Psychometric properties of the Spanish version of the Psychopathy Checklist: Youth Version

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Abstract

The current study examined the psychometric properties (factor structure, reliability and validity) of the Psychopathy Checklist: Youth Version (PCL:YV; Forth et al., 2003) in Spanish samples of male justice-involved youths between 15 and 22-years old. The PCL:YV was administered to two groups of youths who were incarcerated ($n = 62$; $n = 95$) and a sample of youth on probation ($n = 122$). Confirmatory factor analyses showed acceptable-to-good fit for three- and four-factor models. The four-factor hierarchical model with a second-order higher factor representing the whole psychopathy construct was considered for further analyses. PCL:YV scores showed high internal consistency and inter-rater reliability. Low-to-moderate convergence with other measures of psychopathic traits evinced an adequate convergent validity. Convergent and discriminant validity of the PCL:YV total scores were also confirmed considering several measures of psychopathology and personality traits. Importantly, the differential external correlates of the PCL:YV factors provide support for a multidimensional conceptualization of the psychopathy construct. Altogether, these results reveal adequate psychometric properties of the PCL:YV in Spanish population of justice-involved youths and justifies its use to assess psychopathic traits in this kind of populations.

Keywords Psychopathy Checklist: Youth Version (PCL:YV) · Adolescence · Psychopathic traits · Juvenile justice · Psychometric properties · Confirmatory factor analysis

The development of psychopathy is generating increasing interest because research has shown that psychopathy does not emerge suddenly in early adulthood, but that its roots lie in childhood and adolescence (Frick & Marsee, 2018). The Psychopathy Checklist: Youth Version (PCL:YV; Forth et al., 2003) has provided an operational definition of the construct in youth and facilitated research on its criminological and biological correlates.

The PCL:YV was adapted from the Psychopathy Checklist- Revised (PCL-R; Hare, 1991, 2003) considered as the gold standard for the assessment of psychopathy in correctional and forensic adult samples. As the PCL-R, the PCL:YV is a 20-item rating scale that measures the interpersonal, affective, behavioral, and antisocial features of psychopathy in adolescents. There has been a considerable amount of research examining the reliability and validity of the PCL:YV (Das et al., 2009; Forth et al., 2003; Kosson et al., 2002; Schmidt et al., 2006; Vincent et al., 2008). However, the underlying factor structure of this instrument is still a topic of controversy. The models based on two, three, and four factors, proposed for representing the factor structure of the PCL-R in adults, have been the most widely tested (Hare & Neumann, 2006).

The two-factor model of the PCL-R was the first studied and validated in adults mainly using Exploratory Factor Analysis (EFA; Hare, 1991; Harpur et al., 1988). In this model, eight items related to interpersonal and affective features load on Factor 1, and nine items including impulsive, irresponsible, and antisocial tendencies load on Factor 2. When Confirmatory Factor Analysis (CFA) has been used with PCL-R (Cooke & Michie, 2001; Hare, 2003; Hare & Neumann, 2005; Neumann et al., 2007) or PCL: Screening Version (PCL:SV; Hare & Neumann, 2005), studies with adult samples only yielded mixed support for it. In youth, and specially in justice-involved adolescent

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samples, this model could not be replicated (Neumann et al., 2006; Vitacco et al., 2006).

The three-factor model was first hypothesized by Cooke and Michie (2001) using CFA. These authors proposed a hierarchical 3-factor model on a set of 13 of the 20 PCL-R items which loaded on three correlated second-order factors including affective, interpersonal and impulsive/irresponsible factors, excluding the items related to antisocial behavior. Cooke and Michie (2001) considered that only personality characteristics are the core feature of the psychopathy construct (Skeem & Cooke, 2010). This model has been replicated for PCL:YV in justice-involved adolescents (Forth et al., 2003; Kosson et al., 2013; Neumann et al., 2006; Vitacco et al., 2006) and in community boys samples (Kosson et al., 2002). Nevertheless, some authors (Hare, 2003; Hare, 2021; Miller & Lynam, 2012) consider that the antisocial factor is implicit in the definition of psychopathy, because the clinical tradition describes psychopathy in terms of personality traits and socially deviant behaviors (Cleckley, 1941; Hare & Neumann, 2008, 2010).

The four-factor model (Hare, 2003; Hare & Neumann, 2006) includes 18 items classified as the three-factors model (Cooke & Michie, 2001) and an antisocial factor. This model and a variation of it are the proposed models in the technical manual of PCL:YV (Forth et al., 2003) and have been supported achieving good fit in different studies with youths (Kosson et al., 2013; Neumann et al., 2006; Salekin, 2006; Vitacco et al., 2006). The ongoing debate is whether the construct of psychopathy may be defined by only personality characteristics or has also to include antisocial behavior.

This debate about PCL:YV factor structure has been based mainly on data collected in English speaking samples (North America or England). To date, few studies analyzed data from European samples finding differences when compared to North American samples such as profiles of item factor loadings or lower means (Kosson et al., 2013; Neumann et al., 2006). To our knowledge, few studies with different findings have been published regarding the structure of the PCL:YV in European countries such as Portugal (Pechorro et al., 2014), Italy (Sabatello et al., 2020), Germany (Sevecke et al., 2009) or the Netherlands (Hillege et al., 2011). The Portuguese, Dutch, and German versions supported the 3-factor model and the Italian version the 4-factor one. However, no published studies examined the factor structure of PCL:YV in Spain. Therefore, it remains unclear whether and how these findings generalize cross-culturally. If the structure of PCL:YV and its external outcomes are similar across cultures (Jones et al., 2006), it would imply that there are common underlying mechanisms for the development of psychopathy (Kosson et al., 2002).

Reliability Evidence

The PCL:YV manual reported data from 19 independent samples from United States, Canada and England (Forth et al., 2003). The internal consistency indices across settings were Cronbach's α (α = .85 to .94) and mean inter-item correlations (MIC = .23 to .43), thus, were acceptable. With regard to interrater reliability of PCL:YV total score, which is especially important given that the scores are based on clinical judgements, the intraclass correlation coefficients (ICC) for two independent raters were high across samples from different settings (single rating ICC = .90 to .93; averaged ratings ICC = .95 to .96). Several European studies with juvenile-justice involved youths supported adequate inter-rater reliability indices with Dutch (Das et al., 2009; Hillege et al., 2011), German (Sevecke et al., 2009), Portuguese (Pechorro et al., 2014), Danish (Kongerslev et al., 2015) or Swedish (modified PCL-R; Dåderman & Kristiansson, 2003) samples demonstrating that PCL:YV is a reliable instrument.

Validity Evidence

PCL:YV validity has been tested in several studies across different cultures (e.g., Das et al., 2009; Kosson et al., 2002; Sabatello et al., 2020). In Spain, Villar-Torres et al. (2014) found that PCL:YV has an adequate postdictive and convergent validity by using a self-reported measure of psychopathic traits (Antisocial Process Screening Device; APSD; Frick & Hare, 2001) in a justice-involved youths sample. In other cultures, with regard to convergent validity with self-reported measures of psychopathic traits, PCL:YV total scores are usually only modestly to moderately correlated with self-reports (Cauffman et al., 2009; Murrie & Cornell, 2002) such as the Youth Psychopathic Traits Inventory (YPI; Andershed et al., 2002) or APSD. Previous literature proposed that self-reports may not capture the construct of psychopathy in the same way as expert raters, especially regarding interpersonal and affective items (Murrie & Cornell, 2002; Shepherd & Strand, 2016).

With regard to both convergent and discriminant validity, PCL:YV scores also showed convergent relationship with externalizing symptoms including aggression, violence and delinquency (Kosson et al., 2002; Pechorro et al., 2014; Penney & Moretti, 2007; Schmidt et al., 2006). Conversely, PCL:YV relationship with internalizing disorders such as depression or anxiety is still unclear (Ribeiro da Silva et al., 2020). PCL:YV scores have been mostly unrelated, or negatively related, to internalizing

symptoms across different measures (Das et al., 2009; Salekin et al., 2004). However, some studies also found a positive relationship between psychopathy and anxiety (Kosson et al., 2002; Schmidt et al., 2006) suggesting that youth psychopathy may be comorbid with internalizing problems. To clarify these findings, studies focused on internalizing symptomatology and its relationship with PCL:YV factors could be fruitful (De Brito et al., 2021).

There is limited evidence about studies examining the relationship between youth psychopathy and personality traits and disorders. The available literature suggests that PCL:YV is related to low scores in the Big Five personality factors of Agreeableness (e.g., suspicious, liar, aggressive…), and Conscientiousness (e.g., difficulty in impulse control) (Salekin et al., 2005). Das et al. (2009) reported significant positive associations between PCL:YV total scores and externalizing behavior scales as well as negative associations with scales measuring social introversion from Minnesota Multiphasic Personality Inventory-Adolescence (MMPI-A, Butcher et al., 1992).

Associations with other personality measures based on psycho-biological models could also be relevant to understand youth psychopathy. For example, a study with justice-involved youths revealed that high Novelty Seeking together with low Harm Avoidance, Cooperativeness and Reward Dependence based on Cloninger's model could be a consistent profile related to psychopathy (Lennox & Dolan, 2014). Prior research with PCL-R also reported significant and differential associations of PCL-R factors with Sensitivity to Punishment and Sensitivity to Reward Questionnaire (SPSRQ; Torrubia et al., 2001) based on behavioral activation/inhibition systems (BAS/BIS) (Newman et al., 2005; Wallace et al., 2009) as well as with Karolinska Scales of Personality (KSP; Moltó et al., 2000) that provide information on biological dispositions related to vulnerability for psychopathology.

Taken together, these studies provide further support to the convergent and discriminant validity of psychopathy construct in youth. Nevertheless, more research is needed to clarify which personality and temperamental traits characterize psychopathic individuals.

The Current Study

The goal of this study was to investigate the psychometric properties (factor structure, reliability, and validity) of the Spanish version of the PCL:YV (González et al., 2003) in justice-involved male adolescents from three samples (González, 2010; Hilterman et al., 2014; Molinuevo et al., 2014, 2020).

The first goal was to explore the fit of one, two, three, four-factor CFA models. It was hypothesized that the 20 PCL:YV items would best load on a four-factor model with correlated factors showing adequate-to-good fit indexes considering previous results (Ellingwood et al., 2017; Forth et al., 2003; Sabatello et al., 2020) since this model has been originally validated by PCL:YV authors. We also hypothesized that a hierarchical four-factor model,[1] in which a second-order higher factor stands for the global psychopathy construct, would differ very little from the four-factor model with correlated factors and would also show adequate-to-good fit (Neumann et al., 2006).

The second goal was to examine the reliability of the PCL:YV scores. Good-to-excellent internal consistencies and strong interrater agreement were expected.

The third goal was to explore the convergent and discriminant validity with other self- and informant-reported measures of the psychopathy construct, personality traits and psychopathological symptoms such as attentional problems, aggression, externalizing or internalizing symptoms. It was hypothesized that PCL:YV scores would be positively and moderately related to other psychopathy measures, externalizing traits (e.g., monotony avoidance, impulsiveness, aggression and sensitivity to reward) and externalizing symptoms as rule-breaking and aggressive behavior, unrelated to internalizing traits (e.g., anxiety, depression), and negatively and moderately related to sensitivity to punishment.

For the first and second goals data from all three samples were used. To achieve the third goal data from samples 2 and 3 were analyzed.

Method

Participants and Procedures

A total of 279 justice-involved males from 3 samples recruited in Catalonia (Spain) were included. All participants signed an informed consent before the assessment and in case of youths below 18, their parents or guardians also gave an informed consent.

Sample 1 This sample consisted of 122 males who finished community probation with an infraction recorded in Catalan justice system (complete details are provided in Hilterman et al., 2014). The ages ranged from 15 to 22 years[2]

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[1] The hierarchical second-order higher factor model was chosen instead of a bifactor model because theoretically psychopathy construct is defined as a constellation of interpersonal, affective, behavioral and antisocial features (Hare & Neumann, 2008). Psychopathic personality exists through the relationship between its facets as implied in a higher-order factor model, and, therefore, it is not independent of the facets as it would be suggested in a bifactor model.

[2] In Spain, the jurisdictional system allows youths older than 18 to stay in custody in youth detention centers for charges they incurred as youth.

($M = 18.47$; $SD = 1.26$). The ethnic composition was as follows: 73% Spanish, 14% North African/Asian, 10% South American, and 3% European. The study information and the invitation to participate was sent by email to the youths selected randomly one month before the end of probation period. Juveniles who indicated an interest in participating were assigned to an interviewer. The team of nine professionals (psychologists or social workers) from the Department of Justice of the *Generalitat* of Catalonia (Spain) received training sessions conducted by the translators of the Spanish version. To score PCL:YV, the interviewers reviewed collateral information of the youths available on file (initial pretrial assessment, the sentence, the intervention plan and progress reports) and interviewed the youths. The participants were compensated with a voucher for 15 Euros.

Sample 2 This sample consisted of 62 males from secure long-term juvenile detention centers of the Department of Penal Execution in the Community and Juvenile Justice (DGEPCJJ) of the *Generalitat* of Catalonia (for complete details see Molinuevo et al., 2020). The ages ranged from 14 to 22 years ($M = 18.21$; $SD = 1.23$) and youths were housed at 'L'Alzina' ($n = 38$; 61%) and 'El Segre' ($n = 24$; 39%). In these centers young people (14-18 years old) who have committed violent offenses comply with penal sanctions as internment (youth detention). The ethnic composition was as follows: 35% Spanish, 47% North African/Asian, 16% South American, and 2% European. All those incarcerated youths who met inclusion criteria were invited to participate. The assessment sessions lasted two group and two individual sessions within 1 month approximately. The interviewers were mental health professionals who received training sessions by one of the authors of the Spanish version of PCL-R and translators of PCL:YV. These sessions included a review of psychopathy construct, scoring practice using videotapes, cases discussion and supervision of the first interviews. Before the interview, the collateral information was collected from institutional files and then two raters (interviewer and observer) at each center interviewed and scored independently the PCL: YV. The observers were not always present at the interviews, instead, they heard the recorded audiotapes. Participants received a pair of earphones at the 'L'Alzina' center and a computer flash drive at the 'El Segre' center as incentives to participate.[3]

Sample 3 This sample consisted of 95 males from secure long-term juvenile detention centers of DGEPCJJ (complete details are provided in González, 2010; Molinuevo et al., 2014). The ages ranged from 15 to 24 years ($M = 19.66$;

$SD = 2.15$) and were recruited from 'L'Alzina' ($n = 47$; 51%) and 'Trinitat' ($n = 48$; 49%). The ethnic composition was as follows: 73% Spanish, 2% North African/Asian, 9% South American, 2% Other, and 14% missing. The centers provided a list of all youths and those who met the inclusion criteria were invited to participate. The raters of the PCL:YV were members of the research group and received training sessions by the author of the Spanish version of PCL-R and translator of PCL:YV. Before the interview, the collateral information from the institutional files from the social educators was collected. Then, one researcher interviewed the participant in the presence of the observer, and they scored the PCL:YV independently. Some days later, youths were given self-report questionnaires in groups of a maximum of four supervised by one of the project's researchers. The youths received, as compensation for their participation, an item of sports equipment (L'Alzina) or a monetary compensation of 9 euros (Trinitat).

The exclusion criteria were to have limited Spanish proficiency hindering the understanding of assessment tools (samples 1, 2 and 3), a diagnosis of psychotic disorder, cognitive deficits, and/or a medical condition that contraindicated participation in the study (samples 2 and 3).

Measures

Since data were collected from different research projects, not all participants completed all instruments and sample sizes differ across measures.[4]

Hare Psychopathy Checklist: Youth Version (PCL:YV; Forth et al., 2003; authorized Spanish version González et al., 2003). The PCL:YV consists of 20 items designed to assess psychopathic traits in adolescents and it was used in all three samples. This instrument was originally validated for an age range between 12 and 18. In Spain, it was validated for the assessment of adolescents aged 14–24. Each item is scored by trained professionals/clinicians on a 3-point Likert scale (0 = *Does not apply at all*, 1 = *Partially applies*, to 2 = *Definitely applies)*. Total scores range from 0 to 40. Ratings in all three studies were based on a semi-structured interview and a review of collateral information. In this study, the interviewer's ratings were used for all the data analyses, except for interrater agreement in Samples 2 and 3.

Youth Psychopathic Traits Inventory (YPI; Andershed et al., 2002; authorized Spanish version by Hilterman et al., 2006). YPI is a 50-item self-report measure of psychopathic traits in youth aged between 12 and 18. YPI demonstrated

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[3] The choice of incentives was based on the preference of the director of the center.

[4] For a detailed description and reliability information of the used measures see Table S1.

good convergent validity and internal consistency in samples of detained adolescents across different ethnic groups (Colins et al., 2017). It is based on a three-factor conceptualization of psychopathy including Grandiose-Manipulative, Callous- Unemotional and Impulsive-Irresponsible factors and a Total score.

The Inventory of Callous-Unemotional Traits – Youth Self-Report (ICU-Y) and Teacher's Report (ICU-T; Frick, 2003; authorized Spanish version by Ezpeleta et al., 2013). The social educator who was responsible for the youths' supervision and knew them for at least for 3 months completed the ICU-T. ICU-Y and ICU-T are 24-item questionnaires designed to assess Callous-Unemotional (CU) traits. Both have demonstrated adequate psychometric properties (Ezpeleta et al., 2013; Kimonis et al., 2014). Total scores of ICU-Y and ICU-T were used as recommended by Ray et al. (2016).

Achenbach System of Empirically Based Assessment (ASEBA) school-age instruments (Achenbach & Rescorla, 2001; Willoughby et al., 2011). The first-order syndrome scales from Youth Self-Report (YSR) and the Teacher's Report Form (TRF) were used. The YSR was completed by youths to describe their own functioning over the last 6 months and the TRF was completed by a social educator. The YSR and TRF contain 112 items. ASEBA scales showed to be valid, internally consistent and reliable across different informants and time (Achenbach & Rescorla, 2001).

Reactive and Proactive Aggression Questionnaire (RPQ; Raine et al., 2006; authorized Spanish version Andreu et al., 2009). RPQ is a 23-item self-reported questionnaire designed to measure reactive and proactive aggression in children and adolescents. The RPQ is an internally consistent and well-validated measure (good construct and external validity) across various samples (Andreu et al., 2009; Cima & Raine, 2009).

Antisocial Process Screening Device – Self Report (APSD-SR; Frick & Hare, 2001) is a self-reported rating scale designed to assess traits associated with the construct of psychopathy in youths similar to PCL-R. APSD-SR has been validated across different samples including delinquent populations revealing a three-factor structure (Pechorro et al., 2016; Vitacco et al., 2003): Narcissism, Callous-Unemotional and Impulsivity factors, and a Total score.

Karolinska Scales of Personality (KSP; Af Klinterberg et al., 1986; Schalling et al., 1987; authorized Spanish version Ortet et al., 2002). KSP is a personality inventory that assesses stable personality traits and comprises 135 items distributed in 15 scales. Most scales are based on biologically relevant dispositions associated with vulnerability to personality pathology. KSP have been validated in a large number of studies including participants with psychiatric disorders such as psychopathy and delinquency (Dåderman et al., 2005; Ortet et al., 2002). KSP present overall good psychometric properties, even though scores on some scales should be taken with caution (Dåderman et al., 2005; Escorial et al., 2015; Ortet et al., 2002).

Sensitivity to Punishment and Sensitivity to Reward Questionnaire (SPSRQ; Torrubia et al., 2001). This is a 48 item questionnaire that assess individual differences in the Behavioral Inhibition and Behavioral Approach Systems proposed by Gray (1987). Sensitivity to Punishment (SP) is the scale related to anxiety as personality trait and Sensitivity to Reward (SR) is related to impulsivity. Torrubia et al. (2001) reported satisfactory internal consistency, test-retest reliability and convergent and discriminant validity of SP and SR.

Data Analyses

First, to test the fit of four models we used CFA. PCL:YV scores from Samples 1, 2 and 3 were analyzed using MPlus software (Version 8.4; Muthén & Muthén, 2012) with robust weighted least squares used as estimator (WLSMV) considered less biased and more accurate than others with ordinal data such as PCL:YV items (Flora & Curran, 2004; Li, 2016). The tested models were the one-factor model, with the 20 PCL: YV items, the 17-item two-factor model (both for comparative reasons), the 13-item three-factor model, and the 18-item four-factor model. For the primary analysis, each item was specified to load on only one factor, factors were allowed to correlate with each other and error covariances were constrained to zero. In both three and four-factor models, items were allowed to load directly onto one of the three or four respective factors. A correlated factors model could be the most advantageous model since various psychopathy factors have shown differential relations with external variables (Neumann et al., 2006). Nevertheless, we also tested a four-factor model in which the first-order factors loaded on a second-order higher factor representing the whole psychopathy construct.[5] Model fit was assessed using comparative fit index (CFI), Standardized Root Mean Square Residual (SRMR) and root mean square error of approximation (RMSEA). CFI values ≥ .95, SRMR ≤ .05 and RMSEA values ≤ .06 were considered indicators of good model fit, whereas CFI ≥ .90, SRMR ≤ .08 and a RMSEA ≤ .08 were considered as indicating adequate fit (Hu & Bentler, 1999).

In line with prior studies with samples of children with conduct problems (Ezpeleta & Penelo, 2015), baseline invariance[6] (i.e., equivalence of model form) and threshold invariance,

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[5] Loadings on a higher-order factor are mathematically comparable to correlations between factors where there are three or fewer factors (Forth et al., 2003), therefore we only tested a four-factor hierarchical model.

[6] Baseline invariance (or equal form) is supported when the number of factors and pattern - of zero and nonzero loadings - is equal across groups. Threshold and loading invariance implies that the loadings are equal across groups (Svetina et al., 2020).

followed by invariance testing for loadings across settings (youths in probation from Sample 1 or incarcerated youths from Samples 2 and 3) were measured (Svetina et al., 2020; Wu & Estabrook, 2016) using robust chi square difference testing (DIFFTEST). Also changes in CFI (ΔCFI) and RMSEA (ΔRMSEA) were computed according to Chen's (2007) proposal.

Second, descriptive statistics of the PCL:YV were calculated. Third, as indicator of the internal consistency of PCL:YV factors, McDonald's Omegas (ω) (Mcdonald, 1999) were calculated and interpreted as poor (≤.60), marginal (.60–.69), acceptable (.70–.79), good (.80–.89), and excellent (≥.90). Additionally, mean interitem correlation (MIC) was calculated, considering values ranging from .15 to .50 as adequate (Clark & Watson, 1995). To assess interrater reliability, single and average intraclass correlation coefficients (ICC for each factor and total scores) were also computed for Samples 2 and 3. A two-way mixed effects model with measures of absolute agreement was used. Acceptable level of inter-rater reliability values were interpreted as poor (<.50), moderate (.50–.75), good (.75–.90) and excellent (>.90) (Koo & Li, 2016).

Finally, convergent and discriminant validity of the PCL: YV scores were examined through zero-order correlations between the PCL: YV scores with other measures of psychopathy, indices of psychopathology, externalizing behavior, aggression and personality traits. Moderate positive correlations with other psychopathy measures and related constructs such as externalizing traits (e.g., monotony avoidance, impulsiveness, aggression and sensitivity to reward), and externalizing symptoms (rule-breaking and aggressive behavior), would provide evidence of convergent validity, whereas moderate negative correlations with sensitivity to punishment, and no correlation with internalizing traits would indicate adequate discriminant validity.

The data were analyzed with SPSS 22.0 (Statistical Package for the Social Sciences) for Windows and STATA (Software for Statistics and Data Science) was used for McDonald's ω calculation.

Results

Factor Structure

Three samples were merged for CFA purposes. Table 1 shows fit indices calculated from the tested models. All models, except for the 1-factor model, showed good fit indices. The best fit indices were obtained for both 3- and 4- factor models exceeding the criteria and showing an acceptable (RMSEA = .08; SRMR < .08) to excellent model fit (CFI ≥ .95). The hierarchical 4-factor model was considered for the rest of the analyses as it maximizes the usage of items

Table 1 CFA Models Fit Indices: Total Sample ($N = 279$)

|	df	χ2	CFI	SRMR	RMSEA
1 Factor	170	601.501	.934	.082	.102
2 Factors	134	380.738	.958	.070	.087
3 Factors	62	167.434	.976	.059	.083
4 Factors	129	340.740	.964	.064	.082
4 Factors Hierarchical	131	379.968	.958	.070	.088

CFA, Confirmatory Factor Analysis; *df*, Degrees of freedom; *CFI*, Comparative Fit Index; *SRMR*, Standardized Root Mean Squared Residual; *RMSEA*, Root Mean Square Error of Approximation

(Forth et al., 2003) and all four dimensions served as indicators of a coherent higher order psychopathy factor (Fig. 1).

All the items loaded on the hypothesized factor, and the standardized factor loadings were high and statistically significant, ranging between .63–.90 for the Interpersonal Factor, .69–.95 for the Affective Factor, .69–.93 for the Behavioral Factor, and .67–.81 for the Antisocial Factor (Fig. 1).

The results showed that baseline invariance across settings was supported, since the hierarchical four-factor model showed satisfactory model fit for both settings: in probation ($\chi2 = 275.711$; $df = 131$; CFI = .88; RMSEA = .093) and incarcerated ($\chi2 = 265.442$; $df = 131$; CFI = .93; RMSEA = .094). Even though both chi square difference testing of threshold invariance - restricting thresholds to equality between groups - and thresholds plus loadings - restricting both thresholds and loadings to equality between groups - were statistically significant ($\chi2 = 89.497$; $df = 18$; $p \leq .001$ and $\chi2 = 58.934$; $df = 32$; $p = .003$, respectively), changes in CFI and RMSEA were indicative of invariance (ΔCFI = -.002, ΔRMSEA = −.004 and ΔCFI = −.001, ΔRMSEA = −.01, respectively). Altogether, it was concluded that the hierarchical four-factor model showed a good fit to the empirical data and was invariant between different settings (in probation vs incarcerated) although its fit was significantly worse than that of the four-factor correlated model ($\chi2 = 26.121$, $df = 2$, $p < .001$; ΔCFI = −.006, ΔRMSEA = −.005).

Proven invariance, we evaluated if groups of responses differed in their distribution and/or means. The *t*-tests comparisons of the PCL:YV factors and total scores between both groups showed that scores on the Affective [$t(276) = 12.29$; $p \leq .001$], Interpersonal [$t(277) = 11.49$; $p \leq .001$], Behavioral [$t(277) = 11.74$; $p \leq .001$], Antisocial factors [$t(273) = 8.34$; $p \leq .001$] and Total Score [$t(277) = 14.09$; $p \leq .001$] were significantly higher in the incarcerated group ($M_{INT} = 4.71$, $SD_{INT} = 2.02$; $M_{AFF} = 5.95$, $SD_{AFF} = 1.72$; $M_{BEH} = 7.40$, $SD_{BEH} = 2.18$; $M_{ANT} = 7.31$, $SD_{ANT} = 2.60$; $M_{TOT} = 27.74$, $SD_{TOT} = 7.00$) than in probation group ($M_{INT} = 1.92$, $SD_{INT} = 1.76$; $M_{AFF} = 3.16$, $SD_{AFF} = 2.22$; $M_{BEH} = 3.94$, $SD_{BEH} = 2.63$; $M_{ANT} = 4.37$, $SD_{ANT} = 3.10$; $M_{TOT} = 14.29$, $SD_{TOT} = 8.54$).
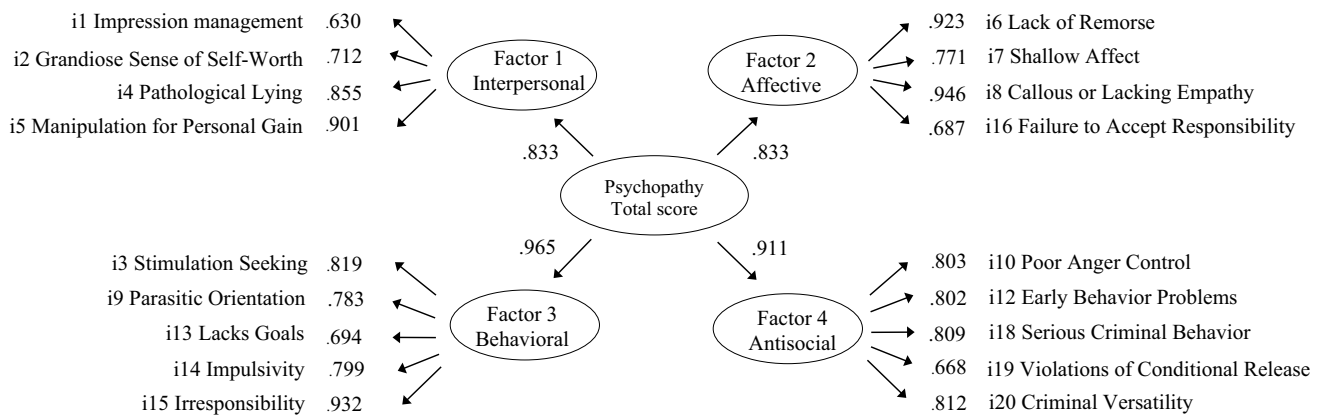
Fig. 1 Factor loadings and factor covariances for the PCL:YV four-factor hierarchical model. Total sample analysis in Spanish justice-involved youths (*N* = 279)

Table 2 Descriptive Statistics and Reliability for PCL:YV scores: Total Sample and Across Samples

PCL:YV		Total Sample (*N*=279)	Sample 1 (*n*=122)	Sample 2 (*n*=62)	Sample 3 (*n*=95)
Factor 1 Interpersonal	Mean (SD)	3.50 (2.36)	1.92 (1.76)	4.77 (2.30)	4.67 (1.83)
	Range (Min-Max)	0.00–8.00	0.00–8.00	0.00–8.00	1.00–8.00
	McDonald's ω (MIC)	.81 (.51)	.80 (.36)	.79 (.43)	.81 (.38)
	ICC (Single-Average)	NA	NA	.60–.75	.79–.88
Factor 2 Affective	Mean (SD)	4.73 (2.40)	3.16 (2.22)	5.68 (2.25)	6.13 (1.24)
	Range (Min-Max)	0.00–8.00	0.00–8.00	0.00–8.00	2.00–8.00
	McDonald's ω (MIC)	.85 (.56)	.86 (.48)	.62 (.50)	.89 (.27)
	ICC (Single-Average)	NA	NA	.45–.62	.61–.76
Factor 3 Behavioral	Mean (SD)	5.89 (2.94)	3.94 (2.63)	6.63 (2.40)	7.90 (1.87)
	Range (Min-Max)	0.00–10.00	0.00–10.00	0.00–10.00	2.00–10.00
	McDonald's ω (MIC)	.86 (.54)	.86 (.44)	.87 (.38)	.84 (.38)
	ICC (Single-Average)	NA	NA	.68–.81	.83–.91
Factor 4 Antisocial	Mean *(SD)*	6.00 (3.18)	4.37 (3.10)	6.51 (2.37)	7.85 (2.62)
	Range (Min-Max)	0.00–10.00	0.00–10.00	1.00–10.00	1.00–10.00
	McDonald's ω (MIC)	.84 (.52)	.89 (.49)	.97 (.33)	.83 (.65)
	ICC (Single-Average)	NA	NA	.82–.90	.93–.97
Total score	Mean *(SD)*	21.86 (10.20)	14.29 (8.54)	25.71 (8.43)	29.06 (5.55)
	Range (Min-Max)	0.00–38.00	0.00–37.00	8.00–38.00	14.00–37.00
	McDonald's ω (MIC)	.94 (.44)	.94 (.33)	.96 (.32)	.94 (.24)
	ICC (Single-Average)	NA	NA	.71–.83	.90–.95

PCL:YV, Psychopathy Checklist: Youth Version; *SD*, Standard Deviation; *NA*, not available; *MIC*, Mean Interitem Correlation; *ICC*, Intraclass Correlation Coefficient; *Sample 1*, youths in probation; *Samples 2 and 3*, incarcerated youths

Descriptive Statistics, Internal Consistency and Interrater Reliability

The descriptive statistics of PCL:YV factors and total scores are presented in Table 2 for the total sample and across samples. The mean PCL:YV total score for the total sample was 21.86 (SD = 10.20).

Table 2 also presents internal consistency and interrater reliability indices of PCL:YV total and factor scores. Overall, McDonald's ω and MIC values for four factors and PCL:YV total score, were indicative of acceptable-to-excellent

Table 3 Zero-order Correlations between the PCL:YV scores, YPI, ICU and APSD

	Factor 1 INT	Factor 2 AFF	Factor 3 BEH	Factor 4 ANT	PCL:YV Total
Sample 2					
YPI Total score ($n = 60$)	.08	.26*	.37**	.37**	.34**
GM	.09	.12	.22	.23	.21
CU	.00	.27*	.24	.25	.22
II	.09	.27*	.44***	.42**	.39**
ICU-T ($n = 60$)	−.01	.15	.01	−.02	.06
ICU-Y ($n = 62$)	.12	.22	.17	.10	.20
Sample 3					
APSD-SR Total score ($n = 74$)	.04	.28*	.29*	.43***	.39**
Narcissism	.21	.22	.23*	.41***	.42***
Callous	−.16	.14	.11	.13	.06
Impulsivity	−.10	.19	.19	.32**	.21

INT, Interpersonal; *AFF*, Affective; *BEH*, Behavioral; *ANT*, Antisocial; *YPI*, Youth Psychopathy Traits Inventory; *GM*, Grandiose-Manipulative; *CU*, Callous-Unemotional; *II*, Impulsive-Irresponsible; *ICU-T*, Inventory of Callous-Unemotional traits Teachers Version; *ICU-Y*, Inventory of Callous-Unemotional traits Youth Version; *APSD-SR*, Antisocial Process Screening Device – Self Report

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

internal consistency as all $\omega \geq .70$ except for the Affective Factor ($\omega = .62$) in Sample 2. In general, MIC values were acceptable, except for the Antisocial factor in Sample 3 and for all factors in the total sample with slightly high values suggesting that the items are highly correlated.

Using a two-way mixed effects model with absolute agreement, the single-measure ICC for PCL:YV total score and all factors were moderate to excellent, except for the affective factor in Study 2 which was poor (ICC = .45). Average ICCs ranged between .62 (Affective factor in Sample 2) to .97 (Antisocial factor in Sample 3) showing from moderate to excellent reliability.

Convergent and Discriminant Validity

The convergent validity of the PCL:YV factors and total score was studied through their associations with other self-reported and informant measures of psychopathy such as YPI, ICU and APSD (see Table 3).

With regard to YPI, PCL:YV total score and PCL:YV Behavioral and Antisocial factors showed significant positive correlations with the YPI Impulsive-Irresponsible factor and YPI Total score. No associations were found between PCL:YV factors or Total score and ICU-T or ICU-Y.

Results considering APSD showed significant positive correlations between PCL:YV Affective factor and APSD Total score, PCL:YV Behavioral factor and both APSD Narcissism and Total score, and PCL:YV Antisocial factor with APSD Total score, APSD Narcissism and APSD Impulsivity/Conduct problems factors.

The convergent and discriminant validity was also examined using correlations between PCL:YV factors and Total score with YSR, TRF, RPQ (Table 4), KSP and SPSRQ (Table 5).

With regard to externalizing problems, results showed significant positive associations between the PCL:YV Behavioral factor and both TRF and YSR Rule-breaking and Aggressive Behavior scales. The PCL:YV Antisocial factor was positively related to YSR Rule-breaking, YSR Aggressive Behavior and TRF Aggressive Behavior scales. The PCL:YV Total score showed positive correlations with YSR Rule-breaking, YSR Aggressive Behavior and TRF Aggressive Behavior scales.

Results also revealed significant positive associations between the PCL:YV Behavioral factor and TRF Thought and Attention Problems scales, while the Antisocial factor was positively related to TRF Attention Problems scale.

With respect to RPQ, the PCL:YV Behavioral and Antisocial factors and PCL:YV total score showed positive associations with RPQ Proactive, RPQ Reactive Aggression scales, and RPQ Total score.

With regard to the personality traits assessed with KSP (see Table 5), all factors showed a positive association with KSP Monotony Avoidance/Sensation Seeking scale. The PCL:YV Interpersonal factor showed a significant positive correlation with KSP Verbal Aggression and negative associations with KSP Psychic anxiety, Somatic Anxiety and Inhibition of Aggression scales. The PCL:YV Affective factor was positively related to KSP Irritability, Impulsivity and Indirect Aggression scales and negatively

Table 4 Zero-order Correlations between the PCL:YV scores, Psychopathological Symptoms, and Aggressive Behavior

	Factor 1 INT	Factor 2 AFF	Factor 3 BEH	Factor 4 ANT	PCL:YV Total
Sample 2					
ASEBA YSR (*n* = 58)					
Anxious/Dep	−.04	.02	.09	.13	.08
Withdrawn/Dep	.13	.26	.17	.15	.23
Somatic	.02	.05	.10	.16	.12
Social	−.02	.08	.09	.05	.08
Thought	.09	.13	.27*	.23	.25
Attention	−.09	.00	.07	.05	.06
Rule-breaking	.18	.14	.43**	.38**	.38**
Aggressive	.03	.10	.30*	.35**	.28*
ASEBA TRF (*n* = 60)					
Anxious/Dep	.20	.05	.18	.11	.17
Withdrawn/Dep	−.02	−.02	−.01	−.03	−.04
Somatic	.16	−.10	.19	.16	.11
Social	.18	.13	.10	.19	.20
Thought	.09	.10	.24	.14	.19
Attention	.08	.06	.39**	.31*	.24
Rule-breaking	.03	.06	.38**	.24	.21
Aggressive	.08	.12	.38**	.33*	.27*
RPQ (*n* = 59)					
Proactive	.13	.17	.27*	.32*	.30*
Reactive	.09	.12	.30*	.43**	.29*
Total score	.13	.17	.32*	.42**	.33*

INT, Interpersonal; *AFF*, Affective; *BEH*, Behavioral; *ANT*, Antisocial; *ASEBA*, Achenbach System of Empirically Based Assessment; *YSR*, Youth Self-Report; *TRF*, Teacher Report Form; *RPQ*, Reactive Proactive Questionnaire

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

related to KSP Inhibition of Aggression. The PCL:YV Behavioral factor showed positive associations with KSP Irritability, Psychastenia, Verbal Aggression and Indirect Aggression scales and negatively related to KSP Social Desirability scale. Positive associations also emerged between the PCL:YV Antisocial factor and KSP Irritability, Muscular Tension, Impulsivity, Verbal and Indirect Aggression scales. On contrast, the PCL:YV Antisocial factor was negatively related to KSP Socialization, Inhibition of Aggression and Social Desirability scales.

The PCL:YV Total score was positively related to KSP Monotony Avoidance/Sensation Seeking, Irritability, Impulsivity, Verbal and Indirect Aggression scales and negatively related to KSP Inhibition of Aggression and Social Desirability scales.

Positive associations also emerged between both the PCL:YV Antisocial factor and Total score and SPSRQ Sensitivity to Reward. In contrast, a negative association between the PCL:YV Total score and SPSRQ Sensitivity to Punishment was found.

Discussion

The aim of the present study was to examine the psychometric properties (factor structure, reliability and validity) of the PCL:YV in Spanish samples of justice-involved youth males. Overall, the findings suggest that the four-factor structure with a higher order factor representing psychopathy is maintained across settings (in probation and incarcerated). The PCL:YV factors and the Total score had acceptable-to-excellent reliability (internal consistency and interrater agreement) in all samples. Results partially supported the convergent validity of total PCL:YV and its factors as they were related to other measures of psychopathic traits (YPI and APSD), but not to all of them (ICU). It was also supported by associations with externalizing behavior, externalizing personality traits and sensitivity to reward. Discriminant validity was established since PCL:YV total scores were unrelated to internalizing traits, and negatively related to sensitivity to punishment.

Table 5 Zero-order Correlations between the PCL:YV scores and Personality Traits

	Factor 1 INT	Factor 2 AFF	Factor 3 BEH	Factor 4 ANT	PCL:YV Total
Sample 3					
KSP (*n* = 72–88)					
Psychic anxiety	−.34**	−.12	−.02	−.03	−.19
Somatic anxiety	−.29**	−.03	−.02	.02	−.13
Muscular tension	−.18	−.01	.08	.26*	.06
Psychasthenia	−.15	.04	.23*	.21	.12
Inhibition of aggression	−.23*	−.27*	−.14	−.32**	−.36**
Detachment	−.13	.05	.05	−.02	−.03
Impulsiveness	.11	.25*	.20	.25*	.26*
Monotony avoidance	.29**	.36**	.32**	.32**	.46***
Socialization	.00	.05	−.21	−.39***	−.21
Indirect aggression	.16	.23*	.29**	.47***	.45***
Verbal aggression	.24*	.11	.37**	.47***	.46***
Irritability	.11	.39***	.28**	.38***	.44***
Suspicion	−.14	−.02	.05	.13	.06
Guilt	−.19	−.14	.11	.09	−.05
Social desirability	.02	−.19	−.23*	−.23*	−.22*
SPSRQ (*n* = 69–73)					
Sensitivity punishment	−.21	−.08	−.16	−.15	−.25*
Sensitivity reward	.09	.04	.11	.31*	.25*

INT, Interpersonal; *AFF*, Affective; *BEH*, Behavioral; *ANT*, Antisocial; *KSP*, Karolinska Scales of Personality; *SPSRQ*, Sensitivity to Punishment and Sensitivity to Reward Questionnaire

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

Factor Structure

First, as regards to the factor structure, it was confirmed that the data produced good fit for both 13-item three-factor (Cooke & Michie, 2001) and 18-item four-factor models (Hare, 2003; Hare & Neumann, 2006) with correlated latent factors, as well as the hierarchical four-factor model. Prior research has also found that data from juvenile justice samples fit adequately both with three-factor (e.g., Hillege et al., 2011; Pechorro et al., 2014; Sevecke et al., 2009) and four factor models (e.g., Neumann et al., 2006; Sabatello et al., 2020; Salekin, 2006). These results are to some extent expected if one considers that both models are quite similar, with the four-factor model representing an extension of the three-factor model with the inclusion of the Antisocial factor (persistent and varied rule breaking). Although data showed good fit either with the three and four-factor models, in this study the hierarchical second-order four-factor model was retained as it was confirmed across settings (probation and institutions) with higher scores in the incarcerated groups. Moreover, it is theoretically coherent, that is, psychopathy construct exists through the relationship between interpersonal, affective, behavioral and antisocial features as described by Hare and Neumann (2008). The four-factor model is also the recommended in the Manual of the PCL:YV as it avoids the loss of important information (Forth et al., 2003) and it has been argued that both antisocial behavior and personality are central features of the construct (Hare & Neumann, 2010; Lynam & Miller, 2012; Neumann et al., 2015). In addition, item loadings were significant and all higher than .63 on their corresponding factor. Therefore, all items and all the four factors of the PCL:YV showed to be relevant and contributed significantly to the configuration of an homogeneous construct of psychopathy that is better assessed from a multidimensional perspective as it was originally proposed for PCL and its variants (Forth et al., 2003; Hare, 2003, 2021). The results on the factor structure of the PCL:YV obtained in the present study can shed light into the debate about the structure of the psychopathy construct, particularly in European countries, as prior literature has been inconclusive.

Reliability

Analyses of the internal consistency of PCL:YV total scores showed excellent levels with McDonald's ω ≥ .94 and acceptable MIC values. As regards interrater agreement, both single and average ICCs were good-to-excellent. Overall, the reliability indices were similar to those reported in the PCL:YV manual for the total score in both

institutionalized and probation groups (Forth et al., 2003). Considering the factors, these also showed reasonable levels of internal consistency, with McDonald's $\omega \geq 70$ (except for the Affective factor in Sample 2) and acceptable MIC values (except for the Antisocial factor in Study 3 which were slightly high). Considering interrater agreement, the average ICCs were higher in all cases. Both the single and average ICCs were ranging between good-to-excellent, with the exception of the single ICC Affective factor in Study 2. Inadequate ICC for the Affective factor has been previously reported (Das et al., 2009; Spain et al., 2004) and it might be suggesting that clinicians have issues in judging the affective deficits, especially in seriously antisocial samples. In general, as it was hypothesized the PCL:YV was found to be, in both institutionalized and probation populations, a reliable instrument for the assessment of psychopathy.

Convergent and Discriminant Validity

As regards convergent validity, moderate associations between PCL:YV total scores with other self-reported measures of psychopathy (YPI and APSD-SR) emerged. This finding is consistent with data from the PCL:YV manual that reports small-to-moderate correlations with APSD and other psychopathy self-reports (Forth et al., 2003)**,** and also with further studies using YPI (Cauffman et al., 2009; Dolan & Rennie, 2006). Importantly, no association between PCL:YV total scores and ICU-Y or ICU-T was detected, similar to previous literature reporting none or weak correlations in the few studies that aimed to examine this relationship (Frick & Ray, 2015). In this sense, it is important to consider that the ICU is aimed to measure only the affective factor of psychopathy and that it cannot be understood as a measure of the whole construct (Frick & Ray, 2015). Besides, it has been also suggested that CU traits might be particularly difficult to assess within the existing measures (Ribeiro da Silva et al., 2020).

This study also analyzed the associations between the PCL:YV factors and the YPI, APSD-SR (Total and factor scores) and ICU scores. Moderate correlations were detected between the PCL:YV Antisocial factor and Impulsivity scales in both YPI and APSD-SR. The Behavioral factor also showed moderate associations with Impulsivity scores in YPI, but not with APSD-SR. The Affective factor showed a significant small size correlation with CU YPI scores, but not with other measures of CU traits (APSD-SR, ICU-Y or ICU-T). In this sense, it can be taken into account that even though the ICU is the most exhaustive instrument for the assessment of CU traits, a self- or informant-report might not be enough to assess these traits in justice-involved youths (Feilhauer et al., 2012). Remarkably, the PCL:YV Interpersonal facet was not related to any of the self-report or informant measures.

This low-to-moderate convergence between the PCL:YV and other measures of psychopathy might have several explanations. First, these measures rely on different sources of information (i.e., self-report versus expert ratings based on interview and record data). Second, they conceptualize psychopathy in different ways (i.e., only the PCL:YV includes the antisocial component while the YPI and the ICU do not include it). Third, self-reported measures of psychopathy seem to have difficulties to detect interpersonal and affective characteristics in forensic samples, where motivation for accurate reporting may be low and motivation for deception and manipulation may be high (Paulino et al., 2022). Therefore, multiple sources and measures should be included when assessing persons in forensic samples (Feilhauer et al., 2012; Hare, 2021; Kelsey et al., 2015; Shepherd & Strand, 2016).

Altogether, these findings show that the convergent validity of PCL:YV total scores is moderate when these are compared with total scores from other self-reports aimed to assess psychopathy (APSD-SR and YPI). When the convergent validity of each factor is analyzed, the Behavioral and Antisocial factors show also moderate validity indices, but these are low for the Interpersonal and Affective factors. These results are also in accordance with other studies that show that correlations of Behavioral and Antisocial factors of the PCL:YV with other psychopathy measures tend to be higher than those found with the Interpersonal and the Affective ones (Dolan & Rennie, 2006; Villar-Torres et al., 2014).

In this research the study of convergent and discriminant validity included the assessment of psychopathological symptoms (YSR and TRF), aggressive behavior and personality traits (KSP and SPSRQ).

With regard to the psychopathological symptoms, PCL:YV total scores were positively related to externalizing symptoms such as self-reported and educator reported aggressive behavior, and only self-reported rule-breaking behavior. Externalizing symptoms are an important aspect to the conceptualization of psychopathy and prior studies usually found a positive association between total PCL:YV scores and externalizing behavior as well (Kosson et al., 2002; Schmidt et al., 2006). When the factor scores were considered, the Behavioral factor was related to self- and educator-reported rule-breaking and aggressive behavior. The Antisocial factor was also associated to self-reported rule-breaking and aggressive behavior and educator-reported aggressive behavior. Therefore, the hypothesis was partially supported since the PCL:YV total scores as well as the Behavioral and Antisocial, but not Interpersonal and Affective factors were associated with externalizing symptoms as has been previously reported by some of the studies (Pechorro et al., 2014; Sevecke et al., 2009).

With regard to the correlations of the PCL:YV total score with RPQ, KSP and SPSRQ, results showed that individuals with high scores in the PCL:YV could be described as monotony avoiders (sensations seekers), aggressive (showing both reactive and proactive aggression), assertive (low inhibition of aggression), impulsive, lowly sensitive to punishment, highly sensitive to reward and with low social desirability. These findings are consistent with the conceptualization of psychopathy as a whole construct (De Brito et al., 2021). Furthermore, it is interesting to note that PCL:YV total scores were not associated with anxiety/negative emotionality traits. Although the psychopathy construct according to Cleckley (1976) is characterized by low anxiety, the PCL total scores in its different variants tends to show little correlation with anxiety, as in the present study (Derefinko, 2015). Nevertheless, when the relationship with each factor was analyzed, differential correlates emerged.

The pattern of correlations observed between the PCL:YV Total score and the personality scales was very similar to the obtained for the Behavioral, Antisocial and, to some extent, the Affective factors. Two noticeable results were a specific significant association between the Interpersonal factor and low scores in some anxiety scales and a negative significant correlation between the Socialization scale and the Antisocial factor.

The lack of anxiety/negative emotionality has been traditionally considered as one of the core characteristics of psychopathy and an indicator of positive psychological functioning in psychopaths (Cleckley, 1976). This would suggest that interpersonal characteristics of psychopathy are the most adaptive, therefore do not present the same pattern of correlations as the other factors. Prior empirical evidence partially supported this finding as in a sample of psychiatric convicted adults, Psychic Anxiety from KSP and the interpersonal factor from PCL-R were also negatively related (Wallinius et al., 2012). In general, a meta-analysis reported a negative relationship between anxiety and the Interpersonal-Affective factor, but not with the Impulsive-Antisocial factor (Derefinko, 2015). More studies are needed that report on all four factors in order to conclude if it is the Interpersonal or the Affective factor that accounts more in for this relationship.

It is not surprising the specific association between the Antisocial factor and the Socialization scale, since it has been typically associated with antisocial behaviors and very low scores on this scale have been found in juvenile-justice involved youths (Dåderman & Kristiansson, 2004). In this sense, similar results were obtained in adults: only a significant association with PCL-R Impulsive-Antisocial factor (Moltó et al., 2000) and the strongest association with the Antisocial factor (Wallinius et al., 2012).

Finally, it is worth noting that monotony avoidance was associated both to all the PCL:YV factors and to PCL:YV Total score. Previous research also suggested that this association may exist since conceptually both constructs share several common characteristics (Dickey, 2014; Patrick et al., 2009): need for stimulation, impulsivity, irresponsibility, risk-taking, substance use, etc. In addition, the results obtained in the present study are partially coincident with those obtained in adult samples (Torrubia et al., 2019; Wallinius et al., 2012). Altogether, this seems to be indicative that sensation seeking trait is more relevant in psychopathy than other externalizing traits as impulsivity or sensitivity to reward and that it should be considered as an essential element to guide treatment.

Overall, it can be concluded that the findings provided support for the convergent and discriminant validity of PCL:YV for both total score and its factors as they were mainly related to externalizing traits and behaviors and unrelated or negatively related to internalizing problems as hypothesized and previously suggested. Importantly, the differential associations obtained between the PCL:YV factors and external variables provide evidence of the usefulness of a multidimensional approach to psychopathy [see Salekin et al., 2018 for discussion].

Limitations and Future Directions

Although this study is one of the first to examine the factor structure of the PCL:YV in a Spanish youth sample, the study has some limitations. First, the sample size, although adequate for the analyses conducted, was relatively small to calculate some of the convergent validity indices. Second, some of the KSP reliability indices were low, so the results should be interpreted with caution. Third, given the characteristics of the samples included in this study the results and conclusions should not be generalized to other populations (clinical, non-offenders, females). Therefore, future studies should include larger and heterogeneous samples in order to examine if this pattern of results is replicated or if it is specific to justice-involved youths. The incremental validity of PCL:YV over other less time-consuming measures of psychopathy should also be analyzed, especially considering the affective-interpersonal features since these are usually considered core characteristics of psychopathy. It would help to understand if PCL:YV provides information that cannot be obtained through self- and informant-reports. Finally, the predictive capacity of the total PCL:YV score and its factors on the treatment outcomes and on later psychosocial adjustment should be investigated through prospective studies in order to design intervention programs that better fit to the specific characteristics of each justice-involved youth.

Conclusions

The present research contributes to expand knowledge on the construct, convergent and discriminant validity of the PCL:YV by examining its association with other measures of psychopathic traits, personality dimensions and youth psychopathology. In addition, the study of its factor structure, not previously studied in Spain, will help to the cross-cultural comprehension of the psychopathy construct in youth populations and will promote its use in Spanish speaking countries.

Altogether, these results suggest that PCL:YV is a reliable and cross-culturally valid measure to assess in Spanish justice-involved youths the psychopathy construct and its four factors, as it is usually conceptualized in both youth and adult populations (e.g., Hare & Neumann, 2006).

Declarations

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