

City University of New York (CUNY)

CUNY Academic Works

Student Theses

John Jay College of Criminal Justice

Spring 6-2020

Psychopathy and Police Officers: A Cross-Sectional Analysis of the Relationship Between Psychopathic Traits and Police Work Across Temporal Factors

Hunter N. Moore

CUNY John Jay College, hunternmoore@gmail.com

[How does access to this work benefit you? Let us know!](#)

More information about this work at: https://academicworks.cuny.edu/jj_etds/162

Discover additional works at: <https://academicworks.cuny.edu>

This work is made publicly available by the City University of New York (CUNY).

Contact: AcademicWorks@cuny.edu

Psychopathy and Police Officers: A Cross-Sectional Analysis of the Relationship Between
Psychopathic Traits and Police Work Across Temporal Factors

Hunter N. Moore

John Jay College of Criminal Justice, City University of New York

New York, NY

Spring 2020

Table of Contents

Table of Contents	2
Abstract	4
List of Tables	5
List of Figures	6
Introduction	7
Classic Concept of Psychopathy	8
Assessing Psychopathy	8
Developmental Trends of Psychopathy	11
Psychopathy and Law Enforcement	12
Current Study	14
Method	15
Participants and Procedure	16
Materials	17
Data Analysis	17
Results	18
PPI-R Scores Across Age	18
PPI-R Scores Across Time on the Job	19
Coldheartedness	20

PSYCHOPATHY AND POLICE	3
Other Notable Findings	20
Discussion	21
Limitations	23
Future Research	25
Conclusions	25
References	27
Appendix	38

Abstract

It's estimated that psychopathic personalities constitute about 1% of the general population but is seen at elevated rates in particularly stressful and harsh environments (Babiak & Hare, 2006; Hare, 1996). A career in law enforcement is one known to be uniquely stressful (Lucas et al., 2012), and the trauma from their career seems to be having an impact on their personality (Wills & Schulberg, 2016). While psychopathy traits have been reported in police officers (Próchniak, 2012), these traits have yet to be assessed as a function of time. The current study explores these relationships by assessing psychopathy traits, as measured by the Psychopathic Personality Inventory-Revised, in a sample of New York City police officers and recruits across groups categorized by age and the length of time spent on the job. Significant differences of psychopathy traits were found between age and time-on-the-job groups, particularly in PPI-1 traits. However, these relationships do not fit a simple, linear model. It was also found that this sample had higher PPI-1 scores than PPI-2 scores across all time variables, a configuration that is unique from that of criminal and community samples (Lilienfeld & Widows, 2005). These findings suggest that a significant relationship exists between psychopathy and time, a relationship that varies between populations. These findings also warrant further research, preferably longitudinal in nature.

Keywords: psychopathy, police, law enforcement, age differences, Psychopathic Personality Inventory-Revised

List of Tables

1. Significant Differences of PPI-R Factor Scores Between Age Groups	19
2. Significant Differences of PPI-R Factors Scores Between Time on the Job Groups	19

List of Figures

1. Means of PPI-R Factor Scores Across Age Groups 18

2. Means of PPI-R Factor Scores Across Time on the Job Groups 18

Psychopathy and Policing: A Cross-Sectional Analysis of the Relationship Between
Psychopathic Traits and Police Work Across Temporal Factors

Psychopathy is a personality construct which is characterized by traits such as emotional callousness, grandiosity, pathological lying, and an increased need for stimulation (Cleckley, 1941; Hare, 1965). While this personality type exists in about 1% of the general population, it can be found at higher rates (about 15-25%) in the prison population (Hare, 1996). This disproportional representation of psychopathy in correctional institutions emphasizes its importance for the field of criminal justice. In addressing this issue, researchers have discovered the value of the predictive power of psychopathy in regard to recidivism, specifically violent recidivism (Hart et al., 1988; Serin, 1996). However, further evidence suggests that research should continue to extend this attention to other populations.

For instance, focus has more recently diverged to exploring this construct in a variety of high-status positions, with the majority of research being applied to the corporate world (Boddy, 2010, 2014; Howe et al., 2014). Because of the harsh relational environment that often exists in this field, scholars sought to understand how the personality types that thrive in these careers may be related to psychopathy. Indeed, when looking at corporate executive officers (CEOs), data suggests elevated rates of psychopathy scores which seem to be related to greater professional success (Babiak & Hare, 2006; Howe et al., 2014), but tends to have adverse effects on the mood and productivity of their employees (Boddy, 2010, 2014). These findings lead to more general questions about the role of psychopathy in careers with especially harsh or stressful environments.

A career in law enforcement is one that has been identified as being uniquely stressful and traumatizing (Beehr et al., 1995; Brown & Campbell, 1994; Chopko et al., 2015; Lucas et al., 2012), and as the proceeding literature review aims to defend, may also be related to certain features of psychopathy. This review will introduce the reader to general knowledge regarding psychopathy, including classical and modern conceptualizations, as well as important developmental trends of the construct. This review will end with a proposed connection of certain psychopathic traits to time variables (as measured by a cross-sectional analysis) in the law enforcement population and the current study designed to assess this connection.

Classic Concept of Psychopathy

Although many other descriptions of seemingly similar concepts existed earlier on, in 1941 Hervey Cleckley published a book called *The Mask of Sanity*, providing the first clinical description of the psychopathic personality. Cleckley referred to psychopathy as a "mask of sanity" because of an apparent degree of psychopathology that is disguised, or masked, by superficial pro-social behaviors. The psychological disturbances can be noted in highly impulsive behavior, a reduced capacity for empathic responses, and an impaired ability to recognize emotion in others (Decety et al., 2013; Stevens et al., 2001). The mask is constructed through charm and social dominance, as well as a resistance to anxiety and depression (Cleckley, 1941; Falkenbach et al., 2013). This masking of the disturbances is a key factor of the uniqueness and transience of this disorder, as well as its adaptive qualities.

Assessing Psychopathy

Due to the connections between psychopathy and certain outcomes, like recidivism, the process in which psychopathic traits are assessed and measured has received considerable attention. The most common tool for assessing psychopathy is the Psychopathy Checklist-

Revised (PCL-R), developed by Dr. Robert Hare (2003). The PCL-R is a 20-item scale, scored by the clinician by gathering information through semi-structured interviews as well as collateral information such as hospital records. Although the PCL-R is considered the gold-standard for assessing psychopathy, the assessments are resource- and time-consuming (taking about 90 to 120 minutes to complete) (Hare, 2003); therefore, research on large groups of non-forensic populations calls for the use of a self-report measure. Consequently, tools like the Psychopathic Personality Inventory-Revised (PPI-R), a 154-item self-report measure, have proved to be valuable for expanding psychopathy research (Lilienfeld & Widows, 2005).

Subtypes of Psychopathy

Psychopathy has come to be understood as a multidimensional construct, with separate, but related, groups of traits (Cooke & Michie, 2007). Factor analyses of the PCL-R show support for a two-factor model (Hare et al., 1990; Hare, 2003). In this two-dimensional model, Factor 1 embodies the interpersonal-affective aspect of psychopathy, including characteristics like low anxiety, manipulativeness, grandiosity, and a lack of empathy (Hare, 2003; Skeem et al., 2003). Individuals representing a high proportion of Factor 1 traits are often considered a subtype of psychopathic individuals known as primary psychopaths (Benning et al., 2003). Factor 2 refers to the lifestyle-antisocial traits, like impulsivity, a general disregard for social norms, and a failure to plan (Benning et al., 2003; Snowden & Gray, 2011). Individuals with elevated levels of psychopathy concentrated in this domain are often considered to be secondary psychopaths (Benning et al., 2003). Secondary psychopathy is also associated with high trait anxiety (Skeem et al., 2003).

In support of a binary conceptualization, two dominant factors also emerge from analysis of the PPI-R (Benning et al., 2003). PPI-1, also called Fearless Dominance (FD), reflects Factor 1 traits, while PPI-2, or Self-Centered Impulsivity (SCI), reflects Factor 2 traits. Out of the eight subscales on the PPI-R, seven of them load onto these two factors, leaving the scale of Coldheartedness to be assessed individually. Coldheartedness is representative of a lack of emotion, guilt, empathy, and connection to others (Lilienfeld & Widows, 2005). In addition to the factor analyses, Model-Based Cluster Analysis is another technique that has been employed to further validate the existence of subtypes of psychopathy (e.g., Falkenbach et al., 2018; Hicks et al., 2004; Lee & Salekin, 2010; Poythress et al., 2010; Skeem et al., 2007).

Further research on the two factors of psychopathy, and their related subtypes, has continued to identify more differences between them. For instance, it has been determined that secondary psychopathy is associated with reactive aggression, substance abuse, and suicidality (Benning, et al., 2003; Kimonis et al., 2012; Patrick et al., 1997; Verona et al., 2001).

Alternatively, primary psychopathy seems to represent a more adaptive presentation, showing positive correlations with positive affect, socio-economic status, education level, and social functioning (Benning et al., 2003; Derefinko & Lynam, 2006; Maples et al., 2014).

Consideration of the adaptive and maladaptive nature of these constructs has contributed to a growing body of research about "successful psychopathy." Successful psychopaths are individuals who exhibit certain features of psychopathy which have become successfully adaptive to their lifestyle (Lilienfeld et al., 2015). Generally speaking, successful psychopaths are those who exhibit traits of primary psychopathy more prominently in comparison to the more maladaptive subtypes (Hall & Benning, 2006; Lilienfeld et al., 2012). Therefore, on the PPI-R, successful psychopathy would present as higher scores on the PPI-1 factor in relation to the PPI-

2 measure. In Cleckley's terminology, these are the individuals who have developed a convincing mask to conceal, or work around, any pathology, allowing for a higher level of functioning.

Developmental Trends of Psychopathy

Although psychopathy is thought to be relatively stable over time (Hare, 2003), research has provided evidence of certain changes that occur throughout the lifespan in the presentation of psychopathic traits (Bates et al., 2014; Gill & Crino, 2012; Harpur & Hare, 1994; Huchzermeyer et al., 2008). For instance, studies of criminal psychopaths have shown that the Factor 1 traits of psychopathy remain stable throughout the lifetime, while the Factor 2 traits tend to decrease with age, specifically around the fourth decade of life (Hare, 2003; Harpur & Hare, 1994; Huchzermeyer et al., 2008). The most plausible explanation of this phenomenon is found in the "maturation hypothesis," which posits that immature personality types (like psychopathic or borderline) will become less symptomatic as they age and their impulsivity decreases, while the mature personalities (like obsessive-compulsive or paranoid) will worsen over time with mental degeneration (Whitbourne & Whitbourne, 1979). Essentially, criminal psychopaths organically become more successful with age. A longitudinal study by Morizot & Leblanc shows support for this trend in their Undercontrolled-Delayed Maturation personality typology (2005). The group of men in that typology, who displayed the most frequent and varied antisocial behaviors during adolescence, showed consistent levels of disinhibition throughout their lives, but reduced their engagement in criminality in adulthood.

An examination of developmental trends of psychopathic traits was eventually extended to community populations (often university students), in which a slightly different trend appears. In these cases, all reported dimensions of psychopathy tend to decrease with age (Bates et al., 2014; Gill & Crino, 2012). One way of understanding this variation is to recognize that, while

normal human maturation would lead to a reduction in traits regarding impulsive behavior such as those seen in Factor 2 (Green et al., 1994), Factor 1 traits, such as manipulateness and grandiosity, might actually prove to be quite adaptable to the harsh life of criminality and incarceration, resulting in the maintenance of Factor 1 traits in this population. However, individuals are often scorned for those very same characteristics in the general public, resulting in the reduction of Factor 1 traits. The experience of extended incarceration alone could feasibly result in the maintenance of such traits. For instance, studies of prisonization, or the change one goes through during incarceration, suggest a degree of desensitization and change of emotional expression that occurs in incarcerated individuals due to the volatile environment of prison (Akers et al., 1977; Bukstel & Kilmann, 1980; Homer, 1981). In order to further understand the relationship between environment and changes in the presentation of psychopathy over time, an assessment of psychopathy traits as a function of age in other environments, in which certain traits may be adaptable, is warranted.

Psychopathy and Law Enforcement

As previously mentioned, law enforcement is a career which has been identified as uniquely stressful and traumatizing (Beehr et al., 1995; Brown & Campbell, 1994; Chopko et al., 2015; Lucas et al., 2012). Beginning with the police academy, recruits are presented with a “punitive initiation into the occupational subculture,” in which pain, degradation, and sacrifice are central to their socialization (Doreian & Conti, 2017). Once in their line of duty, police officers may be physically attacked, publicly criticized, or may witness the deaths of citizens and fellow officers (Lucas et al., 2012). Nonetheless, police officers generally exhibit emotional stability and are reported to be “remarkably free of psychopathology,” suggesting psychological resilience in the law enforcement population (Gomà-i-Freixanet & Wismeijer, 2002; Lorr &

Strack, 1994, p. 4). Perhaps in a similar way that Factor 1 traits have been adaptable for the forensic population to the harsh environments of prison (Akers et al., 1977; Bukstel & Kilmann, 1980; Hare, 2003; Harpur & Hare, 1994; Homer, 1981; Huchzermeier et al., 2008, Morizot & Leblanc, 2005), this same constellation of traits has been adaptable for police officers to maintain emotional stability through the stress and trauma of their career. For instance, it's plausible that the resilience against anxiety and depression that is associated with Factor 1 psychopathy could protect them from the stress of their profession, while a lack of empathy could safe-guard police officers from the trauma of the events they witness. Indeed, certain traits reflective of Factor 1 psychopathy have been noted in law enforcement agents. Among these are limited empathy, low anxiety, excitement-seeking, and dominance (Adlam, 1982; Bakker & Heuven, 2006; Mills & Bohannon, 1980; Prochniak, 2012). Further, it seems that the presence of these traits may be contributing to greater success as a police officer (Bannish & Ruiz, 2003; Forero et al., 2009).

Few studies have delved into the existence of psychopathic traits specifically in police officers; however, a recent study compared PPI-R scores of police recruits to that of community and offender samples presented in the PPI-R manual (Falkenbach, et al., 2018; Lilienfeld & Widows, 2005). In accordance with the idea that Factor 1 psychopathy may contribute to one's adaptability to a law enforcement career, this study found higher levels of PPI-1 traits (analogous to Factor 1 traits) and lower levels of the PPI-2 factor (or Factor 2) in the law enforcement sample in comparison to each of the other samples.

While offender and community samples have shown particular developmental trends in regard to traits of psychopathy as previously mentioned, research has done little to examine these trends in law enforcement populations. Due to the connection of adaptive psychopathy to success in police officers, this examination seems warranted. Further, while police officers are a

reportedly emotionally stable population, there is evidence that the experience of their careers, especially the occupational stress and trauma that they endure, may be having an impact on their personality (Wills & Schuldberg, 2016). Specifically, it was found that the traits of Independence, Well-Being, Empathy, Self-Control, and Good-Impression all decreased in a 5 to 10-year period following the pre-hire evaluations of recruits (Wills & Schuldberg, 2016). The rate of decline of these traits was positively correlated with the presence of posttraumatic stress symptoms (Wills & Schuldberg, 2016). Additionally, job-related traumatic events tended to have a negative impact on empathy in this study (Wills & Schuldberg, 2016). This suggests that certain personality traits may be less stable throughout the lifespan than previously believed, depending on the environment. To better understand this phenomenon, and how it relates to the dynamic factors of psychopathy, psychopathy traits in law enforcement populations would need to be specifically assessed as a function of the amount of time spent in their career. However, past research on the developmental trends of psychopathy characteristics have been based on age, not the amount of time spent in a particular environment like prison or a law enforcement career. In order to bridge this gap in research, time-based changes in psychopathic traits should be simultaneously assessed according to age and the amount of time spent on the job.

Current Study

The present study explored the relationship between psychopathy and police work; specifically looking at the distribution of the two dimensions of psychopathy across age and time on the job. Because longitudinal studies have shown changes in psychopathic traits with age in community and in criminal samples (Bates et al., 2014; Gill & Crino, 2012; Harpur & Hare, 1994; Huchzermeier et al., 2008), and because they have also shown certain personality changes in law

enforcement populations as a function of time on the job (Wills & Schuldberg, 2016), either or both of these factors, age and time on the job, could be potentially associated with variations of psychopathic traits in law enforcement agents. Moreover, as little research has been done in this area, both age and time on the job are held as variables in order to capture these potential associations. Due to the conceptualization of Factor 1 traits as being potentially adaptive in harsh environments, it is proposed that Factor 1 traits, or PPI-1 traits as presented by the PPI-R, will be more prominent in those participants who are older and/or have spent more time in a career of law enforcement. Due to the process of normal human maturation, and the associated reduction in impulsivity, it is proposed that Factor 2 traits, or PPI-2 traits as presented by the PPI-R, will be less prominent in those participants who are older and/or have spent more time in a career of law enforcement. Although not a part of the hypothesis, PPI-C (the PPI-R Coldheartedness scale), will also be assessed in an explorative manner to gain a more complete picture of these relationships.

Method

Research Design

The current study is a cross-sectional, between-subjects design which allows for the examination of psychopathy traits throughout a law enforcement career within a reasonable time frame. Regression analyses and analyses of variance will be run to find any existing relationships between one's age, the time they've spent in law enforcement, and their psychopathy scores.

Participants and Procedure

This study utilized an existing database of 1,459 police officers and recruits. For collection of the original data, convenience sampling was used to gather a sample from a Northeast metropolitan police force. IRB-approved procedures were followed for the collection of all data used. The participants took part in the study in exchange for a free meal, and their participation had no impact on their job. Following the informed consent process, the PPI-R was administered, taking approximately 90 minutes for completion.

The age of participants ranged from 21 to 59 years ($M = 29.78$, $SD = 6.355$). The racial demographics of participants was relatively representative of the department with 57.8% ($n = 844$) Caucasian, 20.7% ($n = 302$) Hispanic/Latino, 11.9% ($n = 174$) African American, 6.5% ($n = 95$) Asian/Pacific Islander, 0.1% ($n = 1$) Native American, 1.4% ($n = 21$) of a different identity, and 1.6% ($n = 23$) undeclared. Consistent with statistics regarding gender makeup of U.S. police officers, males accounted for the majority (85.3% male). The pool of participants consisted of 57.6% ($n = 841$) recruits/PPOs, 27.7% ($n = 404$) sergeants, 6.6% ($n = 96$) officers, 4.9% ($n = 72$) lieutenants, 2.2% ($n = 32$) detectives, 0.9% ($n = 13$) captains, 0.1% ($n = 1$) chief inspectors, and 0.1% ($n = 1$) was unreported. Recruits were overrepresented due to sampling methods. Participants reported having spent between 0 and 396 months in their law enforcement career ($M = 54.67$, $SD = 68.209$).

Participants were separated into groups based on two different factors, their age and the number of months they've been in law enforcement. Eight groups were established for the age of participants at the time of assessment: 21-25, 26-30, 31-35, 36-40, 41-45, 46-50, 51-55, and 56-60. Similarly, eight groups were established for the number of months that participants had spent

in law enforcement at the time of assessment: 0-49, 50-99, 100-149, 150-199, 200-249, 250-299, 300-349, and 350-399.

Materials

Psychopathic Personality Inventory Revised (PPI-R; Lilienfeld & Widows, 2005). The PPI-R is a 154-item self-report measure of psychopathy. The measure consists of a series of statements such as "I stretch the rules to see how much I can get away with," with responses being rated on a four-point scale as 1:False, 2:Mostly False, 3:Mostly True, 4:True. As previously mentioned, this measure is broken down into eight subscales. Social Influence, Fearlessness, and Stress Immunity load onto Fearless Dominance (PPI-R-I); Machiavellian Egocentricity, Rebellious Nonconformity, Blame Externalization, and Carefree Nonplanfulness load onto Self-Centered Impulsivity (PPI-R-II). An additional subscale, Coldheartedness does not load onto either of these factors, so it creates its own factor: Coldheartedness (PPI-R-C). Research has supported the validity and reliability of this measure ($\alpha = .78-.92$; Lilienfeld & Widows, 2005).

Data Analysis

Descriptive statistics were run to assess the distribution of age, time on the job, rank, gender, marital status, and racial make-up of the sample. IBM SPSS version 24 was used to assess for the existence and degree of linear and curvilinear relationships between each factor of psychopathy with age, as well as with the length of time on the job. Omega-squared statistics were run to assess the magnitude of these effects. Multivariate and univariate (ANOVA) analyses of variance were used to assess for statistically significant differences between age groups and, again, for time on the job groups. Tukey's HSD post-hoc test was then run to determine which of the groups are statistically different. Descriptive statistics were also run for

scores on the Coldheartedness scale. It's relationship to time on the job and age was assessed through correlations, linear regression analyses, and ANOVAs followed by Tukey's HSD post-hoc test.

Results

Figures 1 and 2 show differences in PPI-R scores based on the participant's age and the length of time they've spent on the job. As would be expected there was a high, but not perfect, correlation between a participant's age and the number of months they've been on the job (TOJ) ($r = .814, p < .000$).

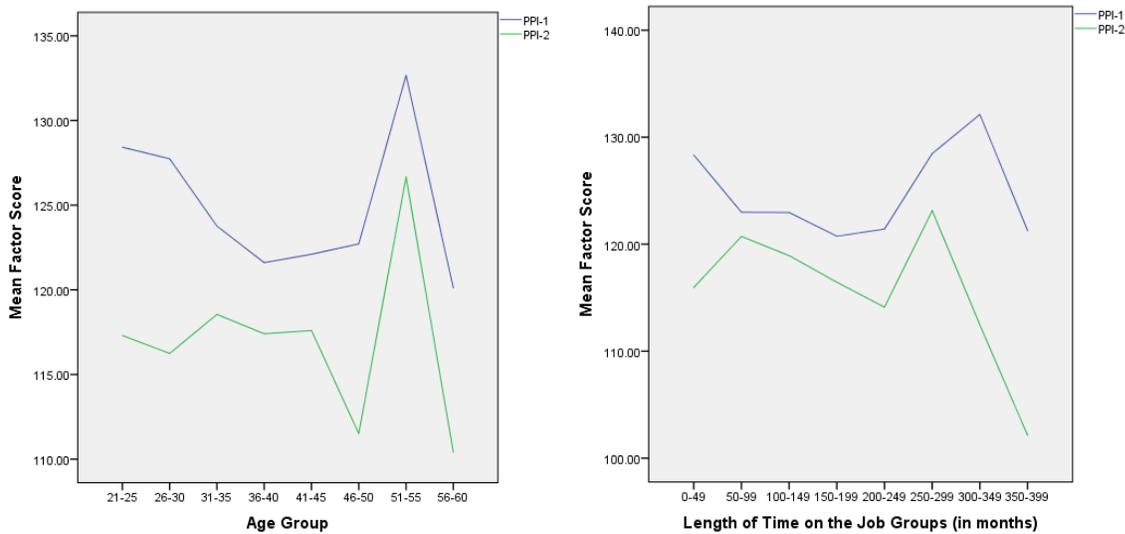


Figure 1. Means of the Psychopathic Personality Inventory-Revised (PPI-R) factor scores across age groups.

Figure 2. Means of the Psychopathic Personality Inventory-Revised (PPI-R) factor scores across time on the job (TOJ) groups.

PPI-R Scores Across Age

Multivariate analyses of variance showed that there were significant differences across age groups for PPI-1 ($F(7, 1405) = 5.52; p < .000$), but not for PPI-2 ($F(7, 1405) = .61; p <$

.744). A univariate analysis of variance (ANOVA) across age groups showed statistically significant differences for PPI-1 ($F(7, 1406) = 5.64, p < .000$), but not for PPI-2 ($F(7, 1405) = .61, p < .744$) (see Table 1). Trend analysis indicated significant linear ($F(1, 1412) = 31.67, p < .000$), and quadratic ($F(1, 1412) = 28.52, p = .000$) trends for PPI-1 scores across age; however, no significant linear or quadratic trends were found for PPI-2.

Table 1. Significant differences of PPI-R factor scores between age groups

	21-25		26-30		31-35		36-40		41-45		46-50		51-55		56-60		F	N ²
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD				
PPI-R Total	282.28	28.23	280.33	24.71	277.92	30.96	275.71	28.11	276.67	29.69	268.41	20.86	290.00	28.00	261.64	17.59	(7, 1406) = 2.01	.010
PPI-1	128.43 ^{a,d,e,g}	16.09	127.74 ^{a,d}	16.20	123.53 ^{a,b}	16.48	121.60 ^{a,b}	14.24	122.10 ^a	15.30	122.71	15.49	132.67	5.86	120.11	6.24	(7, 1406) = 5.64	.027
PPI-2	117.30	22.62	116.24	19.83	118.55	23.07	117.40	23.10	117.60	24.55	111.51	13.99	126.67	21.96	110.42	19.77	(7, 1405) = 0.61	.003

Superscript letters indicate which age groups have significant differences in means: a = 21-25, b = 26-30, c = 31-35, d = 36-40, e = 41-45, f = 46-50, g = 51-55, h = 56-60; significance level indicated by * $p < .05$

PPI-R Scores Across Time on the Job

Multivariate analyses of variance across TOJ groups showed statistically significant differences for both PPI-1 scores ($F(7, 1391) = 6.72; p < .000$) and PPI-2 scores ($F(7, 1391) = 2.06; p < .045$). A univariate analysis of variance across TOJ groups showed significant differences for both PPI-1 ($F(7, 1392) = 6.89, p < .000$) and PPI-2 (TOJ & PPI-2: $F(7, 1391) = 2.06, p < .045$) (see Table 2). Analysis showed significant linear (TOJ/PPI1: $F(1, 1386) = 28.25, p = .000$), and quadratic (TOJ²/PPI1: $F(1, 1386) = 10.097, p = .002$) trends for PPI-1 scores across TOJ; again, no significant linear or quadratic trends were found for PPI-2.

Table 2. Significant differences of PPI-R factor scores between TOJ groups

	0-49		50-99		100-149		150-199		200-249		250-299		300-349		350-399		F	N ²
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD				
PPI-R Total	281.09	27.20	279.78	27.06	276.71	32.94	272.83	25.52	272.44	28.12	286.45	24.38	278.83	21.74	260.99	15.17	(7, 1392) = 1.88	.009
PPI-1	128.35 ^{b,c,d}	15.72	122.99 ^a	16.34	122.60 ^a	17.29	120.74 ^a	16.48	121.41	13.92	128.47	12.15	132.13	6.36	121.27	6.15	(7, 1392) = 6.89	.033
PPI-2	115.95 ^b	22.23	120.73 ^a	21.74	118.93	21.54	116.45	22.33	114.11	22.55	123.14	20.36	112.45	19.74	102.14	9.47	(7, 1391) = 2.06	.010

Superscript letters indicate which TOJ groups have significant differences in means: a = 0-49 months, b = 50-99, c = 100-149, d = 150-199, e = 200-249, f = 250-299, g = 300-349, h = 350-399; significance level indicated by * $p < .05$

Coldheartedness

Scores on the Coldheartedness scale in the present sample ranged from 16 to 58.67 ($M = 36.45$, $SD = 6.78$). This score is higher than scores reported in community and offender samples in the PPI-R manual (Lilienfeld & Widows, 2005), supporting previous findings by Falkenbach et al. (2018). There was a significant, but weak positive relationship between PPI-C and PPI-2 ($r = .113$, $p < .000$); there was not a significant relationship between PPI-C and PPI-1. There also was not a significant relationship between PPI-C and age, but there was a significant, yet weak negative relationship between PPI-C and TOJ ($r = -.053$, $p < .049$). Additionally, there were no significant differences between age groups or TOJ groups in regard to PPI-C scores.

Other Notable Findings

Further analyses were run on gender, race, and marital differences to better understand these results. One-way ANOVAs were used for these tests, with Tukey's HSD being used for all post-hoc analyses. Men had scores that were significantly higher than women for PPI-1 ($F(1, 1438) = 40.25$, $p < .000$, $\eta^2 = .027$), and this difference was significantly sustained in the total PPI-R scores ($F(1, 1438) = 34.43$, $p < .000$, $\eta^2 = .023$). When looking at racial differences, Whites/Caucasians and Asian/Pacific Islanders were amongst the highest of scorers. Particularly, on PPI-1, Whites/Caucasians scored significantly higher than Hispanic/Latinos and Asian/Pacific Islanders ($F(4, 1423) = 4.58$, $p < .001$, $\eta^2 = .013$). In regards to PPI-2 and race, Asian/Pacific Islanders scored significantly higher scores than Hispanic/Latinos and Whites/Caucasians ($F(4, 1422) = 4.34$, $p < .002$, $\eta^2 = .012$). Lastly, marital status was assessed. Those participants which were single (i.e. never been married) scored significantly higher in PPI-1 ($F(3, 1435) = 4.51$, $p < .004$, $\eta^2 = .009$), and the total PPI-R scores reflected this significant difference ($F(3, 1435) = 3.85$, $p < .009$, $\eta^2 = .008$) although the PPI-2 scores showed no significant differences.

Discussion

In looking at a law enforcement population, the two factors of psychopathy, PPI-1 and PPI-2, each have different relationships with age, as they do with the length of time one has spent on the job. Analyses of PPI-R factor scores show that there are significant differences between age groups for PPI-1 scores, but not for PPI-2. However, for the amount of time spent on the job, significant differences existed for both factors. Although cross-sectional in design, the current study allows for the examination of the two factors of psychopathy across time variables. More simple, linear trends were hypothesized, but the results ended up adhering to a more complex, non-linear trend. Generally speaking, PPI-1 scores are fairly high in younger, less-experienced police officers, decrease, and then plateau until they peak in the early 50s. Finally, PPI-1 scores decrease again in participants over the age of 56. Statistically speaking, PPI-2 scores show more stability across time variables, but they also peak in the early 50s before decreasing for the eldest, most-experienced officers.

Actual results did not precisely mimic the expected ones; however, the examination of confounding variables may bring understanding to this. In regard to the first hypothesis, that PPI-1 scores will increase with age/job experience, this would have been true (although still not a perfectly linear association) if the study cut off at the age of 55. One might recall that all scores of psychopathy decreased with age in the community population (Bates et al., 2014; Gill & Crino, 2012), hypothetically due to them maturing out of these kinds of traits (Whitbourne & Whitbourne, 1979). It is possible that, although the PPI-1 traits may be adaptive to a law enforcement career, the trends that are seen in the general public eventually have their effect on the police community as well. This non-linear relationship would essentially be a balancing between the environment of their job and the fact that they are still a part of the larger

community. Also, while a lack of empathy, a central trait of psychopathy, is originally thought of as a Factor 1 trait, it is best captured by the Coldheartedness scale on the PPI-R (Lilienfeld & Widows, 2005). Since it's been found that empathy is negatively correlated with traumatic, job-related events in police officers, Coldheartedness may be more significant in the adaptation of psychopathy traits to a law enforcement career than originally hypothesized. Future research could examine this by looking at the relationship between PPI-C traits and traumatic events endured on the job.

The second hypothesis, which states that PPI-2 scores will decrease with age/job experience, is supported in the sense that the oldest/most experienced group of participants exhibit the lowest PPI-2 scores out of all groups. However, once again, there is significant variation amongst younger age groups. As posttraumatic stress symptoms have been reported to be associated with personality changes for police officers (Wills & Schulberg, 2016), it is possible that traumatic events and the subsequent posttraumatic stress symptoms they experience are leading to spikes in impulsive behavior. Impulsivity, which is related to *The Diagnostic and Statistical Manual of Mental Disorders* (5th edition; American Psychiatric Association, 2013), Criterion E of PTSD, "Alterations in Arousal and Reactivity", is also a PPI-2 psychopathy trait. Although, these earlier age groups are not as likely to have yet experienced the same traumas as those more experienced groups, and therefore, not yet exhibiting such significant variations in their behavior. Another potential explanation is the presence of racial and gender differences; studies have shown that not all races or genders present posttraumatic stress symptoms the same, a phenomenon that has been reiterated in studies of gender differences in posttraumatic stress symptoms among police officers (Carragher et al., 2016; Kaczurkin et al., 2016; Wills & Schulberg, 2017). Studies examining the relationship between PPI-2 psychopathy traits and

traumatic events/posttraumatic stress symptoms, as well as a further examination into racial and gender differences in the temporal patterns of PPI-2 scores could be useful in providing clarity on this topic.

One final note should be made in regard to the relationship between PPI-1 and PPI-2 scores of psychopathy. In the sample from the current study, police officer's PPI-1 scores are generally higher than their PPI-2 scores across all time variables. This expands upon the findings from Falkenbach et al. (2018), which shows that police recruits tend to have higher PPI-1 scores in relation to their PPI-2 scores. This finding is notable in the sense that recorded PPI-R scores of community and offender samples (as reported by Lilienfeld & Widows, 2005) and student samples (as reported by Falkenbach et al., 2018) all show higher PPI-2 scores rather than their PPI-1 scores. This difference between police samples from so many other populations may be reflective of a "hero" mindset in which anxiety is low and traits like fearlessness and social dominance are high. This heroism was discussed by Lykken when he said that "The hero and the psychopath might be twigs on the same genetic branch" (1995, p. 118). This topic is further explored by Falkenbach, Glackin, & Mckinley in a 2018 article.

Limitations

Firstly, the present study is limited by the fact that it is cross-sectional as opposed to longitudinal. Since it does not follow the same participants, tracking their psychopathy scores over time, this study can only reveal change at an aggregate level. Due to this, a multitude of factors could be interfering with the outcomes of this study. For instance, cohort differences could account for some of the variation of scores between groups.

In hand with this, another limitation, is the varying sample sizes across age and TOJ groups. For instance, the sample size for age 21-25 is 433, while the groups aged 51-55 and 56-60 each had a sample size of only 3. These inconsistent sample sizes lower the power of the study and increases the margin of error. The small sample size for the older age groups reduces the chance for variability among participants, while the larger sample size for the younger age groups may artificially increase such variability among participants.

Also, a difference in measurement tools across studies makes for a difficult comparison. The PCL-R, which was used to assess psychopathy as a function of age, loads perfectly onto the two factors (Hare, 2003; Harpur & Hare, 1994). The PPI-R is best fit to this two-factor model; however, the scale of Coldheartedness, which measures the lack of empathy, does not load onto either factor, leaving it to be assessed individually. Considering the relevance of trauma in the uniqueness of the law enforcement population and how it relates to empathy, the fact that the measure used for this study does not fit more cleanly into the two-factor model becomes problematic.

Other limitations include the presence of various extraneous variables. For instance, the specific type of work a participant does within the police force (i.e. a patrol cop vs. a cop in a specialized unit like homicide) is likely to dictate the experiences of the individual and may also possibly dictate the way in which they adapt to their career. Different locations may also heed different results; this study examined New York City police officers, but other cities or smaller towns may result in different adaptations. Also, although some observations of racial differences were made in the present study, further evaluation of racial background in this context may be warranted.

Future Research

Given the limitations of the present study, future research has a variety of directions it can take in order to gain a deeper understanding on the concept of adaptive psychopathy traits in police officers. Where resources permit, a longitudinal study of the same sort would be extremely valuable. As previously mentioned, exploring racial and gender differences in the temporal patterns of PPI-2 psychopathy scores may also prove valuable. Also previously mentioned, an examination of job-related trauma and PPI-1 psychopathy may also help to provide clarity on the topic.

Conclusions

In summary, the PPI-1 and -2 scores of New York City police officers follow a unique trend across temporal factors, showing more complex, non-linear trends than originally anticipated. PPI-1 scores are fairly high in younger, less-experienced police officers, decrease, and then plateau until they peak in the early 50s. PPI-2 scores remain relatively stable between the ages of 21 and 45, after which, the scores drop, then peak in the early 50s, and then drop again in the late 50s. The extremely small sample sizes that exist for participants in their 50s, however, make for a difficult interpretation of these fluctuations in later life/career. A multitude of other factors and research styles can be employed in future research to offer a clearer picture of this concept.

While psychopaths have developed a notorious reputation due to their tendency for manipulateness and lack of emotional depth, a phenomenon is now being revealed in which certain types of psychopathy may actually be successful adaptations to some environments. Certainly, an environment like that of a police officer's career draws in a certain type of personality, but it also seems to be shaping a certain type of personality. Ideally, this study will

work to inform future research in continuing to make sense of the psychopathic personality and how it relates to police work, and this can, in turn, start to improve police-community relations.

References

- Adlam, K. R. (1982). The police personality: Psychological consequences of being police officers. *Journal of Police Science and Administration*, 10(3), 344-349.
- Akers, R. L., Hayner, N. S., & Gruninger, W. (1977). Prisonization in five countries. *Criminology: An Interdisciplinary Journal*, 14(4), 527-554. doi:10.1111/j.1745-9125.1977.tb00042.x.
- Babiak, P., & Hare, R. D. (2006). *Snakes in suits: When psychopaths go to work*. Regan Books/Harper Collins Publishers.
- Bakker, A. B. & Heuven, E. (2006). Emotional dissonance, burnout, and in-role performance among nurses and police officers. *International Journal of Stress Management*, 13(4), 423-440.
- Bannish, H., & Ruiz, J. (2003). The antisocial police personality: A view from the inside. *International Journal of Public Administration*, 26(7), 831-881.
- Bate, C., Boduszek, D., Dhingra, K., & Bale, C. (2014). Psychopathy, intelligence and emotional responding in a non-forensic sample: An experimental investigation. *Journal of Forensic Psychiatry & Psychology*, 25(5), 600-612. doi:10.1080/14789949.2014.943798.
- Beehr, T., Johnson, L., & Nieva, R. (1995). Occupational Stress: Coping of Police and Their Spouses. *Journal of Organizational Behavior*, 16(1), 3-25. Retrieved from <http://www.jstor.org.ez.lib.jjay.cuny.edu/stable/2488609>

- Benning, S. D., Patrick, C. J., Hicks, B. M., Blonigen, D. M., & Krueger, R. F. (2003). Factor Structure of the Psychopathic Personality Inventory: Validity and Implications for Clinical Assessment. *Psychological Assessment, 15*(3), 340-350. doi:10.1037/1040-3590.15.3.340.
- Boddy, C. R. (2010). Corporate psychopaths and organizational type. *Journal of Public Affairs, 10*(4), 300-312. doi: 10.1002/pa.365.
- Boddy, C. R. (2014). Corporate psychopaths, conflict, employee affective well-being and counterproductive work behaviour. *Journal of Business Ethics, 121*(1), 107-121. doi:10.1007/s10551-013-1688-0.
- Blair, R. R., & Coles, M. (2000). Expression recognition and behavioural problems in early adolescence. *Cognitive Development, 15*(4), 421-434. doi:10.1016/S0885-2014(01)00039-9.
- Bloch, D. P. (2005). Complexity, Chaos, and Nonlinear Dynamics: A New Perspective on Career Development Theory. *The Career Development Quarterly, 53*(3), 194-207. doi:10.1002/j.2161-0045.2005.tb00990.x
- Bukstel, L. H., & Kilmann, P. R. (1980). Psychological effects of imprisonment on confined individuals. *Psychological Bulletin, 88*(2), 469-493. doi:10.1037/0033-2909.88.2.469.
- Burke, R. J. (1989). Examining the career plateau: some preliminary findings. *Psychological Reports, 65*295-306
- Carragher, Sunderland, Batterham, Calear, Elhai, Chapman, & Mills. (2016). Discriminant validity and gender differences in DSM-5 posttraumatic stress disorder symptoms. *Journal of Affective Disorders, 190*, 56-67.

- Chopko, B. A., Palmieri, P. A., & Adams, R. E. (2015). Critical incident history questionnaire replication: Frequency and severity of trauma exposure among officers from small and midsize police agencies. *Journal of Traumatic Stress, 28*(2), 157-161.
doi:10.1002/jts.21996.
- Cleckley H. (1941). *The mask of sanity: An attempt to clarify some issues about the so-called Psychopathic Personality*. St. Louis, MO: Mosby.
- Cooke, D. J., & Michie, C. (2001). Refining the construct of psychopathy: Towards a hierarchical model. *Psychological Assessment, 13*(2), 171-188.
- Decety, J., Skelly, L. R., & Kiehl, K. A. (2013). Brain response to empathy-eliciting scenarios involving pain in incarcerated individuals with psychopathy. *JAMA Psychiatry, 70*(6), 638-645. doi:10.1001/jamapsychiatry.2013.27.
- Derefinko, K.J., & Lynam, D.R. (2006). Convergence and divergence among self-report psychopathy measures: A personality-based approach. *Journal of Personality Disorders, 20*(3), 261–280.
- Doreian, & Conti. (2017). Creating the thin blue line: Social network evolution within a police academy. *Social Networks, 50*, 83-97
- Eber, H. W. (1991). *Good cop includes bad cop: A supplementary concept of police brutality*. Paper presented at the Annual Meeting of the Society of Multivariate Experimental Psychology, Albuquerque, NM.

- Edens, J. F., Cox, J., Smith, S. T., DeMatteo, D., & Sörman, K. (2015). How reliable are Psychopathy Checklist–Revised scores in Canadian criminal trials? A case law review. *Psychological Assessment, 27*(2), 447-456. doi:10.1037/pas0000048.
- Falkenbach, D., Balash, J., Tsoukalas, M., Stern, S., Lilienfeld, S., & Widiger, Thomas A. (2018). From Theoretical to Empirical: Considering Reflections of Psychopathy Across the Thin Blue Line. *Personality Disorders: Theory, Research, and Treatment, 9*(5), 420-428.
- Falkenbach, Glackin, & Mckinley. (2018). Twigs on the same branch? Identifying personality profiles in police officers using psychopathic personality traits. *Journal of Research in Personality, 76*, 102-112.
- Falkenbach, D., Howe, J., & Falki, M. (2013). Using self-esteem to disaggregate psychopathy, narcissism, and aggression. *Personality and Individual Differences, 54*(7), 815-820.
- Forero, C., Gallardo-Pujol, D., Maydeu-Olivares, A., & Andrés-Pueyo, A. (2009). A Longitudinal Model for Predicting Performance of Police Officers Using Personality and Behavioral Data. *Criminal Justice and Behavior, 36*(6), 591-606.
- Gill, D. J., & Crino, R. D. (2012). The Relationship between Psychopathy and Age in a Non-Clinical Community Convenience Sample. *Psychiatry, Psychology & Law, 19*(4), 547-557. doi:10.1080/13218719.2011.615810.
- Goldsmith, A. (2005). Police reform and the problem of trust. *Theoretical Criminology, 9*(4), 443-470. doi: 10.1177/1362480605057727.

- Gomà-i-Freixanet, M., & Wismeijer, A. J. (2002). Applying personality theory to a group of police bodyguards: A physically risky prosocial prototype? *Psicothema*, *14*(2), 387-392.
- Gough, H. G., & Bradley, P. (1996). California Psychological Inventory manual (3rd ed.). Palo Alto, CA: *Consulting Psychologists Press*.
- Green, L., Fry, A., & Myerson, J. (1994). Discounting of delayed rewards: A life-span comparison. *Psychological Science*, *5*, 33-36. doi: 10.1111/j.1467-9280.1994.tb00610.x
- Hall, J. R., & Benning, S. D. (2006). The “successful” psychopath. In C. J. Patrick (Ed.), *Handbook of psychopathy* (459-478). New York, London: Guilford.
- Hare, R. D. (1965). Temporal gradient of fear arousal in psychopaths. *Journal Of Abnormal Psychology*, *70*(6), 442-445. doi:10.1037/h0022775.
- Hare, R. D. (1979). *Psychopathy and the need for stimulation*. Paper presented at the international conference on Temperament, Warsaw, Poland.
- Hare, R. D. (1996). Psychopathy: A clinical construct whose time has come. *Criminal Justice and Behavior*, *23*(1), 25-54. doi:10.1177/0093854896023001004.
- Hare, R. D. (2003). *Manual for the Revised Psychopathy Checklist (2nd ed.)*. Toronto, ON, Canada: Multi-Health Systems.
- Hare, R. D., Harpur, T. J., Hakstian, A. R., Forth, A. E., Hart, S. D., & Newman, J. P. (1990). The revised Psychopathy Checklist: Reliability and factor structure. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, *2*(3), 338-341. doi:10.1037/1040-3590.2.3.338.

- Hare, R. D., & Jutai, J. W. (1983). Criminal history of the male psychopath: Some preliminary data. *Prospective Studies of Crime and Delinquency*, 225-236. doi: 10.1007/978-94-009-6672-7_12.
- Hare, R. D., & Neumann, C. S. (2005). Structural models of psychopathy. *Current Psychiatry Reports*, 7(1), 57-64. doi: 10.1007/s11920-005-0026-3.
- Hare, R. D., & Neumann, C. S. (2010). The role of antisociality in the psychopathy construct: Comment on Skeem and Cooke (2010). *Psychological Assessment*, 22(2), 446-454. doi: 10.1037/a0013635.
- Harpur, T.J., & Hare, R.D. (1994). Assessment of psychopathy as a function of age. *Journal of Abnormal Psychology*, 103(4), 604–609. doi: 10.1037/0021-843X.103.4.604.
- Hart, S. D., Kropp, P. R., & Hare, R. D. (1988). Performance of male psychopaths following conditional release from prison. *Journal of Consulting and Clinical Psychology*, 56(2), 227-232. doi:10.1037/0022-006X.56.2.227.
- Hicks, B. M., Markon, K. E., & Patrick, C. J. (2004). Identifying psychopathy subtypes based on personality structure. *Psychological Assessment*, 16(3), 276–288.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments., 3rd ed.* Odessa, FL, US: Psychological Assessment Resources.
- Homer, J. (1981). Total institutions and the self-mortifying process. *Canadian Journal of Criminology*, 23, 331-342. doi: not found (ISSN: 07049722).
- Howe, J., Falkenbach, D., & Massey, C. (2014). The Relationship among Psychopathy, Emotional Intelligence, and Professional Success in Finance. *International Journal of Forensic Mental Health*, 13(4), 337-347. doi: 10.1080/14999013.2014.951103.

- Huchzermeier, C., Geiger, F., Bruß, E., Godt, N., Kohler, D., Hinrichs, G., et al. (2007). The relationship between DSM-IV cluster B personality disorders and psychopathy according to Hare's criteria: Clarification and resolution of previous contradictions. *Behavioral Sciences and the Law*, 25(6), 901–911. doi: 10.1002/bsl.722.
- Huchzermeier, C., Geiger, F., Kohler, D., Bruß, E., Godt, N., Hinrichs, G., et al. (2008). Are there age-related effects in antisocial personality disorders and psychopathy? *Journal of Forensic and Legal Medicine*, 15(4), 213–218. doi: 10.1016/j.jflm.2007.10.002
- Jonason, P. K., Wee, S., Li, N. P., & Jackson, C. (2014). Occupational niches and the Dark Triad traits. *Personality and Individual Differences*, 69, 119–123. doi:10.1016/j.paid.2014.05.024.
- Kaczurkin, Asnaani, Hall-Clark, Peterson, Yarvis, & Foa. (2016). Ethnic and racial differences in clinically relevant symptoms in active duty military personnel with posttraumatic stress disorder. *Journal of Anxiety Disorders*, 43, 90–98.
- Kimonis, E. R., Tatar, J. R., & Cauffman, E. (2012). Substance related disorders among juvenile offenders: What role do psychopathic traits play? *Psychology of Addictive Behaviors*, 26(2), 212–225.
- Lee, Z., Salekin, R., & Lejuez, Carl W. (2010). Psychopathy in a Noninstitutional Sample: Differences in Primary and Secondary Subtypes. *Personality Disorders: Theory, Research, and Treatment*, 1(3), 153–169.
- Lilienfeld, S. O., Patrick, C. J., Benning, S. D., Berg, J., Sellbom, M., & Edens, J. F. (2012a). The role of fearless dominance in psychopathy: Confusions, controversies, and

- clarifications. *Personality Disorders: Theory, Research, And Treatment*, 3(3), 327–340.
doi:10.1037/a0026987.
- Lilienfeld, S. O., & Widows, M. (2005). *Professional manual for the Psychopathic Personality Inventory-Revised (PPI-R)*. Lutz, FL: Psychological Assessment Resources.
- Lorr, M. & Stack, S. (1994). Personality profiles of police candidates. *Journal of Clinical Psychology*, 50, 200-207. doi: 10.1002/1097-4679(199403)50:2<200::AID-JCLP2270500208>3.0.CO;2-1.
- Lucas, T., Weidner, N., & Janisse, J. (2012). Where does work stress come from? A generalizability analysis of stress in police officers. *Psychology & Health*, 27(12), 1-22
- Major, J. T., Johnson, W., & Deary, I. J. (2014). Linear and nonlinear associations between general intelligence and personality in Project TALENT. *Journal of Personality and Social Psychology*, 106(4), 638-654. doi:10.1037/a0035815.
- Maples, J.L., Miller, J.D., Fortune, E., MacKillop, J., Campbell, W.K., Lynam, D.R., et al. (2014). An examination of the correlates of fearless dominance and self-centered impulsivity among high-frequency gamblers. *Journal of Personality Disorders*, 28(3), 379–393.
- Mills, C. J., & Bohannon, W. E. (1980). Personality characteristics of effective state police officers. *Journal of Applied Psychology*, 65(6), 680-684.
- Morizot, J. & Le Blanc, M. (2005). Searching for a Developmental Typology of Personality and Its Relations to Antisocial Behavior: A Longitudinal Study of a Representative Sample of Men. *Journal of Personality*. DOI: 10.1111/j.1467-6494.2004.00307.x.

- Patrick, C. J., Zempolich, K. A., & Levenston, G. K. (1997). Emotionality and violence in psychopaths: A biosocial analysis. In A. Raine, D. Farrington, P. Brennan, & S. A. Mednick (Eds.), *The biosocial bases of violence* (pp. 145–161). New York: Plenum.
- Patrick, C. J. (2007). Getting to the heart of psychopathy. In H. Hervé, J. C. Yuille (Eds.), *The psychopath: Theory, research, and practice* (pp. 207–252). Mahwah, NJ: Lawrence Erlbaum.
- Plant, E. A., & Peruche, B. M. (2005). The consequences of race for police officers' responses to criminal suspects. *Psychological Science*, 16, 180–183. <http://dx.doi.org/10.1111/j.0956-7976.2005.00800.x>.
- Porter, S., & Woodworth, M. (2006). Psychopathy and Aggression. *Handbook of Psychopathy*, 481-494.
- Poythress, N. G., Edens, J. F., Skeem, J. L., Lilienfeld, S. O., Douglas, K. S., & Frick, P. J. (2010). Identifying subtypes among offenders with Antisocial Personality Disorder: A cluster-analytic study. *Journal of Abnormal Psychology*, 119(2), 389-400.
- Próchniak, P. (2012). Traits of personality and preferred values among fearless and courageous policemen. *International Journal of Psychological Studies*, 4(4), 113-120.
- Sanford, J. S., & Arrigo, B. A. (2007). Policing and psychopathy: The case of Robert Philip Hanssen. *Journal of Forensic Psychology Practice*, 7(3), 1-31.
doi:10.1300/J158v07n03_01.

Skeem, J. L., Poythress, N., Edens, J. F., Lilienfeld, S. O., & Cale, E. M. (2003). Psychopathic personality or personalities? Exploring potential variants of psychopathy and their implications for risk assessment. *Aggression and Violent Behavior, 8*(5), 513–546. doi:10.1016/S1359-1789(02)00098-8.

Skeem, J., Johansson, P., Andershed, H., Kerr, M., & Louden, J. E. (2007). Two subtypes of psychopathic violent offenders that parallel primary and secondary variants. *Journal of Abnormal Psychology, 116*(2), 395-409.

Serin, R. C. (1996). Violent recidivism in criminal psychopaths. *Law and Human Behavior, 20*(2), 207-217. doi:10.1007/BF01499355.

Segal, D. L., Coolidge, F. L., & Rosowsky, E. (2006). *Personality Disorders and Older Adults: Diagnosis, Assessment, and Treatment*. Hoboken, NJ: John Wiley & Sons.

Snowden, R.J., Gray, N.S., (2011). Impulsivity and psychopathy: Associations between the Barrett Impulsivity Scale and the Psychopathy Checklist revised. *Psychiatry Research, 187*(3), 414-417. doi: 10.1016/j.psychres.2011.02.003.

Stevens, D., Charman, T., & Blair, R. R. (2001). Recognition of emotion in facial expressions and vocal tones in children with psychopathic tendencies. *The Journal of Genetic Psychology: Research and Theory on Human Development, 162*(2), 201-211. doi:10.1080/00221320109597961.

Stratton, J.G. (1984). *Police passages*. Manhattan Beach, CA: Glennon.

Verona, E., Patrick, C. J., & Joiner, T. E. (2001). Psychopathy, antisocial personality, and suicide risk. *Journal of Abnormal Psychology, 110*, 462–470.

Vitacco, Michael J., Neumann, Craig S., & Jackson, Rebecca L. (2005). Testing a Four-Factor

Model of Psychopathy and Its Association with Ethnicity, Gender, Intelligence, and

Violence. *Journal of Consulting and Clinical Psychology*, 73(3), 466-476. doi:

[10.1037/0022-006X.73.3.466](https://doi.org/10.1037/0022-006X.73.3.466)

Weiss, B., Lavner, J. A., & Miller, J. D. (2018). Self- and partner-reported psychopathic traits'

relations with couples' communication, marital satisfaction trajectories, and divorce in a

longitudinal sample. *Personality Disorders: Theory, Research, And Treatment*, 9(3), 239-

249. doi:10.1037/per0000233

Wills, J. L., & Schulberg, D. (2016). Chronic trauma effects on personality traits in police

officers. *Journal of Traumatic Stress*, 29(2), 185-189. doi:10.1002/jts.22089.

Appendix

Demographics

Age (years and months):

Amount of time spent on the job (months):

Gender:

Race:

Rank:

Marital status: