International note: Confirmatory factor analysis and psychometric properties of the Youth Psychopathic Traits Inventory in a sample of Portuguese adolescents

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ABSTRACT

The aim of this paper was to test the factorial structure and evaluate the psychometric properties of the Youth Psychopathic Traits Inventory (YPI). The YPI is composed of 10 dimensions that further represent three hypothesized facets of the classical description of psychopathy: callousness, interpersonal manipulation and impulsiveness. A sample of 500 adolescents aged 12 to 18 ($M = 14.87$; $SD = 1.67$) from northern Portugal participated in this study. The results generally confirmed the factorial structure of the YPI in this sample, with some qualifications.

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Introduction

The Youth Psychopathic Traits Inventory (YPI; Andershed, Kerr, Stattin, & Levander, 2002) aims to identify psychopathic traits among 12-18-year-olds. The YPI was derived from Cooke and Michie's (2001) three-factor model of psychopathy and was developed to overcome the deliberate manipulation of one's self-image, which can produce biased results. Therefore, its items are written in positive or neutral language (Lilienfeld & Andrews, 1996).

According to Andershed et al. (2002), the YPI's factorial structure is similar to that of the Psychopathy Checklist Revised (PCL-R: Hare, 2003) according to Cooke and Michie (2001). The callous/unemotional dimension produces the least consistent results; in a study by Poythress, Dembo, Wareham, and Greenbaum (2006), the three-factor model was not replicated.

Method

Participants and procedure

The participants included 500 12–18-year-old adolescents ($M = 14.87$; $SD = 1.67$) (all students invited to participate actually participated). The study was performed in the Northern District of Portugal. We selected two regular schools (n = 262) and two professional schools (n = 238).

This study was conducted after obtaining informed consent from parents and authorization from school boards.

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Table 1
Values corresponding to the CFA between items and dishonest charm, grandiosity, lying and manipulation first order factors.

Dimensions	Factorial saturations (standardised direct effects)	Construct/composite reliability	Variance extracted %
Dishonest charm	.60 (it.6) to .76 (it.38) (M = .66)*	.79/.98	44
Indexes χ^2 = 6.46+, p = .26, df = 5; CFI = .99+; NFI = .99+; RMSEA = .02+			
Grandiosity	.51 (it.30) to .68 (it.37) (M = .61)*	.75/.97	38
Indexes χ^2 = 7.65, p = .18, df = 5; CFI = .99 +; NFI = .99+; RMSEA = .033+			
Lying	.55 (it.7) to .74 (i43) (M = .65)*	.78/.97	42
Indexes χ^2 = 14.179, p = .015; CFI = .99+; NFI = .98+; RMSEA = .061+			
Manipulation	.57 (it.46)to .84 (i20) (M = .69)*	.81/.98	48
Indexes χ^2 = 48.412, p < .001, df = 5; CFI = .95; NFI = .94; RMSEA = .13			

Note. it = item; + reference values: χ^2 < 2; CFI > 0.90; RMSEA < .08; NFI > 0.80; *t > 196, p < .05.

Table 2
Values Corresponding to the CFA Between Items and Remorselessness, Unemotionality and Callousness (first order factors).

First order factors	Factorial saturations (standardised direct effects)	Construct/composite reliability	Variance extracted %
Remorselessness	. 49 (it.8) to .61 (it.48) (M = .54)	.67/.94	30
Indexes χ^2 = 4.58, p = .47, df = 5; CFI = 1,000; NFI = .99; RMSEA = 0.000			
Unemotionality	.42 (it.2) to .56 (it.39) (M = .48)	.97/.90	23
Indexes χ^2 = 35.60, p < 0.001, df = 5; CFI = .86; NFI = .85; RMSEA = 0.111			
Callousness*(5it.)	−.052 (it.12) e .09 (it.17) to .73 (it.35) (M = .35)	.41/.70	.21
Callousness.(3it)	.42 (it.23) to .74 (it.35) (M = .57)	.58/.81	.34
Mod. 5 items: Indexes χ^2 = 24.29, p < .001, df = 5; CFI = .88; NFI = .86; RMSEA = .09			
Mod. 3 items: Indexes χ^2 = .00, df = 9; CFI = 1.00; NFI = 1.00; RMSEA = .22			

Note. it = item; reference values: χ^2 < 2; CFI > .90; RMSEA < .08; NFI > .80.
*t > 1.96; p < .05.

Measures

The YPI contains 50 items; responses are given on a 4-point Likert scale ranging from "Does not apply at all" to "Applies very well" (Andershed et al., 2002). To construct the YPI, the authors started by creating 10 subscales of five items each that displayed good reliability. These 10 first-order factors corresponded to the classical description of psychopathy. Andershed et al. (2002) submitted these 10 first-order factors for principal component analysis (PCA) with Promax rotation, and three second-order factors, *grandiose manipulative*, *callous/unemotional*, and *impulsivity and lack of sense of responsibility*, were obtained from exploratory factorial analysis (EFA) and confirmatory factorial analysis (CFA; χ^2 indexes) with structural equation modelling (SEM); this model displayed a good fit to the data (Comparative Fit Index [CFI] = 0.98).

Results

CFA

CFAs with SEM were performed using variance-covariance matrices (50 items, 498 participants) to test the model fit of ten first-order factors and three second-order factors. These analyses were conducted in two steps. First, we analysed the fit among the observed variables, the items, and the first-order factors. Second, we analysed the fit between the first-order and second-order factors.

Table 3
Values corresponding to the CFA between items and thrill-seeking, impulsivity, lack of sense of responsibility first order factors.

First order factors	Factorial saturations (standardised direct effects)	Construct/composite reliability	Variance extracted %
Thrill-seeking	.46 (it.4) to .69 (it.22) (M = .57)	.70/.95	32
Indexes χ^2 = 74.214, p < 0.001, df = 5; CFI = .84; NFI = .83; RMSEA = .17			
Impulsivity	.37 (it.3) to .68 (it.18) (M = .50)	.63/.92	27
Indexes χ^2 = 12.734, p = 0.025, df = 5; CFI = .97; NFI = .95; RMSEA = .06			
Lack of sense of responsibility	.42(it.13) to .70 (it.16) (M = .55)	.68/.94	31
Indexes χ^2 = 16.60, p = .0005, df = 5; CFI = .97; NFI = .97; RMSEA = .05			

Note. it = item; + reference values: χ^2 < 2; CFI > 0.90; RMSEA < .08; NFI > 0.80; *t > 1.96, p < .05.