Anthony W. Tatman

Critical Hire, PLC, Des Moines, Iowa, United States of America

Correspondence concerning this article should be addressed to Anthony "Tony" Tatman, 500 Hickman Road, #813, Waukee, IA 50263-7713. E-mail: tonytatman@criticalhire.com. ORCID #: 0000-0002-0195-0193

Initial Reliability and Validity for the Critical Hire - Personality Assessment

The use of personality testing during the hiring process has become a common practice in general business settings. However, their use has been rather non-existent in the field of corrections. This limited use may stem from a lack of awareness about preemployment personality tests in corrections, as well as a lack of measures normed and validated for use with correctional applicants. The present study outlines reliability and validity for the Critical Hire – Personality Assessment, a Five Factor Model based assessment of personality developed for probation, parole, and other correctional officer job applicants. This study provides initial empirical support for the Critical Hire – Personality Assessment's internal consistency, test-retest reliability, convergent validity, and criterion validity when measuring job performance ratings. Results provide practical application of the Critical Hire - Personality Assessment for correctional agencies as a tool complementing existing hiring practices.

Keywords: Preemployment testing, personality testing, Five Factor Model, correctional officers

Introduction

Preemployment personality testing has become a widely used, reliable and validated process for predicting future job performance and counterproductive work behaviors (CWBs) across a variety of work settings (Ones, Dilchert, Viswesvaran, & Judge, 2007). The Five Factor Model (FFM; Digman, 1990; Goldberg, 1993) is one model of personality that has routinely been integrated into pre-employment testing. The five factors measured by the FFM (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness) have been found to be associated with, and valid predictors of, a broad range of measures of work performance (Barrick & Mount, 1991; Barrick, Mount, & Judge, 2001; Behling, 1998; Hurtz & Donovan, 2000; Mount

& Barrick, 1995; Mount, Barrick, & Stewart, 1998; Oh & Berry, 2009; Oh, Wang, & Mount, 2011; Ones et al., 2007; Salgado, 2002; Tett & Christiansen, 2007; Tett, Jackson, & Rothstein, 1991). A pattern has emerged from this research showing that Conscientiousness and Neuroticism (sometimes labeled Emotional Stability) are associated with supervisor ratings of training and job performance across occupational settings, whereas Extraversion, Openness, and Agreeableness are more job-specific in terms of their predictive ability (Barrick & Mount, 2005; Judge & Ilies, 2002). Salgado (2003) also found that Conscientiousness and Emotional Stability significantly outperformed non-FFM based inventories in predicting future job performance. The use of the FFM in predicting job performance, academy performance, and disciplinary problems for law enforcement officers have also been well supported (Aamodt, 2004; Barrick & Mount; Bishop et al., 2001; Salgado, 1997; Salgado et al., 2014). Despite the widespread use and acceptance of the FFM in personnel selection, in general, and law enforcement, specifically, its application to correctional officer selection has not yet been documented.

The Need for Pre-Employment Personality Testing for Correctional Applicants

Considerable research has identified how FFM personality traits are associated with police academy and police officer job performance (Aamodt, 2004; Barrick & Mount, 1991; Black, 2000; Chibnall & Detrick, 2003; Detrick & Chibnall, 2006; Detrick, Chibnall, & Luebbert, 2004; Salgado, 1997). Detrick and Chibnall, for example, identified that highly rated, entry-level police officers scored lower on Neuroticism, higher on Extraversion, and higher on Conscientiousness, then lower-rated peers. Similar research, however, has not been conducted for correctional officers. Although there are noteworthy differences between police and correctional officers, most notable being their essential job functions and philosophical orientation, there are some noteworthy similarities (Herrmann & Bedwell, 2014; Herrmann & Broderick, 2011). For

example, a growing number of probation and parole officers across the Unites States carry firearms, with many probation and parole departments enabling their officers with full arrest authority (Roscoe, Duffee, Rivera, & Smith, 2007; Small & Torres, 2001). Similar to police officers, correctional officers are also given considerable authority by the Courts and Boards of Parole, as well as have an expectation from the public, to protect the community and ensure that the offenders they serve uphold the law. These similarities with police officers justify further analysis of the FFM with correctional officers during preemployment evaluation applications.

The Personality-Job Fit Theory (Anderson, Flynn, & Spataro, 2008) would also provide support and justification for the need for further analysis of personality traits, in general, and the FFM, specifically, for correctional officers during the pre-employment evaluation process. The personality-job fit theory suggests that the better an employee's personality fits with an organization's culture, job demands, and overall environment the more successful that employee will be in the job. Research has been conducted on personality traits for police officers (Detrick & Chibnall, 2013). However, similar research has not been conducted for correctional officers. This hole in the research limits correctional hiring agencies from both knowing what personality traits tend to associate with successful and unsuccessful officers, as well as limits the ability to assess for those key traits within the application process. This hole in the research, and limitation for correctional hiring agencies, further supports the analysis of personality traits and the FFM when used in preemployment evaluation settings.

Additional understanding of correctional officer personality factors could also result in financial savings for correctional agencies. Hiring poor performers can be devastating to an organization. The U.S. Department of Labor estimates that replacing a poor performer costs an additional 30% of that employee's potential first-year earnings (Fatemi, 2016). The average

annual salary for probation, parole, and other correctional officers ranges between $43,540 and $56,630 (United States Department of Labor, Bureau of Labor Statistics, 2018). Based on these figures, the cost to replace one officer, either through involuntary or voluntary departures, could fall between $56,602 and $73,619, resulting in a significant financial cost to hiring agencies. As referenced above, a poor personality-job fit can lead to workplace problems that can result in premature resignation or even escalate to the point of requiring termination. Identifying personality traits associated with successful correctional officers could enable hiring agencies to be better informed about traits associated with a strong personality-job fit, and therefore potentially reducing rates of turnover. This reduced turnover could result in considerable financial savings for a correctional agency.

Introducing the Critical Hire – Personality Assessment

The author did an extensive search for pre-employment, personality assessments with published norms and validation for correctional officers. Although several tools tout application for correctional officers, empirical validation and norms specific for correctional officers were not published or available. As a result, Anthony Tatman (2019) developed the Critical Hire-Personality Assessment (CH-PA), which consists of five personality scales and 16 subscales modeling the FFM. The CH-PA was developed on, and validated with, new and incumbent correctional and law enforcement officers. Since its development, the CH-PA has been used as part of a comprehensive hiring process throughout multiple law enforcement and correctional agencies within the Midwest. However, up to this point, reliability and validity data have not been published on the CH-PA making this tool rather unknown in the field of personnel assessment, corrections, and law enforcement. Therefore, the purpose of this paper is to introduce the CH-PA and share initial reliability and validity data.

The CH-PA is a 72-item assessment measuring 5 distinct, and FFM consistent, personality scales: Stress Response, Extraversion, Flexibility, Agreeableness, and Conscientiousness. The Stress Response scale is made up of 15 items and contains three subscales (Irritability, 5 items; Impulsivity, 5 items; and Social Discomfort, 5 items). The Extraversion scale is made up of 18 items and contains 4 subscales (Warmth, 5 items; Assertiveness, 4 items; Gregariousness, 4 items, and Activity Level, 4 items). The Flexibility scale is made up of 8 items and contains 2 subscales (Openness to New Ideas, 4 items; and Openness to Change, 4 items). The Agreeableness scale is made up of 13 items and contains 3 subscales (Empathy, 7 items; Trust, 4 items, and Modesty, 2 items). The Conscientiousness scale is made up of 27 items and contains 4 subscales (Drive and Self-Discipline, 9 items; Organization, 8 items; Persistence and Reliability, 6 items; Deliberation, 4 items). CH-PA scores are reported as T scores (M = 50, SD = 10), and questions are anchored with a five-point, Likert-scale (e.g., Strongly Agree to Strongly Disagree).

Studies and Research Questions

This paper presents 4 separate studies, which posed 4 research questions, to measure the reliability and validity of the CH-PA. The research questions consisted of: “Do the CH-PA scales and subscales have adequate internal consistency?” (Study 1), “Do the CH-PA scales and subscales have adequate convergent validity?” (Study 2), “Do the CH-PA scales and subscales have adequate test-retest reliability?” (Study 3), and “Do the CH-PA scales and subscales have adequate criterion validity?” (Study 4).

Study 1 - Internal Consistency

Method

Participants, Procedures, and Measures

Participants for Study 1 consisted of a convenience sample of 973 applicants for law enforcement and correctional positions within agencies located within rural and urban regions of the Midwest. Participants completed the online administration of the CH-PA during the pre-conditional offer phase of a comprehensive hiring process. The respective hiring agencies chose not to solicit age, gender or racial identification at this early stage in the hiring process and therefore were not available for this study. Cronbach Alpha coefficients were calculated to answer the research question "Do the CH-PA scales and subscales have adequate internal consistency?"

Results

Results revealed that the CH-PA's scales and subscales had moderate to strong internal consistency (Table 1).

Study 2 - Convergent Validity

Method

Participants

Participants for Study 2 consisted of a subset of 196 job applicants from Study 1. Study 2 participants completed the CH-PA at a pre-conditional offer phase of the hiring process, and subsequently completed the NEO Personality Inventory-R (NEO PI-R; Costa & McCrae, 1992) during their post-conditional offer, preemployment psychological evaluation. Gender composition for this sample consisted of 79 Males and 117 Females. The mean age was 33.64 (SD = 10.40, Median = 32), with a range of 19 to 61 years of age. Racial/ethnic composition consisted of 167 Caucasian, 23 African American, 5 Hispanic, and 1 Asian participants.

Measures and Procedures

In addition to the CH-PA, participants in this study completed the NEO PI-R. The NEO PI-R is a self-administered, FFM based assessment of normal adult personality. The NEO PI-R measures five major factors (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness), along with six facets for each factor. Norms have been established for men and women, separately and combined. Combined norms were used in this study. Scores are reported as T scores (M = 50, SD = 10). Extensive research has been conducted on the NEO PI-R, supporting its reliability and validity as a measure of normal personality, in general, (Costa & McCrae, 1992), as well as for law enforcement personnel selection, specifically. Research specific to law enforcement personnel has specifically found that NEO PI-R factors and facets are valid predictors of various measures of police academy and job performance (Barrick & Mount, 1991; Bishop, Tong, Diong, et al, 2001; Black, 2000; Chibnall & Detrick, 2003; Detrick & Chibnal, 2006; Detrick et al., 2004). Pearson Correlation coefficients were calculated between CH-PA scales and subscales and NEO PI-R factors and facets to answer the research question "Do the CH-PA scales and subscales have adequate convergent validity?"

Results & Conclusions

Results revealed significant correlation coefficients between NEO PI-R factors and their comparable CH-PA scales, as well as between NEO PI-R facets and their comparable CH-PA subscales (Tables 2 to 6). Before completing the analyses for this study NEO PI-R facets were conceptually paired with their comparable CH-PA subscale based on facet/subscale purpose and item content. These comparable scales are identified in bold in Tables 2 through 6. These results suggest that the CH-PA scales and subscales are measuring similar constructs as those measured

by the NEO PI-R, and provides initial evidence for the convergent validity of the CH-PA as a measure of normal personality.

Study 3 - Test-Retest Reliability

Method

Participants, Procedures, and Measure

Participants for Study 3 consisted of a subsample of 100 participants from Study 1 who completed the CH-PA on multiple occasions as they repeatedly applied for positions with various community-based corrections agencies within the Midwest. Consistent with Study 1, applicant age, gender or racial identification were not solicited at the pre-conditional offer phase in which the CH-PA was administered, and therefore are not available for this study. The average test re-test frequency was 47.98 days, with a median of 46.5 days, and a range of 1 to 155 days. Pearson Correlation coefficients were calculated to measure test re-test reliability.

Results & Conclusions

Results revealed moderate to strong test-retest reliability for the CH-PA scales and subscales (Table 7). Results from Study 3 provide evidence that the CH-PA scales and subscales have good reliability over an approximately 5-month period, supporting the stability of the CH-PA scores over time.

Study 4 – Criterion Validity

Methods

Participants and Measure

The CH-PA has been used in community-based correction (CBC) agencies throughout the Midwest as part of a comprehensive hiring process for new and promotional candidates. As a result, archival data has been accumulated. Using this archival data 94 CBC employees (51

males and 43 females) completed the CH-PA as they applied for promotions within their existing agency or with a different CBC agency. The sample had an average age of 37.50 (*SD* = 8.81) and ranged from 20 to 61 years of age. Racial/ethnic composition consisted of 74 Caucasian, 12 African American, 6 Hispanic, and 2 Asian participants.

Procedures

Supervisors for each participant who completed the CH-PA were asked to rate their respective employee(s) job performance on a Likert scale of 1 (Low Performer; N = 5), 2 (Below Average Performer; N = 8), 3 (Average Performer; N = 56), 4 (Above Average Performer; N = 20), and 5 (High Performer; N = 5). Supervisors rated their respective employees without reference to, or direct knowledge of, the employee's CH-PA scores. Pearson Correlation coefficients were conducted to answer the research question "Do the CH-PA scales and subscales have adequate criterion validity?"

Results & Discussion

Results obtained from Study 4 revealed that various CH-PA scales and subscales correlated significantly with supervisor ratings of job performance (Table 8). It is noteworthy that the CH-PA Stress Response (r = -.34, p = .001), Extraversion (r = .31, p = .018), and Conscientiousness (r = .44, p = .000) showed significant relationships with job performance rankings, while Openness (r = .06, p = .56) and Agreeableness (r = .04, p = .70) scales did not. These findings would suggest that elevated scores on Extraversion and Conscientiousness are significantly associated with increases in job performance ratings, while decreases in Stress Response scores are significantly associated with increases in job performance ratings. These findings are consistent with existing research which measured the relationship between the NEO PI-R and

supervisory rankings of law enforcement officers (Detrick & Chibnall, 2006). These results provide valuable information regarding the linear relationship between Stress Response, Extraversion, and Conscientiousness scores for correctional officers and supervisor ratings of job performance.

Post hoc Receiver Operating Characteristic (ROC; Hanley & McNeil, 1983) curves were then calculated to measure the degree to which the CH-PA Stress Response, Extraversion and Consciousness Scales and Subscale scores could predict job performance ratings. ROC is a global discrimination index that measures the probability that a randomly selected low performer generated lower Extraversion and Conscientiousness scores, for example, than randomly selected higher performers across cut-off thresholds (Altman & Bland, 1994). Based on its reliance on sensitivity and specificity, ROC curves are resistant to changes in base rates (Rice & Harris, 2005), making it the preferred discrimination index for this analysis. ROC areas refer to the Area Under the Curve (AUC) and can vary between 0 and 1. A ROC value of .5 or less indicates an average, or less than average, respectively, level of prediction. ROC values between .5 and 1 indicate prediction exceeding chance levels, with values closer to 1 showing stronger prediction. Confidence intervals that include ROC values of .5 demonstrate a range of predictive accuracy that includes chance. ROC values of .56, .64, and .71 also correspond to the .2 (small), .5 (moderate), and .8 large Cohen's *d* effect size coefficients (Rice & Harris). ROC analyses require dichotomous dependent variables. Therefore, the continuous data previously used in Study 4 was recoded as 1 for employees rated as Low and Below Average (N=13) and 2 for employees rated as Average and higher (N=81).

Results from this post hoc analysis (Table 8) revealed that the CH-PA Stress Response scale, and its Social Discomfort subscale, had a medium to large effect, respectively, for

predicting job performance ratings. Impulsivity showed a relatively small AUC, suggesting that, although Impulsivity has a significant correlation with job performance ratings in this sample, the magnitude of its predictive ability is just above chance levels. CH-PA Extraversion, and its subscales Warmth and Assertiveness, also showed moderate predictive abilities. The Conscientiousness scale, and its Drive and Self-Discipline, Organization, and Deliberation subscales, also showed moderate predictive abilities. The Dependability and Reliability subscale showed a relatively small AUC, suggesting that, although it had a statistically significant correlation with job performance ratings in this sample, the magnitude of its predictive ability is just above chance levels. Overall, these post hoc analyses indicated that the CH-PA contains scales and subscales that correlate with, as well as adequately predict, job performance ratings in a manner consistent with existing research (Detrick & Chibnall, 2006).

Summary & Discussion

The results generated from this paper provide initial empirical support for the Critical Hire – Personality Assessment's (CH-PA) internal consistency, test-retest reliability, convergent validity with the NEO Personality Inventory-Revised (Costa & McCrae, 1992), and criterion validity when measuring job performance ratings. The results presented in this paper have practical utility for pre-employment evaluators and correctional agencies. In 1978, the Equal Employment Opportunity Commission adopted the Uniform Guidelines on Employee Selection Procedures (UGESP; Uniform Guidelines on Employee Selection Procedure, 1978). These Guidelines provide a framework for determining the proper use of tests and other applicant selection procedures. Based on the UGESP, selection procedures, such as preemployment personality testing, must show, not just claim, empirical evidence for the instrument or process's validity and reliability. The International Association of Chiefs of Police (IACP) Police

Psychological Services Section has also enacted Guidelines for Preemployment Psychological Evaluations (International Association of Chiefs of Police, 2014), which have arguably become the gold standard for preemployment evaluators in law enforcement contexts. These IACP Guidelines also state that test instruments used in a preemployment evaluation setting should have documented reliability and validity and that tests without this empirical data should not be used to guide hiring decisions. This study provides preemployment evaluators and hiring agencies of correctional applicants with reliability and validity data for the CH-PA necessary to meet relevant professional standards and Federal guidelines when used in preemployment evaluations.

Results from this paper also provide practical application of the Personality-Job Fit Theory (Anderson et al., 2008) to the field for corrections. A good personality-job fit is important for any job but could be of great significance in high-risk, high-demand careers such as corrections. The Personality-Job Fit Theory would suggest that the more incongruent an officer's personality is with the demands corrections the more likely it will lead to problems within the workplace and potential safety issues for the employee, their peers, the community, and clients they serve. Results obtained from Study 4 identified multiple CH-PA personality traits (Table 8) that were significantly correlated with, and moderately predictive of, job performance ratings. This information could contribute to informing correctional agencies about what personality traits lead to success as a correctional officer, and therefore what traits lead to a strong personality-job fit in corrections.

Information obtained from this paper may also benefit correctional agencies by providing valid and reliable information early in the hiring process about personality traits empirically identified as predicting job performance. Although the CH-PA was not developed or intended to

be used as the sole determinant for screening out applicants from consideration (Tatman, 2019), information shared by the CH-PA may provide correctional agencies with valuable information about an applicant's personality characteristics that can be incorporated into the hiring process. For example, personality traits that significantly deviate from the average correctional officer could lead to specific interview questions, or follow up conversations with references or past employers to explore the trait in question. Information shared by the CH-PA regarding possible deviant scores could also benefit correctional agencies and managers by knowing specific personality traits to monitor and possibly address in supervision or coaching sessions if the individual is ultimately hired.

Limitations and Future Research

Readers should note that, although the present findings are promising, these remain initial findings. Additional research is encouraged before generalizations are made about the applicability of these findings to the hiring practices of correctional officers. A specific noteworthy limitation is the sample size used in Study 4. Study 4 consisted of 94 participants. Although that is a suitable sample size for many statistical calculations, researchers have suggested that ROC analyses utilize sample sizes of 200 or greater (Hanczar et al., 2010). Therefore, the author would stress that the findings generated from the ROCs conducted in this study should be read with this limitation in mind. Future research is recommended to replicate results obtained in this particular study with a larger sample size.

A specific area for future research would also involve replicative studies regarding the criterion validity of the CH-PA when predicting job performance. This paper found that select scales and subscales of the CH-PA predicted supervisor ratings of job performance. Future research is recommended to expand on this finding by investigating the degree to which the CH-

PA predicts other outcome variables and counterproductive work behaviors. For example, additional information on the relationship between correctional officer personality traits and client feedback ratings, rates of termination, and absenteeism or tardiness, could be valuable to hiring agencies and contribute to these current findings.

Disclosure statement

In accordance with Taylor & Francis policy and my ethical obligation as a researcher, I am reporting that I have a financial and business interest in a company that may be affected by the research reported in the enclosed paper. I have disclosed those interests fully to Taylor & Francis, and I have in place an approved plan for managing any potential conflicts arising from my ownership of Critical Hire, PLC.

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Table 1

Critical Hire – Personality Assessment (CH-PA) Scales and Subscale Internal Consistency, Means, and Standard Deviations

CH-PA				
Scales	Subscales	Alpha	*M*	*SD*
Stress Response		.86	28.97	6.04
	Irritability	.79	8.73	2.31
	Impulsivity	.72	10.99	2.20
	Social Discomfort	.71	9.24	2.20
Extraversion		.85	67.91	7.59
	Warmth	.81	21.46	2.22
	Assertiveness	.80	15.31	2.45
	Gregariousness	.77	13.10	2.88
	Activity Level	.71	18.03	3.07
Flexibility		.77	29.88	4.10
	Open to New Ideas	.82	15.06	2.78
	Open to Change	.62	14.82	2.15
Agreeableness		.79	51.02	5.16
	Empathy	.79	28.71	3.23
	Trust	.73	14.47	2.36
	Modesty	.64	7.84	1.46
Conscientiousness		.89	112.63	10.69
	Drive & Self-Discipline	.85	38.39	3.75
	Organization	.82	34.51	3.05
	Dependability & Reliability	.77	23.37	3.05
	Deliberation	.72	16.35	1.99

Table 2

CH-PA Stress Response and NEO PI-R Neuroticism Correlations

	CH-PA			
	Scale	Subscales		
NEO PI-R	Stress Response	Irritability	Impulsivity	Social Discomfort
Factor				
Neuroticism	.56			
Facets				
Anxiety		.41	.42	.50
Angry Hostility		**.57**	.35	.46
Depression		.39	.42	.47
Self-Consciousness		.33	.37	**.53**
Impulsivity		.31	**.52**	.28
Vulnerability		.55	.42	.51

Note: All correlations were significant at $p > .01$. Predetermined comparisons between NEO PI-R facets and CH-PA subscales are identified in **bold**.

Table 3

CH-PA Extraversion and NEO PI-R Extraversion Correlations

	CH-PA				
	Scale	Subscales			
NEO PI-R	Extraversion	Warmth	Assertiveness	Gregariousness	Activity Level
Factor					
Extraversion	.59				
Facets					
Warmth		**.68**	.35	.36	.26
Gregariousness		.41	.25	**.61**	.25
Assertiveness		.37	**.63**	.18	.29
Activity		.28	.36	.31	**.53**
Excitement Seeking		.20	.16	.31	.38
Positive Emotions		.56	.30	.25	.27

Note: All correlations were significant at $p > .01$. Predetermined comparisons between NEO PI-R facets and CH-PA subscales are identified in **bold**.

Table 4

CH-PA Flexibility and NEO PI-R Openness Correlations

	CH-PA		
	Scale	Subscales	
NEO PI-R	Flexibility	Open to New Ideas	Open to Change
Factor			
Openness	.57		
Facets			
Fantasy		.18*	.08**
Aesthetics		.34	.23
Feelings		.05**	.06**
Actions		.26	**.46**
Ideas		**.75**	.28
Values		.40	.18*

Note: All correlations were significant at $p > .01$, except for * > .05. ** were not significant. Predetermined comparisons between NEO PI-R facets and CH-PA subscales are identified in **bold**.

Table 5

CH-PA Agreeableness and NEO PI-R Agreeableness Correlations

	CH-PA			
	Scale	Subscales		
NEO PI-R	Agreeableness	Empathy	Trust	Modesty
Factor				
Agreeableness	.54			
Facets				
Trust		.25	**.56**	-.02**
Straightforwardness		.29	.20	.22
Altruism		.44	.25	.11**
Compliance		.36	.27	.12**
Modesty		.26	.08**	**.43**
Tender Mindedness		**.45**	.22	.11**

Note: All correlations were significant at $p > .01$, except for ** which were not significant. Predetermined comparisons between NEO PI-R facets and CH-PA subscales are identified in **bold**.

Table 6

CH-PA Conscientiousness and NEO PI-R Conscientiousness Correlations

	CH-PA				
	Scale	Subscales			
NEO PI-R	Conscientiousness	Drive & Self-Discipline	Dependability & Reliability	Organization	Deliberation
Factor					
Conscientiousness	.62				
Facets					
Competence		.57	.56	.45	.56
Order		.54	.33	**.51**	.35
Dutifulness		.45	**.43**	.39	.44
Achievement Striving		.57	.49	.36	.44
Self-Disciplined		**.67**	.52	.54	.51
Deliberation		.36	.30	.38	**.51**

Note: All correlations were significant at $p > .01$. Predetermined comparisons between NEO PI-R facets and CH-PA subscales are identified in **bold**.

Table 7

CH-PA Scale and Subscale Means, Standard Deviations, and Test-Retest Reliability

CH-PA				
Scales	Subscales	*M*	*SD*	*r*
Stress Response		28.45	5.71	.79
	Irritability	8.68	2.39	.74
	Impulsivity	10.60	2.74	.69
	Social Discomfort	9.17	2.20	.76
Extraversion		67.73	7.15	.85
	Warmth	21.46	2.09	.83
	Assertiveness	15.31	2.21	.73
	Gregariousness	13.00	3.19	.87
	Activity Level	17.96	2.99	.72
Flexibility		29.00	3.83	.80
	Open to New Ideas	14.88	2.92	.83
	Open to Change	14.78	2.25	.72
Agreeableness		50.91	5.34	.87
	Empathy	28.50	3.30	.87
	Trust	14.42	2.47	.82
	Modesty	7.99	1.49	.64
Conscientiousness		112.32	10.27	.88
	Drive & Self-Discipline	38.30	3.73	.86
	Dependability & Reliability	34.55	2.97	.82
	Organization	22.98	3.92	.81
	Deliberation	16.49	1.89	.70

Note: * All test-retest reliability Pearson Correlation coefficients were significant at $p > .000$

Table 8

Pearson Correlations and ROC Areas for CH-PA Scores and Job Performance Ratings

CH-PA					
Scale	Subscale	*r*	*p*	ROC Area	95% C.I.
Stress Response		-.33	.001	.68	.52 - .85
	Irritability	-.18	.085		
	Impulsivity	-.27	.007	.59	.42 - .76
	Social Discomfort	-.28	.007	.75	.58 - .92
Extraversion		.24	.018	.74	.61 - .88
	Warmth	.21	.038	.62	.46 - .79
	Assertiveness	.22	.030	.68	.52 - .84
	Gregariousness	.07	.508		
	Activity Level	.15	.150		
Flexibility		.09	.408		
	Open to New Ideas	.09	.387		
	Open to Change	.06	.586		
Agreeableness		.01	.899		
	Empathy	-.02	.873		
	Trust	.04	.681		
	Modesty	.00	.967		
Conscientiousness		.37	.000	.68	.52 - .83
	Drive & Self-Discipline	.32	.002	.67	.49 - .85
	Organization	.31	.003	.67	.51 - .82
	Dependability & Reliability	.25	.015	.59	.43 - .76
	Deliberation	.25	.014	.62	.46 - .77

Note: ROC Areas were calculated post hoc. ROCs were only calculated for scales and subscales showing significant correlations.