

# Confirmatory Factor Analysis of the Youth Psychopathic Traits Inventory in a Sample of Portuguese Adolescents

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## Abstract

This paper's purpose consists in confirming the factorial structure, as well as, the evaluation of the psychometric properties of the "Youth Psychopathic Traits Inventory" (YPI), according to Confirmatory Factor Analysis procedure. 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  $\bar{x}$  14.87; SD  $\bar{s}$  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.

**Keywords:** Confirmatory Factor Analysis; Adolescence; Psychopathy

## Introduction

This paper's purpose consists in confirming the factorial structure, as well as, the evaluation of the psychometric properties of the "Youth Psychopathic Traits Inventory" (YPI) which assumes the existence of psychopathy in adolescence and aims to identify psychopathic traits in a group of adolescents aged between 12 and 18 years. The problem of the existence of psychopathy in adolescence remained unnoticed for many years, because initially the attention was directed to the recidivist and highly violent adult offenders [1]. It was Bowlby's pioneering study [2] that described juvenile delinquents as "young psychopaths".

On the other side of the Atlantic we have Cleckley [3], who produced his classic description of psychopathic adults and, without having a possible knowledge of this Bowlby has achieved between the two descriptions a peculiar coincidence of elements. The interest was focused, mainly, in the fact that Bowlby has identified the traits of temperament, that constitute the main matter of contemporary research on juvenile psychopathy: as: the absence of affective ties, the inability to react emotionally, early delinquency and instrumental violence, impulsiveness and superficial charm and misleading intelligence.

Thus, it can be stated that juvenile and adolescent psychopathy started being approached systematically less than two decades ago, by Frick [4,5] Lynam's [6] whose studies, coincidentally, would be recognized by the courts, when defendants of these age groups on the basis of psychopathy diagnoses were sentenced (mainly in Canada, but also in the USA, see Frick, 2002).

The controversy gained emphasis earlier this decade, with the edition of scientific periodicals entirely devoted to this issue presenting arguments both in favour or against the existence of juvenile psychopathy (e.g., Law and Human Behaviour, 26 (2), 2002; Behavioural Sciences and the Law, 21, 2003).

The existence of a psychopathic organization, seen as a personality disturbance (PD) before adulthood, and that many of the typical traits of psychopathy are common in adolescent development is debatable [7]. In fact, no one can argue that juvenile and adolescent psychopaths simply don't exist because, in general, personality traits are not stabilized at these ages, and therefore one cannot speak of personality disturbances before adulthood [8]. There is a second concern in these antagonism arguments that is if psychopathy in adolescence would be isomorph with the phenomenology of the disorder in adulthood.

It was- within this controversial context that Andershed et al. [1] proposed the Youth Psychopathic Traits Inventory (YPI), as a way of showing a clear commitment in the investigation about the existence of psychopathy in adolescence, with an instrument that, due to its characteristics, could give a good support to the empirical research on this domain.

From the moment the existence of psychopathy in adolescence is assumed, care must be taken due to the risk of stigmatization/labelling of minors that have negative implications in legal contexts, and these diagnoses should be supported on scientifically rigorous criteria [9]. According to Salekin, Rosenbaum and Lee the indicators of psychopathy in children, adolescents and adults share many similarities in terms of prevalence (around 20% in forensic contexts).

From the moment it is assumed the existence of psychopathy in adolescence we must take care of the risk of stigmatization / label of minors that have negative implications in legal contexts, and these diagnoses should be supported in criteria scientifically rigorous [9]. On the other hand, the concept of psychopathy

teens should not be used in a pejorative perspective/negative, but rather from a constructive/preventive perspective which allows: identification and early prevention; the establishment of adequate prevention and rehabilitation programmes and reduction the rates of crime [10,11]. According to Salekin et al. [12] the indicators of psychopathy in children, adolescents and adults share many similarities in terms of prevalence (around 20% in forensic contexts).

According to Andershed et al. [1], the YPI's factorial structure is similar to the one found by Cooke and Michie [13], which is based on the Psychopathy Checklist Revised (PCL-R: Hare, [14] model. The following similarities were found: (1) Grandiose/Manipulative (interpersonal dimension), (2) Callous/Unemotional (affective dimension), and (3) Impulsive/Lack of sense of responsibility (behavioural dimension).

The Callous/Unemotional (affective dimension) produces the least reliable results, as observed in Andershed et al. [1], our preliminary study [15-18].

However, in the Poythress et al. [18] study, the three-factor model could not be replicated using confirmatory factor analysis.

Relatively the internal consistency, higher scores reflect an increased presence of psychopathic traits. The Cronbach's alpha has previously been reported as 0.84 for Grandiose-Manipulative, 0.74 for Callous-Unemotional, 0.78 for Impulsive-lack of sense of responsibility, and 0.88 for the YPI total [1]. The official Portuguese version of the YPI [19] was used.

Throughout this exhibition we realized that efforts were made in identifying youth most likely to persist in such behaviours into adulthood extending the construct of psychopathy to youth [9], characterizing affective and interpersonal traits, specifically callous/lack of empathy and unemotional traits, which consistently emerge as robust and incremental predictors of antisocial behaviour [20-22]. The YPI [21] and others self-report measures have difficulty capture adults and youths with high psychopathic traits tend to have a profound lack of self-insight.

## Method

### Participants and procedure

The participants included 500 12e18-year-old adolescents ( $M \approx 14.87$ ;  $SD \approx 1.67$ ). The study was performed in the Northern District of Portugal. We selected two regular schools ( $n \approx 262$ ) and two professional schools ( $n \approx 238$ ) randomly.

The research was carried out after obtaining informed consent by the parents and school boards authorizations.

Participants were informed that they were participating in a study to access the validity and the adaptation of a psychological instrument, assured of anonymity and confidentiality, and their consent to participate was obtained. All measures were administered in a randomized order. Participants were then debriefed and thanked.

## Measures

The YPI was tested in a community sample of young adolescents ( $N=1024$ ). The scale contains 50 items, to which participants respond on a 4-point Likert scale. The responses ranged from "Does not apply at all" to "Applies very well" [1]

To develop this scale, the authors first created 10 subscales of 5 items each. These subscales had good reliability values and represented 10 first-order factors corresponding to the classic description of psychopathy: dishonest charm, grandiosity, lying, manipulation, remorselessness, callousness and unemotionality, impulsivity, lack of a sense of responsibility and thrill-seeking.

After subjecting the 10 first-order factors to Principal Components Analysis (PCA) with the Promax oblique rotation, 3 second-order factors were obtained: grandiose manipulative, callous unemotional, and impulsivity and lack of sense of responsibility.

These factors were identified using exploratory factorial analysis (EFA), and the results were confirmed using Confirmatory Factor Analysis (CFA; \*2 indexes) with structural equation modelling (SEM); this model displayed a good fit to the data (Comparative Fit Index [CFI]=0.98).

## Results and Discussion

For the fit indexes, we used the  $\chi^2$  index, the CFI, the root means square error of approximation (RMSEA) and the normed fit index (NFI). The following criteria were applied:  $\chi^2/df < 2$  [5];  $CFI > 0.90$ ;  $RMSEA < 0.08$ ; and  $NFI > 0.80$  [6]

All items [(Dishonest charm (0.60 to 0.76), Grandiosity (0.51 to 0.68), Lying (0.55 to 0.74) and Manipulation (0.57 to 0.84)] present factorial saturations and displayed highly significant, positive associations with the tested first-order factors.

Index values indicating good fit were observed for the factor remorselessness. However, the indices did not indicate good fit for unemotionality/callousness.

For the factors impulsivity and lack of sense of responsibility, the indexes, except for the  $\chi^2$  index, indicated good model fit.

The factorial saturations were high and significant, varying between 0.73 and 0.90, except for the relationship between the callous/unemotional in previous studies [1,7,8], second-order factor and the callousness first-order factor (0.118). In contrast, the covariance-standardized values between the second-order factors were high and significant.

The measurement method used to determine the unidimensionality of the values of unemotionality ( $CFI=0.86$ ,  $RMSEA=0.111$ ) and thrill-seeking ( $CFI=0.84$ ,  $RMSEA=0.17$ ) constitutes a limitation of this study. Instead of using the fixed-factor method described by Little [23] for scaling latent factors, the factor loadings for marker indicators were freed and the factor variances fixed to 1.00. This change allowed an estimation of those parameters and avoided assigning the metrics factors. As observed in previous studies [1,16,17,19], the overall dimension of callous and unemotional shows weak results, which is one of the study's limitations.

The diversity of adolescents (clinical-referred and justice) should be expanded in future studies because the lack of diversity constrained this study's scope, especially regarding the frequency of the psychopathic behaviour type. Consequently, the traits of affective sensitivity but not of emotionality were affected.

This study used a sample of students from regular and professional schools. The institutional rules did not allow the students to be identified. Therefore, we will not be able to retest the students to determine the consistency of the results over time. In addition, the mean values obtained from the responses to the items were below the mean value of the scale, indicating an absence of psychopathy indicators. Therefore, it is important to gather data from populations with greater numbers of individuals with psychopathic traits. Nevertheless, the results we obtained open the door to the use of the YPI in the assessment of psychopathic traits in Portuguese-speaking juveniles, which supports an intercultural approach to this disorder among adolescents.

In summary, and considering the evidence reviewed and the psychometric results obtained in this study, the YPI is a very useful tool in the assessment of the psychopathic features of adolescents since: 1) it highlights the hierarchical structure of psychopathy in accordance to Cooke and Michie's [13] model, with an excellent adjustment of the data to the theoretical model (CFI=0,98); 2) It is an instrument of self-report which has the virtue of a better applicability to large samples; 3) It is an instrument that due to the way in which the items were formulated might successfully control the concern with the risk of insincerity.

## Limitations and Future Directions

This study used a sample of students from regular and professional schools and the institutional rules did not allowed students' identification that would enable us to apply a test retest for examine the consistency of the results over time. It should also be noted that the mean values obtained in the responses to the items stood below the scale mean value, pointing to an absence of indicators of psychopathy. It would be important, therefore, to gather data in more problematic populations. In any case, the results obtained open the door to the use of the YPI in the assessment of psychopathy features in Portuguese speaking juveniles, giving support for an intercultural approach of this disorder in adolescence.

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