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Structural analysis of the PCL-R and relationship to BIG FIVE personality traits and parenting characteristics in an Hispanic female offender sample

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ABSTRACT

Valid measurement of psychopathic traits in females using the Psychopathy Checklist Revised (PCL-R) continues to be an under researched topic. Previous latent variable and other psychometric studies have raised questions concerning the structure and predictive effects of psychopathic traits in females. New cross-cultural research finds good support for a four-factor model of psychopathy in females and the predictive effects of the psychopathy factors (Declercq, Carter, & Neumann, 2015; Neumann, Hare, & Pardini, 2015). Nevertheless, additional research is needed on females, especially individuals from diverse cultural backgrounds. We investigated the factor structure and construct validity of the PCL-R in a female Hispanic sample (n = 155). Confirmatory factor analysis showed that the four-factor model provided an adequate fit. Furthermore, structural equation modelling revealed significant negative and positive predictive effects, respectively, between general personality (Agreeableness and Conscientiousness), and indifferent/abusive parenting with the broad syndrome of psychopathy.

1. Introduction

The four-factor model of psychopathy has been extensively supported through a large series of item-level latent variable studies that employ a wide diversity of samples and types of assessments (Neumann & Hare, 2008; Neumann, Hare, & Pardini, 2015). There is also support for a three-factor model of psychopathy (Cooke & Michie, 2001; Larsson, Andershed, & Lichtenstein, 2006), which excludes an overt antisocial/developmental factor. However, this excluded factor may be questioned on both conceptual and empirical grounds (Hare & Neumann, 2006, 2008; Lynam & Miller, 2012). Moreover, the structural modelling results for the four-factor model of psychopathy are in-line with behavior genetic research that finds all four domains of the model load onto a common genetic factor (e.g., Larsson et al., 2006), and longitudinal research (e.g., Forsman, Lichtenstein, Andershed, & Larsson, 2010) showing these domains are inter-related across time (Hare & Neumann, 2010). While there has been debate regarding the two models (Neumann, Vitacco, Hare, & Wupperman, 2005), it is helpful to note that the three-factor model is embedded within the four-factor model. Alternative widely validated factor structures based on other measurements such as the two factor model based on the Psychopathic Personality Inventory (Lilienfeld & Widows, 2005) would roughly map onto the overarching earlier two-factor model of psychopathy (e.g. Benning, Patrick, Hicks, Blonigen, & Krueger, 2003; but also see Neumann, Uzieblo, Crombez, & Hare, 2013; Patrick, Edens, Poythress, Lilienfeld, & Benning, 2006). However, the four-factor model may be preferred given the potential for biased prediction parameters when the antisocial factor is eliminated (Vitacco, Neumann, & Jackson, 2005). Moreover, longitudinal studies of youth have consistently found overt antisociality to be a critical early feature, along with other traits (e.g., callous-unemotional, affective detachment), in the manifestation of psychopathic personality (Eisenbarth, Stadtland, Nedopil, & Osterheider, 2012; Fontaine, McCrory, Boivin, Moffitt, & Viding, 2011; Neumann, Wampler, Taylor, Blonigen, & Iacono, 2011). Similar results are found for structural studies of youth samples (Kosson et al., 2013; Kosson, Cyterski, Steuerwald, Neumann, & Walker-Matthews, 2002; Neumann, Kosson, Forth, & Hare, 2006). As such, we employed a four-factor model in the current study.

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While most studies have tended to involve male participants, given the high prevalence of psychopathy in males compared to females, there are some studies that have found that the four-factor model also works well for representing the larger construct in females, based on both PCL-R and the Self-Report Psychopathy scale (SRP; Paulhus, Neumann, & Hare, 2016). For example, the four-factor model has shown adequate fit with female offenders (Neumann, Hare, & Newman, 2007), female youth samples (Kosson et al., 2013) as well as more broadly across the globe via the SRP (Gordts, Uzieblo, Neumann, Van den Bussche, & Rossi, 2015; Hare & Neumann, 2008; Neumann, Schmitt, Carter, Embley, & Hare, 2012), however less across different ethnic backgrounds in rarely studied women.

Although structural analyses have suggested gender variance only in the antisocial factor (Bolt, Hare, Vitale, & Newman, 2004), existing gender differences (de Vogel & Lancel, 2016; Hicks et al., 2012) continue to raise questions concerning the structural and predictive effects of psychopathic traits in females. More specifically, while recent cross-cultural research finds good support for the structure of psychopathic personality in females (Neumann et al., 2012) and the predictive effects of the psychopathy factors (Declercq, Carter, & Neumann, 2015), the predictive validity of the PCL-R for recidivism appears to be less strong in females, compared to males (Coid et al., 2009; Eisenbarth et al., 2012). Thus, additional research on the correlates and predictive effects of psychopathic traits in females is warranted, especially in under-studied minority samples (Olver, Neumann, Kingston, Nicholaichuk, & Wong, 2018).

Research on general or normal range personality and psychopathy has shown a moderate to strong relationship between psychopathy and the Five Factor Model (FFM). Especially Agreeableness as well as Conscientiousness explain a large amount of variance in psychopathy (O'Boyle, Forsyth, Banks, Story, & White, 2015), which seems to hold across different sample types and assessment tools (see Lynam & Miller, 2015). More specifically, a meta-analysis presented by Lynam and Derefinko (2006) revealed a negative moderate-to-large weighted effect size between Conscientiousness and psychopathy, and a negative large weighted effect size between Agreeableness and psychopathy. In contrast, the weighted effect sizes between psychopathy and the FFM domains of Neuroticism and Extraversion, were small (positive) and minuscule (negative), respectively. As such, we focused our analyses on the Agreeableness and Conscientiousness domains, expecting to see significant associations among these FFM domains and the PCL-R.

Attachment, which has a strong influence on temperament (Grossmann, Grossmann, & Waters, 2006), a precursor of personality, is built in early life and is significantly associated with parenting variables. Thus, parenting by the mother and father can be described as early potential correlates of psychopathic traits and therefore serve as construct validation variable. A systematic review of literature on the impact of parenting on callous-unemotional (CU) and antisocial behavior found consistent evidence for a negative impact of negative parenting styles, especially harsh parenting on CU and antisocial behavior, even after controlling for pre-existing personality traits (Waller, Gardner, & Hyde, 2013). Furthermore, parenting seems to not only have an impact on antisocial behavior and CU, but also on their interaction (e.g., Fontaine et al., 2011). A recent study highlighted that a positive impact of parental warmth on conduct problems seems to be only present in those with low or medium levels of affective psychopathic traits in a predominantly male and ethnically diverse sample of adolescents (Chinchilla & Kosson, 2015). In addition, in an adolescent offender sample, an association was found between retrospectively reported harsh parenting style and the antisocial component of psychopathy, but only in those low on affective deficits and in those high on interpersonal deficits (Edens, Skopp, & Cahill, 2008). However, these findings are limited to juvenile (and male) samples. On the other hand, for Hispanic female adolescents, inconsistent parenting and poor supervision has been linked to the narcissistic and impulsive aspects of psychopathic traits, but not to the callous aspect (Vitacco, Neumann, Ramos, & Roberts, 2003). This finding for a Hispanic sample provides some basis for generating expectations for the current study. While few studies exist on poor parenting experiences during upbringing in adult offenders, Farrington (2006) has shown that harsh parenting is robustly associated with psychopathic traits in adults. Thus, we hypothesized that the PCL-R total and its factors, especially lifestyle and antisocial, would be positively associated with negative parenting (indifferent or abusive) styles, however with smaller effect sizes due to measurement variance (i.e., methods of assessment). Another type of parenting style is referred to as over-controlling, which we also assessed, though we did not have specific hypotheses regarding this type of parenting being associated with psychopathic traits.

2. Methods

2.1. Sample

For the current study, 155 female offenders, self-identified with Hispanic background, were recruited for a larger brain imaging study. Mean age was 34.23 (SD = 7.06, range = 21–54). For the FFM and parenting variables used in the current study some participants were missing these data, however, there was little difference between the cases with (14.8%) versus without (85.2%) missing data for all study variables (including PCL-R). Moreover, when a significant difference did occur, they were generally associated with very small effect sizes (mean η^2 = 0.01), therefore we included all cases with data for the study variables.

2.2. Measures

2.2.1. Psychopathy Checklist Revised (PCL-R; Hare, 2003)

The PCL-R is a clinical rating scale to measure psychopathic personality traits. It includes 20 items (scored 0, 1 or 2), which are rated based on an interview with the participant and information from official records, clinical files. The structure of the PCL-R has been described in a broad range of literature, where the earliest structure to emerge involved a two-factor solution (Hare et al., 1990), with an interpersonal/affective factor and a deviant lifestyle factor. Based on use of sophisticated mathematical modelling, a four-factor solution (Hare, 2003; Neumann et al., 2015) has received the most empirical support with interpersonal, affective, lifestyle and antisocial factors.

In the current sample, ratings were completed by trained research staff, with a bachelor's degree or higher. Research staff completed official Hare PCL-R training (by certified instructor***). All PCL-R interviews were videotaped so that double ratings could be acquired. Inter-rater reliability was consistent with other published results (kappa > 0.8) and in cases in which two raters disagreed by more than the standard error on the test (i.e., 2 points), a final score was achieved via discussion between the two raters and another trained expert. These consensus ratings were used in this report.

2.2.2. NEO-PI Five-Factor Inventory (FFI)

The NEO-PI, one of the most widely used measures for the big five personality traits was implemented with the 60-item version (Costa & McCrae, 1992). The self-report items are rated on a 5-point Likert scale ranging from “strongly disagree” to “strongly agree” and which reflect the five higher-order domains Neuroticism, Extraversion, Openness to Experiences, Agreeableness and Conscientiousness. There are 12 items per FFM-FFI domain. In the current data set, Alpha coefficients were generally acceptable and ranged between 0.73 (Extraversion) to 0.83 (Conscientiousness). However, the Openness scale had a somewhat low alpha value (0.53), which has also been reported previously for a genetics study on addiction (Bjornsdottir et al., 2014). The mean inter-item correlations (MICs) ranged from 0.19 (Extroversion) to 0.30 (Conscientiousness), with Openness MIC = 0.10.