples were identified as part of the Task 1 literature review. Participants in these studies spanned the following job types/categories. All branches of the military were represented in the set of samples.

- Trainees (e.g., Combat Control Team; Survival, Evasion, Resistance, Escape; Explosive Ordnance Disposal; Special Operational Weather Teams; Pararescue Jumpers; Air Force Basic Military
- Students, ROTC Cadets
- Enlisted personnel
- Applicants/recruits
- Officers
- Pilots

Criterion Measures

The validation studies included a range of criteria measures that were generally organized using the criteria taxonomy described in Section 4. Specifically, the taxonomy included the following areas:

- Peer and supervisor performance ratings
- Promotion/job selection
- Grades/job knowledge
- Attrition
- Fitness
- Training outcomes
- Counterproductive work behaviors

Sets of meta-analytic results are presented in several parts, organized by criterion area. Results are presented by constructs where the mapping task indicated overlap of scales across assessments. Aggregated results are presented by construct and for specific assessment scales. Many constructs are only measured by one assessment scale, as other mapped scales were not represented in the validity studies for a given criterion. For purposes of labeling similar scales across assessments, the TAPAS names were adopted. When assessment scales were not represented in the mapping results but have meta-analytic validity estimates, they are presented separately at the bottom of the tables. If any of the conceptually mapped scales were not

represented in validity studies, the constructs do not appear in the tables. Note that the mapping of NCAPS to TAPAS involved reviewing specific conceptual constructs underlying the assessment scales. As shown in Table 15, some NCAPS scales mapped directly to TAPAS scales (e.g., NCAPS Stress Tolerance mapped completely to TAPAS Adjustment) but in many cases, only facets of NCAPS scales were mapped to TAPAS. For purposes of conducting the meta-analysis and combining results across studies, it was determined that at least half of the NCAPS facets must map to a given TAPAS scale to be included in the meta-analysis. Including NCAPS scales that overlapped to a smaller degree would have led to construct mismatches.

The sections of results are as follows.

- **Part A – Prediction for Broad Criteria Areas:** The first set of results are for the broad criteria areas as described in the criterion taxonomy discussed above (Tables 129-135).
- **Part B – Prediction for Promotion Eligibility:** A second set of results is presented for more specific types of criteria, including various promotion eligibility criteria (presence/absence, number, and strength of stratification statements) as multiple studies were conducted for these specific criteria (Table 136). Note that all of these studies were conducted using the SDI only.
- **Part C – Prediction for Categories of Performance Ratings:** Multiple studies were available for categories of performance ratings, including task and contextual performance and interpersonal and organizational deviance (Tables 137-140). Note that all studies conducted using these criteria were on SDI domains and NCAPS. Because SDI domains did not map per the mapping task results, meta-analytic results are presented at the assessment scale level only.
- **Part D – Prediction for Attrition Outcomes:** Another set of results are presented for various attrition-related outcomes, including attrition cognitions, 3 month, 6 month, 12 month, 24 month, and overall attrition (Tables 141-146). Note that all of these studies were conducted using the TAPAS only.
- **Part E – Prediction of Job Knowledge Outcomes:** A set of results are presented for specific types of job knowledge outcomes, including WTBD, MOS-specific, IMT exam, Army wide, AIT, training achievement, and training failure (Tables 147-154). All of these studies were conducted using the TAPAS only.
- **Part F – Moderator Analyses for Job-Specific Validation Studies:** A subset of studies was conducted using specific jobs. Rather than studies using a range of jobs across a branch, it was hypothesized that the magnitude of the validity coefficients would differ for job-specific local validation studies compared to broad sample validation studies. This set of tables reports results of job-specific validity as a moderator (Tables 155-159).

10.3 Meta-Analysis Results

Tables 129 through 159 provide information about the meta-analytic validity of the constructs and assessment scales, organized by criteria domain. Each table of meta-analytic results contains scale-level validities for up to three of the focal assessments depending on how many assessments were subject to criterion-related validity research for a given criterion area. Brief interpretive information is provided following each table of results.

To help establish benchmarks for what size of correlation coefficients could be expected for different combinations of measures and outcomes in personnel research and practice, Bosco, Aguinis, Singh, Field, and Pierce (2014) reviewed numerous studies that spanned a 30 year period. For psychological characteristics (personality traits, emotional states, etc.) predicting job performance (similar to the variables under investigation in this meta-analysis), they found that correlations ranging from .10 to .23 could be considered “medium.” Correlations below and above these ranges could be considered “low” and “high” respectively.

Overall, most scales across the NCAPS, TAPAS, and SDI demonstrated zero-to-small relationships with the various criteria. On their own, individual scales tended to not demonstrate useful levels of validity across multiple criterion areas. Scales that demonstrated medium or large effects are called out in the brief interpretive statements that follow each table of results.

The scales that tended to demonstrate somewhat more consistently robust relationships across at least two criteria areas include the following:

- NCAPS Achievement
- TAPAS Achievement
- TAPAS Consideration
- TAPAS Dominance
- TAPAS Physical Conditioning
- TAPAS Responsibility
- TAPAS Can Do composite
- TAPAS Will Do composite
- SDI Agreeableness
- SDI Conscientiousness
- SDI Neuroticism
- SDI Extroversion
- SDI Openness

10.4 Moderator Analysis

The percent of variance accounted for by sampling error often suggested the presence of moderator variable(s). Moderator analyses were conducted using job or MOS-specific studies as a potential moderator. In the archival review of previous research, it was noted that more substantial validity results tended to be observed historically for job-specific validation studies

rather than large scale military studies, and thus this was identified as a potential moderator. A critical mass of job-specific studies on the SDI and TAPAS were conducted on a limited number of criteria, including supervisor ratings of performance, grades/job knowledge, fitness, training, attrition, and presence/absence of stratification statements. Note that no job-specific studies were conducted using the NCAPS.

Part A: Prediction for Broad Criterion Areas

Table 129. Meta-Analytic Results for Prediction of Overall Peer Rating of Performance

Construct Name or Assessment Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
Achievement	5	19743	0.08	0.11	19	0.05	0.17
NCAPS Achievement	2	390	0.28	0.39	100	0.39	0.39
TAPAS Achievement	3	19353	0.08	0.11	29	0.07	0.14
Adjustment	5	19743	-0.02	-0.03	21	-0.09	0.03
NCAPS Stress Tolerance	2	390	0.19	0.27	100	0.27	0.27
TAPAS Adjustment	3	19353	-0.03	-0.04	48	-0.06	-0.01
Adventure Seeking	1	17933	-0.02	-0.02	k=1	-0.04	-0.01
TAPAS Adventure Seeking	1	17933	-0.02	-0.02	k=1	-0.03	-0.01
Consideration	1	215	0.09	0.13	k=1	0.00	0.25
TAPAS Consideration	1	215	0.09	0.13	k=1	0.00	0.25
Cooperation	3	19353	-0.01	-0.01	9	-0.08	0.06
TAPAS Cooperation	3	19353	-0.01	-0.01	9	-0.06	0.06
Curiosity	3	1595	0.03	0.05	100	0.05	0.05
TAPAS Curiosity	1	1205	0.03	0.04	k=1	-0.01	0.09
NCAPS Willingness to Learn	2	390	0.06	0.08	100	0.08	0.08
Dominance	3	19353	0.07	0.10	8	0.02	0.18
TAPAS Dominance	3	19353	0.07	0.10	8	0.02	0.18
Even Tempered	5	19743	0.00	0.00	22	-0.05	0.06
NCAPS Stress Tolerance	2	390	0.19	0.27	100	0.27	0.27
TAPAS Even Tempered	3	19353	0.00	0.00	36	-0.03	0.03
Ingenuity	1	215	-0.07	-0.10	k=1	-0.16	0.02
TAPAS Ingenuity	1	215	-0.07	-0.10	k=1	-0.16	0.02
Non-Delinquency	5	19743	-0.04	-0.05	16	-0.10	0.00
NCAPS Dutifulness	2	390	0.13	0.18	100	0.18	0.18
TAPAS Non-Delinquency	3	19353	-0.04	-0.05	16	-0.10	0.00
Optimism	3	19353	0.04	0.05	23	0.01	0.09
TAPAS Optimism	3	19353	0.04	0.05	23	0.01	0.09
Order	4	18538	0.01	0.01	16	-0.05	0.07
NCAPS Attention to Detail	2	390	0.25	0.35	100	0.35	0.35
TAPAS Order	2	18148	0.00	0.00	100	0.00	0.00
Responsibility	5	19743	0.07	0.09	50	0.07	0.12
NCAPS Dutifulness	2	390	0.13	0.18	100	0.18	0.18

TAPAS Responsibility	3	19353	0.07	0.09	35	0.06	0.12
Self-Control	2	18148	0.01	0.01	100	0.01	0.01
TAPAS Self-Control	2	18148	0.01	0.01	100	0.01	0.01
Situational Awareness	3	18323	-0.02	-0.02	21	-0.07	0.02
NCAPS Vigilance	2	390	0.18	0.25	100	0.25	0.25
TAPAS Situational Awareness	1	17933	-0.02	-0.02	K=1	-0.04	-0.01
Sociability	2	18148	-0.01	-0.01	55	-0.03	0.00
TAPAS Sociability	2	18148	-0.01	-0.01	55	-0.03	0.00
Team Orientation	1	17933	-0.03	-0.04	k=1	-0.06	-0.03
TAPAS Team Orientation	1	17933	-0.03	-0.04	k=1	-0.06	-0.03
NCAPS Adaptability Flexibility	2	390	0.12	0.16	100	0.16	0.16
NCAPS Dependability	2	390	0.19	0.26	100	0.26	0.26
NCAPS Self-Reliance	2	390	0.07	0.10	100	0.10	0.10
NCAPS Social Orientation	2	390	0.13	0.18	100	0.18	0.18
TAPAS Attention-Seeking	2	18148	0.01	0.02	100	0.02	0.02
TAPAS Commitment to Serve	1	17933	0.00	0.00	k=1	-0.01	0.01
TAPAS Courage	1	17933	0.01	0.01	k=1	0.00	0.03
TAPAS Intellectual Efficiency	3	19353	0.03	0.05	74	0.03	0.06
TAPAS Physical Conditioning	3	19353	0.10	0.14	15	0.09	0.19
TAPAS Selflessness/Generosity	2	18148	-0.01	-0.01	100	-0.01	-0.01
TAPAS Tolerance	3	19353	0.00	0.00	100	0.00	0.00
TAPAS Can Do Composite	1	17933	0.02	0.02	k=1	0.01	0.03
TAPAS Will Do Composite	1	17933	0.11	0.11	k=1	0.10	0.12
TAPAS Adaptation Composite	1	17933	0.07	0.07	k=1	0.06	0.08

- The following constructs yielded medium to large estimated operational validities with peer ratings of performance: Achievement, Consideration, Dominance, and Situational Awareness. Moderators were indicated for Achievement. Consideration, Dominance, and Situational Awareness were supported by one assessment.
- With the exception of Willingness to Learn, all NCAPS scales yielded medium or large estimated operational validities. No credibility interval included zero and 100% of the variance was accounted for by sampling error, indicating no presence of moderator variables.
- Few TAPAS scales were classified as medium estimated operational validities, with the exceptions of Achievement, Consideration, Dominance, Physical Conditioning, and the Will Do composite. The percentage of variance accounted for by sampling error tended to be low for these scales, however, indicating variability in the study-level correlations and presence of moderator variables. Additional analysis is needed to determine study characteristics that underlie the variability in these results.
- No studies were available to meta-analytically analyze predictor-criterion relationships for the SDI.

Table 130. Meta-Analytic Results for Prediction of Overall Supervisor Rating of Performance

Construct Name or Assessment Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
Achievement	18	15377	0.09	0.12	70	0.08	0.15
NCAPS Achievement	4	2627	0.06	0.08	44	0.01	0.15
TAPAS Achievement	14	12750	0.10	0.13	100	0.13	0.13
Adjustment	16	13980	0.00	0.00	100	0.00	0.00
NCAPS Stress Tolerance	4	2627	0.02	0.02	100	0.02	0.02
TAPAS Adjustment	12	11353	-0.01	-0.01	100	-0.01	-0.01
Consideration	1	109	0.16	0.21	(K = 1)	0.05	0.36
TAPAS Consideration	1	109	0.16	0.21	(K = 1)	0.05	0.36
Curiosity	5	3055	0.04	0.05	100	0.05	0.05
TAPAS Curiosity	2	1743	0.01	0.02	100	0.02	0.02
NCAPS Willingness to Learn	3	1312	0.07	0.09	100	0.09	0.09
Dominance	14	12750	0.04	0.05	32	-0.03	0.13
TAPAS Dominance	14	12750	0.04	0.05	31	-0.03	0.13
Even Tempered	18	15377	0.01	0.02	73	-0.02	0.05
NCAPS Stress Tolerance	4	2627	0.02	0.02	100	0.02	0.02
TAPAS Even Tempered	14	12750	0.01	0.02	63	-0.03	0.06
Ingenuity	1	109	0.07	0.09	(K = 1)	-0.07	0.25
TAPAS Ingenuity	1	109	0.07	0.09	(K = 1)	-0.07	0.25
Non-Delinquency	18	15377	0.01	0.01	32	-0.07	0.09
NCAPS Dutifulness	4	2627	0.06	0.07	100	0.07	0.07
TAPAS Non-Delinquency	14	12750	0.01	0.01	32	-0.07	0.09
Optimism	14	12750	0.04	0.05	78	0.02	0.08
TAPAS Optimism	14	12750	0.04	0.05	78	0.02	0.08
Order	16	12857	0.02	0.00	88	-0.02	0.02
NCAPS Attention to Detail	3	1312	0.05	0.07	100	0.07	0.07
TAPAS Order	13	11545	0.00	0.00	100	0.00	0.00
Responsibility	6	3941	0.05	0.06	100	0.06	0.06
NCAPS Dutifulness	4	2627	0.06	0.07	100	0.07	0.07
TAPAS Responsibility	2	1314	0.02	0.03	100	0.03	0.03
Self-Control	11	10148	0.02	0.03	100	0.03	0.03
TAPAS Self-Control	11	10148	0.02	0.03	100	0.03	0.03
Sociability	11	10148	0.00	0.00	100	0.00	0.00
TAPAS Sociability	11	10148	0.00	0.00	100	0.00	0.00
Situational Awareness	3	1312	0.01	0.01	100	0.01	0.01
NCAPS Vigilance	3	1312	0.01	0.01	100	0.01	0.01
NCAPS Adaptability Flexibility	4	2627	0.02	0.02	100	0.02	0.02
NCAPS Dependability	4	2627	0.05	0.06	81	0.03	0.09
NCAPS Social Orientation	4	2627	0.03	0.04	68	0.00	0.08
SDI Agreeableness	3	431	0.09	0.12	35	-0.07	0.30
SDI Conscientiousness	3	431	0.17	0.22	100	0.22	0.22
SDI Extroversion	3	431	0.01	0.01	100	0.01	0.01

SDI Neuroticism	3	431	-0.05	-0.06	100	-0.06	-0.06
SDI Openness	3	431	0.03	0.04	100	0.04	0.04
TAPAS Attention-Seeking	13	11545	-0.01	-0.01	42	-0.07	0.06
TAPAS Intellectual Efficiency	14	12750	0.03	0.04	87	0.02	0.06
TAPAS Physical Conditioning	14	12750	0.10	0.12	66	0.08	0.16
TAPAS Selflessness/Generosity	11	10148	-0.01	-0.02	76	-0.05	0.01
TAPAS Tolerance	14	12750	-0.01	-0.01	53	-0.06	0.04
TAPAS Can Do Composite	4	5223	0.08	0.08	100	0.08	0.08
TAPAS Will Do Composite	4	5223	0.12	0.12	47	0.08	0.15
TAPAS Adaptation Composite	1	3845	0.08	0.08	(K = 1)	0.06	0.10

- The following constructs yielded medium to large estimated operational validities with supervisor ratings of performance: Achievement and Consideration. Moderators were indicated for Achievement. Consideration was supported by only one assessment.
- No NCAPS scales met the threshold for medium effect sizes in this analysis; all were zero to small.
- Two of the five SDI Domains resulted in medium-sized estimated operational validities, for Agreeableness and Conscientiousness, although a moderator is likely present in the relationship between Agreeableness and Supervisor Ratings of Performance as indicated by the percentage of variance explained by sampling error.
- A few TAPAS scales demonstrated medium effects, including Achievement, Consideration, Physical Conditioning, and the Will Do composite. There is evidence of moderators present in the relationships between Physical Conditioning and the Will Do composite with supervisor rating of performance, however.

Table 131. Meta-Analytic Results for Prediction of Selection/Promotion Outcomes

Construct or Assessment Scale Name	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
Achievement	3	1821	0.06	0.07	100	0.07	0.07
TAPAS Achievement	3	1821	0.06	0.07	100	0.07	0.07
Adjustment	3	1821	0.07	0.08	93	0.06	0.09
TAPAS Adjustment	3	1821	0.07	0.08	93	0.06	0.09
Adventure Seeking	1	1216	0.08	0.09	(K = 1)	0.05	0.13
TAPAS Adventure Seeking	1	1216	0.08	0.09	(K = 1)	0.05	0.13
Consideration	1	109	0.03	0.03	(K = 1)	-0.10	0.17
TAPAS Consideration	1	109	0.03	0.03	(K = 1)	-0.10	0.17
Dominance	4	2266	0.05	0.06	68	0.02	0.10

TAPAS Dominance	4	2266	0.05	0.06	68	0.02	0.10
Even Tempered	3	1770	-0.01	-0.01	20	-0.13	0.10
TAPAS Even-Tempered	3	1770	-0.01	-0.01	20	-0.13	0.10
Ingenuity	1	109	0.03	0.03	(K = 1)	-0.10	0.17
TAPAS Ingenuity	1	109	0.03	0.03	(K = 1)	-0.10	0.17
Non-Delinquency	3	1770	-0.04	-0.04	41	-0.11	0.03
TAPAS Non-Delinquency	3	1770	-0.04	-0.04	41	-0.11	0.03
Optimism	3	1821	0.12	0.13	100	0.13	0.13
TAPAS Optimism	3	1821	0.12	0.13	100	0.13	0.13
Order	1	109	0.21	0.23	(K = 1)	0.10	0.37
TAPAS Order	1	109	0.21	0.23	(K = 1)	0.10	0.37
Responsibility	2	1325	0.10	0.12	100	0.12	0.12
TAPAS Responsibility	2	1325	0.10	0.12	100	0.12	0.12
Self-Control	1	109	0.20	0.22	(K = 1)	0.09	0.36
TAPAS Self-Control	1	109	0.20	0.22	(K = 1)	0.09	0.36
Sociability	2	190	-0.10	-0.11	30	-0.34	0.12
TAPAS Sociability	2	190	-0.10	-0.11	30	-0.34	0.12
TAPAS Attention-Seeking	2	1325	0.00	-0.01	62	-0.05	0.04
TAPAS Courage	1	1216	0.05	0.06	(K = 1)	0.01	0.10
TAPAS Intellectual Efficiency	2	1325	0.04	0.04	100	0.04	0.04
TAPAS Physical Conditioning	5	2347	0.11	0.12	90	0.10	0.14
TAPAS Selflessness/Generosity	2	605	0.06	0.07	46	-0.02	0.16
TAPAS Situational Awareness	1	1216	0.02	0.02	(K = 1)	-0.02	0.06
TAPAS Team Orientation	1	1216	-0.04	-0.04	(K = 1)	-0.09	0.00
TAPAS Tolerance	2	1325	-0.02	-0.02	100	-0.02	-0.02
TAPAS Virtue	1	109	0.04	0.04	(K = 1)	-0.09	0.18

- The following constructs yielded medium to large estimated operational validities with selection/promotion outcomes: Optimism, Order, Responsibility, and Self Control. Moderators were not indicated for Optimism or Responsibility; Order and Self Control were studied in one sample only. All construct-level results are based on contributions from the TAPAS only.
- Four TAPAS scales demonstrated medium effects with selection/promotion outcomes: Order, Physical Conditioning, Responsibility, and Self-Control. However, it should be noted that two of these relationships were based on a single sample.
- No studies were available to meta-analyze predictor-criterion relationships for the NCAPS or SDI.

Table 132. Meta-Analytic Results for Prediction of Grades/Job Knowledge Outcomes

Construct Name or Assessment Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
Achievement	16	33763	0.06	0.06	22	0.01	0.12
NCAPS Achievement	1	102	0.34	0.38	(K = 1)	0.25	0.51
TAPAS Achievement	14	33075	0.05	0.06	29	0.01	0.11
SDI Achievement Striving - C	1	586	0.21	0.23	(K = 1)	0.18	0.29
Adjustment	13	31618	0.07	0.07	32	0.04	0.12
NCAPS Stress Tolerance	1	102	-0.09	-0.10	(K = 1)	-0.24	0.04
TAPAS Adjustment	10	30344	0.07	0.08	31	0.04	0.12
SDI Stress Under Pressure - N	1	586	-0.22	-0.25	(K = 1)	-0.30	-0.19
SDI Worry - N	1	586	-0.13	-0.15	(K = 1)	-0.20	-0.09
Adventure Seeking	2	17785	0.07	0.08	79	0.07	0.09
TAPAS Adventure Seeking	2	17785	0.07	0.08	79	0.07	0.09
Aesthetics	1	586	-0.10	-0.11	(K = 1)	-0.17	-0.05
SDI Cultured - O	1	586	-0.10	-0.11	(K = 1)	-0.17	-0.05
Cooperation	13	32563	-0.02	-0.02	62	-0.05	0.00
TAPAS Cooperation	12	31977	-0.02	-0.03	100	-0.03	-0.03
SDI Pleasant - A	1	586	0.11	0.12	(K = 1)	0.06	0.18
Consideration	1	586	0.07	0.08	(K = 1)	0.02	0.14
Helpful Altruistic - A	1	586	0.07	0.08	(K = 1)	0.02	0.14
Curiosity	3	2838	0.12	0.14	100	0.14	0.14
TAPAS Curiosity	3	2838	0.12	0.14	100	0.14	0.14
Depth	1	586	-0.06	-0.07	(K = 1)	-0.13	-0.01
SDI Reflective - O	1	586	-0.06	-0.07	(K = 1)	-0.13	-0.01
Dominance	14	33149	0.03	0.03	67	0.01	0.05
TAPAS Dominance	12	31977	0.03	0.03	91	0.02	0.04
SDI Dominance Leader - E	1	586	0.13	0.15	(K = 1)	0.09	0.20
SDI Reserved - E	1	586	-0.09	-0.10	(K = 1)	-0.16	-0.04
Even Tempered	14	32665	0.05	0.05	55	0.03	0.08
NCAPS Stress Tolerance	1	102	-0.09	-0.10	(K = 1)	-0.24	0.04
TAPAS Even Tempered	12	31977	0.05	0.05	55	0.03	0.08
SDI Temperamental - N	1	586	-0.17	-0.19	(K = 1)	-0.25	-0.13
Ingenuity	1	586	0.16	0.18	(K = 1)	0.12	0.24
SDI Creative - O	1	586	0.16	0.18	(K = 1)	0.12	0.24
Non-Delinquency	14	33075	0.00	0.00	50	-0.03	0.02
TAPAS Non-Delinquency	14	33075	0.00	0.00	50	-0.03	0.02
Optimism	12	31977	0.02	0.02	52	-0.01	0.04
TAPAS Optimism	12	31977	0.02	0.02	52	-0.01	0.04
Order	12	31358	-0.07	-0.08	47	-0.11	-0.05
TAPAS Order	11	30772	-0.07	-0.08	47	-0.11	-0.05
SDI Order - C	1	586	0.10	0.11	(K = 1)	0.05	0.17
Responsibility	3	18990	0.07	0.08	4	0.00	0.17
TAPAS Responsibility	3	18990	0.07	0.08	4	0.00	0.17

Self-Control	9	29139	0.00	0.01	100	0.01	0.01
TAPAS Self-Control	9	29139	0.00	0.01	100	0.01	0.01
Sociability	9	29139	-0.09	-0.10	100	-0.10	-0.10
TAPAS Sociability	9	29139	-0.09	-0.10	100	-0.10	-0.10
Situational Awareness	2	17785	0.04	0.04	6	-0.02	0.10
TAPAS Situational Awareness	2	17785	0.04	0.04	6	-0.02	0.10
Team Orientation	3	18371	-0.03	-0.03	19	-0.08	0.01
TAPAS Team Orientation	2	17785	-0.03	-0.03	16	-0.07	0.00
SDI Independent – A (-)	1	586	0.04	0.04	(K = 1)	-0.01	0.10
NCAPS Social Orientation	1	102	0.03	0.03	(K = 1)	-0.11	0.18
SDI Agreeableness	4	1056	0.06	0.06	53	-0.02	0.14
SDI Conscientiousness	4	1056	0.18	0.20	100	0.20	0.20
SDI Extroversion	4	1056	0.02	0.03	100	0.03	0.03
SDI Machiavellianism	2	696	-0.02	-0.02	100	-0.02	-0.02
SDI Neuroticism	4	1056	-0.17	-0.19	100	-0.19	-0.19
SDI Openness	4	1056	0.03	0.03	47	-0.06	0.13
SDI Interpersonal Tactics - M	1	586	-0.12	-0.13	(K = 1)	-0.19	-0.08
SDI Scientific Interest - O	1	586	0.10	0.11	(K = 1)	0.05	0.17
SDI Team Player - A	1	586	0.19	0.21	(K = 1)	0.16	0.27
SDI Considerate - A	1	586	0.08	0.08	(K = 1)	0.03	0.13
SDI Self Serving - M	1	586	0.00	0.00	(K = 1)	-0.05	0.05
SDI Sociable - E	1	586	-0.03	-0.03	(K = 1)	-0.08	0.02
TAPAS Attention-Seeking	11	30772	0.02	0.02	53	0.00	0.05
TAPAS Commitment to Serve	2	17785	-0.06	-0.06	20	-0.10	-0.03
TAPAS Courage	2	17785	0.02	0.03	100	0.03	0.03
TAPAS Intellectual Efficiency	12	31977	0.18	0.20	23	0.16	0.25
TAPAS Physical Conditioning	14	33075	0.00	0.00	36	-0.03	0.04
TAPAS Selflessness/Generosity	9	29139	-0.05	-0.05	92	-0.06	-0.04
TAPAS Tolerance	12	31977	-0.02	-0.02	43	-0.06	0.01
TAPAS Can Do Composite	7	22476	0.22	0.22	7	0.13	0.30
TAPAS Will Do Composite	7	22476	0.02	0.02	42	0.00	0.05
TAPAS Adaptation Composite	2	17785	0.09	0.09	100	0.09	0.09

- The following constructs yielded medium to large estimated operational validities with grades/job knowledge outcomes: Curiosity and Ingenuity. Moderators were not indicated for Curiosity. Ingenuity was studied only in one study.
- NCAPS Achievement demonstrated a large effect with grades/job knowledge, though this relationship was examined in only one study.
- SDI Conscientiousness demonstrated a medium effect with grades/job knowledge.
- The following SDI Facets demonstrated medium effects: Achievement Striving, Creative, Dominance Leader, Order, Pleasant, Scientific Interest, and Team Player, although all of these relationships were examined in just one study.
- For the TAPAS, Curiosity, Intellectual Efficiency, and the Can Do composite demonstrated medium effects with this criteria, with the analysis of the latter two indicating the presence of moderator variables. Sociability demonstrated a medium negative effect.

Table 133. Meta-Analytic Results for Prediction of Fitness Outcomes

Construct Name or Assessment Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
Achievement	17	85361	-0.02	-0.03	3	-0.03	-0.02
TAPAS Achievement	16	42753	0.09	0.10	100	0.10	0.10
SDI Achievement Striving - C	1	42608	-0.02	-0.02	(K = 1)	-0.03	-0.02
Adjustment	14	125504	0.01	0.01	100	0.01	0.01
TAPAS Adjustment	12	40288	0.01	0.01	100	0.01	0.01
SDI Stress Under Pressure - N	1	42608	0.04	0.05	(K = 1)	0.04	0.06
SDI Worry – N (-)	1	42608	0.04	0.05	(K = 1)	0.04	0.05
Adventure Seeking	2	23846	0.07	0.08	100	0.08	0.08
TAPAS Adventure Seeking	2	23846	0.07	0.08	100	0.08	0.08
Aesthetics	1	42608	-0.02	-0.02	(K = 1)	-0.03	-0.02
SDI Cultured - O	1	42608	-0.02	-0.02	(K = 1)	-0.03	-0.02
Cooperation	15	83720	-0.03	-0.03	12	-0.07	0.01
TAPAS Cooperation	14	41112	-0.03	-0.03	43	-0.06	0.00
SDI Pleasant - A	1	42608	-0.02	-0.03	(K = 1)	-0.03	-0.02
Consideration	1	42608	-0.03	-0.04	(K = 1)	-0.03	-0.03
Helpful Altruistic - A	1	42608	-0.03	-0.04	(K = 1)	-0.04	-0.03
Curiosity	3	2550	0.02	0.03	100	0.03	0.03
TAPAS Curiosity	3	2550	0.02	0.03	100	0.03	0.03
Depth	1	42608	0.01	0.01	(K = 1)	0.00	0.02
SDI Reflective - O	1	42608	0.01	0.01	(K = 1)	0.00	0.02
Dominance	16	126959	0.02	0.02	3	0.02	0.02
TAPAS Dominance	14	41743	0.11	0.13	27	0.08	0.17
SDI Dominance Leader - E	1	42608	0.03	0.03	(K = 1)	0.02	0.04
SDI Reserved - E	1	42608	0.01	0.01	(K = 1)	0.00	0.02
Even Tempered	15	84351	-0.05	-0.06	91	-0.02	-0.05
TAPAS Even Tempered	14	41743	-0.05	-0.06	91	-0.07	-0.05
SDI Temperamental – N (-)	1	42608	0.05	0.06	(K = 1)	0.05	0.07
Ingenuity	1	42608	-0.05	-0.06	(K = 1)	-0.07	-0.05
SDI Creative – O	1	42608	-0.05	-0.06	(K = 1)	-0.07	-0.05
Non-Delinquency	16	42753	-0.05	-0.06	79	-0.07	-0.04
TAPAS Non-Delinquency	16	42753	-0.05	-0.06	79	-0.07	-0.04
Optimism	14	41743	0.04	0.05	100	0.05	0.05
TAPAS Optimism	14	41743	0.04	0.04	100	0.04	0.04
Order	14	82515	0.03	0.03	100	0.03	0.03
TAPAS Order	13	39907	0.03	0.03	100	0.03	0.03
SDI Order - C	1	42608	0.01	0.01	(K = 1)	0.01	0.02
Responsibility	3	25051	0.00	0.00	100	0.00	0.00
TAPAS Responsibility	3	25051	0.00	0.00	100	0.00	0.00
Self-Control	11	38803	-0.01	-0.01	100	-0.01	-0.01
TAPAS Self-Control	11	38803	-0.01	-0.01	100	-0.01	-0.01
Situational Awareness	2	23846	0.00	0.01	32	-0.01	0.02
TAPAS Situational Awareness	2	23846	0.00	0.01	32	-0.01	0.02

Sociability	12	81521	0.03	0.04	100	0.04	0.04
TAPAS Sociability	11	38913	0.03	0.04	100	0.04	0.04
SDI Reserved - E	1	42608	0.01	0.01	(K = 1)	0.00	0.02
Team Orientation	3	66454	0.03	0.04	20	0.02	0.05
TAPAS Team Orientation	2	23846	0.03	0.03	14	0.00	0.06
SDI Independent – A (-)	1	42608	0.03	0.04	(K = 1)	0.03	0.04
SDI Agreeableness	1	42608	-0.04	-0.04	(K = 1)	-0.05	-0.04
SDI Conscientiousness	1	42608	-0.01	-0.01	(K = 1)	-0.02	-0.01
SDI Extroversion	1	42608	0.00	0.00	(K = 1)	0.00	0.01
SDI Machiavellianism	1	42608	0.06	0.07	(K = 1)	0.06	0.08
SDI Neuroticism	1	42608	0.05	0.06	(K = 1)	0.05	0.06
SDI Openness	1	42608	-0.03	-0.03	(K = 1)	-0.04	-0.02
SDI Envious - M	1	42608	0.07	0.08	(K = 1)	0.07	0.09
SDI Interpersonal Tactics - M	1	42608	0.02	0.02	(K = 1)	0.02	0.03
SDI Scientific Interest - O	1	42608	-0.03	-0.03	(K = 1)	-0.04	-0.02
SDI Team Player - A	1	42608	-0.04	-0.04	(K = 1)	-0.05	-0.04
SDI Considerate - A	1	42608	-0.03	-0.03	(K = 1)	-0.04	-0.02
SDI Self Serving - M	1	42608	0.03	0.03	(K = 1)	0.02	0.03
SDI Sociable - E	1	42608	-0.01	-0.01	(K = 1)	-0.02	0.00
TAPAS Attention-Seeking	13	40538	0.07	0.08	62	0.06	0.10
TAPAS Commitment to Serve	2	23846	-0.04	-0.04	4	-0.11	0.02
TAPAS Courage	2	23846	0.03	0.03	100	0.03	0.03
TAPAS Intellectual Efficiency	14	41743	0.03	0.04	44	0.01	0.06
TAPAS Physical Conditioning	16	42753	0.27	0.30	40	0.27	0.34
TAPAS Selflessness/Generosity	11	38562	-0.01	-0.01	100	-0.01	-0.01
TAPAS Tolerance	14	41463	0.00	0.00	100	0.00	0.00
TAPAS Can Do Composite	8	32414	0.00	0.00	100	0.00	0.00
TAPAS Will Do Composite	8	32414	0.20	0.20	4	0.10	0.30
TAPAS Adaptation Composite	2	23846	0.17	0.17	100	0.17	0.17

- Only Dominance yielded a medium to large estimated operational validity with fitness outcomes at the construct level. Moderators were not indicated for Dominance.
- The SDI did not demonstrate any effects of at least medium magnitude with fitness outcomes.
- The following TAPAS scales demonstrated medium estimated operational validities with fitness outcomes: Achievement, Dominance, Physical Conditioning, Will Do Composite, Adaptation Composite, although the presence of a moderator variable was indicated for Dominance, Physical Conditioning, and the Will Do composite.
- The NCAPS has not been studied in relation to fitness outcomes.

Table 134. Meta-Analytic Results for Prediction of Training Outcomes

Construct or Assessment Scale Name	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
Achievement	11	11785	0.07	0.08	94	0.07	0.09
TAPAS Achievement	11	11785	0.07	0.08	94	0.07	0.09
Adjustment	8	7109	0.03	0.03	100	0.03	0.03
TAPAS Adjustment	8	7109	0.03	0.03	100	0.03	0.03
Consideration	1	461	-0.05	-0.05	(K = 1)	-0.12	0.01
TAPAS Consideration	1	461	-0.05	-0.05	(K = 1)	-0.12	0.01
Cooperation	7	6900	-0.03	-0.03	100	-0.03	-0.03
TAPAS Cooperation	7	6900	-0.03	-0.03	100	-0.03	-0.03
Curiosity	1	461	-0.01	-0.02	(K = 1)	-0.08	0.05
TAPAS Curiosity	1	461	-0.01	-0.02	(K = 1)	-0.08	0.05
Dominance	9	7990	0.10	0.11	100	0.11	0.11
TAPAS Dominance	9	7990	0.10	0.11	100	0.11	0.11
Even Tempered	8	7102	-0.02	-0.02	51	-0.07	0.02
TAPAS Even-Tempered	8	7102	-0.02	-0.02	51	-0.07	0.02
Non-Delinquency	12	11987	-0.03	-0.04	43	-0.09	0.02
TAPAS Non-Delinquency	12	11987	-0.03	-0.04	43	-0.09	0.02
Optimism	7	6900	0.03	0.04	100	0.04	0.04
TAPAS Optimism	7	6900	0.03	0.04	100	0.04	0.04
Order	7	6900	0.01	0.01	100	0.01	0.01
TAPAS Order	7	6900	0.01	0.01	100	0.01	0.01
Responsibility	1	461	0.00	0.00	(K = 1)	-0.07	0.06
TAPAS Responsibility	1	461	0.00	0.00	(K = 1)	-0.07	0.06
Self-Control	7	6900	0.00	0.00	100	0.00	0.00
TAPAS Self-Control	7	6900	0.00	0.00	100	0.00	0.00
Sociability	6	6439	0.03	0.03	100	0.03	0.03
TAPAS Sociability	6	6439	0.03	0.03	100	0.03	0.03
SDI Agreeableness	1	170	-0.05	-0.06	(K = 1)	-0.17	0.05
SDI Conscientiousness	1	170	0.10	0.11	(K = 1)	0.00	0.22
SDI Extroversion	1	170	-0.02	-0.02	(K = 1)	-0.13	0.09
SDI Machiavellianism	1	170	0.01	0.01	(K = 1)	-0.10	0.12
SDI Neuroticism	1	170	-0.13	-0.15	(K = 1)	-0.25	-0.04
SDI Openness	1	170	-0.05	-0.06	(K = 1)	-0.17	0.05
TAPAS Attention-Seeking	7	6900	0.04	0.05	100	0.05	0.05
TAPAS Intellectual Efficiency	8	7781	0.05	0.06	45	0.01	0.11
TAPAS Physical Conditioning	13	11673	0.11	0.12	30	0.05	0.20

TAPAS Selflessness/Generosity	7	6641	-0.03	-0.03	91	-0.04	-0.01
TAPAS Tolerance	8	7023	-0.04	-0.05	49	-0.09	0.00
TAPAS Virtue	1	461	-0.04	-0.05	(K = 1)	-0.12	0.02
TAPAS Can Do Composite	3	3494	0.02	0.02	74	-0.01	0.04
TAPAS Will Do Composite	3	3494	0.00	0.00	16	-0.09	0.09

- No constructs yielded medium to large estimated operational validities with training outcomes at the construct level.
- SDI Conscientiousness was a medium positive predictor for training outcomes, although this was examined only in one study. Neuroticism was a medium negative predictor, although this was also only examined in one study.
- TAPAS Dominance and Physical Conditioning were positive medium predictors, although there is indication of a moderator variable for Physical Conditioning.
- No studies were available to meta-analyze predictor-criterion relationships for the NCAPS.

Table 135. Meta-Analytic Results for Prediction of Counterproductive Work Behavior (CWB) Outcomes

Construct or Assessment Scale Name	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
Achievement	12	29994	-0.08	-0.09	25	-0.14	-0.04
TAPAS Achievement	12	29994	-0.08	-0.09	25	-0.14	-0.04
Adjustment	10	28789	-0.02	-0.02	81	-0.03	-0.01
TAPAS Adjustment	10	28789	-0.02	-0.02	81	-0.03	-0.01
Adventure Seeking	2	22414	-0.02	-0.03	18	-0.05	0.00
TAPAS Adventure Seeking	2	22414	-0.02	-0.03	18	-0.05	0.00
Cooperation	10	29370	-0.01	-0.01	28	-0.05	0.03
TAPAS Cooperation	10	29370	-0.01	-0.01	28	-0.05	0.03
Dominance	10	29370	-0.05	-0.05	100	-0.05	-0.05
TAPAS Dominance	10	29370	-0.05	-0.05	100	-0.05	-0.05
Even Tempered	10	29370	-0.02	-0.02	20	-0.08	0.03
TAPAS Even-Tempered	10	29370	-0.02	-0.02	20	-0.08	0.03
Non-Delinquency	12	29994	-0.04	-0.04	11	-0.12	0.04
TAPAS Non-Delinquency	12	29994	-0.04	-0.04	11	-0.12	0.04
Optimism	10	29370	-0.03	-0.04	94	-0.04	-0.03
TAPAS Optimism	10	29370	-0.03	-0.04	94	-0.04	-0.03
Order	10	29370	-0.02	-0.03	32	-0.07	0.01

TAPAS Order	10	29370	-0.02	-0.03	32	-0.07	0.01
Responsibility	2	22414	-0.03	-0.03	4	-0.10	0.04
TAPAS Responsibility	2	22414	-0.03	-0.03	4	-0.10	0.04
Self-Control	10	28789	-0.03	-0.04	16	-0.10	0.02
TAPAS Self-Control	10	28789	-0.03	-0.04	16	-0.10	0.02
Sociability	10	29370	0.01	0.01	100	0.01	0.01
TAPAS Sociability	10	29370	0.01	0.01	100	0.01	0.01
SDI Agreeableness	2	360	-0.25	-0.28	100	-0.28	-0.28
SDI Conscientiousness	2	360	-0.32	-0.36	100	-0.36	-0.36
SDI Extroversion	2	360	0.02	0.03	100	0.03	0.03
SDI Neuroticism	2	360	0.32	0.35	100	0.35	0.35
SDI Openness	2	360	-0.06	-0.07	100	-0.07	-0.07
TAPAS Attention-Seeking	10	29370	0.00	0.00	100	0.00	0.00
TAPAS Commitment to Serve	2	22414	0.03	0.03	3	-0.05	0.11
TAPAS Courage	2	22414	-0.05	-0.06	31	-0.08	-0.04
TAPAS Intellectual Efficiency	10	29370	-0.03	-0.03	33	-0.07	0.01
TAPAS Physical Conditioning	12	29994	-0.08	-0.09	25	-0.14	-0.04
TAPAS Selflessness/Generosity	10	29370	-0.01	-0.01	12	-0.08	0.07
TAPAS Situational Awareness	2	22414	-0.02	-0.02	100	-0.02	-0.02
TAPAS Team Orientation	2	22414	-0.02	-0.02	8	-0.07	0.02
TAPAS Tolerance	10	29370	0.00	0.00	22	-0.05	0.05
TAPAS Can Do Composite	6	24210	-0.02	-0.02	100	-0.02	-0.02
TAPAS Will Do Composite	6	24210	-0.11	-0.11	100	-0.11	-0.11
TAPAS Adaptation Composite	2	22414	-0.08	-0.08	70	-0.08	-0.07

- No constructs yielded medium to large estimated operational validities with CWBs at the construct level.
- SDI Neuroticism was a large positive predictor of CWB outcomes; SDI Agreeableness and Conscientiousness were large negative predictors. Note that negative results are considered favorable in this analysis.
- For the TAPAS, the only medium-sized predictor was the Will Do composite.
- No studies were available to meta-analyze predictor-criterion relationships for the NCAPS.

PART B – PREDICTION FOR PROMOTION ELIGIBILITY

Table 136. Meta-Analytic Results for Prediction of Stratification Statement Outcomes

Presence/Absence of Stratification Statements

Assessment Name	Variable Label	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
SDI-D	Agreeableness	4	3934	0.06	0.07	100	0.07	0.07
SDI-D	Conscientiousness	4	3934	0.08	0.09	100	0.09	0.09
SDI-D	Extroversion	4	3934	-0.06	-0.06	100	-0.06	-0.06
SDI-D	Machiavellianism	4	3934	-0.01	-0.01	100	-0.01	-0.01
SDI-D	Neuroticism	4	3934	-0.05	-0.06	100	-0.06	-0.06
SDI-D	Openness	4	3934	0.00	0.00	100	0.00	0.00

- No SDI domains were at least medium-sized predictors of presence/absence of stratification statements.
- No studies were available to meta-analyze predictor-criterion relationships for the NCAPS or TAPAS.

Strength of Stratification Statements

Assessment Name	Variable Label	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
SDI-D	Agreeableness	2	464	0.23	0.26	100	0.26	0.26
SDI-D	Conscientiousness	2	464	0.18	0.20	100	0.20	0.20
SDI-D	Extroversion	2	464	0.24	0.26	100	0.26	0.26
SDI-D	Machiavellianism	2	464	0.00	0.00	33	-0.13	0.13
SDI-D	Neuroticism	2	464	-0.21	-0.23	100	-0.23	-0.23
SDI-D	Openness	2	464	0.10	0.11	100	0.11	0.11

- Several SDI domains were moderate to large predictors of strength of stratification statements, including Agreeableness, Conscientiousness, Extroversion, Neuroticism, and Openness.

- No studies were available to meta-analytically analyze predictor-criterion relationships for the NCAPS or TAPAS.

Number of Stratifications on First Three OPRs

Assessment Name	Variable Label	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
SDI-D	Agreeableness	2	1808	0.09	0.10	100	0.10	0.10
SDI-D	Conscientiousness	2	1808	0.12	0.14	65	0.10	0.17
SDI-D	Extroversion	2	1808	-0.09	-0.10	100	-0.10	-0.10
SDI-D	Machiavellianism	2	1808	-0.04	-0.05	100	-0.05	-0.05
SDI-D	Neuroticism	2	1808	-0.06	-0.07	100	-0.07	-0.07
SDI-D	Openness	2	1808	-0.05	-0.05	100	-0.05	-0.05

- Three SDI domains were moderate predictors of the number of stratification statements including Agreeableness, Conscientiousness, and Extroversion, although the presence of a moderator variable was indicated for Conscientiousness.
- No studies were available to meta-analyze predictor-criterion relationships for the NCAPS or TAPAS.

PART C – PREDICTION FOR CATEGORIES OF PERFORMANCE RATINGS

Table 137. Meta-Analytic Results for Prediction of Performance Rating Areas – Task Performance

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
NCAPS	Achievement	3	2542	0.04	0.05	38	-0.02	0.12
NCAPS	Adaptability Flexibility	3	2542	0.02	0.03	100	0.03	0.03
NCAPS	Attention to Detail	2	1227	0.06	0.07	100	0.07	0.07
NCAPS	Dependability	3	2542	0.05	0.06	100	0.06	0.06
NCAPS	Dutifulness	3	2542	0.07	0.09	100	0.09	0.09
NCAPS	Self-Reliance	3	2542	-0.02	-0.03	100	-0.03	-0.03

NCAPS	Social Orientation	3	2542	0.03	0.03	100	0.03	0.03
NCAPS	Stress Tolerance	3	2542	0.03	0.04	64	-0.01	0.08
NCAPS	Vigilance	2	1227	0.01	0.01	53	-0.06	0.07
NCAPS	Willingness to Learn	2	1227	0.07	0.10	100	0.10	0.10
SDI-D	Agreeableness	3	431	0.02	0.03	37	-0.15	0.21
SDI-D	Conscientiousness	3	431	0.13	0.17	100	0.17	0.17
SDI-D	Extroversion	3	431	0.02	0.02	36	-0.16	0.21
SDI-D	Neuroticism	3	431	-0.06	-0.08	100	-0.08	-0.08
SDI-D	Openness	3	431	-0.01	-0.01	100	-0.01	-0.01

- Only NCAPS Willingness to Learn was a medium predictor of task performance ratings.
- SDI Conscientiousness was a medium predictor of task performance ratings.
- No studies were available to meta-analyze predictor-criterion relationships for the TAPAS.

Table 138. Meta-Analytic Results for Prediction of Performance Rating Areas – Contextual Performance

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient t (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
SDI-D	Agreeableness	3	431	0.13	0.17	30	-0.04	0.38
SDI-D	Conscientiousness	3	431	0.19	0.25	100	0.25	0.25
SDI-D	Extroversion	3	431	-0.01	-0.01	100	-0.01	-0.01
SDI-D	Neuroticism	3	431	-0.05	-0.07	99	-0.08	-0.05
SDI-D	Openness	3	431	0.04	0.05	37	-0.13	0.23

- SDI Agreeableness and Conscientiousness were moderate predictors of ratings of contextual performance.
- No studies were available to meta-analyze predictor-criterion relationships for the NCAPS or TAPAS.

Table 139. Meta-Analytic Results for Prediction of Performance Rating Areas – Organizational Deviance

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
SDI-D	Agreeableness	2	360	-0.23	-0.29	67	-0.37	-0.21
SDI-D	Conscientiousness	2	360	-0.39	-0.50	100	-0.50	-0.50
SDI-D	Extroversion	2	360	0.00	0.00	100	0.00	0.00
SDI-D	Neuroticism	2	360	0.33	0.42	100	0.42	0.42
SDI-D	Openness	2	360	-0.02	-0.02	100	-0.02	-0.02

- SDI Agreeableness and Conscientiousness were medium negative predictors of organizational deviance although there was indication of a moderator variable for Agreeableness; SDI Neuroticism was a medium positive predictor.
- No studies were available to meta-analyze predictor-criterion relationships for the NCAPS or TAPAS.

Table 140. Meta-Analytic Results for Prediction of Performance Rating Areas – Interpersonal Deviance

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
SDI-D	Agreeableness	2	360	-0.28	-0.36	100	-0.36	-0.36
SDI-D	Conscientiousness	2	360	-0.25	-0.33	100	-0.33	-0.33
SDI-D	Extroversion	2	360	0.05	0.07	100	0.07	0.07
SDI-D	Neuroticism	2	360	0.30	0.39	100	0.39	0.39
SDI-D	Openness	2	360	-0.10	-0.13	100	-0.13	-0.13

- SDI Agreeableness, Conscientiousness, and Openness were at least medium negative predictors of interpersonal deviance; SDI Neuroticism was a medium positive predictor.
- No studies were available to meta-analyze predictor-criterion relationships for the NCAPS or TAPAS.

PART D – PREDICTION FOR ATTRITION OUTCOMES

Table 141. Meta-Analytic Results for Prediction of Overall Attrition

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	13	117846	-0.02	-0.02	53	-0.03	-0.01
TAPAS	Adjustment	9	110822	-0.01	-0.02	100	-0.02	-0.02
TAPAS	Adventure Seeking	1	9155	-0.01	-0.01	(K = 1)	-0.03	0.00
TAPAS	Attention-Seeking	11	114775	-0.03	-0.03	53	-0.04	-0.02
TAPAS	Commitment to Serve	1	9155	0.03	0.03	(K = 1)	0.01	0.04
TAPAS	Cooperation	11	114775	0.00	0.00	100	0.00	0.00
TAPAS	Courage	1	9155	0.00	0.00	(K = 1)	-0.02	0.01
TAPAS	Curiosity	1	1689	-0.04	-0.04	(K = 1)	-0.08	-0.01
TAPAS	Dominance	11	114775	-0.02	-0.02	76	-0.03	-0.01
TAPAS	Even-Tempered	11	114775	-0.01	-0.01	46	-0.02	0.01
TAPAS	Intellectual Efficiency	11	114775	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Non-Delinquency	13	117846	0.01	0.02	100	0.02	0.02
TAPAS	Optimism	11	114775	-0.03	-0.03	56	-0.04	-0.02
TAPAS	Order	11	114775	0.01	0.02	88	0.01	0.02
TAPAS	Physical Conditioning	13	117846	-0.07	-0.07	16	-0.11	-0.04
TAPAS	Responsibility	1	9155	-0.03	-0.03	(K = 1)	-0.05	-0.02
TAPAS	Self-Control	9	110822	0.00	0.00	100	0.00	0.00
TAPAS	Selflessness/Generosity	9	110822	0.03	0.03	100	0.03	0.03
TAPAS	Situational Awareness	1	9155	-0.03	-0.03	(K = 1)	-0.05	-0.02
TAPAS	Sociability	9	110822	0.00	0.00	100	0.00	0.00
TAPAS	Team Orientation	1	9155	0.00	0.00	(K = 1)	-0.02	0.01
TAPAS	Tolerance	11	114775	0.01	0.01	100	0.01	0.01
TAPAS	Can Do Composite	7	91344	-0.03	-0.03	49	-0.04	-0.01
TAPAS	Will Do Composite	7	91344	-0.06	-0.06	19	-0.08	-0.03
TAPAS	Adaptation Composite	1	67798	-0.07	-0.07	(K = 1)	-0.07	-0.06

- No TAPAS scales were at least medium predictors of overall attrition outcomes.

Table 142. Meta-Analytic Results for Prediction of Attrition Cognitions

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	3	5784	-0.10	-0.11	6	-0.25	0.02
TAPAS	Adjustment	2	4969	-0.03	-0.04	100	-0.04	-0.04
TAPAS	Attention-Seeking	3	5784	-0.04	-0.04	100	-0.04	-0.04
TAPAS	Cooperation	3	5784	-0.02	-0.03	53	-0.06	0.00
TAPAS	Curiosity	1	815	0.06	0.07	(K = 1)	0.02	0.12
TAPAS	Dominance	3	5784	-0.06	-0.07	17	-0.14	0.00
TAPAS	Even-Tempered	3	5784	-0.02	-0.02	18	-0.09	0.05
TAPAS	Intellectual Efficiency	3	5784	-0.03	-0.03	26	-0.09	0.02
TAPAS	Non-Delinquency	3	5784	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Optimism	3	5784	-0.05	-0.05	17	-0.12	0.02
TAPAS	Order	3	5784	0.00	0.00	100	0.00	0.00
TAPAS	Physical Conditioning	3	5784	-0.03	-0.04	30	-0.09	0.01
TAPAS	Self-Control	2	4969	-0.03	-0.03	100	-0.03	-0.03
TAPAS	Selflessness/Generosity	2	4969	-0.03	-0.04	100	-0.04	-0.04
TAPAS	Sociability	2	4969	0.00	0.00	100	0.00	0.00
TAPAS	Tolerance	3	5784	-0.03	-0.03	32	-0.08	0.02
TAPAS	Can Do Composite	2	4969	-0.12	-0.12	100	-0.12	-0.12
TAPAS	Will Do Composite	2	4969	-0.08	-0.08	100	-0.08	-0.08

- TAPAS Achievement and the Can Do composite were at least medium negative predictors of ratings of attrition cognitions. Note that negative relationships indicate hypothesized and favorable results.

Table 143. Meta-Analytic Results for Prediction of Three Month Attrition

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	2	11448	0.00	0.00	100	0.00	0.00
TAPAS	Adjustment	2	11052	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Attention-Seeking	2	11448	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Cooperation	2	11448	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Dominance	2	11448	0.00	-0.01	100	-0.01	-0.01
TAPAS	Even-Tempered	2	11448	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Intellectual Efficiency	2	11448	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Non-Delinquency	2	11448	0.01	0.01	100	0.01	0.01
TAPAS	Optimism	2	11448	-0.03	-0.04	100	-0.04	-0.04

TAPAS	Order	2	11448	0.01	0.01	59	0.00	0.03
TAPAS	Physical Conditioning	2	11448	-0.05	-0.05	100	-0.05	-0.05
TAPAS	Self-Control	2	11052	0.00	0.00	100	0.00	0.00
TAPAS	Selflessness/Generosity	2	11448	0.03	0.04	100	0.04	0.04
TAPAS	Sociability	2	11448	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Tolerance	2	11448	0.00	0.00	100	0.00	0.00
TAPAS	Can Do Composite	2	11448	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Will Do Composite	2	11448	-0.01	-0.01	100	-0.01	-0.01

- No TAPAS scales were at least medium predictors of three-month attrition.

Table 144. Meta-Analytic Results for Prediction of Six Month Attrition

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	12	139956	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Adjustment	8	132806	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Adventure Seeking	1	9155	-0.03	-0.03	(K = 1)	-0.05	-0.02
TAPAS	Attention-Seeking	10	136883	-0.03	-0.03	34	-0.05	-0.02
TAPAS	Commitment to Serve	1	9155	0.02	0.02	(K = 1)	0.01	0.04
TAPAS	Cooperation	10	136883	0.00	0.00	100	0.00	0.00
TAPAS	Courage	1	9155	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Curiosity	2	4077	-0.04	-0.04	100	-0.04	-0.04
TAPAS	Dominance	10	136883	-0.02	-0.02	55	-0.03	-0.01
TAPAS	Even-Tempered	10	136883	0.00	-0.01	35	-0.02	0.01
TAPAS	Intellectual Efficiency	10	136883	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Non-Delinquency	12	139956	0.02	0.02	100	0.02	0.02
TAPAS	Optimism	10	136883	-0.03	-0.03	57	-0.04	-0.02
TAPAS	Order	10	136883	0.01	0.02	7	0.01	0.02
TAPAS	Physical Conditioning	12	139956	-0.07	-0.07	52	-0.09	-0.06
TAPAS	Responsibility	1	9155	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Self-Control	8	132806	0.00	0.00	100	0.00	0.00
TAPAS	Selflessness/Generosity	8	132806	0.03	0.03	100	0.03	0.03
TAPAS	Situational Awareness	1	9155	-0.01	-0.01	(K = 1)	-0.03	0.00
TAPAS	Sociability	8	132806	0.00	0.00	100	0.00	0.00
TAPAS	Team Orientation	1	9155	-0.03	-0.03	(K = 1)	-0.05	-0.02
TAPAS	Tolerance	10	136883	0.01	0.01	100	0.01	0.01
TAPAS	Can Do Composite	6	113330	-0.02	-0.02	48	-0.03	-0.01
TAPAS	Will Do Composite	6	113330	-0.05	-0.05	15	-0.07	-0.03
TAPAS	Adaptation Composite	1	87415	-0.06	-0.06	(K = 1)	-0.06	-0.06

- No TAPAS scales were at least medium predictors of six month attrition.

Table 145. Meta-Analytic Results for Prediction of Twelve Month Attrition

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	2	73595	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Adjustment	1	72432	-0.01	-0.01	(K = 1)	-0.02	-0.01
TAPAS	Adventure Seeking	1	9155	-0.03	-0.03	(K = 1)	-0.05	-0.02
TAPAS	Attention-Seeking	1	72432	-0.03	-0.03	(K = 1)	-0.04	-0.03
TAPAS	Commitment to Serve	1	9155	0.02	0.02	(K = 1)	0.01	0.04
TAPAS	Cooperation	1	72432	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Courage	1	9155	-0.02	-0.02	(K = 1)	-0.04	-0.01
TAPAS	Dominance	1	72432	-0.02	-0.02	(K = 1)	-0.03	-0.02
TAPAS	Even-Tempered	1	72432	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Intellectual Efficiency	1	72432	-0.01	-0.01	(K = 1)	-0.02	-0.01
TAPAS	Non-Delinquency	2	73595	0.01	0.01	100	0.01	0.01
TAPAS	Optimism	1	72432	-0.02	-0.02	(K = 1)	-0.03	-0.02
TAPAS	Order	1	72432	0.01	0.01	(K = 1)	0.01	0.02
TAPAS	Physical Conditioning	2	73595	-0.08	-0.09	100	-0.09	-0.09
TAPAS	Responsibility	1	9155	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Self-Control	1	72432	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Selflessness/Generosity	1	72432	0.03	0.03	(K = 1)	0.03	0.04
TAPAS	Situational Awareness	1	9155	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Sociability	1	72432	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Team Orientation	1	9155	-0.03	-0.03	(K = 1)	-0.05	-0.02
TAPAS	Tolerance	1	72432	0.01	0.01	(K = 1)	0.01	0.02
TAPAS	Can Do Composite	2	73595	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Will Do Composite	2	73595	-0.07	-0.07	100	-0.07	-0.07
TAPAS	Adaptation Composite	1	72432	-0.07	-0.07	(K = 1)	-0.07	-0.07

- No TAPAS scales were at least medium predictors of 12 month attrition.

Table 146. Meta-Analytic Results for Prediction of 24 Month Attrition

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	2	44708	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Adjustment	1	43547	-0.01	-0.01	(K = 1)	-0.02	0.00
TAPAS	Adventure Seeking	1	9155	0.02	0.02	(K = 1)	0.01	0.04
TAPAS	Attention-Seeking	1	43547	-0.01	-0.01	(K = 1)	-0.02	0.00

TAPAS	Commitment to Serve	1	9155	0.04	0.04	(K = 1)	0.03	0.06
TAPAS	Cooperation	1	43547	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Courage	1	9155	0.01	0.01	(K = 1)	0.00	0.03
TAPAS	Dominance	1	43547	-0.02	-0.02	(K = 1)	-0.03	-0.02
TAPAS	Even-Tempered	1	43547	-0.01	-0.01	(K = 1)	-0.02	0.00
TAPAS	Intellectual Efficiency	1	43547	-0.01	-0.01	(K = 1)	-0.02	0.00
TAPAS	Non-Delinquency	2	44708	0.01	0.01	100	0.01	0.01
TAPAS	Optimism	1	43547	-0.02	-0.02	(K = 1)	-0.03	-0.02
TAPAS	Order	1	43547	0.02	0.02	(K = 1)	0.02	0.03
TAPAS	Physical Conditioning	2	44708	-0.08	-0.09	100	-0.09	-0.09
TAPAS	Responsibility	1	9155	-0.09	-0.10	(K = 1)	-0.12	-0.09
TAPAS	Self-Control	1	43547	0.00	0.00	(K = 1)	-0.01	0.01
TAPAS	Selflessness/Generosity	1	43547	0.04	0.04	(K = 1)	0.04	0.05
TAPAS	Situational Awareness	1	9155	-0.08	-0.09	(K = 1)	-0.10	-0.07
TAPAS	Sociability	1	43547	0.01	0.01	(K = 1)	0.00	0.02
TAPAS	Team Orientation	1	9155	0.05	0.06	(K = 1)	0.04	0.07
TAPAS	Tolerance	1	43547	0.01	0.01	(K = 1)	0.00	0.02
TAPAS	Can Do Composite	2	44708	-0.03	-0.03	100	-0.03	-0.03
TAPAS	Will Do Composite	2	44708	-0.07	-0.07	100	-0.07	-0.07
TAPAS	Adaptation Composite	1	43547	-0.08	-0.08	(K = 1)	-0.09	-0.07

- TAPAS Responsibility was moderately negatively related to 24 month attrition, although this relationship was studied only in one study.

PART E – PREDICTION OF JOB KNOWLEDGE OUTCOMES

Table 147. Meta-Analytic Results for Prediction of Grades/Job Knowledge – WTDB JKT

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	4	25533	0.04	0.05	100	0.05	0.05
TAPAS	Adjustment	4	25533	0.06	0.07	100	0.07	0.07
TAPAS	Adventure Seeking	2	23091	0.08	0.09	100	0.09	0.09
TAPAS	Attention-Seeking	4	25533	0.02	0.02	100	0.02	0.02
TAPAS	Commitment to Serve	2	23091	-0.07	-0.08	8	-0.12	-0.03
TAPAS	Cooperation	4	25533	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Courage	2	23091	0.06	0.07	100	0.07	0.07
TAPAS	Dominance	4	25533	0.04	0.04	100	0.04	0.04
TAPAS	Even-Tempered	4	25533	0.05	0.05	36	0.03	0.08
TAPAS	Intellectual Efficiency	4	25533	0.17	0.19	35	0.16	0.21
TAPAS	Non-Delinquency	4	25533	0.00	0.00	100	0.00	0.00
TAPAS	Optimism	4	25533	0.01	0.01	100	0.01	0.01
TAPAS	Order	4	25533	-0.08	-0.09	100	-0.09	-0.09
TAPAS	Physical Conditioning	4	25533	0.00	0.00	100	0.00	0.00
TAPAS	Responsibility	2	23091	0.05	0.06	4	-0.01	0.13
TAPAS	Self-Control	4	25533	0.01	0.01	55	-0.01	0.03
TAPAS	Selflessness/Generosity	4	25533	-0.04	-0.05	63	-0.06	-0.04
TAPAS	Situational Awareness	2	23091	0.03	0.03	4	-0.04	0.10
TAPAS	Sociability	4	25533	-0.08	-0.09	100	-0.09	-0.09
TAPAS	Team Orientation	2	23091	-0.01	-0.01	14	-0.05	0.02
TAPAS	Tolerance	4	25533	-0.02	-0.03	100	-0.03	-0.03
TAPAS	Can Do Composite	4	25533	0.21	0.21	7	0.16	0.27
TAPAS	Will Do Composite	4	25533	0.03	0.03	100	0.03	0.03
TAPAS	Adaptation Composite	2	23091	0.09	0.09	100	0.09	0.09

- TAPAS Intellectual Efficiency and the Can Do composite were positively and moderately related to WTDB JKT.

Table 148. Meta-Analytic Results for Prediction of Grades/Job Knowledge – Warrior Tasks and Battle Drills (WTDB) Job Knowledge Test (JKT)

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	4	25533	0.04	0.05	100	0.05	0.05
TAPAS	Adjustment	4	25533	0.06	0.07	100	0.07	0.07
TAPAS	Adventure Seeking	2	23091	0.08	0.09	100	0.09	0.09
TAPAS	Attention-Seeking	4	25533	0.02	0.02	100	0.02	0.02
TAPAS	Commitment to Serve	2	23091	-0.07	-0.08	8	-0.12	-0.03
TAPAS	Cooperation	4	25533	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Courage	2	23091	0.06	0.07	100	0.07	0.07
TAPAS	Dominance	4	25533	0.04	0.04	100	0.04	0.04
TAPAS	Even-Tempered	4	25533	0.05	0.05	36	0.03	0.08
TAPAS	Intellectual Efficiency	4	25533	0.17	0.19	35	0.16	0.21
TAPAS	Non-Delinquency	4	25533	0.00	0.00	100	0.00	0.00
TAPAS	Optimism	4	25533	0.01	0.01	100	0.01	0.01
TAPAS	Order	4	25533	-0.08	-0.09	100	-0.09	-0.09
TAPAS	Physical Conditioning	4	25533	0.00	0.00	100	0.00	0.00
TAPAS	Responsibility	2	23091	0.05	0.06	4	-0.01	0.13
TAPAS	Self-Control	4	25533	0.01	0.01	55	-0.01	0.03
TAPAS	Selflessness/Generosity	4	25533	-0.04	-0.05	63	-0.06	-0.04
TAPAS	Situational Awareness	2	23091	0.03	0.03	4	-0.04	0.10
TAPAS	Sociability	4	25533	-0.08	-0.09	100	-0.09	-0.09
TAPAS	Team Orientation	2	23091	-0.01	-0.01	14	-0.05	0.02
TAPAS	Tolerance	4	25533	-0.02	-0.03	100	-0.03	-0.03
TAPAS	Can Do Composite	4	25533	0.21	0.21	7	0.16	0.27
TAPAS	Will Do Composite	4	25533	0.03	0.03	100	0.03	0.03
TAPAS	Adaptation Composite	2	23091	0.09	0.09	100	0.09	0.09

- TAPAS Intellectual Efficiency and the Can Do composite were moderately positively related to WTDB JKT.

Table 149. Meta-Analytic Results for Prediction of Grades/Job Knowledge – MOS Specific Job Knowledge Test

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	11	12808	0.04	0.05	100	0.05	0.05
TAPAS	Adjustment	7	10638	0.06	0.06	100	0.06	0.06
TAPAS	Attention-Seeking	9	11923	0.02	0.02	91	0.01	0.04
TAPAS	Cooperation	9	11923	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Curiosity	2	1285	0.13	0.14	100	0.14	0.14
TAPAS	Dominance	9	11923	0.00	-0.01	100	-0.01	-0.01
TAPAS	Even-Tempered	9	11923	0.04	0.05	59	0.01	0.08
TAPAS	Intellectual Efficiency	9	11923	0.18	0.20	49	0.16	0.24
TAPAS	Non-Delinquency	11	12808	-0.01	-0.01	60	-0.04	0.03
TAPAS	Optimism	9	11923	0.01	0.01	31	-0.05	0.07
TAPAS	Order	9	11923	-0.08	-0.08	69	-0.11	-0.06
TAPAS	Physical Conditioning	11	12808	-0.02	-0.03	96	-0.04	-0.02
TAPAS	Self-Control	7	10638	-0.02	-0.02	84	-0.04	-0.01
TAPAS	Selflessness/Generosity	7	10638	-0.04	-0.05	38	-0.10	0.00
TAPAS	Sociability	7	10638	-0.08	-0.09	100	-0.09	-0.09
TAPAS	Tolerance	9	11923	-0.02	-0.03	60	-0.06	0.01
TAPAS	Can Do Composite	5	3414	0.09	0.09	23	0.00	0.18
TAPAS	Will Do Composite	5	3414	0.01	0.01	65	-0.03	0.04

- TAPAS Curiosity and Intellectual Efficiency were moderately positively related to MOS Specific JKT.

Table 150. Meta-Analytic Results for Prediction of Grades/Job Knowledge – Initial Military Training (IMT) Exam Grade

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	2	3758	0.03	0.03	100	0.03	0.03
TAPAS	Adjustment	2	3758	0.00	0.00	100	0.00	0.00
TAPAS	Attention-Seeking	2	3758	-0.02	-0.03	100	-0.03	-0.03
TAPAS	Cooperation	2	3758	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Dominance	2	3758	0.01	0.01	100	0.01	0.01
TAPAS	Even-Tempered	2	3758	0.02	0.02	100	0.02	0.02

TAPAS	Intellectual Efficiency	2	3758	0.12	0.13	100	0.13	0.13
TAPAS	Non-Delinquency	2	3758	0.02	0.02	100	0.02	0.02
TAPAS	Optimism	2	3758	-0.01	-0.02	100	-0.02	-0.02
TAPAS	Order	2	3758	0.00	-0.01	100	-0.01	-0.01
TAPAS	Physical Conditioning	2	3758	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Self-Control	2	3758	0.02	0.02	100	0.02	0.02
TAPAS	Selflessness/Generosity	2	3758	-0.02	-0.03	100	-0.03	-0.03
TAPAS	Sociability	2	3758	-0.07	-0.07	100	-0.07	-0.07
TAPAS	Tolerance	2	3758	-0.03	-0.03	100	-0.03	-0.03
TAPAS	Can Do Composite	2	3758	0.06	0.06	100	0.06	0.06
TAPAS	Will Do Composite	2	3758	0.04	0.04	57	0.01	0.06

- TAPAS Intellectual Efficiency was moderately positively related to IMT Exam Grade.

Table 151. Meta-Analytic Results for Prediction of Grades/Job Knowledge – Army Wide JKT

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	7	9625	0.06	0.06	100	0.06	0.06
TAPAS	Adjustment	5	8613	0.09	0.10	100	0.10	0.10
TAPAS	Attention-Seeking	5	8613	0.05	0.06	98	0.05	0.07
TAPAS	Cooperation	5	8613	-0.03	-0.03	100	-0.03	-0.03
TAPAS	Dominance	5	8613	0.05	0.05	100	0.05	0.05
TAPAS	Even-Tempered	5	8613	0.05	0.06	100	0.06	0.06
TAPAS	Intellectual Efficiency	5	8613	0.23	0.25	93	0.24	0.26
TAPAS	Non-Delinquency	7	9625	-0.03	-0.03	95	-0.04	-0.02
TAPAS	Optimism	5	8613	0.02	0.02	100	0.02	0.02
TAPAS	Order	5	8613	-0.07	-0.08	100	-0.08	-0.08
TAPAS	Physical Conditioning	7	9625	0.01	0.02	95	0.01	0.02
TAPAS	Self-Control	5	8613	0.00	0.00	100	0.00	0.00
TAPAS	Selflessness/Generosity	5	8613	-0.05	-0.06	100	-0.06	-0.06
TAPAS	Sociability	5	8613	-0.07	-0.08	100	-0.08	-0.08
TAPAS	Tolerance	5	8613	-0.04	-0.05	59	-0.08	-0.01
TAPAS	Can Do Composite	2	1012	0.12	0.12	100	0.12	0.12
TAPAS	Will Do Composite	2	1012	0.04	0.04	100	0.04	0.04

- TAPAS Adjustment, Intellectual Efficiency, and Can Do composite were positively and moderately related to Army Wide JKT.

Table 152. Meta-Analytic Results for Prediction of Grades/Job Knowledge – Advanced Individual Training (AIT) Grade

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	3	2600	0.11	0.12	21	0.03	0.22
TAPAS	Attention-Seeking	1	1200	-0.05	-0.06	(K = 1)	-0.10	-0.01
TAPAS	Cooperation	1	1200	0.01	0.01	(K = 1)	-0.03	0.05
TAPAS	Curiosity	1	1200	0.09	0.10	(K = 1)	0.06	0.14
TAPAS	Dominance	1	1200	0.05	0.06	(K = 1)	0.01	0.10
TAPAS	Even-Tempered	1	1200	0.12	0.13	(K = 1)	0.09	0.17
TAPAS	Intellectual Efficiency	1	1200	0.15	0.17	(K = 1)	0.13	0.21
TAPAS	Non-Delinquency	3	2600	0.09	0.10	48	0.05	0.15
TAPAS	Optimism	1	1200	0.08	0.09	(K = 1)	0.05	0.13
TAPAS	Order	1	1200	0.05	0.06	(K = 1)	0.01	0.10
TAPAS	Physical Conditioning	3	2600	-0.02	-0.03	100	-0.03	-0.03
TAPAS	Tolerance	1	1200	0.04	0.04	(K = 1)	0.00	0.09
TAPAS	Can Do Composite	3	2600	0.17	0.17	14	0.07	0.27
TAPAS	Will Do Composite	3	2600	0.12	0.12	31	0.05	0.18

- TAPAS Achievement, Curiosity, Even-Tempered, Intellectual Efficiency, Non-Delinquency, Can Do composite, and Will Do composite were moderately related to AIT grade.

Table 153. Meta-Analytic Results for Prediction of Grades/Job Knowledge – Training Achievement

Table Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	6	6434	0.09	0.10	100	0.10	0.10
TAPAS	Adjustment	6	6434	0.01	0.01	100	0.01	0.01
TAPAS	Attention-Seeking	6	6434	0.05	0.05	100	0.05	0.05
TAPAS	Cooperation	6	6434	-0.03	-0.03	100	-0.03	-0.03
TAPAS	Dominance	6	6434	0.11	0.13	100	0.13	0.13
TAPAS	Even-Tempered	6	6434	-0.04	-0.04	100	-0.04	-0.04
TAPAS	Intellectual Efficiency	6	6434	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Non-Delinquency	6	6434	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Optimism	6	6434	0.02	0.02	100	0.02	0.02

TAPAS	Order	6	6434	0.04	0.05	100	0.05	0.05
TAPAS	Physical Conditioning	6	6434	0.13	0.15	100	0.15	0.15
TAPAS	Self-Control	6	6434	0.01	0.01	100	0.01	0.01
TAPAS	Selflessness/Generosity	6	6434	-0.01	-0.02	100	-0.02	-0.02
TAPAS	Sociability	6	6434	0.04	0.04	100	0.04	0.04
TAPAS	Tolerance	6	6434	0.00	0.00	100	0.00	0.00
TAPAS	Can Do Composite	1	361	0.07	0.07	(K = 1)	0.00	0.14
TAPAS	Will Do Composite	1	361	0.07	0.07	(K = 1)	0.00	0.14

- TAPAS Achievement, Dominance, and Physical Conditioning were moderately positively related to Training Achievement.

Table 154. Meta-Analytic Results for Prediction of Grades/Job Knowledge – Training Failure

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	6	6443	-0.09	-0.10	100	-0.10	-0.10
TAPAS	Adjustment	6	6443	-0.05	-0.06	100	-0.06	-0.06
TAPAS	Attention-Seeking	6	6443	-0.05	-0.06	100	-0.06	-0.06
TAPAS	Cooperation	6	6443	0.02	0.02	100	0.02	0.02
TAPAS	Dominance	6	6443	-0.11	-0.12	100	-0.12	-0.12
TAPAS	Even-Tempered	6	6443	0.03	0.03	100	0.03	0.03
TAPAS	Intellectual Efficiency	6	6443	-0.08	-0.09	100	-0.09	-0.09
TAPAS	Non-Delinquency	6	6443	0.02	0.02	100	0.02	0.02
TAPAS	Optimism	6	6443	-0.05	-0.05	100	-0.05	-0.05
TAPAS	Order	6	6443	0.02	0.02	100	0.02	0.02
TAPAS	Physical Conditioning	6	6443	-0.15	-0.17	100	-0.17	-0.17
TAPAS	Self-Control	6	6443	0.01	0.01	100	0.01	0.01
TAPAS	Selflessness/Generosity	6	6443	0.05	0.05	100	0.05	0.05
TAPAS	Sociability	6	6443	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Tolerance	6	6443	0.08	0.09	100	0.09	0.09
TAPAS	Can Do Composite	1	361	-0.08	-0.08	(K = 1)	-0.15	-0.01
TAPAS	Will Do Composite	1	361	-0.08	-0.08	(K = 1)	-0.15	-0.01

- TAPAS Achievement, Dominance, and Physical Conditioning were positively and moderately related to Training Failure.

**PART F –
MODERATOR ANALYSES FOR JOB-SPECIFIC VALIDATION STUDIES**

Table 155. Meta-Analytic Results for Prediction for Prediction of Supervisor Ratings of Performance – Job-Specific Studies

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
SDI	Agreeableness	1	106	0.08	0.10	(K = 1)	-0.06	0.26
SDI	Conscientiousness	1	106	0.16	0.21	(K = 1)	0.05	0.36
SDI	Extroversion	1	106	0.13	0.17	(K = 1)	0.01	0.33
SDI	Neuroticism	1	106	-0.02	-0.03	(K = 1)	-0.19	0.14
SDI	Openness	1	106	0.03	0.04	(K = 1)	-0.12	0.20
TAPAS	Achievement	7	3849	0.10	0.13	93	0.11	0.15
TAPAS	Adjustment	7	3849	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Attention-Seeking	7	3849	0.00	0.00	88	-0.03	0.03
TAPAS	Consideration	1	109	0.16	0.21	(K = 1)	0.05	0.36
TAPAS	Cooperation	7	3849	0.00	-0.01	100	-0.01	-0.01
TAPAS	Dominance	7	3849	0.04	0.05	95	0.04	0.07
TAPAS	Even-Tempered	7	3849	0.02	0.02	100	0.02	0.02
TAPAS	Ingenuity	1	109	0.07	0.09	(K = 1)	-0.07	0.25
TAPAS	Intellectual Efficiency	7	3849	0.02	0.03	100	0.03	0.03
TAPAS	Non-Delinquency	7	3849	0.04	0.05	55	-0.01	0.12
TAPAS	Optimism	7	3849	0.04	0.06	43	-0.03	0.14
TAPAS	Order	7	3849	0.00	0.00	100	0.00	0.00
TAPAS	Physical Conditioning	7	3849	0.08	0.11	100	0.11	0.11
TAPAS	Responsibility	1	109	0.07	0.09	(K = 1)	-0.07	0.25
TAPAS	Self-Control	7	3849	0.01	0.02	100	0.02	0.02
TAPAS	Selflessness/Generosity	7	3849	0.01	0.01	94	-0.01	0.03
TAPAS	Sociability	7	3849	0.00	0.01	100	0.01	0.01
TAPAS	Tolerance	7	3849	0.01	0.01	49	-0.06	0.08

- SDI Agreeableness, Conscientiousness, Extroversion were moderately positively related to MOS Specific JKT.
- TAPAS Achievement, Consideration, and Physical Conditioning were moderately positively related to supervisor ratings of performance for MOS-specific validation studies.
- These results compare very similarly to the general meta-analytic results for prediction of supervisor ratings.

Table 156. Meta-Analytic Results for Prediction for Prediction of Grades/Job Knowledge – Job-Specific Studies

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
SDI	Agreeableness	3	802	0.09	0.11	100	0.11	0.11
SDI	Conscientiousness	3	802	0.17	0.19	100	0.19	0.19
SDI	Extroversion	3	802	0.05	0.06	100	0.06	0.06
SDI	Machiavellianism	2	696	-0.02	-0.02	100	-0.02	-0.02
SDI	Neuroticism	3	802	-0.18	-0.20	100	-0.20	-0.20
SDI	Openness	3	802	0.02	0.02	39	-0.09	0.13
SDI	Achievement Striving - C	1	586	0.21	0.23	(K = 1)	0.18	0.29
SDI	Creative – O	1	586	0.16	0.18	(K = 1)	0.12	0.24
SDI	Cultured - O	1	586	-0.10	-0.11	(K = 1)	-0.17	-0.05
SDI	Dominance Leader - E	1	586	0.13	0.15	(K = 1)	0.09	0.20
SDI	Helpful Altruistic - A	1	586	0.07	0.08	(K = 1)	0.02	0.14
SDI	Independent - A	1	586	0.04	0.04	(K = 1)	-0.01	0.10
SDI	Interpersonal Tactics - M	1	586	-0.12	-0.13	(K = 1)	-0.19	-0.08
SDI	Order - C	1	586	0.10	0.11	(K = 1)	0.05	0.17
SDI	Pleasant - A	1	586	0.11	0.12	(K = 1)	0.06	0.18
SDI	Reflective - O	1	586	-0.06	-0.07	(K = 1)	-0.13	-0.01
SDI	Reserved - E	1	586	-0.09	-0.10	(K = 1)	-0.16	-0.04
SDI	Scientific Interest - O	1	586	0.10	0.11	(K = 1)	0.05	0.17
SDI	Stress Under Pressure - N	1	586	-0.22	-0.25	(K = 1)	-0.30	-0.19
SDI	Team Player - A	1	586	0.19	0.21	(K = 1)	0.16	0.27
SDI	Temperamental - N	1	586	-0.17	-0.19	(K = 1)	-0.25	-0.13
SDI	Worry - N	1	586	-0.13	-0.15	(K = 1)	-0.20	-0.09
SDI	Considerate - A	1	586	0.08	0.08	(K = 1)	0.03	0.13
SDI	Self Serving - M	1	586	0.00	0.00	(K = 1)	-0.05	0.05
SDI	Sociable - E	1	586	-0.03	-0.03	(K = 1)	-0.08	0.02
TAPAS	Achievement	5	4843	0.06	0.06	100	0.06	0.06
TAPAS	Adjustment	4	4062	0.07	0.08	100	0.08	0.08
TAPAS	Attention-Seeking	5	4843	0.03	0.03	73	0.00	0.06
TAPAS	Cooperation	5	4843	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Curiosity	1	781	0.14	0.16	(K = 1)	0.11	0.21
TAPAS	Dominance	5	4843	0.02	0.02	100	0.02	0.02
TAPAS	Even-Tempered	5	4843	0.06	0.07	83	0.05	0.09
TAPAS	Intellectual Efficiency	5	4843	0.19	0.21	67	0.18	0.24
TAPAS	Non-Delinquency	5	4843	-0.01	-0.01	47	-0.06	0.04
TAPAS	Optimism	5	4843	0.03	0.03	35	-0.03	0.09

TAPAS	Order	5	4843	-0.06	-0.07	100	-0.07	-0.07
TAPAS	Physical Conditioning	5	4843	-0.01	-0.01	59	-0.05	0.03
TAPAS	Self-Control	4	4062	-0.01	-0.01	100	-0.01	-0.01
TAPAS	Selflessness/Generosity	4	4062	-0.05	-0.05	61	-0.09	-0.02
TAPAS	Sociability	4	4062	-0.08	-0.09	100	-0.09	-0.09
TAPAS	Tolerance	5	4843	-0.03	-0.04	49	-0.08	0.01

- SDI Agreeableness and Conscientiousness were moderately positively related to MOS Specific grades/job knowledge; SDI Neuroticism was moderately negatively related.
- SDI Achievement Striving, Creative, Dominance Leader, Order, Pleasant, Scientific Interest, Team Player were moderately positively related to MOS-specific grades/job knowledge. SDI Cultured, Interpersonal Tactics, Reserved, Stress Under Pressure, Worry were moderately negatively related.
- TAPAS Curiosity and Intellectual Efficiency were moderately positively related to MOS-specific grades/job knowledge.
- Compared to the general results for predicting grades/job knowledge, there were more SDI scales that related to the job-specific grades/job knowledge criteria. More TAPAS scales were related as well.

Table 157. Meta-Analytic Results for Prediction for Prediction of Fitness – Job-Specific Studies

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	5	2226	0.09	0.10	100	0.10	0.10
TAPAS	Adjustment	4	1402	0.00	0.00	100	0.00	0.00
TAPAS	Attention-Seeking	5	2226	0.04	0.04	100	0.04	0.04
TAPAS	Cooperation	5	2226	-0.05	-0.06	70	-0.10	-0.01
TAPAS	Curiosity	1	824	0.06	0.07	(K = 1)	0.02	0.12
TAPAS	Dominance	5	2226	0.09	0.10	92	0.08	0.12
TAPAS	Even-Tempered	5	2226	-0.05	-0.06	100	-0.06	-0.06
TAPAS	Intellectual Efficiency	5	2226	0.02	0.02	100	0.02	0.02
TAPAS	Non-Delinquency	5	2226	-0.06	-0.07	100	-0.07	-0.07
TAPAS	Optimism	5	2226	0.04	0.04	100	0.04	0.04
TAPAS	Order	5	2226	0.03	0.04	100	0.04	0.04
TAPAS	Physical Conditioning	5	2226	0.28	0.32	100	0.32	0.32
TAPAS	Self-Control	4	1402	-0.04	-0.04	100	-0.04	-0.04
TAPAS	Selflessness/Generosity	4	1402	0.00	0.00	96	-0.02	0.01
TAPAS	Sociability	4	1402	0.04	0.04	100	0.04	0.04

TAPAS	Tolerance	5	2226	0.01	0.01	100	0.01	0.01
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- TAPAS Dominance was moderately related to MOS-specific fitness and Physical Conditioning had a large effect for this outcome.
- Compared to the general results for predicting fitness, there fewer TAPAS scales were related to fitness in this analysis, although the results do not indicate the presence of a moderator.

Table 158. Meta-Analytic Results for Prediction for Prediction of Training – Job-Specific Studies

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
SDI	Agreeableness	1	170	-0.05	-0.06	(K = 1)	-0.17	0.05
SDI	Conscientiousness	1	170	0.10	0.11	(K = 1)	0.00	0.22
SDI	Extroversion	1	170	-0.02	-0.02	(K = 1)	-0.13	0.09
SDI	Machiavellianism	1	170	0.01	0.01	(K = 1)	-0.10	0.12
SDI	Neuroticism	1	170	-0.13	-0.15	(K = 1)	-0.25	-0.04
SDI	Openness	1	170	-0.05	-0.06	(K = 1)	-0.17	0.05
TAPAS	Achievement	4	1402	0.09	0.10	100	0.10	0.10
TAPAS	Adjustment	4	1402	0.02	0.03	100	0.03	0.03
TAPAS	Attention-Seeking	4	1402	0.05	0.05	100	0.05	0.05
TAPAS	Cooperation	4	1402	-0.01	-0.02	100	-0.02	-0.02
TAPAS	Dominance	4	1402	0.11	0.12	100	0.12	0.12
TAPAS	Even-Tempered	4	1402	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Intellectual Efficiency	4	1402	0.03	0.04	100	0.04	0.04
TAPAS	Non-Delinquency	4	1402	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Optimism	4	1402	0.03	0.03	100	0.03	0.03
TAPAS	Order	4	1402	0.01	0.01	100	0.01	0.01
TAPAS	Physical Conditioning	4	1402	0.13	0.15	100	0.15	0.15
TAPAS	Self-Control	4	1402	0.00	0.00	100	0.00	0.00
TAPAS	Selflessness/Generosity	4	1402	-0.02	-0.03	100	-0.03	-0.03
TAPAS	Sociability	4	1402	0.03	0.03	100	0.03	0.03
TAPAS	Tolerance	5	1525	-0.01	-0.01	49	-0.10	0.07

- As with the general meta-analysis results, SDI Conscientiousness was a medium positive predictor for training outcomes, although this was examined only in one study. Neuroticism was a medium negative predictor, although this was only examined in one study.

- TAPAS Achievement, Dominance, and Physical Conditioning were moderately positively related to MOS-specific training performance. Unlike the general meta-analysis results, there was not an indication of a moderator.

Table 159. Meta-Analytic Results for Prediction for Prediction of Attrition – Job-Specific Studies

Assessment Name	Scale	Number of studies (k)	Sample size (N)	Observed validity coefficient (r)	Estimated operational validity coefficient (ρ)	Percent of Variance Accounted for by Sampling Error	Credibility Interval Lower Bound	Credibility Interval Upper Bound
TAPAS	Achievement	4	5970	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Adjustment	4	5970	-0.02	-0.02	100	-0.02	-0.02
TAPAS	Attention-Seeking	4	5970	-0.05	-0.05	56	-0.09	-0.02
TAPAS	Cooperation	4	5970	0.01	0.02	100	0.02	0.02
TAPAS	Dominance	4	5970	-0.03	-0.04	100	-0.04	-0.04
TAPAS	Even-Tempered	4	5970	-0.01	-0.01	74	-0.03	0.02
TAPAS	Intellectual Efficiency	4	5970	0.00	0.00	100	0.00	0.00
TAPAS	Non-Delinquency	4	5970	0.02	0.03	100	0.03	0.03
TAPAS	Optimism	4	5970	-0.03	-0.03	100	-0.03	-0.03
TAPAS	Order	4	5970	0.04	0.04	100	0.04	0.04
TAPAS	Physical Conditioning	4	5970	-0.10	-0.12	100	-0.12	-0.12
TAPAS	Self-Control	4	5970	0.03	0.03	100	0.03	0.03
TAPAS	Selflessness/Generosity	4	5970	0.04	0.05	100	0.05	0.05
TAPAS	Sociability	4	5970	0.00	0.00	100	0.00	0.00
TAPAS	Tolerance	4	5970	0.03	0.04	100	0.04	0.04

- As with the general meta-analysis results, no TAPAS scales were at least medium predictors of overall attrition outcomes.

11.0 SUMMARY OF RECOMMENDATIONS

A comprehensive review was conducted of three personality assessments currently and/or historically used across the US military services for job selection and/or placement. The purpose of this project was to improve testing and test evaluation within the military, and specifically the consolidation of personality assessments developed by the services over the past decade including the TAPAS, NCAPS, and SDI. The consensus of the Manpower Accession Policy Working Group (MAPWG) is that the TAPAS framework and methodology should serve as the basis for future efforts to measure personality in U.S. military enlisted applicants. This technical report summarized an initiative aimed at reviewing previous research findings and analyzing data to make recommendations regarding which aspects from the NCAPS and SDI would be worth

incorporating into the TAPAS system. The tasks in this project included a review of existing documentation on the three assessments, analysis of archival and recently collected data regarding the psychometric properties of each assessment, meta-analysis of accumulated validity studies by construct and assessment, and recommendations for aspects of the NCAPS and SDI to consider including in future versions of TAPAS. The following conclusions were drawn based on the results of these tasks.

The tasks conducted in this project provide some indication that the U.S. military can achieve the stated objective of moving toward a consolidated approach based on assessments currently and/or historically used across the services to assess personality for job selection and/or placement, though there are some challenges with fully achieving this objective. One of the most salient and central findings of this research was the investigation into overlap of the constructs measured across the TAPAS, NCAPS, and SDI, and is a finding that is highly actionable. The qualitative and quantitative reviews and analyses indicate a generally high level of convergence between most personality constructs assessed in the NCAPS and SDI with TAPAS. The quantitative results tended to highly overlap with qualitatively determined expecting mappings. Where these results were obtained, it facilitates the ability to enhance or bolster the TAPAS item banks with mapped NCAPS and/or SDI items/item banks and/or to create new, parallel form concepts. There are several unique elements of the NCAPS and SDI that are not well accounted for by the TAPAS. We recommend that the military consider the relevance of augmenting the TAPAS framework with these unique constructs.

While we believe that the findings regarding construct overlap are robust and actionable, the findings regarding the criterion-related validity of the three assessments are less robust and/or less readily interpretable for various reasons. The archival research that was reviewed as part of this project demonstrated typically zero or small effect sizes with various criterion domains. The expectations for the magnitude of criterion-related validity coefficients were modest in recognition of the fact that single scales from any of these assessments are not typically evaluated or used on their own, not all scales are predicted to relate to all criteria, and that small effects when combined can have more substantial relationships with other variables. Even with low expectations for robust validity coefficients, we observed that most validities were characterized as zero and that a few TAPAS scales consistently demonstrated at least a small effect size (> 0.10). The NCAPS demonstrated somewhat more robust validity coefficients, although the number of investigations that studied this were very limited. The criterion-related validity for the SDI was not typically robust. The meta-analyses further reinforced the conclusion that many of the constructs studied across various assessments tend to result in zero to small validities, and that there is much variability in the performance of the assessments with most results hovering around zero. Based on these results, it is not clear from the research reviewed that TAPAS is likely to add robust prediction to job placement/selection scenarios or add incremental prediction to other assessment tools. To enhance the interpretability of the meta-analytic data, a separate analysis should be undertaken to understand the composite validity of the assessment scales used in operational settings, as it not assumed or expected that single assessment scales are used in operation. It may be that composite validity estimates can exceed typical levels of validity observed in the meta-analyses due to the potential for incremental validity due to low to moderate scale intercorrelations.

Our findings regarding the criterion-related validity studied in the local analyses conducted as part of this project are also limited by the nature of the criteria data used/obtained in the quantitative analyses that were conducted as part of this project. The criteria used in this analysis were limited to self-reported performance of various job-related competencies. The analysis of this criteria data revealed limited variability for certain criteria measures (most notably the likelihood to sexually harass criterion area) and the validity coefficients were much higher than typical levels of prediction compared to what was observed in the archival literature review and is common in the published literature. We believe this indicates a significant issue with common method variance, and particularly favors the SDI given the high degree of similarity in response format for the predictor and criterion measures. Furthermore, we believe that the faking results observed in our analysis suggests a limitation with the criteria measures used in this study. The SDI assessment demonstrated the highest levels of faking-to-honest score differences. The same format was used to collect the criteria measures and thus it can be inferred that the criteria measure was also similarly vulnerable to faking. We recommend that future investigations examine more objective sources of performance to determine the concurrent operational validity of these three assessments. The data set collected as part of this project can be augmented over time through the inclusion of training, fitness, attrition, performance, and other outcome data. The data asset that has been created as a by-product of this study is an excellent start to examining the relative and incremental validity of these three assessments and will allow for ongoing investigations of the assessments' validity.

One of the clearest findings regarding this research were the results of the faking analyses. TAPAS demonstrated the least faking potential of the three assessments and this is a clear strength of TAPAS. This finding was observed in the archival research review and in the quantitative analysis completed as part of this project. The multidimensional forced choice item type appears to largely mitigate the potential for faking/impression management. In contrast, the SDI was the most vulnerable to faking/impression management, with most of its scales demonstrating moderate to high honest to faking score differences. The NCAPS demonstrated more score differences compared to the TAPAS, but fewer than the SDI.

The internal consistency reliability estimates of the NCAPS and SDI are very high but these values are somewhat lower for TAPAS. We believe that higher levels of reliability can be achieved for TAPAS through the use of longer fixed length assessments and/or the introduction of a variable length assessment format with a standard error based stopping rule to ensure that higher levels of reliability are achieved in the CAT prior to termination of the assessment.

Subgroup differences observed across the three assessments were minimal, in line with typical findings observed in the literature regarding score differences between protected subgroups. Often, any small differences, if observed, favored the minority group.

In conclusion, the TAPAS demonstrates many merits, including a comprehensive taxonomy of personality characteristics, a response format that mitigates faking in high stakes settings, and few instances of subgroup differences. The TAPAS also measures several unique aspects of personality not measured in either the NCAPS or SDI. A more targeted approach to understanding the value of the assessment in validity studies is needed, including a job-specific validation strategy to understand a particular combination or configuration of scales for a specific purpose.

The NCAPS has several merits associated with it, but results in somewhat larger faking differences. It has been subject to fewer validation studies, although the ones completed tend to indicate useful levels of validity.

Our review and results are most critical about the SDI. The SDI demonstrates large faking differences and the validity evidence is limited and mixed at best. While the Machiavellianism scales represent a unique aspect to measurement that are not well accounted for in the TAPAS framework, there is not currently enough support to recommend its inclusion going forward.

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**APPENDIX A: DETAILED RESEARCH REVIEWS CONDUCTED AS PART OF
LITERATURE REVIEW**

The validity of TAPAS for predicting peer and supervisor ratings of performance was examined across 12 studies. The study characteristics and results were as follows:

Table A-1. TAPAS Supervisor Ratings Validity

Study ID	N	Job	Date	Criterion	TAPAS Scales for Supervisor Ratings	Notes/Comments
19	423	U.S. Air Force Security Forces Personnel	2017	On-the-job performance (low vs. med/high)	Achievement (.08) Adjustment (.03) Attention Seeking (-.08) Cooperation (.11) Dominance (.03) Even Tempered (.05) Intellectual Efficiency (.05) Non-Delinquency (.17) Optimism (.11) Order (.01) Physical Condition (-.01) Self-Control (.14) Selflessness/Generosity (.03) Sociability (.02) Tolerance (-.05)	No indication of the source of the ratings. Correlations reported.
24	163 ^a 170 ^b 174 ^c 175 ^d 165 ^e 175 ^f 176 ^g 176 ^h	U.S. Army Soldiers	2011	Supervisor performance ratings MOS Specific ^a Common/Warrior Tasks KS ^b Exhibiting Effort ^c Support for Peers ^d Peer Leadership ^e Exhibiting Fitness & Bearing ^f Personal Discipline ^g Commitment & Adjustment ^h	a (-.06) (.06) (.05) (.04) (.05) (.15) (.13) (.13) b (-.04) (.15) (-.02) (-.02) (.03) (.06) (.08) (.04) c (-.03) (.06) (-.03) (.01) (.09) (.04) (.03) (-.05) d (.10) (.11) (.08) (.14) (.14) (.09) (-.05) (-.03) e (-.21) (-.10) (-.12) (-.15) (-.17) (-.13) (-.16) (-.13) f (.08) (.10) (.18) (.10) (.08) (.15) (.08) (.04) g (-.19) (.06) (.07) (-.03) (.00) (.06) (.04) (.06) h (-.01) (.08) (-.04) (.08) (.08) (.10) (.02) (.04) i (-.13) (.06) (-.05) (-.02) (.00) (-.03) (.05) (-.01) j (-.08) (-.02) (-.02) (.00) (-.02) (-.07) (.04) (-.01) k (-.03) (.05) (.09) (.02) (.07) (.14) (.02) (.10) l (.11) (.01) (.11) (.02) (-.02) (-.03) (.02) (.11) m (-.11) (-.10) (-.09) (-.12) (-.06) (-.16) (-.07) (-.11) n (-.05) (-.07) (-.05) (-.07) (-.05) (-.11) (-.22) (-.13) o (-.16) (.00) (.01) (.04) (.04) (-.01) (.00) (.02)	

Study ID	N	Job	Date	Criterion	TAPAS Scales for Supervisor Ratings											Notes/ Comments										
					a	b	c	d	e	f	g	h	i	j												
50	781-846	U.S. Army Entry-Level Enlisted Soldiers	2009	Combined peer and supervisor performance ratings MOS Specific ^a Effort ^b Physical Fitness & Military Bearing ^c Support for Peers ^d Peer Leadership ^e Personal Discipline ^f	Achievement	(.07)	(.09)	(.07)	(-.02)	(.04)	(.05)									Peer and the supervisor ratings were averaged to create a single overall rating for each scale.						
					Curiosity	(.04)	(.04)	(.01)	(.02)	(.06)	(.05)															
					Non-Delinquency	(.01)	(.05)	(-.05)	(.08)	(.01)	(.15)															
					Dominance	(-.00)	(-.04)	(-.03)	(-.08)	(-.02)	(-.09)															
					Even Temper	(.03)	(.09)	(.05)	(.09)	(.04)	(.15)															
					Attention Seeking	(-.04)	(-.10)	(-.03)	(-.11)	(-.05)	(-.17)															
					Intellectual Efficiency	(.04)	(.05)	(-.02)	(-.01)	(.03)	(.03)															
					Order	(.05)	(.01)	(.00)	(-.01)	(.02)	(.02)															
					Physical Conditioning	(.09)	(.10)	(.21)	(.00)	(.14)	(.02)															
					Tolerance	(.02)	(.02)	(.01)	(.06)	(.05)	(.06)															
					Cooperation/Trust	(-.03)	(.01)	(-.02)	(.04)	(-.03)	(.08)															
					Optimism	(.03)	(.02)	(.01)	(.02)	(.05)	(.04)															
					54	366-208,822	U.S. Army Soldiers	2017	Cadre and supervisor performance ratings Cadre Effort & Discipline ^a Cadre Adjustment to the Army ^b Cadre Fitness & Bearing ^c Cadre Working with Others ^d Cadre Overall Performance ^e Supervisor Effort & Discipline ^f Supervisor Fitness & Bearing ^g Working with Others ^h Leadership Potential ⁱ Overall Performance ^j	Achievement	(.07)	(.06)	(.06)	(.05)	(.07)	(.12)	(.11)	(.08)	(.13)	(.11)						
										Adjustment	(-.03)	(-.02)	(-.01)	(-.02)	(-.03)	(.02)	(.01)	(-.02)	(.00)	(.01)						
Adventure Seeking	(-.02)	(-.06)	(.00)	(.00)						(-.02)																
Attention Seeking	(.00)	(.00)	(.03)	(.01)						(.01)	(-.01)	(.00)	(-.01)	(.00)	(.00)											
Commitment to Serve	(.02)	(.01)	(-.02)	(.01)						(.00)																
Cooperation	(-.01)	(.01)	(.01)	(.00)						(.00)	(-.04)	(-.01)	(-.03)	(-.05)	(-.03)											
Courage	(.01)	(.02)	(.02)	(.02)						(.01)																
Dominance	(.04)	(.05)	(.06)	(.04)						(.06)	(.02)	(.04)	(.04)	(.03)	(.04)											
Even Tempered	(.00)	(-.01)	(-.01)	(.01)						(.00)	(-.03)	(.02)	(-.04)	(.00)	(-.02)											
Intellectual Efficiency	(.02)	(.01)	(.01)	(.02)						(.03)	(.07)	(.10)	(.02)	(.04)	(.07)											
Non-Delinquency	(-.01)	(-.01)	(-.03)	(-.02)						(-.03)	(.01)	(.02)	(-.03)	(.00)	(.00)											
Optimism	(.02)	(.03)	(.02)	(.02)						(.03)	(.02)	(.05)	(.05)	(.03)	(.04)											
Order	(.00)	(-.01)	(.01)	(.00)						(.00)	(-.04)	(-.04)	(-.03)	(-.03)	(-.04)											
Physical Conditioning	(.06)	(.07)	(.14)	(.06)						(.09)	(.05)	(.07)	(.13)	(.07)	(.09)											
Responsibility	(.09)	(.05)	(.00)	(.04)	(.07)																					
Self-Control	(.02)	(.00)	(.00)	(.00)	(.01)	(.05)	(.05)	(.01)	(.07)	(.04)																
Selflessness/Generosity	(.00)	(.00)	(.00)	(-.01)	(-.01)	(-.02)	(-.03)	(-.03)	(-.02)	(-.04)																
Situational Awareness	(.02)	(.00)	(-.02)	(.00)	(-.02)																					

Study ID	N	Job	Date	Criterion	TAPAS Scales for Supervisor Ratings	Notes/ Comments						
67	505-1,696	U.S. Army Soldiers	2010	Supervisor Army Wide Performance Ratings (Effort)	Self-Control	(.07) (.04) (.08)						
					Selflessness/Generosity	(.03) (-.04) (.02)						
					Sociability	(.14) (.12) (.15)						
					Tolerance	(-.02) (-.06) (.12)						
					Achievement	(.08)						
					Curiosity	(-.02)						
					Non-Delinquency	(.03)						
					Dominance	(-.06)						
					Even-Temper	(.07)						
					Attention-Seeking	(-.08)						
Intellectual Efficiency	(-.02)											
Order	(-.01)											
Physical Conditioning	(.07)											
Tolerance	(-.03)											
Cooperation/Trust	(.04)											
Optimism	(.03)											
68	696 a1 668 a2 703 a3 699 a4 358 b1 348 b2 358 b3 356 b4	U.S. Army Soldiers	2011	Supervisor performance ratings for "Reasonable" and "A Lot" a of familiarity and "A lot" b of familiarity Effort a1-b1 Peer Leadership a2-b2 Personal Discipline a3-b3 Physical Fitness and Bearing a4-b4	a1	a2	a3	a4	b1	b2	b3	b4
					Achievement	(.05) (.06) (.04) (.07) (.04) (.06) (.02)						
					Adjustment	(-.03) (-.05) (-.04) (-.05) (-.04) (-.06) (-.08) (-.05)						
					Attention Seeking	(.08) (.06) (.08) (.09) (.12) (.10) (.06) (.11)						
					Cooperation	(.02) (-.04) (-.07) (-.01) (.04) (-.09) (-.09) (.01)						
					Dominance	(.06) (.02) (.02) (.06) (.04) (.03) (.02) (.07)						
					Even Tempered	(.05) (.00) (.05) (.04) (.12) (.00) (.08) (.08)						
					Intellectual Efficiency	(-.01) (.01) (.01) (-.04) (.00) (.03) (.02) (-.03)						
					Non-delinquency	(.01) (.03) (-.01) (-.03) (-.08) (-.02) (-.08) (-.09)						
					Optimism	(.03) (.05) (.05) (.04) (.03) (.02) (.05) (.06)						
					Order	(.06) (.10) (.09) (.06) (.07) (.12) (.10) (.03)						
					Physical Conditioning	(.11) (.05) (.02) (.11) (.13) (.08) (.05) (.17)						
					Self-Control	(.01) (-.02) (.03) (-.01) (.00) (-.08) (-.03) (-.02)						
					Selflessness/Generosity	(-.05) (-.02) (-.03) (-.03) (-.03) (.00) (.00) (.05)						
					Sociability	(.00) (.00) (-.05) (.01) (.02) (.06) (-.01) (.07)						
					Tolerance	(.01) (-.01) (.01) (.02) (-.01) (.00) (-.02) (.00)						
					1a	1b	2a	2b	3a	3b	4a	4b
Achievement	(.10) (.05) (.08) (.07) (.06) (-.04) (.07) (-.02)											
Adjustment	(-.01) (.01) (-.01) (-.02) (-.06) (-.06) (-.08) (-.04)											
Attention-Seeking	(.03) (-.03) (-.03) (-.05) (-.03) (.00) (-.02) (.03)											
72	8,739 1 3,292 2 2,307 3 2,872 4	U.S. Army Soldiers Infantry (11B) 1 Combat Medics	2012	Supervisor performance ratings ^a MOS specific ratings ^b	1a	1b	2a	2b	3a	3b	4a	4b
					Achievement	(.10) (.05) (.08) (.07) (.06) (-.04) (.07) (-.02)						
					Adjustment	(-.01) (.01) (-.01) (-.02) (-.06) (-.06) (-.08) (-.04)						
					Attention-Seeking	(.03) (-.03) (-.03) (-.05) (-.03) (.00) (-.02) (.03)						

Study ID	N	Job	Date	Criterion	TAPAS Scales for Supervisor Ratings	Notes/ Comments					
72	151,625	(68W) ² Military Police (31B) ³ Motor Transport Operators (88M) ⁴ Army Wide ⁵	2012	Performance Ratings Scales Effort ^a Physical Fitness and Bearing ^b Personal Discipline ^c Commitment/Adjustment to the Army ^d Support for Peers ^e Peer Leadership ^f Common Task Knowledge and Skill ^g MOS Qualification and Skill ^h Overall Performance ⁱ	Cooperation (-07) (-02) (.03) (.03) (-05) (-04) (.04) (.03) Dominance (.01) (-04) (.00) (-06) (.08) (.05) (-03) (.06) Even-Tempered (.04) (.06) (-05) (-02) (.06) (.05) (-03) (-09) Intellectual Efficiency (-01) (.01) (.01) (-05) (.00) (-01) (-03) (-06) Non-Delinquency (.05) (-02) (.04) (.16) (-07) (-06) (.09) (-01) Order (-05) (-06) (.08) (.07) (.00) (-11) (-04) (-01) Physical Conditioning (.13) (.08) (.12) (.06) (.02) (-04) (.06) (.03) Self-Control (-04) (-03) (.00) (.08) (.02) (-03) (.00) (.06) Selflessness/Generosity (-02) (-05) (.00) (.02) (-08) (-07) (.01) (-09) Sociability (.01) (.04) (.02) (-03) (-02) (.00) (.14) (.02) Tolerance (.02) (-02) (-03) (.03) (-03) (-06) (.20) (.22) Optimism (.11) (.08) (-02) (.01) (.08) (.08) (.04) (.08)	a b c d e f g h i (.10) (.07) (.08) (.07) (.04) (.08) (.05) (.06) (.09) (-02) (-01) (-02) (-02) (-03) (-03) (.01) (-04) (-03) (.04) (.05) (-01) (.02) (.05) (.01) (.02) (-01) (.02) (-03) (-03) (-06) (-04) (-03) (-03) (-02) (-03) (-04) (.07) (.06) (.02) (.04) (.03) (.03) (.04) (.04) (.04) (.03) (.01) (.01) (.00) (.02) (.01) (.02) (.00) (.02) (.00) (-02) (-01) (-01) (-02) (.01) (-01) (.01) (.03) (.01) (-03) (.01) (.01) (.01) (.01) (.01) (.00) (-01) (.00) (.00) (.02) (.00) (-01) (.02) (-01) (.01) (.02) (.12) (.16) (.05) (.09) (.08) (.08) (.09) (.09) (.10) (.01) (-02) (.01) (-01) (-03) (-01) (-01) (.02) (.01) (-04) (-05) (-05) (-06) (-07) (-04) (-05) (-04) (.01) (.01) (.02) (-02) (.00) (.01) (.00) (.01) (.00) (-01) (.01) (-02) (-03) (-01) (-02) (-03) (-02) (-02) (.03) (.05) (-05) (.06) (.07) (.04) (.07) (.07) (.05) (.06)					
					83	1,568	ROTC Cadets	Leader Development and Assessment Course (LDAC) leader performance scores ^a LDAC platoon tactical evaluation scores ^b	Achievement (.12) (.05) (.08) (.08) (.08) (.08) (.08) (.08) (.08) Curiosity (.03) (.03) (.03) (.03) (.03) (.03) (.03) (.03) (.03) Non-Delinquency (-15) (-15) (-15) (-15) (-15) (-15) (-15) (-15) (-15) Dominance (.24) (.24) (.24) (.24) (.24) (.24) (.24) (.24) (.24) Even Temper (-07) (-07) (-07) (-07) (-07) (-07) (-07) (-07) (-07) Intellectual Efficiency (.09) (.09) (.09) (.09) (.09) (.09) (.09) (.09) (.09) Adjustment (.02) (.02) (.02) (.02) (.02) (.02) (.02) (.02) (.02)	a b (.12) (.12) (.03) (.02) (-15) (-11) (.24) (.16) (-07) (-02) (.09) (.03) (.02) (.00)	

Study ID	N	Job	Date	Criterion	TAPAS Scales for Supervisor Ratings	Notes/ Comments
85	1,205	ROTC Cadets	2011	Leader Development and Assessment Course (LDAC) leader performance scores ^a LDAC platoon tactical evaluation scores ^b LDAC Land Navigation Score ^c	Physical Conditioning	(.22) (.20)
					Responsibility	(-.01) (.02)
					Tolerance	(-.04) (-.05)
					Trust/Cooperation	(-.16) (-.13)
					Optimism	(.09) (.04)
						a b c
					Achievement	(.12) (.12) (.04)
					Curiosity	(.03) (.02) (.06)
					Non-Delinquency	(-.15) (-.11) (-.14)
					Dominance	(.24) (.16) (.02)
					Even Temper	(-.07) (-.02) (.04)
					Intellectual Efficiency	(.09) (.03) (.06)
					Adjustment	(.02) (.00) (.09)
					Physical Conditioning	(.22) (.20) (.01)
					Responsibility	(-.01) (.02) (-.01)
Tolerance	(-.04) (-.05) (-.07)					
Trust-Cooperation	(-.16) (-.13) (-.11)					
Optimism	(.09) (.04) (.02)					

The validity of TAPAS for predicting promotion or selection was examined across 3 studies. The validation samples included Army soldiers, drill sergeants, and a variety of trainees for various military jobs. The study characteristics and results were as follows:

Table A-2. TAPAS Promotion or Selection Validity

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Training Outcome	Notes/Comments
69	109	Drill Sergeant	Not reported	Promotion Timing	Achievement Adjustment Attention Seeking Consideration Dominance Even Tempered Ingenuity Intellectual Efficiency Non-Delinquency Optimism Order Physical Conditioning Responsibility Self-Control Selflessness/Generosity Sociability Tolerance Virtue	Negative values indicate a greater degree of correlation for accelerated drill sergeants; whereas positive values indicate a greater degree of correlation for non-accelerated drill sergeants
71	585	Army Soldiers	2014	Selection for Army Special Operations Forces (ARSOF) Training	Achievement Adjustment Adventure Seeking Attention Seeking Courage Dominance Even Tempered Intellectual Efficiency Non-Delinquency Optimism Physical Conditioning Responsibility Situational Awareness	The goal of this research was to identify Soldiers who were selected for ARSOF training after completing the assessment and selection course

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Training Outcome		Notes/Comments
17	70	Survival, Evasion, Resistance, Escape (SERE) Trainees	2017	Pass-Fail Selection	Team Orientation	(-.04)	Correlations unavailable for null results under .09
					Tolerance	(-.02)	
					Achievement	(.12)	
					Adjustment	(.12)	
					Dominance	(.09)	
					Optimism	(.12)	
					Physical Conditioning	(.13)	
Selflessness/Generosity	(.10)						
17	445	Combat Control Team (CCT)	2017	Pass-Fail Selection	Dominance	(.13)	Correlations unavailable for null results under .09
					Even Tempered	(-.17)	
					Non-Delinquency	(-.14)	
17	81	SOWT	2017	Pass-Fail Selection	Physical Conditioning	(.09)	
					Physical Conditioning	(.23)	
					Sociability	(.12)	

The validity of TAPAS for predicting grades/job knowledge was examined across 8 studies. The study characteristics and results were as follows:

Table A-3. TAPAS Grades/Job Knowledge Validity

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Grades			Notes/Comments		
					a1	b2	c3			
24	342 ¹ 274 ² 660 ³	U.S. Army Soldiers	2011	WTBD JKT ^a MOS Specific JKT ^b Initial Military Training (IMT) Exam Grade ^c	Achievement	(.04)	(-.04)	(.01)		
					Adjustment	(.12)	(.08)	(.01)		
					Attention Seeking	(-.04)	(-.05)	(.00)		
					Cooperation	(-.06)	(.02)	(.03)		
					Dominance	(.02)	(-.11)	(.02)		
					Even Tempered	(-.11)	(-.04)	(.01)		
					Intellectual Efficiency	(.20)	(.11)	(.11)		
					Non-delinquency	(-.08)	(-.09)	(-.03)		
					Optimism	(.03)	(-.03)	(.01)		
					Order	(-.13)	(-.08)	(.02)		
					Physical Conditioning	(.03)	(.00)	(-.04)		
					Self-Control	(-.12)	(-.07)	(.04)		
					Selflessness/Generosity	(-.17)	(-.18)	(.01)		
					Sociability	(-.03)	(-.07)	(-.09)		
Tolerance	(-.09)	(-.09)	(.01)							
50	781-846	U.S. Army Entry-Level Enlisted Soldiers	2009	MOS specific job knowledge test	Achievement			(.09)		
					Curiosity				(.14)	
					Non-Delinquency				(.08)	
					Dominance				(.03)	
					Even-Temper				(.12)	
					Attention-Seeking				(-.02)	
					Intellectual Efficiency				(.15)	
					Order				(-.01)	
					Physical Conditioning				(-.01)	
					Tolerance				(.00)	
					Cooperation/Trust				(-.05)	
					Optimism				(.14)	
					Achievement				a	b
					Curiosity				(.04)	(.04)
Non-Delinquency				(.08)	(.06)					
Dominance				(.07)	(.08)					

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Grades		Notes/Comments			
54	1,059 – 1,769	IMT Sample			Attention Seeking	(.01)	(.02)			
					Commitment to Serve	(-.05)	(-.06)			
					Cooperation	(-.02)	(-.02)			
					Courage	(.02)	(.06)			
					Dominance	(.02)	(.04)			
					Even Tempered	(.05)	(.05)			
					Intellectual Efficiency	(.18)	(.16)			
					Non-Delinquency	(-.01)	(-.01)			
					Optimism	(.01)	(.01)			
					Order	(-.08)	(-.08)			
					Physical Conditioning	(.00)	(.00)			
					Responsibility	(.05)	(.04)			
					Self-Control	(.01)	(.01)			
					Selflessness/Generosity	(-.04)	(-.04)			
					Situational Awareness	(.05)	(.04)			
					Sociability	(-.10)	(-.08)			
					Team Orientation	(-.04)	(-.02)			
					Tolerance	(-.02)	(-.02)			
							a	b		
							Achievement	(.04)	(.06)	
							Adjustment	(.07)	(.07)	
							Adventure Seeking	(.11)	(.05)	
							Attention Seeking	(.05)	(.05)	
							Commitment to Serve	(-.13)	(-.18)	
		Cooperation	(-.02)	(.01)						
		Courage	(.05)	(.06)						
		Dominance	(.01)	(.03)						
		Even Tempered	(.06)	(.07)						
		Intellectual Efficiency	(.20)	(.19)						
		Non-Delinquency	(.00)	(.00)						
		Optimism	(.01)	(.00)						
		Order	(-.13)	(-.12)						
		Physical Conditioning	(-.02)	(.01)						
		Responsibility	(.26)	(.21)						
		Self-Control	(.03)	(.03)						
		Selflessness/Generosity	(-.08)	(-.06)						

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Grades											Notes/Comments			
					Situational Awareness	Sociability	Team Orientation	Tolerance	a1	a2	b1	b2	c1	c2					
61	No Waiver ¹ (390 – 383) Any Waiver ² (112 – 151) Conduct Waiver ³ (62 – 79) Medical Waiver ⁴ (38 – 47) Other Waiver ⁵ (21 – 48)	U.S. Army Soldiers Army Class	2011	MOS Specific JKT ^a Army Wide JKT ^b AIT Grade ^c														(-.09)	(-.14)
									.03	.24	-.11	.16	.15	.17					
									.08	.19	-.06	.01	.16	.09					
									-.05	.05	.03	.09	-.04	-.01					
61	No Waiver (1,110 – 1,999) Any Waiver (157 – 267) Conduct Waiver (62 – 75) Medical Waiver	U.S. Army Soldiers TOPS IOT&E	2011	MOS Specific JKT ^a Army Wide JKT ^b AIT Grade ^c															
									-.01	.13	.07	.09	.02	.08					
									-.03	-.07	-.03	-.07	.05	-.09					
									-.01	-.08	.04	-.01	.00	-.11					

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Grades					Notes/Comments			
67	73 – 118) Other Waiver (32 – 90)	U.S. Army Soldiers	2010	JKT	Achievement						(.08)		
					Curiosity							(.11)	
					Non-Delinquency							(.05)	
					Dominance							(.05)	
					Even-Temper							(.14)	
					Attention Seeking							(.02)	
					Intellectual Efficiency							(.14)	
					Order							(.00)	
					Physical Conditioning							(-.04)	
					Tolerance							(-.01)	
					Cooperation/Trust							(-.03)	
										a1	b2	c3	
										(.05)	(.01)	(.03)	
										(.08)	(.03)	(.00)	
68	2,100 ¹ 1,751 ² 3,098 ³	U.S. Army Soldiers	2011	WTBD JKT ^a MOS Specific JKT ^b IMT Exam Grade ^c	Attention Seeking						(.03)		
					Cooperation							(-.02)	
					Dominance							(.03)	
					Even Tempered							(.02)	
					Intellectual Efficiency							(.23)	
					Non-delinquency							(-.03)	
					Optimism							(.00)	
					Order							(-.08)	
					Physical Conditioning							(.03)	
					Self-Control							(-.01)	
					Selflessness/Generosity							(-.05)	
					Sociability							(-.07)	
					Tolerance							(-.04)	
										a	b		
					(.05)	(.06)							
					(.06)	(.09)							
					(.03)	(.06)							
72	151,625	U.S. Army Soldiers	2012	MOS Specific JKT ^a	Achievement								
					Adjustment								

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Grades										Notes/Comments					
					11B ^a	11B ^b	68W ^a	68W ^b	31B ^a	31B ^b	88W ^a	88W ^b								
72	8,739 ¹ 3,292 ² 2,307 ³ 2,872 ⁴	U.S. Army Soldiers Infantry (1B) ¹ Combat Medics (68W) ² Military Police (31B) ³ Motor Transport Operators (88M) ⁴	2012	MOS Specific JKT ^a Army-Wide JKT ^b	Cooperation	(.06)	(.07)	(.00)	(.01)	(.05)	(.07)	88W ^a	(-.02)	(-.03)						
					Dominance	(.05)	(.09)	(.03)	(.05)	(.10)	(.08)	(.07)	(.00)	(.06)						
					Even-Tempered	(.06)	(.07)	(-.04)	(-.01)	(.02)	(.03)	(.08)	(.03)	(.05)						
					Intellectual Efficiency	(-.01)	(-.04)	(.01)	(.00)	(-.01)	(-.01)	(-.02)	(.20)	(.24)						
					Non-Delinquency	(.01)	(.04)	(-.01)	(.03)	(.00)	(.01)	(.01)	(-.02)	(-.08)						
					Order	(.06)	(.07)	(.00)	(.05)	(.06)	(.07)	(.01)	(-.03)	(.01)						
					Physical Conditioning	(.19)	(.22)	(.10)	(.16)	(.24)	(.22)	(.23)	(-.01)	(.00)						
					Self-Control	(.00)	(-.02)	(-.06)	(-.03)	(.03)	(.01)	(-.03)	(-.04)	(-.05)						
					Selflessness/Generosity	(-.06)	(-.07)	(-.05)	(-.06)	(-.12)	(-.04)	(-.12)	(-.08)	(-.06)						
					Sociability	(.01)	(.04)	(-.08)	(-.02)	(.02)	(.04)	(-.11)	(-.02)	(-.03)						
					Tolerance	(.00)	(-.01)	(-.04)	(.04)	(.03)	(.01)	(-.07)	(-.07)	(-.07)						
					Optimism	(.00)	(-.04)	(-.01)	(-.03)	(-.15)	(-.09)	(-.05)	(-.02)	(.01)						
					Achievement	(-.06)	(-.07)	(-.10)	(-.07)	(-.12)	(-.10)	(-.07)	(-.07)	(-.09)						
					Curiosity	(-.04)	(-.03)	(.05)	(.00)	(-.01)	(-.09)	(-.14)	(-.14)	(-.14)						
Non-Delinquency	(.03)	(.03)	(-.03)	(.00)	(-.03)	(-.02)	(-.02)	(-.02)	(.01)											
Dominance																				
Even Temper																				
Intellectual Efficiency																				
Adjustment																				
85	1,205	ROTC Cadets	2011	National Order of Merit List Score ^a GPA ^b	Achievement							a	b	(.24)	(.19)					
					Curiosity												(.12)	(.15)		
					Non-Delinquency													(-.03)	(.10)	
					Dominance													(.14)	(.03)	
					Even Temper													(-.03)	(-.01)	
					Intellectual Efficiency													(.04)	(.05)	
					Adjustment													(-.04)	(-.10)	

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Grades	Notes/Comments
					Physical Conditioning	(.26) (.05)
					Responsibility	(.11) (.12)
					Tolerance	(.05) (.12)
					Trust-Cooperation	(-.15) (-.06)
					Optimism	(.05) (.01)

The validity of TAPAS for predicting attrition was examined across 12 studies. The study characteristics and results were as follows:

Table A-4. TAPAS Attrition Validity

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Attrition Criterion 1		Notes/Comments	
					a	b		
24	361	U.S. Army Soldiers	2011	Attrition Cognitions ^a Attrition at 3-months ^b	Achievement	(-.15)	(.01)	TAPAS had no relationships (> = .1) with attrition at 3-months. NOTE: THERE ARE OTHER DV'S HERE: ALQ, affective commitment, normative commitment, career intentions, reenlistment intentions, army fit, MOS fit, Army civilian comparison
					Adjustment	(-.08)	(.01)	
					Attention Seeking	(.00)	(.00)	
					Cooperation	(-.03)	(-.01)	
					Dominance	(.04)	(-.02)	
					Even Tempered	(-.08)	(-.01)	
					Intellectual Efficiency	(-.02)	(-.01)	
					Non-Deinquency	(.00)	(.00)	
					Optimism	(-.04)	(-.05)	
					Order	(-.03)	(-.02)	
					Physical Conditioning	(-.05)	(-.04)	
					Self-Control	(-.01)	(-.01)	
					Selfnessness/Generosity	(.03)	(.01)	
					Sociability	(.01)	(-.03)	
Tolerance	(-.08)	(.00)						
Can do Composite	(-.10)	(-.02)						
Will do Composite	(-.11)	(-.01)						
50	815-2,395	U.S. Army Entry-level Soldiers	2009	6-month Attrition	Physical Conditioning		(-.10)	
					Achievement		(-.06)	
					Curiosity		(-.04)	
					Non-deinquency		(-.01)	
					Dominance		(.04)	
					Even Tempered		(-.05)	
					Attention Seeking		(.04)	
					Intellectual Efficiency		(-.01)	
					Order		(.00)	
					Tolerance		(-.01)	
					Cooperation		(-.02)	
					Optimism		(-.06)	

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Attrition Criterion 1	Notes/Comments
50	815-2,395	U.S. Army Entry-level Soldiers	2009	Attrition Cognitions	Achievement (.13) Even-Tempered (.11) Cooperation/Trust (-.10) Curiosity (.06) Non-delinquency (.03) Dominance (.05) Attention Seek (-.04) Intellectual Efficiency (.08) Order (-.04) Physical Conditioning (.07) Tolerance (.08) Cooperation (-.10) Optimism (.09)	
54	366-43,959	U.S. Army Soldiers	2017	Retention Cognitions	Commitment to serve (.27) Achievement (.06) Adjustment (.00) Adventure Seeking (.01) Attention Seek (-.02) Cooperation (.00) Courage (.05) Dominance (.06) Even Tempered (.02) Intellectual Efficiency (.01) Non-delinquency (.03) Optimism (.00) Order (.04) Physical Conditioning (-.03) Responsibility (.03) Self-control (.03) Situational Awareness (.06) Sociability (.02) Team Orientation (.04) Tolerance (.05) AFQP (-.12) Can do Composite (-.01)	Sample was also split into Tier 1 (primarily high school diploma) and Tier 2 (primarily non-diploma graduate) soldiers. TAPAS had no relationships (> = .1) with attrition at 6-months, 12-months, and 24-months.

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Attrition Criterion 1				Notes/Comments						
					Will do Composite	a	b	c							
54				6 Month Attrition ^a 12 Month Attrition ^b 24 Month Attrition ^c	Will do Composite				(.02)						
					Achievement	(-.02)	(-.02)	(-.02)	(-.02)						
					Adjustment	(-.01)	(-.01)	(-.01)	(-.01)						
					Adventure Seeking	(-.03)	(-.03)	(-.03)	(.02)						
					Attention Seek	(-.03)	(-.03)	(-.03)	(-.01)						
					Commitment to serve	(.02)	(.02)	(.02)	(.04)						
					Cooperation	(.00)	(.00)	(.00)	(.00)						
					Courage	(.00)	(-.02)	(-.02)	(.01)						
					Dominance	(-.02)	(-.02)	(-.02)	(-.02)						
					Even tempered	(.00)	(.00)	(.00)	(-.01)						
					Intellectual Efficiency	(-.01)	(-.01)	(-.01)	(-.01)						
					Non-delinquency	(.02)	(.01)	(.01)	(.01)						
					Optimism	(.01)	(-.02)	(-.02)	(-.02)						
					Order	(.01)	(.01)	(.01)	(.02)						
					Physical conditioning	(-.06)	(-.06)	(-.06)	(-.08)						
					Responsibility	(.00)	(.00)	(.00)	(-.09)						
					Self-Control	(.00)	(.00)	(.00)	(.00)						
					Selflessness/Generosity	(.03)	(.03)	(.03)	(.04)						
					Situational Awareness	(-.01)	(.00)	(.00)	(-.08)						
					Sociability	(.00)	(.00)	(.00)	(.01)						
Team orientation	(-.03)	(-.03)	(-.03)	(.05)											
Tolerance	(.01)	(.01)	(.01)	(.01)											
57	2,368	U.S. Army recruits	2017	Attrition 24-months	Physical Conditioning				(.10)						
					Achievement				(.06)						
					Non-delinquency				(.02)						
					Dominance				(.05)						
					Even Temper				(.02)						
					Attention Seeking				(-.04)						
					Intellectual Efficiency				(-.02)						
					Order				(-.01)						
					Tolerance				(-.02)						
					Physical Conditioning				(.10)						
					Achievement				(.06)						
					57	2,159	U.S. Army recruits	2017	Attrition 48-months	Physical Conditioning				(.10)	
										Achievement				(.06)	

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Attrition Criterion 1	Notes/Comments					
61	Any 652 Conduct 377 Medical 211 Other 154	U.S. Army Soldiers (Army Class LV)	2011	6-month Attrition No waiver ^a Any waiver ^b Conduct waiver ^c Medical waiver ^d Other waiver ^e	Non-delinquency	(.04)	Sample was separate into groups based upon the type of waiver the soldier received. No relationships found for No waiver group.				
					Dominance	(-.01)					
					Even Tempered	(.02)					
					Attention Seeking	(-.06)					
					Intellectual Efficiency	(-.02)					
					Order	(-.02)					
					Tolerance	(-.01)					
					Trust	(-.03)					
					Achievement	(-.06)		(-.03)	(.01)	(-.10)	(-.08)
					Non-delinquency	(-.01)		(-.01)	(.05)	(.00)	(-.05)
Physical Conditioning	(-.09)	(-.13)	(-.15)	(-.02)	(-.16)						
Can do Composite	(-.06)	(-.06)	(-.03)	(-.07)	(-.02)						
Will do Composite	(-.09)	(-.10)	(-.11)	(.01)	(-.11)						
61	Any 521 Conduct 203 Medical 224 Other 135	U.S. Army Soldiers (TOPS IOT&E)	2011	6-month Attrition No waiver ^a Any waiver ^b Conduct waiver ^c Medical waiver ^d Other waiver ^e	a	b	c	d	e		
					Achievement	(.00)	(-.03)	(-.12)	(-.06)	(.03)	
					Non-delinquency	(.01)	(.12)	(.08)	(.12)	(.14)	
					Physical Conditioning	(-.07)	(-.09)	(-.15)	(-.11)	(-.02)	
					Can do Composite	(-.02)	(.03)	(-.07)	(.07)	(.03)	
					Will do Composite	(-.01)	(-.01)	(-.06)	(-.02)	(.03)	
					Even-Tempered				(-.10)		
					Physical Conditioning				(-.10)		
					Optimism				(-.10)		
					Achievement				(-.04)		
Curiosity				(-.04)							
Non-delinquency				(.01)							
Dominance				(.03)							
Attention Seek				(.04)							
Intellectual Efficiency				(-.03)							
Order				(-.01)							
Tolerance				(-.02)							
67	505-1,696	U.S. Army Soldiers	2010	6-month Attrition	Even-Tempered	(-.10)					
					Physical Conditioning	(-.10)					
					Optimism	(-.10)					
					Achievement	(-.04)					
					Curiosity	(-.04)					
					Non-delinquency	(.01)					
					Dominance	(.03)					
					Attention Seek	(.04)					
					Intellectual Efficiency	(-.03)					
					Order	(-.01)					
Tolerance	(-.02)										

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Attrition Criterion 1	Notes/Comments
68	8,638	U.S. Army Soldiers	2011	3-month Attrition	Cooperation	(-.02)
					Achievement	(.00)
68	3,810	U.S. Army Soldiers	2011	6-month Attrition	Adjustment	(-.02)
					Attention Seek	(-.01)
					Cooperation	(-.01)
					Dominance	(.00)
					Even Tempered	(-.01)
					Intellectual Efficiency	(-.01)
					Non-delinquency	(.01)
					Optimism	(-.03)
					Order	(.02)
					Physical Conditioning	(-.05)
					Self-Control	(.00)
					Selflessness/Generosity	(.04)
					Sociability	(.00)
					Tolerance	(.00)
					Can do Composite	(-.01)
					Will do Composite	(-.01)
					Achievement	(.00)
					Adjustment	(-.01)
					Attention Seeking	(-.04)
					Cooperation	(.00)
Dominance	(-.02)					
Even Tempered	(.00)					
Intellectual Efficiency	(-.01)					
Non-delinquency	(.02)					
Optimism	(-.04)					
Order	(.03)					
Physical Conditioning	(-.07)					
Self-Control	(.01)					
Selflessness/Generosity	(.02)					
Sociability	(-.02)					
Tolerance	(.02)					
Can do Composite	(-.02)					
Will do Composite	(-.01)					

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Attrition Criterion 1	Notes/Comments																																																																																
70	15,082	U.S. Army recruits	2014	6-month Attrition	<p>Physical Conditioning</p> <p>Includes results by type of attrition – overall, performance, medical, failure to meet standard, behavior</p> <p>Odds ratios. TAPAS scorers in the lowest physical conditioning quintile had the highest rates of attrition (12.7%) and high scorers had the lowest rates of attrition (6.3%). There was a significant linear trend for decreasing risk of attrition with increasing TAPAS physical conditioning score (Cochran-Armitage test $p < .0001$).</p> <p>The most common types of attrition were performance (including physical fitness testing), failure to meet standards, and medical. More than half of attrition was performance-related (52%), with a trend for decreasing risk of attrition with increasing physical conditioning score (Cochran-Armitage test $p < .0001$).</p>																																																																																	
72	151,625 9,231 (11B) 2,386 (31B) 3,425 (68W) 3,037 (88M)	U.S. Army Soldiers	2012	6-month Attrition 9,231 (11B) ^a 2,386 (31B) ^b 3,425 (68W) ^c 3,037 (88M) ^d	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>Physical Conditioning</td> <td>(-.12)</td> <td>(-.04)</td> <td>(-.02)</td> <td>(.01)</td> </tr> <tr> <td>Achievement</td> <td>(-.02)</td> <td>(-.06)</td> <td>(-.06)</td> <td>(-.01)</td> </tr> <tr> <td>Adjustment</td> <td>(-.01)</td> <td>(.08)</td> <td>(.01)</td> <td>(-.04)</td> </tr> <tr> <td>Attention Seek</td> <td>(.04)</td> <td>(.07)</td> <td>(.04)</td> <td>(.06)</td> </tr> <tr> <td>Cooperation</td> <td>(.02)</td> <td>(.06)</td> <td>(-.02)</td> <td>(-.04)</td> </tr> <tr> <td>Dominance</td> <td>(-.04)</td> <td>(.02)</td> <td>(-.07)</td> <td>(-.02)</td> </tr> <tr> <td>Even tempered</td> <td>(.01)</td> <td>(-.01)</td> <td>(-.02)</td> <td>(.03)</td> </tr> <tr> <td>Intellectual Efficiency</td> <td>(.00)</td> <td>(.04)</td> <td>(.00)</td> <td>(.09)</td> </tr> <tr> <td>Non-delinquency</td> <td>(.03)</td> <td>(.04)</td> <td>(-.01)</td> <td>(.08)</td> </tr> <tr> <td>Order</td> <td>(.04)</td> <td>(-.02)</td> <td>(.00)</td> <td>(.07)</td> </tr> <tr> <td>Self-control</td> <td>(.03)</td> <td>(.07)</td> <td>(.03)</td> <td>(.01)</td> </tr> <tr> <td>Selfnessness/Generosity</td> <td>(.04)</td> <td>(-.02)</td> <td>(.00)</td> <td>(-.01)</td> </tr> <tr> <td>Sociability</td> <td>(.02)</td> <td>(.10)</td> <td>(.02)</td> <td>(.06)</td> </tr> <tr> <td>Tolerance</td> <td>(.03)</td> <td>(.00)</td> <td>(-.03)</td> <td>(-.06)</td> </tr> <tr> <td>Optimism</td> <td>(-.02)</td> <td>(-.04)</td> <td>(-.02)</td> <td>(.01)</td> </tr> </tbody> </table>		a	b	c	d	Physical Conditioning	(-.12)	(-.04)	(-.02)	(.01)	Achievement	(-.02)	(-.06)	(-.06)	(-.01)	Adjustment	(-.01)	(.08)	(.01)	(-.04)	Attention Seek	(.04)	(.07)	(.04)	(.06)	Cooperation	(.02)	(.06)	(-.02)	(-.04)	Dominance	(-.04)	(.02)	(-.07)	(-.02)	Even tempered	(.01)	(-.01)	(-.02)	(.03)	Intellectual Efficiency	(.00)	(.04)	(.00)	(.09)	Non-delinquency	(.03)	(.04)	(-.01)	(.08)	Order	(.04)	(-.02)	(.00)	(.07)	Self-control	(.03)	(.07)	(.03)	(.01)	Selfnessness/Generosity	(.04)	(-.02)	(.00)	(-.01)	Sociability	(.02)	(.10)	(.02)	(.06)	Tolerance	(.03)	(.00)	(-.03)	(-.06)	Optimism	(-.02)	(-.04)	(-.02)	(.01)	From this sample, relationships between TAPAS scales and various criteria in the four largest MOS: Infantry (11B), Combat Medics (68W), Military Police (31B), and Motor Transport Operators (88M). Correlations and logistic regression unstandardized coefficients reported.
	a	b	c	d																																																																																		
Physical Conditioning	(-.12)	(-.04)	(-.02)	(.01)																																																																																		
Achievement	(-.02)	(-.06)	(-.06)	(-.01)																																																																																		
Adjustment	(-.01)	(.08)	(.01)	(-.04)																																																																																		
Attention Seek	(.04)	(.07)	(.04)	(.06)																																																																																		
Cooperation	(.02)	(.06)	(-.02)	(-.04)																																																																																		
Dominance	(-.04)	(.02)	(-.07)	(-.02)																																																																																		
Even tempered	(.01)	(-.01)	(-.02)	(.03)																																																																																		
Intellectual Efficiency	(.00)	(.04)	(.00)	(.09)																																																																																		
Non-delinquency	(.03)	(.04)	(-.01)	(.08)																																																																																		
Order	(.04)	(-.02)	(.00)	(.07)																																																																																		
Self-control	(.03)	(.07)	(.03)	(.01)																																																																																		
Selfnessness/Generosity	(.04)	(-.02)	(.00)	(-.01)																																																																																		
Sociability	(.02)	(.10)	(.02)	(.06)																																																																																		
Tolerance	(.03)	(.00)	(-.03)	(-.06)																																																																																		
Optimism	(-.02)	(-.04)	(-.02)	(.01)																																																																																		
79	4,608	U.S. Army applicants	2017	Attrition Cognitions ^e	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> </tr> </thead> <tbody> <tr> <td>Achievement</td> <td></td> <td>(-.13)</td> </tr> </tbody> </table>		a	b	Achievement		(-.13)	Study had a focus on aberrant responding.																																																																										
	a	b																																																																																				
Achievement		(-.13)																																																																																				

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Attrition Criterion 1	Notes/Comments	
84				6 month attrition ^b	Adjustment	(-.02) (-.02)	There are other correlations available. Reported here statistics for the clean sample (aberrant responses removed). Differences between correlations for total and clean samples is between .00 and .01. TAPAS had no relationships (> = .1) with attrition at 6-months.
					Attention Seeking	(-.04) (-.03)	
					Cooperation	(-.02) (-.01)	
					Dominance	(-.09) (-.01)	
					Even Tempered	(-.04) (-.01)	
					Intellectual Efficiency	(-.05) (-.01)	
					Non-delinquency	(-.03) (.01)	
					Order	(.01) (.02)	
					Physical Conditioning	(-.05) (-.07)	
					Self-Control	(-.03) (.00)	
					Selfnessness/Generosity	(-.05) (.03)	
					Sociability	(.00) (.00)	
					Tolerance	(-.04) (.01)	
					Optimism	(-.07) (-.02)	
					86	55,590	
Int Eff (-.09; -.01)							
				18-month Attrition	N/A	Logistic Regression. TAPAS as a whole was a significant predictor of 18-month attrition.	

The validity of TAPAS for predicting fitness was examined across 9 studies. The study characteristics and results were as follows:

Table A-5. TAPAS Fitness Validity

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Fitness	Notes/Comments
24	357	U.S. Army Soldiers	2011	Army Physical Fitness Test (APFT)	Achievement	(.05)
					Adjustment	(.03)
					Attention Seeking	(.00)
					Cooperation	(.06)
					Dominance	(.08)
					Even Tempered	(-.10)
					Intellectual Efficiency	(.00)
					Non-delinquency	(.08)
					Optimism	(.03)
					Order	(.03)
					Physical Conditioning	(.27)
					Self-Control	(.07)
					Selflessness/Generosity	(.06)
					Sociability	(.07)
Tolerance	(.09)					
50	781-846	U.S. Army Soldiers	2009	APFT	Achievement	(.12)
					Curiosity	(.06)
					Non-Delinquency	(-.09)
					Dominance	(.04)
					Even-Temper	(-.02)
					Attention Seeking	(.01)
					Intellectual Efficiency	(.05)
					Order	(.05)
					Physical Conditioning	(.30)
					Tolerance	(.01)
					Cooperation/Trust	(-.12)
					Optimism	(.01)
					Achievement	(.09)
					Adjustment	(.01)
Adventure Seeking	(.08)					
Attention Seeking	(.08)					
54	366-208,822	U.S. Army Soldiers IMT	2017	APFT	Achievement	(.09)
					Adjustment	(.01)

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Fitness	Notes/Comments
54	120-1,709	U.S. Army Soldiers In-unit	2017	APFT	Commitment to Serve (-.05) Cooperation (-.02) Courage (.03) Dominance (.12) Even Tempered (-.05) Intellectual Efficiency (.04) Non-Delinquency (-.05) Optimism (.04) Order (.03) Physical Conditioning (.27) Responsibility (.00) Self-Control (-.01) Selflessness/Generosity (-.01) Situational Awareness (.00) Sociability (.03) Team Orientation (.02) Tolerance (.00) Achievement (.06) Adjustment (.01) Adventure Seeking (.10) Attention Seeking (.04) Commitment to Serve (.12) Cooperation (-.04) Courage (.01) Dominance (.11) Even Tempered (-.02) Intellectual Efficiency (.04) Non-Delinquency (-.06) Optimism (.05) Order (.04) Physical Conditioning (.27) Responsibility (.02) Self-Control (.02) Selflessness/Generosity (-.04) Situational Awareness (.06)	

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Fitness		Notes/Comments	
61	N = 23 – 414	U.S. Army Soldiers	2011	End of Training APFT No Waiver ^a Any Waiver ^b	Sociability	(.05)	Only three TAPAS scales were examined	
					Team Orientation	(.11)		
					Tolerance	(-.01)		
61	N = 31 – 316	U.S. Army Soldiers Army class	2011	In-unit APFT No Waiver ^a Any Waiver ^b	a	b	Only three TAPAS scales were examined	
					Achievement	(.11)		(.12)
					Non-delinquency	(-.11)		(-.15)
61	N = 41 – 1,425	U.S. Army Soldiers	2011	End of Training APFT No Waiver ^a Any Waiver ^b	Physical Conditioning	(.23)	Only three TAPAS scales were examined	
					Achievement	(.27)		
					Non-delinquency	(-.09)		
61	N = 41 – 1,425	U.S. Army Soldiers	2011	End of Training APFT No Waiver ^a Any Waiver ^b	a	b	Only three TAPAS scales were examined	
					Achievement	(.09)		(.09)
					Non-delinquency	(-.09)		(-.12)
67	505-1,696	U.S. Army Soldiers	2010	APFT	Physical Conditioning	(.26)		
					Achievement	(.12)		
					Curiosity	(.03)		
					Non-Delinquency	(-.07)		
					Dominance	(-.03)		
					Even-Temper	(-.05)		
					Attention-Seeking	(-.03)		
					Intellectual Efficiency	(.00)		
					Order	(.08)		
					Physical Conditioning	(.24)		
					Tolerance	(-.04)		
					Cooperation/Trust	(-.06)		
					Optimism	(-.02)		
					Achievement	(.08)		
					Adjustment	(.01)		
Attention Seeking	(.03)							
Cooperation	(-.02)							
Dominance	(.13)							
Even Tempered	(-.08)							
Intellectual Efficiency	(.04)							
Non-delinquency	(-.08)							
Optimism	(.02)							
68	2,128	U.S. Army Soldiers	2011	APFT				

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Fitness	Notes/Comments
72	151,625	U.S. Army Soldiers	2012	APFT	Order	(.03)
					Physical Conditioning	(.27)
					Self-Control	(-.02)
					Selfnessness/Generosity	(.01)
					Sociability	(.02)
					Tolerance	(.02)
					Achievement	(.09)
					Adjustment	(.01)
					Cooperation	(-.01)
					Dominance	(.14)
					Even Tempered	(-.07)
					Attention Seeking	(.07)
					Intellectual Efficiency	(.04)
					Non-delinquency	(-.05)
Order	(.02)					
Physical Conditioning	(.28)					
Self-Control	(-.02)					
Selfnessness/Generosity	(.00)					
Sociability	(.04)					
Tolerance	(.02)					
Optimism	(.05)					
72	8,739 ¹ 3,292 ² 2,307 ³ 2,872 ⁴	U.S. Army Soldiers Infantry (11B) ¹ Combat Medics (68W) ² Military Police (31B) ³ Motor Transport Operators (88M) ⁴	2012	APFT	11B ¹	(.10)
					68W ²	(.07)
					31B ³	(.03)
					88M ⁴	(.03)
					Achievement	(.01)
					Adjustment	(.00)
					Attention Seeking	(.02)
					Cooperation	(.03)
					Dominance	(.14)
					Even Tempered	(-.01)
					Intellectual Efficiency	(.01)
					Non-delinquency	(-.07)
					Order	(.05)
					Physical Conditioning	(.29)
Self-Control	(-.04)					
Selfnessness/Generosity	(.01)					
Sociability	(.02)					
Tolerance	(.03)					

Study ID	N	Job	Date	Criterion	Predictive TAPAS Scales for Fitness				Notes/Comments	
					Optimism	(.02)	(.05)	(.10)		
79	4,713	U.S. Army Soldiers	2014	APFT	Achievement			(.09)	(.09)	
					Adjustment			(.00)	(.00)	
					Cooperation			(-.01)	(-.01)	
					Dominance			(.14)	(.14)	
					Even Tempered			(-.07)	(-.07)	
					Attention Seeking			(.07)	(.07)	
					Intellectual Efficiency			(.05)	(.05)	
					Non-delinquency			(-.05)	(-.05)	
					Order			(.01)	(.01)	
					Physical Conditioning			(.27)	(.27)	
					Self-Control			(-.02)	(-.02)	
					Selflessness/Generosity			(.00)	(.00)	
					Sociability			(.03)	(.03)	
					Tolerance			(.02)	(.02)	
Optimism			(.06)	(.06)						
85	1,205	ROTC Cadets	2011	LDAC APFT ^a Fall Sem APFT ^b	Achievement		a	(.15)	(.13)	
					Curiosity			(.02)	(-.03)	
					Non-Delinquency			(-.13)	(-.09)	
					Dominance			(.06)	(.07)	
					Even Temper			(-.03)	(-.03)	
					Intellectual Efficiency			(-.07)	(-.09)	
					Adjustment			(.05)	(.05)	
					Physical Conditioning			(.44)	(.36)	
					Responsibility			(.03)	(.04)	
					Tolerance			(-.02)	(.00)	
					Trust-Cooperation			(-.14)	(-.13)	
					Optimism			(.04)	(.05)	

The validity of TAPAS for predicting training performance was examined across 6 studies. The validation samples included Army soldiers and a variety of trainees for various military jobs. The study characteristics and results were as follows:

Table A-6. TAPAS Training Performance Validity

ID	N	Job	Date	Criterion	Predictive TAPAS Scales		Notes/Comments	
					a	b		
24	53,964	Army soldiers	Not reported	Training Achievement (ALQ) ^a Training Failure (ALQ) ^b	Attention Seeking	(.15)	(-.15)	Can do and will do composites were created. Both were correlated .07 with training achievement and -.08 with training failure.
					Dominance	(.15)	(-.17)	
					Order	(.11)	(-.11)	
					Physical Conditioning	(.14)	(-.05)	
					Sociability	(.11)	(.04)	
					Achievement	(.10)	(-.08)	
					Adjustment	(.09)	(.05)	
					Cooperation	(-.04)	(.07)	
					Even Tempered	(.00)	(-.07)	
					Selfness/Generosity	(-.07)	(.04)	
					Intellectual Efficient	(-.01)	(-.10)	
					Non delinquency	(.08)	(.00)	
					Optimism	(.04)	(.07)	
					Self-Control	(-.03)	(.00)	
					Tolerance	(.01)	(.09)	
					75	Varies by criteria	Air Traffic Control Specialist trainees	
Tolerance	(-.19)	(-.09)						
Dominance	(.03)	(-.01)						
Excitement Seeking	(-.01)	(-.02)						
Consideration	(-.03)	(-.07)						
Cooperation	(-.05)	(-.06)						
Industriousness	(.03)	(.00)						
Order	(-.04)	(-.04)						
Self-Control	(-.06)	(-.02)						
Responsibility	(.02)	(-.03)						
Virtue	(-.04)	(-.05)						
Traditionalism	(-.01)	(-.13)						
Adjustment	(.03)	(.02)						
Even-Tempered	(-.03)	(.01)						

ID	N	Job	Date	Criterion	Predictive TAPAS Scales				Notes/Comments		
61	Varies by criteria	Army Soldiers	2011	No Waiver ^a Any Waiver ^b Conduct Waiver ^c Medical Waiver ^d Other Waiver ^e							
61	Varies by criteria	Army Soldiers	2011	Advanced Individual Training Grade Army Class LV (N = 380) No Waiver ^a Any Waiver ^b						Incremental Validity over AFQT. Composites examined for Criterion 1: Can do composite (.04) Will do composite (.03). Composites examined for Criterion 2: Will do Composite (.01)	
61	Varies by criteria	Army Soldiers	2011	Advanced Individual Training Grade TOPS IOT&E (N = 1999) No Waiver ^a Any Waiver ^b						Incremental validity over AFQT. Composites examined for Criterion 1: Can do Composite (.06), Will do Composite (.09). Composite criterion examined for Criterion 2: Can do Composite (.01)	
61	Varies by criteria	Army Soldiers	2011	IMT Graduation Status Army Class LV (N = 1622) No Waiver ^a Any Waiver ^b						Incremental validity over AFQT. Composites examined for Criterion 1: Can do Composite (.06), Will do Composite (.09). Composite criterion examined for Criterion 2: Can do Composite (.01)	
61	Varies by criteria	Army Soldiers	2011	IMT Graduation without failure Status TOPS IOT&E (N = 3459) No Waiver ^a Any Waiver ^b						Incremental validity over AFQT. Composites examined for Criterion 1: Can do Composite (.06), Will do Composite (.09). Composite criterion examined for Criterion 2: Can do Composite (.01)	
72	151,625	Army Soldiers Army Wide Sample	NA	Training Achievement ^a Training Failure ^b						Incremental validity over AFQT. Composites examined for Criterion 1: Can do Composite (.06), Will do Composite (.09). Composite criterion examined for Criterion 2: Can do Composite (.01)	

ID	N	Job	Date	Criterion	Predictive TAPAS Scales	Notes/Comments
					Attention Seeking (.04) (-.05) Selflessness/Generosity (-.01) (.05) Int Efficiency (-.02) (-.08) Non delinquency (-.01) (.02) Order (.04) (.02) Self-Control (.01) (.00) Sociability (.03) (-.02) Tolerance (.00) (.08) Optimism (.02) (0.04) Physical Conditioning (.13) (-.16)	
78	585	Military soldiers	2014	Average technical training exam scores	TAPAS-95s showed .10 incremental validity when added to AFQT	

The validity of TAPAS for predicting Counterproductive Work Behaviors (CWBs) examined across 5 studies. The validation samples included Air Force Recruits, Military Police, Combat Medics, Motor Transport Operators, and Military Soldiers. The study characteristics and results were as follows:

Table A-7. TAPAS Counterproductive Work Behaviors Validity

ID	N	Job	Date	Criterion	Predictive TAPAS Scales for CWB 1		Notes/Comments
22	1,341	Air Force Recruits	2018	Unethical Decision Making	Openness to Experience	(-.21)	
					Intellectual Efficiency	(-.16)	
					Tolerance	(-.17)	
					Conscientiousness	(-.36)	
					Achievement	(-.25)	
					Non-Delinquency	(-.30)	
					Order	(-.15)	
					Self-Control	(-.23)	
					Extroversion	(-.01)	
					Dominance	(-.06)	
					Attention-Seeking	(.02)	
					Physical Conditioning	(.08)	
					Sociability	(-.03)	
					Agreeableness	(-.24)	
Cooperation	(-.16)						
24		U.S. Army Soldiers	2011	Disciplinary Incidents (N = 176)	Selflessness/Generosity	(-.23)	
					Emotional Stability	(-.17)	
					Adjustment	(-.06)	
					Even-Tempered	(-.19)	
					Optimism	(-.10)	
					Achievement	(-.21)	
					Adjustment	(-.08)	
					Attention Seeking	(.05)	
					Cooperation	(.03)	
					Dominance	(-.03)	
Even Tempered	(-.04)						
Selflessness/Generosity	(-.04)						
Intellectual Efficiency	(.00)						
Non-delinquency	(-.09)						

ID	N	Job	Date	Criterion	Predictive TAPAS Scales for CWB 1				Notes/Comments		
					a	b	c	d			
68	98,331	Soldiers	2011	Disciplinary Incidents (N=996)	Optimism					(-.06)	
					Order						(-.01)
					Physical Conditioning						(-.10)
					Self-Control						(.07)
					Sociability						(.04)
					Tolerance						(-.05)
					Achievement						(-.10)
					Adjustment						(-.02)
					Attention Seeking						(-.03)
					Cooperation						(.01)
					Dominance						(-.04)
					Even Tempered						(.03)
					Selflessness/Generosity						(-.06)
					Intellectual Efficiency						(-.02)
Non-delinquency						(-.01)					
72	151,625	(11B) ^a Military Police (31B) ^b Combat Medics (68W) ^c Motor Transport Operators (88M) ^d	2012	Disciplinary Incidents	Optimism					(-.01)	
					Order						(-.01)
					Physical Conditioning						(-.06)
					Self-Control						(.01)
					Sociability						(.02)
					Tolerance						(-.02)
					Achievement						(-.07)
					Adjustment						(.15)
					Cooperation						(-.04)
					Dominance						(-.01)
					Even Tempered						(-.09)
					Attention Seeking						(-.13)
					Selflessness/Generosity						(.06)
					Intellectual Efficiency						(-.04)
Non-delinquency						(-.03)					
Order						(-.10)					
Physical Conditioning						(.06)					
Self-Control						(-.09)					
Sociability						(.00)					
Tolerance						(.03)					
						(.02)	(.00)	(.00)	(-.06)		

ID	N	Job	Date	Criterion	Predictive TAPAS Scales for CWB 1	Notes/Comments
78	523	Military Soldiers	2014	# of Disciplinary Incidents	Optimism TAPAS-95s showed .16 incremental validity over AFQT	(-.02) (-.07) (.05) (-.02)

The validity of the NCAPS for predicting various outcomes was examined across 5 studies. The validation samples included Students, Navy Recruits, and Navy Enlisted Personnel. The study characteristics were as follow.

Table A-8. NCAPS Validity

ID	N	Job	Date	Criterion	NCAPS Scales										Notes/Comments														
					a	b	c	d	e	f	g	h	i																
1	65-131	Students	2006	ACT ^a																									
				University GPA ^b																									
				High School GPA ^c																									
				Class Grades ^d																									
3	1315	Navy Recruits	2010	Supervisor Ratings of Cooperation ^a																									
				Task Performance ^b																									
				Adaptability ^c																									
				Initiative ^d																									
				Knowledge and Support of Unit ^e																									
				Command ^e																									
				Integrity ^f																									
				Problem Solving ^g																									
				Integrity ^h																									
				Communicating ⁱ																									
5	195 for peer ratings or 85 for supervisory ratings	Navy Enlisted Personnel	2006	Composites of Peer Ratings ^a and Supervisor Ratings ^b of																									
				Cooperating/Working Well with Others,																									
				Task Proficiency and Productivity,																									
				Adaptability/Flexibility, Initiative and Self Development,																									
				Knowledge/Support of Unit/Command Objectives, Problem-Solving and																									
				Adaptability/Flexibility																									
				Attention to Detail																									
				Achievement																									
				Dependability																									
				Dutifulness																									
Social Orientation																													
Self-Reliance																													

ID	N	Job	Date	Criterion	NCAPS Scales											Notes/Comments											
					a	b	c	d	e	f	g	h	i	j													
6	195	Navy Enlisted Personnel	2006	Decision-Making, Integrity/Honesty, Work Ethic.	Stress Tolerance												.21*	.18*									
					Vigilance															.17*	.13						
					Willingness to Learn																.07	.19*					
6	195	Navy Enlisted Personnel	2006	Peer Ratings Cooperating/Working Well with Others ^a , Task Proficiency and Productivity ^b , Adaptability/Flexibility ^c , Initiative and Self Development ^d , Knowledge/Support of Unit/Command Objectives ^e , Problem-Solving and Decision-Making ^f , Integrity/Honesty ^g , Work Ethic ^h , Communicating Effectively ⁱ , and Overall Potential (Global Rating) ^j	ADF	.12	.12	.12	.09	.08	.07	.09	.00	.16*	.11												
					ADL	.24*	.26*	.16*	.19*	.17*	.12	.18*	.16*	.25*	.25*	.28*											
					AV	.24*	.25*	.18*	.26*	.15*	.23*	.16*	.19*	.25*	.25*	.28*											
					DEP	.25*	.19*	.14*	.17*	.10	.08	.16*	.14*	.24*	.17*												
					DUT	.15*	.19*	.04	.13	.04	.08	.14*	.13	.13	.12												
					SO	.09	.12	.14*	.10	.15*	.08	.15*	.02	.21*	.11												
					SRL	.00	.05	-.02	.08	-.04	.12	-.01	.01	.03	.11												
					ST	.27*	.20*	.20*	.15*	.08	.14*	.16*	.09	.21*	.17*												
					VIG	.19*	.17*	.12	.14*	.08	.11	.14*	.06	.19*	.18*												
					WTL	.08	.06	.00	.09	.11	.06	.03	-.02	.11	.05												
					85				Supervisor Ratings Cooperating/Working Well with Others ^a , Task Proficiency and Productivity ^b , Adaptability/Flexibility ^c , Initiative and Self Development ^d , Knowledge/Support	a	b	c	d	e	f	g	h	i	j								
										ADF	.08	.16	.14	.05	.12	.07	.00	.01	.09	.01							
										ADL	.20*	.16	.06	.21*	.08	.10	.13	.14	.06	.11							
										AV	.32*	.34*	.26*	.32*	.23*	.30*	.24*	.26*	.21*	.19*							
DEP	.27*	.20*	.16	.25*						.03	.17	.17	.28*	.03	.19*												
DUT	.12	.12	-.04	.19*						-.02	.06	.08	.13	-.03	.04												

ID	N	Job	Date	Criterion	NCAPS Scales											Notes/Comments												
					SO	SRL	ST	VIG	WTL	a	b	c	d	e	f		g	h	i	j								
13	Sample 1: 11-1144	Navy Enlisted Personnel	2008	of Unit/Command Objectives ^e ,	.28*	.18*	.17	.21*	.12	.24*	.06	.13	.20*															
				Problem-Solving and Decision-Making ^f ,	-.04	.13	-.03	.16	.08	-.11	.12	.04	-.03															
				Integrity/Honesty ^g , Work Ethic ^h ,	.20*	.26*	.05	.23*	.15	.01	.16	.07	.07															
				Communicating Effectively ⁱ , and Overall Potential (Global Rating) ^j	.13	.21*	.13	.12	.09	-.06	.07	.07	.02															
				Supervisor Ratings Cooperating/Working Well with Others ^a ,	.06	.14	.19*	.21*	.24*	.02	.03	.27*	.11															
				Task Proficiency and Productivity ^b ,																								
				Adaptability/Flexibility ^c , Initiative and Self Development ^d ,																								
				Knowledge/Support of Unit/Command Objectives ^e ,	.41*	.42*	.33*	.16*	.14*	.65*	.15*	.44*	.51*															
				Problem-Solving and Decision-Making ^f ,	.05	-.02	.25*	-.40*	-.22*	.03	.22*	.02	.05	.00														
				Integrity/Honesty ^g , Work Ethic ^h ,	.01	.02	.03	.02	.02	-.01	.03	.04	.02															
				Communicating Effectively ⁱ , and Overall Performance Composite ^j	-.03	-.02	-.03	-.01	-.01	-.02	-.03	.02	-.02	.01	.01	.00	.00											
				Supervisor Ratings Cooperating/Working Well with Others ^a ,	.02	.07*	.05	.08*	.04	.05	.03	.07*	.06*															
				Task Proficiency and Productivity ^b ,																								
Adaptability/Flexibility ^c , Initiative and Self Development ^d ,																												
Knowledge/Support																												

ID	N	Job	Date	Criterion	NCAPS Scales											Notes/Comments
				of Unit/Command	PER	-.04	.10	.13	.09	.06	.15*	.09	-.01	.10	.10	
				Objectives ^e ,	SC	.06	.11	.17*	.09	.09	.08	.12	.04	.02	.12	
				Problem-Solving and	SO	.13	.08	.06	.03	.20*	.11	.14*	.00	.23*	.15*	
				Decision-Making ^f ,	SRL	-.04	.13	.09	.09	-.04	.10	.03	.01	-.03	.05	
				Integrity/Honesty ^g ,	ST	.16*	.12	.19*	.09	.04	.09	.10	-.03	.03	.12	
				Work Ethic ^h ,	VIG	.10	.21*	.05	.23*	.22*	.12	.19*	.08	.09	.20*	
				Communicating	WTL	.00	.09	-.01	.11	.13	.01	.12	.00	.07	.08	
				Effectively ⁱ , and												
				Overall Performance												
				Composite ^j												
				Supervisor Ratings		a	b	c	d	e	f	g	h	i	j	
				Cooperating/Working	ADF	.29	.29	.28	.32	.44*	.33	.29	.26	.40*	.37*	
				Well with Others ^a ,	ADL	.00	.22	.11	.11	.01	.33	.11	.47*	.31	.19	
				Task Proficiency and	AV	-.07	.26	.13	.15	.05	.20	-.07	.39*	.24	.16	
				Productivity ^b ,	DEP	.11	.41*	.23	.25	.09	.36*	.10	.40*	.36*	.31	
				Adaptability/Flexibility	DUT	-.03	.11	.08	.11	.18	.14	.04	.24	.34	.13	
				^c , Initiative and Self	LO	-.09	.05	.01	-.10	.20	-.02	-.17	-.02	.13	.00	
				Development ^d ,	PER	-.14	.14	-.10	.02	.20	.05	-.12	.08	.20	.02	
				Knowledge/Support	SC	.28	.58*	.47*	.30	.42*	.44*	.22	.62*	.52*	.52*	
				of Unit/Command	SO	.31	.38	.35*	.16	.16	.18	.28	.38*	.26	.35*	
				Objectives ^e ,	SRL	-.13	-.10	-.12	.09	.00	.09	.00	-.04	.13	-.03	
				Problem-Solving and	ST	.23	.51*	.32	.22	.33	.34	.12	.41*	.34	.38*	
				Decision-Making ^f ,	VIG	.00	.32	.19	.14	-.08	.36*	.16	.47*	.39*	.23	
				Integrity/Honesty ^g ,	WTL	-.26	.00	-.16	-.25	-.16	-.01	-.23	-.08	-.03	-.18	
				Work Ethic ^h ,												
				Communicating												
				Effectively ⁱ , and												
				Overall Performance												
				Composite ^j												

Sample
3: 33

The validity of the SDI domains and facets for predicting various outcomes was examined across 7 studies. The validation samples included USAF personnel and Canadian Forces. The study characteristics were as follows:

Table A-9. SDI Validity

ID	N	Job	Date	Criterion	SDI Scales					Notes/Comments	
					a	b	c	d	e		
25	586	USAF Officers	2016	Final School Grades						Grades .12* .19* .11 .08 .07 -.12* -.21* -.22* -.17* -.13* -.06 -.09 -.03 .13* .19* .21* .10 .05 .16* -.06 .10 -.10 -.01 -.06 .04 .00	
35			2014								

ID		N	Job	Date	Criterion	SDI Scales					Notes/Comments
36	170 a 110 b, c, d, e	USAF Officers	2016	Remotely Piloted Aircraft Flight Screening Graduation ^a Remotely Piloted Aircraft Instrument Qualification Academic Average ^b Remotely Piloted Aircraft Instrument Qualification Daily Flying Average ^c Remotely Piloted Aircraft Instrument Qualification Check Flight Average ^d Remotely Piloted Aircraft Instrument Qualification Total Average ^e	Agreeableness	-05	.02	.01	.12	.09	
					Neuroticism	-.13	-.18	-.15	-.02	-.11	
					Introversion/Extroversion	.02	-.03	-.01	-.03	-.03	
					Conscientiousness	.10	.17	.18	.11	.18	
					Openness	-.05	-.22*	-.10	-.23*	-.23*	
					Machiavellianism	.01	-.07	-.01	-.10	-.08	
					Agreeableness		1a	1b	2a	2b	
					Emotional Stability		.01	-.02	.20*	.16	
					Extroversion		.01	.01	.22*	.29*	
					Conscientiousness		.04	.04	.24*	.29*	
Openness		.01	-.00	.13	.12						
Machiavellianism		-.04	.01	.15	.05						
				.07	.11	.10	.04				
201	USAF Navigators	2016	Presence or absence of stratification statement ¹ Strength of stratification statement ² Direct supervisor ^a Senior rater ^b	Agreeableness	1a	1b	2a	2b			
				Agreeableness	.04	.05	.28*	.18			

ID	N	Job	Date	Criterion	SDI Scales									Notes/Comments											
					Emotional Stability	Extroversion	Conscientiousness	Openness	Machiavellianism	Agreeableness	Neuroticism	Extroversion	Conscientiousness		Openness	Machiavellianism									
37	3,1 40 ^a 1,6 62 ^b	USAF Manned Aircraft Pilots	2016	stratification statement ¹ Strength of stratification statement ² Direct supervisor ^a Senior rater ^b Presence or absence of stratification statement ^a Number of stratifications on first three OPRs ^b	.04	.11	.19	.09																	
					.01	.11	.23*	.01		.06*	.09*														
					.01	.10	.25*	.04		-.05*	-.05														
					-.02	.03	.03	-.14		-.07*	-.08*														
					-.02	-.04	-.13	-.10		.08*	.11*														
										-.00	-.04														
										-.02	-.04														
39	106	Canadian Forces Initial Assessment Phase Candidates	2005	Initial Assessment Phase (IAP) Course final grade ^a Mean composite score of the 15 IAP Supervisors Rating Form (SRF) dimensions ^b SRF item assessing																					

ID	N	Job	Date	Criterion	SDI Scales										Notes/Comments		
					Conscientiousness	.21*	.16*	.13*	.19*	.11	.38*	-.28*					
90	2,2 90	USAF Personnel	2016	Organizational Deviance ^f Interpersonal Deviance ^g Push-ups ^a Sit-ups ^b Run time ^c Overall fitness ^d	a	b	c	d	e	f	g	h	i	j			
					-.10*	-.09*	.10*	---	---	-.10*	-.08*	---	---	---	---	---	
					-.10*	-.08*	.09*	---	---	-.10*	-.08*	---	---	---	---	---	---
					-.10*	-.08*	.09*	---	---	-.10*	.08*	---	---	---	---	---	---
					.11*	.12*	-.09*	---	---	.11*	.12*	-.09*	---	---	---	---	---
					.08*	.11*	-.09*	---	---	.08*	.11*	-.09*	---	---	---	---	---
					.14*	.11*	---	---	---	.14*	.11*	---	---	---	---	---	---
					---	---	---	---	---	---	---	---	---	---	---	---	---
					-.08*	---	---	---	---	-.08*	---	---	---	---	---	---	---
					---	---	---	---	---	---	---	---	---	---	---	---	---
					.06*	---	---	---	---	.06*	---	---	---	---	---	---	---
					---	---	---	---	---	---	---	---	---	---	---	---	---
					-.13	-.07*	.10*	---	---	-.13	-.07*	.10*	---	---	---	---	---
					Conscientiousness	---	---	---	---	---	---	---	---	---	---	---	---
Achievement	---	---	---	---	---	---	---	---	---	---	---	---	---				
91	71	USAF Airmen	1997	Supervisor ratings of Technical Knowledge/Skill ^a , Initiative/Effort ^b , Knowledge of/Adherence to Regulations/Order s ^c , Integrity ^d , Leadership ^e , Military Appearance ^f , Self-Development	a	b	c	d	e	f	g	h	i	j			
					.29*	.39*	.35*	.36*	.40*	.27*	.31*	.26*	.33*	.47*			
					.18	.11	.07	.20	.23	.14	.17	.06	.16	.20			
					.07	.17	.13	.02	.13	.15	.20	-.13	.07	.01			
					-.23	-.24*	-.24*	-.21	-.34*	-.23	-.33*	-.17	-.21	-.24*			

ID	N	Job	Date	Criterion	SDI Scales										Notes/Comments	
				9. Self-Control ^h , Global 1: Technical Proficiency ⁱ , and Global 2: Interpersonal Proficiency ^j	Open	.15	.20	.26*	.27*	.27*	.05	.29*	.22	.04	.35*	

APPENDIX B: STUDY 1 WITHIN-MEASURE INTERCORRELATIONS (TAPAS & SDI)

Table B-1. TAPAS Uncorrected Correlations

TAPAS	Can Do	Pers*	Will Do	Ach	Adj	Att	Coop	Dom	Even	IntE	Non	Opt	Ord	Phys	SC	Selfl	Soc
Persistence*	0.42																
Will Do	0.22	0.54															
Achievement	0.25	0.05	0.60														
Adjustment	0.21	0.14	0.19	0.12													
Attention-Seeking	-0.08	-0.03	0.16	0.08	0.10												
Cooperation	-0.01	-0.01	-0.04	0.05	0.01	-0.13											
Dominance	0.12	0.01	0.47	0.29	0.15	0.27	-0.15										
Even-Tempered	0.24	0.32	0.04	0.09	0.24	-0.01	0.28	-0.03									
Intellectual Efficiency	0.70	0.09	0.22	0.22	0.23	0.07	-0.05	0.23	0.13								
Non-Delinquency	0.06	-0.04	0.07	0.19	-0.02	-0.08	0.21	-0.01	0.15	-0.02							
Optimism	0.08	0.03	0.26	0.07	0.22	0.07	0.11	0.06	0.10	0.08	0.03						
Order	-0.32	-0.47	0.05	0.16	-0.05	-0.05	0.08	0.02	-0.02	0.01	0.10	0.00					
Physical Conditioning	0.06	0.74	0.77	0.17	0.10	0.11	-0.10	0.15	-0.05	0.08	-0.07	0.03	-0.03				
Self-Control	0.06	-0.07	0.03	0.15	0.11	-0.14	0.14	-0.01	0.18	0.09	0.17	0.08	0.21	-0.07			
Selflessness/Generosity	-0.10	-0.04	0.07	0.14	-0.06	0.04	0.16	0.04	0.10	-0.05	0.12	0.04	0.02	-0.02	0.06		
Sociability	-0.34	-0.26	0.17	0.12	0.10	0.40	0.02	0.25	0.05	0.02	-0.02	0.10	-0.02	0.08	-0.07	0.16	
Tolerance	-0.18	-0.05	-0.02	0.03	0.04	0.07	0.07	0.00	0.12	0.07	-0.03	0.06	-0.03	-0.06	0.06	0.16	0.16

Note. All correlations $\geq \pm 0.05$ are significant at $p < 0.05$. N = 2106. Can Do = Can Do Composite, Pers = Persistence Composite, Will Do = Will Do Composite, Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, Selfl = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance.
 *164 scores were missing for the Persistence Composite. This resulted in an N of 1942 for correlations involving this composite.

Table B-2. SDI Domains Uncorrected Correlations

SDI	Agree	Cons	Extro	Neur	Open
Conscientiousness	0.59				
Extroversion	0.44	0.15			
Neuroticism	-0.50	-0.48	-0.27		
Openness	0.30	0.20	0.16	-0.07	
Machiavellianism	-0.34	-0.42	-0.01	0.49	0.01

Note. All correlations $\geq \pm 0.07$ are significant at $p < 0.05$. N = 2106. Agree = Agreeableness, Cons = Conscientiousness, Extro = Extroversion, Neur = Neuroticism, Open = Openness.

Table B-3. SDI Facets Uncorrected Correlations

SDI Facet	Tea	SUP	Res	AS	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel
SUP	-0.41																												
Res	-0.25	0.41																											
AS	0.65	-0.42	-0.20																										
Cre	0.46	-0.35	-0.26	0.50																									
IntT	-0.26	0.20	0.11	-0.19	-0.06																								
Ple	0.52	-0.41	-0.42	0.42	0.31	-0.23																							
Tem	-0.46	0.68	0.36	-0.41	-0.33	0.31	-0.52																						
DL	0.36	-0.41	-0.59	0.39	0.39	0.06	0.33	-0.28																					
Ord	0.38	-0.28	-0.19	0.57	0.27	-0.08	0.33	-0.30	0.31																				
Ref	0.20	0.10	0.19	0.19	0.38	0.04	0.04	0.05	-0.01	0.04																			
Cyn	-0.24	0.35	0.35	-0.24	-0.20	0.39	-0.30	0.37	-0.18	-0.16	0.16																		
Hel	0.50	-0.26	-0.25	0.49	0.41	-0.27	0.52	-0.34	0.27	0.30	0.22	-0.28																	

SDI Facet	Tea	SUP	Res	AS	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel
Wor	-0.22	0.57	0.33	-0.17	-0.16	0.21	-0.26	0.50	-0.21	-0.14	0.22	0.34	-0.12																
Exc	0.13	-0.17	-0.22	0.06	0.12	0.11	0.12	-0.08	0.23	0.04	0.00	-0.02	0.13	-0.11															
Sel	0.58	-0.56	-0.35	0.71	0.42	-0.23	0.48	-0.54	0.41	0.56	-0.01	-0.35	0.47	-0.34	0.08														
Sci	0.17	-0.18	-0.01	0.20	0.39	0.00	0.08	-0.14	0.10	0.05	0.16	-0.16	0.15	-0.15	0.11	0.16													
Env	-0.32	0.46	0.24	-0.34	-0.26	0.43	-0.34	0.58	-0.18	-0.26	-0.01	0.35	-0.29	0.42	0.04	-0.43	-0.04												
Ind	-0.15	0.25	0.39	-0.08	-0.11	0.25	-0.26	0.31	-0.15	-0.05	0.15	0.44	-0.24	0.25	-0.09	-0.21	-0.05	0.26											
Ang	-0.40	0.60	0.29	-0.35	-0.27	0.29	-0.49	0.76	-0.22	-0.26	0.06	0.33	-0.29	0.42	-0.06	-0.46	-0.12	0.46	0.26										
Hig	0.02	-0.03	-0.23	-0.06	0.04	0.09	0.09	-0.01	0.16	-0.04	0.06	-0.04	0.10	-0.04	0.32	-0.05	-0.02	0.04	-0.04	0.02									
Del	0.53	-0.36	-0.17	0.72	0.48	-0.22	0.37	-0.40	0.28	0.46	0.28	-0.20	0.44	-0.10	-0.05	0.56	0.17	-0.35	-0.10	-0.34	-0.06								
Cul	0.22	-0.06	-0.08	0.22	0.43	-0.14	0.19	-0.17	0.12	0.16	0.37	-0.19	0.32	-0.06	-0.02	0.18	0.28	-0.18	-0.10	-0.15	0.11	0.26							
Inf	0.11	-0.10	-0.14	0.08	0.21	0.44	0.04	0.03	0.38	0.01	0.18	0.11	0.03	-0.02	0.14	0.01	0.07	0.16	0.12	0.05	0.21	0.02	0.09						
Opt	0.44	-0.42	-0.44	0.40	0.36	-0.13	0.69	-0.46	0.41	0.29	0.07	-0.29	0.50	-0.31	0.18	0.43	0.13	-0.31	-0.22	-0.43	0.13	0.32	0.23	0.16					
Unc	-0.36	0.31	0.23	-0.43	-0.18	0.48	-0.32	0.40	-0.15	-0.32	0.07	0.38	-0.31	0.21	0.15	-0.49	-0.03	0.43	0.28	0.36	0.15	-0.45	-0.14	0.26	-0.22				
Spo	-0.10	0.05	-0.09	-0.16	0.09	0.22	0.00	0.10	0.12	-0.10	0.12	0.14	0.00	0.03	0.33	-0.16	-0.02	0.10	0.10	0.13	0.34	-0.22	0.03	0.18	0.11	0.37			
Act	0.30	-0.25	-0.34	0.36	0.38	0.00	0.28	-0.21	0.45	0.28	0.12	-0.16	0.35	-0.10	0.27	0.31	0.15	-0.14	-0.07	-0.16	0.20	0.25	0.16	0.20	0.36	-0.08	0.27		
Wel	0.51	-0.25	-0.29	0.35	0.29	-0.17	0.49	-0.27	0.29	0.21	0.17	-0.14	0.45	-0.12	0.28	0.31	0.05	-0.15	-0.12	-0.25	0.23	0.26	0.13	0.12	0.45	-0.12	0.16	0.32	
Img	0.02	0.21	0.21	-0.09	0.23	0.09	-0.06	0.19	-0.11	-0.19	0.57	0.18	0.06	0.21	0.06	-0.22	0.11	0.19	0.17	0.16	0.14	-0.05	0.22	0.15	-0.03	0.25	0.23	0.02	0.16

Note. All correlations >= ±0.05 are significant at p<0.05. N = 2106. Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, AS = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.

**APPENDIX C: STUDY 2 WITHIN-MEASURE INTERCORRELATIONS (TAPAS,
NCAPS, & SDI)**

Table C-1. TAPAS Uncorrected Correlations

TAPAS	Can Do	Pers	Will Do	Ach	Adj	Att	Coop	Dom	Even	IntE	Non	Opt	Ord	Phys	SC	Selfl	Soc
Persistence	0.51																
Will Do	0.27	0.52															
Achievement	0.31	0.11	0.66														
Adjustment	0.20	0.12	0.17	0.08													
Attention-Seeking	-0.10	-0.11	0.09	0.03	0.20												
Cooperation	0.07	0.10	0.08	0.16	-0.01	-0.14											
Dominance	0.07	-0.01	0.47	0.21	0.12	0.15	-0.02										
Even-Tempered	0.30	0.39	0.09	0.16	0.25	-0.07	0.32	-0.03									
Intellectual Efficiency	0.74	0.09	0.31	0.31	0.24	0.04	0.04	0.21	0.14								
Non-Delinquency	0.07	0.01	0.11	0.25	-0.04	-0.21	0.25	0.01	0.22	0.05							
Optimism	0.08	0.13	0.33	0.14	0.26	0.02	0.07	0.04	0.19	0.08	0.11						
Order	-0.30	-0.42	0.13	0.18	-0.01	-0.05	0.07	0.05	-0.00	0.14	0.14	-0.05					
Physical Conditioning	0.14	0.68	0.80	0.23	0.07	0.04	0.00	0.16	-0.02	0.16	-0.04	0.08	0.07				
Self-Control	0.18	0.07	0.17	0.24	0.05	-0.03	0.21	0.04	0.17	0.19	0.29	0.06	0.16	0.07			
Selflessness/Generosity	-0.07	-0.01	0.14	0.22	-0.10	-0.01	0.18	0.12	0.05	-0.02	0.16	0.06	-0.01	0.01	0.12		
Sociability	-0.39	-0.38	0.15	0.08	0.09	0.37	-0.02	0.26	-0.04	0.08	-0.06	0.07	0.08	0.05	-0.09	0.11	
Tolerance	-0.15	-0.11	-0.04	0.03	0.03	-0.03	0.10	-0.00	0.04	0.13	0.04	0.10	0.02	-0.11	0.04	0.22	0.10

Note. All correlations $\geq \pm 0.09$ are significant at $p < 0.05$. N = 551. Can Do = Can Do Composite, Pers = Persistence Composite, Will Do = Will Do Composite, Ach = Achievement, Adj = Adjustment, Att = Attention-Seeking, Coop = Cooperation, Dom = Dominance, Even = Even-Tempered, IntE = Intellectual Efficiency, Non = Non-Delinquency, Opt = Optimism, Ord = Order, Phys = Physical Conditioning, SC = Self-Control, Selfl = Selflessness/Generosity, Soc = Sociability, Tol = Tolerance.

Table C-2. NCAPS Uncorrected Correlations

NCAPS	ST	AV	SO	ADF	WTL	DEP	ADL	DUT	SRL
Achievement	0.37								
Social Orientation	0.30	0.23							
Adaptability Flexibility	0.42	0.43	0.36						
Willingness to Learn	0.39	0.44	0.27	0.45					
Dependability	0.41	0.57	0.23	0.39	0.43				
Attention to Detail	0.31	0.46	0.17	0.39	0.40	0.60			
Dutifulness	0.30	0.38	0.22	0.32	0.38	0.46	0.44		
Self-Reliance	0.19	0.20	-0.08	0.15	0.07	0.19	0.12	0.00	
Vigilance	0.40	0.50	0.25	0.41	0.44	0.58	0.50	0.41	0.18

Note. All correlations $\geq \pm 0.12$ are significant at $p < 0.05$. N = 551. ST = Stress Tolerance, AV = Achievement, SO = Social Orientation, ADF = Adaptability/Flexibility, WTL = Willingness to Learn, DEP = Dependability, ADL = Attention to Detail, DUT = Dutifulness, SRL = Self-Reliance.

Table C-3. SDI Domains Uncorrected Correlations

SDI	Agree	Neur	Extro	Cons	Open
Neuroticism	-0.47				
Extroversion	0.45	-0.15			
Conscientiousness	0.63	-0.49	0.16		
Openness	0.48	-0.18	0.19	0.40	
Machiavellianism	-0.28	0.45	0.17	-0.42	-0.00

Note. All correlations $\geq \pm 0.15$ are significant at $p < 0.05$. N = 551. Agree = Agreeableness, Neur = Neuroticism, Extro = Extroversion, Cons = Conscientiousness, Open = Openness.

Table C-4. SDI Facets Uncorrected Correlations

SDI facet	Tea	SUP	Res	AS	Cre	IntT	Ple	Tem	DL	Ord	Ref	Cyn	Hel	Wor	Exc	Sel	Sci	Env	Ind	Ang	Hig	Del	Cul	Inf	Opt	Unc	Spo	Act	Wel		
SUP	-0.42																														
Res	-0.22	0.33																													
AS	0.70	-0.43	-0.14																												
Cre	0.61	-0.35	-0.17	0.66																											
IntT	-0.35	0.26	0.03	-0.26	-0.23																										
Ple	0.57	-0.37	-0.37	0.43	0.38	-0.25																									
Tem	-0.48	0.64	0.26	-0.45	-0.39	0.41	-0.48																								
DL	0.26	-0.29	-0.52	0.36	0.41	0.15	0.22	-0.14																							
Ord	0.46	-0.30	-0.13	0.57	0.37	-0.13	0.32	-0.29	0.26																						
Ref	0.34	0.04	0.17	0.33	0.48	-0.12	0.15	-0.07	0.03	0.22																					
Cyn	-0.07	0.18	0.20	-0.07	-0.09	0.32	-0.14	0.22	0.06	-0.11	0.12																				
Hel	0.60	-0.23	-0.14	0.52	0.55	-0.36	0.49	-0.38	0.21	0.33	0.37	-0.11																			
Wor	-0.13	0.57	0.26	-0.16	-0.11	0.16	-0.17	0.46	-0.12	-0.09	0.18	0.27	-0.04																		
Exc	0.22	-0.10	-0.20	0.15	0.21	0.04	0.23	-0.11	0.23	0.10	0.08	0.01	0.22	-0.01																	
Sel	0.63	-0.51	-0.18	0.69	0.56	-0.36	0.49	-0.51	0.27	0.56	0.22	-0.21	0.50	-0.21	0.13																
Sci	0.24	-0.26	0.03	0.33	0.44	-0.11	0.18	-0.24	0.07	0.11	0.25	-0.00	0.27	-0.17	0.09	0.29															
Env	-0.38	0.46	0.17	-0.36	-0.30	0.44	-0.29	0.55	-0.06	-0.35	-0.08	0.30	-0.32	0.36	0.01	-0.49	-0.09														
Ind	0.02	0.09	0.24	0.14	0.10	0.23	-0.18	0.21	0.04	0.03	0.19	0.37	-0.08	0.17	0.10	-0.06	0.10	0.22													
Ang	-0.44	0.55	0.18	-0.39	-0.30	0.35	-0.50	0.77	-0.04	-0.28	-0.07	0.14	-0.35	0.44	-0.08	-0.49	-0.27	0.46	0.16												
Hig	0.10	0.09	-0.24	0.02	0.07	0.15	0.14	0.11	0.20	0.04	0.13	0.04	0.16	0.12	0.34	0.00	-0.04	0.09	0.12	0.11											
Del	0.62	-0.37	-0.09	0.70	0.57	-0.35	0.40	-0.46	0.24	0.56	0.38	-0.16	0.46	-0.14	0.04	0.61	0.24	-0.41	-0.02	-0.40	-0.01										
Cul	0.35	-0.08	0.00	0.33	0.42	-0.25	0.26	-0.21	0.06	0.24	0.44	-0.11	0.38	-0.08	0.04	0.29	0.38	-0.24	0.04	-0.20	0.07	0.38									
Inf	-0.02	-0.00	-0.23	0.01	0.11	0.45	-0.01	0.14	0.35	-0.05	0.12	0.22	-0.03	0.02	0.20	-0.08	0.09	0.23	0.21	0.16	0.27	-0.12	0.08								
Opt	0.41	-0.36	-0.37	0.40	0.42	-0.11	0.58	-0.39	0.32	0.24	0.17	-0.13	0.49	-0.27	0.22	0.35	0.18	-0.27	-0.11	-0.37	0.15	0.36	0.27	0.13							
Unc	-0.43	0.31	0.04	-0.42	-0.35	0.56	-0.25	0.42	-0.03	-0.34	-0.10	0.27	-0.32	0.15	0.06	-0.50	-0.14	0.46	0.16	0.34	0.20	-0.51	-0.19	0.38	-0.16						
Spo	-0.03	0.04	-0.15	-0.05	0.05	0.25	0.07	0.11	0.23	-0.10	0.08	0.15	0.05	-0.01	0.34	-0.13	-0.07	0.12	0.17	0.09	0.35	-0.17	-0.02	0.29	0.21	0.34					
Act	0.31	-0.22	-0.25	0.40	0.38	0.07	0.26	-0.12	0.43	0.31	0.19	0.01	0.30	-0.08	0.29	0.34	0.20	-0.12	0.16	-0.16	0.23	0.28	0.20	0.24	0.42	-0.04	0.32				
Wel	0.67	-0.21	-0.27	0.49	0.45	-0.25	0.54	-0.29	0.21	0.31	0.30	-0.03	0.52	-0.05	0.32	0.43	0.16	-0.22	0.01	-0.28	0.26	0.39	0.26	0.06	0.40	-0.26	0.14	0.29			
Img	0.12	0.17	0.08	0.01	0.26	-0.01	0.05	0.13	-0.09	-0.11	0.50	0.19	0.14	0.16	0.18	-0.09	0.19	0.17	0.18	0.11	0.28	-0.01	0.24	0.24	0.06	0.14	0.23	0.07	0.28		

Note: All correlations >= ±0.08 are significant at p<0.05. N = 551. Tea = Team Player, SUP = Stress Under Pressure, Res = Reserved, AS = Achievement Striving, Cre = Creative, IntT = Interpersonal Tactics, Ple = Pleasant, Tem = Temperamental, DL = Dominance Leader, Ord = Order, Ref = Reflective, Cyn = Cynical View, Hel = Helpful Altruistic, Wor = Worry, Exc = Excitement Seeking, Sel = Self Discipline, Sci = Scientific Interest, Env = Envious, Ind = Independent, Ang = Angry Hostile, Hig = High Intensity, Del = Deliberation, Cul = Cultured, Inf = Influence Tactics, Opt = Optimist, Unc = Unconventional, Spo = Spontaneous Variety, Act = Activity, Wel = Well Adjusted, Img = Imagination.

SYMBOLS, ABBREVIATIONS, AND ACRONYMS

CARS	Computer Adaptive Rating Scales
CAT	Computer Adaptive Testing
CWB	Counterproductive Work Behaviors
DCG	Drasgow Consulting Group
IRT	Item Response Theory
LTSH	Likelihood to Sexually Harass
MAPWG	Manpower Accession Policy Working Group
MDPP	Multidimensional Pairwise Preference
MEPS	Military Enlisted Processing Stations
MFC	Multidimensional Forced Choice
NCAPS	Navy Computerized Adaptive Personality Scales
SBIR	Small Business Innovation Research
SDI	Self-Descriptive Inventory
SME	Subject Matter Expert(s)
TAPAS	Tailored Adaptive Personality Assessment System
UPP	Unidimensional Pairwise Preference