Female Psychopathic Traits in Forensic and School Context: Comparing the Antisocial Process Screening Device Self-Report and the Youth Psychopathic Traits Inventory-Short

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Abstract The association between psychopathic traits and antisociality among females is an important and understudied area of research. Drawing on 377 female adolescents (103 selected from forensic settings and 274 selected from school settings) from Portugal, the current study examined the psychometric properties of the Antisocial Process Screening Device Self-Report (APSD-SR) and Youth Psychopathic Traits Inventory - Short version (YPI-S) in female youth populations. When comparing these two measures the YPI-S revealed clearer results in terms of its three-factor structure and internal consistency, and stronger convergent validity coefficients. The APSD-SR revealed problems in terms of its factor structure and internal consistency of its Callous-Unemotional (CU) and Impulsivity dimensions. Convergent validity was demonstrated among these measures and with measures of other facets of the psychopathy construct (CU traits, narcissism) and related constructs (reactive and proactive aggression), and discriminant validity was found with a measure of basic empathy. Expected significant associations were found in terms of criterion-related validity with several indicators of delinquent careers including age of criminal onset, Conduct Disorder (CD), crime seriousness, violent crimes, alcohol use, and drug use.

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Psychopathy, defined as a personality disorder that represents a suite of affective, interpersonal, and behavioral traits that create significant impairments in social functioning and impose high costs to society in terms of crime and criminal justice system expenditures. The prevalence of psychopathy among forensic and justice system-involved individuals is several times higher than the general population. Although the association between psychopathy and assorted antisocial conditions and behaviors is unequivocal (da Silva et al. 2012; DeLisi 2009; Hare 1993, 1996; Pechorro et al. 2016b), the strength and consistency of that relationship largely pertains to data derived from male, adult criminal offenders. The association between various psychopathy features and female antisociality, defined as the liability for involvement in conduct problems and antisocial behavior is more heterogeneous and the literature is replete with competing and at times contradictory findings (Nicholls and Petrila 2005; Vitale and Newman 2001).

Certainly, studies have shown gender consensus in the linkages between psychopathy and a multitude of behavioral outcomes including: self-reported and teacher-rated aggression (Marsee et al. 2005), emotional processing (Kimonis et al. 2006), negative health outcomes (Beaver et al. 2014), and both self-reported physical and relational aggression (Penney and Moretti 2007). Together, these studies suggest that the

psychopathy construct is related to antisociality in generally similar ways for males and females. Specifically, studies have shown that arrogant and deceitful interpersonal style, affective deficits, impulsivity, and irresponsible behavioral style are significantly correlated with diverse types of aggression for both genders (Forth et al. 2003; Kosson, Neumann, Forth, Salekin, Hare, et al. 2013; McCuish et al. 2014; Penney and Moretti 2007). Kosson et al. (2013) analyzed data from 14 samples of female offenders including those in secured treatment facilities, detention centers, confinement facilities, arrestees, probationers, inpatients, and patients from psychiatric and pediatric clinics, with data selected from Canada, Germany, Netherlands, Sweden, United Kingdom, and the USA. They found strong support for a link between psychopathy and antisocial conduct among adolescent females.

Others have shown reduced, weaker, or null associations for psychopathy measures and various types of recidivism (Cook et al. 2010; Schmidt et al. 2006; Vincent et al. 2008), psychopathy, aggression, and future offending (Odgers et al. 2005), and psychopathy and drug use (Vaughn et al. 2008a). For instance, Vincent et al. (2008) reported zero prevalence of violent recidivism among highly psychopathic female delinquents.[1] Similarly, Odgers et al. (2005) found that psychopathy was not predictive of future offending once victimization was considered among delinquent girls.

There is evidence that psychopathy is differentially expressed by female offenders and that various items selected from prominent measures of the conditions have differential associations with behavioral measures. For example, Schrum and Salekin (2006) used item response theory to analyze test and item functioning of the PCL:YV among adolescent girls from detention facilities in Florida and Alabama. They found that *callousness and lack of empathy, conning and manipulation*, and a *grandiose sense of self-worth* were the most discriminating of the underlying psychopathy construct. Other items including *poor anger control, shallow affect*, and *serious violation of conditional release* were the least discriminating.

Still others have shown stronger effects for psychopathy among female versus male delinquents in clinical and juvenile justice system samples (Cook et al. 2010; Marsee et al. 2005; Sevecke et al. 2009) particularly as the condition relates to psychiatric problems, psychiatric hospitalization, and suicidal behavior (Cook et al. 2010; Sevecke et al. 2009). Other studies have utilized exclusively female samples and shown diverse psychopathy-deviance effects including callous-unemotional traits and proactive aggression (Marsee and Frick 2007). For instance, Kunimatsu et al.

(2012) examined happy victimization which is the experience of positive emotions/affect and the absence of negative emotions after perpetrating antisocial conduct among a sample of 59 mostly African American justice system-involved girls. Girls who were the most callous and unemotional experienced positive emotions in the course of engaging in total and violent delinquency.[2]

In sum, a spate of psychopathy measures have been utilized to study aggression, conduct problems, and serious delinquency among adolescent females drawn from juvenile justice settings, clinic settings, and general population samples. Perhaps because of the multitude of measures and the heterogeneity of the samples, the research findings about the psychopathy-antisociality relation among girls are mixed.

Studying Psychopathic Traits among Forensic Samples of Females with the APSD-SR and the YPI-S

Very few studies exist that research the psychopathy construct among forensic samples of incarcerated female adolescents, and even the most recent of these few studies that are available (e.g., Bauer et al. 2011; Cook et al. 2010; Kosson et al. 2013) used the Psychopathy Checklist: Youth Version (PCL:YV; Forth et al. 2003). Clinical assessments of the psychopathy construct using the PCL:YV, considered by many a gold standard for assessing psychopathy (Lynam and Gudonis 2005), are valid and useful, but also time-consuming, expensive, difficult to use, and require access to institutional file information that is not always available.

The use of self-report measures to assess the psychopathy construct among youth has several advantages. Self-report measures provide better insight into subjective dispositions (e.g., lack of remorse, grandiosity) and motivations for actions (e.g., using charm to con others), can be administered to many people at the same time so they are time- and cost-effective, and do not require the contribution of parents, teachers, or juvenile detention staff that need to be previously trained (Andershed et al. 2002; Colins et al. 2014; Loney et al. 2003). One of the main sources of skepticism regarding the use of self-report measures of the psychopathy construct derives from presumed tendency of psychopathic individuals to distort their questionnaire responses, especially in a socially desirable or undesirable direction. However, Ray et al. (2013) found no evidence in a recent meta-analytic review that scores

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[1] It should be noted that many psychopathy measures (e.g., APSD, PPI, YPI, ICU) also have differential predictive validity for serious delinquency outcome variables (Asscher et al. 2014; DeLisi et al. 2014a; Fritz et al. 2008; Muñoz and Frick 2007; Pechorro et al. 2013; Poythress et al. 2006b; Vaughn et al. 2008b), and that various subscales of these measures exhibit differential predictive validity.

[2] In a meta-analysis of the Hare measures of psychopathy and antisocial behavior, Leistico et al. (2008) found that gender composition of the sample was a significant moderator of PCL-R Total and PCL-R Factor 1 effect sizes. The negative regression coefficients indicated that the scores explained future antisocial conduct in samples that included more female participants. Conversely PCL-R Factor 2 effect sizes appear to be equivalent despite the gender composition of the samples.

on psychopathy measures were positively associated with measures of social desirability or faking good.

The Antisocial Process Screening Device (APSD; Frick and Hare 2001) is currently the most researched questionnaire measure of child and youth psychopathy. The APSD is basically a downward extension of the Psychopathy Checklist–Revised (PCL-R; Hare 1991) adult model of psychopathy. Caputo et al. (1999) (1999) adapted an experimental self-report version of the APSD (APSD-SR) for use with older youths (aged 12 to 18 years) by creating second person stems for each item (e.g., item 6. "You lie skillfully and easily"). Although the self-report version of the APSD was not originally designed specifically for use with justice-involved youths, it is particularly important to evaluate it this population because it has become a popular measure for assessing psychopathic features in justice-involved adolescents.

Some studies using the APSD-SR among forensic samples have provided supporting evidence for the three-factor model. For example, Vitacco et al. (2003), using samples of incarcerated male and female adolescent offenders, examined the factor structure of the APSD-SR and reported a good fit for the three-factor model despite the fact items 19 ("Does not show emotions") and 20 ("Keeps same friends") failed to reach a minimum acceptable (i.e., .30) loading which raised concerns about these items of the CU dimension. Poythress et al. (2006b)using a sample of 165 male and female adolescents referred to an arbitration program for youths arrested for the first time, also reported a good fit for a modified version of the three-factor model of the APSD-SR excluding items 19 and 20.

Other studies regarding the factor structure of the APSD-SR revealed far less promising results. For example, Pechorro et al. (2013), using a mixed community and forensic sample of Portuguese male and female youths concluded that a modified two-factor structure (including items 2 and 6) provided the best option for the APSD-SR in terms of structural validity and internal consistency. Colins et al. (2014) examined the factor structure of the APSD-SR in a sample of detained Belgian female adolescents, and found that the three-factor model and the two-factor model did not reach the criteria for acceptable fits; despite the fact the two-factor model was better in terms of fit they used the three-factor structure because the developer of the APSD-SR suggested that was the factor structure of choice.

Another important issue in terms of the psychometric properties of the APSD-SR is the internal consistency of its CU dimension. A review by Poythress et al. (2006a) found that the APSD-SR was consistently poor across ten studies of juvenile justice-involved youths, raising the possibility this was probably due to a defensive response style triggered by their involvement in the justice system. They suggested that investigators should exclude items 19 and 20 for purposes of assessing CU features when using the APSD-SR with justice-involved adolescents. Addressing these limitations is

important given the recent inclusion of CU traits as a specifier ("with Limited Prosocial Emotions") for CD in the 5th Edition of the *Diagnostic and Statistical Manual for Mental Disorders* (DSM-5; American Psychiatric Association 2013). Also, the importance of the combination of the three psychopathy factors in relation to conduct problems and criminal behavior has been shown in children, adolescents, and adults (e.g., Colins et al. 2017; Frogner et al. 2016; Zwaanswijk et al. 2016).

The Youth Psychopathic Traits Inventory – Short (YPI-S; van Baardewijk et al. 2010) is a brief recent version of the YPI (Andershed et al. 2002) developed through a stepwise selection process using a series of exploratory and confirmatory factor analyses, and content related arguments. It is organized in three factors, without the ten subscales composing the original YPI that are supposed to capture the same interpersonal, affective, and behavioral traits of the psychopathy construct. By not including such subscales, the YPI-S, solved a problem related to an inappropriate use of subscale scores rather than raw items (parceling) in factor analyses, i.e., not justifying the assumption of unidimensionality (Colins et al. 2012).

Of the six YPI-S studies published to date (Colins et al. 2012; Colins et al. 2014; Colins and Andershed 2016; Orue and Andershed 2015; Pechorro et al. 2015b; van Baardewijk et al. 2010), only one (i.e., Colins et al. 2014) used a forensic sample of detained girls, but all revealed the expected three-factor structure, namely the Interpersonal, the Affective, and the Behavioral dimensions. However, some studies (e.g., Colins et al. 2012; Pechorro et al. 2015a) found that item 5 ("I have probably skipped school or work more than most other people") of the YPI-S showed low standardized loadings (.11 and .28, respectively), but retained it in order to test whether the original factor structure could be replicated. The internal consistencies measured by Cronbach's alpha of the YPI-S total and its three dimensions were generally good, despite the fact the Affective and the Behavioral dimension were sometimes slightly below the minimum recommended level of .70.

Unfortunately, only Colins et al. (2014) study used a sample of detained female adolescents to examine the psychometric properties of the YPI-S, but these authors were able to demonstrate very promising results, namely in terms of its factor structure, internal consistency, convergent validity with other psychopathy measures (e.g., APSD-SR), concurrent validity with psychiatric diagnostics (e.g., DSM-5's CD; APA, 2013), and criterion-related validity with criminal variables (e.g., self-reported offending, aggression).

Aim of the Present Study

Because the expression of psychopathic traits could vary across gender groups, it is crucial to examine the generalizability of measures such as the APSD-SR and the YPI-S.

The main aim of the present study is to examine the psychometric properties of the APSD-SR and of the YPI-S among female youths from Portugal. To our knowledge this is the first study attempting to simultaneously compare the psychometric properties of both these instruments among a forensic sample of incarcerated female youths along with a sample of community youths. We are curious about the potentially differential role of psychopathic traits in forensic and school contexts among adolescent females. Based on prior studies (e.g., Colins et al. 2014; Pechorro et al. 2013; Poythress et al. 2006a), it is hypothesized that: a) the YPI-S will present clearer results in terms of factor-structure and internal consistency than the APSD-SR; b) convergent validity will be found among these measures and with measures of other facets of the psychopathy construct (e.g., callous-unemotional traits, narcissism) and related constructs (e.g., aggression), and discriminant validity will be found with a measure of empathy; and c) significant associations will be found with criterion-related variables such as CD, age of criminal onset, crime seriousness, violent crimes, alcohol and drug use.

Method

Participants

The sample was composed of 377 female participants ($N = 377$; mean age = 16.23 years; $SD = 1.38$ years; range = 14–19 years) recruited from forensic and school contexts. Of this total, 103 participants ($n = 103$; mean age = 16.41 years; $SD = 1.19$ years; range = 14–18 years) formed the forensic sample and 274 participants ($n = 274$; mean age = 16.17 years; $SD = 1.44$ years; range = 14–19 years) formed the school sample. The female inmates were recruited from the three juvenile detention centers managed by the Portuguese Ministry of Justice that admit female detainees. They were all detained by the court's decision, the hardest measure a Portuguese court can decide. The community females were recruited from public schools of the Lisbon, Algarve and Coimbra regions. All the participants were informed about the nature of the study and asked to voluntarily participate.

The participants were mainly white Europeans (forensic sample = 59.2%; school sample = 90.1%) from an urban background (forensic sample = 97.1%; school sample = 100%) with a low socioeconomic status (forensic sample = 60.2%; school sample = 39.1%). The detained youths had their crime onset ($M = 12.50$ years; $SD = 1.56$ years) and first criminal problems with the law ($M = 13.27$ years; $SD = 1.55$ years) early in their lives. Most were detained before they were 16 years old ($M = 15.90$, $SD = 1.04$) due to having committed serious and violent crimes (e.g., robbery, assault).

Measures

The *Antisocial Process Screening Device – Self-Report* (APSD-SR; Frick and Hare 2001; Caputo et al. 1999) is a multidimensional 20-item measure designed to assess psychopathic traits in adolescents (see, Lee et al. 2003; Poythress et al. 2006a). It was modeled after the Psychopathy Checklist (Hare 2003; Forth et al. 2003; Pechorro et al. 2015c). Each item is scored on a 3-point ordinal scale (ranging from 0 = *Not at all true*, 1 = *Sometimes true*, or 2 = *Definitely true*). The total score, as well as each dimension score, is obtained by adding the respective items. Higher scores are indicative of an increased presence of psychopathic traits (Frick and Hare 2001). The Portuguese adaptation of the APSD-SR (Pechorro et al. 2013; Pechorro et al. 2016d) was used. Internal consistency reliability statistics for the APSD-SR will be given later in this paper.

The *Youth Psychopathic Traits Inventory-Short* (YPI-S; van Baardewijk et al. 2010) is an 18-item self-report shorter version of the original YPI (Andershed et al. 2002) designed to measure psychopathic-like traits in adolescents. All the items of the YPI-S came from the original YPI. Stepwise parallel reduction using principal components analysis and content-related arguments were used to develop the YPI-S. A three-factor structure almost identical to the factor structure of the YPI was demonstrated in boys and girls. The YPI-S showed strong convergence with the original YPI and similar correlations to external criterion. Each item in the YPI-S is scored on a 4 point Likert scale (ranging from 1 = *Does not apply at all* to 4 = *Applies very well*). The YPI-S can be scored by simply adding the items. Higher scores indicate an increased presence of the characteristics associated. The Portuguese validation of the YPI-S was used (Pechorro et al. 2015b; Pechorro et al. 2016e; Pechorro et al. 2017d). Internal consistency reliability statistics for the YPI-S will be given later in this paper.

The *Inventory of Callous-Unemotional Traits* (ICU; Essau et al. 2006; Kimonis et al. 2008) is a 24-item self-report scale designed to assess callous-unemotional traits in youth (see Roose et al. 2010) derived from the callous-unemotional (CU) subscale of the Antisocial Process Screening Device (APSD; Frick and Hare 2001). Each item is scored on a four-point scale (ranging from 0 = *Not at all true*, to 3 = *Definitely true*). The ICU provides both a total score and three subscale scores, namely: Callousness, Uncaring, and Unemotional. Scores are calculated by reverse-scoring the positively worded items and then summing the items to obtain a total score. Higher scores indicate an increased presence of CU traits. The Portuguese version of the ICU was used (Pechorro et al. 2016a; Pechorro et al. 2017a). The internal consistency for the current study estimated by Cronbach's alpha was: ICU total $\alpha = .86$; Callousness dimension $\alpha = .79$; Uncaring dimension $\alpha = .80$; and Unemotional dimension $\alpha = .82$.

The *Narcissistic Personality Inventory – 13* (NPI-13; Gentile et al. 2013) is a short form of the Narcissistic Personality Inventory (NPI; Raskin and Terry 1988) which is considered by far the most widely used measure of grandiose narcissism. The NPI-13 consists of 13 statements, among which one is considered to confirm an attitude of narcissism, and the other is not. The NPI-13 provides both a total score and three subscale scores, namely: Leadership/Authority, Grandiose Exhibitionism, and Entitlement/Exploitativeness. Higher scores indicate an increased presence of the associated characteristics. A Portuguese version of the NPI-13, especially adapted for use with adolescents, was used (Pechorro et al. 2016c; Pechorro et al. 2017). The internal consistency for the current study, estimated by Kuder-Richardson coefficient, was: NPI-13 total KR20 = .82; Leadership/Authority dimension KR20 = .75; Grandiose Exhibitionism dimension KR20 = .70; and Entitlement/Exploitativeness dimension KR20 = .60.

The *Basic Empathy Scale* (BES; Jolliffe and Farrington 2006) is a 20-item self-report measure designed to assess empathy in youths. The BES was developed as a concise and coherent scale with the aim of measuring two distinct factors: affective empathy (11 items), and cognitive empathy (9 items). Each item is scored on a five-point ordinal scale (from 1 = *Strongly disagree* to 5 = *Strongly agree*). Scores are calculated by reverse-scoring the positively worded items and then summing the items to obtain the total score and the factors scores. Higher scores indicate an increased presence of the associated characteristics. The Portuguese version of the BES was used (Pechorro et al. 2015a). The internal consistency for the current study, estimated by Cronbach's alpha, was: BES total α = .88; Affective dimension α = .83; and Cognitive dimension α = .91.

The *Reactive-Proactive Aggression Questionnaire* (RPQ; Raine et al. 2006) is a self-report measure that distinguishes between reactive and proactive aggression. The RPQ consists of 23 items rated on a 3-point ordinal scale (0 = *Never*, 1 = *Sometimes*, 2 = *Often*). A total of 11 items assess reactive aggression (e.g., "Reacted angrily when provoked by others") and 12 items assess proactive aggression (e.g., "Hurt others to win a game"). Summed scores provide a measure of reactive or proactive aggression, as well as total aggression. Higher scores indicate higher levels of aggression. The RPQ is appropriate for use with youth in late adolescence and young adults. The Portuguese version of the RPQ was used (Pechorro et al. 2017b; Pechorro et al. 2017c). The internal consistency for the current study estimated by Cronbach's alpha was: RPQ total α = .90; Reactive dimension α = .81; and Proactive dimension α = .87.

The *Sellin-Wolfgang Index of Crime Seriousness* (ICS; Sellin and Wolfgang 1964) guided the delinquency seriousness classification of the official court reports. Level 0 consisted of no delinquency. Level 1 consisted of minor delinquency committed at home, such as stealing minor amounts of money from mother's purse. Level 2 consisted of minor delinquency outside the home including shoplifting something worth less than 5 euros, vandalism and minor fraud (e.g. not paying bus fare). Level 3 consisted of moderately serious delinquency such as any theft over 5 euros, gang fighting, carrying weapons, and joyriding. Level 4 consisted of serious delinquency such as car theft and breaking and entering. Level 5 consisted of having performed at least two of each of the behaviors in the previous level.

A CD scale was also created based on the 15 items used to assess CD (see e.g., Skilling et al. 2001). The 15 dichotomous items (coded 0 = No; 1 = Yes) were summated to obtain a total continuous score. Thus, higher scores indicate a higher number of positively endorsed indicators of CD. Based on the Kuder-Richardson coefficient, the internal consistency of the CD scale was considered good (.89).

A questionnaire was constructed to describe the socio-demographic and criminal characteristics of the participants, to offer a descriptive account of the sample, and to explore the association of some of these variables (e.g., age of onset) with APSD-SR and YPI-S scores. This questionnaire included variables such as participants' age, nationality, ethnic group (white Europeans vs. minorities), socioeconomic status, parental marital status, level of schooling completed, age of crime onset, age of first problem with the law, age of first incarceration, length of the conviction, taking of psychiatric drugs, use of physical violence in committing crimes, alcohol use, cannabis use, and cocaine/heroin use. Socioeconomic status (SES) was measured by considering both parental level of education and profession appropriate to the Portuguese reality (Simões 1994). DSM-5's CD (APA 2013) was assessed by the first and second authors of this study using the official diagnostic criteria (i.e., the standard method described in the DSM-5). CD assessment was made using interviews (i.e., in person) and institutional files (that also included psychiatric information).

Procedures

Authorization to assess detained youths was obtained from the General Directorate of Reintegration and Prison Services of the Portuguese Ministry of Justice. The detainees were informed about the nature of the study and asked to voluntarily participate. The participation rate was approximately 89%. Motives for not participating included refusal to participate (6%), inability to participate due to not understanding the Portuguese language (4%) and inability to participate due to security issues (1%). Authorization to assess youths in the school context was obtained from the General Directorate of Education of the Portuguese Ministry of Education, and parental permission was obtained for all children. The participants, students from public schools of the

Lisbon, Algarve and Coimbra regions, were informed about the nature of the study and asked to voluntarily participate. The participation rate was approximately 84%. Participants who were unwilling or unable to collaborate were excluded. The measures were administered by means of individual face-to-face interviews in an appropriate setting. Some of the information (e.g., sociodemographic variables) was obtained from self-reports, and institutional files were also used to complement the information obtained (e.g., prior criminal activity and detentions).

The data were analyzed using SPSS v23 (IBM SPSS 2015) and EQS 6.2 (Bentler and Wu 2008). The factor structures of the Portuguese language versions of the APSD-SR and YPI-S were assessed with Confirmatory Factor Analysis (CFA) performed in EQS 6.2 (Bentler and Wu 2008; Byrne 2006). Goodness of fit indices were calculated, including Satorra-Bentler χ^2/df, comparative fit index (CFI), incremental fit index (IFI), and root mean square error of approximation (RMSEA). A χ^2/df value <5 is considered adequate, ≤ 2 is considered good, and values = 1 are considered very good (Maroco 2014; West et al. 2012). A CFI $\geq$ .90 and RMSEA $\leq$ .08 indicate adequate fit, whereas a CFI $\geq$ .95 and RMSEA $\leq$ .06 indicate good model fit (Byrne 2006). Regarding the incremental fit index, also known as Bollen's IFI, values $\geq$ .90 are regarded as acceptable. In terms of the Akaike Information Criterion (AIC), which measures the expected discrepancy between the true model and the hypothesized model, the model with the smallest AIC should be selected (West et al. 2012). The CFA was performed on the original scale items and only items with standardized loading above .30 were retained (Nunnally and Bernstein 1994). Polychoric correlations with robust methodologies were used to perform the CFA on the ordinal items and modification indices were considered (Byrne 2006). Pearson correlations were used to analyze associations between scale variables, Spearman correlations were used with ordinal variables, and point-bisserial correlations were used to analyze associations between nominal dichotomous variables and scale variables (Leech et al. 2015). Correlations were considered low if below .20, moderate if between .20 and .50, and high if above .50. Mean inter-item correlations were considered good if between .15 and .50 (Clark and Watson 1995). Corrected item-total correlations were considered adequate if above .20, and Cronbach's alphas were considered good if above .70 (Nunnally and Bernstein 1994).

Results

The first step in examining the psychometric properties of the APSD-SR and YPI-S among incarcerated female juvenile delinquents and community youths was to attempt to replicate, by means of CFA using the ML method, the different factor structures proposed for these two instruments. In Table 1 are shown the goodness-of-fit indices obtained regarding the different models among the different samples, namely the forensic sample, the community sample, and the total sample. The APSD-SR three-factor modified model did not fit the data well in the forensic and school samples, but it obtained an adequate fit in the total sample. It is important to mention that items 2 and 6 were not included in the factor model proposed by Frick and Hare (2001), and that the exclusion of items 19 and 20 from the CU dimension is consistent with prior research assessing CU traits using the APSD-SR with justice-involved adolescents (see Poythress et al. 2006a). The YPI-S three-factor model obtained an adequate fit in the forensic sample and good fits in the school sample and total samples, including in terms of obtaining the lowest AICs. We found the strongest support in terms of goodness-of-fit indices for the YPI-S three-factor first order inter-correlated robust structure, but it is worth pointing out that item 5 of the YPI-S in the school sample did not reach a minimum .30 loading.
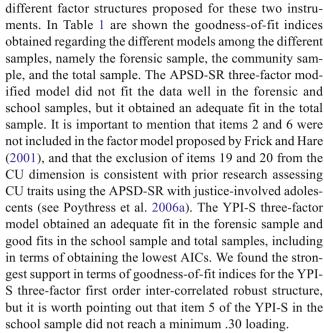
Table 2 displays the item loadings for the three-factor modified robust structure of the APSD-SR (without items 2, 6, 19 and 20) and the three-factor model of the YPI-S with the ML robust method. The APSD-SR model is not entirely consistent with prior research in not including items 19 and 20 in the CU dimension because it did not reach the minimum acceptable level of loading (i.e., .30), but it can be gleaned from the table that the loadings of the items are very similar with factors identified by Frick and Hare (2001). The loading corresponded to Factor 1 which was comprised of the callous-unemotional/affective dimension, Factor 2 which was comprised of the impulsivity/behavioral dimension, and Factor 3 which was comprised of the narcissistic/interpersonal dimension.

Table 3 presents the correlations among the APSD-SR total (and its dimensions) and YPI-S total (and its dimensions). These correlations were moderate to strong as expected with all correlations significant at the $p < .001$ level.

The next step was the estimation of Cronbach's alpha, mean inter-item correlation and corrected item-total correlation range (see Table 4). It is worth pointing out that the CU (original and modified) and the Impulsivity dimensions of the APSD-SR did not reach the recommended minimum .70 level in the forensic sample, school sample, and total sample. In addition, the YPI-S Behavioral dimension did not meet the recommended minimum .70 level in the forensic and school samples, and the YPI-S Behavioral dimension failed to meet the same minimum level in the school sample.

The convergent validity of the APSD-SR (and its dimensions) and YPI-S (and its dimensions) with the ICU, the NPI-13, and the RPQ revealed mostly the expected moderate to high statistically significant positive correlations. On the other

Table 1 Goodness of fit indices for the different models of the APSD-SR and YPI-S

	S-Bχ² / df	IFI	CFI	RMSEA (90% CI)	AIC
Forensic sample					
APSD-SR 1-factor	2.04	.67	.66	.10(.09–.12)	6.33
APSD-SR 2-factor*	1.66	.81	.81	.08(.06–.10)	-45.99
APSD-SR 3-factor*	1.59	.84	.83	.08(.06–.09)	-53.98
APSD-SR 3-factor mod.	1.61	.87	.86	.08(.05–.10)	-39.18
YPI-S 1-factor	3.28	.72	.72	.15(.13–.16)	172.69
YPI-S 3-factor 1st	1.83	.90	.90	.09(.07–.11)	-21.64
YPI-S 3-factor 2nd	2.64	.67	.66	.13(.11–.14)	84.30
School sample					
APSD-SR 1-factor	2.07	.86	.86	.06(.05–.07)	11.28
APSD-SR 2-factor*	2.00	.88	.88	.06(.05–.07)	.31
APSD-SR 3-factor*	2.02	.88	.88	.06(.05–.07)	2.43
APSD-SR 3-factor mod.	2.26	.89	.89	.07(.06–.08)	25.89
YPI-S 1-factor	4.00	.85	.85	.11(.10–.11)	271.20
YPI-S 3-factor 1st**	2.05	.95	.95	.06(.05–.07)	5.84
YPI-S 3-factor 2nd	2.45	.84	.84	.07(.06–.08)	58.33
Total sample					
APSD-SR 1-factor	3.49	.83	.83	.08(.07–.09)	253.21
APSD-SR 2-factor*	2.45	.90	.90	.06(.05–.07)	60.22
APSD-SR 3-factor*	2.50	.90	.90	.06(.06–.07)	66.48
APSD-SR 3-factor mod.	2.22	.94	.94	.06(.05–.07)	21.66
YPI-S 1-factor	5.56	.89	.89	.11(.10–.11)	480.63
YPI-S 3-factor 1st	2.16	.97	.97	.06(.05–.06)	20.23
YPI-S 3-factor 2nd	2.91	.87	.87	.07(.06–.08)	119.77

APSD-SR Antisocial Process Screening Device – Self-Report, *YPI-S* Youth Psychopathic Traits Inventory – Short version, *S-Bχ²* Satorra-Bentler chi-square, *df* degrees of freedom, *IFI* Incremental Fit Index, *CFI* Comparative Fit Index, *RMSEA (90% CI)* Root Mean Square Error of Approximation (90% Confidence Interval, *AIC* Akaike Information Criterion, *ML* Maximum Likelihood, *APSD-SR 2-factor* 2-factor first order model (Frick et al. 2000), *APSD-SR 3-factor* 3-factor first order model (Frick and Hare 2001), *APSD-SR 3-factor mod.* 3-factor first order modified model excluding items 19 and 20, *YPI-S 3-factor 1st* YPI-S 3-factor first order model, *YPI-S 3-factor 2nd* YPI-S 3-factor second order model

* = items 19 and 20 of the APSD-SR did not reach a .30 loading; ** = item 5 of the YPI-S did not reach a .30 loading

hand, the discriminant validity with the BES revealed the expected negative or null correlations due to non-overlapping constructs (see Table 5).

Correlations of the APSD-SR (and its dimensions) and YPI-S (and its dimensions) with other variables (e.g., age, education) were also analyzed (see Table 6). Statistically significant correlations were found with years of education, taking of psychiatric drugs, age of crime onset, age of first problem with the law, CD symptoms (scored as a scale), CD diagnosis (coded No = 0, Yes = 1), crime seriousness (coded as ordinal scale), violent crimes (coded No = 0, Yes = 1), number of criminal charges, alcohol use, cannabis use, and cocaine/heroin use (these last three coded as five-point ordinal scales). Regarding the CD diagnostic (DSM-5; APA 2013), a very high prevalence of 85.4% was found in the forensic sample. Inter-rater reliability for the CD diagnosis, using the intraclass correlation coefficient (ICC), was .89 (p ≤ .001).

Discussion

The main aim of this study was to analyze and compare the structural validity and internal consistency of the APSD-SR and YPI-S among incarcerated female juvenile offenders and community youths. In the forensic sample, several fit indices suggested less than optimal fit for the one-factor, two-factor, three-factor, and modified three-factor models of the APSD-SR and the one-factor and three-factor second order model of the YPI-S. Of the seven models with the forensic sample, the YPI-S three-factor first order model had the best overall fit. In addition, the CU dimension, modified CU dimension, and Impulsivity dimension of the APSD-SR failed to meet the minimum recommended Cronbach's alpha level (Nunnally and Bernstein 1994) as did the Behavioral dimension of the YPI-S. Regarding the mean inter-item correlations, some problems were found because the APSD-SR total and the APSD-

Table 2 Item loadings for the confirmatory 3-factor first order inter-correlated robust structures of the APSD-SR modified and YPI-S using the total sample

Items	Factor 1	Factor 2	Factor 3
APSD-SR			
3. Concerned about schoolwork (R)	.39		
7. Keeps promises (R)	.45		
12. Feels bad or guilty (R)	.67		
18. Concerned about feelings of others (R)	.69		
19. Does not show emotions	--		
20. Keeps same friends (R)	--		
1. Blames others for mistakes		.61	
4. Acts without thinking		.54	
9. Gets bored easily		.46	
13. Risky and dangerous behaviors		.44	
17. Does not plan ahead		.42	
5. Shallow emotions			.44
8. Brags about accomplishments			.64
10. Uses or cons others			.89
11. Teases other people			.78
14. Charming in insincere ways			.63
15. Becomes angry when corrected			.49
16. Thinks he is more important			.71
2. Engages in illegal activities	--	--	--
6. Lies easily and skillfully	--	--	--
YPI-S			
12. I think that crying is a sign of weakness, even if no one […].	.54		
17. When other people have problems.it is often their own […].	.73		
25. To be nervous and worried is a sign of weakness.	.61		
39. I don't understand how people can be touched enough […].	.62		
44. To feel guilty and remorseful about things you have […].	.70		
45. I don't let my feelings affect me as much as other […].	.41		
5. I have probably skipped school or work more than most […].		.59	
9. I consider myself as a pretty impulsive person.		.74	
18. It often happens that I talk first and think later.		.67	
29. I get bored quickly by doing the same thing over and over.		.38	
32. It often happens that I do things without thinking ahead.		.74	
34. It has happened several times that I've borrowed […].		.53	
14. I have the ability to con people by using my charm […].			.92
15. I am good at getting people to believe me when I […].			.86
19. I have talents that go far beyond other people's.			.61
20. It's easy for me to manipulate people.			.88
38. When I need to. I use my smile and my charm to use others.			.81
41. I am destined to become a well-known important […].			.46

APSD-SR Antisocial Process Screening Device – Self-Report, *YPI-S* Youth Psychopathic Traits Inventory – Short version, *R* Reversible items, *Factor 1* Callous-Unemotional / Affective, *Factor 2* Impulsivity / Behavioral, *Factor 3* Narcissism / Interpersonal

SR CU dimension were below the recommended value range (Clark and Watson 1995), revealing some excessive heterogeneity between the items. In terms of the corrected item-total correlation range, some problems were also found because the APSD-SR total, the APSD-SR three-factor modified total, the APSD-SR CU dimension, and the YPI-S Behavioral dimension failed to reach the minimum recommended value (Kaplan and Saccuzzo 2013; Nunnally and Bernstein 1994). In total, these findings are consistent with other research using Belgian female adolescent detainees (Colins et al. 2014).

Table 3 Pearson correlations matrix of the APSD-SR modified and YPI-S

	APSD	3factor	CU	Imp	Nar	YPI	Affec	Behav	Inter
APSD	1								
3factor	.97***	1							
CU	.62***	.54***	1						
Imp	.77***	.79***	.24***	1					
Nar	.84***	.86***	.29***	.54***	1				
YPI	.70***	.66***	.34***	.52***	.62***	1			
Affec	.42***	.39***	.26***	.25***	.39***	.73***	1		
Behav	.68***	.65***	.33***	.58***	.55***	.83***	.40***	1	
Inter	.57***	.53***	.24***	.40***	.54***	.84***	.43***	.57***	1

APSD Antisocial Process Screening Device –Self-Report, *3factor* 3-factor total of the APSD-SR modified (excluding items 2, 6, 19 and 20), *CU* Callous-Unemotional dimension, *Imp* Impulsivity dimension, *Nar* Narcissism dimension, *YPI-S* Youth Psychopathic Traits Inventory – Short version, *Affec* Affective dimension, *Behav* Behavioral dimension, *Inter* Interpersonal dimension

***significant at the .001 level

In the school sample, several fit indices also suggested less than optimal fit although the one-factor, two-factor, three-factor, and modified three-factor model of the APSD-SR showed some improvements. Also improved were the one-factor and three-factor second order model of the YPI-S. Of the seven models with the school sample, the YPI-S three-factor first-order model again had the best overall fit (including a better RMSEA value). The CU dimension, modified CU dimension, Impulsivity dimension, and Narcissism dimension of the APSD-SR failed to meet the minimum recommended Cronbach's alpha level. Similarly, the Behavioral dimension and Affective dimension of the YPI-S also failed to meet the minimum recommended Cronbach's alpha level. In terms of the mean inter-item correlations, problems were found because the APSD-SR total and the APSD-SR CU dimension were below the recommended value range. Regarding the corrected item-total correlation range, some problems were also found because the APSD-SR total, the APSD-SR three-factor modified total, the APSD-SR CU dimension, the APSD-SR CU modified dimension, the YPI-S Affective dimension, and the YPI-S Behavioral dimension failed to reach the minimum recommended value revealing the weak associations of some items (Nunnally and Bernstein 1994).

In the total sample, the YPI-S three-factor model presented much better results in terms of fit indices than the APSD-SR three- or two factor models. There were also problems regarding the low Cronbach's alpha levels of the CU dimension, CU modified dimension and Impulsivity dimension of the APSD-SR. The APSD-SR CU dimension also revealed problems in terms of the mean inter-item correlations. Finally, the APSD-SR total, the APSD-SR three-factor modified total, the APSD-SR CU dimension, and the APSD-SR CU modified dimension also presented problems in terms of the corrected item-total correlation range. Overall, the results of the YPI-S were more satisfactory in terms of its three-factor structure, Cronbach's

alpha levels, mean inter-item correlations and item-total correlation range. Therefore, the first hypothesis set was supported.

The correlations between the APSD-SR total and its dimensions showed mostly moderate to high statistically significant positive associations. The same pattern of associations was observable regarding the YPI-S and its dimensions, and also regarding the associations between the APSD-SR and the YPI-S (and its dimensions). These results were consistent with previous studies (e.g., Colins et al. 2014).

Taken together, the affective dimension of psychopathy is the feature of the disorder that seems to work most differently for females. There are several possible explanations for this. One is that females are less likely than males to be callous and unemotional because emotional expression and connections to others are simply more salient for girls than boys (Cook et al. 2010; Vitale and Newman 2001). For instance, prior studies of juvenile justice involved youth have shown that relative to males, females have significantly greater interpersonal reactivity including greater empathetic concern, greater perspective-taking, and greater personal distress in interpersonal contexts (Pardini et al. 2003; also see, McCuish et al. 2014). In addition, psychopathic traits among delinquent girls have been shown to be mediated by moral disengagement whereas for males, the psychopathy-crime link was unaffected by moral disengagement (DeLisi et al. 2014b). These suggest that emotionality and distress from emotions is more problematic for females.[3]

Irrespective of problems with the latent structure of various measures, the convergent validity (AERA et al. 2014; Kaplan and Saccuzzo 2013) of the APSD-SR and the YPI-S with the

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[3] This relationship has also been shown physiologically. O'Leary et al. (2007) studied 84 college students (male and female). They found that high psychopathy males showed no increases in cortisol after a stress test, but high psychopathy females did show increases in cortisol.

Table 4 Cronbach's Alpha, mean inter-item correlation, and corrected item-total correlation range of the APSD-SR modified and YPI-S

	Cronbach α	MIIC	CITCR
Forensic sample			
APSD-SR total	.73	.12	.08–.59
APSD-SR 3-factor mod. Total	.77	.18	.13–.58
APSD-SR Callous-Unemotional	.42	.11	.01–.39
APSD-SR Callous-Unemotional mod	.62	.29	.21–.57
APSD-SR Impulsivity	.56	.20	.25–.45
APSD-SR Narcissism	.76	.31	.25–.60
YPI-S total	.85	.23	.20–.73
YPI-S Affective	.79	.39	.40–.62
YPI-S Behavioral	.63	.21	.16–.64
YPI-S Interpersonal	.82	.43	.24–.82
School sample			
APSD-SR total	.75	.13	.01–.50
APSD-SR 3-factor mod. Total	.74	.15	.01–.48
APSD-SR Callous-Unemotional	.40	.10	.10–.32
APSD-SR Callous-Unemotional mod	.42	.15	.11–.37
APSD-SR Impulsivity	.58	.21	.27–.49
APSD-SR Narcissism	.66	.21	.24–.50
YPI-S total	.81	.20	.21–.63
YPI-S Affective	.63	.22	.17–.49
YPI-S Behavioral	.62	.20	.12–.59
YPI-S Interpersonal	.82	.44	.40–.70
Total sample			
APSD-SR total	.77	.15	.02–.55
APSD-SR 3-factor mod. Total	.78	.18	.11–.55
APSD-SR Callous-Unemotional	.42	.11	.09–.35
APSD-SR Callous-Unemotional mod	.51	.21	.19–.39
APSD-SR Impulsivity	.56	.20	.23–.48
APSD-SR Narcissism	.72	.27	.25–.56
YPI-S total	.86	.26	.31–.64
YPI-S Affective	.71	.29	.27–.54
YPI-S Behavioral	.74	.32	.29–.63
YPI-S Interpersonal	.84	.46	.39–.76

APSD-SR Antisocial Process Screening Device –Self-Report, *APSD-SR 3-factor mod. Total* 3-factor total of the APSD-SR modified (excluding items 2, 6, 19 and 20), *APSD-SR Callous-Unemotional mod* Callous-Unemotional dimension modified (excluding items 19 and 20), *YPI-S* Youth Psychopathic Traits Inventory – Short version, *Cronbach α* Cronbach's alpha, *MIIC* Mean inter-item correlation, *CITCR* Corrected item-total correlation range

ICU, the NPI and the RPQ revealed mostly positive moderate to high statistically significant correlations demonstrating the expected overlap with other facets of psychopathic traits and aggression in line with previous studies (e.g., Chabrol et al. 2009, Cima et al. 2013; Colins et al. 2014; Seals et al. 2012; Poythress et al. 2006a; Roose et al. 2010). The discriminant validity of both measures with the BES revealed mostly the expected negative low or very low correlations consistent with

previous studies (e.g., Muñoz et al. 2011; Pechorro et al. 2015a). The exceptions were moderate negative statistically significant correlations with the Callous-Unemotional modified dimension of the APSD-SR and the Affective dimension of the YPI-S. Hence, the second hypothesis was confirmed.

The analyses also showed somewhat similar clear associations between the APSD-SR and YPI-S to a host of criterion-related variables including CD symptoms and diagnosis, crime seriousness, history of violent crime, and polysubstance use. However, it is worth emphasizing that the dimensions of the YPI-S showed much stronger associations with parameters of the delinquent career such as the age of crime onset and the age of first problem with the law variables, and that the Behavioral dimension of the YPI-S was the dimension that showed stronger associations with CD symptoms and diagnosis, crime seriousness and history of violent crimes.

Like their male peers, females in the forensic and school context who display more psychopathic personality features are likely to exhibit generalized problem behaviors that predict juvenile justice system involvement. These findings are consistent with studies of youth in North America and Europe where psychopathic traits were robustly predictive of arrest, probation, incarceration, total offending, and overall criminal justice system involvement (e.g., Campbell et al. 2004; Chabrol et al. 2009; Colins et al. 2014; Corrado et al. 2015; Forth et al. 2003; Beaver et al. 2015). Consequently, the third hypothesis was also confirmed.

Examining the psychometric properties of measures in different populations can often make a contribution to the literature. Understanding psychopathy in girls and women, particularly girls, is an important and understudied area of research because we know a great deal more about psychopathy in boys and men than we do in girls and women. To our knowledge this is the first study attempting to simultaneously compare the psychometric properties of the APSD-SR and the YPI-S among a forensic sample of incarcerated female youths along with a sample of community youths. However, we must point out some limitations of our study. A significant part of the data was collected using self-report measures and that raises the problem of shared method variance. The relatively small size of the forensic sample was a serious limitation, which is an important issue given that CFA was used (both Type I and II errors are much more likely with small samples, especially when the data are skewed). Further psychometric properties of these instruments should be assessed in the future (e.g., cross-validation, predictive validity). Because our study was cross-sectional we cannot establish causality relations between psychopathic traits and criminal/antisocial behavior.

We must conclude our study showed that the validity and reliability of the YPI-S is stronger when compared to the APSD-SR among detained female youths and community youths. More specifically, the YPI-S demonstrated clearer results in terms of its proposed three-factor structure and internal

Table 5 Correlations of the APSD-SR modified and YPI-S with other measures

	APSD-SR total / YPI-S total	APSD-SR 3-factor mod. Total	Callous-Unemotional mod. / Affective	Impulsivity / Behavioral	Narcissism / Interpersonal
ICU total	.61***/.52***	.55***	.46***/.41***	.37***/.43***	.45***/.43***
ICU Callousness	.58***/.51***	.52***	.32***/.38***	.41***/.41***	.46***/.44***
ICU Uncaring	.59***/.48***	.58***	.58***/.33***	.36***/.45***	.44***/.36***
ICU Unemotional	.16**/.14**	.07^{ns}	.13*/.16**	.02^{ns}/.06^{ns}	.05^{ns}/.12*
NPI-13 total	.46***/.56***	.47***	.17**/.24***	.30***/.46***	.54***/.62***
NPI-13 LA	.40***/.50***	.40***	.18**/.28***	.23***/.35***	.47***/.55***
NPI-13 GE	.41***/.45***	.42***	.16**/.19***	.28***/.40***	.48***/.47***
NPI-13 EE	.31***/.43***	.31***	.08^{ns}/.12*	.22***/.39***	.36***/.50***
RPQ total	.67***/.60***	.64***	.29***/.33***	.49***/.63***	.64***/.47***
RPQ Reactive	.61***/.51***	.59***	.29***/.26***	.46***/.53***	.57***/.41***
RPQ Proactive	.62***/.59***	.59***	.24***/.35***	.44***/.62***	.60***/.44***
BES total	−.11*/−.04^{ns}	-.09^{ns}	−.32***/−.19***	.06^{ns}/.06^{ns}	-.01^{ns}/.00^{ns}
BES Affective	-.10^{ns}/−.12*	-.08^{ns}	−.25***/−.20***	.05^{ns}/−.03^{ns}	-.02^{ns}/−.08^{ns}
BES Cognitive	-.07^{ns}/.07^{ns}	-.07^{ns}	−.28***/−.09^{ns}	.05^{ns}/.10^{ns}	.01^{ns}/.10^{ns}

APSD-SR Antisocial Process Screening Device – Self-Report, *YPI-S* Youth Psychopathic Traits Inventory – Short version, *APSD-SR 3-factor mod. Total* 3-factor total of the APSD-SR modified (excluding items 2, 6, 19 and 20), *Callous-Unemotional mod.* Callous-Unemotional dimension modified (excluding items 19 and 20), *ICU* Inventory of Callous-Unemotional Traits, *NPI-13* Narcissistic Personality Inventory 13 items short version, *NPI-13 LA* Leadership/Authority dimension, *NPI-13 GE* Grandiose Exhibitionism dimension, *NPI-13 EE* Entitlement/Exploitativeness dimension, *RPQ* Reactive-Proactive Aggression Questionnaire, *BES* Basic Empathy Scale

***significant at the .001 level; **significant at the .01 level; *significant at the .05 level; *ns* = non-significant

consistency. Indeed, consistent with many previous studies using the APSD-SR in juvenile justice–involved youths, we further demonstrated the psychometric problems that arise of using this measure simultaneously among these two kinds of

Table 6 Correlations of the APSD-SR and YPI-S with other variables

	APSD-SR total / YPI-S total	APSD-SR 3-factor mod. Total	Callous-Unemotional mod. / Affective	Impulsivity / Behavioral	Narcissism / Interpersonal
Age	.11*/.05^{ns}	.08^{ns}	-.02^{ns}/−.03^{ns}	.06^{ns}/.04^{ns}	.12*/.09^{ns}
Education (years)	−.31***/−.34***	−.28***	−.29***/−.20***	−.17**/−.43***	−.21***/−.17**
SES	.09^{ns}/.06^{ns}	.06^{ns}	.14**/.10^{ns}	.03^{ns}/.09^{ns}	.00^{ns}/−.03^{ns}
Psychiatric drugs	.30***/.27***	.26***	.12*/.18**	.32***/.32***	.17**/.15**
ACO	−.24**/−.54***	−.19*	.02^{ns}/−.23**	−.20*/−.52***	−.19*/−.50***
AFPL	−.30**/−.42***	−.27**	.02^{ns}/−.29**	-.14^{ns}/−.34***	−.36***/−.37***
AFIJDC	-.17^{ns}/−.17^{ns}	−.20*	-.14^{ns}/−.06^{ns}	-.16^{ns}/−.19*	-.14^{ns}/−.17^{ns}
CD symptoms	.62***/.60***	.56***	.31***/.30***	.46***/.67***	.51***/.44***
CD diagnosis	.56***/.53***	.49***	.31***/.27***	.39***/.62***	.41***/.37***
ICS	.54***/.54***	.46***	.29***/.27***	.36***/.61***	.39***/.39***
PVC	.50***/.53***	.42***	.29***/.31***	.29***/.57***	.38***/.40***
NCC	.22*/.08^{ns}	.23*	-.17^{ns}/−.10^{ns}	.42***/.10^{ns}	.19^{ns}/.20*
Alcohol	.45***/.38***	.41***	.16**/.11*	.41***/.45***	.34***/.30***
Cannabis	.46***/.39***	.40***	.22***/.17**	.36***/.46***	.31***/.31***
Cocaine/heroin	.40***/.32***	.36***	.19**/.12*	.33***/.39***	.27***/.24***

APSD-SR Antisocial Process Screening Device – Self-Report, *YPI-S* Youth Psychopathic Traits Inventory – Short version, *APSD-SR 3-factor mod. Total* 3-factor total of the APSD-SR modified (excluding items 2, 6, 19 and 20), *Callous-Unemotional mod.* Callous-Unemotional dimension modified (excluding items 19 and 20), *ACO* Age of crime onset, *AFPL* Age of first problem with the law, *AFIJDC* Age of first incarceration into a Juvenile Detention Center, *CD symptoms* DSM-5 Conduct Disorder symptoms scored as a scale, *CD diagnosis* DSM-5 Conduct Disorder diagnosis, *ICS* Index of Crime Seriousness, *PVC* Previous violent crimes, *NCC* Number of criminal charges

***significant at the .001 level; **significant at the .01 level; *significant at the .05 level; *ns* = non-significant

samples. We hope that our study may be a contribution to future research/use of these instruments with female youth, and promote research of the psychopathy construct in southern European countries and a more generalized use of the YPI-S.

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