A brief measure of narcissism among female juvenile delinquents and community youths: The Narcissistic Personality Inventory - 13

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Abstract

Research on narcissism has a long tradition, but there is limited knowledge regarding its application among female youth, especially for forensic samples of incarcerated female youth. Drawing on 377 female adolescents (103 selected from forensic settings and 274 selected from school settings) from Portugal, the current study is the first to examine simultaneously the psychometric properties of a brief version of the Narcissistic Personality Inventory (NPI–13) among females drawn from incarcerated and community settings. The results support the three-factor structure model of narcissism after the removal of one item due to its low factor loading. Internal consistency, convergent validity, and discriminant validity showed promising results. In terms of criterion-related validity, significant associations were found with criterion-related variables such as age of criminal onset, conduct disorder, crime severity, violent crimes, alcohol and drug use. The findings provide support for use of the NPI-13 among female juveniles.

Keywords: assessment, Narcissistic Personality Inventory - 13, incarcerated female juvenile delinquents; validation

Narcissism is a multidimensional construct that has a long tradition in the psychoanalytic and clinical literatures. According to the DSM-5 (American Psychiatric Association, 2013) the central characteristics of narcissism include a grandiose sense of self-importance, a need for the admiration of others, arrogance, a sense of uniqueness and entitlement, a lack of empathy, envy, and a tendency to exploit others.

Narcissistic Personality Disorder (NPD) is one of the least common personality disorders and the estimates of its prevalence vary quite widely. Some researchers indicates that NPD affects from 0-1% of the general population (Samuels, Eaton, Bienvenu, Brown, Costa, & Nestadt, 2002; Torgerson, Kringlen, & Cramer, 2001) although others have found rates of 3.9-5.3% in non-clinical control samples (Bodlund, Ekselius, & Lindström, 1993; Klein et al., 1995). However, in an epidemiologic survey in US, prevalence of lifetime NPD was 6.2% (Stinson et al., 2008). NPD was associated with mental disability among men but not women. High co-occurrence rates of substance use, mood, anxiety, and other personality disorders were observed (Stinson et al., 2008).

NPD is more frequently found among people with higher education or special professional groups (Maffei et al., 1995), more common in males (Foster, Campbell, & Twenge, 2003; Robins & Trzesniewski, 2005; Stinson et al., 2008) and more prevalent in clinical settings (Shedler & Westen, 2007). There is also evidence for age-related differences, suggesting that narcissism may dissipate across the life course (Foster et al., 2003; Wilson & Sibley, 2011).

Empirical evidence suggests that narcissism may be a core feature underlying antisocial behavior among youth. Research has consistently found an association between narcissism and antisocial behavior (e.g., Barry, Grafeman, Adler, & Pickard, 2007; Chabrol, Van Leeuwen, Rodgers, & Sejourne, 2009), behavioral problems,

proactive aggression, and low self-esteem (e.g., Lau & Marsee, 2013; Muñoz, Kimonis, Frick, & Aucoin, 2013; Washburn, McMahon, King, Reinecke, & Silver, 2004). Additionally, research has found important associations between narcissism and psychopathic traits among youth (Andershed, Gustafson, Kerr, & Stattin, 2002; Lynam, 2011). Barry, Frick, and Killian (2003) found positive correlations between maladaptive dimensions of narcissism (e.g., Exhibitionism, Exploitativeness, and Entitlement) and callous-unemotional traits. In addition, Feilhauer, Cima, and Arntz (2012) suggests that items from the Inventory of Callous-Unemotional traits (ICU; Kimonis et al., 2008) capturing a "lack of conscience" were positively related with maladaptive narcissism.

One of the measures most commonly used and well-validated for sub-clinical levels of narcissism is the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979) which consisted of 80 items based on the DSM-III criteria for NPD. A shorter version, consisting of 40 forced-choice items was introduced later (Raskin & Terry, 1988). It measures narcissism as a continuous construct, in which extreme manifestations represent pathological narcissism and less extreme forms reflect narcissism as a personality trait (Emmons, 1987). There is no specific cut-off score for which a person would be considered a clinical narcissist (Foster & Campbell, 2007). It has seven subscales: authority (8 items), self-sufficiency (6 items), superiority (5 items), exhibitionism (7 items), exploitativeness (5 items), vanity (3 items), and entitlement (6 items).

The NPI correlates positively with high self-reported self-esteem (e.g., Emmons, 1984, 1987; Raskin & Terry, 1988; Rhodewalt & Morf, 1995), self-focused attention (Emmons, 1987), self-referencing (Raskin & Shaw, 1988), need for uniqueness (Emmons, 1984), need for power (Carroll, 1987), and with lack of discrepancy between

actual and ideal self (Rhodewalt & Morf, 1995). The NPI was also found to be negatively associated with relationship-related variables: empathy and perspective taking (Watson, Grisham, Trotter, & Biderman, 1984), agreeableness (Rhodewalt & Morf, 1995, 1998), need for intimacy (Carroll, 1987) and to correlate positively with hostility (Bushman & Baumeister, 1998; Rhodewalt & Morf, 1995).

Although research has extensively validated the NPI (e.g., Calhoun, Glaser, Stefurak, & Bradshaw, 2000; Emmons, 1984; Raskin & Terry, 1988; Rhodewalt & Morf, 1995), concern with regards to its construct validity exists largely due to modest reliabilities of its subscales, uncertain factor structure, and ambiguity about how to interpret the total score when it is summed across the items (e.g., Brown, Budzek, & Tamborksi, 2009). It is worth mentioning that the forced-choice format usually results in lowered reliability due to the way the forced-choice questionnaires have been scored traditionally (Brown & Maydeu-Olivares, 2011, 2013). If the reduction in reliability is substantial, then it may not be possible to achieve adequate validity (Domino & Domino, 2006).

Additionally, the length of the NPI may prohibit its use in settings where time pressure and respondent fatigue are major concerns (Ames, Rose, & Anderson, 2006). To improve assessment efficiency Gentile and colleagues (2013) developed a brief measure of narcissism, composed of 13 items with the following factors: leadership/authority (LA, 4 items), grandiose exhibitionism (GE, 5 items), and entitlement/exploitativeness (EE, 4 items).

The NPI-13 has shown good psychometric characteristics, namely internal consistency, exceeding the recommended minimum Cronbach's alpha of .70, with the exception of the EE subscale (with an alpha of .52), and good criterion-related validity. Additionally, NPI-13 showed good psychometric properties with a Portuguese male

youth forensic sample, justifying its future use with similar samples (Pechorro, Gentile, Ray, Nunes, & Gonçalves, 2016).

In short, narcissism is an underlying central characteristic of anti-social behavior among youth and the NPI-13 is a relevant measure among samples of antisocial youth. However, the available research has some gaps to overcome. Additional research is necessary to adapt short measures of narcissism such as the NPI-13 to female juvenile offenders and culturally distinct samples (see Grijalva et al., 2015), while simultaneously analyzing its forensic importance.

Although men have been over-represented in aggression and criminal behavior (Cross, Copping, & Campbell, 2011), an increase in deviant behavior is being increasingly registered in females, with female detainees rates augmenting steadily in the past decades (Cauffman, 2008; Chesney-Lind & Shelden, 2014). Past research has found that boys and girls have significantly different levels of narcissism (Foster et al., 2003; Robins & Trzesniewski, 2005; Stinson et al., 2008). However, as Grijalva and colleagues (2015) points out, more research is needed to examine the contextual, social and biological aspects that contribute to gender differences in narcissism.

The main aim of the present study is to assess the psychometric properties of the Portuguese version of the NPI-13 among incarcerated female juvenile delinquents and community youths. It was hypothesized that: 1) the factor structure of the NPI-13 proposed by Gentile et al. (2013) would be replicated among the current forensic sample using confirmatory factor analysis; 2) the NPI-13 would show convergent validity with existing measures of psychopathic traits and aggression, and discriminant validity with a social anxiety measure; and, 3) the NPI-13 scores in terms of criterion-related validity would be significantly associated with conduct disorder, age of crime onset, age of first

problem with the law, increased crime severity, use of physical violence, alcohol abuse, 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 (i.e., juvenile detention facilities) 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 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 Narcissistic Personality Inventory - 13 (NPI-13; Gentile et al., 2013) is a short 13 forced-choice items version of the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), considered the most widely used measure of trait narcissism. Gentile et al. (2013) developed the NPI-13 specifically to maintain the three-factor structure derived by Ackerman et al. (2011): leadership/authority (LA), grandiose exhibitionism (GE), and entitlement/exploitativeness (EE). The three-factor structure of the NPI-13 was supported using confirmatory factor analysis (Gentile et al., 2013). The

Portuguese adaptation of the NPI-13 (Pechorro, Gentile, Ray, Nunes, & Gonçalves, 2016) was used.

The Antisocial Process Screening Device – Self-Report (APSD-SR; Frick & Hare, 2001; Caputo, Frick, & Brodsky, 1999) is a multidimensional 20-item measure designed to assess psychopathic traits in adolescents. It was modeled after the PCL-Revised (PCL-R; Hare, 2003). The APSD has three main factors: Callous-Unemotional, Narcissism, and Impulsivity. Each item is scored on a 3-point ordinal scale (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 & Hare, 2001). The Portuguese validation of the APSD-SR (Pechorro, Maroco, Poiares, & Vieira, 2013; Pechorro, Hidalgo, Nunes, & Jiménez, 2016) was used. The internal consistency for the current study, estimated by Cronbach's alpha, was .77.

The Youth Psychopathic Traits Inventory (YPI; Andershed et al., 2002) is a 50-item self-report measure designed to assess the core personality traits of the psychopathic personality constellation in youth aged 12 years old and up. Each item is scored on an ordinal 4-point ordinal scale (ranging from 1= *Does not apply at all*, to 3 = *Applies very well*). The YPI consists of 10 subscales (with 5 items each) designed in line with Cooke and Michie's (2001) three-dimensional conceptualization of the psychopathy construct, namely: the Grandiose-Manipulative dimension, the Callous-Unemotional dimension, and the Impulsive-Irresponsible dimension. More specifically, the Grandiose-Manipulative dimension consists of the Dishonest charm, Grandiosity, Lying, and Manipulation subscales; the Callous-Unemotional dimension consists of the Callousness, Unemotionality, and Remorselessness subscales; the Impulsive-Irresponsible dimension consists of the Impulsivity, Thrill-seeking, and Irresponsibility

subscales. Higher scores reflect an increased presence of the characteristics associated, namely psychopathic traits. The Portuguese version of the YPI was used (Pechorro, Andershed, Ray, Maroco, & Gonçalves, 2015; Pechorro, Ribeiro da Silva, Andershed, Rijo, & Gonçalves, 2016; Pechorro, Ribeiro da Silva, Rijo, Gonçalves, & Andershed, in press). The internal consistency for the current study, estimated by Cronbach's alpha, was .94.

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 & Hare 2001). Each item is scored on a 4-point ordinal 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 validation of the ICU was used (Pechorro, Ray, Barroso, Maroco, & Gonçalves, 2016; Pechorro, Hawes, Gonçalves, & Ray, in press). The internal consistency for the current study, estimated by Cronbach's alpha, was .86.

The Barratt Impulsiveness Scale version 11 (B1S-11; Patton et al., 1995; Stanford et al., 2009) is a 30-item self-report questionnaire designed to measure impulsiveness. Each item is scored on a 4-point ordinal scale (ranging from 1 = *Rarely/Never*, to 4 = *Almost Always/Always*). The BIS-11 contains six subscales that correspond to the six first-order factors, namely: (1) Attention; (2) Cognitive instability; (3) Motor; (4) Perseverance; (5) Self-control; and (6) Cognitive complexity. These six first-order factors converge into three second-order factors, namely: (1) Attentional

impulsiveness (Attention and Cognitive Instability dimensions), (2) Motor impulsiveness (Motor and Perseverance dimensions), and (3) Non-planning impulsiveness (Self-control and Cognitive Complexity dimensions). The items are summed and the higher the BIS-11 scores, the higher the impulsiveness level. A Portuguese version of the BIS-11, especially adapted for use with adolescents, was used (Pechorro, Marôco, Ray, & Gonçalves, 2015; Pechorro, Ayala-Nunes, Ray, Nunes, & Gonçalves, 2016; Pechorro, Ayala-Nunes, Nunes, Maia, & Gonçalves, in press). The internal consistency for the current study, estimated by Cronbach's alpha, was .85.

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, Ray, Raine, Maroco, & Gonçalves, in press; Pechorro, Kahn, Ray, Raine, & Gonçalves, in press). Internal consistency for the present study, estimated by Cronbach's alpha, was .90.

The Social Anxiety Scale for Adolescents (SAS-A; La Greca & Lopez, 1998) is an 18-item self-report scale designed to assess subjective experience of social anxiety in adolescents. Each item is rated on a 5-point ordinal scale (ranging from 0 = *Not at all*, to 4 = *All the time*). Three distinct subscales have been identified: Fear of Negative Evaluation (FNE; 8 items), Social Avoidance and Distress – New subscale (SAD-New; 6 items), and Social Avoidance and Distress – General subscale (SAD-General; 4

items). The FNE subscale reflects fears, concerns, or worries regarding negative evaluations from peers, the SAD-New reflects social avoidance and distress with new social situations or unfamiliar peers, and the SAD-General reflects more generalized or pervasive social distress, discomfort, and inhibition. Scores are obtained by summing the ratings for the items comprising each subscale. The Portuguese validation of the SAS-A (Pechorro, Ayala-Nunes, Nunes, Maroco, & Gonçalves, 2016) was used. Internal consistency for the present study, estimated by Cronbach's alpha, was .93.

The Sellin-Wolfgang Index of Crime Seriousness (ICS; Wolfgang et al., as cited in White et al., 1994) is a classification scheme for coding the seriousness of crimes based on official court reports. Level 0 consists of no delinquency. Level 1 consists of minor delinquency committed at home such as stealing minor amounts of money from mother's purse. Level 2 consists 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 consists of moderately serious delinquency such as any theft over 5 euros, gang fighting, carrying weapons, and joyriding. Level 4 consists of serious delinquency such as car theft and breaking and entering. Level 5 consists of having performed at least two of each of the behaviors in the previous level.

A conduct disorder (CD) scale was also created based on the 15 items used to assess CD (see e.g., Skilling, Quinsey, & Craig, 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).

In addition, a questionnaire was constructed to describe the socio-demographic and criminal characteristics of the participants. This questionnaire included variables such as participants' age, ethnic group, geographic classification of residence (rural vs. urban), level of schooling completed, socioeconomic status, parental marital status, previous use of physical violence (coded 0 = *No*, 1 = *Yes*), alcohol abuse, and drug use (these last two coded as five-point ordinal scales from 0 = *Almost never/Never*, to 4 = *Almost always/Always*). Socioeconomic status (SES) was measured by considering both parental level of education and profession, appropriate to the Portuguese context. DSM-5's Conduct Disorder diagnosis (CD; American Psychiatric Association, 2013) was assessed only regarding the forensic sample by the first and last authors of this article, using the official diagnostic criteria (i.e., the standard method described in the DSM-5). The prevalence of CD found in the current forensic sample was 85.4%.

Procedures

Authorization to validate the NPI-13 in Portugal was obtained from the first author of the questionnaire (Gentile et al., 2013). Appropriate procedures (e.g., avoiding item bias or differential item functioning) were followed during the translation and retroversion (Hambleton, Merenda, & Spielberger, 2005). The first and last authors of this article, who made sure that young people would be able to properly understand the meaning of the items, completed the initial translation from English into Portuguese. A native English speaker with considerable professional experience in translating psychology-related scientific texts then independently translated the questionnaire back into English. No significant differences were found between the back-translation and the original version, demonstrating that the translated items had the same or very similar meanings as the original English items.

The current sample was recruited from two difference sources. First, juvenile detention centers managed by the Portuguese Ministry of Justice that admit female detainees served as recruitment sites for the sample of detained female juveniles. The primary investigator obtained authorization to recruit detained youths from the General Directorate of Reintegration and Prison Services of the Portuguese Ministry of Justice. The participation rate was approximately 89%. Motives for non-participation 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%). Second, public schools of the Lisbon, Algarve, and Coimbra regions served as recruitment sites for the community sample. The primary investigator obtained authorization from the General Directorate of Education of the Portuguese Ministry of Education to conduct recruitment within schools. The participation rate for the community sample was approximately 84%. Parental consent was obtained for all those agreeing to participate. 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 used to complement the information obtained (e.g., prior criminal activity and detentions).

The data were analyzed using SPSS Statistics v24 (IBM Corp., 2016) and EQS 6.3 (Bentler & Wu, 2015). The factor structure was assessed with Confirmatory Factor Analysis (CFA) performed in EQS 6.3, with robust Maximum Likelihood (ML) estimation (Byrne, 2006). Goodness of fit indices were calculated, including Satorra-Bentler chi-square/degrees of freedom, comparative fit index (CFI), incremental fit index (IFI), root mean square error of approximation (RMSEA), and Akaike Information Criterion (AIC). A chi-square/degrees of freedom value < 5 is considered

acceptable, a value ≤ 2 is considered good, and = 1 very good (Maroco, 2014; West, Taylor, & Wu, 2012). A CFI ≥ .90 and RMSEA ≤ .08 indicate adequate fit, whereas a CFI ≥ .95 and RMSEA ≤ .06 indicate good model fit (Byrne, 2006). The incremental fit index, also known as Bollen's IFI, is relatively insensitive to sample size; values that exceed .90 are regarded as acceptable (Maroco, 2014). Regarding the AIC, lower values indicate a better relative quality of the model as compared to alternative model's formulations (West, Taylor, & Wu, 2012). The CFA was performed on the original scale items and items with standardized loadings above .30 were retained. Modification indexes were considered to check if any modifications would significantly improve the measurement model. Polychoric Correlation matrixes with robust estimation methodologies were used to perform the CFAs on the ordinal items because they provide more accurate estimates (Byrne, 2006).

Kuder-Richardson coefficients (i.e., Cronbach's alpha for dichotomous items) and omega coefficients (considered satisfactory if above .70), mean inter-item correlations (MIIC; considered good if within the .15-.50 range), and corrected item-total correlation ranges (CITCR; considered adequate if above .20) were used to assess reliability (Clark & Watson, 1995; Nunnally & Bernstein, 1994). The omega coefficient was used in the present research because it is currently considered a better estimator of reliability than alpha (see Revelle & Zinbarg, 2009). Pearson correlations were used to analyze associations between scale variables, Spearman correlations were used to analyze associations between ordinal variables and scale variables and point-biserial correlations were used to analyze associations between nominal dichotomous variables and scale variables (Leech, Barrett, & Morgan, 2015). Correlations were considered low if below .20, moderate if between .20 and .50, and high if above .50.

Results

The first step in examining the psychometric properties of the Portuguese version of the NPI-13 was an attempt to replicate, by means of CFA using the ML Robust method, the three-factor model proposed for this instrument (Gentile et al., 2013) among the forensic sample, school sample, and the total combined sample. The one-factor model was also analyzed. Shown in Table 1 are the goodness of fit indexes we obtained regarding the one-factor model, the two-factor model and three-factor model. We were only able to find support for three-factor model after removal of item 9 (i.e., "I like to look at myself in the mirror") due to low item-loading across the three samples. This was somewhat unexpected considering this item had a relatively high loading on Gentile et al.'s study (2013), but it is important to mention that they used mixed gender samples.

[Insert Table 1]

Table 2 displays the item loadings for the three-factor structure of the NPI-13 across the three samples. As seen in the table, all items loaded above .30 on the intended factor, with the exception of item 9 of the GE. Thus, item 9 was removed and is not included in the remaining statistical procedures.

[Insert Table 2]

Table 3 presents the correlations between the NPI-13 total and its dimensions across the three samples. As expected, the strength of these correlations were moderate to high positive correlations. Additionally, the order of magnitude of the strength of these correlations were relatively consistent across the three samples, with the exception of factor 2. Specifically, the correlations between the EE and LA were the strongest while the correlations between the EE and GE are the weakest across all three samples.

[Insert Table 3]

Table 4 displays the Kuder-Richardson coefficients, the omega coefficients, the mean inter-item correlations, and the corrected item-total correlation ranges for the NPI-13 and its dimensions. It is important to note the low Kuder-Richardson coefficients found for the EE dimensions across all three samples.

[Insert Table 4]

The correlations with criterion variables and the NPI-13 across the different samples are presented in table 5. The convergent validity of the NPI-13 total and its dimensions with the APSD-SR, the YPI, the ICU, the BIS-11, and the RPQ revealed mostly moderate and moderately-high statistically significant positive correlations. For the most part, the correlations among the subscales of the NPI and criterion measures were similar in direction and magnitude. It is somewhat surprising that the correlations between the LA dimension of the NPI-13 and all three measures of psychopathy exhibited the strongest correlations with all three measures of psychopathy across the different samples given that the EE and GE are more indicative the maladaptive aspects of narcissism. The correlations with the SAS-A were in the expected negative direction.

Correlations with other variables were also analyzed. Statistically significant correlations were found between the NPI-13 total and its subscales with age of crime onset, age of first problem with the law, CD symptoms (scored as a scale), crime seriousness, previous violent crimes, alcohol abuse and cannabis use. Among the total sample, only the correlation between age of first problem with the law and the GE dimension was not significant. However, among the school sample several variables did not reach statistical significance, namely age of crime onset, crime seriousness, previous violent crimes, and cannabis use.

[Insert Table 5]

Discussion

The present study examined the psychometric properties of the NPI-13 among a female forensic sample and community adolescents. Confirmatory factor analysis suggested the three-factor first-order inter-correlated model was the best fitting model, despite the fact one item (i.e., *I like to look at myself in the mirror*) had to be excluded due to low factor loading. Perhaps this was because "looking in the mirror" is a very common behavior among most young females and, therefore, does not discriminate across dimensions of narcissism in the current sample. Nonetheless, the results confirm the multidimensional conceptualization of narcissism among Portuguese females and replicates previous work in samples of adults (e.g., Gentile et al., 2015).

Within both samples of forensic and community adolescents, internal consistency measured by the Kuder-Richardson coefficient was good for the total NPI-13 score and two of the associated subscales. The exception was the EE subscale with values systematically below the recommended cutoff (i.e., .70; Kaplan & Saccuzzo, 2013). This was somewhat expected given that previous studies (e.g., Gentile et al., 2013) also found these kinds of low values regarding the EE subscale. In terms of the Omega coefficient, the values were good for the total NPI-13 and all subscales. Adequate homogeneity was present between the items with mean inter-item correlations falling within the recommended value range (i.e., .15-.50; Clark, & Watson, 1995) and correct item-total correlation ranges above the recommended value (i.e., .20; Nunnally & Bernstein, 1994).

Evidence of adequate convergent and discriminant validity (AERA, APA, & NCME, 2014) was present with the NPI-13 demonstrating the expected associations with external correlates. Specifically, the NPI-13 and its subscales were significantly and positively associated with self-reported measures of psychopathy, CU traits, impulsivity, and aggression. In general, the different correlations of NPI-13 subscales

with external criteria corroborates their discriminant validity (e.g., with SAS-A). The other correlations are somewhat similar across the different subscales, more or less corroborating the presence of the same latent construct.

The criterion-related validity of the NPI-13 and its subscales with the age of crime onset and age of first problem with the law revealed mostly negative moderate statistically significant associations. These correlations are consistent with previous research (e.g., Forth, Kosson, & Hare, 2003) showing negative associations between dimensions of psychopathy-related traits, such as narcissism, and the age of crime onset variable. Positive moderate statistically significant correlations emerged between the NPI-13 and measures of criminal behavior such as crime seriousness and previous violent crime. Because narcissism is considered a facet of the psychopathy construct (Feilhauer & Cima, 2013), we expected to find these positive associations with measures of externalizing behavior, similar to those identified in prior studies (e.g., Dolan & Rennie, 2006; Poythress, Dembo, Wareham, & Greenbaum, 2006).

The correlations with DSM-5's (American Psychiatric Association, 2013) Conduct Disorder symptoms revealed moderate associations. The high prevalence of conduct disorder found in the current female forensic sample (85.4%) was somewhat higher than those typically found among forensic samples (see Sevecke & Kosson, 2010).

The correlations of the NPI-13 and its subscales with alcohol abuse and cannabis use revealed mostly positive moderate low statistically significant correlations. The EE dimension manifested the highest correlation with alcohol and cannabis use. These results are consistent with previous research showing that narcissism is closely

associated with maladaptive variables and outcomes (e.g., Ackerman et al., 2011; Gentile et al., 2013).

The results should be considered within the context of some limitations. First, the current study relied almost entirely on self-reports, which may have increased the possibility of shared method variance inflating associations between study variables. However, most findings from the current study are relatively consistent with theoretical considerations and past empirical work on the NPI-13. Second, the cross-sectional design and analyses in the current study do not allow us to infer causality in terms of the associations between narcissism and other constructs measured. In addition, the cross-sectional nature of the current study does not allow for the examination of temporal stability, analysis of test-retest, or associated outcomes for the NPI-13. While Gentile et al. (2013) also argued for the need of investigating test-retest reliability, this study had only a small forensic sample of females, and thus future research is required in order to fill this research gap. Despite these limitations, the NPI-13 appears to be a promising brief measure of narcissism. We hope that our study may promote future research on the narcissism construct among youths and contributes to a more generalized use of brief measures of narcissism.

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Table 1

Goodness of fit indexes of the NPI-13 among the different samples

NPI-13	S-Bχ^2/df	IFI	CFI	RMSEA	AIC
Forensic (*n*=103)					
1-factor†	1.77	.94	.95	.09(.06-.11)	-14.25
2-factor††	1.69	.95	.95	.08(.05-.11)	-19.00
3-factor †††	1.62	.97	.97	.08(.05-.10)	-18.43
School (*n*=274)					
1-factor§	3.83	.88	.88	.09(.10-.12)	113.42
2-factor§§	3.76	.88	.88	.09(.10-.11)	107.39
3-factor§§§	2.75	.94	.94	.08(.06-.10)	35.33
Total (*N*=377)					
1-factor¥	3.68	.94	.94	.09(.07-.10)	104.16
2-factor¥¥	3.50	.95	.95	.08(.07-.09)	91.51
3-factor ¥¥¥	2.53	.97	.97	.06(.05-.08)	24.71

Note. NPI-13 = Narcissistic Personality Inventory short version; S-Bχ^2 = 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; 2-factor = combining LA and GE subscales

† included error covariance between items 1 and 2, 5 and 7, 6 and 8; †† included error covariance between items 1 and 2, 5 and 7, 6 and 8; ††† included error covariance between items 1 and 2; 5 and 7, 6 and 8;

§ included error covariance between items 5 and 7, 1 and 2, 6 and 8; §§ included error covariance between items 5 and 7, 1 and 2, 6 and 8; §§§ included error covariance between items 5 and 7, 1 and 2, 6 and 8;

¥ included error covariance between items 1 and 2, 5 and 7, 6 and 8, ¥¥ included error covariance between items 1 and 2, 5 and 7, 6 and 8, ¥¥¥ included error covariance between items 5 and 7, 6 and 8, 1 and 2.

Table 2

Item loadings and item prevalence for the confirmatory 3-factor structure of the NPI-13 among the different samples

Items	% Prev Item T	Factor 1 F/S/T	Factor 2 F/S/T	Factor 3 F/S/T
Leadership/Authority (LA)				
1. I like having authority over other people.	19.9%	.75/.66/.69	--	--
2. I have a strong will to power.	25.2%	.63/.55/.59	--	--
3. People always seem to recognize my […]	24.4%	.46/.59/.55	--	--
4. I am a born leader.	32.1%	.60/.57/.60	--	--
Factor Mean (*SD*) Forensic sample (*n*=103)		1.47(1.46)		
Factor Mean (*SD*) School sample (*n*=274)		.85(1.21)		--
Factor Mean (*SD*) Total sample (*N*=377)		1.02(1.31)		--
Grandiose Exhibitionism (GE)				--
5. I know that I am a good person […].	25.2%		.43/.44/.49	--
6. I like to show off my body.	15.9%	--	.73/.36/.58	--
7. I like to look at my body.	31.3%	--	.37/.35/.42	
8. I will usually show off if I get the chance.	18.3%	--	.74/.48/.65	
9. I like to look at myself in the mirror.	63.1%	--	--/--/--	
Factor Mean (*SD*) Forensic sample (*n*=103)		--	2.43(1.67)	
Factor Mean (*SD*) School sample (*n*=274)			1.20(1.21)	
Factor Mean (*SD*) Total sample (*N*=377)		--	1.54(1.45)	
Entitlement/Exploitativeness (EE)		--		
10. I find it easy to manipulate people.	25.7%	--	--	.38/.42/.44
11. I insist upon getting the respect that […].	51.9%	--	--	.43/.48/.46
12. I expect a great deal from other people.	33.4%		--	.56/.49/.53
13. I will never be satisfied until I get […].	29.4%		--	.73/.72/.73
Factor Mean (*SD*) Forensic sample (*n*=103)				1.83(1.30)
Factor Mean (*SD*) School sample (*n*=274)				1.28(1.21)
Factor Mean (*SD*) Total sample (*N*=377)				1.44(1.26)

Note. NPI-13 = Narcissistic Personality Inventory short version; F/S/T samples = Forensic/School/Total samples; % Prev item T = Percentage of prevalence of each item among the Total sample

Table 3

Zero-order inter-correlations for the NPI-13 and the lower-order dimensions among the different samples

	NPI-13 total	LA	GE	EE
Forensic (*n*=103)				
NPI-13 total	1			
NPI-13 LA	.88***	1		
NPI-13 GE	.80***	.55***	1	
NPI-13 EE	.76***	.57***	.34***	1
School (*n*=274)				
NPI-13 total	1			
NPI-13 LA	.82***	1		
NPI-13 GE	.73***	.49***	1	
NPI-13 EE	.80***	.56***	.32***	1
Total (*N*=377)				
NPI-13 total	1			
NPI-13 LA	.87***	1		
NPI-13 GE	.78***	.55***	1	
NPI-13 EE	.79***	.58***	.37***	1

Note. NPI-13= Narcissistic Personality Inventory short version; LA = Leadership/Authority dimension; GE = Grandiose Exhibitionism dimension; EE = Entitlement/Exploitativeness dimension

*** significant at the .001 level

Table 4

Kuder-Richardson coefficients, Omega coefficients, mean inter-item correlations, and corrected item-total correlation range for the NPI-13 among the different samples

	K-R	Omega	MIIC	CITCR
Forensic sample (*n*=103)				
NPI-13 total	.84	.88	.30	.28 – .71
NPI-13 Leadership/Authority	.76	.85	.44	.35 – .69
NPI-13 Grandiose Exhibitionism	.78	.83	.47	.54 – .65
NPI-13 Entitlement/Exploitativeness	.56	.75	.24	.21 – .53
School sample (*n*=274)				
NPI-13 total	.81	.88	.27	.35 – .61
NPI-13 Leadership/Authority	.74	.85	.41	.37 – .67
NPI-13 Grandiose Exhibitionism	.67	.78	.33	.30 – .63
NPI-13 Entitlement/Exploitativeness	.60	.76	.27	.21 – .48
Total sample (*N*=377)				
NPI-13 total	.84	.90	.30	.35 – .66
NPI-13 Leadership/Authority	.76	.86	.44	.46 – .69
NPI-13 Grandiose Exhibitionism	.76	.84	.44	.48 – .67
NPI-13 Entitlement/Exploitativeness	.60	.76	.26	.23 – .51

Note. NPI-13= Narcissistic Personality Inventory short version; K-R = Kuder-Richarson coefficient; Omega = Omega coefficient; MIIC = Mean inter-item correlation; CITCR = Corrected item-total correlation range

Table 5

Correlations of the NPI-13 with other measures and variables among the different samples

	NPI-13 total	Leadership/ Authority	Grandiose/ Exhibitionism	Entitlement/ Exploitativeness
Forensic/school (*n*=103/*n*=274)				
APSD-SR	.38***/.33***	.41***/.29***	.25***/.23***	.25*/.27***
YPI	.57***/.54***	.52***/.51***	.45***/.37***	.41***/.41***
ICU	.14^{ns}/.11^{ns}	.21*/.17**	.05^{ns}/-.04^{ns}	.11^{ns}/.14*
BIS-11	.44***/.20**	.40***/.19**	.28**/.14*	.41***/.13*
RPQ	.54***/.38***	.46***/.35***	.27**/.21***	.62***/.33***
SAS-A	.09^{ns}/-.16*	.13^{ns}/-.14*	.08^{ns}/-.17**	-.02^{ns}/-.07^{ns}
ACO	-.38***/-.29^{ns}	-.40***/-.36^{ns}	-.15^{ns}/-.35^{ns}	-.41***/-.05^{ns}
AFPL	-.22*/-.83*	-.32**/-.95***	.08^{ns}/-.95***	-.36***/.28^{ns}
ICS	.27**/.06^{ns}	.27**/.04^{ns}	.11^{ns}/.02^{ns}	.29**/.07^{ns}
PVC	.25*/.00^{ns}	.30**/.04^{ns}	.07^{ns}/.01^{ns}	.24*/-.05^{ns}
CD symptoms	.38***/.19**	.43***/.22**	.14^{ns}/.12*	.38***/.11^{ns}
Alcohol	.08^{ns}/.21***	.11^{ns}/.16**	-.11^{ns}/.17**	.28**/.22***
Cannabis	.15^{ns}/.10^{ns}	.25*/.04^{ns}	.01^{ns}/.02^{ns}	.13^{ns}/.17**
Total (*N*=377)				
APSD-SR	.44***	.38***	.37***	.32***
YPI	.61***	.54***	.50***	.44***
ICU	.21***	.23***	.11*	.19***
BIS-11	.36***	.31***	.29***	.26***
RPQ	.53***	.43***	.41***	.45***
SAS-A	-.12*	-.08^{ns}	-.12*	-.07^{ns}
ACO	-.42***	-.43***	-.27***	-.35***
AFPL	-.28***	-.36***	-.01^{ns}	-.36***
ICS	.35***	.24***	.36***	.24***
PVC	.34***	.27***	.35***	.22***
CD symptoms	.42***	.34***	.38***	.28***
Alcohol	.27***	.20***	.22***	.29***
Cannabis	.29***	.22***	.25***	.25***

Note. NPI-13 = Narcissistic Personality Inventory short version; APSD-SR = Antisocial Process Screening Device – Self-Report; YPI = Youth Psychopathic Traits Inventory; ICU = Inventory of Callous-Unemotional Traits; BIS-11 = Barratt Impulsiveness Scale – 11; RPQ = Reactive-Proactive Aggression Questionnaire; SAS-A = Social Anxiety Scale for Adolescents; ACO = Age of crime onset; AFPL = Age of first problem with the law; CD symptoms = DSM-5 Conduct Disorder symptoms scored as a scale; ICS = Index of Crime Seriousness; PVC = Previous violent crimes

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

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