

ASSESSMENT OF PSYCHOPATHY IN INCARCERATED FEMALES

Rebecca L. Jackson

Thesis Prepared for the Degree of

MASTER OF SCIENCE

UNIVERSITY OF NORTH TEXAS

August 2001

APPROVED:

Richard Rogers, Major Professor and Chair

Kenneth W. Sewell, Committee Member

Paul L. Lambert, Committee Member

Ernest H. Harrell, Chair of the Department of  
Psychology

Warren Burggren, Dean of the College of Arts and  
Sciences

C. Neal Tate, Dean of the Robert B. Toulouse  
School of Graduate Studies

Jackson, Rebecca L, Assessment of psychopathy in incarcerated females, Master of Science (Psychology), August 2001, 90 pp., 17 Tables, references, 77 titles.

Psychopaths constitute only an estimated 1% of the population, yet they are responsible for a disproportionately large number of violent and nonviolent crimes. The literature addressing this syndrome among male offenders is quite extensive. In contrast, psychopathy and its underlying factor structure remains understudied among female offenders. Research has suggested marked gender differences in the prevalence, clinical characteristics, and underlying dimensions of psychopathy. This study examined the dimensions of psychopathy in a female offender sample. The Psychopathy Checklist-Revised and the Self Report Psychopathy-II (SRP-II) were administered to 119 female inmates at Tarrant County Jail in Fort Worth, TX. Confirmatory factor analyses of the Psychopathy Checklist-Revised (PCL-R) did not support the use of the traditional two-factor male model or a recently proposed two-factor female model. This thesis also addressed females' self-appraisal of PCL-R Factor 1 characteristics as well as the usefulness of the self-administered Self-Report Psychopathy-II as a screen for psychopathy.

## TABLE OF CONTENTS

LIST OF TABLES .....	iii
Chapter	
1. INTRODUCTION.....	1
Historical Perspectives of Psychopathy	
Current Perspectives of Psychopathy	
Diagnostic Issues	
Measurement of Psychopathy	
Psychopathy Checklist –Revised	
Self-Report Measures	
Gender Differences	
Utility of External Criteria	
Current Study	
Research Questions	
2. METHODS.....	29
3. RESULTS .....	40
4. DISCUSSION .....	54
APPENDIX A .....	73
APPENDIX B .....	76
APPENDIX C .....	78
APPENDIX D .....	80
REFERENCES .....	82

## LIST OF TABLES

Table	
1. Correlations of the PCL and PCL-R with Self-Report Inventories.....	13
2. Correlations of PCL-R with the PAI in Female and Male Inmates.....	16
3. PAI Scale/Subscale Correlations with the PCL:SV.....	18
4. Means (Standard Deviations) for PCL:SV for Male and Female Noncriminals.....	20
5. Hare et al. (1990) and Salekin et al. (1997) PCL-R Factor Structure Specifications for Confirmatory Factor Analysis.....	35
6. Estimates of Diagnostic Validity.....	37
7. Calculating Utility Estimates for Psychopathy.....	38
8. Means (Standard Deviations) for Female Offenders Across Ethnic Groups: PCL-R, SRP-II, and BRF.....	41
9. Goodness of Fit Estimated for Hare et al. (1990) and Salekin et al. (1997) Models .....	43
10. PCL-R Factor Loadings (Factor Loading/Error Term) Generated by Confirmatory Factor Analysis Testing the Hare et al. (1990) Model of Psychopathy in a Sample of Female Offenders .....	44
11. PCL-R Factor Loadings (Factor Loading/Error Term) Generated by Confirmatory Factor Analysis Testing the Salekin et al. (1997) Model of Psychopathy in a Sample of Female Offenders .....	46
12. Exploratory Factor Analysis Factor Loadings.....	48
13. Correlations Between the PCL-R, SRP-II and Behavior Ratings Form (BRF).....	51
14. Utility Estimates of the SRP-II as a Screen for the PCL-R in a Sample of Female Offenders .....	52

15. A comparison of Factor Loadings for Core Personality Traits: Hare et al. (1990), Salekin et al. (1997) and the Current Sample .....	56
16. A Comparison of Factor Loadings for Impulsive/Irresponsible Factor: Hare et al. (1990), Salekin et al. (1997), and the Current Sample .....	60
17. Correlations of PCL-R Items with their BRF Intended Indicators .....	68

## CHAPTER 1

### INTRODUCTION

Psychopaths constitute only an estimated 1% of the general population, although they represent 15-25% of our prison population (Hare, 1996). These individuals present a considerable challenge for the criminal justice system and the effective management of correctional and forensic populations. The proper identification of psychopaths can have far-reaching implications in terms of treatment, incarceration, and eventual release.

Beginning with historical perspectives, this introduction traces the evolution of psychopathy from theoretical construct to clinical classification. The discussion then turns to diagnostic disputes. An important debate in the literature is addressed, namely, the appropriateness of conceptualizing psychopathy as a categorical or a dimensional variable. In addition, differences between psychopathy and Antisocial Personality Disorder are outlined and measurement of psychopathy is discussed with an evaluation of current assessment techniques. Finally, gender differences in psychopathy and its correlates are delineated. Following a review of this literature, certain voids in knowledge of female psychopathy became apparent. The current study's research questions emerged from this review and attempt to specifically address psychopathy as a clinical construct in female offenders.

#### Historical Perspectives of Psychopathy

Attempts to understand and explain criminal behavior are almost as old as criminal behavior itself. Philosophers and scientists alike have contemplated its causes and attempted to describe its manifestations. The concepts we now know as antisocial

personality disorder and psychopathy have a long history of successive efforts in describing their core traits and behavioral correlates.

In one of the earliest attempts to understand criminal behavior, Philippe Pinel (1806) described a disorder that he called manie sans delire (insanity without delirium; Pinel, 1806). As such, he was the first to recognize that insanity did not necessarily require a defect in one's reasoning abilities (Millon, Simonsen, Birket-Smith & Davis, 1998). According to Pinel (1806), these individuals were taken with fits of fury and impulsive violence who demonstrated no "lesion of the understanding" (p. 150). When not acting on instinct and driven by passion, these individuals demonstrated sound judgment and unimpaired reasoning abilities.

Benjamin Rush expanded on Pinel's idea of insanity without delirium. Rush (1812) also described individuals who engaged in socially deviant acts without possessing a defect in reasoning ability. Contrary to Pinel's rather neutral clinical observations, Rush characterized these individuals in terms of moral depravity. He believed that innate defects in these individuals caused them to behave in socially unacceptable ways.

The theorists of this time agreed that these individuals, now classified as psychopaths, behaved in socially and morally reprehensible ways, yet they did not appear to be "insane" in a psychotic sense. As a result, the term "moral insanity" came into scientific usage when it was coined by Prichard (1835). He defined moral insanity as

Madness consisting in a morbid perversion of the natural feeling, affections, inclinations, temper, habits, moral dispositions, and natural impulses, without any

remarkable disorder or defect of the intellect or knowing and reasoning faculties, and particularly without any insane illusion or hallucination (Prichard, 1835, p. 16).

The concept of moral insanity did not originate with Prichard but his description gave other theorists a useful framework. Prichard agreed with Rush's perspective in deeming this disorder morally and socially reprehensible. However, Prichard's description of moral insanity is overly broad and includes most nonpsychotic disorders (Millon et al., 1998).

At the end of the 19<sup>th</sup> century, scientists began to reject the value judgment implicit with the label of moral insanity. In 1891, Koch suggested that the label "psychopathic inferiority" replace the term "moral insanity" (Millon et al., 1998). This term was the first usage of "psychopathic" in relation to the disorder now identified as psychopathy. Like moral insanity, psychopathic inferiority was overinclusive. Koch labeled as psychopathic inferiority "all mental irregularities, whether congenital or acquired, that influence a man in his personal life and cause him, even in the most favorable cases to seem not fully in possession of normal mental capacity" (as cited in Millon et al., 1998, p. 8). Koch believed that a physical basis existed for these irregularities causing psychopaths to always remain psychopaths. Contrary to current usage, the term psychopathy was a generic label for all personality disorders and did not imply a specific diagnosis or classification (Millon et al., 1998).

The idea of psychopathic inferiority was once again refined by Adolph Meyer (1904 as cited in Millon et al., 1998). Meyer attempted to separate psychopathic

inferiority into two subgroups. The first subgroup was constitutionally inferior and denoted an organic cause. A second subgroup included psychoneurotic disorders. He believed the psychoneuroses were caused by psychogenic factors. Although the term “inferior” fell into disfavor in the scientific community because of its derogatory flavor, Meyers’ two subgroups remained popular in American nosology throughout the early decades of the 20<sup>th</sup> century: constitutional psychopathic state and psychopathic personality.

Shortly after Meyer’s conceptualization of psychopathic personality, a competing theory was introduced. Birnbaum (1909; as cited in Millon et al., 1998) suggested that “sociopathy” most adequately described the majority of psychopathic personality cases. He believed that antisocial behavior is rarely caused by organic or physical forces. Instead, he suggested that societal forces were responsible for deviant and otherwise undesirable behavior. His theory was not given much notice until the 1920s and 1930s. Before that time, psychopathic behavior was still considered a constitutional defect.

The ensuing decades saw a greater understanding of psychopathy as something other than a constitutional defect. More credence was given to the idea that something other than physical or “constitutional” causes were responsible for psychopathic behavior (Lewis, 1974; Millon et al., 1998). Social factors and learning paradigms were considered important in the development of psychopathic traits. For example, an idea expressed by Cameron and Margaret (1951) illustrates the changing perspective professionals were taking regarding causes of psychopathic behavior. They stated: “We cannot ignore the

effects of parental emphasis, of others' reactions and of self-reactions in training a growing child to socially deviant behavior" (p. 191).

Although the cause of psychopathic behavior continues to be an important topic of scientific inquiry, modern conceptions of psychopathy involve a greater attempt to describe the syndrome and identify the correlates associated with its manifestations. An effort to elucidate the diverse disorders included in theories of the syndrome was provided by Cleckley (1941). His work helped to shape the current perspectives of psychopathy and provided a theoretical basis for future research.

#### Current Perspectives of Psychopathy

Two main approaches have developed in describing the classification of psychopathy: the personality-based approach and the behavior-based approach (Lilienfeld, 1994). The personality-based approach, originating with Cleckley (1941/1976) assumes that an integral dimension of psychopathy is a constellation of personality traits. These traits include lack of remorse, superficial charm, pathological lying, and conning or manipulative behavior. This theoretical approach was the basis for DSM-II diagnostic criteria for Antisocial Personality Disorder (APD; APA, 1968). The DSM-II cautioned that "a mere history of repeated legal or social offenses is not sufficient to justify this diagnosis" (p. 43). This conceptualization differs markedly from the behavioral approach advanced by Robins (1966) that eventually became the basis of DSM-III (APA, 1980) and remains the predominant focus of DSM-IV APD (APA, 1994, 2000).

Cleckley outlined his depiction of psychopathy in his book, The Mask of Sanity (1976). He described both personality and behavioral traits as being central to the disorder. However, Cleckley described the typical psychopath as a person who does not usually commit felonies that would bring about long-term imprisonment. Rather, he conceptualized the psychopath as an individual who regularly causes trouble for society but is quite adept at escaping arrest and subsequent incarceration. He described the psychopath as one who engages in a lifetime of petty crimes and otherwise socially undesirable behavior (Cleckley, 1976). In contrast, Hare and McPherson (1984) have reported that psychopaths commit a disproportionately large number of crimes and violent crimes. It should be noted, however, that Hare's conception of psychopathy is somewhat different from Cleckley's. Specifically, Hare's conception includes indicators of criminality, such as juvenile delinquency and probation/parole violations. Cleckley's conceptualization lacks such indicators (Rogers, in press).

Conceptions of psychopathy have evolved over time. However, one constant has emerged: Psychopathy is most appropriately viewed as a syndrome constituting both personality traits and socially deviant behavior. Although current formulations of the disorder focus on these aspects of the syndrome to varying degrees (APA, 1994; Hare, 1996; Robins, 1966), the recognition of both of these dimensions is vital to an accurate understanding of psychopathy.

### Diagnostic Issues

Psychopathy: Categorical or Dimensional? A long-standing debate exists as to whether psychological disorders are distinct categories or whether their symptoms exist

within all individuals to varying degrees. The current diagnostic system requires a clinician to use categorical disorders, which are composed of discrete categories, based on symptoms. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; APA, 1994), “There is no assumption that each category of mental disorder is a completely discrete entity with absolute boundaries dividing it from other mental disorders or from no mental disorder” (p. xxii). Nevertheless, the DSM-IV continues to use a categorical approach in order to facilitate communication and diagnosis. The categorical approach has been retained for reasons of tradition, simplicity, utility, and validity (Widiger, 1997). In contrast to the advantages of a categorical approach, Widiger (1997) suggested that a dimensional approach is more useful for the understanding of mental disorders, highlighting the fact that not all individuals within a diagnostic category are homogenous.

The classification of psychopathy is not exempt from this categorical vs. dimensional debate. Using the recommended cut score (e.g.,  $\geq 30$  on the Psychopathy Checklist-Revised) as indicative of psychopathy assumes that it is a categorical rather than dimensional construct. From a categorical perspective, are psychopaths qualitatively or quantitatively different from non-psychopaths? From a dimensional perspective, are psychopathic traits present in everyone to varying degrees? Hart and Hare (1997) found that the association between dimensional PCL-R scores and criminal behavior were nearly linear. This finding lends support for a dimensional model.

Recent research has discovered nonlinear aspects to the association, suggesting that underlying the PCL scales is a distinct clinical entity or taxon (Harris, Rice, &

Quinsey, 1994). Treating psychopathy as a taxon has implications related to the selection of cut scores for the classification of psychopathy. Utilizing a sample of 653 males, Harris et al. (1994) scored the PCL-R from file information (no interview data) and classified two groups of individuals, those included in and those excluded from the psychopathy taxon. Although the distribution of scores was not clearly bimodal, the distribution of PCL-R scores was not normally distributed. However, the distribution of PCL-R scores was normal for the psychopathic sample. Harris et al. cited this distribution of scores as evidence of the existence of a taxon. They concluded that the optimal PCL-R score for inclusion in the psychopathy taxon was about 25, somewhat lower than the cut score of 30 recommended for clinical and research purposes (Hare, 1991).

The PCL-R lends itself to both categorical and dimensional analyses. Both categorical and dimensional measures of psychopathy may be useful in different contexts. For example, categorical models facilitate communication and diagnosis, whereas dimensional models yield scores that have greater precision and reliability (Hart & Hare, 1997).

Psychopathy vs. Antisocial Personality Disorder. The DSM-IV (APA, 1994, 2000) diagnosis of Antisocial Personality Disorder (APD) is often used interchangeably with psychopathy. Although related, they actually represent two different constructs. The diagnosis of APD is behaviorally based, focusing on criminal and socially deviant behaviors. Core personality features are not required to make this diagnosis. Although lying, conning, and lack of remorse appear in the diagnostic criteria, their presence is not

necessary to render this diagnosis. Due to the polythetic nature of the DSM-IV, APD can be diagnosed in the absence of any core personality traits.

Many psychopaths engage in chronic criminal behavior and warrant the diagnosis of APD. The opposite is not true; not all individuals meeting the diagnosis of APD also meet criteria for psychopathy. The prevalence of psychopathy in correctional settings is 15-25%, considerably lower than the base rate for APD of 50-80% (Hare, 1991). A key difference between APD and psychopathy is the presence of psychopathic personality traits, such as superficial charm, need for stimulation and shallow affect, some of which are necessary for the classification of psychopathy.

#### Measurement of Psychopathy

Early attempts at diagnostic categorization of psychopathy depended on a clinician's judgement of the patient's fitting the description of psychopathic behavior in the absence of other mental disorders, such as a psychosis (Cleckley, 1976). Other assessment methods were used, such as the MMPI Pd Scale, the 16PF, and the Maudsley Personality Inventory. In the appendix of Craft's (1966) Psychopathic Disorders and their Assessment, Black reviewed the available tools for assessing psychopathy. He evaluated the usefulness of 54 measures in determining the presence of psychopathy. Black concluded that only the following were potentially useful indicators of psychopathy: (a) MMPI, (b) the Raven's Progressive Matrices (1938, 1956) and the Mill Hill Vocabulary Scale (Raven, 1943) when used together, (c) Porteus Mazes (Porteus, 1952), and (d) the Delinquency Prediction Instrument (Stott, 1961) when used with school-aged children). Although these measures have their place, none is exceptional in

terms of accurate and reliable classification of psychopathy. This imprecision in classification and assessment of psychopathy led Craft (1966) to observe that “One can therefore do no better than outline the clinical characteristics of the most severe type of psychopathic disorder and to remark that the infinite variety of human personalities means that there are many variants upon the theme of psychopathic disorder” (p. 209).

Variations do occur in the expression of psychopathic personality (Cleckley, 1976) and for a time, assessment focused on the variations in these clinical characteristics. In the 1970s, Hare sought to standardize the assessment procedure by rating prison inmates on a 7- point scale according to the extent to which the prisoners’ personality and behaviors corresponded with Cleckley’s description of psychopathy. This diagnostic tool required in-depth knowledge of Cleckley’s criteria and the ability to integrate interview information with case history to arrive at a single score. Hare and Cox (1978 as cited in Hare, 1991) found that ratings were reliable, but expressed concern about how the ratings were achieved.

The ambiguities in the psychopathy ratings prompted Hare (1980) to develop a more objective measure that would operationalize the Cleckley conceptualization of psychopathy. Hare devised a rating scale based on the 16 criteria identified by Cleckley. He employed a 3-point scale with "0" indicating absence of the characteristic, "1" indicating uncertainty about its presence, and "2" indicating definite presence. Hare (1990) reported that results were encouraging but expressed reservations about how the Cleckley criteria were operationalized. For this reason, he and Janice Frazelle (Hare & Frazelle, 1980; an unpublished report cited in Hare, 1991) developed a new assessment

method that would require less subjective interpretation of the Cleckley criteria. This 22-item inventory was made available to other investigators and later revised and published as the Psychopathy Checklist-Revised (PCL-R; Hare, 1991).

Psychopathy Checklist – Revised (PCL-R). This 20-item inventory is the revised version of Hare’s Psychopathy Checklist (Hare, 1985). Theoretically grounded by the personality-based approach championed by Cleckley and others, the PCL-R assesses both personality and behavioral variables. The PCL-R has a two-factor structure, each measuring one of the two basic dimensions of psychopathy. Factor 1 is characterized as selfish, callous, and remorseless use of others; Factor 2 represents a chronically unstable and antisocial lifestyle (Harpur, Hakstian, & Hare, 1988). This two-factor structure is stable in male offenders (Hare et al., 1990; Harpur et al., 1988; Harpur, Hare, & Hakstian, 1989). However, in a nonclinical sample of 150 male and female university students, Forth, Brown, Hart and Hare (1996) were unable to confirm the two-factor structure proposed for the Psychopathy Checklist: Screening Version. Rather, they found that a one-factor solution accounted for most of the variance for male and female participants.

### Self-Report Measures

Several self-report inventories have been developed to measure antisocial/psychopathic personality. For example, the Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) and the Self-Report Psychopathy-II (Hare, 1991) were developed to solely address the construct of psychopathy. Additionally, several multiscale measures include scales designed to measure antisocial/psychopathic personality traits. Most popular among these measures are the MMPI-2 Pd scale

(McKinley & Hathaway, 1944), the Millon Clinical Multiaxial Inventory-III Antisocial scale (Millon 1994; Millon, Davis, & Millon, 1997), and the Personality Assessment Inventory Antisocial scale (Morey, 1991).

Core personality features are key to the classification of psychopathy. Because of their behavioral focus, traditional multi-scale inventories (e. g., the MMPI and the MCMI) may not be measuring psychopathy as intended by Cleckley and Hare, but may only be measuring antisocial traits corresponding to Factor 2. These scales tend focus on overt delinquent and antisocial acts, to the exclusion of interpersonal and affective symptoms of psychopathy (Harpur, Hare, & Hakstian, 1989).

This section examines the efficacy of the more commonly used self-report measures of psychopathy. Strategies for measuring antisocial traits and behaviors will be outlined as well as each measure's relationship with other measures of psychopathy.

MMPI-2 Pd scale. The MMPI-2 Psychopathic Deviate (Pd) scale consists of 50 items that explore complaints about family and authority figures, self and social alienation, and boredom (Greene, 2000). Individuals who score high on this scale are reported to be angry individuals who are emotionally shallow and impulsive (Greene, 2000). Elevations on the Pd scale have been reported to be positively correlated with delinquency, criminal behaviors, and recidivism rates (Forgac, Cassel, & Michaels, 1984; Gearing, 1979; Holland & Levi, 1983). As summarized in Table 1, Hare (1991) reported low correlations between the MMPI Pd scale and the PCL-R (Factor 1,  $r = .11$ ; Factor 2,  $r = .31$ ; Total score,  $r = .25$ ).

Table 1

Correlations of the PCL and PCL-R with Self-Report Inventories

Measure	Scale	F1	F2	Total Score
MMPI <sup>a</sup>	Pd Scale	.11	.31	.26
MCMI-II <sup>a</sup>	Antisocial	.24	.51	.45
SRP-II <sup>a</sup>		.50	.44	.54
PPI <sup>b</sup>		.54	.40	.54

Note. <sup>a</sup> Reported by Hare, 1991. <sup>b</sup> Reported by Poythress, Edens, & Lilienfeld, 1998.

MCMI-III Antisocial scale. The MCMI-III (Millon, 1994, Millon, Davis, & Millon, 1997), like its predecessors (Millon, 1977, 1987), was developed to correspond to DSM diagnostic criteria. As such, the MCMI-III does not assess for psychopathy, per se. The Antisocial scale consists of 17 items geared toward the criteria for Antisocial Personality Disorder in the DSM-IV (APA, 1994). Millon (1994) reported an alpha coefficient for this scale of .77 and test-retest reliability of .93. The Antisocial scale exhibits a modest correlation with the MMPI Pd scale (.41). However, other MCMI-III scales also correlate with the MMPI Pd scale: Self-Defeating (.45), Schizotypal (.43), and Depressive (.41) personality disorder scales (Millon, 1994; Millon, Davis, & Millon, 1997). The MCMI-II Antisocial scale reports moderate correlations with the PCL-R (see Table 1). However, research with the MCMI-III and the PCL-R has yet to be reported.

Psychopathic Personality Inventory (PPI). In response to the lack of adequate self-report measures of psychopathy, Lilienfeld and Andrews (1996) developed the

Psychopathic Personality Inventory (PPI). This multi-scale inventory consists of eight scales that focus specifically on personality traits rather than antisocial behaviors. In other words, the PPI was designed to measure predominantly Factor 1 (core personality traits) and not Factor 2 (antisocial behaviors). The PPI was developed and validated on noncriminal populations. The PPI is reported to correlate highly with the SRP-R at .91 (Lilienfeld & Andrews, 1996).

More recently, Poythress, Edens, and Lilienfeld (1998) investigated the criterion-related validity of the PPI with an incarcerated sample of young males aged 17-21. They found a moderately high correlation between the PPI total score and the PCL-R total score ( $r = .54$ ). Further analysis found significant correlation with the PCL-R factor scores as well (Factor 1,  $r = .54$ ; Factor 2,  $r = .40$ ). Unlike most self-report inventories, the PPI is seemingly unique in its higher correlation to PCL-R Factor 1 rather than Factor 2. Consistent with its purpose, the authors reported that “the PPI is the first self-report measure of psychopathy to correlate substantially with Factor 1” (p. 429).

PAI ANT scale. The Personality Assessment Inventory’s Antisocial scale (ANT) was developed to measure both the personality traits and deviant behaviors indicative of psychopathy (Morey, 1991). As such, it is theoretically grounded in the personality-based conception of psychopathy advanced by Cleckley (1941/1976) and Hare (1985, 1991, 1996). The PAI consists of three Antisocial subscales, two of which measure personality characteristics associated with psychopathy and the third is thought to measure antisocial behaviors. The Egocentricity (ANT-E) subscale and the Stimulus-Seeking (ANT-S) subscale were developed to assess some of the core personality traits

associated with psychopathy, therefore, these subscales should correlate more highly with PCL-R Factor 1 than Factor 2. The Antisocial Behaviors (ANT-A) subscale measures behaviors that characterize antisocial conduct. Salekin et al. (1998) used the PAI ANT scale in a study of psychopathy in female offenders and found it to be moderately correlated to the PCL-R (see Table 2). Despite its conceptualization, the PAI ANT scale appears to be more effective at measuring antisocial behavior rather than personality traits in this sample as evidenced by its higher correlation on Factor 2 ( $r = .53$ ) than on Factor 1 ( $r = .34$ ) of the PCL-R.

Table 2

Correlations of PCL-R with the PAI in Female (Salekin et al., 1998) and Male Inmates (Edens et al., 2000)

PAI Scale	Female Inmates			Male Inmates		
	Factor 1	Factor 2	Total	Factor 1	Factor 2	Total
ANT Scale	.34*	.53**	.51**	.07	.53***	.40**
ANT-E	.31*	.46**	.46**	.10	.22	.20
ANT-A	.30*	.42**	.41**	.11	.61***	.49***
ANT-S	.29*	.51**	.47**	-.01	.43***	.28*

\*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$ .

Edens, Hart, Johnson, Johnson, and Olver (2000) investigated the usefulness of the Personality Assessment Inventory (PAI) in assessing psychopathy in two separate samples. The first sample employed 55 male inmates in the Texas Department of Criminal Justice, who were given the PAI and the PCL-R. The correlation between the ANT total Score and the PCL-R total score was significant ( $r = .40$ ). As reported in Table 2, none of the ANT subscales correlated significantly with Factor 1 scores. Again, the ANT-A subscale and the ANT-S subscale correlated significantly with Factor 2.

The gender differences apparent in Table 2 are striking. Salekin et al. (1998), utilizing a sample of female inmates found modest but significant correlations between the ANT scale and its subscales with Factor 1 of the PCL-R. In contrast, Edens et al.

(2000) found only negligible correlations in male inmates. Interestingly, Factor 2 correlations appeared comparable across genders. Perhaps women are better reporters of their own personality style; they may possess more insight into those styles. It is also possible that the PAI itself somehow does a better job identifying issues pertinent to female psychopathy.

A second sample from Edens et al. (2000) consisted of 46 male inpatients at a maximum-security forensic hospital who were administered the PCL:SV and the PAI. Results suggest that the ANT scale is significantly correlated with the PCL:SV total score ( $r = .54$ ). The ANT-A and the ANT-S subscales were also significantly correlated with the PCL:SV total score, PCL:SV Factor 1 and PCL:SV Factor 2 (see Table 3). Surprisingly, the ANT-E score was not significantly correlated with any PCL-SV score. However, when partial correlations were performed, Factor 1 correlations were no longer significant. Correlations with Factor 2 remained significant for the ANT total score as well as the ANT-A and ANT-S subscales. Edens et al. did not find a significant correlation between the ANT-E scale and Factor 1 of the PCL in either male offenders or male forensic inpatients, despite its development designed to measure precisely those traits.

Table 3

PAI Scale/Subscale Correlations with the PCL:SV (Reported by Edens et al., 2000)

PAI Scale/Subscale	PCL:SV	Part 1 r (partial r)	Part 2 r (partial r)
ANT	.54***	.44** (.07)	.56***(.39**)
ANT-A	.56***	.50***(.20)	.54***(.30*)
ANT-E	.28	.23 (.04)	.29 (.18)
ANT-S	.50***	.36* (-.07)	.56***(.47***)

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ .

Self-Report Psychopathy-II (SRP-II). The Self-Report Psychopathy scale (SRP; Hare, 1985), and its revision, the SRP-II (Hare, 1991) are self-report scales based on the PCL and the PCL-R, respectively. The SRP was designed to measure both core personality traits and antisocial behaviors. Hare (1991) reported correlations between SRP-II scores and the PCL-R in a male forensic sample that are moderate (Factor 1,  $r = .50$ ; Factor 2,  $r = .44$ ; Total score,  $r = .54$ ) and appear to rival those found with the PPI (see Table 1). Hare suggested that the SRP-II may be useful in noncriminal populations or in cases where file information or interviews are absent or limited. Research with a noncriminal population has shown that the correlation between the SRP-II and the PCL-SV, are encouraging (females  $r = .55$ ; males  $r = .62$ ; see Forth et al., 1996).

In keeping with Hare's recommendation, the SRP-II is predominantly used in research with non-clinical samples. Thus far, its utility as a screen for psychopathy in a

forensic population remains unexamined. Limited clinical resources would be better utilized if this 60-item inventory could be used to screen potential candidates for a full assessment of psychopathy.

### Gender Differences

Females generally engage in less antisocial behavior than their male counterparts. This fact is reflected in the arrest rates; approximately 78% of the persons arrested in the United States were male (National Institute of Justice, 1998). This gender disparity in arrest rates is even more dramatic for violent offenses. Steffensmeier (1993) reported that males are arrested at a much higher rate (nearly 600%) for violent offenses, such as homicide and assaults. However, the female crime rate is on the rise and has been for several years. In the period from 1996 to 1997, no change was observed in the number of male arrests, but a 3% increase was recorded in female arrests (National Institute of Justice, 1998).

As outlined earlier, research has supported the idea that the PCL-R, specifically Factor 2 of the PCL-R, is a relatively good predictor of recidivism among male offenders (Salekin, Rogers & Sewell, 1996). However, a growing body of research suggests that the construct of psychopathy may manifest differently among females. For example, female psychopaths appear to recidivate at a lower rate than male psychopaths (50% vs. 62%; Salekin et al., 1998).

Research with criminal and noncriminal populations suggests psychopathy scores are lower among females than among males (Forth, Brown, Hart, & Hare, 1996; Salekin et al., 1997; Zagon & Jackson, 1994). Salekin et al. (1998) reported PCL-R scores for

female inmates ( $M = 17.86$ ,  $SD = 8.48$ ) that are lower than scores typically reported for male inmates ( $M = 23.6$ ,  $SD = 7.9$ ; Hare, 1990). It is important to note, however, that the majority of Hare's samples were gathered from maximum and medium security facilities (Hare, 1991). In contrast, Salekin et al.'s sample was solicited from a large county jail. In a treatment setting, Rutherford, Cacciola, Alterman, and McKay (1996) found lower average PCL-R total scores for female ( $M = 13.8$ ,  $SD = 7.0$ ) than for male methadone patients ( $M = 17.9$ ,  $SD = 7.6$ ).

Forth et al. (1996) reported PCL: SV scores for noncriminal females that are significantly lower than their male counterparts (see Table 4). Additionally, noncriminal males scored significantly higher ( $p < .05$ ) than females on all PCL:SV items with the exception of item 9 (lacks goals).

Table 4

Means (Standard Deviations) for PCL:SV for Male and Female Noncriminals (Forth et al., 1996)

Gender	PCL: SV Scores		
	Total	Factor 1	Factor 2
Males	6.36 (5.03)	2.89 (2.63)	3.48 (2.81)
Females	2.68 (2.48)	.92 (1.24)	1.81 (1.55)

Zagon and Jackson (1994) found that differences in psychopathy scores extend to self-reported psychopathy as well. They reported that males scored significantly higher than females (all  $ps < .01$ ) on the SRP-II total score, SRP-II Factor 1 and SRP-II Factor 2.

Mulder, Wells, and Bushnell (1994) found that women with Antisocial Personality Disorder (APD) are less violent and less likely to commit other types of crimes. Mulder et al. also found that women with APD were more likely than men with APD to suffer from depressive and anxiety disorders. In terms of background characteristics, Mulder et al. found that antisocial women were more likely than antisocial men to be unemployed, have high rates of marital separation and to live in rented accommodations. Furthermore, antisocial women's lives were more characterized by relationship difficulties and lying, whereas antisocial males' difficulties were characterized by job troubles, violence, and traffic offenses.

Hare (1991) suggested that socialization patterns of men and women may play a role in the expression of psychopathy, even if there are no gender differences in the core personality structure of the syndrome. Greater socialization may inhibit socially deviant and violent acts in women. For example, Silverthorn and Frick (1999) have argued that women may experience guilt more often than men for acting aggressively. Silverthorn and Frick hypothesized that the strong presence of psychopathic personality traits (Factor 1) may be necessary for women to break traditional gender norms and engage in repeated antisocial acts. As indirect support of this idea, Salekin et al. (1998) found that Factor 1 scores are more predictive of recidivism in females than Factor 2. This result seems to suggest that females who engage in chronic criminal behavior are likely to exhibit Factor

1 personality traits, such as lack of empathy and remorse. This finding highlights the importance of understanding and adequately measuring Factor 1 traits in women.

Utility of External Criteria. Research has demonstrated that psychopathy is associated with recidivism and aggression in males (Hemphill, 1998; Hemphill & Hare, 1995; Salekin et al., 1996; Serin, 1996; Serin & Amos, 1995). A meta-analysis by Salekin et al. (1996) found PCL and PCL-R total scores suggest that psychopathy scores, especially Factor 2 score, is a robust predictor of violent and general recidivism in males. They concluded that psychopaths classified primarily on Factor 1 items may not pose as great a risk as psychopaths classified predominantly on Factor 2 scores. The authors cautioned, however, that research with female offenders is preliminary. As such, assumptions about dangerousness, recidivism and institutional adjustment of females based on PCL-R scores are premature (Salekin et al., 1996). However, in a more recent study of psychopathy and recidivism in female offenders, Salekin, Rogers, Ustad, and Sewell (1998) provided partial support for the importance of core psychopathic traits. Salekin et al. found that PCL-R Factor 1 scores were better predictors of recidivism than were Factor 2 scores in female offenders.

Research by Salekin et al. (1997) suggested that the PCL-R factor structure for females differs substantially from Hare et al.'s (1990) proposed factor structure, which was validated primarily on male forensic patients and inmates. Figures 1 and 2 provide a schematic depiction of both Salekin et al.'s (1997) and Hare et al.'s (1990) models. Salekin et al. (1997) administered the PCL-R to 103 female inmates from the Tarrant County Jail in Fort Worth, Texas. Although they found support for the two-factor model,

they found that females displayed more overlap across the two dimensions. In particular, three items are cross-loaded: poor behavioral controls, lack of realistic goals, and impulsivity. These items load uniquely on Factor 2 in Hare's model of male psychopathy. Three additional items failed to load above .40 on either factor (failure to accept responsibility, many short-term relationships, and revocation of conditional release). In Hare's model, failure to accept responsibility loads on Factor 1, revocation of conditional release loads on Factor 2 and many short-term relationships fails to load on either factor. In addition, Salekin et al. found that two items, promiscuous sexual behavior and criminal versatility, load substantially for females that are not found in male populations. In summary, initial research suggests that this different factor structure may have far-reaching implications for the classification and predictive ability of psychopathy in females (Salekin et al., 1998).

Figure 1: Salekin et al. (1997) Proposed Model of Psychopathy

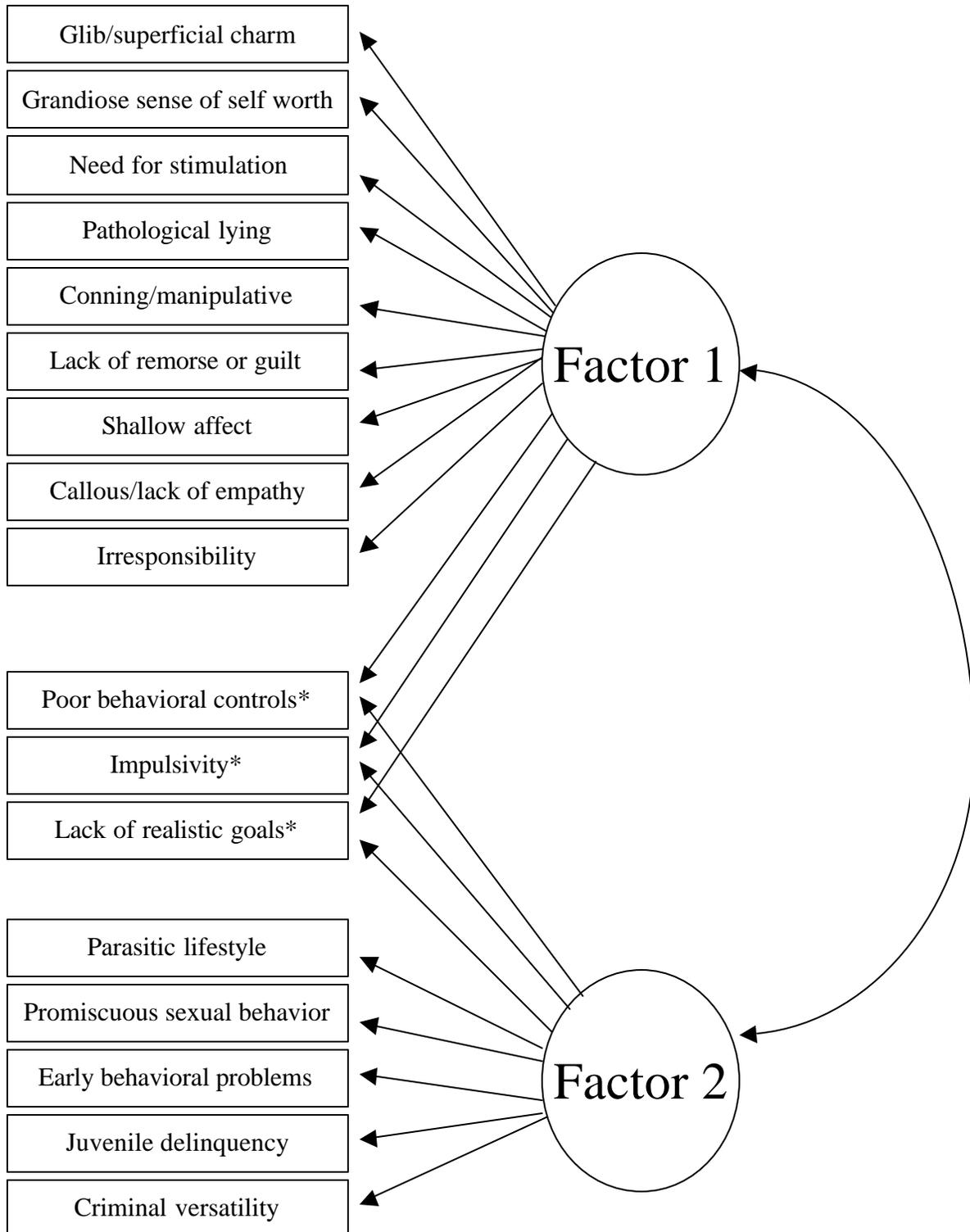
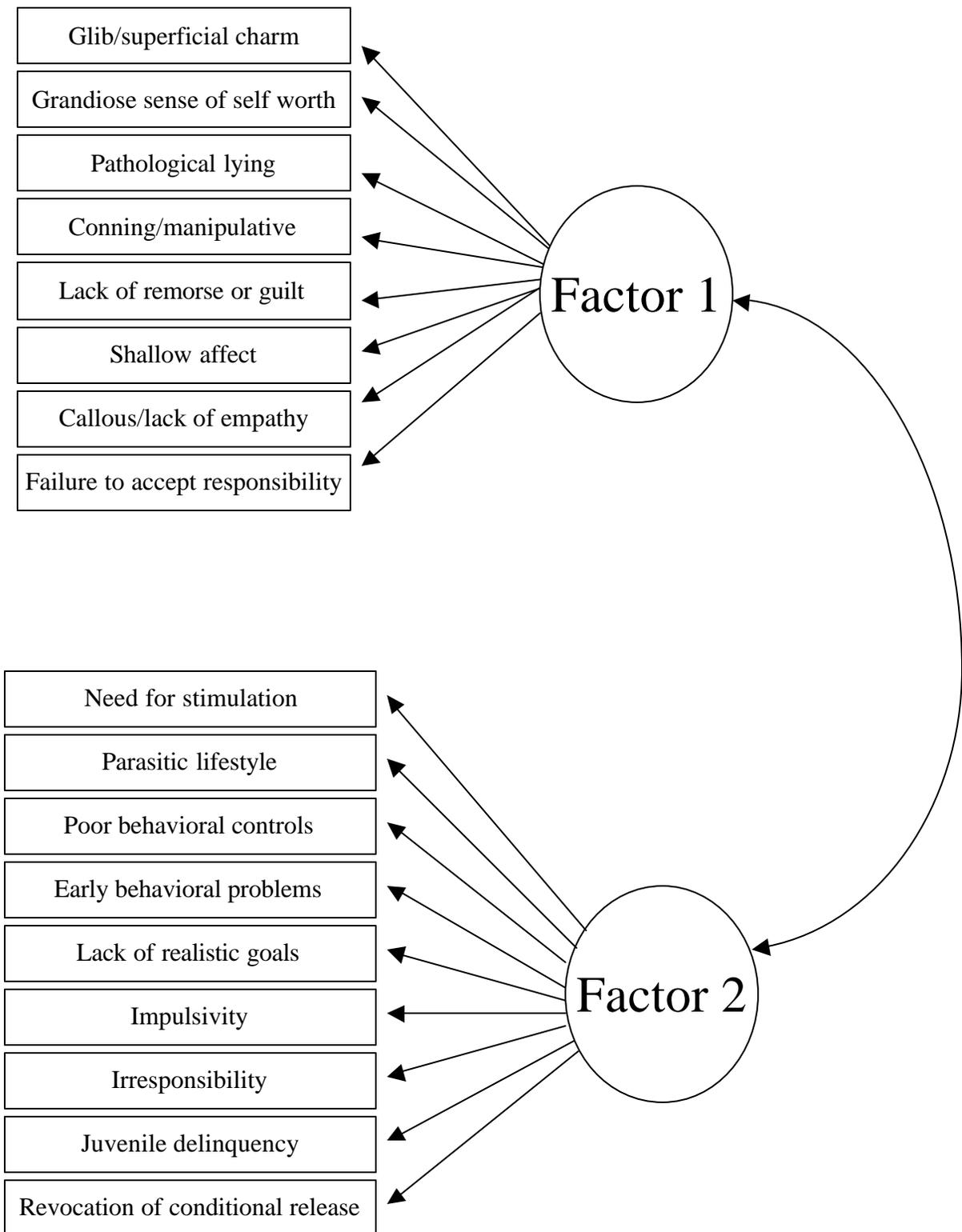


Figure 2: Hare et al. (1990) Model of Male Psychopathy



## Current Study

The available literature on psychopathy and its correlates leaves many important issues unresolved. As noted previously, the two-factor structure of the PCL-R is stable in male offenders (Hare et al., 1990; Harpur et al., 1988; Harpur et al., 1989). However, little research has been conducted with female offenders. Salekin et al. (1997) provided the only factor analytic study which suggests that the factor structure for females may be substantially different.

Gender differences in the relationship of psychopathy to external correlates are also understudied. Investigators (Hemphill, 1998; Hemphill & Hare, 1995; Salekin et al., 1996; Serin, 1996; Serin & Amos, 1995) have reported that PCL-R scores are correlated with recidivism and aggression in males. Male psychopaths commit a disproportionately large number of violent crimes (Hare, 1999; Hare & McPherson, 1984). These external correlates of psychopathic behavior correspond to Factor 2 of the PCL-R. In contrast, correlates of Factor 1 traits have not been investigated. Specifically, correlates of Factor 1 personality traits in females have not been adequately examined.

The use of self-report measures with criminal populations has achieved varying levels of success. To date, no self-report inventory has been tested with the PCL-R for screening purposes. As stated previously, an effective use of a self-report screen could save valuable resources such as time and mental health dollars within the correctional system. By identifying a subset of female offenders who has a moderate to high likelihood of being psychopathic, many unnecessary lengthy and expensive assessments can be avoided.

Selection of an effective screen must meet several criteria. Issues such as reading level, length, utility estimates, and coverage of the target construct must be considered. The SRP-II was chosen for several reasons. First, its reported Flesch-Kincaid reading level is 3.70. In addition, the SRP-II is considerably shorter than other self-report or multi-scale inventories that have been employed with incarcerated samples (e.g., PPI and PAI). Finally, the SRP-II was chosen because it is intended to measure both Factor 1 and Factor 2 and appears to do so with more precision than other available self-report measures.

The present investigation is based on a personality-based approach to the assessment of psychopathy. The major thrust of the study is based on the thesis that personality traits are central to this disorder and play an integral role in its expression, particularly with female offenders. With this theoretical framework in mind, the present study examines the assessment of psychopathy in female inmates using different methods, each of which places at least equal importance on Factor 1, or core personality, traits.

## Research Questions

To investigate the dimensions of psychopathy in female offenders, the following research questions are addressed:

1. Can either the Hare et al. (1990) two-factor model of male psychopathy or the Salekin et al. (1997) two-factor model of female psychopathy be confirmed with the present sample?
2. When measured by Factor 1 of the PCL-R, how accurate are women's self-appraisal of their own psychopathic personality traits?
3. Is the SRP-II an effective screen for psychopathy in female offenders?

## CHAPTER 2

### METHOD

A confirmatory factor analytic approach was utilized in the present study to investigate the factor structure of the Psychopathy Checklist-Revised. Models were generated to represent the factor structures identified by both Hare et al. (1990; see Figure 1) and Salekin et al. (1997; see Figure 2). Both of these hypothesized models were then tested against data from the present sample. In addition to the CFA, correlational analyses were employed to investigate additional research questions.

#### Participants

The sample consisted of 119 female inmates at the Tarrant County Jail in Fort Worth, Texas. The participants had a mean age of 31.24 ( $SD = 8.04$ ) with an average of 11.75 ( $SD = 1.86$ ) years of education. The racial composition of the sample was 65 (54.6%) Caucasians, 36 (30.3%) African Americans, 12 (10.1%) Hispanic Americans or Hispanic, and 6 (5.0%) identified themselves as biracial. Hispanic American and Hispanic females are likely to be underrepresented in this sample due to the number of female inmates who were unable to speak English fluently. No differences between ethnicities were observed in terms of age ( $F [3] = .45, p > .05$ ) or years of education ( $F [3] = .08, p > .05$ ).

Both adjudicated offenders and those with trials pending were evaluated. Representative offenses included possession/manufacturing/delivery of a controlled

substance, theft and theft by check, credit card abuse and to a lesser extent violent crimes, such as assault or assault with bodily injury.

### Measures

Wide Range Achievement Test – 3 (WRAT-3). The Reading portion of the WRAT-3 was administered to assess a reading level for each participant. The WRAT-3 consists of a 36-word list of increasing difficulty. Correlations between the WRAT and the Gilmore Oral Reading Test are strong ( $r = .87$ ; Hollensworth & White, 1981). Other researchers (Tramil, Tramil, Thornthwaite, & Anderson, 1981) suggested that the WRAT measures the same construct (verbal fluency) as the Reading Comprehension subtest of the Peabody Individual Achievement Test. Finally, Prewett and Giannuli (1991) found that the reading subtests of the Woodcock-Johnson, Peabody Individual Achievement Test -Revised, Kaufman Test of Education Achievement and the WRAT-R load highly on a single factor, suggesting that each reading test measures a similar construct.

The Psychopathy Checklist-Revised (PCL-R). The PCL-R (Hare, 1991) is a 20-item scale used in the assessment of psychopathy. A PCL-R score is determined through a semi-structured interview and a review of collateral information. The PCL-R employs a three-point scoring scale. A score of “0” on an item suggests that the behavior or trait is not present in the individual; a “1” suggests it may be present or is present in some respects, and a “2” indicates the definite presence of the item. Total scores equal to or greater than 30 are considered indicative of psychopathy. Factor 1 consists of those items that represent core personality traits. Factor 2 measures the behavioral traits of a socially deviant lifestyle. The PCL-R yields a total score, a Factor 1 score, and a Factor 2 score.

Hare et al. (1990) reported interrater reliability ranging from .82 to .93 for the PCL and PCL-R total scores when applied to male prisoners. Hare (1991) summarized interrater reliability across four inmate and two forensic psychiatric samples (ICCs were .78 to .89 with a median of .84). Darke, Kaye, Finlay-Jones, and Hall (1998) reported perfect (1.00) diagnostic agreement across raters using both a community sample as well as a prison sample. Darke et al. also reported very high correlations between the total scores of the raters ( $r = .94$ )

In contrast to interrater reliability, estimates of test-retest reliability fell in the moderate to moderately high range. Employing a sample of 200 male and 25 female methadone patients, Rutherford, Cacciola, Alterman, McKay, and Cook (1999) found the test-retest reliability of the PCL-R to be moderate. Interestingly, Factor 1 was more stable across time in women (.63) than men (.43). Factor 1 was less reliable in men than Factor 2 (.60). Utilizing a cut score of 25, Rutherford et al. (1999) found the test-retest reliability of the classification of psychopathy to be .48 for men and .67 for women.

In sum, the PCL-R is considered a highly reliable interview for assessment of psychopathy (Rogers, in press). Research has also shown that the PCL-R is a moderately strong predictor of both violent and general recidivism (Salekin et al., 1996).

Self-Report Psychopathy-II (SRP-II). The SRP and its revision, the SRP-II, are self-report measures of psychopathy developed by Hare (1985, 1991). The SRP-II is derived from the PCL-R and is reported to have a similar factor structure (Hare, 1991). It is a 60-item inventory, scored on a 7-point Likert-type scale ranging from Disagree

Strongly to Agree Strongly. The SRP-II is reported to have a Flesch-Kincaid grade level of 3.70 (K. Cruise, personal communication, October 27, 1999).

Behavior Ratings Form (BRF). The Behavior Ratings Form (BRF) was developed by nine graduate students in clinical psychology with special interests in forensic psychology, and one faculty member with extensive clinical and research experience in forensic assessment. This form was developed to assess Factor 1 personality traits as identified by Hare and Salekin et al. Members of this team generated 8-12 behavioral indicators of each psychopathic personality trait. Each member then independently rated each criterion on its effectiveness in representing the personality trait. Ratings were made on a Likert-type scale ranging from 1 (unimportant in the expression of psychopathy) to 7 (very important). The results of this prototypical analysis were used to select two behavioral indicators that are most representative of each Factor 1 trait. All selected items exceeded the benchmark of “moderately important” ( $M$  ratings  $> 5.00$ ). The two items receiving the highest mean ratings for each trait were chosen to represent that trait on the BRF. In general, items were high to very high in prototypicality (grand  $M = 5.90$ ,  $SD = 1.10$ ). Items, means, and standard deviations are reported in Appendix A.

### Procedure

During the initial stages of data collection, correctional officers on the unit facilitated inmate participation by introducing the researcher to potential volunteers. As the study progressed, female inmates were approached directly by the researcher and

invited to participate in the study. Additionally, a few participants who particularly enjoyed the experience were very helpful in recruiting others to participate.

In accordance with the University of North Texas Internal Review Board, participants met individually with the researcher who explained the general purpose of the study. Interested participants provided written, informed consent (see Appendix B). Interviews were conducted in an all-purpose room within the unit. During interviews, the door remained closed to protect the confidentiality of the participant. Interviews generally lasted two hours with breaks given as needed.

After informed consent was obtained, basic demographic information was gathered in an interview format. The WRAT-3 Reading subtest was the first test to be administered. Participants with less than a fourth grade reading level were continued in the study but were not administered the SRP-II. In the assessment sequence, the SRP-II was then administered to individuals with a sufficient reading level ( $n = 81$ ).

The SRP-II was administered first in order to most closely parallel clinical practice. That is, to most effectively judge the use of the SRP-II as a screen for psychopathy, it must be administered before any other measure of psychopathy to avoid potentially influencing or contaminating a participant's responses. Following the administration of the SRP-II, the Psychopathy Checklist – R (PCL-R) and the Behavioral Ratings Form (BRF) were administered in counterbalanced order to control for possible order effects.

### Statistical Methods

A confirmatory factor analysis was performed on the two models discussed. Hare's model was defined by significant factor loadings as reported by Hare et al. (1990). Salekin et al.'s model was defined by significant factor loadings reported by Salekin et al. (1997). Table 5 presents model specifications for these analyses.

The confirmatory factor analyses were based on 119 participants and 20 PCL-R items. The ratio of participants to variables was virtually 6:1; an acceptable ratio for the proposed CFA (Hair, Anderson, Tatham, & Black, 1995). EQS (Bentler, 1995) was used to employ a structural equation modeling approach to CFA.

Table 5

Hare et al. (1990) and Salekin et al. (1997) PCL-R Factor Structure Specifications for  
Confirmatory Factor Analysis

Psychopathy Checklist –R Items	Hare et al. (1990)	Salekin et al. (1997)
Glibness/Superficial charm	Factor 1	Factor 1
Grandiose sense of self worth	Factor 1	Factor 1
Need for stimulation	Factor 2	Factor 1
Pathological lying	Factor 1	Factor 1
Conning/manipulative	Factor 1	Factor 1
Lack of remorse or guilt	Factor 1	Factor 1
Shallow affect	Factor 1	Factor 1
Callous/lack of empathy	Factor 1	Factor 1
Parasitic lifestyle	Factor 2	Factor 2
Poor behavioral controls	Factor 2	Factor 1 & Factor 2
Promiscuous sexual behavior		Factor 2
Early behavioral problems	Factor 2	Factor 2
Lack of realistic, long-term goals	Factor 2	Factor 1 & Factor 2
Impulsivity	Factor 2	Factor 1 & Factor 2
Irresponsibility	Factor 2	Factor 1
Failure to accept responsibility for actions	Factor 1	
Many short term marital relationships		
Juvenile delinquency	Factor 2	Factor 2
Revocation of conditional release	Factor 2	
Criminal versatility		Factor 2

One way to conceptualize goodness of fit with confirmatory factor analysis is by thinking of models nested within one another. At one end of the continuum is the independence model. In this case, the independence model, also called the null or unrestricted model, is the data. At the other end of the continuum is the full or perfect model (i.e., hypothesized model) with zero degrees of freedom. Fit indices that employ a comparative fit approach place the hypothesized model somewhere along this continuum by attempting to fit the hypothesized model to the observed data. (Tabachnick & Fidell, 1996). In each approach, a fit index  $\geq .90$  indicates a good fit. The following fit indices were calculated in the present study.

Normed Fit Index (NFI). This index evaluates the model by comparing the chi square value of the hypothesized model to the chi square value of the independence model. With small samples, the NFI may underestimate the fit of the model in good fitting models.

Non-normed Fit Index (NNFI). This results from an adjustment to the normed fit index. Mathematically, the NFI cannot reach a value of one with small samples, even when a perfect fit exists. Therefore, this modification reduces the problem of underestimation with small samples.

Comparative Fit Index (CFI). The CFI uses a different approach to assess the fit of the model. The CFI employs the noncentral chi square distribution with noncentrality parameters. The noncentrality parameter is simply an estimation of the degree of noncentrality (i.e., the distance of the true mean from zero). The CFI is a ratio of the noncentrality parameter for the estimated model relative to the noncentrality parameter

for the independence model. Hence, the larger the CFI, the better the fit. The CFI performs well estimating model fit even in small samples (Tabachnick & Fidell, 1996).

Robust Comparative Fit Index (RCFI). The RCFI is a variation of the CFI that is less affected by multivariate non-normality than is the CFI. Bentler (1995) suggests that the RCFI is the best indicator of model fit because of its robustness to violations of normality.

Reporting several fit indexes also serves as a procedural check in that the fit estimate should increase with each reported index. The RCFI should indicate the best fit (Bentler, 1995). The NFI and the NNFI both are compromised, to varying degrees, by small sample sizes. The present sample size ( $N = 119$ ), although adequate for CFA, is nonetheless small (Tabachnick & Fidell, 1996).

Utility estimates were calculated to estimate the usefulness of the SRP-II as a screen for the presence of psychopathy. Specifically, Positive Predictive Power, Negative Predictive Power, Specificity, and Sensitivity were calculated. Tables 6 and 7 present definitions and formulas used for calculating utility estimates.

Table 6

Estimates of Diagnostic Validity

SRP Score Indicates Psychopathy is:	PCL Score of 30 or above (Psychopathy is present)	PCL Score of 30 or below (Psychopathy is absent)
Present	True Positive (a)	False Positive (b)
Absent	False Negative (c)	True Negative (d)

Table 7

Calculating Utility Estimates for Psychopathy

Utility Estimate	Formula
Positive Predictive Power (PPP) ?? When the measure indicates that a person has psychopathy, what is the likelihood he or she does?	$a / a + b$
Negative Predictive Power (NPP) ?? When the measure indicates that a person does not have psychopathy, what is the likelihood he or she does not?	$d / c + d$
Sensitivity ?? How accurate is the measure in identifying persons who have psychopathy?	$a / a + c$
Specificity ?? How accurate is the measure in identifying persons who do not have psychopathy?	$d / b + d$

A screen designed to rule out psychopathy must have high negative predictive power and sensitivity so that very few cases of psychopathy are missed. Negative predictive power (NPP) is the ratio of true nonpsychopaths in relation to all offenders classified as nonpsychopaths. NPP must be high in this situation. If a screening device (e.g., the SRP-II) indicates the person is not psychopathic, a clinician wants to be confident in screening out this individual with no further testing. When utilizing a screening device to screen out a clinical condition, Positive Predictive Power (PPP) can be somewhat sacrificed to ensure a very high NPP. Because psychopaths pose such a

great risk to society, it is important to provide a full assessment to those individuals who may be psychopathic.

Sensitivity estimates the accuracy of a test at identifying persons with a particular condition (i. e., psychopathy). In an effort to minimize false negatives, a certain number of false positives can be tolerated. By being overinclusive, the screening device allows the clinician to minimize the risk of false negatives.

## CHAPTER 3

### RESULTS

A considerably lower proportion of female offenders were classified as psychopaths in this sample (5.9%) as compared to research with other females (i.e., 16%; Salekin et al., 1997) and male samples (i.e., 25 to 30%; Hare, 1991). PCL-R scores for the current study were approximately normally distributed (skewness =  $-.156$ ; kurtosis =  $-.592$ ;  $ks = .061$ ,  $p = .20$ ). The mean for the total PCL-R scores ( $M = 18.17$ ,  $SD = 6.98$ ) was in the “mixed” range for psychopathy. These PCL-R scores were comparable with past research with a female sample (18.17 current research vs. 17.86,  $SD = 8.48$  Salekin et al., 1998).

No differences were observed across ethnicity with regard to total PCL-R scores ( $F [3] = .92$ ,  $p > .05$ ). However, there was a significant difference in Factor 1 scores across ethnicity ( $F [3] = 3.65$ ,  $p < .05$ ). Post Hoc analysis with Tukey HSD indicated that African Americans obtained higher Factor 1 scores than Caucasians ( $p = .01$ ; Cohen's  $d = .21$ ; see Table 8 for means and standard deviations). No differences were found in Factor 2 scores ( $F [3] = .58$ ,  $p > .05$ ). Ethnic differences were also examined for the SRP-II and the BRF. No significant differences were observed for the SRP-II total score ( $F [3] = .88$ ,  $p > .05$ ) or factor scores ( $F_1$ ,  $F [3] = 2.17$ ,  $p > .05$ ;  $F_2$ ,  $F [3] = 1.55$ ,  $p > .05$ ). Likewise, no differences were found for the BRF ( $F [3] = .58$ ,  $p > .05$ ). Correlations among the tests administered (PCL-R, SRP-II, and BRF) are presented in Appendix D.

Table 8

Means (Standard Deviations) for Female Offenders Across Ethnic Groups: PCL-R, SRP-II, and BRF

	African American	Caucasian	Hispanic American	Biracial
PCL-R Total	19.33 (.94)	17.89 (.94)	15.67 (2.30)	19.17 (2.07)
Factor 1	6.33 (2.12)	4.34 (3.36)	4.00 (3.95)	5.00 (2.76)
Factor 2	8.08 (3.06)	8.47 (3.62)	7.25 (3.98)	7.33 (2.66)
SRP-II Total	89.88 (19.90)	93.02 (25.34)	81.88 (20.42)	80.50 (10.40)
Factor 1	34.21 (7.06)	30.40 (7.12)	35.00 (7.17)	28.17 (7.25)
Factor 2	35.43 (13.97)	41.19 (14.91)	31.00 (13.27)	37.17 (11.65)
BRF Total	19.64 (4.76)	17.46 (4.60)	16.67 (5.28)	16.5 (3.45)

Research Question #1

Research Question #1 investigated whether the factor structures found by Hare et al. (1990) and Salekin et al. (1997) could be confirmed with the present sample of incarcerated females. Hare's 2-factor model (Hare et al., 1990; Harpur, Hare, & Hakstian, 1989) has been accepted as the proper conceptualization of psychopathy for clinical and research purposes.<sup>1</sup> Therefore, the first CFA attempted to confirm his standard model on the current sample (see Table 5 for model specifications). The fit for the Hare model was poor ( $\chi^2 [118] = 269.29, p < .001$ ). As summarized in Table 9, none of the fit indices achieved the accepted standard of  $\geq .90$ . In an effort to improve the model, multivariate

recommendations provided by EQS were systematically evaluated. However, these recommendations did not appreciably improve the fit indices. Therefore, the model was deemed to be a poor fit for the data. Table 10 presents factor loadings and associated error terms for each item specified in the Hare et al. model.

Table 10 reports both factor loadings and error terms for the Hare et al. (1990) model. One benefit of utilizing confirmatory factor analysis (CFA) is that it allows for inspection not only of factor loadings, but also of associated error terms. Unlike exploratory factor analyses which provides an estimate of common variance, CFA partials out error variance from common variance. The amount of variance accounted for is calculated by a simple formula ( $1 - \text{error term}^2$ ). For example, a factor loading of .43 has an associated error term of .90. This item then accounts for 19% of the variance in its specified factor. An item accounting for 30% or more of the variance is considered meaningful and deemed to be a good discriminator of the latent variable (Embretson & Hershberger, 1999). Factor loadings of  $\geq .60$  are needed to achieve this standard<sup>2</sup>.

---

<sup>1</sup> Hare (1991) proposed, with appropriate cautions, the use of these two dimensions with both male and female offenders.

<sup>2</sup> Factor loading of .60 have an associated error variance of .83. Therefore, an item achieving a factor loading of .60 accounts for 31% of the variance in its factor.

Table 9

Goodness of Fit Estimated for Hare et al. (1990) and Salekin et al. (1997) Models

Table 1

Dimensions of Psychopathy in Female Offenders: Fit Indices for Three Confirmatory Factor Analytic (CFA) Models

CFA Model	Factors	$\chi^2$	p	NFI	NNFI	CFI	RCFI	RMSEA
Hare et al. (1990)	2	269.29	.001	.58	.66	.70	.73	.11
Salekin et al. (1997)	2	334.30	.001	.54	.56	.63	.65	.13

Table 10

PCL-R Factor Loadings (Factor Loading/Error Term) Generated by Confirmatory Factor Analysis Testing the Hare et al. (1990) Model of Psychopathy in a Sample of Female Offenders

PCL-R Item	Factor 1	Factor 2	Error Term
1. Glib/Superficial Charm	.12		.99
2. Grandiose Sense of Self Worth	.29		.96
3. Need for Stimulation		.58	.82
4. Pathological Lying	.51		.86
5. Conning/Manipulative	.43		.90
6. Lack of Remorse	<b>.70</b>		.71
7. Shallow Affect	<b>.69</b>		.73
8. Callous/Lack of Empathy	<b>.86</b>		.50
9. Parasitic Lifestyle		<b>.62</b>	.78
10. Poor Behavioral Controls		.47	.89
11. Promiscuous Sexual Behavior			
12. Early Behavioral Problems		.42	.91
13. Lacks Realistic Goals		<b>.62</b>	.78
14. Impulsivity		.38	.73
15. Irresponsibility		.58	.82
16. Failure to accept responsibility	.33		.95
17. Many short-term marriages			
18. Juvenile Delinquency		.37	.93
19. Revocation of Conditional Release		.11	.99
20. Criminal Versatility			

Note. Substantial loadings ( $\geq .60$ ) are presented in bold type.

Salekin et al.'s 1997 proposed factor structure was then tested using the same CFA procedures. Factor loadings from the Salekin et al. findings of .40 or above were considered significant (see Table 5 for model specifications). The result of this CFA also

yielded a poor fit ( $\chi^2 [116] = 372.15, p < .001$ ). Table 9 presents the appropriate fit indices. As with the Hare et al. model, none of the fit indices for the Salekin et al. model reached the  $\geq .90$  standard for a good fit. Table 11 presents factor loadings and associated error terms for the Salekin et al. model. An examination of multivariate recommendations did not appreciably improve the fit indices.

Table 11

PCL-R Factor Loadings (Factor Loading/Error Term) Generated by Confirmatory Factor Analysis Testing the Salekin et al. (1997) Model of Psychopathy in a Sample of Female Offenders

PCL-R Item	Factor 1	Factor 2	Error Term
1. Glib/Superficial Charm	.09		.99
2. Grandiose Sense of Self Worth	.27		.96
3. Need for Stimulation	.24		.97
4. Pathological Lying	.56		.83
5. Conning/Manipulative	.48		.88
6. Lack of Remorse	<b>.68</b>		.73
7. Shallow Affect	<b>.67</b>		.74
8. Callous/Lack of Empathy	<b>.80</b>		.60
9. Parasitic Lifestyle		<b>.61</b>	.80
10. Poor Behavioral Controls	.07	.48	.84
11. Promiscuous Sexual Behavior		.42	.91
12. Early Behavioral Problems		.47	.88
13. Lacks Realistic Goals	.01	.56	.82
14. Impulsivity	- .45	<b>.99</b>	.72
15. Irresponsibility	.41		.91
16. Failure to accept responsibility			
17. Many short-term marriages			
18. Juvenile Delinquency		.36	.93
19. Revocation of Conditional Release			
20. Criminal Versatility		<b>.60</b>	.80

Note. Substantial loadings ( $\geq .60$ ) are presented in bold type.

Exploratory factor analyses were then performed in an attempt to discover the underlying factor structure in this population. In an effort to make a direct comparison with previously derived models (i.e., Hare et al., 1990 and Salekin et al., 1997), a two-factor solution was first specified. Harpur, Hakstian, and Hare (1988) employed an

unweighted least squares extraction with oblique rotation to define the two-factor structure. Replication of that procedure with the current sample resulted in an unsatisfactory solution in that it failed to yield an independent Factor 2. One possible explanation is differences in sample composition. Harpur et al. (1988) utilized male prison inmates, while Harpur et al. (1989) employed male prison inmates and male forensic psychiatric patients. Therefore the factor analytic extraction and rotation by Salekin et al. were employed. They used principal axis factoring (PAF) analysis with varimax rotation. The PAF yielded a satisfactory two-factor solution with no significant cross-loadings (see Table 12)<sup>3</sup>.

---

<sup>3</sup> Confirmatory factor analysis of this solution yielded an unsatisfactory fit (NFI = .60, NNFI = .66, CFI = .73, RCFI = .76). This poor fit suggests that this two-factor solution does not adequately reproduce the data.

Table 12

Exploratory Factor Analysis Factor Loadings

Psychopathy Checklist –Revised Items	Impulsive/Irresponsible Behavior	Core Personality Traits
1. Glibness/Superficial charm	- .15	.25
2. Grandiose sense of self worth	.00	<b>.41</b>
3. Need for stimulation	<b>.62</b>	- .12
4. Pathological lying	.34	<b>.46</b>
5. Conning/manipulative	.31	<b>.41</b>
6. Lack of remorse or guilt	.21	<b>.65</b>
7. Shallow affect	.23	<b>.61</b>
8. Callous/lack of empathy	.32	<b>.74</b>
9. Parasitic lifestyle	<b>.60</b>	.26
10. Poor behavioral controls	.39	.31
11. Promiscuous sexual behavior	<b>.45</b>	.16
12. Early behavioral problems	.36	.23
13. Lack of realistic, long-term goals	<b>.53</b>	.24
14. Impulsivity	<b>.72</b>	.00
15. Irresponsibility	<b>.64</b>	.00
16. Failure to accept responsibility for actions	.17	.32
17. Many short term marital relationships	.17	.00
18. Juvenile delinquency	.37	.00
19. Revocation of conditional release	.00	.11
20. Criminal versatility	<b>.54</b>	.27
% of variance accounted for	16.73	12.33
Eigenvalues	3.35	2.47

Note. Substantial loadings ( $\geq .40$ ) are presented in bold.

The first factor in this solution, Impulsive/Irresponsible Behavior (IIB), accounted for 16.7% of the variance. Table 12 presents the seven items with unique and substantial loadings on this factor. The IIB factor is characterized by rash behavior undertaken without regard for its consequences and an unusually high proneness to boredom. In addition, individuals scoring high on this factor are likely to be unreliable in financial, employment, and family situations.

The second factor, Core Personality Traits (CPT), accounted for 12.3% of the variance. This factor consists of six unique and substantial loadings that address affective and interpersonal characteristics (see Table 12). Deficits in emotional experiences appear to be most descriptive of individuals scoring high on this factor. They often have difficulty experiencing empathy and genuine emotions and will sometimes simulate those emotions. Furthermore, these individuals tend to have difficulty identifying with the feelings of others. Often without guilt or remorse, these individuals view others as objects to be manipulated without regard to their physical or emotional welfare.

### Research Question #2

Research Question #2 examined whether female offenders are able to recognize and acknowledge behaviors that are indicative of core psychopathic traits. The Behavior Ratings Form (BRF) was developed to address this issue. Using the prototypical analysis described earlier, behaviors judged to be most representative of core psychopathic personality traits were identified. The inmates were then asked to rate how likely they are to engage in those behaviors.

Items retained for the BRF consisted of 12 items (see Appendix B) designed to evaluate the six core personality traits: grandiose sense of self worth, pathological lying,

conning/manipulative, lack of remorse, shallow affect and callous/lack of empathy. The scale has moderate internal consistency (Cronbach's alpha = .69).

The investigator was interested in examining the relationship between the women's acknowledgement of psychopathic-type behaviors in relationship to PCL-R core psychopathic traits. Pearson's product-moment correlations were computed between the BRF and the PCL-R. The relationship between the BRF and the women's self-reported appraisal via the SRP-II was also investigated. Table 13 presents the results of the correlational analyses. Unexpectedly, the BRF total score did not correlate significantly higher ( $p > .05$ ), with the Core Personality Traits factor of the PCL-R than the Impulsive/Irresponsible Behavior factor. All correlations with the exception of Factor 1 of the SRP-II are significant at the .01 level. Interestingly, the BRF appears to correlate more highly ( $p < .05$ ) with Factor 2 of the SRP-II and the total score of the SRP-II.

Table 13

Correlations Between the PCL-R, SRP-II and Behavior Ratings Form (BRF)

	Core Personality Traits <sup>a</sup>	Impulsive/Irresponsible Behavior <sup>a</sup>	Total Score
PCL-R			.31**
Hare et al.	.32**	.28**	
Salekin et al.	.36**	.28**	
Current PAF	.38**	.23*	
SRP-II <sup>b</sup>	.17	.41**	.42**

\*  $p \leq .05$ , \*\*  $p \leq .01$  level

<sup>a</sup> The Core Personality Traits factor corresponds to Factor 1 of the Hare et al. (1990) and the Salekin et al. (1997) models. The Impulsive/Irresponsible Behavior factor corresponds to Factor 2 of those models.

<sup>b</sup>SRP-II Total Score intended to correlate maximally with the PCL-R total score.

Research Question #3

Research Question 3 addressed the use of the SRP-II with female offenders as a screen for the PCL-R classification of psychopathy. Cut scores that maximize negative predictive power and sensitivity were calculated based on the distribution of SRP-II scores. As discussed earlier, using a tool to screen out nonpsychopaths dictates that negative predictive power and sensitivity must be high so that very few cases of psychopathy are missed. Unlike diagnostic tools, Positive Predictive Power (PPP) and specificity can be somewhat sacrificed when estimating the utility of this type of screen.

A cut score of 115 was used to maximize negative predictive power and sensitivity (see Table 14)<sup>4</sup>. Perfect negative predictive power (1.0) and sensitivity (1.0) were found. In other words, the proposed cut score was able to identify every female offender who subsequently scored in the psychopathic range on the PCL-R (i. e.,  $\geq 30$ ). The hallmark of an effective screen is its ability to identify a subset of offenders likely to have psychopathy without missing cases with psychopathy. With a PPP of .46, the SRP-II is moderately effective with approximately one-half of the identified cases warranting the classification of psychopathy. It is important to note that these utility estimates are very preliminary. Shrinkage is likely to occur on cross-validation. In addition, the low base rate of psychopathy constrains the generalizability of these estimates.

Table 14

Utility Estimates of the SRP-II as a Screen for the PCL-R in a Sample of Female Offenders

Cut Score	PPP	NPP	Sensitivity	Specificity	Hit Rate
115	.46	1.0	1.0	.91	.91

Supplemental Analysis

An additional exploratory factor analysis was undertaken as part of the supplementary analyses. Previously, a two-factor solution was specified in order to most closely parallel the factor solutions of both Hare et al. (1990) and Salekin et al. (1997). However, using a scree test and eigenvalues greater than one, a three-factor solution

<sup>4</sup> Utility estimates based on a PCL-R cut score of  $\geq 25$  were also calculated. An SRP-II cut score of  $\geq 80$ , yielded the following utility estimates: PPP = .39, NPP = .96, Sensitivity = .95, and Specificity = .48. The overall hit rate was .60.

appeared to be promising. This three-factor solution accounted for 36.2% of the variance. Appendix C presents the findings of this principal axis factoring rotated to a varimax solution. After close inspection, the three-factor model does not appear to be the superior solution. Its third factor is relatively weak, consisting of only two loadings (see Tabachnick & Fidell, 1996).

Factor 1, Behavioral and Emotional Deficits (15.0% of the variance), is composed of six substantial and unique loadings that represent long-standing deficits in behavioral and emotional functioning. Consistent with two-factor solutions, similar items load substantially (e. g., lack of remorse, shallow affect, and callous/lack of empathy).

Factor 2, Impulsive/Irresponsible Behavior, (14.2% of the variance) is also composed of six unique and substantial loadings. Similar to two-factor solutions, this factor is characterized by socially deviant behavior. It is most characterized by impulsive and irresponsible behavior coupled with an unusual proneness to boredom.

Factor 3, Interpersonal Deficits (7.1% of the variance), is composed of only two items. As noted earlier, the importance and interpretability of this factor can be questioned (Tabachnick & Fidell, 1996).

## CHAPTER 4

### DISCUSSION

Researchers and clinicians persist in their effort to understand psychopathy and its underlying dimensions. A substantial component of this effort involves the proper assessment of the syndrome across genders. Researchers consistently find gender differences in degree, prevalence, and important symptom expression in psychopathy (Darke, Kaye, Finlay-Jones, & Hall, 1998; Forth et al., 1996; Rutherford et al., 1996; Salekin et al., 1997, 1998). Despite repeated reports of these differences, researchers and clinicians continue to assess psychopathy according to the male model, use the cut score established with male samples, and tailor treatment programs toward treating “male” psychopathy. The current study sought to address gender differences in psychopathy as well as the use of self-report scales to indicate psychopathic traits in a sample of female offenders.

#### Factor Structure

The theoretical foundation for this thesis was provided by the work of Salekin et al. (1997, 1998). Employing an exploratory factor analysis, they found an underlying factor structure for their female sample that differed considerably from the factor structure found for males. Specifically, there was significant cross-loading of three items while two other items (promiscuous sexual behavior and criminal versatility) loaded substantially in the female sample that do not load in male samples (Hare et al., 1990). The current study was unable to confirm the factor structure proposed by Salekin et al. Instead, a two-factor structure that appears to more closely resemble the Hare et al. factor

structure was found in this sample. In particular, the Impulsive/Irresponsible factor derived in the current study shares more items with Factor 2 of the Hare et al. (1990) solution than with Salekin et al.'s (1997) factor solution (i.e., five unique loadings with Hare et al. vs. three unique loadings with Salekin et al., see Table 16).

The similarities across factor solutions on Factor 1 with the Core Personality Traits factor are striking. These important similarities and differences are discussed in the following section.

Core Personality Traits. A constellation of six unique and replicated items were found consistently in Hare et al. (1990) as well as Salekin et al. (1997). These loadings (grandiose sense of self worth, pathological lying, conning/manipulative, lack of remorse, shallow affect, and callous/lack of empathy) represent core psychopathic features (see Table 15 for model comparisons). Beginning principally with Cleckley (1941), these items have long been recognized as hallmark features of psychopathy. Indeed, these psychopathic personality traits are the cornerstone of the personality-based approach, championed by Cleckley (1941/1976), Hare and his colleagues (1980, 1985, 1993, 1996, 1990), and Lilienfeld (1994). In his original description of the psychopath, Cleckley (1941/1976) described the psychopath as untruthful and insincere, lacking in remorse, possessing a general poverty of major affective reactions, and pathological egocentricity (see also Rogers, in press). These descriptors closely parallel the PCL-R items of pathological lying, lack of remorse or guilt, shallow affect, and grandiose sense of self-worth. These items consistently emerge as important items in descriptions of male psychopathy (Hare et al. 1990,1991; Harpur et al., 1988, 1989). Replication of these six

items on a second female sample suggests that this subset of core psychopathic personality traits may be applied across genders. Despite gender differences in socialization and development, the presence of these deficits in affective and interpersonal functioning appear to be important features of psychopathy in both men and women.

Table 15

A Comparison of Factor Loadings for Core Personality Traits: Hare et al. (1990), Salekin et al. (1997) and the Current Sample

Hare et al.	Salekin et al.	Current Study
1. Glib/Superficial Charm	Glib	
2. Grandiose	Grandiose	Grandiose
4. Pathological Lying	Lying	Lying
5. Conning/Manipulative	Conning/Manipulative	Conning/Manipulative
6. Lack of Remorse	Lack of Remorse	Lack of Remorse
7. Shallow Affect	Shallow Affect	Shallow Affect
8. Callous/ Lacks Empathy	Callous/ Lacks Empathy	Callous/Lacks Empathy
16. Failure to accept responsibility		
3.	Need for Stimulation	
10.	Poor Behavioral Controls <sup>a</sup>	
13.	Lacks Realistic Goals <sup>a</sup>	
14.	Impulsivity <sup>a</sup>	
15.	Irresponsibility	

<sup>a</sup> Cross-loaded items include Poor Behavioral Controls, Lacks Realistic Goals, and Impulsivity.

Despite the homogeneity found for this factor (i. e., six unique and replicated items), important differences also emerge. Glib/superficial charm (item 1 of the PCL-R) is often included in descriptions of core psychopathic personality traits. This item consistently loads substantially in factor solutions on male samples and also loaded substantially in Salekin et al.'s (1997) female sample. Unexpectedly, Glib/superficial charm did not load significantly in the present sample, particularly since the same setting was used as the Salekin et al. study. Several hypotheses can be generated as possible explanations of this unexpected finding. One hypothesis is that the expression of this trait, representative of an interpersonal style, may have been influenced by the gender of the interviewer. The presence of a male interviewer in the Salekin et al. study may have influenced the women to behave in a more charming or glib manner. In the current study, a female interviewer may not have provided the motivation needed to behave in a charming manner. A more direct, straightforward approach, rather than a flirtatious or charming interpersonal style may have been adopted by the women when the interviewer was also female. A second possibility is that women self-disclose more readily to other women than they do to men. For instance, Pollner (1998) found that women reported a significantly greater number of symptoms (e. g., drug dependence and conduct disorders) to female rather than male interviewers. As a result, the female offenders in this sample may have been positively influenced by the gender of the interviewer.

Gender differences may also influence the interviewer's perceptions and their subsequent PCL-R ratings. A female interviewer rating another female's behavior may be less likely to rate her as charming. In contrast, a male interviewer may be more likely

to perceive his female respondent as charming. Pollner (1998) found that male interviewers reported that “excellent rapport” had been developed in greater number of their interviews than female interviewers. This finding may suggest that the males enjoyed the interview process more and found the respondents to be more likeable than did the female interviewers. This difference could also lead to differential scoring by male and female interviewers on Item 1, Glib/superficial charm.

Impulsive/Irresponsible Behavior. In contrast to the CPT factor, gender differences become readily apparent on the IIB factor. Although it more closely resembles Factor 2 of the Hare et al. (1990) and Salekin et al. (1997) solutions, it differs in important respects (see Table 16). Results found by Salekin et al. (1997) and replicated in the current study suggest that gender differences do exist in the manifestation of psychopathy. However, these gender differences are most striking within the behavioral facet of psychopathy.

Three commonalities emerge in substantial loadings across models. One item, parasitic lifestyle, emerged as a unique and replicated item across all three models. It is likely that psychopaths, regardless of gender, will tend to live a parasitic existence. As reported in Table 16, two other loadings appear common to the three solutions: lack of realistic long-term goals and impulsivity. Although cross-loaded in the Salekin et al. sample, these items consistently emerge as substantial loadings on this behavioral factor across models.

The heterogeneity of the Impulsive/Irresponsible Behavior dimension sheds light on gender differences in psychopathy. One salient finding is that two items emerged as

important and reliable indicators of female psychopathy that do not load substantially on the male model of psychopathy. Replicated items for female psychopathy were promiscuous sexual behavior and criminal versatility (see Table 16). Neither of these items load significantly in Hare et al.'s (1990) model of male psychopathy. Promiscuous sexual behavior may be a more important feature of female than male psychopathy for several reasons. Promiscuity in female offenders may be related to their criminal activity and exploitation of others. One hypothesis is that female offenders are more likely than their male counterparts to engage in prostitution. Sex also may be serving an instrumental function for female offenders. A second hypothesis generated from extended interviews with female offenders is that sex serves as a manipulation tool to obtain drugs or a place to live for free. Promiscuity in the current sample was correlated with irresponsibility ( $r = .47, p \leq .01$ ) and a parasitic lifestyle ( $r = .34, p \leq .01$ ).

Table 16

A Comparison of Factor Loadings for Impulsive/Irresponsible Factor: Hare et al. (1990), Salekin et al. (1997) and the Current Sample

Hare et al.	Salekin et al.	Current Study
3. Need for Stimulation		Need for Stimulation
9. Parasitic Lifestyle	Parasitic Lifestyle	Parasitic Lifestyle
10. Poor Behavioral Controls	Poor Behavioral controls <sup>a</sup>	
12. Early Behavioral Problems	Early Behavioral Problems	
13. Lacks Realistic Goals	Lacks Realistic Goals <sup>a</sup>	Lacks Realistic goals
14. Impulsivity	Impulsivity <sup>a</sup>	Impulsivity
15. Irresponsibility		Irresponsibility
18. Juvenile Delinquency	Juvenile Delinquency	
19. Revocation of Conditional		
11.	Promiscuous	Promiscuous
20.	Criminal Versatility	Criminal Versatility

<sup>a</sup>Cross-loaded with Core Personality Traits.

Replication of factor solutions across female samples is pivotal to the understanding of female psychopathy. Stability of solutions is important for establishing consistent findings and those variables that consistently do not load. As an example of the latter, revocation of conditional release did not load significantly in either the Salekin et al. or the current study. In contrast, this item loads significantly in the majority of Hare's (1991) samples of male offenders. This disparity may reflect a gender difference in the expression of psychopathy and hence, the item may not be a reliable indicator of female psychopathy.

An alternative hypothesis is that this disparity may reflect other sample differences. Both the current study and the Salekin et al. study were conducted in a large metropolitan jail. The majority of Hare's work with the PCL and PCL-R has been performed in prisons. Differences may occur in the severity of the infraction needed to violate conditional release from either a jail or prison. Until such time that the PCL-R is validated on females prison inmates, this issue remains unresolved.

#### Concluding Comments on Gender Differences

Findings from nonpsychopathic research provide indirect evidence of gender differences in the underlying dimensions of psychopathy. For example, important gender differences are observed with Axis II disorders. With the related diagnosis of Antisocial Personality Disorder (APD), men are more frequently diagnosed than women (3% of men vs. 1% of women; APA, 2000). In contrast, Borderline, Histrionic, and Dependent Personality Disorders are more frequently diagnosed in women (APA, 2000). Therefore, it is reasonable to expect gender differences in classification rates of psychopathy. Indeed, researchers (Forth, Brown, Hart, & Hare, 1996; Salekin et al., 1997; Zagon & Jackson, 1994) have reported rates of psychopathy that are lower in females than in males. In addition, the mean score on the PCL-R appears to be lower for women than for men (Hare, 1991; Salekin et al., 1997). This trend of relatively low PCL-R scores was again seen in the current study of female offenders.

Another hypothesis is that observed differences in psychopathy may reflect a gender bias in the classification system. Hartung and Widiger (1998) argued that diagnostic criteria may favor one gender over another. On this point, Zoccolillo (1993)

recommended the development of separate diagnostic criteria for conduct disorder in girls in recognition of gender differences. Zoccolillo argued that a conduct disorder diagnosis for girls should place relatively more emphasis on rule violations at home and school, substance abuse, prostitution, chronic lying, running away from home overnight, and poor school performance. Likewise, this diagnosis for girls should place less emphasis on vandalism, fire setting, burglary, use of a weapon in fights, stealing with confrontation of a victim, and rape.

Limited research with female samples has already indicated particular items or criteria that may better represent psychopathy in women than men. For example, promiscuous sexual behavior and criminal versatility emerged as significant items in both the Salekin et al. (1997) sample and the present female sample. With further validation, descriptions of psychopathy in women should place relatively more emphasis on these items. Additionally, the revocation of conditional release is a significant indicator of psychopathy in males. Thus far, it has not been shown to be a salient item with females. Together, these findings suggest that it may not be prudent to apply the psychopathic characteristics with equal weight across genders.

More work is needed before conclusive statements can be made regarding the dimensions of female psychopathy and its similarities and differences from male psychopathy. The present study, combined with Salekin et al.'s (1997), provide the first systematic gender comparisons for psychopathy. Important similarities emerge on core psychopathic traits with six items consistently found for both male and female psychopathy. These items (grandiose sense of self worth, pathological lying,

conning/manipulative, lack of remorse, shallow affect, and callous/lack of empathy) are likely to be a) the most salient features of core psychopathic traits and b) generalizable across gender.

Unlike the commonalities found in core psychopathic traits, much more heterogeneity was found across genders for the factor measuring antisocial behavior. A single item, Parasitic Lifestyle, loaded uniquely and substantially across all samples. More important to female psychopathy was the replication of two items from the Salekin et al. (1997) sample in the present study. These items, promiscuous sexual behavior and criminal versatility, loaded substantially in the female offender samples. These items appear to be more related to female psychopathy than male psychopathy.

In conclusion, the Salekin et al. (1997) study and the present study have laid the initial groundwork for research into female psychopathy. Continued research into female psychopathy must begin to look at confirming these proposed factor structures and investigating the external correlates associated with female psychopathy.

### Self-Reported Psychopathy

Researchers (Poythress, Edens, & Lilienfeld, 1998) have noted the considerable time investment required to administer the PCL-R and recognize the need for time-efficient screening tools. As a result, alternative measures have been investigated, including self-report scales (e. g., Edens, Hart, Johnson, Johnson, & Olver, 2000; Lilienfeld & Andrews, 1996; Poythress et al., 1998). An important feature of self-report instruments lies in their effective use of professional time. With the limited availability of

mental health practitioners in correctional settings, the use of self-report measures to screen individuals promotes efficiency.

Psychopathic Personality Inventory (PPI). Poythress et al. (1998) achieved a moderate level of convergent validity for the PPI in a sample of incarcerated offenders. As a screen for psychopathy, results were moderate. Positive Predictive Power and Negative Predictive Power were adequate at .71 and .88, respectively. The PPI had excellent specificity (.95) with two of the 40 nonpsychopaths misclassified as psychopaths. Sensitivity was relatively modest at .50.

The PPI was designed to assess only Factor 1 personality characteristics. When attempting to classify or screen for the presence of psychopathy, Factor 2 is also essential. Poythress et al. (1998) prudently cautioned against using the PPI for clinical classification.

Self-Report Psychopathy-II (SRP-II). Three characteristics of the SRP-II indicate its potential as a screen for psychopathy. First, the SRP-II assesses both Factor 1 and Factor 2 psychopathy. Second, the SRP-II is a short, 60-item questionnaire that requires approximately 15 minutes to complete. Finally, the SRP-II's reading level of about fourth grade adds to its usefulness in correctional populations, where reading skills are often limited.

Using the SRP-II, utility estimates calculated on the present sample were very positive. Low scores on the SRP-II (< 115) were highly accurate in screening out those without the disorder (NPP = 1.00). Additionally, the SRP-II cut score of 115 was highly sensitive with none of the psychopathic individuals being missed (sensitivity = 1.00).

However, the low prevalence of psychopathy in the present population likely affected these estimates. Baldessarini, Finklestein, and Arana (1983) noted the impact that prevalence rates have on predictive power of tests. To illustrate, they calculated utility estimates at different prevalence rates. For example, the PPP dropped from 93% to 61% to 12% as the prevalence decreased from 50% to 10% to 1%, respectively. In contrast, NPP increased inversely to prevalence from 76% to 97% and 99% for the same three prevalence rates. Baldessarini et al. note that "highly sensitive tests, even if somewhat limited in specificity, can be particularly useful in broad screening programs if test results are negative, especially if the tests are simple, convenient, and inexpensive" (p. 573).

In summary, the SRP-II appears promising as a screen rather than a diagnostic tool. Prevalence rates of psychopathy being quite low in female populations maximizes the NPP of a test. The identified cut score of 115 should be investigated with other samples before any firm conclusion can be drawn. The present findings suggest that the SRP-II may be potentially useful in screening female jail detainees; however, its generalizability to other settings remains unexamined.

#### Behavior Ratings Form (BRF)

One identified problem in attempting to utilize self-report measures to assess for psychopathy is their relatively low correlations with PCL-R scores. Moreover, self-report scales appear to consistently correlate more highly with the interview-based PCL-R Factor 2 than Factor 1 scores. The current study attempted to further investigate the offenders' self-awareness of Factor 1 personality characteristics. In particular, the BRF was created to address whether women can identify characteristics in themselves that are

related to Factor 1 traits. More specifically, do they have the insight needed to recognize their own psychopathic characteristics? Psychopathy, like many personality disorders, is associated with a lack of insight regarding the impact of one's behavior on other people (Edens et al., 2000). Thus, although psychopathic individuals may be able to report their behavioral history with reasonable accuracy, they may be unable to provide an accurate appraisal of their interpersonal and affective styles. For example, psychopaths may truly not perceive themselves as callous, irresponsible, or lacking in anxiety (Edens et al., 2000).

Psychopaths are often inaccurate reporters of their own emotional and affective states (Edens et al., 2000; Hare, 1993; Steuerwald & Kosson, 2000); their inaccuracies are likely to affect their descriptions of Factor 1 traits. Reporting on personality, emotions, and affective experiences requires a certain amount of insight that psychopaths may lack. Given the evidence that self-report measures are consistently more highly correlated with Factor 2 behaviors, we hypothesized that these individuals would more accurately rate behaviors than personality traits. As a result, we developed the BRF with the aim of operationalizing the core psychopathic personality characteristics.

As expected, the BRF correlated more highly with Factor 1 than with Factor 2 of the PCL-R. However, this correlation was still only modest ( $r = .38$ ). Given that the BRF items were chosen to typify Factor 1 traits, higher correlations were expected. Several nonexclusive hypotheses for this finding must be considered.

The first hypothesis for the modest relationship with PCL-R Factor 1 is that the BRF's face validity makes it vulnerable to social desirability. Females in this culture are

socialized to be warm, considerate, and nurturing (Myers, 1986). Even if a particular female does not possess those traits, she would likely know their social desirability. Social desirability may have affected the ratings of all these individuals, regardless of the extent of antisocial or psychopathic traits.

A second hypothesis is deception and manipulation resulted in altered presentation for reasons other than social desirability. A smaller percentage of these women, those manifesting psychopathic traits, may have been additionally motivated to alter their response styles (see Rogers & Cruise, 2000 for a review). Rogers and Cruise (2000) found that psychopaths were three times more likely than nonpsychopaths to have high levels of three levels of deception: unrealistically positive self-presentation, denial of criminality, and conning and manipulation. The most dramatic difference between psychopaths and nonpsychopaths was found on the unrealistically positive self-presentation dimension. Given that finding, it is not surprising that the antisocial/psychopathic females in the current study were presenting themselves in an overly positive light.

A third hypothesis is that, regardless of response style or social desirability, the BRF items may be poor indicators of Factor 1 characteristics. As Table 17 illustrates, this hypothesis has merit. Significant correlations were found for only 8 of the 12 items, and the magnitude of the correlations was generally modest. Although these modest correlations may be affected by response style, the possibility cannot be ignored that these items are simply inadequate indicators of Factor 1 traits.

Table 17

Correlations of PCL-R Items with their BRF Intended Indicators (Refer to Appendix A for BRF Item Numbers)

BRF Item	Grandiose	Lying	Conning	Lacks Remorse	Shallow Affect	Callous/Lacks Empathy
1.	-.06					
2.	.19*					
3.		.26**				
4.		.37**				
5.			.10			
6.			.42**			
7.				.21*		
8.				.26**		
9.					.14	
10.					.29**	
11.						.14
12.						.22*

Note: \*  $p \leq .05$ , \*\*  $p \leq .01$ .

## Limitations of the Study

Limitations of this study have been noted throughout the discussion; several salient constraints are expanded here. First, a relatively small sample size was used for the purposes of confirmatory factor analysis (Tabachnick & Fidell, 1996). Fit indices employed to estimate goodness of fit are negatively affected by small samples. Larger sample sizes would allow for more confidence in both confirmatory and exploratory factor analytic findings. Because the PCL-R is a lengthy interview, gathering large numbers of participants is difficult in light of the time constraints. In the future, several samples of females can be combined for purposes of confirmatory factor analysis, thereby increasing the power of the statistic. In addition, a larger sample size would allow for cross-validation of the SRP-II cut score in calculating utility estimates.

The rate of psychopathy in this study was lower than has been found with other male and female correctional samples. Sufficient research has not been conducted with females to conclude whether this difference reflects actual differences in rates of psychopathy. Doubtlessly, the small rate of psychopathy affected the study's utility estimates.

The SRP-II was chosen for this study as a self-report measure of psychopathy largely because it is reported to share the PCL-R's factor structure. At present, no published data have examined its factor structure. Confirmatory factor analysis of the SRP-II is needed to test its factor structure and similarity with the PCL-R.

## Directions for Future Research

### Confirmatory Factor Analysis

Using confirmatory factor analysis, neither the Hare et al. factor structure nor the Salekin et al. factor structure for the PCL-R was able to adequately reproduce the data in this sample. Clearly, large scale research utilizing CFA procedures is necessary to investigate fully the underlying factor structure of psychopathy in women.

Additionally, no published reports testing the factor structure of the SRP-II exist. Confirming its factor structure is an important step in testing its usefulness in clinical and research settings. Confirmatory factor analysis, testing the report of the SRP-II's two factor structure is a logical first step. This factor structure should also be tested across genders and settings (e.g., jails, prison, forensic, and noncriminal samples).

### Generalizability

Validation of the PCL-R on females across settings is an essential next step. The construct of psychopathy appears to be valid within female offenders in a metropolitan jail. However, this construct has not been adequately tested in a prison setting or in noncriminal or forensic psychiatric patients. Important differences may exist in those populations.

### Predictive and Criterion-Related Validity

External correlates of PCL-R dimensions in females need further investigation. Future research with female samples should address correlates of both PCL-R factors. For example, research has shown that PCL-R Factor 2 is a better predictor of recidivism in males while Factor 1 is a better predictor in females. Other correlates of Factor 1 traits in females have yet to be examined. Moreover, violence and aggression is correlated with

Factor 2 scores in males. Information regarding females is lacking in this area. Future research with females must consider the correlates of psychopathy, and particularly the differential predictive ability of the PCL-R factors across genders. Criterion-related validity of the PCL-R, in terms of institutional adjustment and treatment progress, also deserves consideration in this population.

### Summary

The current project was undertaken to better understand dimensions of female psychopathy within an incarcerated sample. By examining the construct of psychopathy in female offenders, the study highlighted similarities and differences with male psychopathy. Based on the findings of Salekin et al. (1997) and the current study, female psychopathy appears to differ substantially from male psychopathy. Adding to many past reports (Forth, Brown, Hart, & Hare, 1996; Rutherford, Cacciola, Alterman, & McKay, 1996; Salekin et al., 1997; Zagon & Jackson, 1994 ), the current study again confirmed that females obtain lower scores on the PCL-R than their male counterparts. Furthermore, the rate of psychopathy was again shown to be lower among females (5.9%) than what is typically reported for males (15-25%).

The current study also added to existing evidence (Salekin et al. 1997) that a different underlying factor structure exists for females. Although the differences are substantial, the similarities between male psychopathy and female psychopathy are also striking. Particularly interesting is the replication of six personality characteristics on Factor 1. Grandiose sense of self worth, pathological lying, conning/manipulative, lack of remorse, shallow affect, and callous/lack of empathy all load substantially in both male and female models.

In conclusion, psychopaths of either gender are likely to exhibit core psychopathic personality traits of grandiose sense of self-worth, lack of remorse, shallow affect, callous/lack of empathy, lying and conning/manipulative behavior. The striking gender differences are most likely to appear within the behavioral domain of psychopathy. Potentially important findings from the current study suggest that behavioral manifestations exist in the expression of psychopathy, regardless of similar underlying interpersonal and affective functioning. These behavioral differences must be considered closely when assessing and attempting to treat female psychopathy.

APPENDIX A  
BEHAVIOR RATING FORM

## Appendix A

### Behavior Rating Form (BRF)

Compared to other people, how likely are you to:

BRF Item	Target PCL-R Item	Mean	Standard Deviation
Act if rules don't apply to you	Grandiose sense of self worth	6.20	.79
Brag about your accomplishments		6.10	.88
Stick to a story you've made up even when others know it's not true	Pathological lying	6.00	1.05
Fix damage with new lies when caught in a lie		6.00	1.41
Take advantage of other inmates	Conning/manipulative	6.20	.79
Try to swindle people out of money/goods/services		6.20	1.03
Laugh or joke about what happens to victims of crime	Lack of remorse	6.30	1.16
Express no sadness or guilt for individuals you may have hurt due to your crimes		6.20	.92
Put on emotional reactions just for show	Shallow affect	5.20	1.55
Pretend to care about others even when you really don't		5.20	1.23
Believe that victims deserve to be taken advantage of	Callous/lack of empathy	5.80	1.81
Make fun of others or tease them without caring about how they feel or react		5.80	1.14

<sup>a</sup> Ratings were made on a 7-point Likert-type scale ranging from Unimportant (to the expression of psychopathy) to Very Important.

APPENDIX B  
CONSENT FORM

Appendix B

**Personality Variables in Females at Tarrant County Jail**

Research with male offenders suggests that certain personality variables are associated with their adjustment in jail. We cannot assume that what is true for male offenders is also true for female offenders. My participation in this project will help researchers understand what personality variables affect women's adjustment in jail.

I understand that I will be asked to complete several brief measures and an interview. I also understand that to adequately complete the interview, the examiner will review my criminal charges. All results will be coded without my name or any other identifying information. All records will be kept confidential within the limits allowed by law. I understand, however, that if I inform the examiner of instances of child abuse that are occurring or my intent to commit suicide, she will be required to report that. I also understand that under extraordinary circumstances, the research records may be subpoenaed.

I understand that this is a research project and my participation is entirely voluntary. I can withdraw from the study at any time and for any reason without penalty. I understand that information gathered today will not affect my legal case or my status at Tarrant County Jail. I also understand that this research is being conducted by Rebecca Jackson, a graduate student at UNT, as part of the requirements for an advanced degree in psychology. Although participation time varies from person to person, the whole process should take about two hours. If I have any questions regarding this study, I can contact Rebecca Jackson or Dr. Richard Rogers at (940) 565-2671.

This project has been reviewed and approved by the UNT Committee for the Protection of Human Subjects (940-565-3940).

I agree to and accept the above conditions.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

APPENDIX C

PSYCHOPATHY CHECKLIST – REVISED THREE FACTOR SOLUTION

## Appendix C

### PCL-R: Principal Axis Factoring with Varimax Rotation Derived on a Sample of Female

#### Offenders

Psychopathy Checklist –R Items	Factor 1	Factor 2	Factor 3
Glibness/Superficial charm	.03	- .06	<b>.61</b>
Grandiose sense of self worth	.23	- .01	<b>.61</b>
Need for stimulation	.02	<b>.61</b>	- .08
Pathological lying	<b>.49</b>	.26	.09
Conning/manipulative	.37	.30	.25
Lack of remorse or guilt	<b>.64</b>	.11	.18
Shallow affect	<b>.73</b>	.05	- .02
Callous/lack of empathy	<b>.80</b>	.16	.10
Parasitic lifestyle	.33	<b>.57</b>	- .05
Poor behavioral controls	<b>.50</b>	.25	- .21
Promiscuous sexual behavior	.13	<b>.51</b>	.23
Early behavioral problems	<b>.43</b>	.21	- .29
Lack of realistic, long-term goals	.36	<b>.45</b>	- .06
Impulsivity	.21	<b>.64</b>	- .20
Irresponsibility	.13	<b>.68</b>	.08
Failure to accept responsibility for actions	.27	.17	.25
Many short term marital relationships	- .20	.31	.29
Juvenile delinquency	.19	.31	- .17
Revocation of conditional release	- .04	.02	.33
Criminal versatility	.28	<b>.55</b>	.17
% of Variance accounted for	14.98	14.19	7.06
Eigenvalues	3.00	2.84	1.41

Note: Substantial loadings (> .40) are presented in bold.

APPENDIX D  
CORRELATIONS BETWEEN THE PCL-R, SRP-II, AND BRF FOR FEMALE  
INMATES

## Appendix D

### Correlations Between the PCL-R, SRP-II, and BRF for Female Inmates

	PCL-R Factor 1 <sup>a</sup>	PCL-R Factor 2 <sup>a</sup>	PCL-R Total
SRP –II			
Factor 1	.31**	.24*	.31**
Factor 2	.29**	.64**	.53**
Total	.40**	.61**	.57**
BRF	.27**	.26**	.25**

Note. <sup>a</sup> PCL-R factor scores calculated based on Hare's two-factor model of psychopathy.

<sup>b</sup> SRP Total Score intended to correlate maximally with the PCL-R. \*\* Correlation is significant at the .01 level. \* Correlation is significant at the .05 level.

## REFERENCES

- American Psychiatric Association. (1968). Diagnostic and statistical manual of mental disorders (2<sup>nd</sup> edition). Washington, DC: Author.
- American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (3<sup>rd</sup> edition). Washington, DC: Author.
- American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4<sup>th</sup> edition). Washington, DC: Author.
- American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (Text Revision). Washington, DC: Author.
- Alterman, A. L., Cacciola, J. S., & Rutherford, M. J. (1993). Reliability of the Revised Psychopathy Checklist in substance abuse patients. Psychological Assessment, *5*, 442-448.
- Baldessarini, R. J., Finklestein, S., & Arana, G. W. (1983). The predictive power of diagnostic tests and the effect of prevalence of illness. Archives of General Psychiatry, *40*, 569-573.
- Bentler, P. M. (1995). Structural equation program manual. Encino, CA: Multivariate Software, Inc.
- Black, D. A. (1966). Classification and discussion of psychological methods of assessing psychopathy and the psychopath. In M. Craft (Ed.), Psychopathic disorders and their assessment (pp. 227-305). London: Pergamon Press.

Cameron, N., & Margaret, A. (1951). Behavior pathology. Boston: Houghton Mifflin.

Cleckley, H. (1941/1976). The mask of sanity. St. Louis, MO: Mosby.

Craddick, R. A. (1962). Selection of psychopathic from non-psychopathic prisoners within a Canadian prison. Psychological Reports, *10*, 495-499.

Craft, M. (1966). Psychopathic disorders and their assessment. London: Pergamon Press.

Darke, S, Kaye, S., Finlay-Jones, R., & Hall, W. (1998). Factor structure of psychopathy among methadone maintenance patients. Journal of Personality Disorders, *12*, 162-171.

Edens J. F., Hart S. D., Johnson D. W., Johnson J. K., & Olver, M. E. (2000). Use of the Personality Assessment Inventory to assess psychopathy in offender populations. Psychological Assessment, *12*, 132-139.

Embretson, S. E., & Hershberger, S. L. (1999). The new rules of measurement: What every psychologist and educator should know. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Forgac, G. E., Cassel, C. A., & Michaels, E. J. (1984). Chronicity of criminal behavior and psychopathology in male exhibitionists. Journal of Clinical Psychology, *40*, 827-832.

Forth, A. E., Brown, S. L., Hart, S. D., & Hare R. D. (1996). The assessment of psychopathy in male and female noncriminals: Reliability and validity. Personality and Individual Differences, 20, 531-543.

Gearing, M. L. (1979). The MMPI as a primary differentiator and predictor of behavior in prison: A methodological critique and review of the recent literature. Psychological Bulletin, 86, 929-963.

Gilmore, J. V., & Gilmore, E. C. (1968). Gilmore Oral Reading Test. The Psychological Corporation.

Greene, R. L. (2000). The MMPI-2: An interpretive manual (2<sup>nd</sup> ed.). Needham Heights, MA: Simon & Schuster, Inc.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). Multivariate data analysis. Englewood Cliffs, NJ: Prentice-Hall.

Hare, R. D. (1980). A research scale for the assessment of psychopathy in criminal populations. Personality and Individual Differences, 1, 111-117.

Hare, R. D. (1985). Comparison of the procedures for the assessment of psychopathy. Journal of Consulting and Clinical Psychology, 53, 7-16.

Hare, R. D. (1991). Manual for the Hare Psychopathy Checklist-Revised. Toronto, Ontario, Canada: Multi-Health Systems.

Hare, R. D. (1993). Without conscience: The disturbing world of the psychopaths among us. New York: Simon & Schuster.

Hare, R. D. (1996). Psychopathy. A clinical construct whose time has come. Criminal Justice and Behavior, 23, 25-54.

Hare, R. D. (1999). Psychopathy as a risk factor for violence. Psychiatric Quarterly, 70, 181-197.

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, 2, 338-341.

Hare, R. D., & McPherson, L. M. (1984). Violent and aggressive behavior in criminal psychopaths. International Journal of Law and Psychiatry, 7, 35-50.

Harpur, T. J., Hakstian, A. R., & Hare, R. D. (1988). Factor structure of the Psychopathy Checklist. Journal of Consulting and Clinical Psychology, 56, 741-747.

Harpur, T. J., Hare, R. D., & Hakstian, A. R. (1989). Two-factor conceptualization of psychopathy: Construct validity and assessment implications. Psychological Assessment, 1, 6-17.

Harris, G. T., Rice, M. E., & Quinsey, V. L. (1994). Psychopathy as a taxon: Evidence that psychopaths are a discrete class. Journal of Consulting and Clinical Psychology, 62, 387-397.

Hart, S. D., & Hare, R. D. (1997). Psychopathy: Assessment and association with criminal conduct. In D. M. Stoff, J. Breiling, & J. D. Maser (Eds.), Handbook of antisocial behavior (pp. 22-35). New York: John Wiley & Sons, Inc.

Hartung, C. M., & Widiger, T. A. (1998). Gender differences in the diagnosis of mental disorders: Conclusions and controversies of the DSM-IV. Psychological Bulletin, 123, 260-278.

Haynes S. N., Richard D. C. S., & Kubany, E. S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. Psychological Assessment, 7, 238-247.

Hemphill, J. (1998). Psychopathy and recidivism: A review. Legal and Criminological Psychology, 3, 139-170.

Hemphill, J., & Hare, R. D. (1995). Psychopathy checklist factor scores and recidivism. Issues in Criminological and Legal Psychology, 24, 68-73.

Holland, T. R., & Levi, M. (1983). Personality correlates of extent versus type of antisocial behavior among adult offenders: A multivariate analysis. Multivariate Behavioral Research, 18, 391-400.

Hollensworth, R., & White, R. B. (1981). Relationship between reading scores on the Wide Range Achievement Test and the Gilmore Oral Reading Test in young children. Psychological Reports, 49, 191-193.

Lewis, A. (1974). Psychopathic personality: A most elusive category. Psychological Medicine, 4, 133-140.

Lilienfeld, S. O. (1994). Conceptual problems in the assessment of psychopathy. Clinical Psychology Review, 14, 17-38.

Lilienfeld, S., & Andrews, B. (1996). Development and preliminary validation of a self-report measure of psychopathic personality traits in noncriminal populations. Journal of Personality Assessment, 66, 488-524.

Millon, T. (1994). Millon Clinical Multiaxial Inventory-III manual. Minneapolis, MN: National Computer Systems.

Millon, T., Davis, R., & Millon, C. (1997). The Millon Clinical Multiaxial Inventory-III manual (2<sup>nd</sup> ed.). Minneapolis, MN: National Computer Systems.

Millon, T., Simonsen, E., Birket-Smith, M., & Davis, R. D. (1998). Psychopathy: Antisocial, criminal and violent behavior. New York: The Guilford Press.

Morey, L. C. (1991). Personality Assessment Inventory: Professional manual. Odessa, FL: Psychological Assessment Resources, Inc.

Mulder, R. T., Wells, J. E., & Bushnell, J. A. (1994). Antisocial women. Journal of Personality Disorders, 8, 279-287.

Myers, D. G. (1986). Psychology (2<sup>nd</sup> ed.). New York: Worth Publishers, Inc.

National Institute of Justice. (1998). World Wide Web. Available:

[www.ojp.usdoj.gov/nij/](http://www.ojp.usdoj.gov/nij/)

Pinel, P. (1806). A treatise on insanity. In D. N. Robinson (Ed.), Significant contributions to the history of psychology (pp. 156-159). Washington, DC: University Publications of America.

Pollner, M. (1998). The effects of interviewer gender in mental health interviews. The Journal of Nervous and Mental Disease, 186, 369-373.

- Porteus, S. D. (1952). The Porteus Maze Test Manual. London: Harrap.
- Poythress, N. G., Edens, J. F., & Lilienfeld, S. O. (1998). Criterion-related validity of the Psychopathic Personality Inventory in a prison sample. Psychological Assessment, *10*, 426-430.
- Prewett, P. N., & Giannuli, M. M. (1991). The relationship among the reading subtests of the WJ-R, PIAT-R, K-TEA, and WRAT-R. Journal of Psychoeducational Assessment, *9*, 166-174.
- Prichard, J. C. (1837). A treatise on insanity and other disorders affecting the mind. Philadelphia: Haswell, Barrington, and Haswell.
- Raven, J. C. (1938). Progressive Matrices, Sets A, B, C, D, and E. London: Lewis.
- Raven, J. C. (1943). The Mill Hill Vocabulary Scale. London: Lewis.
- Robins, L. (1966). Defiant children grown up. Baltimore: Williams & Wilkins.
- Rogers, R. (in press). Handbook of diagnostic and structured interviewing. New York: Guilford Publications.
- Rogers, R., Salekin, R. T., & Sewell, K. W. (1999). Validation of the Millon Clinical Multiaxial Inventory for Axis II disorders: Does it meet the Daubert Standard? Law and Human Behavior, *23*, 425-443.
- Rush, B. (1812). Medical inquiries and observations upon the diseases of the mind. Philadelphia: Kimber & Richardson.

Rutherford, M. J., Cacciola, J. S., Alterman, A. I., & McKay, J. R. (1996). Reliability and validity of the revised psychopathy checklist in women methadone patients. Assessment, *3*, 145-156.

Rutherford, M. J., Cacciola, J. S., Alterman, A. I., McKay, J. R., & Cook, T. G. (1999). The 2-year test-retest reliability of the Psychopathy Checklist-Revised in methadone patients. Assessment, *6*, 285-291.

Salekin, R. T., Rogers, R., & Sewell, K. W. (1996). A review and meta-analysis of the Psychopathy Checklist and Psychopathy Checklist-Revised: Predictive validity of dangerousness. Clinical Psychology: Science and Practice, *3*, 203-215.

Salekin, R. T., Rogers, R., & Sewell, K. W. (1997). Construct validity of psychopathy in a female offender sample: A multitrait-multimethod evaluation. Journal of Abnormal Psychology, *106*, 576-585.

Salekin, R. T., Rogers, R., Ustad K. L., & Sewell, K. W. (1998). Psychopathy and recidivism among female inmates. Law and Human Behavior, *22*, 109-126.

Serin, R. C. (1996). Violent recidivism in criminal psychopaths. Law and Human Behavior, *20*, 207-217.

Serin, R. C., & Amos, N. L. (1995). The role of psychopathy in the assessment of dangerousness. International Journal of Law and Psychiatry, *18*, 231-238.

Silverthorn, P., & Frick, P. (1999). Developmental pathways to antisocial behavior: The delayed-onset pathway in girls. Development and Psychopathology, *11*, 101-126.

Steffensmeier, D. (1993). National trends in female arrests, 1960-1990: Assessment and recommendations for research. Journal of Quantitative Criminology, *9*, 411-441.

Steuerwald, B. L., & Kosson, D. S. (2000). Emotional experiences of the psychopath. In C. B. Gacono (Ed.), The clinical and forensic assessment of psychopathy: A practitioner's guide (pp. 111-135). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Stott, D. H. (1961). Manual for the Delinquency Prediction Instrument. London: University of London Press.

Tabachnick, B. G., & Fidell, L. S. (1996). Using multivariate statistics. New York: HarperCollins College Publishers.

Tramill, J. L., Tramill, J. K., Thornthwaite, R., & Anderson, F. (1981). Investigations into the relationships of the WRAT, the PIAT, the SORT, and the WISC-R in low-functioning referrals. Psychology in the Schools, *18*, 149-153.

Widiger, T. A. (1997). Mental disorders as discrete clinical conditions: Dimensional versus categorical classification. In S. M. Turner & M. Hersen (Eds.), Adult psychopathology and diagnosis (pp. 3-23). New York: John Wiley & Sons, Inc.

Zagon, I. K., & Jackson, H. J. (1994). Construct validity of a psychopathy measure. Personality and Individual Differences, *17*, 125-135.

Zoccolillo, M. (1993). Gender and the development of conduct disorder. Development and Psychopathology, *5*, 65-78.