THE SRP-II AS A RICH SOURCE OF DATA ON THE PSYCHOPATHIC PERSONALITY

by

WHITNEY S. LESTER

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ABSTRACT

This study examines the factor structure, external correlates, and predictive utility of the Self-Report Psychopathy scale (SRP-II; Hare, Harpur, & Hemphill, 1989). It was hypothesized that the SRP-II would sufficiently tap facets of the psychopathic personality, despite failing to replicate the structure of the PCL-R, and thereby provide a rich source of data for examining the construct of psychopathy as delineated by Cleckley (1941). Participants for the current investigation were 1257 undergraduate students who completed a battery of psychological tests. Exploratory factor analysis revealed that models with two to four factors made the most conceptual sense. Confirmatory factor analysis revealed a rationally-derived, four-factor model to have the best fit. Further analyses indicate these factors are linked to, and are significant predictors of, external correlates relevant to psychopathy.

LIST OF ABBREVIATIONS AND SYMBOLS

β Beta coefficient

df   Degrees of freedom

χ Computed value of chi-square test

F   Fisher's *F* ratio

M   Mean

N   Sample size

p   Probability; level of statistical significance

r   Pearson product-moment correlation

R^2 R square value

SD   Standard deviation

t   Computed value of *t* test

=   Equal to

<   Less than

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Introduction

The construct of psychopathy has a long history in the field of mental health, first as a syndrome of interest to clinicians and more recently as a construct of interest to researchers. The seminal work on the topic, *The Mask of Sanity*, was written by Dr. Hervey Cleckley and first published in 1941. In this volume, and subsequent editions, Cleckley endeavored to offer a detailed explanation of the syndrome, including a clinical profile highlighting 16 hallmark traits of the psychopathic personality. In measuring psychopathy, clinicians used a global clinical assessment approach in which they rated respondents along a 7-point scale based on how closely the individual matched the 16 criteria using information gathered from an extensive interview and case history review (Hare, 1980).

In the early 1980's, Dr. Robert Hare sought to develop a more systematic assessment of the construct for use with forensic populations. More specifically, he created the Psychopathy Checklist (PCL; Hare, 1980) to be an even more objective and reliable measure of psychopathy than the global clinical assessment approach (Hare, 1980). The 22 items on the original version of the PCL were derived from a larger pool of items relevant to the assessment of psychopathy and were retained based on their ability to discriminate between individuals with low and high psychopathy ratings (Hare, 1980). Each item is rated on a 3-point scale using information gathered through an interview and a review of the individual's institutional files. Similar to the global clinical rating system, an individual's score reportedly indicated how well the individual matched Cleckley's psychopathy criteria. Initial assessment of the PCL suggested that it was "closely tied to the clinical concept of psychopathy" (i.e., the Cleckley criteria) (Hare, 1980, p.

118). The checklist and 16 Cleckley criteria were subjected to principal components analysis and the analysis of each measure yielded a five-factor structure. Correlational analyses "indicated that the overall fit between the two set of factors was extremely good" (Hare, 1980, p. 118). However, later analyses using PCL data from a large forensic sample (N = 1,119), revealed a two-factor structure (Harpur, Hare, & Hakstian, 1989).

In response to the growing popularity of the PCL, the measure was revised to create the current incarnation of the checklist, the Psychopathy Checklist-Revised (PCL-R; Hare, 1991). The revision included modifying item descriptions, deleting two items, and improving the scoring instructions and scoring criteria. The PCL and PCL-R were found to "have virtually the same psychometric properties and external correlates, are highly correlated, and can be considered measures of the same construct" (Hare, 1991, p. 1). Additionally, a two-factor solution consistent with the PCL model was found for the revised version of the measure using a large forensic sample (N = 1,281; Hare, Harpur, Hakstian, Forth, Hart, & Newman, 1990).

In the field of psychology today, the PCL-R is considered by many to be the "gold-standard" assessment of the construct (Cooke, Kosson, & Michie, 2001) and the bi-component structure is the most widely accepted model of psychopathy. The first factor is typically referred to as an interpersonal/affective factor and the second as a social deviance factor (Hare et al., 1990; Harpur, Hare, & Hakstian, 1989). More recently, the two-factor structure of the PCL-R has been further refined to include a lower order, four-facet structure (antisocial behavior, impulsive thrill-seeking, interpersonal manipulation, and cold affect; Hare 2003), as well.

Despite these findings, the factor structure of psychopathy is still a point of contention in the literature. Cooke and Michie (2001) developed a hierarchical three-factor model (Interpersonal, Affective, and Lifestyle) using PCL-R data and argued that this model makes for

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a more coherent construct. However, a four-factor solution for the PCL-R has also been described (Neumann, Vitacco, Hare, & Wupperman, 2005). This model included three of the factors described by Cooke and Michie (2001) and also a fourth Antisocial factor. Part of this debate has also questioned whether antisocial items should be considered part of the psychopathy construct or rather one potential consequence of this personality syndrome (Cooke & Michie, 2001; Hare & Neumann, 2010; Skeem & Cooke, 2010).

As psychopathy research has expanded to include non-forensic samples, numerous self-report measures have been developed to assess the construct. Two-factor models of psychopathy have been found using some of these self-report measures, but findings of a two-factor solution that corresponds to the PCL-R factors have been less consistent across measures (e.g., Benning, Patrick, Hicks, Blonigen, & Krueger, 2003; Levenson, Kiehl, & Fitzpatrick, 1995; Lynam, Whiteside, & Jones, 1999). One measure for which this has been true is the Self-Report Psychopathy scale (SRP-II; Hare, Harpur, & Hemphill, 1989).

The SRP-II is a revised version of Hare's Self-Report Psychopathy scale (SRP, Hare 1985). The first version of the SRP was created shortly after the first version of the PCL and was designed to assess the same construct and factors as the checklist (Hare, 1985; Hare, 1991; Hare, Harpur, & Hemphill, 1989). Similar to the PCL, the final 29 items of the original SRP were derived from a larger pool of items relevant to the assessment of psychopathy (Hare, 1985). The SRP was then revised to better capture the two-factor structure of the PCL-R (Williams, Nathanson, & Paulhus, 2003) with a specific focus on successfully measuring the interpersonal/affective factor, as self-report scales were noted to be less successful at assessing this factor in comparison to the social deviance factor (Hare, 1991). Thus, on the 60-item SRP-II, nine of the items were designated as a scale for assessing the PCL-R personality (i.e.,

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interpersonal/affective) factor and 13 items were designated as a scale for measuring the behavioral factor (i.e., social deviance). Nine additional items were described as tapping both factors. These 31 items have come to be used as an abridged version of the SRP-II.

Despite its origins, the SRP-II has also been recommended (Hare, 1991), and utilized, for research in normative (i.e., non-forensic and non-clinical) populations. However, past research on the factor structure of the SRP-II in normative populations has not yielded the desired result of replicating the PCL-R two-factor structure. To clarify, in the majority of factor analytic projects utilizing the SRP-II, a two-factor structure has been found consistently, but these models have failed to isolate an interpersonal factor consistent with that of the PCL-R, rather personality items were found to load on both scales (e.g., Benning, Patrick, Salekin, & Leistico, 2005; Williams & Paulhus 2004). For example, Williams and Paulhus (2004) described two studies in which they, using all 60 items, examined a two-factor and five-factor model of the SRP-II, but found that neither model paralleled that of the PCL-R. In their comparison of three psychopathy measures, Benning and colleagues (2005) also found a two-factor solution; however, the authors concluded that the self-report measures examined, including the SRP-II, may not capture the constructs of the PCL-R. This finding was consistent across factor analyses of the abridged (31-item) SRP-II and a revised, 23-item version of the SRP-II created by the authors following their first examination of the measure. Most recently, Williams, Paulhus and Hare (2007) examined the factor structure of the SRP-II in a college sample and confirmed a four-factor structure similar to that found using the PCL-R. However, this was only after making significant changes to the measure to address problems described by Williams and Paulhus (2004), including removing three items to address an excess of anxiety items and adding 17 items to address a lack of antisocial behavior items.

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A third edition of the Self-Report Psychopathy scale (SRP-III; Williams, Nathanson, & Paulhus, 2003) was constructed to address a number of criticisms of the measure including 1) the need to update the measure to tap the four lower-order facets of the PCL-R (Williams, Nathanson, & Paulhus, 2003), 2) the lack of an Antisocial Behavior facet, and 3) the need for additional items loading on the remaining three facets to bolster reliability (Williams & Paulhus, 2003). The 40-item SRP-III includes 31 of the items found on the SRP-II and nine new items. Using this scale, Williams, Nathanson, and Paulhus (2003) found a four-facet structure parallel to that of the PCL-R and meaningful correlations with aspects of personality and behavior relevant to psychopathy. However, work on the SRP-III continues as several variations exist, including 31-, 62-, and 64-item versions, and are being used in current research.

Statement of the Problem

In its original form, the SRP was designed as a complementary measure to the PCL, which was based broadly on the Cleckley conceptualization of psychopathy. The revision of the scale (i.e., the SRP-II) aimed to refine the factor structure of the measure by improving the ability of the measure to assess the personality (i.e., interpersonal/affective) factor of psychopathy and not just the behavior (i.e., social deviance) factor. However, replicating the two-factor and the recent four-facet structures of the PCL-R in normative populations has historically been difficult. To address this issue and others, including an absent Antisocial Behavior facet, a third edition of the SRP was created. With the addition of nine items and the removal of 29 items, the SRP-III was found to parallel the four-facet structure measured by the PCL-R. Moreover, further refinement of the SRP-III continues as subsequent versions are being utilized in current research.

Even with the advent of the SRP-III, I suggest that the SRP-II should not be discarded as a useless measure. Rather, the SRP-II, as a more personality-oriented measure of psychopathy, may be a rich source of data and useful for examining the construct of psychopathy outside of the more behavior-oriented perspective of the PCL-R and SRP-III. More specifically, the SRP-II, with its origins in broadly assessing the Cleckley psychopath and focus on tapping the interpersonal/affective factor of psychopathy, may be better suited as a measure of the psychopathic *personality* than the SRP-III which, despite the benefit of assessing the four-facet structure, was designed with the goal of measuring an antisocial behavior component in mind.

Thus, the specific purpose of this study was to examine the factor structure, external correlates, and predictive ability of the SRP-II to validate its utility as an important instrument for understanding the psychopathic personality. Thus, I hypothesize that this measure sufficiently taps certain facets of the psychopathic personality, despite failing to replicate the two-factor and four-facet structures of the PCL-R. Results from past research, suggest that a factor analysis of the SRP-II will yield a two-factor solution; however, the two-factor solution is not likely to correspond to the PCL-R model. In this alternate model, behavioral items tend to load on the same factor, but personality items tend to load across both factors, thereby resulting in a mixed behavioral factor with associated personality traits and a second personality-oriented factor.

An examination of external correlates will clarify the nature of the relationship between the psychopathy construct, as measured by the SRP-II, in a normative sample and other constructs relevant to the assessment of psychopathy. For example, in their examination of external correlates in an undergraduate sample, including personality and self-reported delinquency, Williams and Paulhus (2004) found support for the SRP-II total score as a valid

measure of the psychopathy construct. Lastly, regression analyses will allow for exploration of the usefulness of the SRP-II in predicting scores on measures of relevant traits and behaviors.

Specific hypotheses regarding the nature of the relationships between the measures of individual differences and psychopathy, as measured by the SRP-II, are presented below:

1. Personality. Previous research with the SRP-II by Paulhus and Williams (2002) examined the relationship between the SRP-II total score and the Five-Factor Model of personality (FFM; McCrae & Costa, 1990) using the Big Five Inventory (BFI; John & Srivastavra, 1999). Results indicated that SRP-II total scores were positively correlated with Openness and Extraversion, and negatively correlated with Agreeableness and Conscientiousness. I expect that a similar pattern of correlations will emerge with the hypothesized personality factor and further expect the hypothesized behavioral factor to also be negatively correlated with Agreeableness and Conscientiousness. The fifth scale of the BFI, Neuroticism, was found to be positively correlated with SRP-II total scores leading to the hypothesis that both factors of the expected solution will be positively correlated with Neuroticism. This finding and hypothesis are inconsistent with Cleckley's (1964) conceptualization of the psychopath as exhibiting low levels of anxiety; however, it has been suggested that this finding is related to the subfacets of Neuroticism being differentially related to psychopathy (Lynam & Derefinko, 2006; Miller, Lynam, Widiger, & Leukefeld, 2001). Moreover, the association between anxiety and psychopathy is still a topic of great interest and the focus of current research efforts in the field.

2. Attachment. Based on Cleckley's (1964) description of a callous, egocentric, manipulative, narcissistic and superficial individual, I hypothesize that the psychopathic personality will be positively associated with the Ambivalence-Worry attachment quality, in

which individuals hold positive views of the self, but negative views of others (Carver, 1997). However, previous research in this area has not found evidence of a consistent or strong association between attachment and psychopathy. For example, Timmerman and Emmelkamp (2006) found, using a mixed sample of male inmates, forensic patients, and individuals from the general population, evidence suggesting a dismissing (i.e., Ambivalent-Worry) attachment style may be related to psychopathy; however, Brennan and Shaver (1998) described findings from an undergraduate sample that suggested attachment was unrelated to psychopathy.

3. Emotional Intelligence and Empathy. In reading Cleckley's (1964) 15 case descriptions, two broad commonalities emerge: 1) the individuals described have significant personality deficits as evidenced by the way they regard themselves and others, and 2) the individuals have significant emotional deficits as evidenced by the way they treat and (fail to) react to others' distress. This observation is supported by recent research that has suggested that psychopathy is associated with lower emotional intelligence (e.g., Ali, Amorim, & Chamorro-Premuzic, 2009; Malterer, Glass, & Newman, 2008); however, *specific* deficits in emotional intelligence have been found to be differentially associated with facets of psychopathy. Thus, exploration of the associations between psychopathy and the emotional intelligence subscales will help to further clarify the patterns of deficits described in the literature in a normative sample.

Empathy is just one aspect of emotional intelligence and has, understandably, attracted considerable interest in the field of psychopathy research. Previous research using the SRP-II has found a negative correlation between psychopathy and empathy (Zagon & Jackson, 1994); however, findings from other projects have been mixed. Nonetheless, with the ties the SRP-II has to Cleckley's conceptualization, which describes the psychopath as an unfeeling and

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emotionally unresponsive individual, I hypothesize that empathy will be negatively correlated with personality-oriented dimensions of psychopathy.

4. Risky Driving Behavior. Cleckley's (1964) criteria suggest that the prototypic psychopath is a sensation-seeking individual lacking both maladaptive and appropriate anxiety. This description would suggest that the psychopathic individual may be at risk for engaging in risk-taking behavior, such as risky driving. In one of a very small number of studies examining risky driving and psychopathy, findings reported by Fernandes, Soames Job, and Hatfield (2007) suggest that attitudes and beliefs were better predictors of risky driving behavior than personality. Thus, I hypothesize that risky attitudes/beliefs and risky driving behaviors will be positively correlated with the factor characterized by items tapping antisocial behavior.

5. Current Academic Achievement and Future Career Aspirations. Cleckley's (1964) original conceptualization of the psychopath included "good intelligence." However, findings concerning the relationship between intelligence and psychopathy have been inconsistent and have not typically provided support for Cleckley's assertion. Thus, current GPA will be used as an indicator of intelligence to explore this relationship.

Additionally, Cleckley (1964) suggests that psychopathy is marked by an "absence of delusions and other signs of irrational thinking" and that the psychopath is able to "outline acceptable life plans." However, Cleckley also described an egocentric individual with a greatly inflated sense of self-worth. Thus, one might expect that individuals high in psychopathy might be able to provide a logical plan for accomplishing life goals, but report goals of obtaining prestigious (e.g., high-status or high-power) positions. Additionally, as described by Salekin, Trobst, and Krioukova (2001), "one type of psychopath described by Cleckley, the 'successful psychopath,' may use formal education (business, law, medicine) as a stepping stone to higher

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status, and positions of greater power" (p. 427). In examining the association between psychopathy and self-reported future career aspirations, I hypothesize that the more personality-oriented factor of the hypothesized solution will be positively correlated with reports of loftier career goals.

6. Past Antisocial Behavior. The positive association between antisocial behavior and psychopathy is a well-established finding in the field. Thus, I expect to replicate this finding in that reports of past trouble with the law and academic misconduct will be positively correlated with the more behavior-oriented factor of the hypothesized two-factor structure.

Methodology

Design

This study was a four-part data analysis project that used a large archival dataset to examine the latent factor structure of the SRP-II using exploratory factor analysis. Confirmatory factor analysis was then used to assess model fit. Third, correlational analyses were used to examine the relationships between the factor scores and a wide range of self-reported personal characteristics and behaviors. Lastly, regression analyses were used to examine the utility of the SRP-II factor scores in predicting relevant traits and behaviors.

Participants

Participants were 1,257 undergraduate students between 17 and 51 years of age ($M = 19.3$ years, $SD = 2.3$) enrolled at a large university in the southeastern United States. The sample includes 869 (69.7%) female participants and 378 (30.3%) male participants. Additionally, 1,025 (82.2%) of the participants reported their ethnicity as Caucasian. The remainder of the sample included 137 (11%) African American students, 18 (1.4%) Hispanic students, and 17 (1.4%) Asian students. Twenty-eight students (2.2%) endorsed "Other." Students volunteered for the study through the Psychology Department's online Subject Pool and received course credit for their participation.

Measures

Self-Report Psychopathy Scale-II (SRP-II; Hare, Harper, & Hemphill, 1989). The SRP-II is a 60-item, self-report measure of psychopathy. Respondents are asked to rate items using a 7-point Likert scale (*1 = Disagree Strongly, 7 = Agree Strongly*). Findings reported by

Salekin, Trobst, and Krioukova (2001) provide support for the discriminant and convergent validity of the SRP-II total score. There is also evidence supporting the construct validity of the total score (e.g., Andershed, Gustafson, Kerr, & Stattin, 2002; Paulhus & Williams, 2002; Williams & Paulhus, 2004).

Interpersonal Adjective Scales Revised – Big Five Version (IASR-B5; Trapnell & Wiggins, 1990). The IASR-B5 is a self-report measure that allows for the assessment of the interpersonal circumplex and Big Five factors of personality. The item pool consists of 124 adjectives. Respondents are asked to rate how well each adjective describes their personal characteristics using an 8-point Likert scale (*1=Extremely Inaccurate, 8=Extremely Accurate*). Alpha coefficients for the five factor scales ranged from 0.87 to 0.94. The IASR-B5 was also found to have good convergent and discriminant validity when compared with two other measures of personality (Trapnell & Wiggins, 1990).

Measure of Attachment Qualities (MAQ; Carver, 1997). The MAQ is a 14-item, self-report measure of adult attachment. Respondents are asked to rate items using a 4-point scale *(1= strongly agree, 4=strongly disagree)*. The MAQ assesses four attachment qualities, including Avoidance, Ambivalence-Worry, Ambivalence-Merger, and Security, which represent various combinations of an individual's views of the self and views of others. More specifically, the Avoidance is associated with negative views of the self and negative views of others. Ambivalence-Worry is associated with positive views of the self and negative views of other. Conversely, Ambivalence-Merger is associated with negative views of the self and positive views of others, and Secure is associated with positive views of the self and others (Hollist & Miller, 2005). The MAQ was found to have good convergent validity with other measures of

attachment and alpha coefficients ranging from 0.69 to 0.76 for the four attachment quality

scales (Carver, 1997).

Emotional Quotient Inventory (EQ-i; Bar-On, 1997). The EQ-i is a 133-item self-

report measure assessing facets of emotional-social intelligence as described in the Bar-On

model of emotional intelligence (Bar-On, 2006). Respondents are asked to rate short sentences

describing emotionally-intelligent and socially-intelligent behavior using a 5-point scale (*1=very

seldom or not true of me, 5=very often true of me or true of me*). The EQ-i assessment provides a

total score and scores for five composite scales labeled Intrapersonal, Interpersonal, Stress

Management, Adaptability, and General Mood Scale. The EQ-i also includes fifteen subscales.

Five subscales (self-regard, emotional self-awareness, assertiveness, independence, and self-

actualization) are used to calculate the Intrapersonal composite. Three subscales (empathy, social

responsibility, and interpersonal relationship) are used to calculate the Interpersonal composite.

Two subscales (stress tolerance and impulse control) are used to calculate the Stress

Management composite. Three subscales (reality testing, flexibility, problem solving) are used to

calculate the Adaptability composite and the final two subscales (optimism and happiness) are

used to calculate the General Mood Scale. Similar to tests of general intelligence, the EQ-i raw

scores are converted to standard scores with a mean of 100 and a standard deviation of 15.

Dawda and Hart (2000) examined the psychometric properties of the EQ-i in a sample of

university students as part of a larger study on emotion and personality. Alpha coefficients for

the total score and composite scale scores ranged from 0.81 to 0.96 indicating excellent internal

consistency. Values for the subscales were more variable, but adequate. Findings also support the

convergent and discriminant validity of the EQ-i. For the purposes of this project, only the total

score and the subscales that make up the Intrapersonal, Interpersonal, and Stress Management

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composites were examined because of their relevance to the psychopathy construct. Additionally, the composite scale scores were not examined because Dawda and Hart (2000) concluded that, because of variable convergent and discriminant validity among the composite scales, the usefulness of these scales may be limited.

Test of Self-Conscious Affect – Version 3 (TOSCA-3; Tangney, Dearing, Wagner, & Gramzow, 2000) The TOSCA-3 is a 16-item self-report measure of empathy and perspective-taking. Items include 11 negative scenarios and five positive scenarios describing everyday occurrences. For each scenario, four common reactions are described. Respondents are asked to rate, using a 5-point Likert scale (1=not likely, 5=likely) how likely they are to react in the manner described in the reaction statements. The TOSCA-3 yields scores for six indices. The Shame-proneness scale assesses an individual's tendency to expect to experience shame, or actually experience feelings of shame, in response to events. Similarly, the Guilt-proneness scale assesses an individual's tendency to expect to experience, or actually experience feelings of guilt, in response to events. The Externalization of Blame scale assesses an individual's tendency to blame and direct their anger at others. The Detachment scale assesses an individual's tendency to minimize problems or emotionally distance themselves from an event. Lastly, the Alpha and Beta Pride scales assess "pride in self" and "pride in behavior," respectively (Tangney, 1990; Tangney, Stuewig, & Mashek, 2007, p. 360). The TOSCA-3 has demonstrated high alpha coefficients of 0.76 (Beck & Steer, 1993) and 0.78 (Mullins-Nelson, Salekin, & Leistico, 2006).

Risky Driving. The driving questionnaire is a 77-item self-report measure. The questionnaire was created by combining the items from the RoadSafe Auckland Annual Driver Survey (RoadSafe Auckland, 2000) and the driving questionnaire for *Year 10* (i.e., 9th grade) students described by Harré, Brandt, and Dawe (2000). The questionnaire assesses driving-

related attitudes and behaviors, including, for example, attitudes concerning drinking and driving, wearing a safety belt, speeding, and obeying specific traffic laws. Participants were asked to report on their actual behavior in these areas as well. Additional items asked respondents to provide demographic data and answer general questions about their level of driving experience, views on traffic enforcement, opinions on the design and standards of their local roads, and exposure to advertising or education concerning road safety. For the purposes of this project, only items related to risky driving attitudes and behaviors were examined. Item scores were summed to yield an overall total score with higher scores indicating riskier driving behavior and attitudes.

Current Academic Achievement and Future Career Aspirations. Participants' current academic achievement was assessed using three items in which they were asked to report their current year in school, current grade point average (GPA), and current major. For the purposes of this project, only GPA was examined. Future career aspirations were assessed using two items in which participants were asked to report their future career aspirations and to state the likelihood of achieving the stated career goal. Responses regarding the likelihood of achieving future career goals were coded as either a pessimistic or optimistic response; however, this item was not used for analysis purposes because 96% of responders gave an optimistic response. Responses describing specific careers were coded according to the prestige associated with the reported occupation (i.e., 1 = high power career aspirations, 0 = other). Examples of occupations coded as "high power" include doctor, judge, chief executive officer (CEO), and NCAA president.

Antisocial Behavior. Past antisocial behavior was assessed using six questions. Participants were asked to report (yes/no) whether they had ever been 1) accused of academic misconduct, 2) in trouble with the law, 3) arrested off campus, 4) arrested on campus, 5) in a jail

or detention center, or 6) in prison. For each question endorsed, participants were also asked to report the number of times and the reason(s) (i.e., offense(s) committed) they had been in trouble with that specific entity. Participants that reported being sent to a jail, detention center, or prison were asked to report their length of stay. This same series of questions was utilized by Mullins-Nelson, Salekin, and Leistico (2006) and they reported positive correlations with psychopathy ranging from 0.33 to 0.40 for males, and from 0.02 to 0.19 for females.

Procedure

Testing sessions were held in a classroom setting. Participants provided informed consent prior to completing the assessment battery. The order of administration was the same for all participants. A research assistant was available throughout testing to address any questions or concerns.

Results

Descriptive statistics for the self-report measures are presented in Table 1.

Exploratory Factor Analysis

The Mplus software package (Version 5; Muthén & Muthén, 2007) was used to conduct

an exploratory factor analysis (EFA) to examine the latent factor structure of the SRP-II. In

preparing the SRP-II dataset for analysis, the response distribution of each item was examined.

None of the items exhibited significant skewness or kurtosis. Additionally, because the data

analytic plan included both exploratory and confirmatory factor analyses, the SRP-II dataset was

split into random halves**.**

In writing the EFA syntax, the lower and upper limits of the number of factors to be

extracted were limited to one and seven, respectively. The upper limit was set at seven because

previous factor analytic results with the SRP-II have not exceeded five factors and a model with

a large number of factors would most likely be too diffuse to be meaningful. The default rotation

method (i.e., Quartimin (oblique) rotation) was used and the models were estimated using all

available data under the default missing data theory command. Lastly, the default estimator,

maximum likelihood estimation with robust standard errors (MLR) was used and modification

indices were requested.

Conclusions regarding model fit were based on four fit indices, including two

incremental fit indices and two absolute fit indices. "An incremental fit index measures the

proportionate improvement in fit by comparing a target model with a more restricted, nested

baseline model" (Hu & Bentler, 1999, p. 2). This baseline model, also called a null model,

usually consists of uncorrelated variables (Bentler & Bonett, 1980; Hu & Bentler, 1999). For this project, the comparative fit index (CFI) and the Tucker-Lewis fit index (TLI) were examined. CFI and TLI values greater than 0.90 are considered to be indicative of good model fit. "An absolute fit index assesses how well an a priori model reproduces the sample data" (Hu & Bentler, 1999, p. 2). For the purposes of this project, the root-mean-square error of approximation (RMSEA) and the standardized root-mean-square residual (SRMR) index were used to evaluate the fit of the models. An RMSEA value of approximately 0.06 or less and a SRMR value equal to or less than 0.08 indicate good model fit.

With all 60 items included in the analysis, results indicated poor fit for models composed of one to seven factors. The fit statistics are presented in Table 2. However, when the factors were examined at the item level, models with two, three, and four factors were observed to make good conceptual sense (i.e., were consistent with current conceptions of the psychopathic personality). To be more specific, the two-factor model was interpreted as a model consisting of a mixed interpersonal dominance/fearlessness factor and a factor tapping global disinhibition. The three-factor model was interpreted as a model consisting of a similar mixed interpersonal dominance/fearlessness factor, a mixed impulsivity/callous-unemotional affect factor, and a factor tapping low anxiety. The four-factor model consisted of a mixed fearlessness/risk-taking behavior factor, a factor tapping interpersonal manipulativeness, and similar to the three-factor model, factors tapping impulsivity/callous-unemotional affect and low anxiety.

Confirmatory Factor Analysis

Confirmatory factor analyses were conducted using the Mplus program (Muthén & Muthén, 2007) to test the overall fit of SRP-II factor models described in the literature. The CFA syntax specified MLR as the estimator, limited the iterations to 10,000, and requested

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modification indices. Decisions regarding model fit were based on the four fit indices described above. Results indicated poor fit for the models tested, including Hare's (1989) original, rationally-assigned, two-factor model (CFI = 0.64, TLI = 0.60, RMSEA = 0.08, SRMR = 0.09) that accompanied the scoring pamphlet for the SRP-II and Benning and colleagues (2005) 23-item, two-factor scale (CFI = 0.73 , TLI = 0.70 , RMSEA = 0.07, SRMR = 0.08) described above.

Based on the information provided by the EFA results, and because the confirmatory factor analyses examining existing models did not yield a satisfactory model, an effort was made to develop factor scales consistent with aspects of Cleckley's conceptualization of psychopathy. Thus, using rational assignment, novel two-, three-, and four-factor model scales were created. These scales were then subjected to CFA and model fit was judged according to the same criteria described above. Results indicated poor fit for the rationally-derived two-factor model (CFI = 0.76, TLI = 0.75, RMSEA = 0.06, SRMR = 0.09) and three-factor model (CFI = 0.75, TLI = 0.73, RMSEA = 0.06, SRMR = 0.08).

The rationally-derived, four-factor model did not exhibit great model fit (CFI = 0.74, TLI = 0.72, RMSEA = 0.06, SRMR = 0.09), but made good conceptual sense. Six content domains were judged to be present within the four-factor model including arrogance, cold-heartedness, disinhibition/impulsivity, interpersonal dominance, fearlessness, and manipulativeness. To further refine the model, these domains were subjected to two separate three-factor confirmatory factor analyses. The results indicated the first set of factors were clearly separate, while the latter set was highly correlated. The latter set was examined and combined into a single factor. The scales were then combined to form a refined, 36-item, four-factor model and subjected to CFA. In addition to entering the syntax described previously, the first loading for each factor was freed

from being fixed at one and instead, the factor variances were fixed at one. Eight residual

correlations were also specified based on information provided by the modification indices.

These eight correlations were selected because the item pairs were judged to tap the same

construct and had high modification index (M.I.) values (i.e., greater than 30). The correlations

included the following item pairs: 27 with 5, 26 with 27, 48 with 51, 28 with 16, 24 with 11, 60

with 44, 20 with 16, and 43 with 44. Results for the refined four-factor model revealed

acceptable fit based on the RMSEA and SRMR indices and the CFI and TLI values were just

slightly below the cutoff (CFI=0.85, TLI=0.84, RMSEA=0.05, SRMR=0.06; Factor 1:

Interpersonal (Dominance/Manipulativeness/Arrogance; 16 items); Factor 2:

Disinhibition/Impulsivity (9 items); Factor 3: Fearlessness (5 items); Factor 4: Cold-heartedness

(6 items)). Factor loadings for this model are presented in Table 3.

Correlational Analyses

Pearson product-moment correlations, conducted in PASW Version 18, were used to

examine the relationships between the factors in the final four-factor model of the SRP-II.

Correlational analyses were also used to determine if meaningful relationships existed between

the SRP-II factors and the additional measures in the battery including the IASR-B5, MAQ, EQ-

i, TOSCA-3, risky driving questionnaire, and reports of current academic achievement, future

career aspirations, and past antisocial behavior. Results are displayed in Table 4. Correlations

between factor scores were significant ($p < 0.01$, two-tailed), with Disinhibition/Impulsivity and

Cold-heartedness exhibiting the strongest relationship ($r = 0.62$, $p < 0.01$) and Fearlessness and

Cold-heartedness exhibiting the weakest ($r = 0.15$, $p < 0.01$). Additionally, factors scores were

significantly ($p < 0.01$) correlated with the SRP-II total score, ranging from 0.82 (Interpersonal)

to 0.63 (Cold-heartedness).

In terms of the Five-Factor Model, a model of normative personality, correlations were in the expected direction with negative correlations between the SRP-II factor scores and Agreeableness, as well as negative correlations between the SRP-II scores and Conscientiousness. Additionally, Neuroticism was found to be negatively correlated with the SRP-II factor scales; however, the correlation with Disinhibition/Impulsivity was non-significant. This direction of the correlations between the SRP-II and IASR-B5 Neuroticism is contrary to the expectations of the current project, as well as previous findings (Paulhus & Williams, 2002), but is consistent with Cleckley's conceptualization of the psychopath as lacking anxiety. Findings regarding the relationship between Openness and Extraversion and the SRP-II factors were less clear. Openness was found to be positively correlated with the Interpersonal and Fearlessness factors, but negatively correlated with Disinhibition/Impulsivity and Cold-heartedness. Similarly, Extraversion was found to be negatively correlated with Disinhibition/Impulsivity and Cold-heartedness. However, results indicated a non-significant relationship between Extraversion and the Interpersonal and Fearlessness factors.

Correlations between the SRP-II factor scores and attachment styles were in the expected direction. Higher scores on the SRP-II factor scales were negatively correlated with a secure attachment style; however, this relationship was only significant for the Disinhibition/Impulsivity and Cold-heartedness scales. Maladaptive attachment styles (i.e., Avoidance, Ambivalence-Worry, and Ambivalence-Merger) were positively correlated with the SRP-II factor scales. However, the correlations between the Fearlessness factor and the Ambivalence-Worry and Ambivalence-Merger attachment styles were not significant. The correlation between the SRP-II Cold-heartedness factor and the Ambivalence-Worry attachment style was also not significant.

The SRP-II factors were negatively correlated with overall (i.e., total score) emotional intelligence. The factor scales also were negatively correlated with the Emotional Self-Awareness, Social Responsibility, and Impulse Control subscales of the EQ-i. The Assertiveness and Stress Tolerance subscales were found to be positively correlated with the Interpersonal and Fearlessness factors and negatively correlated with the Disinhibition/Impulsivity and Cold-Heartedness factors. The Self-Regard subscale was negatively correlated with the Disinhibition/Impulsivity and Cold-heartedness factors, but positively correlated with the Interpersonal factor; however, the positive correlation with Fearlessness was non-significant. The Interpersonal, Disinhibition/Impulsivity, and Cold-heartedness factor scales were negatively correlated with the Self-Actualization and Interpersonal Relationship subscales, but the correlations with the Fearlessness factor were not significant. The Independence subscale was positively correlated with the Interpersonal and Fearlessness factors, but correlated negatively with the Disinhibition/Impulsivity factor, and there was no significant relationship with the Cold-heartedness factor. Lastly, the Empathy subscale was negatively correlated with the Interpersonal, Disinhibition/Impulsivity, and Fearlessness factors, but positively correlated with the Cold-heartedness factor.

In terms of empathy and perspective-taking, students with higher SRP-II factor scores scored lower on scales measuring shame and guilt, but scored higher on the TOSCA-3 Detachment and Externalization of Blame scales. Alpha and Beta Pride were negatively correlated with Disinhibition/Impulsivity and Cold-heartedness, but positively correlated with the Interpersonal and Fearlessness factors; however, the correlation between the Beta Pride scale and Fearlessness was non-significant.

Students with higher scores on the SRP-II factor scales reported engaging in more risky driving behavior and reported lower GPAs. Interestingly, higher Interpersonal factor scores were positively correlated with reports of high-power career aspirations. The remaining factors were not significantly correlated with career aspirations. Finally, as predicted, students scoring higher on the SRP-II factor scales reported engaging in more antisocial behavior.

Regression Analyses

Overall, the results of the multiple linear regression analyses indicated that the refined four-factor model of the SRP-II was a useful model for predicting scale scores of relevant external correlates. Regression model statistics are shown in Table 5 and regression coefficients are shown in Table 6. In terms of the Five Factor Model of personality, the overall four-predictor model was significant for each of the personality scales. More specifically, the model accounted for 4% of the variability in Neuroticism scores, 25% of the variability in Conscientiousness scores, 12% of the variability in Openness scores, 26% of the variability in Extraversion scores, and 46% of the variability in Agreeableness scores. In looking at the specific predictors for Neuroticism, Disinhibition/Impulsivity, Fearlessness, and Cold-heartedness had significant effects in the full model. For Agreeableness, the Interpersonal, Fearlessness, and Cold-heartedness factor scales were significant predictors in the full model. All of the factors scale had significant effects in models predicting Conscientiousness, Openness, and Extraversion scale scores.

The overall four-predictor model was significant in predicting each of the attachment scale scores. The full model was able to account for 5% of the variability in Avoidance scores, 1% of the variability in Ambivalence-Worry scores, 2% of the variability in Ambivalence-Merger scores, and 2% of the variability in Security scale scores. In predicting Avoidance scale

scores, the Interpersonal and Cold-heartedness factor scales had significant effects in the model. For Ambivalence-Worry, the Interpersonal, Disinhibition/Impulsivity, and Fearlessness factors had significant effects in the full model. Only the Interpersonal factor was a significant predictor of Ambivalence-Merger scores, and the Disinhibition/Impulsivity and Cold-heartedness factors had significant effects in the model predicting Security scale scores.

The overall four-predictor model was significant in predicting the EQ-i Total Score and in predicting the scores for all of the EQ-i subscales examined. More specifically, the full model accounts for 24% of the variability in EQ-i Total scores, 10% of the variability in EQ-i Self-Awareness subscale scores, 6% of the variability in Self-Regard subscale scores, 21% of the variability in Self-Actualization subscale scores, 31% of the variability in Empathy subscale scores, 18% of the variability in Interpersonal Relationship subscale scores, 3% of the variability in Independence subscale scores, 46% of the variability in Social Responsibility subscale scores, 28% of the variability in Impulse Control subscale scores, and 7% of the variability in the Assertiveness and Stress Tolerance subscales.

In terms of individual predictors, the Disinhibition/Impulsivity, Fearlessness, and Cold-heartedness factors had significant effects in the full model when predicting EQ-i Total, Self-Actualization, Empathy, and Interpersonal Relationship scores. The Interpersonal, Disinhibition/Impulsivity, and Fearlessness factors were significant predictors in the model when predicting Assertiveness and Stress Tolerance subscale scores. In predicting Independence and Social Responsibility subscale scores, the Interpersonal, Disinhibition/Impulsivity, and Cold-heartedness factors had significant effects in the full model. For Self-Awareness scores, only the Disinhibition/Impulsivity and Cold-heartedness factors were significant predictors in the model and for Self-Regard, only the Interpersonal and Disinhibition/Impulsivity factors had significant

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effects in the full model. Lastly, in predicting Impulse Control subscale scores, all four of the factors had significant effects in the model.

In examining models for predicting TOSCA-3 scale scores using the four predictors, all of the models were significant. In predicting TOSCA-3 Shame scores, the full model accounted for 7% of the variability in scores and in predicting TOSCA-3 Detachment scores, the model was able to account for 13% of the variability in scores. For TOSCA-3 Guilt and Externalization of Blame scores, the overall models were able to account for 25% and 10% of the variability in scores, respectively. The full model accounts for 9% of the variability in TOSCA-3 Alpha Pride scale scores and 10% of the variability in TOSCA-3 Beta Pride scale scores. In terms of individual predictors, the Interpersonal, Fearlessness, and Cold-heartedness factors had significant effects in the model predicting TOSCA-3 Shame scores. The Interpersonal and Disinhibition/Impulsivity factors had significant effects in predicting TOSCA-3 Alpha Pride scale scores. In predicting TOSCA-3 Detachment and Externalization of Blame scores, the Interpersonal and Cold-heartedness factors had significant effects. Somewhat similarly, the Interpersonal, Disinhibition/Impulsivity, and Cold-heartedness factors were significant predictors of TOSCA-3 Guilt and Beta Pride scores.

In predicting the risky driving questionnaire total score, the overall model was significant and accounted for 32% of variability in scores. Additionally, the Interpersonal, Disinhibition/Impulsivity, and Fearlessness factors were significant predictors in the model. For Grade Point Average (GPA), the four-predictor model was significant and accounted for 5% of the variability in GPA. Only the Disinhibition/Impulsivity factor had a significant effect in the full model. Third, in predicting a participant's antisocial behavior total score, the overall model

was significant and was able to account for 12% of variability in the score. Both the Disinhibition/Impulsivity and Cold-heartedness factors had significant effects in the full model.

To further clarify the predictive utility of the factor scales, the four highest positive and four highest negative standardized beta coefficients for each factor scale were examined. This comparison is presented in Table 7. The beta coefficients for the 32 scales included in the comparison ranged from -0.44 to 0.08. Beta coefficients greater than or equal to 0.10 are significant at an alpha level less than 0.01. Effect size interpretations are based on Hemphill's (2003) empirical guidelines.

For the Interpersonal factor, the TOSCA-3 Alpha and Beta Pride scales had the highest positive beta values and large effect sizes, while TOSCA-3 Detachment and IASR-B5 Openness scales had slightly lower beta coefficients and medium effect sizes. The IASR-B5 had the highest negative beta coefficient and a large effect size. The EQ-i Impulse Control, EQ-i Social Responsibility, and TOSCA-3 Shame scales had beta coefficients below 0.20 indicating small effect sizes.

For the Disinhibition/Impulsivity factor, the Antisocial Behavior Total Score had a large effect size with the highest positive beta value. The Risky Driving Total Score had a medium effect size, while the IASR-B5 Neuroticism and MAQ Ambivalence-Worry scales had small effect sizes. Scales with the highest negative beta values included the IASR-B5 Conscientiousness, EQ-i Total Score, EQ-i Impulse Control, and EQ-i Social Responsibility scales. All four scales had large effect sizes.

The highest positive beta value for the Fearlessness factor was the Risky Driving Total Score scale. This had a medium effect size. The three other scales with the highest positive beta values, including the EQ-i Stress Tolerance, EQ-i Interpersonal Relationships, and EQ-i Self-

Actualization scales, had small effect sizes. The scales with the four highest negative beta

coefficients, including the IASR-B5 Neuroticism, IASR-B5 Conscientiousness, TOSCA-3

Shame, and IASR-B5 Agreeableness scales, had small effect sizes with beta coefficients ranging

from -0.08 to -0.19. For the Cold-heartedness factor, the MAQ Avoidance, TOSCA-3

Detachment, TOSCA-3 Externalization of Blame, and EQ-i Independence scales had the highest

positive beta values, but small effect sizes. The EQ-i Empathy, EQ-i Social Responsibility,

IASR-B5 Extraversion, and IASR-B5 Agreeableness scales had the highest negative beta

coefficients and all had large effect sizes.

Finally, because self-reported career aspirations was coded as a dichotomous variable,

binary logistic regression was used to assess the impact of factor scale scores on the likelihood

that respondents would report high power career aspirations. The full model, containing all four

factor scales as predictors, was statistically significant, χ^2 (4, N = 1180) = 16.35, $p < .01$. The

model as a whole explained between 1.4% (Cox and Snell R Square) and 2.3% (Nagelkerke R

squared) of the variance in career aspiration response. Only the Interpersonal factor made a

unique, statistically significant contribution to the model. However, an examination of the

Classification Table indicated that the model was only successful in identifying respondents that

did not report high power career aspirations. More specifically, without any independent

variables in the model, the program correctly classified 979 respondents that reported "other

career aspirations," incorrectly classified 201 cases as reporting "other career aspirations" when

they in fact reported "high power career aspirations," and did not correctly or incorrectly predict

that any participants reported "high power career aspirations." Thus, without any predictors

entered in the model, 83% of cases were correctly identified. These exact same results were

obtained after the addition of the four factor scales as predictors. Additionally, results indicated that there were a significant number of outliers that were misclassified.

Discussion

Similar to previous projects examining the SRP-II, the current project suggests that the SRP-II should not be touted as a measure of psychopathy that assesses Hare's (1991, 2003) two-factor, PCL-R model. However, the results of this project do suggest that the SRP-II has utility as a measure of psychopathy in normative populations. Contrary to the study hypotheses, exploratory and confirmatory factor analyses did not reveal a satisfactory two-factor model. Rather, when the 60-item questionnaire was subjected to EFA, fit indices indicated that models with one to seven factors failed to explain the data well. Interestingly, when examined at the item level, the two-, three-, and four-factor models exhibited factors consistent with aspects of Cleckley's conceptualization of psychopathy, including factors tapping impulsivity, fearlessness, and low anxiety, thus providing support for the hypothesis that the measure contains items that successfully tap facets of personality relevant to Cleckley's psychopathy. Moreover, the presence of a low anxiety factor in the three- and four-factor models is an intriguing result, as the role of anxiety in psychopathy in normative samples is not well understood and is not considered in Hare's PCL-R model of psychopathy.

Based on the information provided by the EFA, an attempt was made to refine the measure by creating rationally-derived factor scales that were subsequently subjected to CFA. As described previously, some support for selecting the four-factor model as the best fitting model is based on the CFA fit indices. The values for the RMSEA and SRMR were below the recommended cutoff indicating good model fit. Conversely, the CFI and TLI values were just slightly below the recommended threshold. However, as the values were 0.85 and 0.84,

respectively, this was not judged to be indicative of truly poor fit. Furthermore, Marsh, Hau, and Grayson (2005) have suggested that incremental fit indices may not be the best fit indices to use when examining item-level data. In their chapter, they summarize previous research that identified potential issues associated with the use of various goodness of fit (GOF) indices. For example, some research has suggested that TLI values may fluctuate as a function of sample size and CFI values might be biased as a result of the way the value is calculated. However, incremental fit indices are not the only potentially problematic indices, as the authors discussed issues with other indices not used in this project. Additionally, Marsh and colleagues (2005) expressed doubt regarding the appropriateness of applying the same cutoff values in every application of GOF indices. Thus, Marsh and colleagues (2005) suggested the following:

> Other information such as parsimony, sampling fluctuations, comparative fit, interpretability, and substantive issues, and theory should all be considered. We remain skeptical about indices that seek to transform the art of model evaluation into a set of mechanistic rules and absolute cutoff values that are uniformly applied in all situations. (p. 311)

In line with Marsh's advice, and as with the EFA results, item-level inspection of the four rationally-derived scales indicated that the factors tap facets of psychopathy described in Cleckley's conceptualization and make good conceptual sense. More specifically, the first factor in the model can be described as a broad factor tapping interpersonal styles (i.e., dominance, manipulativeness, and arrogance) characteristic of the psychopathic personality. This is similar to Cleckley's (1976) description of the psychopath as superficially charming, untruthful and insincere, and pathologically egocentric. The second factor tapping disinhibition/impulsivity can be viewed as representing such Cleckley (1976) criteria as "absence of 'nervousness'" and

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"unreliability." Third, the Fearlessness factor could also be tied to Cleckley's (1976) "absence of 'nervousness,'" as well as his criteria describing a "general poverty in major affective reactions" and "failure to learn by experience." Lastly, the Cold-heartedness scale seems to be representative of Cleckley's (1976) criteria describing a "lack of remorse or shame" and "incapacity for love."

Correlational analyses revealed meaningful relationships between SRP-II total and four factor scores and constructs relevant to psychopathy providing support for the refined four-factor model. While not directly supporting the study hypotheses due to the addition of two factors, results were generally in the hypothesized direction, thereby providing support for the construct validity of the SRP-II. More specifically, psychopathy, as measured by the refined, four-factor SRP-II model, was associated with maladaptive attachment styles, lower emotional intelligence, a lack of empathy, engaging in risky driving behavior, and engaging in more antisocial behavior. In terms of personality, the majority of findings replicated those of Paulhus and Williams (2002); however, the direction of the correlations differed for Extraversion and Neuroticism. The positive correlation between the SRP-II Total score and Neuroticism is of particular interest as this direction is consistent with Cleckley's description, but is not a consistent finding across studies and as noted previously, the role of anxiety is still a point of contention in the field.

Investigating the associations between psychopathy and facets of emotional intelligence also provided support for the refined model. In general, adaptive facets of emotional intelligence (i.e., emotional self-awareness, self-regard, self-actualization, empathy, interpersonal relationships, social responsibility, and impulse control) were negatively associated with psychopathy indicating that individuals higher in psychopathy did more poorly in these areas. Conversely, facets of emotional intelligence related to interpersonal dominance (i.e.,

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assertiveness, independence, and stress tolerance) were positively associated with psychopathy indicating that individuals with higher psychopathy scores did better in these areas. This examination of the differential associations between psychopathy and facets of emotional intelligence is also interesting because of the consistency of the results in terms of Cleckley's (1976) model of psychopathy. For example, Cleckley (1976) described individuals that are "unresponsiveness in general interpersonal relations" and exhibit a "specific loss of insight;" however, despite this, these individuals also exhibit a distinct "absence of 'nervousness.'"

Findings from the current project did not support the hypothesis that psychopathy would be associated with higher GPA's as an indication of Cleckley's (1976) "good intelligence." However, this may not be a valid finding as a traditional measure of intelligence was not used. Lastly, Cleckley and others suggested that some psychopaths may endeavor to obtain a high-status position in a given occupation through formal education. This hypothesis was supported as participants that reported high power career aspirations tended to have higher psychopathy scores. Unfortunately, however, further analyses revealed that the four-factor structure is not useful in predicting respondents' career aspirations.

Furthermore, the results of multiple regression analyses indicated that factor scores from the refined model were useful in predicting outcomes (i.e., scale scores) of external correlates relevant to psychopathy, thereby providing evidence of the predictive validity of the four-factor model. In fact, regression models that included all four factor scales as predictors significantly predicted all of the outcomes examined. In general, the Interpersonal, Disinhibition/Impulsivity, and Cold-heartedness factors most frequently had significant effects in the regression model suggesting that these three factors may be of particular importance in examining the psychopathic personality.

A closer examination of the regression models provided additional support for the convergent and discriminant validity of the refined model. Specifically, the Interpersonal factor scale was related to increased pride (both in oneself and in one's behavior), emotional detachment, and openness to new experiences, but was related to decreased agreeableness and, to a lesser extent, decreased impulse control, feelings of social responsibility, and proneness to experience shame. This factor fits well with Cleckley's (1976) criteria describing egocentricity and interpersonal unresponsiveness. The Disinhibition/Impulsivity factor was strongly related to a lack of conscientiousness, low overall emotional intelligence, poor impulse control, and decreased feelings of social responsibility, echoing Cleckley's criteria describing the psychopath as unreliable. This factor was also related to increased antisocial behavior and risky driving, and less strongly tied to higher neuroticism, or anxiety.

The Fearlessness factor was most strongly related to increased risky driving behavior, while also being tied to greater stress tolerance, self-actualization, and functioning in interpersonal relationships, but decrease neuroticism and conscientiousness. This factor seems to suggest Cleckley's superficially charming and anxiety-free psychopath. The Cold-heartedness factor was strongly related to a lack of empathy, feelings of social responsibility, extraversion, and agreeableness. It was also, to a lesser degree, tied to an avoidant attachment style, increased emotional detachment, and a tendency to blame others, thereby corresponding well to Cleckley's criteria describing an unempathic, emotionally unresponsive individual.

Taken together, these findings suggest that, despite failing to replicate the PCL-R two-factor model, the SRP-II appears to be a useful measure for a more personality-oriented examination of psychopathy in normative populations. The distinct lack of a behavioral factor more closely aligns the four-factor model to the Cleckley, rather than Hare, conceptualization of

the syndrome. However, the generalizability of these results may be limited by the fact that this is an undergraduate sample. Further limitations of the study include the reliance on self-report measures and the unequal number of male and female participants. However, a particular strength of the study relevant to the concern about relying on self-report is the very large sample size. Additionally, the large number of female participants might also be viewed as a strength, in that fewer studies in this field of research include large samples of female participants and the manifestation of psychopathy in females is generally less well understood. Lastly, the broad scope of the study measures allowed for a detailed examination of a large number of facets of personality and behavior that are relevant to psychopathy.

Future work in this area should continue to examine the factor structure of psychopathy in normative populations, especially with a larger pool of male participants. Researchers should also continue to examine the external correlates of psychopathy as this is important to improving measure development and understanding how the syndrome manifests. As measurement improves, the predictive utility of the psychopathy construct should also continue to be investigated. Finally, more work is needed on examining the developmental path that these young adults take, including examining their career trajectories and life outcomes more broadly.

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Table 1

Descriptive statistics for self-report measures

Scale	Mean	SD	N
SRP-II Total Score[a]	120.57	26.84	1180
SRP-II Interpersonal (Factor 1)	63.80	14.13	1189
SRP-II Disinhibition/Impulsivity (Factor 2)	22.38	9.51	1194
SRP-II Fearlessness (Factor 3)	19.82	6.54	1232
SRP-II Cold-heartedness (Factor 4)	14.55	6.37	1196
IASR-B5[b] Neuroticism	38.56	10.22	1236
IASR-B5 Conscientiousness	38.29	10.56	1236
IASR-B5 Openness	37.44	10.65	1236
IASR-B5 Extraversion	40.15	11.62	1231
IASR-B5 Agreeableness	38.19	9.92	1231
MAQ[c] Avoidance	9.35	3.26	1253
MAQ Ambivalence-Worry	7.18	2.61	1253
MAQ Ambivalence-Merger	5.91	2.17	1253
MAQ Security	10.70	1.59	1253
EQ-i[d] Total Score	424.08	58.23	1066
EQ-i Emotional Self-Awareness	29.03	5.37	1040
EQ-i Assertiveness	24.36	4.61	1042
EQ-i Self-Regard	33.00	7.03	1034
EQ-i Self-Actualization	35.07	5.81	1040
EQ-i Independence	23.77	4.73	1051
EQ-i Empathy	31.58	5.12	1032
EQ-i Interpersonal Relationship	41.73	5.81	1028
EQ-i Social Responsibility	40.24	6.49	1024
EQ-i Stress Tolerance	30.70	5.87	1041
EQ-i Impulse Control	31.66	6.46	1043
TOSCA[e] Shame	45.77	9.44	1253
TOSCA Detachment	31.91	5.96	1253
TOSCA Guilt	61.91	9.03	1253
TOSCA Externalization of Blame	39.02	8.31	1253
TOSCA Alpha Pride	19.51	3.52	1253
TOSCA Beta Pride	19.95	3.24	1253
Risky Driving Questionnaire Total Score	118.12	23.61	949
Grade Point Average (GPA)	3.12	0.55	1144
High Power Career Aspirations	-	-	1247
Antisocial Behavior Total Score	0.73	1.68	1196

Note. Mean and standard deviation values are not available for the High Power Career Aspirations scale because this is a dichotomous variable.
[a]Self-Report Psychopathy Scale-II Total Score (i.e., total of items included in the refined four-factor model); [b]Interpersonal Adjective Scales-Big Five Version; [c]Measure of Attachment Qualities; [d]Emotional Quotient Inventory; [e]Test of Self-Conscious Affect-Version 3.

Table 2

Exploratory factor analysis fit index values for models with one to seven factors

Number of Factors in Model	CFI[a]	TLI[b]	RMSEA[c]	SRMR[d]
1	0.43	0.41	0.07	0.09
2	0.68	0.66	0.05	0.06
3	0.76	0.73	0.04	0.05
4	0.81	0.79	0.04	0.04
5	0.85	0.82	0.04	0.04
6	0.87	0.83	0.04	0.03
7	0.87	0.83	0.04	0.03

[a]Comparative Fit Index; [b]Tucker-Lewis Fit Index; [c]Root Mean Square Error of Approximation; [d]Standardized Root Mean Square Residual.

Table 3

Factor indicators for confirmatory factor analysis of a rationally-derived four-factor model of the Self-Report Psychopathy scale

Factor Scale	Coefficient
Interpersonal (Dominance, Manipulativeness, Arrogance)	
2. I enjoy giving "bossy" people a hard time.	0.51
3. I think I could "beat" a lie detector.	0.54
4. Sometimes you have to be crafty or sly.	0.72
5. It's best to be dominant and assertive because no one else is going to look out for you.	0.55
8. I can be fairly cunning if I have to be.	0.68
26. I insist upon getting the respect that is due to me.	0.29
27. The best way to get things done is to be forceful and persistent.	0.40
37. I can usually talk my way out of anything.	0.58
41. I have a strong will to power.	0.34
42. I would describe myself as a crafty individual.	0.40
44. I will never be satisfied until I get all that I deserve.	0.48
46. If I ruled the world it would be a much better place.	0.33
48. I don't think of myself as tricky or sly. (R)	0.49
50. It's sometimes fun to see how far you can push someone before they catch on.	0.56
51. People can usually tell if I am lying. (R)	0.40
56. I find it easy to manipulate people.	0.66
Disinhibition/Impulsivity	
7. I like to change jobs fairly often.	0.35
10. I am usually very careful about what I say to people. (R)	0.36
16. I didn't get into too much trouble at school. (R)	0.54
18. I get in trouble for the same things time after time.	0.47
20. I was never in trouble with the police when I was a kid. (R)	0.44
28. I got in a lot of trouble at school.	0.72
29. Rules are made to be broken.	0.64
40. I enjoy gambling for large stakes.	0.60
43. I prefer having many sexual partners rather than just one.	0.57
Fearlessness	
1. I enjoy driving at high speed.	0.39
11. I have often done something dangerous just for the thrill of it.	0.73
23. I enjoy taking chances.	0.57
24. I wouldn't do anything dangerous just for the thrill of it. (R)	0.29
32. I would be good at a dangerous job because I like making fast decisions.	0.66
Cold-heartedness	
31. Not hurting others' feelings is important to me. (R)	0.71
34. On average my friends would probably say I am a kind person. (R)	0.68
49. I almost never feel guilty over something I've done.	0.40

(continued)

Table 3 (continued)

54. When I do something wrong, I feel guilty even though nobody else knows it. (R)	0.52
57. I'm a soft-hearted person. (R)	0.64
60. I am the most important person in this world and nobody else matters.	0.53

Note. (R) = Reverse-keyed items.

Table 4

Correlations between total and factor scores of the SRP-II for the total sample and measures of relevant external correlates

Scale	SRP-II F1[a]	SRP-II F2[b]	SRP-II F3[c]	SRP-II F4[d]	SRP-II Total[e]
SRP-II F1[a]	--	--	--	--	**.82****
SRP-II F2[b]	**.34****	--	--	--	**.76****
SRP-II F3[c]	**.46****	**.34****	--	--	**.64****
SRP-II F4[d]	.26**	**.62****	.15**	--	**.63****
IASR-B5 N[f]	-.06*	-.03	-.15**	-.12**	-.10**
IASR-B5 C[g]	-.08**	**-.49****	-.21**	**-.34****	**-.34****
IASR-B5 O[h]	.20**	-.12**	.13**	-.21**	.05
IASR-B5 E[i]	-.01	**-.39****	.02	**-.47****	-.25**
IASR-B5 A[j]	**-.57****	**-.44****	**-.36****	**-.50****	**-.66****
MAQ-A[k]	.15**	.17**	.06*	.21**	.21**
MAQ-AW[l]	.09**	.08**	.01	.04	.08**
MAQ-AM[m]	.11**	.10**	.05	.09**	.13**
MAQ-S[n]	-.03	-.17**	-.04	-.22**	-.14**
EQ-i Total[o]	-.10**	**-.47****	-.10*	**-.39****	**-.32****
EQ-i ES[p]	-.10**	-.28**	-.09**	-.29**	-.24**
EQ-i A[q]	.16**	-.13**	.11**	-.08*	.04
EQ-i SR[r]	.08*	-.20**	.02	-.14**	-.05
EQ-i SA[s]	-.08**	**-.42****	-.02	**-.38****	-.28**
EQ-i I[t]	.11**	-.10**	.06*	-.00	.03
EQ-i E[u]	-.16**	**-.31****	-.10**	.16**	**-.38****
EQ-i IR[v]	-.08*	**-.35****	.00	**-.38****	-.25**
EQ-i SoR[w]	**-.31****	**-.60****	-.20**	**-.61****	**-.56****
EQ-i ST[x]	.13**	-.15**	.14**	-.09**	.03
EQ-i IC[y]	**-.34****	**-.48****	**-.30****	**-.34****	**-.51****
TOSCA-S[z]	-.19**	-.17**	-.16**	-.22**	-.25**
TOSCA-D[aa]	**.34****	.20**	.20**	.21**	**.35****

Table 4 (continued)

TOSCA-G[bb]	-.24**	**-.42****	-.18**	**-.45****	**-.42****
TOSCA-E[cc]	.26**	.20**	.11**	.23**	.29**
TOSCA-AP[dd]	.24**	-.10**	.06*	-.08**	.09**
TOSCA-BP[ee]	.24**	-.10**	.06	-.09**	.09**
RD[ff]	**.41****	**.43****	**.44****	.29**	**.55****
GPA[gg]	-.12**	-.22**	-.12**	-.11**	-.19**
HPC[hh]	.11**	.01	.04	.03	.08**
ASB[ii]	.13**	**.32****	.15**	.12**	.25**

Note. Correlations greater or equal to 0.30 are shown in boldface.

[a]Self-Report Psychopathy Scale-II Interpersonal scale; [b]Self-Report Psychopathy Scale-II Disinhibition/Impulsivity scale; [c]Self-Report Psychopathy Scale-II Fearlessness scale; [d]Self-Report Psychopathy Scale-II Cold-heartedness scale; [e]Self-Report Psychopathy Scale-II Total Score (i.e., total of items included in the refined four-factor model); [f]Revised Interpersonal Adjective Scales-Big Five Version Neuroticism scale; [g]Revised Interpersonal Adjective Scales-Big Five Version Conscientiousness scale; [h]Revised Interpersonal Adjective Scales-Big Five Version Openness scale; [i]Revised Interpersonal Adjective Scales-Big Five Version Extraversion scale; [j]Revised Interpersonal Adjective Scales-Big Five Version Agreeableness scale; [k]Measure of Attachment Qualities Avoidance scale; [l]Measure of Attachment Qualities Ambivalence-Worry scale; [m]Measure of Attachment Qualities Ambivalence-Merger scale; [n]Measure of Attachment Qualities Security scale; [o]Emotional Quotient Inventory Total Score; [p]Emotional Quotient Inventory Emotional Self-Awareness subscale; [q]Emotional Quotient Inventory Assertiveness subscale; [r]Emotional Quotient Inventory Self-Regard subscale; [s]Emotional Quotient Inventory Self-Actualization subscale; [t]Emotional Quotient Inventory Independence subscale; [u]Emotional Quotient Inventory Empathy subscale; [v]Emotional Quotient Inventory Interpersonal Relationship subscale; [w]Emotional Quotient Inventory Social Responsibility subscale; [x]Emotional Quotient Inventory Stress Tolerance subscale; [y]Emotional Quotient Inventory Impulse Control subscale; [z]Test of Self-Conscious Affect-Version 3 Shame scale; [aa]Test of Self-Conscious Affect-Version 3 Detachment scale; [bb]Test of Self-Conscious Affect-Version 3 Guilt scale; [cc]Test of Self-Conscious Affect-Version 3 Externalization of Blame scale; [dd]Test of Self-Conscious Affect-Version 3 Alpha Pride scale; [ee]Test of Self-Conscious Affect Beta Pride scale; [ff]Risky Driving Questionnaire Total Score; [gg]Grade Point Average; [hh]High Power Career Aspirations; [ii]Antisocial Behavior Total Score.

p < .05. **p* < .01.

Table 5

Multiple linear regression analyses predicting external correlate scale scores with SRP-II factor scores: Model statistics

Dependent Variable	df	F	R^2
IASR-B5[a] Neuroticism	1170	13.39**	0.04
IASR-B5 Conscientiousness	1170	100.02**	0.26
IASR-B5 Openness	1170	39.67**	0.12
IASR-B5 Extraversion	1166	104.35**	0.26
IASR-B5 Agreeableness	1165	252.76**	0.47
MAQ[b] Avoidance	1177	17.64**	0.06
MAQ Ambivalence-Worry	1177	4.28**	0.01
MAQ Ambivalence-Merger	1177	5.64**	0.02
MAQ Security	1177	16.85**	0.05
EQ-i[c] Total Score	1004	81.12**	0.25
EQ-i Emotional Self-Awareness	980	27.63**	0.10
EQ-i Assertiveness	986	19.50**	0.07
EQ-i Self-Regard	976	17.22**	0.07
EQ-i Self-Actualization	981	67.20**	0.22
EQ-i Independence	992	9.70**	0.04
EQ-i Empathy	974	109.35**	0.31
EQ-i Interpersonal Relationship	972	53.56**	0.18
EQ-i Social Responsibility	967	207.07**	0.46
EQ-i Stress Tolerance	986	19.53**	0.07
EQ-i Impulse Control	985	97.02**	0.28
TOSCA[d] Shame	1176	23.26**	0.07
TOSCA Detachment	1176	45.07**	0.13
TOSCA Guilt	1176	96.51**	0.25
TOSCA Externalization of Blame	1176	32.41**	0.10
TOSCA Alpha Pride	1176	31.07**	0.10
TOSCA Beta Pride	1176	31.75**	0.10
Risky Driving Questionnaire Total Score	908	105.75**	0.32
Grade Point Average (GPA)	1077	15.61**	0.06
Antisocial Behavior Total Score	1132	38.39**	0.12

[a]Interpersonal Adjective Scales-Big Five Version; [b]Measure of Attachment Qualities; [c]Emotional Quotient Inventory; [d]Test of Self-Conscious Affect-Version 3
**$p < .01$.

Table 6

Multiple linear regression analyses predicting external correlate scale scores with SRP-II factor scores: Coefficients

Dependent Variable	SRP-II F1[a]		SRP-II F2[b]		SRP-II F3[c]		SRP-II F4[d]	
	β	t	β	t	β	t	β	t
IASR-B5[e] Neuroticism	0.03	1.00	0.13	3.32**	-0.19	-5.71**	-0.17	-4.73**
IASR-B5 Conscientiousness	0.14	4.89**	**-0.44**	-12.94**	-0.11	-3.81**	-0.09	-2.85**
IASR-B5 Agreeableness	**-0.43**	-17.39**	-0.06	-1.91	-0.08	-3.26**	**-0.33**	-12.15**
IASR-B5 Extraversion	0.13	4.35**	**-0.24**	-7.13**	0.10	3.42**	**-0.37**	-11.38**
IASR-B5 Openness	**0.27**	8.33**	-0.09	-2.45*	0.07	2.13*	**-0.23**	-6.54**
MAQ[f] Avoidance	0.11	3.24**	0.04	1.01	-0.02	-0.65	0.17	4.55**
MAQ Ambivalence-Worry	0.10	2.96**	0.08	2.16*	-0.07	-2.05*	-0.03	-0.78
MAQ Ambivalence-Merger	0.10	2.83*	0.06	1.46	-0.03	-0.91	0.04	1.05
MAQ Security	0.05	1.45	-0.08	-2.18*	0.00	-0.01	-0.18	-5.05**
EQ-i[g] Total Score	0.06	1.82	**-0.40**	-10.95**	0.07	2.20*	-0.18	-4.99**
EQ-i Emot. Self-Aware.[h]	0.02	0.58	-0.16	-3.90**	-0.02	-0.55	**-0.20**	-5.14**
EQ-i Assertiveness	**0.20**	5.57**	**-0.24**	-5.75**	0.10	2.65*	-0.01	-0.16
EQ-i Self-Regard	0.16	4.47**	**-0.23**	-5.66**	0.03	0.72	-0.05	-1.22
EQ-i Self-Actualization	0.04	1.35	**-0.35**	-9.20**	0.11	3.24**	**-0.20**	-5.58**
EQ-i Independence	0.13	3.69**	**-0.22**	-5.15**	0.05	1.36	0.09	2.17*
EQ-i Empathy	-0.03	-0.79	**-0.21**	-5.89**	0.09	3.01**	**-0.42**	-12.29**
EQ-i Interpers. Relation.[i]	0.02	0.64	**-0.22**	-5.76**	0.12	3.55**	**-0.28**	-7.46**
EQ-i Social Responsibility	-0.10	-3.54**	**-0.35**	-11.05**	0.03	1.22	**-0.38**	-12.70**
EQ-i Stress Tolerance	0.13	3.76**	**-0.25**	-6.02**	0.16	4.44**	0.00	0.03
EQ-i Impulse Control	-0.17	-5.26**	**-0.36**	-9.91**	-0.08	-2.65*	-0.08	-2.20*
TOSCA[j] Shame	-0.10	-3.11**	0.01	0.27	-0.09	-2.82*	-0.19	-5.22**
TOSCA Detachment	**0.28**	8.80**	0.01	0.18	0.05	1.69	0.13	3.77**
TOSCA Guilt	-0.08	-2.60*	**-0.20**	-5.83**	-0.02	-0.79	**-0.31**	-9.60**
TOSCA Ext. of Blame[k]	**0.22**	6.91**	0.05	1.37	-0.03	-0.91	0.15	4.14**
TOSCA Alpha Pride	**0.31**	9.65**	-0.17	-4.49**	0.00	0.03	-0.06	-1.81
TOSCA Beta Pride	**0.31**	9.76**	-0.16	-4.17**	-0.00	-0.11	-0.08	-2.35*

(continued)

Table 6 (continued)

Risky Driving Total Score[l]	**0.20**	6.25**	**0.25**	6.92**	**0.26**	8.18**	0.05	1.48
Grade Point Average (GPA)	-0.01	-0.35	**-0.23**	-5.76**	-0.04	-1.29	0.03	0.84
ASB Total Score[n]	0.02	0.49	**0.39**	10.40**	0.04	1.28	-0.13	-3.67*

Note. Beta values greater than or equal to 0.20 are in boldface.

[a]Self-Report Psychopathy scale Interpersonal factor; [b]Self-Report Psychopathy scale Disinhibition/Impulsivity factor; [c]Self-Report Psychopathy scale Fearlessness scale; [d]Self-Report Psychopathy scale Cold-heartedness factor; [e]Interpersonal Adjective Scales-Big Five Version; [f]Measure of Attachment Qualities; [g]Emotional Quotient Inventory; [h]Emotional Quotient Inventory Self-Awareness subscale; [i]Emotional Quotient Inventory Interpersonal Relationships subscale; [j]Test of Self-Conscious Affect-Version 3; [k]Test of Self-Conscious Affect-Version 3 Externalization of Blame scale; [l]Risky Driving Questionnaire Total Score; [m]High Power Career Aspirations; [n]Antisocial Behavior Total Score.

p < .05. **p* < .01.

Table 7

Highest positive and negative beta coefficients by factor for the rationally-derived four-factor SRP-II model

Factor	Scale	β	Effect Size	Scale	β	Effect Size
Interpersonal						
	TOSCA Alpha Pride[a]	0.31	L	IASR-B5 Agreeableness	-0.43	L
	TOSCA Beta Pride	0.31	L	EQ-i Impulse Control	-0.17	S
	TOSCA Detachment	0.28	M	EQ-i Social Responsibility	-0.10	S
	IASR-B5 Openness[b]	0.27	M	TOSCA Shame	-0.10	S
Disinhibition/Impulsivity						
	Antisocial Behavior Total Score	0.39	L	IASR-B5 Conscientiousness	-0.44	L
	Risky Driving Total Score	0.25	M	EQ-i Total Score	-0.40	L
	IASR-B5 Neuroticism	0.13	S	EQ-i Impulse Control	-0.36	L
	MAQ Ambivalence-Worry[c]	0.08	S	EQ-i Social Responsibility	-0.35	L
Fearlessness						
	Risky Driving Total Score	0.26	M	IASR-B5 Neuroticism	-0.19	S
	EQ-i Stress Tolerance[d]	0.16	S	IASR-B5 Conscientiousness	-0.11	S
	EQ-i Interpersonal Relationships	0.12	S	TOSCA Shame	-0.09	S
	EQ-i Self-Actualization	0.11	S	IASR-B5 Agreeableness	-0.08	S
Cold-heartedness						
	MAQ Avoidance	0.17	S	EQ-i Empathy	-0.42	L
	TOSCA Detachment	0.13	S	EQ-i Social Responsibility	-0.38	L
	TOSCA Externalization of Blame	0.15	S	IASR-B5 Extraversion	-0.37	L
	EQ-i Independence	0.09	S	IASR-B5 Agreeableness	-0.33	L

Note. S = small effect size. M = medium effect size. L = large effect size. Effect size interpretations are based on Hemphill's (2003) empirical guidelines.

[a]Test of Self-Conscious Affect-Version 3; [b]Interpersonal Adjective Scales Revised-Big Five Version; [c]Measure of Attachment Qualities; [d]Emotional Quotient Inventory.