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Self-Report Psychopathy in an Australian Community Sample

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Psychopathy has long been identified as a central personality correlate of criminal and violent behaviour yet remains relatively unexplored in Australia. The present study utilised the recently developed Self-Report Psychopathy Scale – III (SRP-III) with an Australian community sample ($N = 327$). As expected, males reported higher levels of psychopathy across the four SRP-III facets, callous-affect (CA), interpersonally manipulative (IPM), erratic life-style (ELS) and criminal tendencies (CT). Psychopathy was associated with lower levels of empathy (especially CA), higher alcohol use (ELS, CT), pro-violence thoughts (IPM, CA) and elevated depression, anxiety and stress (IPM, ELS). Each facet was found to enhance the statistical prediction of physical aggression, beyond age, gender, social desirability and violent thoughts. The SRP-III is a potentially useful instrument for measuring psychopathic characteristics when comprehensive documentation is not available.

Key words: community; physical aggression; psychopathy; Self-Report Psychopathy Scale – III (SRP-III); violence.

Psychopathy is a serious psychological disorder and a widespread social problem (Blair, Mitchell, & Blair, 2005; Cleckley, 1976; Hare, 1999; Kantor, 2006). Considering the prevalence of psychopathy is approximately 1% of the general community, and 15–25% of prison populations, a disproportionate amount of criminal behaviour is associated with the disorder (Hare, 1996). Research indicates a strong and consistent relationship between the assessment of psychopathy and violence (Leistico, Salekin, DeCoster, & Rogers, 2008) which may be more pronounced for instrumental/proactive forms of aggression (Blair et al., 2005; Cornell et al., 1996; Hare, 1999; Patrick & Zempolich, 1998).

While violence and criminal behaviour associated with psychopathy pose the greatest concern to society, the majority of psychopaths manage to reside in the community without murdering people (Hare, 1999). Many never go to prison or even set foot near a correctional facility. In North America alone Hare (1999) estimated that there are as many as 2 million psychopathic individuals in the community, with up to 100,000 in New York. These individuals are just as callous, manipulative and egocentric as the criminal psychopath. However, due to their intelligence, social skills, family background and other circumstances they manage to reside in the society.

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Limited epidemiological studies examining psychopathy in the community have been conducted (Blair et al., 2005). Recently, Coid, Yang, Ullrich, Roberts, and Hare (2009) assessed the prevalence and correlates of psychopathy in a community sample in Great Britain. The study utilised a sample of 639 individuals aged between 16 and 74 years of age. Using the Psychopathy Checklist: Screening Version (PCL: SV; Hart, Cox, & Hare, 1995) which taps four main facets of psychopathy (interpersonal, affective, lifestyle and antisocial), the authors found that with a more liberal cut off score, just over 3.5% of men and less than 1% of women met the criteria for psychopathy.

The results of Coid et al. (2009) showed that psychopathy in the community correlated with younger age, being male, violent behaviour, homelessness, imprisonment, drug dependence and adult antisocial personality disorder. However, psychopathy was not associated with alcohol misuse in the general population despite being common in forensic samples. Coid et al. concluded that the majority of the general population had very few psychopathic traits, compared to a forensic population. Although several important findings are made by Coid et al. regarding the aetiology and prevalence of psychopathy in society, one limitation of the study's methodology is evident. In an attempt to adapt the PCL: SV to a community sample the researchers adjusted the measure's cut off score from 13 down to 11 for the identification of psychopathy. The authors believed this was justified due to traits not being as prominent in the community and therefore not weighted as heavily. A major risk of this method is the likelihood of increasing measurement error. However, as normative data for psychopathy assessment are heavily based on forensic samples this approach may be warranted; as such measures may underestimate psychopathy characteristics in community populations.

The factor structure of psychopathy has arisen from the work of Hare (2003) using the PCL-R, who identified that the construct can be categorised into four distinct but oblique dimensions: interpersonal, affective, lifestyle and antisocial facets. Interpersonal features include glibness and superficial charm, a grandiose sense of self-worth, pathological lying and manipulation. Affective characteristics include a lack of remorse and guilt, shallow affect, failure to accept responsibility and a callous lack of empathy. The lifestyle facet incorporates a need for stimulation and proneness to boredom, impulsivity, a lack of long-term goals and a parasitic lifestyle, while the antisocial facet includes early behavioural problems, poor behavioural controls, juvenile delinquency and criminal versatility.

The four facets of psychopathy, with two higher-order factors linking interpersonal/affective and lifestyle/antisocial, along with a superordinate factor, have been replicated utilising the PCL-R with a sample of almost 6000 adult offenders (Hare & Neumann, 2008), and 1631 adolescents (Hare & Neumann, 2006). Hare and Neumann (2008) also supported the four-facet structure utilising a community sample of 514 adults, despite relatively low levels of these traits. The four-facet model of psychopathy, as measured by the PCL-SV, has been found to have greater predictive validity, compared to an alternative three-factor model, for future violence among civil psychiatric patients and a matched community sample (Neumann & Hare, 2008; Vitacco, Neumann, & Jackson, 2005).

The contribution of each facet of psychopathy to the prediction of violence has been the subject of recent debate. Harpur and Hare (1991; as cited in Hare & Neumann, 2008) proposed that the traditional factors of the PCL, factor 1 (affective and interpersonal facets) interact with factor 2 (lifestyle and antisocial facets) in predicting violent behaviour. Individuals

who present with high levels of both factors were considered to pose the highest risk for violent behaviour. This intriguing hypothesis was further evaluated by Kennealy, Skeem, Walters, and Camp (2010) meta-analytic review of 26 studies involving 10,555 offender and psychiatric patients. While factor 2 was moderately predictive of future violence, the contribution from factor 1 to future violence was only small although statistically significant. The interaction between the two factors of psychopathy was zero in predicting future violence.

Research has investigated the relationship between the four-facet model of psychopathy and other diagnostic criteria. Vitacco and colleagues found a moderate positive association for intelligence with the interpersonal facet and a negative association between the affective facet and intelligence (Vitacco, Neumann, & Wodushak, 2008; Vitacco et al., 2005; see also Neumann & Hare, 2008). The lifestyle and antisocial facets have been found to have the most consistent and positive correlations with substance use disorders among male jail inmates (Neumann & Hare, 2008; Walsh, Allen, & Kosson, 2007). Despite the promising findings regarding the four-facet model of psychopathy, strong criticism has arisen regarding such conceptualisation of psychopathy, particularly the inclusion of the antisocial facet which Cooke and colleagues considered a behavioural consequence, as opposed to being a core component of psychopathy (Cooke, Michie, & Hart, 2006; Skeem & Cooke, 2010a, 2010b; but see Hare & Neumann, 2010 for comment and reply).

One area of particular interest is the lack of empathic concern shown by psychopathic individuals. Empathy is a sense of similarity between the feelings one experiences and those expressed by others (Decety & Jackson, 2004). In essence, empathy acts as a protective factor for aggression and violent behaviour (Jolliffe & Farrington, 2004). Empathy appears to be

specifically related to the interpersonal and affective components of psychopathy in adults (Hare, 2003; Mullins-Nelson, Salekin, & Leistico, 2006). Although it has been demonstrated that psychopaths lack empathy in forensic samples (Hare, 1999), limited research has replicated this in the general community (Kirkman, 2002) besides Coid et al. (2009).

Whilst empathy is an important feature associated with psychopathy, another characteristic of interest is thought processes. The thought processes of a person are considered to have strong influences on his or her behaviours (Firestone & Firestone, 2008). Frequent thoughts of violence promote aggressive tendencies and reinforce schemas, increasing the risk of violent and aggressive behaviour (Grisso, Davis, Vesselinov, Appelbaum, & Monahan, 2000). The range of research exploring the relationship between psychopathy and violent thoughts is limited. One exception is a study conducted by Grisso et al. (2000), investigating violent thoughts and violent behaviour in patients hospitalised with mental disorders. Approximately one third of the sample reported experiencing violent thoughts or fantasies about violence, twice as great as the prevalence in the general community. However, while a relationship between violent thoughts and violent behaviour was only partially supported, the authors concluded that other factors including anger, impulsiveness and psychopathic tendencies may play a role in mediating this relationship. Participants who acknowledged experiencing thoughts and fantasies about violence were rated higher on the PCL-SV, compared to individuals who reported not experiencing violent thoughts (Grisso et al., 2000).

Research investigating psychopathy has relied heavily on forensic and offender samples, with less attention paid to community populations. Further studies are needed to establish whether correlates of psychopathy in offender samples such as

physical aggression, alcohol misuse and empathy remain associated with psychopathy in the general community, especially within Australia. The authors located two studies utilising Australian samples. The first conducted by Zagon and Jackson (1994) evaluated the psychometric properties of the Self-Report Psychopathy II (SRP-II) using a sample of 149 university students. Factor 1 of the SRP-II was considered to measure the affective/interpersonal components of psychopathy, while factor 2 was considered to measure social deviance. The affective/interpersonal factor was positively correlated with self-report measures of narcissism, social desirability and tendency to present oneself in a favourable light (Minnesota Multiphasic Personality Inventory lie scale), and was negatively correlated with state and trait anxiety, and empathy. Factor 2 of the SRP-II was negatively correlated with social desirability and the MMPI lie scale, suggesting that individuals who self-report elevated rates of social deviance were relatively unconcerned with making a favourable social impression.

Finding a negative correlation for anxiety with the affective/interpersonal features of psychopathy is consistent with findings from other self-report measures of psychopathy (Falkenbach, Poythress, Falki, & Manchak, 2007) and theoretical propositions of psychopathy (e.g., Cleckley, 1976; Skeem & Cooke, 2010a). Elevated levels of psychopathic characteristics, particularly affective and interpersonal traits, have been associated with reduced stress response to tasks designed to increase autonomic arousal (O'Leary, Taylor, & Eckel, 2010). Conversely, higher rates of anxiety disorder appear more pronounced for individuals with higher rates of antisocial and criminal behaviour, but less likely for individuals with psychopathic affective and interpersonal features (Nichita & Buckley, 2007).

The second study investigating psychopathy in Australia, utilised a sample of 116

male prisoners incarcerated in Albany, Western Australia (Summers & Loza, 2004). The purpose of the study was to validate the Self-Appraisal Questionnaire (SAQ) which measures constructs related to recidivism including criminal history, associates, alcohol/drugs and criminal tendencies. A significant correlation was found between the PCL-R and the SAQ, providing support for the SAQ's construct validity.

While early attempts to utilise self-report approaches to psychopathy were unsuccessful, recently developed instruments have demonstrated greater promise with more favourable reliability and validity, including the Levenson Primary and Secondary Psychopathy Scales (Levenson, Kiehl, & Fitzpatrick, 1995), the Psychopathic Personality Inventory – Revised (Lilienfeld & Widows, 2005), and the Self-Report Psychopathy Scales (Paulhus, Hemphill, & Hare, in press; see Lilienfeld & Fowler, 2006 for a review). The present study utilised the newly revised Self-Report Psychopathy Scale-III (Paulhus et al., in press) which was developed to provide coverage of the four facets of psychopathy articulated by Hare (Hare, 2003; Hare & Neumann, 2008). The study aimed to expand on the current research on psychopathy by examining the relationship with gender, empathy, alcohol misuse, social desirability, depression, anxiety, stress, violent thoughts and physical aggression in an Australian community sample. It was hypothesised that:

- (a) psychopathy would be more prevalent for males compared to females;
- (b) psychopathy would be associated with lower levels of empathy, especially for the affective and interpersonal facets;
- (c) psychopathy would be associated with higher levels of alcohol use, especially for the lifestyle and anti-social facets;

- (d) the interpersonal and affective facets would be associated with higher social desirability bias, while the lifestyle and antisocial facets would be associated with lower social desirability bias;
- (e) higher anxiety and stress would be associated with lower levels of the interpersonal and affective facets and higher levels of the lifestyle and antisocial facets;
- (f) higher levels of depression would be associated with higher levels of the lifestyle and antisocial facets;
- (g) psychopathy would be associated with higher levels of violent thoughts, and this would be more pronounced for instrumental violent thoughts; and
- (h) higher levels of physical aggression would be associated with higher levels of psychopathy, especially for the antisocial facet and that a significant interaction would be found between the interpersonal/affective facets and the lifestyle/antisocial facets, whereby the greatest level of physical aggression would be found for participants with highest levels in each domain.

Method

Participants

A total of 382 participant responses were received from 2888 distributed surveys. Of these participants 327 provided sufficient data for analyses, yielding a response rate of approximately 13.00%. The study comprised 169 females (44.20%) and 101 males (26.50%), who primarily resided in south east Queensland, Australia. A further 112 respondents did not report their gender (29.30%). Ages ranged from 18 to 68 years ($M = 29.32$, $SD = 11.42$).

Among the 70% of participants who provided demographic details, their

median weekly income was \$500 to \$599 (range \$0–\$1500). Occupational status was varied with 35% employed in administration or service delivery, 25% as managers/professionals, 24% as students and 10% in trades/labour. The participants were on average highly educated, with 47% reporting having a university degree, 38% with a TAFE diploma or having completed 12 years education, and 10% with 11 years or less education. A small proportion of the sample reported being previously arrested (13%) or having a criminal record (4%).

Materials

The study consisted of measures for physical aggression, violent thoughts, empathy, social desirability response bias, alcohol misuse, mental state (depression, anxiety, stress), as well as psychopathy.

The Marlowe-Crowne Social Desirability Scale (MCSD) examines the likelihood of participants responding to questions in a manner that is socially acceptable instead of truthful (Reynolds, 1982). The MCSD Short Form C consists of 13 true-false statements with higher total scores indicating responses in a socially acceptable manner, presenting oneself favourably. The MCSDS-C has been found to have moderate reliability and correlates with other indices of self-serving response bias (Reynolds, 1982).

The Aggression Questionnaire (AQ) is a widely used self-report measure assessing involvement with physical aggression, verbal aggression, anger and hostility (Buss & Perry, 1992). As the focus of the study was on violence and aggression, only the physical aggression subscale was used. The physical aggression scale consists of nine items, rated on a five-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. The physical aggression subscale has acceptable levels of internal consistency and test-retest reliability, and correlates with peer nominated ratings for aggressive behaviour (Buss & Perry, 1992).

The Alcohol Use Disorder Identification Test (AUDIT) is used to screen individuals who consume alcohol at harmful levels (Sitharthan, Sitharthan, Kavanagh, & Saunders, 2001). The measure examines alcohol consumption, frequency, tolerance and harm associated with usage. Higher scores reflect greater levels of harmful and hazardous alcohol use, and the AUDIT has been validated in numerous countries including Australia (Babor, De la Fuente, Saunders, & Grant, 1992).

The Self-Report Psychopathy Scale III (SRP-III) consists of 64 items answered on a five-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree* (Paulhus et al., in press). The SRP-III comprises four facets including interpersonal manipulation (IPM), callous affect (CA), erratic lifestyle (ELS) and criminal tendencies (CT). Example items are “I purposely flatter people to get them on my side” (IPM) and “I have purposely tried to hit someone with the vehicle I was driving” (CT). Preliminary investigation with the SRP-III indicates acceptable internal consistency and good convergent validity with the Psychopathy Personality Inventory (Williams & Paulhus, 2004).

The Firestone Assessment of Violent Thoughts (FAVT) is a self-report inventory measuring cognitions supportive of violent behaviour (Firestone & Firestone, 2008). Items were derived from statements made by patients in outpatient clinical and forensic settings. Responses to the 70 items are provided on a three-point scale ranging from (1) *rarely almost never* to (3) *frequently almost always*. The two scales instrumental and reactive violent thoughts were used in the current study. The FAVT has excellent internal consistency, acceptable test-retest reliability, and converges with other measures reflecting pro-violent cognitions (Firestone & Firestone, 2008).

The Depression Anxiety Stress Scale (DASS; Lovibond & Lovibond, 1995) is a self-report inventory designed to measure

three facets of negative emotional states, namely depression, anxiety and stress. Each subscale consists of 14 items requiring ratings on a four-point severity scale ranging from (0) *did not apply to me at all* to (3) *applied to me very much, or most of the time*. The DASS has excellent reliability and significantly differentiates normal and clinical populations.

The Interpersonal Reactivity Index (IRI) is a 28-item self-report measure of empathy (Davis, 1994). The instrument contains four 7-item subscales measuring perspective taking, empathic concern, personal distress and fantasy. Responses are requested on a five-point scale ranging from (0) *does not describe me* to (4) *describes me very well*. The IRI has moderate levels of reliability and found to predict aggressive actions in response to provocation (Giancola, 2003).

Procedure

Participants for the current study were recruited using a random selection of households in south east Queensland as well as distribution by researchers via the online friend finder site Facebook. The survey was housed at the online site Survey Monkey for access. Data collection occurred between March and September 2009. Participants were informed about the research purpose, risks, benefits and procedures via an explanatory statement. All ethical procedures were met and the study was approved by the Bond University Human Research Ethics Committee (BUHREC).

Results

Analytic Plan

First analysis involved a MANOVA with gender (male and female) as the independent variable, and the four SRP-III facets as the dependent variables. Significant MANOVA was followed up with univariate ANOVAs to identify the specific facets

with significant gender difference. The second series of analyses, involved hierarchical regressions with each of the four SRP-III facets predicting the constructs of interest; empathy, alcohol use, social desirability bias, depression, anxiety and stress, and violent thoughts. For each regression, age and gender were entered at step one. Due to the amount of missing data for demographics, mean values for age and gender were entered for missing values. The four SRP-III facets were entered at step two, with evaluation of the incremental variance accounted for by the facets, and the unique contribution for each facet. The final analysis investigated the prediction of physical aggression using the SRP-III facets. Using hierarchical regression, gender, age, total violent thoughts and social desirability was entered at step one. Social desirability and violent thoughts were entered at the first step as previous research has found these constructs account for substantial amount of variance in aggression (Watt, Begelhole, & Guse, 2010). At the second step the four SRP-III facets were entered evaluating the overall increase in variance, as well as the unique contribution for each facet. The third step involved entering an interaction term consistent with the traditional PCL-R factor 1 and factor 2. Standardised scores were calculated for IPM and CA (equivalent to factor 1) and for ELS and CT (equivalent to factor 2). The standardised IPM/CA and ELS/CT terms were multiplied creating an

interaction term which was entered to evaluate its contribution beyond the four facets. Due to space limitations, standardised beta values are presented for the main variables of interest, without reporting unstandardised beta and standard error of beta values (for these values contact the first author).

Gender Difference for Psychopathy

Means and standard deviations for the SRP-III facets and total scores are reported separately for males and females in Table 1. The results are comparable with norms reported by Paulhus et al. (in press) for 194 undergraduate students, especially for the total scores; male $M = 165.20$, $SD = 27.40$, female $M = 139.60$, $SD = 25.40$. As expected, males consistently scored higher than females across the four SRP-III facets, $F(4, 264) = 25.43$, $p < .001$, $\eta^2 = .278$, which was also found for the separate ANOVAs especially for callous-affect; IPM $F(1, 267) = 30.57$, $p < .001$, $\eta^2 = .103$, CA $F(1, 267)$, $p < .001$, $\eta^2 = .270$, ELS $F(1, 267) = 38.10$, $p < .001$, $\eta^2 = .125$, CT $F(1, 267) = 23.50$, $\eta^2 = .081$ and total score $F(1, 267) = 63.82$, $p < .001$, $\eta^2 = .193$.

Empathy, Alcohol, Social Desirability, Mental State and Violent Thoughts

For the four regressions predicting the subscales of the IRI, age and gender accounted for between 6% and 15%

Table 1. SRP-III facet scores for males and females.

	Male			Female		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Interpersonal manipulation	100	43.97***	10.43	169	36.86***	10.06
Callous affect	100	42.41***	7.98	169	32.98***	7.23
Erratic lifestyle	100	48.18***	9.61	169	40.63***	9.75
Criminal tendencies	100	29.77***	9.56	169	24.59***	7.78
SRP-III total score	100	164.34***	29.93	169	135.06***	28.53

* $p < .05$, ** $p < .01$, *** $p < .001$.

variance. Males reported less empathy across the four IRI subscales, while older age was associated with higher levels of empathic concerns and perspective taking, but lower fantasy. The addition of the four SRP-III facets increased the prediction of empathy for empathic concern $R^2\Delta = .265$, $F\Delta(4, 320) = 35.47$, $p < .001$, fantasy $R^2\Delta = .054$, $F\Delta(4, 320) = 5.31$, $p < .001$, and perspective taking $R^2\Delta = .158$, $F\Delta(4, 320) = 16.54$, $p < .001$, but not for personal distress $R^2\Delta = .02$, $F\Delta(4, 288) = 1.25$, $p = .29$. Examination of the unique contributions for the four SRP-III facets in Table 2 indicates that CA was consistently negatively associated with reported empathy. Compared to participants with low callous-affect, individuals with higher levels of callous-affect reported less empathy, especially for empathic concern. In contrast, the contribution from IPM was mixed with negative association found for empathic concern and perspective-taking, and an unexpected positive association with

fantasy. Participants who are interpersonally manipulative tend to fantasise about other people's experience, yet have little concern or perspective taking for others. As anticipated, the contribution from ELS and CT to empathy was minimal, once IPM and CA were accounted for.

In step one for alcohol misuse, gender and age accounted for 12% variance with higher levels of alcohol misuse associated with being male and younger age. The addition of the four SRP-III facets significantly enhanced the prediction of alcohol misuse, $R^2\Delta = .295$, $F\Delta(4, 320) = 20.30$, $p < .001$. As hypothesised, ELS and CT were the strongest unique predictors for alcohol misuse (Table 3). Participants who acknowledged criminal tendencies and an erratic lifestyle reported higher levels of alcohol misuse compared to individuals with less criminal tendencies and less erratic lifestyle.

Social desirability was related to age, so as that older individuals responded in a

Table 2. Standardised beta scores for SRP-III facets predicting interpersonal reactivity index subscales.

	Empathic concern	Fantasy	Perspective taking	Personal distress
IPM	-.19**	.25**	-.16*	.11
CA	-.57***	-.34***	-.37***	-.18*
ELS	.18**	.12	.02	-.02
CT	.08	-.07	.04	.08

Note: IPM = interpersonal manipulation, CA = callous affect, ELS = erratic life style, CT = criminal tendencies. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3. Standardised beta scores for SRP-III facets predicting alcohol misuse, social desirability and violent thoughts.

	Alcohol misuse	Social desirability	Reactive violent thoughts	Instrumental violent thoughts
IPM	-.14	-.36***	.24**	.23**
CA	.15	.04	.21*	.23**
ELS	.33***	-.16*	.01	-.05
CT	.17**	-.04	.10	.14*

Note: IPM = interpersonal manipulation, CA = callous affect, ELS = erratic life style, CT = criminal tendencies. * $p < .05$, ** $p < .01$, *** $p < .001$.

more socially desirable manner (age and gender combined variance 10%). The addition of the four SRP-III facets enhanced the prediction of social desirability bias a further 27%, $R^2\Delta = .274$, $F\Delta(4, 320) = 19.84$, $p < .001$. Social desirability was negatively associated with ELS, but was unexpectedly negatively associated with interpersonal manipulation (Table 3). Participants with elevated levels of erratic lifestyle and interpersonal manipulation responded in a manner that was *less* socially desirable.

Age and gender accounted for a small amount of the variance in violent thoughts (4–5% variance) with age negatively associated with violent thoughts and males more likely to endorse instrumental/proactive violent cognitions compared to females (no difference reactive/hostile thoughts). The prediction of violent thoughts was substantially enhanced with the addition of the four SRP-III facets. As expected the association was more pronounced for instrumental/proactive $R^2\Delta = .233$, $F\Delta(4, 320) = 19.31$, $p < .001$ compared to reactive/hostile $R^2\Delta = .219$, $F\Delta(4, 320) = 18.25$, $p < .001$, though the difference was small. The greatest unique contribution to violent thoughts was from IPM and CA, while CT only predicted instrumental/proactive violent thoughts. Hence, participants with higher levels of psychopathy acknowledge experiencing more violent thoughts compared to individuals with lower levels of psychopathy.

Across the three measures of mental state, age and gender accounted for 3–5% of the variance, with older participants reporting lower levels of depression, stress and anxiety compared to younger participants (gender did not uniquely contribute). The addition of the SRP-III facets enhanced prediction of mental state a further 11 to 12%, for depression $R^2\Delta = .116$, $F\Delta(4, 320) = 10.94$, $p < .001$, anxiety $R^2\Delta = .121$, $F\Delta(4, 320) = 11.56$, $p < .001$ and stress $R^2\Delta = .110$, $F\Delta(4, 320) = 10.38$, $p < .001$.

Table 4. Standardised beta scores for SRP-III facets predicting depression, anxiety and stress.

	Depression	Anxiety	Stress
IPM	.17*	.16*	.16*
CA	.03	.10	.05
ELS	.20*	.14	.14*
CT	.05	.07	.04

Note: IPM = interpersonal manipulation, CA = callous affect, ELS = erratic life style, CT = criminal tendencies. * $p < .05$, ** $p < .01$, *** $p < .001$.

As illustrated in Table 4, the unique contributions were small, with significant prediction from IPM for all three mental states and for ELS on depression and stress. As anticipated, higher levels of ELS were associated with higher levels of depression and stress compared to lower ELS. Inconsistent with the hypotheses, individuals with higher levels of interpersonal manipulation reported greater levels of depression, anxiety and stress, compared to participants who were less manipulative. CA and CT were unrelated to depression, anxiety and stress.

Physical Aggression

The final regression evaluated the SRP-III facets' prediction of physical aggression. At step one, age, gender, social desirability and FAVT total scores accounted for 29% of the variance in physical aggression. The addition of the SRP-III substantially enhanced the prediction of physical aggression, $R^2\Delta = .201$, $F\Delta(4, 318) = 31.37$, $p < .001$. At the final step, the interaction term for IPM/CA x ELS/CT provided additional significant contribution to physical aggression, $R^2\Delta = .021$, $F\Delta(1, 317) = 13.58$, $p < .001$. In the final model, age, gender, social desirability and violent thoughts were no longer unique predictors of physical aggression. In contrast, each of the SRP-III facets, as well as the interaction term was significant; IPM $\beta = .23$ $p < .001$, CA $\beta = .15$ $p = .021$, ELS $\beta = .14$ $p = .021$, CT $\beta = .15$ $p = .007$,

IPM/CA \times ELS/CT interaction term $\beta = .16$ $p < .001$.

To investigate the interaction term further, a tertile split was created for ELS/CT so that participants in the lower third were deemed low ELS/CT, participants in the upper third were deemed high ELS/CT and the middle third participants as moderate ELS/CT. Three hierarchical regressions were ran within each level of ELS/CT predicting physical aggression. Age, gender, social desirability and FAVT total scores were entered at step one, and IPM/CA scores at step two. The addition of IPM/CA significantly enhanced the prediction term among participants considered moderate ELS/CT, $R^2\Delta = .117$, $F\Delta(1, 70) = 13.71$, $p < .001$, and high ELS/CT, $R^2\Delta = .104$, $F\Delta(1, 62) = 9.87$, $p = .003$, but not for low ELS/CT participants, $R^2\Delta = .016$, $F\Delta(1, 83) = 1.80$, $p < .001$. Consequently, the interpersonal and callous-affect features of psychopathy were associated with increased risk for physical aggression for participants at moderate and high levels of erratic lifestyle/criminal tendencies ($\beta = .450$ $p < .001$ and $\beta = .453$ $p = .003$, respectively), but not low levels of erratic lifestyle/criminal tendencies ($\beta = .15$ $p = .18$).

Discussion

The current study investigated correlates of psychopathy in an Australian community sample. As there is limited research on psychopathy within Australia, this represents an important progression regarding the relevance of psychopathy within the local context. The study utilised the newly developed SRP-III (Paulhus et al., in press) which has the advantages of measuring the four facets of psychopathy consistent with research utilising the PCL-R and derivatives.

The SRP-III performed well in relation to the criterion constructs. Males consistently performed higher than females on

the SRP-III including interpersonal manipulation, callous-affect, erratic lifestyle and antisocial behaviour. This is consistent with the larger body of research identifying higher levels of psychopathy among males compared to females (Coid et al., 2009).

In relation to empathy, participants with higher levels of callous-affect were found to have more pronounced deficits in empathy, especially for empathic concern, compared to participants with lower levels of callous-affect. This finding is consistent with Hare (2003) highlighting the central role of an empathetic deficit in psychopathy. Impulsive manipulation was also associated with a deficit in empathic concern and perspective taking, though unexpectedly, was associated with higher levels of fantasy. According to Davis (1994) the fantasy scale of the IRI measures individuals' tendency to imagine oneself in fictional situations. Perhaps this tendency allows individuals with higher levels of psychopathy to manipulate others, while being less compassionate about other's feelings.

Consistent with Walsh et al. (2007) and Neumann and Hare (2008), participants with higher levels of psychopathy, were more prone to alcohol misuse, which was limited to higher levels of erratic lifestyle and criminal tendencies. Psychopathic characteristics were also associated with pro-violence sentiments, which was most pronounced for callous-affect and impulsive manipulation. Individuals with higher levels of psychopathic traits, appear more prone to thoughts about violence both in response to provoking situations, as well as a means to achieving a desired end. The role of violent cognitions is a relatively unexplored area in relation to psychopathy warranting further investigation, especially as pro-violence attitudes may be more amenable to intervention than psychopathic features.

The pattern of results in relation to social desirability bias were partly as

anticipated (erratic lifestyle), but also unexpected (interpersonal manipulation). The negative association between social desirability and interpersonal manipulation and erratic lifestyle may reflect the nature of response bias. Individuals who present themselves in a favourable light may be unlikely to acknowledge these features associated with psychopathy. Alternatively, individuals who are interpersonally manipulative may perceive little to gain from responding in a socially desirable manner to surveys, therefore not motivated to distort their responses. This assumption is supported by Porter and Woodworth (2007) who found that psychopaths are not impulsive by nature, instead calculating and calm, regularly weighing up the pros and cons of their behaviour; if the cost is not worthy, then behaviour may not alter.

Individuals reporting higher levels of psychopathy were also more likely to report higher levels of depression, anxiety and stress. The failure to find the anticipated inverse relationship between mental state (anxiety, stress) and callous-affect and manipulation is inconsistent with O'Leary et al. (2010). The association of psychopathy and mental state may reflect monomethod bias, especially as the magnitude of findings was relatively small. Alternatively, individuals who have an erratic lifestyle and manipulate others may be more likely to experience adverse circumstances, thereby increasing risk for mental health disturbance. Longitudinal studies that utilise multiple informants with community samples may enhance our understanding of the role of psychopathy for mental health functioning.

Psychopathy was found to be a statistically strong predictor for physical aggression, as has been found in multiple studies (Leistico et al., 2008). Each of the facets of psychopathy uniquely contributed to the prediction of aggression, even after controlling for age, gender, social desirability bias and violent thoughts. Furthermore,

the contributions of callous-affect and manipulateness to the prediction of aggression were most pronounced for irresponsible individuals with criminal tendencies. The unique contributions for each facet and their additive effects provide strong support for utilising a four-facet model in measuring psychopathic characteristics in a community sample. The interactive effects, however, require further replication as Kennealy et al. (2010) highlighted the limited contribution for this interaction in predicting future violence among criminal and psychiatric samples.

A number of limitations are evident in the current study. The cross-sectional research design limits the inference of causality. All measures in the current study utilised self-report, which may have inflated the statistical relationships. This was partly reduced by incorporating a measure of response bias, when evaluating the relationship of psychopathy with physical aggression. The study is further limited by the low response rate with overrepresentation of highly educated individuals, necessitating replication with more balanced educational and vocational status.

Continued research is indicated to further evaluate the SRP-III and other self-report measures using community samples. Future research would benefit from longitudinal research designs, to increase understanding regarding potential causal relationships. The development of measures for rating others on psychopathic characteristics would reduce potential for bias in measurement. Other areas of personality measures have long utilised instruments that incorporate self-report in conjunction with other report for ascertaining personality traits (NEO-Personality Inventory-3; Costa & McCrae, 2010).

The SRP-III (Paulhus et al., in press) performed well in the current study with strong support for the measures convergent and discriminant validity. These findings are encouraging for the use of the

instrument within the Australian context, as well as the generalisation of the psychopathy construct to Australian individuals. The SRP-III would appear most useful in circumstances where professionals do not have access to extensive documentation required to score the PCL-R. Supplementing results with measures of response bias, as used in the current study, would enhance confidence in interpreting the results on an individual basis.

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