

Convergent Validity for the Critical Hire-Screen: An Analysis of Contrasted Groups

Anthony “Tony” W. Tatman

Des Moines, Iowa

Author Note

Tony W. Tatman is owner and founder of Critical Hire. Correspondence concerning this article should be addressed to Anthony Tatman at tonytatman@criticalhire.com.

Study Purpose & Hypotheses

This study compared Critical Hire-Screen (CH-S) scale scores between a group of law enforcement officer applicants, correctional officer applicants, and individuals on probation or parole supervision. The following hypotheses were generated to guide this study:

1. Law enforcement officer applicant CH-S Integrity Scale and Impression Management Scale scores will not significant differ from correctional officer applicant CH-S Integrity Scale and Impression Management Scale scores.
2. Correctional officer applicants will generate statistically lower CH-S Integrity Scale scores then individuals on probation and parole.
3. Law enforcement applicants will generate statistically lower CH-S Integrity Scale scores then individuals on probation and parole.
4. Correctional officer applicants will generate statistically similar CH-S Impression Management Scale scores as individuals on probation and parole.
5. Law enforcement applicants will generate statistically similar CH-S Impression Management Scale scores as individuals on probation and parole.

Methods

Participants

This study included three different samples of participants: 1) law enforcement officer applicants, 2) correctional officer applicants, and 3) individuals on probation or parole supervision (i.e., offenders). This study also contained a sample of 208 law enforcement applicants from various hiring agencies in Iowa who completed the CH-S during the pre-conditional offer phase of their agencies hiring process. This sample consisted of 77 Police Officer, 50 Deputy, 45 Correctional Officer/Jailer, 16 Communications Officer/Dispatcher, 13

Female Correctional Officer, 2 Reserve Deputies, 2 Sergeant, 1 Lieutenant, 1 Captain applicants. At the time this study was conducted the CH-S did not solicit age, gender or racial/ethnic information. Therefore, no age, gender or racial/ethnic information was made available for this sample of applicants.

The third group in this study consisted of a sample of 518 individuals applying for probation, parole and other correctional officer positions with various community-based corrections agencies in Iowa. Each correctional officer applicant completed the CH-S during the pre-conditional offer phase of their agencies hiring process. The sample consisted of 234 Probation and Parole Officer, 195 Residential Officer, 34 Community Treatment Coordinator/Counselor, 30 Pretrial Interviewer, 20 Secretary, 11 Administrative Officer, and 3 Supervisor job applicants. At the time this study was conducted the CH-S did not solicit age, gender or racial/ethnic information. Therefore, no age, gender or racial/ethnic information was made available for this sample of applicants.

The sample of offenders consisted of convenience sample of 180 adult males and 55 adult females, generating a sample of 235 offenders. Racial/ethnic composition consisted of 195 Caucasian, 27 African American, 10 Hispanic, and three Native American participants. The ages for this sample of offenders ranged from 19 to 64, with an average of 34.65 ($SD = 10.83$). offender supervision status consisted of 124 individuals on probation, 67 individuals on work release, and 44 individuals on parole. Offender participants were solicited from multiple residential facilities across Iowa. Participation was initiated by requesting Offenders to complete a pencil-paper packet containing the CH-S. Offenders were informed that participation was voluntary, and that their decision to participate, and the answers provided if they did participate, would be kept confidential from their supervising officer, Board of Parole and Court.

Measures

The Critical Hire-Screen (CH-S; Tatman, 2019a) is an overt integrity assessment used at a pre- or post-conditional offer phase in the hiring process. The CH-S measures five factors of integrity: Substances (i.e., use or selling of drugs in the workplace, and/or use of alcohol in the workplace), Theft (i.e., theft in the workplace), Authority (i.e., disparaging or conflictual opinions about management and supervisors), Rules & Deception (i.e., rule breaking, manipulating others, and deceptive behaviors), and Personal Responsibility (i.e., the degree to which an applicant places blame on victims for crimes committed against them).

Statistical Procedures

Independent-samples t-tests were calculated to measure the degree of difference in CH-S Integrity and Impression Management Scale scores between law enforcement officers, correctional officers, and offenders.

Results

Results from the independent-samples t-tests supported hypothesis 1 by finding that law enforcement officer applicant's CH-S scores did not significantly differ from correctional officer applicants (Table 1). This means that law enforcement applicants endorsed items in a way similar to correctional officers. This finding suggests that CH-S norms and cut scores previously published for correctional officers (Tatman, 2019b; Tatman & Huss, 2019a; Tatman & Huss, 2019b) could also apply to law enforcement officers.

Table 1

Differences Between Law Enforcement and Correctional Officer Applicants on the CH-S

CH-S Integrity Scales	Sample	<i>M</i>	<i>SD</i>	<i>t</i> (df)	<i>p</i>
Substances	Law Enforcement Officer	7.72	1.67	-.96 (732)	.337
	Correctional Officer	7.86	1.93		
Theft	Law Enforcement Officer	6.56	1.80	.38 (732)	.708
	Correctional Officer	6.50	1.92		
Authority	Law Enforcement Officer	7.89	2.09	1.73 (732)	.083
	Correctional Officer	7.60	1.99		
Rules & Deception	Law Enforcement Officer	10.82	2.82	1.89 (732)	.059
	Correctional Officer	10.39	2.71		
Responsibility	Law Enforcement Officer	3.12	1.21	.85 (732)	.395
	Correctional Officer	3.04	1.16		
IMS	Law Enforcement Officer	6.62	1.07	-.12 (732)	.903
	Correctional Officer	6.64	1.08		

Results also supported hypothesis 2. Independent-samples t-test results also showed that correctional officer applicants scored significantly lower than offenders on probation or parole on the CH-S integrity scales (Table 2). As expected, this finding means that individuals on probation or parole supervision hold significantly more underlying beliefs supporting substance use, theft, problems with authority, and manipulation and rule violation, while also presenting with less personal responsibility, then correctional officer applicants.

Table 2

Differences Between Correctional Officer Applicants and Offenders on the CH-S

CH-S Integrity Scales	Sample	<i>M</i>	<i>SD</i>	<i>t</i> (df)	<i>p</i>	Cohen's <i>d</i>
Substances	Correctional Officer	7.86	1.93	-14.50 (262.75)	.000	1.29
	Offender	12.94	5.22			
Theft	Correctional Officer	6.50	1.92	-10.37 (324.75)	.000	.87
	Offender	8.68	2.96			
Authority	Correctional Officer	7.60	1.99	-16.14 (389.86)	.000	1.30
	Offender	10.44	2.35			
Rules & Deception	Correctional Officer	10.39	2.71	-9.62 (308.50)	.000	.82
	Offender	13.50	4.60			
Responsibility	Correctional Officer	3.04	1.16	-8.76 (762)	.000	.65
	Offender	3.93	1.55			
IMS	Correctional Officer	6.64	1.08	1.05 (544.03)	.296	
	Offender	6.56	.88			

Results also showed that law enforcement officer applicants scored significantly lower than offenders on probation or parole on the CH-S integrity scales (Table 3), supporting hypothesis 3 in this study. As expected, this finding means that individuals on probation or parole supervision hold significantly more underlying beliefs supporting substance use, theft, problems with authority, and manipulation and rule violation, while also presenting with less personal responsibility, than law enforcement officer applicants.

Table 3
Differences Between Law Enforcement Officer Applicants and Offenders on the CH-S

CH-S Integrity Scales	Sample	<i>M</i>	<i>SD</i>	<i>t</i> (df)	<i>p</i>	<i>d</i>
Substances	Law Enforcement	7.71	1.67	-14.53 (287.70)	.000	1.35
	Offender	12.94	5.22			
Theft	Law Enforcement	6.56	1.80	-9.21 (393.54)	.000	.87
	Offender	8.68	2.96			
Authority	Law Enforcement	7.89	2.09	-12.05 (437.81)	.000	1.15
	Offender	10.44	2.35			
Rules & Deception	Law Enforcement	10.82	2.82	-7.46 (394.78)	.000	.70
	Offender	13.50	4.60			
Responsibility	Law Enforcement	3.12	1.21	-6.01 (438)	.000	.58
	Offender	3.93	1.55			
IMS	Law Enforcement	6.62	1.07	.71 (396.82)	.477	
	Offender	6.56	.88			

Results also support hypotheses 4 and 5 by revealing that correctional and law enforcement officer applicant IMS scores were statistically similar to IMS scores generated by individuals on probation or parole (Table 2 and 3). These results may suggest that the IMS may measure impression management without being influenced by criminal thinking (Tatman & Huss, 2019a) or context in which the CH-S was taken.

Discussion

Analyses conducted in this paper measured the convergent validity of the CH-S by using a contrasted groups approach. A contrasted group methodology measures the difference in test scores between groups of people who would be expected to score differently on a test. When two groups that should score differently on a test actually do score differently (e.g., correctional officers versus offenders) then that difference speaks to the convergent validity of the test. Regarding this study, these results provided added support for the convergent validity of the CH-S as a measure of integrity by showing that the CH-S can differentiate between offenders and law enforcement or correctional officer applicants. This is a significant finding because it empirically shows a clear separation in scores between law enforcement or correctional officers and offenders. This finding has practical utility for hiring agencies by offering potential decision cut points. For example, law enforcement officer applicants generated an average Authority score of 8 (rounded up), while offenders generated an Authority score of 10 (rounded down; Table 3). Based on the shared 2 point standard deviation, additional attention, interview questions, or collateral contacts may be warranted for law enforcement officer applicants who scored over 10 points, as it starts to exceed what is commonly seen in law enforcement applicants and is resembling scores typically generated by offenders. A score of 11 or above on Authority for a law enforcement officer would fall 1.5 standard deviations above the mean compared to other officer applicants meaning their elevated score falls 97.7% higher than other officer applicants.

Convergent validity was also measured by comparing two groups of people that should score similarly on the CH-S: law enforcement and correctional officers. When two groups that should score similarly on a test actually do score in a similar way it also speaks to the convergent

validity of the test. Regarding this study, these results provide further support for the convergent validity of the IMS as a measure of integrity by showing consistency between comparable groups of people. This finding also has significant, practical utility for law enforcement hiring agencies. To date, reliability and validity data on the CH-S has involved primarily correctional officer applicants. This study shows that law enforcement officer applicants generate scores that are statistically similar to correctional officers, suggesting that existing cut scores and norms generated for correctional officers can also apply for law enforcement officers, widening the scope of use of the CH-S to law enforcement officer applicants.

References

- Tatman, A. W. (2019a). *Critical Hire Assessments: Technical Manual for the Critical Hire-Screen and Critical Hire-Personality Assessment*. Urbandale, Iowa: Critical Hire, PLC.
- Tatman, A. W. (2019b). Predicting Correctional Officer Employment Success: Criterion Validity for the Critical Hire – Screen. Manuscript submitted for publication.
- Tatman, A. W., & Huss, M. T. (2019a). Criminal thinking and pre-employment integrity testing: Correlations between the Texas Christian University Criminal Thinking Scales and Critical Hire-Screen. *Journal of Human Resource Management*, 22(1), 65-69.
- Tatman, A. W., & Huss, M. T. (2019b). Initial reliability and validity for the Critical Hire - Screen. *Personnel Assessment and Decisions*. In press.