


**PSYCHOMETRIC PROPERTIES AND FACTOR STRUCTURE OF TRIARCHIC PSYCHOPATHY MEASURE (TRIPM) IN PORTUGUESE ADOLESCENTS** <https://doi.org/10.56238/sevened2024.031-016>**Eduardo Araújo<sup>1</sup>, Olga Cruz<sup>2</sup> and Diana Moreira<sup>3</sup>****ABSTRACT**

Psychopathy is a personality structure characterized by a set of dysfunctional traits, impulsive and irresponsible behavior, poor and arrogant personal style in social interactions, and lack of prosocial emotions. Although it cannot be diagnosed in adolescents, its presence has been referenced in this population. Its association with antisocial and criminal behavior in young people has been demonstrated. It is therefore important that psychopathic traits be identified as early as possible to predict and control future criminal behavior. However, the specific evaluation instruments for this population are scarce. The aim of the present study is the validation, for this population, of an instrument for the evaluation of psychopathy, the Triarchic Psychopathy Measure (TriPM). The TriPM was applied to a validation sample of 793 young or Portuguese adolescents. Confirmatory factorial analysis (CFA) was performed, and the results found were considered satisfactory,  $\chi^2(1350) = 5980.77$ ,  $p < .001$ , RMSEA = .067 (95% C.I. = [.064 - .068]), CFI = .915, TLI = .910, and SRMR = .080.

**Keywords:** Psychopathy. Boldness. Disinhibition. Meanness. Adolescents.

---

<sup>1</sup> PhD, Social and Behavioral Sciences Department, University of Maia (Portugal).

E-mail: eduardo.araujo.psic@gmail.com

<sup>2</sup> PhD, Social and Behavioral Sciences Department, University of Maia (Portugal).

<sup>3</sup> PhD, Laboratory of Neuropsychophysiology, Faculty of Psychology and Educational Sciences, University of Porto (Portugal).



## INTRODUCTION

Over the past 200 years, the scientific, medical, and legal communities have independently, or in unison, sought to understand the behavior of certain individuals who are systematically engaging in inappropriate and antisocial behavior (ASB) and who cause harm to others (Warren & South, 2006). There has been an evolution of the concept of psychopathy over the years (Villar-Torres et al., 2014), though the scientific community diverges regarding the nuclear characteristics of this personality structure (Drislane & Patrick, 2017). Overall, clinical tradition tends to describe psychopathy as a combination of traits that are inferred and associated with socially deviant behaviors (Araújo et al., 2021).

Cleckley (1941) established several basic criteria to define psychopathy, based in affective and interpersonal components, which did not necessarily include the antisocial component. Thus, the characteristics that are generally present in these individuals are (i) superficial charm and high intelligence; (ii) absence of delusions or other symptoms of irrational thinking; (iii) absence of nervousness or other psychoneurotic manifestations; (iv) lying or falseness; (v) absence of remorse or shame; (vi) inappropriately motivated ASB; (vii) unreliability; (viii) poor judgment or difficulties in learning from experience; (ix) pathological egocentrism; (x) poverty in affective manifestations; (xi) fanciful and uninviting behavior; (xii) loss of insight; (xiii) lack of reciprocity in affective relationships; (xiv) suicide threats rarely consumed; (xv) impersonal and poorly integrated sex life; (xvi) failure to follow a life plan.

In sum, for Cleckley (1941), it is a deeply rooted, emotional personality structure, but masked by an appearance of mental health. Unlike individuals with other personality structures who appear to be effectively disturbed, individuals with psychopathy tend to be confident and psychologically well-adjusted (Drislane & Patrick, 2017). Thus, it is in the work of Cleckley (1941) that modern conceptions of psychopathy are based (Durand, 2019; Patrick, 2010, Paiva et al., 2022), and it has motivated the development of later studies (e.g., Conradi et al., 2016; Hansen et al., 2013; McCord & McCord, 1964).

McCord and McCord (1964) helped define this personality structure by identifying a set of characteristics, particularly, their inability to love or a lack of feelings of guilt. Hare (1970), by his side, characterized individuals with psychopathy as manipulative, possessing superficial and insincerity charm, able to convince others to execute acts that are detrimental to their interests, and well as an inability to show empathy or genuine concern for others. It is also important to emphasize the existence of antisocial or unethical, but not necessarily criminal, behaviors (Hare et al., 1991). Consequently, there has been an intense debate about the role of ASB in describing the construct of psychopathy (Simões et al.,



2017). According to the two-factor model proposed by Hare et al. (1991), ASB are defined as being inherent to psychopathy. On the other side, the three-factor model, proposed by Cooke and Michie (2001), and Cook et al. (2004), suggests that ASB is a consequence of this personality structure. To circumvent this difference, Hare (2003) proposed a new four-factor model that included the three factors proposed by Cooke and Michie (2001) and added a fourth, which corresponds to indicators of ASB.

In sum, while some authors suggest that ASB is intrinsic to psychopathy (e.g., Patrick, 2010), others suggest that this behavior is a consequence of more basic psychopathic traits (PT)(Drislane & Patrick, 2017), such as chronic ASB (Bulla et al., 2021), narcissism, impulsivity, callous-unemotional (Zwieten et al., 2013), irresponsibility, absence of remorse or guilt, manipulative style (Bulla et al., 2021), or lack of empathy (Durand, 2019; Hare & Neumann, 2008).

Despite this diversity of conceptions (Weidacker et al., 2017), there is a current consensus that the term psychopathy refers to a personality structure marked by a set of dysfunctional traits, impulsive and irresponsible behavior (Somma et al., 2016; Araújo et al., 2021), a deficient and arrogant personal style (Bulla et al., 2021), lack of pro-social emotions (Kahn et al., 2016), and difficulties in establishing and maintaining intimate relationships (Conradi et al., 2016; Dotterer et al., 2017). In short, the study of psychopathy can be considered the basis for understanding the most disruptive behavior (Dotterer et al., 2017).

## ASSESSMENT OF PSYCHOPATHY

Much of the literature on psychopathy has focused on the debate about the usefulness and stability of the construct over the lifetime of the individual, particularly during adolescence (Dolan & Rennie, 2007). The main concerns pertain to the validity of current assessment instruments and their suitability for the developmental pattern (Maurer et al., 2018).

The concept of psychopathy proposed by Cleckley (1941) had a profound impact on the scientific community, due to the strong predictive value of ASB in general, and its association with violent, impulsive, and aggressive behavior. Cleckley's work is a reference and gave rise to one of the main instruments for the categorical assessment of psychopathy, developed and reviewed by Hare (2003): the Psychopathy Checklist-Revised (PCL-R). Its application involves a semi-structured interview, the duration of which may exceed 120 minutes. This instrument includes questions that cover, in detail, various areas of a person's life (e.g., school and professional history, life goals, financial situation, health,



personal and family interpersonal relationships, sexual life and behavior, substance use, ASB in childhood and adulthood, and other more general issues) (e.g., Shane & Groat, 2018). To triangulate the collected information, or clarify any questions that may arise, other sources may be used. This can be a time-consuming and costly process. In the end, through the joint analysis of the interview and the data form, it is sought to answer 20 items, scored on a three-point scale (i.e., 0 = not applicable, 1 = partially applicable, 2 = totally applicable). Since the PCL-R assesses traits rather than states, to answer the questions raised, one must consider the normal functioning of the individual (e.g., life story) and not his or her current state (Hare, 2003). With a total score of 40 points, Hare (2003) defined 30 points as the cut-off point, after which the individual is considered a psychopath (Hansen et al., 2013).

Though the PCL-R is one of the most used instruments for the assessment of psychopathy, successive studies prove its validity (Shane & Groat, 2018; Yoon et al., 2021). But the PCL-R has some limitations, particularly: (i) long, time-consuming instrument of difficult application; (ii) difficulties in obtaining information; (iii) gender bias in the formulation of the items, which tend to reflect masculine behaviors; (iv) the role of ASB as a central characteristic of psychopathy; (v) subjectivity of some issues, such as superficial charm or proneness to boredom; (vi) use in mostly forensic populations (Simões et al., 2017).

Nonetheless, the PCL-R has originated other instruments, such as the Psychopathy Checklist – Youth Version (PCL-YV) (Simões et al., 2017), the Child Psychopathy Scale (CPS) (Lynam, 1997), the Youth Psychopathic Traits Inventory (YPI) (Andershed et al., 2002) or the Antisocial Process Screening Device (APSD) (Frick & Hare, 2001).

From a dimensional perspective, the Triarchic Psychopathy Model (TriPM) (Patrick et al., 2009) integrates the historical and contemporary findings of psychopathy. On the one side, models such as those operationalized by the PCL-R emphasize emotional deficits and ASB. On the other, the models influenced by Cleckley (1941), such as the Psychopathic Personality Inventory-Revised (PPI-R), emphasize the absence of fear and negative affect (Lilienfeld et al., 2012). The triarchic model interprets these inconsistencies and differentiates the personality structure into three major dimensions: boldness, meanness, and disinhibition (Patrick et al., 2009). More specifically, it reconciles different models, balancing the importance of antisocial personality traits such as impulsivity and aggressiveness, related to characteristics of social dominance, and immunity to stress (Shou et al., 2017). It is important to note that a personality trait is a stable way for an individual to get to know and perceive him or herself, and to understand, experience, and relate to others (Lindberg et al., 2016).



TriPM is a self-report questionnaire composed by 58 items, which operationalizes and maps the main psychopathy traits (PT) as continuously distributed among the general population. Although the sum of all TriPM items allows for the calculation of a total value of psychopathy, and this value obtained presents a significant correlation with total values from other self-report psychopathy inventories (Drislane et al., 2014; Sellbom & Phillips, 2013), the TriPM is mainly intended for the study of the dimensions of psychopathy, taking into consideration its three subscales.

*Boldness* subscale includes more of the adaptive characteristics of psychopathy (Durand, 2019), such as social dominance, low anxiety, desire for adventure, low levels of fear, excitement, and appetite for risk, and immunity to negative effects such as stress and anxiety (Evans & Tully, 2016). *Boldness* is goal-oriented and interpreted as an adaptive demonstration of courage, reflecting a high tendency to detect threat signals (Drislane et al., 2014). Thus, *Boldness* presents strong and positive, correlations with instruments that evaluate courage and bravery, and moderate, but negative, correlations with instruments that evaluate negative affect (Shou et al., 2017). *Disinhibition* subscale comprises purer externalizing factors (e.g., impulsivity, affect deregulation, anger, hostility, focus on immediate gratification). Contemporary psychopathy assessment instruments reflect substantial variations regarding *Disinhibition*, particularly through subscales designed to measure Factor 2 of the PCL-R (Hare, 2003) (i.e., impulsive and irresponsible characteristics of psychopathy). *Meanness* subscale comprises secondary externalizing items (e.g., lack of empathy and appropriate intimate relations, insensitivity, and cruelty) (Patrick et al., 2009), proneness to exploit others, and sensation seeking (Fanti et al., 2016).

Research comparing TriPM subscales with other psychopathy inventories for adults and youth showed that *Disinhibition* and *Meanness* were strongly represented in the same inventories (Dotterer et al., 2017). However, regarding *Boldness*, this result was not found, except with the Youth Psychopathic Traits Inventory (YPI) (Dotterer et al., 2017). *Disinhibition* indices are strongly associated with the behavioral deviance component of psychopathy, as indicated by the increase in the subscales related to impulsiveness, carelessness, irresponsibility, sensation seeking, and ASB (Patrick, 2010).

*Meanness* scores are strongly associated with the affective component of psychopathy, particularly in scales involving cold-heartedness, insensitivity, machiavellianism, manipulation, or absence of remorse (Fanti et al., 2016). In addition, *Meanness* is also a strong predictor of the scores of the Self-Report Psychopathy Scale-III (SRP-III) subscales, Levenson's Self-Report Psychopathy (LSRP) (Levenson et al., 1995), YPI and APSD (Frick & Hare, 2001), as well as of total scores on those inventories (Drislane



& Patrick, 2017). Similarly, *Disinhibition* and *Meanness* contributed to the variation of total psychopathy scores in adult psychopathy inventories (Kelley et al., 2018; Yoon et al., 2021). This corroborates the idea that disinhibitory, interpersonal, and affective characteristics must be present in this personality structure (Patrick et al., 2013). However, this pattern was not observed in youth psychopathy inventories, since *Disinhibition* contributes more than *Meanness* to predict total scores. This suggests that the operationalization of psychopathy assessment instruments varies throughout life, with greater emphasis on the disinhibitory characteristics of the youth conceptions (Pechorro et al., 2012).

More recently, the contribution of *Boldness* to psychopathy has been intensely debated (Yoon et al., 2021). Some authors (e.g., Miller & Lynam, 2012) argue that its association with indices of adaptive functioning prevents it from being considered a central element of psychopathy. Conversely, others, on the other hand, believe that adaptive characteristics corroborate Cleckley's (1941) characterization of psychopathy, as a personality structure masked by apparent emotional stability (Lilienfeld et al., 2012). This emotional stability also differentiates psychopathy from other externalizing conditions associated with negative affect and comorbidity of internalized psychopathology, such as antisocial personality disorder (Patrick et al., 2013). A strong association was found between boldness and some indices of maladaptive functioning (e.g., manipulation, callousness, erratic lifestyle, dishonesty, grandiosity, lack of guilt), as well as with indices of adaptive functioning (e.g., superficial charm, absence of stress, social dominance, well-being, achievement) (Dotterer et al., 2017). These results corroborate the idea that *boldness* encompasses some interpersonal characteristics of psychopathy that are associated with the clinical factor of the PCL-R, comprising items of superficial charm and grandiosity (Patrick et al., 2013). Thus, as operationalized by TriPM, *Boldness* cannot be seen as purely adaptive, especially if it is accompanied by high indices of *Meanness* or *Disinhibition* (Yoon et al., 2021).

TriPM is short and easy to apply, its access is free, and it can be applied to large groups, and has already been translated into various languages, namely, Portuguese (Paiva et al., 2022), Chinese (Shou et al., 2017), German (Kelley et al., 2018), Greek (Fanti, et al., 2016), Italian (Kelley et al., 2018), Spanish (Patrick & Drislane, 2015), Dutch (Patrick & Drislane, 2015), or Swedish (Kelley et al., 2018), among others. Regarding the adolescent population, to date, and as you know, only the Italian version has been translated and validated (Somma et al., 2016).



## PSYCHOPATHY IN ADOLESCENCE

According to Berger (2003), adolescence begins at about 12/13 years and ends when the individual reaches the age of majority (i.e., 18 years). However, other authors argue that it may extend to 20/21 years (e.g., Leenarts et al., 2017). It is a phase in which individuals seek to assert themselves and establish their identity alongside their family and/or peer group. Therefore, oppositional behaviors and rebelliousness, marked by a greater or lesser degree of aggressivity, are normative and frequent (Araújo, 2024). However, and not infrequently, these may assume contours of some severity (Dolan & Rennie, 2007).

The presence of PT among young people with behavioral problems is associated with a more severe pattern of ASB (Araújo, 2024; Paiva et al., 2022). Several studies have shown that young people with high levels of psychopathy exhibit precocious ASB associated with high levels of delinquency and recidivism when compared to adolescents with more moderate PT (Leenarts et al., 2012; Nijhof et al., 2011). Some authors suggest that ASB tend to start early, reaching their peak in late adolescence or early adulthood (Rodríguez et al., 2016). Thus, it is believed that the severity of ASB will increase up to ten times during this developmental period (Araújo, 2024; Zwieten et al., 2013). The severity of these behaviors can be enhanced by exposure to peer groups, especially if they exhibit equally deviant tendencies (Zwieten et al., 2013).

The influence that the interaction with peer groups exerts on the delinquent behavior of an adolescent depends on the level of his or her own PT, as well as the traits evidenced by his or her peers (Larsson, 2012). Thus, the more increased these traits are, the higher the tendency to influence (Nijhof et al., 2011) and the lower the likelihood of being influenced (Larsson, 2012). The study of PT in adolescents has gained increasing relevance as a research topic (Pechorro et al., 2012). Studying psychopathy in this age group can help professionals and researchers understand the different patterns of severe ASB as well as better understand the etiology of this personality structure in adulthood (Somma et al., 2016).

Moreover, the consequences of the behavioral manifestation of high PT are widely described (e.g., Paiva et al., 2022). Thus, to reduce its effects, it is crucial to identify and evaluate these traits as early as possible (Decuyper et al., 2013; Nijhof et al., 2011). As such, adequate psychological assessment tools adapted to this population are essential (Somma et al., 2016). In sum, all the research developed to date demonstrates the social and scientific relevance of this study. Therefore, the main objective is to test, in Portuguese adolescents, the factor structure of the TriPM, an instrument initially developed by Patrick et



al. (2009) for adults, and later adapted for adolescents, like what was developed by Somma et al. (2016), among Italian adolescents.

## METHOD

### PARTICIPANTS

The instruments were administered to 793 individuals. The majority ( $n = 408$ ) were female, with ages between 10 and 21 years ( $M = 16.8$ ,  $SD = 2.88$ ), and a mean of 10.3 schooling years ( $SD = 2.50$ ). Participants were recruited from various schools (i.e., primary and secondary), universities, and other institutions. Dynamic e-mails were also sent to members of the Portuguese Society of Psychiatry and Psychology of Justice, as well as to individuals who attended recreational institutions, to cover a wider range of ages and schooling years. All participants, native and fluent Portuguese speakers, completed the questionnaires voluntarily and anonymously, without financial compensation involved.

### INSTRUMENTS

#### Sociodemographic Questionnaire (QS)

The QS aims to assess some sociodemographic characteristics of participants (e.g., sex, age, years of schooling).

#### Triarchic Psychopathy Measure (TriPM)

The TriPM, developed by Patrick et al. (2009), is a self-report questionnaire that assesses personality dimensions. It consists of a total of 58 items, subdivided into three subscales: (i) *meanness* (19 items), which evaluates the tendency towards cruelty, aggression or sensation seeking; (ii) *boldness* (20 items), which reflects the relationship between social dominance, low anxiety and adventure seeking; (iii) *disinhibition* (20 items), which relates to the tendency towards impulsivity, irresponsibility, anger or opposition (Durand, 2019; Patrick, 2010). The items are evaluated by the participants on a four-point Likert scale, ranging from 0 (false) to 3 (true) (Evans & Tully, 2016; Patrick, 2010). The validation for adolescents of Somma et al. (2016) showed that the TriPM has good psychometric qualities, namely good internal consistency ( $Cronbach's \alpha = .89$  [*Boldness*],  $.90$  [*Meanness*], and  $.89$  [*Disinhibition*]), good reliability and good construct validity. In the current study, the values were  $.74$  (*Boldness*),  $.85$  (*Meanness*), and  $.83$  (*Disinhibition*).





## Antisocial Process Screening Device – Self-Report (APSD-SR)

The APSD-SR was developed by Frick and Hare (2001), and adapted to the Portuguese population by Pechorro (2013) to assess psychopathic personality traits in the adolescent population. It consists of 20 items evaluated by participants on a 3-point Likert scale, with response options ranging from 0 (false) to 2 (often true). Some studies present a two-factor structure of the APSD-SR (e.g., Frick et al., 1994; Oshukova et al., 2015): (a) callous-unemotional, which reflects the interpersonal and affective dimensions of psychopathy, such as absence of guilt and lack of empathy, and (b) impulsivity, which reflects behavioral problems and impulse control deficits. However, other studies (e.g., Frick et al., 2000) report the existence of three factors: (a) *Callous-Unemotional* (CU), which reflects the interpersonal dimensions of psychopathy; (b) *Conduct Problems* (I-CP), which is subdivided into two: (i) *Narcissism* (Nar), reflecting the emphasis on personal needs and (ii) *Impulsivity* (Imp), which reflects the behavioral problems and impulse control deficits. Research has shown that the APSD-SD has good psychometric qualities, particularly good internal consistency (*Cronbach's*  $\alpha = .75$  [ASPD Total] and  $.68$  [Nar]; however, this was not observed for the dimensions of [CU]  $.56$  and [Imp]  $.47$ ) (Pechorro et al., 2013). In the current study, the values of *Cronbach's*  $\alpha$  were also adequate for Total APSD: *Cronbach's*  $\alpha = .76$  and  $.64$  [Nar]; however, adequate internal consistency was not observed for the dimensions of [CU]  $\alpha = .53$  and [Imp]  $\alpha = .55$ .

## PROCEDURE

The Portuguese version of the TriPM for adolescents was developed with the consent of the authors of the original version (Patrick et al., 2013). The first step was the parallel translation and adaptation of the original version, by two experts in Forensic Psychology. The next step was to conduct a pilot study using the method of spoken reflection with ten adolescents with a medium or medium-to-low schooling level (equal to or less than nine years) to guarantee comprehension, that is, to test intelligibility and the suitability of the items and proceed to the face validity of the translated version (Loubir et al., 2015). The characteristics of these adolescents were like those of the population in which the instrument was to be validated, regarding the variables of age and vertical schooling.

The method of spoken reflection aimed at elucidating the researchers the difficulties and the perceptions that the adolescents may have regarding the questionnaire, namely, to verify that the language used in the instructions and the content of the items were adequate and appropriate in linguistic and cultural terms for the populations for whom it is intended. The designed protocol included questions about the comprehension of the instructions and



response options, where the adolescent was asked to state whether he or she considered them to be clear or whether the responsescheme seemed appropriate. The adolescent was expected to verbalize any doubts he or she might have about the meaning of any statement and to feel free to provide comments or suggestions, particularly about improving the items. The purpose of this procedure was to test the clarity and self-sufficiency of the instructions and the comprehensibility of the items, as well as the adequacy of the response options. Care was taken to ensure the standardization of the procedure (American Educational Research Association [AERA], American Psychological Association [APA], and National Council on Measurement in Education [NCME], 1999; Shafique et al., 2017).

After the fine-tuning resulting from spoken reflection, a psychologist fluent in English and Portuguese performed the back-translation, and the final version was sent to the author of the original instrument to proceed with its validation. Throughout this phase, care was taken so that any effects due to cultural differences were minimized (AERA/APA/NCME, 1999; Shafique et al., 2017).

## DATA ANALYSIS

Firstly, there was elimination of eight participants who revealed skewness ( $Sk$ ) and kurtosis ( $Ku$ ) values that indicated severe violations to the normal distribution ( $|Sk| > 3$  and  $|Ku| > 10$ ) (Mardia, 1970), as well as  $D^2$  values (*Mahalanobis square distance*) that suggested they were severe outliers ( $p_1$  and  $p_2 < .001$ ) thus ensuring the assumptions of univariate and multivariate normal distribution of the items, linear relationships between variables, non-zero sample covariances and absence of multicollinearity (McDonald, & Ho, 2002; Muthén, 1983).

Care was taken to analyse other indicators of psychometric quality so that the internal consistency of each factor of the instruments under study was analyzed and evaluated by Cronbach's  $\alpha$  (.60 to .70 acceptable  $> .70$  recommended) (Marôco, 2014).

An exploratory factor analysis (AFE) (Marôco, 2014) was conducted, with oblique rotation since the factors are not independent and might correlate (Hair et al., 2009). Another way to guarantee the validity of the instrument was through concurrent validity, that is when the results agree with other instruments that also evaluate the construct, and in this case, the APSD- SR was used (Pechorro, 2013).

The criteria determined for the extraction of the factors in the EFA were the following: i) through the Kaiser criterion, retain factors with eigenvalues greater than 1 (Kaiser, 1960), and through the Scree plot retaining factors to the left of the inflection point (Cattell, 1966). However, in this study, since the post-extraction communalities were less than .70, the

criterion to be used for factor extraction was Screeplot. This option was also in line with that of the author of the instrument. Regarding the quality of the items and the factors to retain an item, commonality was considered superior to .30 (Hair et al., 2009) and appropriate saturations higher than .32 (Tucker & Lewis, 1973).

The validity of the TriPM was analysed through Confirmatory Factor Analysis (CFA), by the values of high factor weights ( $\lambda \geq .50$ ) and by adequate individual reliability ( $R^2 \geq .25$ ) (Kline, 2016). The model fit was performed from the modification indices (higher than 11;  $p < .001$ ) produced by AMOS and based on theoretical considerations (Byrne, 2010). Subsequently, global results of the subscales were obtained based on the results matrix and factor weights. The overall goodness of model fit was assessed according to the Chi-square goodness of fit test ( $\chi^2/df$ ); Goodness of Fit Index ( $GFI > .90$ ); Parsimony Goodness of Fit Index ( $PGFI > .08$ ); Comparative Fit Index ( $CFI > .90$ ); Parsimony Comparative Fit Index ( $PCFI > .80$ ); Root Mean Square Error of Approximation ( $RMSEA < .05$ ) (Kline, 2016). The level of statistical significance was  $p \leq .05$ .

## RESULTS

Missing data diagnostics revealed that no data were missing. Omega point estimates were satisfactory (Nunnally & Bernstein, 1994).

### CONTENT VALIDITY—CONFIRMATORY FACTOR ANALYSIS

The structural model fit the data reasonably well,  $\chi^2(1592) = 11898.402$ ,  $p < .001$ ,

$RMSEA = .090$  (95%  $CI = [.089 - .092]$ ),  $CFI = .823$ ,  $TLI = .816$ , and  $SRMR = .100$  (Model 1).

However, because  $\chi^2/df$ , the  $RMSEA$ , the  $SRMR$  were both slightly higher and the  $CFI$ ,  $TLI$  were both slightly lower than required. So, we have examined individual items. Consequently, items 1, 16, 25 and 50 of TriPM were not satisfactory, because factor loads are lower than .20 (i.e.,  $\lambda = .08$ ,  $\lambda = .19$ ,  $\lambda = .05$ ,  $\lambda = .16$ , respectively). Thus, those four items are removed, and the CFA was repeated once again. According to this replication, the structural model fit the data better,  $\chi^2(1350) = 5980.77$ ,  $p < .001$ ,  $RMSEA = .067$  (95%  $CI = [.064 - .068]$ ),  $CFI = .915$ ,  $TLI = .910$ , and  $SRMR = .080$  (Model 2). We found that composite estimated reliability values exceeded the recommended minimum of .60 (Bagozzi & Kimmel, 1995). Also, Cronbach's alphas had values higher than .70 (Field, 2024) (Table 1).

Table 1. *TRIPM* Adolescents Factor weights, Cronbach alpha ( $\alpha$ ) and Composite Reliability (CR)

Factor	Item	$\lambda$	$\alpha$ (95%CI)	CR	
<b>Boldness</b>			.74 (.71-.77)	.72	
	Item 1	.08			
	Item 4*	.21			
	Item 7	.30			
	Item 10*	.22			
	Item 13	.46			
	Item 16*	.19			
	Item 19	.68			
	Item 22	.25			
	Item 25*	.05			
	Item 28	.47			
	Item 32	.34			
	Item 35*	.25			
	Item 38	.75			
	Item 41*	.53			
	Item 44*	.16			
	Item 47	.53			
Item 50*	.16				
Item 54	.48				
Item 57*	.47				
<b>Meanness</b>			.85 (.82-.87)	.92	
	Item 2*	.28			
	Item 6	.51			
	Item 8	.48			
	Item 11*	.35			
	Item 14	.63			
	Item 17	.65			
	Item 20	.67			
	Item 23	.69			
	Item 26	.71			
	Item 29	.69			
	Item 33	.48			
	Item 36	.64			
	Item 39*	.37			
	Item 40	.79			
	Item 42	.77			
	Item 45	.58			
Item 48	.80				
Item 52*	.34				
Item 55	.75				
<b>Disinhibition</b>			.83 (.81-.85)	.90	
	Item 3	.21			
	Item 5	.48			
	Item 9	.51			
	Item 12	.55			
	Item 15	.59			
	Item 18	.60			
	Item 21	.23			
	Item 24	.69			
	Item 27	.25			
	Item 30*			.40	
	Item 31			.51	
	Item 34			.83	
	Item 37			.70	
	Item 43			.71	
	Item 46			.46	
	Item 49			.56	
Item 51			.59		

Item 53	.80
Item 56	.66
Item 58	.81

Note. \* = inverted item;  $\lambda$  = Factor weights;  $\alpha$  = Cronbach alpha; CR = Composite reliability.

## CONVERGENT VALIDITY

Concurrent estimates the correlation between instruments that evaluate similar constructs, thus moderate/high correlations are the expected results. The concurrent validity between the TriPM and APSD subscales was analysed, to verify whether there is a relationship between them (Table 2).

Table 2. *TriPM and APSD Convergent Validity*

	<b>Boldness</b>	<b>Meanness</b>	<b>Disinhibition</b>	<b>Narcissism</b>	<b>Impulsivity</b>	<b>Callous-unemotional</b>
<b>Meanness</b>	.126**					
<b>Disinhibition</b>	.151**	.399**				
<b>Narcissism</b>	.102**	.537**	.329**			
<b>Impulsivity</b>	-.015	.619**	.215**	.392**		
<b>Callous-unemotional</b>	-.001	.274**	.352**	.325**	.161**	
<b>APSD total</b>	.069	.703**	.407**	.807**	.738**	.591**

Note. \*\*  $p \leq .001$

Regarding the correlations between the TriPM and APSD subscales, moderate and significant positive correlations were found between *Narcissism* and *Meanness* ( $r = .537, p < .001$ ) and between *Narcissism* and *Disinhibition* ( $r = .329, p < .001$ ) and a weak but equally significant relationship between *Narcissism* and *Boldness* ( $r = .102, p < .001$ ). Similarly, there were significant positive and moderate correlations between *Impulsivity* and *Meanness* ( $r = .619, p < .001$ ), and between *Impulsivity* and *Disinhibition* ( $r = .215, p < .001$ ). However, there was no relationship to *Boldness*. Regarding *Callous-unemotional*, there was a weak correlation with *Meanness* ( $r = .274, p < .001$ ), and a moderate and significant correlation with *Disinhibition* ( $r = .352, p < .001$ ). Finally, concerning the total APSD scale, there were moderate and significant positive correlations between all TriPM and APSD subscales, except for the *Boldness* subscale (TriPM) (all correlations  $p < .001$ ).

## DISCUSSION

The aim of the present study was the adaptation and validation, for the Portuguese adolescent population, of the TriPM, which evaluates the presence of PT according to the Triarchic Psychopathy Model (Patrick et al., 2009). To compare the results obtained (i.e., convergent validity) (Marôco, 2014), we used another instrument for evaluating ASB, and specifically psychopathy, among young people, the APSD (Pechorro, 2013).



Regarding the AFC, it was expected that goodness of fit indices for the three-factor solution would be adequate, as proposed by Patrick et al. (2009), in the original version of the TriPM. However, the observed values suggest that this did not occur (Bagozzi & Kimmel, 1995). The analysis of the items allowed us to conclude that four of them presented saturation loads with values below the desirable. In this way, they were removed. It should be noted that the positioning of the participants about the items may have been biased by cultural issues (Shafique et al., 2017), interpretive errors (Loubir et al., 2015), or because their translation may have affected their real meaning (Somma et al., 2016). Additionally, any effects of social desirability cannot be ruled out. This may explain the differences found.

*Boldness*, conceptualized as the adaptable side of the model, initially was composed of 19 items. However, by the end of the AFC (model 2), was constituted by 15 items, since four of

them were withdrawn (item 1 “I’m optimistic more often than not,” 16 “I have a hard time making things turn out the way I want,” 25 “I don’t think of myself as talented,” and 50 “I don’t stack up well against most others”). These different conceptions of *Boldness*, influenced by cultural issues (Araújo et al., 2023), may explain the differences found.

*Meanness*, was conceptualized as the tendency for cruelty, aggression, and disrespect for others, as well as a lack of empathy, exploitation of others, or excitement through destruction (Fanti et al., 2016), initially comprising 19 items, and *Disinhibition*, related to impulsivity, irresponsibility, anger, or opposition (Patrick, 2010), constituted by 20 items, at the end of the CFA, no differences were found, which means that both factors maintained their composition.

As expected, low to moderate, but significant and positive, correlations were found among all TriPM subscales. These values, consistent with what has been observed in previous research (e.g., Somma et al., 2016), suggest that all factors converge towards the same construct, that is, psychopathy (Sica et al., 2015). In addition, as suggested by Sica et al. (2015), the observed correlation values suggest that the factors are different from each other, which is consistent with the conceptual model underlying the TriPM conceptualization (Patrick et al., 2009). However, some studies (e.g., Dotterer et al., 2017) indicate the existence of a strong correlation between *Boldness* and *Meanness*, which was not observed in the present study. This may have been due, once again, to such cultural differences or interpretative errors (Loubir et al., 2015; Shafique et al., 2017). Additionally, significant positive correlations were also found between *Disinhibition* and *Meanness* and the total value of APSD scores, including the scores of its subscales. These results also suggest that both instruments converge towards the same construct (i.e., psychopathy) (Sica et al.,



2015).

The internal consistency values found for the TriPM are consistent with those reported in the literature, and may therefore be considered suitable (e.g., Drislane et al., 2018). This suggests coherence in responses (Marôco, 2014). However, regarding the APSD, the values found are low. Nonetheless, they are in line with those found by the author of the Portuguese version (Pechorro et al., 2013), which were not adequate either (Marôco, 2014).

It is also worth referencing the mean results obtained for the TriPM scales, which do not differ much from those found in previous studies (e.g., Somma et al., 2016). Given the above, and as expected, the results are conclusive, that is, the version of TriPM resulting from the present study is valid for the evaluation of psychopathy in the Portuguese adolescent population, as verified in the TriPM validation study for the Italian adolescent population (Somma et al., 2016). This is the greatest contribution of this work. Therefore, from now on, the TriPM may be used to evaluate this population, by mental health professionals in general, and in the forensic field.

Some authors (e.g., Araújo, 2024) suggest that in more competitive settings, psychopathy may be adaptive. Thus, the display of certain behaviors, considered inappropriate in other contexts, such as coldness, aggressiveness, or impulsivity may be beneficial to individuals in specific contexts (e.g., in a competitive environment). Thus, it is expected that institutionalized youth, often exposed to a past characterized by scarcity, emotional deprivation, or exposure to maltreatment (Simões et al., 2017) or for a need to survive, develop maladaptive behavior (Rijo et al., 2017), and reveal emotional deficits (e.g., in understanding emotions, their own or those of others; Moreira et al., 2014). These facts may explain the tendency of these young people to manifest greater behavioral maladjustment, reflecting the existence of diverse disorders (Rijo et al., 2017), among them psychopathy (Drislane & Patrick, 2017). This may be corroborated by some high values found for *Disinhibition*, considered by Patrick (2010) as being associated with behavioral deviance. Moreover, it may also explain the higher values of *Meanness*, considered by Patrick (2010) as associated with negative affection, machiavellianism, or manipulative style, very present in these young people.

## LIMITATIONS AND POTENTIALITIES

This work presents some limitations, related to the natural difficulties of accessing the participants, who, as adolescents, required the consent of parents/guardians. The need to circumvent these difficulties (e.g., use of contact networks) has restricted the area of



residence of the participants, thus the overwhelming majority are from a single region of the country and of Caucasian ethnicity. As such, cultural differences between the different regions of the country may not be evidenced in the present study.

Moreover, the dimensional approach adopted by the TriPM does not allow us to access a nosologically entity that makes it possible to confirm whether the individual is a psychopath. In addition, despite the abundance of studies (e.g., Dotterer et al., 2017; Fanti et al., 2016), psychopathy is still poorly understood by the scientific community, so there are still many questions regarding its approach (i.e. categorical or dimensional), presentation or etiology (Moreira et al., 2015; Paiva et al., 2022). Thus, developing instruments for the evaluation of psychopathy is even more difficult (Araújo et al., 2023).

Therefore, psychopathy is not well known for some mental health professionals, who tend to devalue it, in favor of other personality structures (Moreira et al., 2014). As such, it is necessary to develop further studies, to better understand this personality structure and to compare the results obtained here with those obtained with other instruments.

Notwithstanding the limitations, this study also presents several potentialities. Thus, it offers it contributes to fill a need perfectly identified by the scientific community, especially those who are dedicated to the forensic field, or to the study of the criminal phenomenon: the existence of few specific instruments for this field, and particularly about the adolescent population (e.g., Agulhas & Anciães, 2015).

## IMPLICATIONS FOR FUTURE INVESTIGATIONS

Some authors (e.g., Moreira et al., 2015) suggest that in more competitive settings, psychopathy may be adaptive. Thus, the display of certain behaviors, considered inappropriate in other contexts, such as coldness, aggressiveness or impulsivity may be beneficial to individuals in specific contexts (e.g., in a competitive environment). Thus, it is expected that institutionalized youth, often exposed to a past characterized by scarcity, emotional deprivation, or exposure to maltreatment (Simões et al., 2017) or for a need to survive, develop maladaptive behavior (Durand, 2019), and reveal emotional deficits (e.g., in understanding emotions, their own or those of others; Moreira et al., 2014). These facts may explain the tendency of these young people to manifest greater behavioral maladjustment, reflecting the existence of diverse disorders (Rijo et al., 2017), among them psychopathy (Drislane & Patrick, 2017). This may be corroborated by some high value found for the dimension of disinhibition, considered by Patrick (2010) as being associated with behavioral deviance. Moreover, it may also explain the higher values of meanness, considered by Patrick (2010) as associated with negative affection, Machiavellianism or





manipulative style, very present in these young people (Durand, 2019).

On the other hand, and according Araújo et al. (2021), most of the studies conducted in this field, include, mostly, individuals from the community, and male. Thus, it would be of enormous relevance, scientific and social, to conduct more studies using greater samples, which included individuals of both sexes, and from other contexts (i.e., forensics), to perceive the existence of differences in the manifestation of PT between these groups (Efferon & Glen, 2018). In addition, the importance of understanding the way psychopathy manifests itself would be crucial. So, it would also be important to conduct a study to define the normative and stratified data (e.g., according to age and level of schooling) for the Portuguese youth population.



## REFERENCES

1. Agulhas, R., & Anciães, A. (2015). *\*\*Casos práticos em Psicologia Forense: Enquadramento Legal e Avaliação Pericial\*\** (2ª ed.). Edições Sílabo.
2. American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). *\*\*Standards for educational and psychological testing\*\**. American Educational Research Association.
3. Andershed, H., Kerr, M., Stattin, H., & Levander, S. (2002). Psychopathic traits in non-referred youths: A new assessment tool. In E. Blaauw & L. Sheridan (Eds.), *\*\*Psychopaths: Current international perspectives\*\** (pp. 131–158). Elsevier.
4. Araújo, E. (2024). *\*\*Crenças Desadaptativas e Comportamento Violento dos Jovens Adultos Portugueses (Maladaptive Beliefs and Violent Behavior of Portuguese Young Adults)\*\** (Doctoral thesis). University of Maia. <http://hdl.handle.net/10400.24/2494>
5. Araújo, E., Cruz, O., & Moreira, D. (2021). Maladaptive beliefs of young adults in interpersonal relationships: A systematic literature review. *\*\*Trauma, Violence and Abuse, 18\*\**, 1–16. <https://doi.org/10.1177/15248380211038684>
6. Araújo, E., Cruz, O., & Moreira, D. (2023). Maladaptive beliefs and antisocial behavior in young adults: What relationship? *\*\*International Journal of Human Research, 3\*\**(42), 1–21. <https://doi.org/10.22533/at.ed.55834223071110>
7. Bagozzi, R., & Kimmel, S. (1995). A comparison of leading theories for the prediction of goal-directed behaviours. *\*\*British Journal of Social Psychology, 34\*\**(4), 437–461. <https://doi.org/10.1111/j.2044-8309.1995.tb01076.x>
8. Berger, K. (2003). *\*\*O desenvolvimento da pessoa, do nascimento à terceira idade\*\**. LTC.
9. Bulla, B., Smith, N., Preston, O., Capron, D., & Anestis, J. (2021). The indirect effects of psychopathy on trait aggression through anxiety sensitivity across genders. *\*\*Journal of Aggression, Maltreatment and Trauma, 30\*\**(2), 207–225. <https://doi.org/10.1080/10926771.2020.1866134>
10. Byrne, B. (2010). *\*\*Multivariate applications series. Structural equation modeling with AMOS: Basic concepts, applications, and programming\*\** (2ª ed.). Routledge/Taylor & Francis Group.
11. Cleckley, H. (1941). *\*\*The mask of sanity\*\**. Mosby.
12. Cattell, R. (1966). The scree plot test for the number of factors. *\*\*Multivariate Behavioral Research, 1\*\**, 140–161. [https://doi.org/10.1207/s15327906mbr0102\\_10](https://doi.org/10.1207/s15327906mbr0102_10)
13. Conradi, H., Boertien, S., Cavus, H., & Verschuere, B. (2016). Examining psychopathy from an attachment perspective: The role of fear of rejection and abandonment. *\*\*The Journal of Forensic Psychiatry & Psychology, 27\*\**(1), 92–108. <https://doi.org/10.1080/14789949.2015.1077264>
14. Cooke, D., & Michie, C. (2001). Refining the construct of psychopathy: Towards a hierarchical model. *\*\*Psychological Assessment, 13\*\**(2), 171–188. <https://doi.org/10.1037/1040-3590.13.2.171>



15. Cooke, D., Hard, C., & Michie, C. (2004). Cross-national differences in the assessment of psychopathy: Do they reflect variations in raters' perceptions of symptoms? *Psychological Assessment*, 16(3), 335–339. <https://doi.org/10.1037/1040-3590.16.3.33>
16. Decuyper, M., Colins, O., Clercq, B., Vermeiren, R., Broekaert, E., Bijttebier, P., Roose, A., & Fruyt, P. (2013). Latent personality profiles and the relations with psychopathology and psychopathic traits in detained adolescents. *Child Psychiatry & Human Development*, 44(2), 217–232. <https://doi.org/10.1007/s10578-012-0320-3>
17. Dolan, M., & Rennie, C. (2007). The relationship between psychopathic traits measured by the Youth Psychopathic Traits Inventory and psychopathology in a UK sample of conduct-disordered boys. *Journal of Adolescence*, 30(4), 601–611. <http://doi.org/10.1016/j.adolescence.2006.07.002>
18. Dotterer, H., Waller, R., Cope, L., Hicks, B., Nigg, J., Zucker, R., & Hyde, J. (2017). Concurrent and developmental correlates of psychopathic traits using a triarchic psychopathy model approach. *Journal of Abnormal Psychology*, 126(7), 859–876. <http://doi.org/10.1037/abn0000302>
19. Drislane, L., & Patrick, J. (2017). Integrating alternative conceptions of psychopathic personality: A latent variable model of triarchic psychopathy constructs. *Journal of Personality Disorders*, 31(1), 1101–31. [http://doi.org/10.1521/pedi\\_2016\\_30\\_240](http://doi.org/10.1521/pedi_2016_30_240)
20. Drislane, L., Jones, S., Brislin, S., & Patrick, C. (2018). Interfacing five-factor model and triarchic conceptualizations of psychopathy. *Psychological Assessment*, 30(6), 834–840. <http://doi.org/10.1037/pas0000544>
21. Drislane, L., Patrick, C., & Arsal, G. (2014). Clarifying the content coverage of differing psychopathy inventories through reference to the Triarchic Psychopathy Measure. *Psychological Assessment*, 26(2), 350–362. <http://doi.org/10.1037/a0035152>
22. Durand, G. (2019). Incremental validity of the Durand Adaptive Psychopathic Traits Questionnaire above self-report psychopathy measures in community samples. *Journal of Personality Assessment*, 11(5), 493–502. <https://doi.org/10.1080/00223891.2018.1464456>
23. Efferson, L., & Glenn, A. (2018). Examining gender differences in the correlates of psychopathy: A systematic review of emotional, cognitive, and morality-related constructs. *Aggression and Violent Behavior*, 41, 48–61. <http://doi.org/10.1016/j.avb.2018.05.009>
24. Evans, L., & Tully, R. (2016). The Triarchic Psychopathy Measure (TriPM): Alternative to the PCL-R? *Aggression and Violent Behavior*, 27, 79–86. <http://doi.org/10.1016/j.avb.2016.03.004>
25. Fanti, A., Kyranides, M., Drislane, L., Colins, O., & Andershed, H. (2016). Validation of the Greek Cypriot translation of the Triarchic Psychopathy Measure. *Journal of Personality Assessment*, 98(2), 146–154. <http://doi.org/10.1080/00223891.2015.1077452>



26. Field, A. (2024). *\*Discovering statistics using IBM SPSS statistics\**. Sage Publications Limited.
27. Frick, P., & Hare, R. (2001). *\*Antisocial Process Screening Device (APSD): Technical Manual\**. Multi-Health Systems.
28. Frick, P., Barry, C., & Bodin, S. (2000). Applying the concept of psychopathy to children: Implications for the assessment of antisocial youth. In C. Gacono (Ed.), *\*The Clinical and Forensic Assessment of Psychopathy: A Practitioner's Guide\** (pp. 1–24). Lawrence Erlbaum Associates.
29. Frick, P., O'Brien, B., Wootton, J., & McBurnett, K. (1994). Psychopathy and conduct problems in children. *\*Journal of Abnormal Psychology, 103\*(4), 700–707.* <http://doi.org/10.1037/0021-843x.103.4.700>
30. Hair, J., Blake, W., Babin, B., & Anderson, R. (2009). *\*Multivariate Data Analysis\**. Prentice Hall.
31. Hansen, A., Stokkland, B., Johnsen, B., Pallesen, S., & Waage, L. (2013). The relationship between the psychopathy checklist–revised and the MMPI-2: A pilot study. *\*Psychological Reports: Measures & Statistics, 112\*(2), 445–457.* <http://doi.org/10.2466/03.09.PR0.112.2.445-457>
32. Hare, R. (1970). *\*Psychopathy: Theory and Research\**. John Wiley.
33. Hare, R. (2003). *\*The Hare Psychopathy Checklist-Revised: Technical Manual\** (2nd ed.). Multi-Health Systems.
34. Hare, R., & Neumann, C. (2008). Psychopathy as a clinical and empirical construct. *\*Annual Review of Clinical Psychology, 4\*(1), 217–246.* <http://doi.org/10.1146/annurev.clinpsy.3.022806.091452>
35. Hare, R., Hart, S., & Harpur, T. (1991). Psychopathy and the DSM – IV criteria for antisocial personality disorder. *\*Journal of Abnormal Psychology, 100\*(3), 391–398.* <http://doi.org/10.1037/0021-843X.100.3.391>
36. Kaiser, H. (1960). The application of electronic computers to factor analysis. *\*Educational and Psychological Measurement, 20\**, 141–151. <http://dx.doi.org/10.1177/001316446002000116>
37. Kahn, R., Ermer, E., Salovey, P., & Kiehl, K. (2016). Emotional intelligence and callous-unemotional traits in incarcerated adolescents. *\*Child Psychiatry & Human Development, 47\*(6), 903–917.* <http://doi.org/10.1007/s10578-015-0621-4>
38. Kelley, S., Dongen, J., Edens, M., Eisenbarth, H., Fossati, A., Howner, K., Somma, A., & Sorman, K. (2018). Examination of the triarchic assessment procedure for inconsistent responding in six non-English language samples. *\*Psychological Assessment, 30\*(5), 610–620.* <http://dx.doi.org/10.1037/pass0000485>
39. Kerr, M., Zalk, M., & Stattin, H. (2012). Psychopathic traits moderate peer influence on adolescent delinquency. *\*Journal of Child Psychology and Psychiatry, 53\*(8), 826–835.* <http://doi.org/10.1111/j.1469-7610.2011.02492.x>



40. Kline, R. (2016). *\*Principles and practices of structural equation modelling\** (4th ed.). The Guilford Press.
41. Larsson, H. (2012). Commentary: Psychopathic traits enhance adolescents' influence on others and make them less influenced by others? – Reflections on Kerr et al. (2012). *\*Journal of Child Psychology and Psychiatry*, 53\*(8), 836–837. <http://doi.org/10.1111/j.1469-7610.2012.02554.x>
42. Leenarts, L., Diehle, J., Doreleijers, T., Jansma, E., & Lindauer, R. (2012). Evidence-based treatments for children with trauma-related psychopathology as a result of childhood maltreatment: A systematic review. *\*European Child & Adolescent Psychiatry*, 22\*(5), 269–283. <http://doi.org/10.1007/s00787-012-0367-5>
43. Leenarts, L., Dölitzsch, C., Pérez, T., Schmeck, K., & Schmid, M. (2017). The relationships between gender, psychopathic traits, and self-reported delinquency: A comparison between a general population sample and a high-risk sample of juvenile delinquency. *\*Child and Adolescent Psychiatry and Mental Health*, 11\*(1), 1–9. <http://dx.doi.org/10.1186/s13034-017-0202-3>
44. Levenson, M., Kiehl, K., & Fitzpatrick, C. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *\*Journal of Personality and Social Psychology*, 68\*, 151–158. <http://dx.doi.org/10.1037/0022-3514.68.1.151>
45. Lilienfeld, S., Patrick, C., Benning, S., Berg, J., Sellbom, M., & Edens, J. (2012). The role of fearless dominance in psychopathy: Confusions, controversies, and clarifications. *\*Personality Disorders*, 3\*(3), 327–340. <http://doi.org/10.1037/a0026987>
46. Lindberg, N., Oshukova, S., Miettunen, J., & Kaltiala-Heino, J. (2016). Do seriously offending girls differ from their age and offence type-matched male counterparts on psychopathic traits or psychopathy-related background variables? *\*Child and Adolescent Psychiatry and Mental Health*, 10\*(38), 1–10. <http://doi.org/10.1186/s13034-016-0128-1>
47. Loubir, D., Bem, D., Serhier, Z., Otmani, N., Housbane, S., Mouddene, N., Agoub, M., & Othmani, B. (2015). Le stress perçu: Validation de la traduction d'une échelle de mesure de stress en dialecte marocain. *\*Pan African Medical Journal*, 21\*(280), 1–9. <http://doi.org/10.11604/pamj.2015.21.280.6430>
48. Lynam, D. (1997). Pursuing the psychopath: Capturing the fledgling psychopath in a nomological net. *\*Journal of Abnormal Psychology*, 106\*(3), 425–438. <http://doi.org/10.1037/0021-843X.106.3.425>
49. Mardia, K. (1970). Measures of multivariate skewness and kurtosis with applications. *\*Biometrika*, 57\*(3), 519-530. <http://dx.doi.org/10.1093/biomet/57.3.519>
50. Marôco, J. (2014). *\*Análise de Equações Estruturais, Fundamentos Teóricos, Software & Aplicações\**. Report Number.
51. Maurer, J., Steele, V., Fink, B., Vincent, G., Calhoun, V., & Kiehl, K. (2018). Investigating error-related processing in incarcerated adolescents with self-report psychopathy measures. *\*Biological Psychology*, 132\*, 96–105. <http://doi.org/10.1016/j.biopsycho.2017.11.009>



52. McDonald, R., & Ho, M. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods*, 7\*(1), 64-82. <http://doi.org/10.1037/1082-989X.7.1.64>
53. McCord, W., & McCord, J. (1964). *The Psychopath: An Essay on the Criminal Mind*. Van Nostrand Reinhold.
54. Miller, J., & Lynam, D. (2012). An examination of the Psychopathic Personality Inventory's nomological network: A meta-analytic review. *Personality Disorders: Theory, Research, and Treatment*, 3\*(3), 305–326. <http://doi.org/10.1037/a0024567>
55. Moffitt, T. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100\*(4), 674–701. <http://doi.org/10.1037/0033-295X.100.4.674>
56. Moreira, D., Almeida, F., Pinto, M., & Fávero, M. (2014). Psychopathy: Comprehensive review of its assessment and intervention. *Aggression and Violent Behavior*, 19\*(3), 191–195. <http://doi.org/10.1016/j.avb.2014.04.008>
57. Moreira, D., Pinto, M., Almeida, F., Barros, F., & Barbosa, F. (2015). Psicopatia no feminino: Uma breve revisão da sua avaliação e subtipos. *Sociedade Portuguesa de Psiquiatria e Psicologia da Justiça*, 32–48. <http://hdl.handle.net/10400.24/451>
58. Muthén, B. (1983). A general structural equation model with dichotomous, ordered categorical, and continuous latent variable indicators. *Psychometrika*, 49\*(1), 115-132. <http://dx.doi.org/10.1007/BF02294210>
59. Nijhof, K., Vermuls, A., Ron, J., Scholte, H., van Dam, C., Veerman, J., & Engels, R. (2011). Psychopathic traits of Dutch adolescents in residential care: Identifying subgroups. *Journal of Abnormal Child Psychology*, 39\*(1), 59–70. <http://doi.org/10.1007/s10802-010-9445-7>
60. Nunnally, J., & Bernstein, I. (1994). *The Assessment of Reliability*. *Psychometric Theory*, 3, 248-292.
61. Oshukova, S., Kaltiala-Heino, R., Miettunen, J., Marttila, R., Tani, P., Aronen, E., Marttunen, M., Kaivojosa, M., & Lindberg, N. (2015). Self-reported psychopathic traits among non-referred Finnish adolescents: Psychometric properties of the Youth Psychopathic Traits Inventory and the Antisocial Process Screening Device. *Child and Adolescent Psychiatry and Mental Health*, 9\*(1), 1–11. <http://doi.org/10.1186/s13034-015-0047-6>
62. Paiva, T., Pasion, R., Patrick, C., Moreira, D., Almeida, F., & Barbosa, F. (2022). Further evaluation of the Triarchic Psychopathy Measure: Evidence from community adult and prisoner samples from Portugal. *Psychological Assessment*, 32\*(3), e1–e14.
63. Patrick, C. (2010). Operationalizing the triarchic conceptualization of psychopathy: Preliminary description of brief scales for assessment of boldness, meanness, and disinhibition. *Unpublished Manual*, 1–16.
64. Patrick, C., & Drislane, L. (2015). Triarchic model of psychopathy: Origins, operationalizations, and observed linkages with personality and general



psychopathology. \*Journal of Personality, 83\*(6), 627–643.  
<http://doi.org/10.1111/jopy.12119>

65. Patrick, C., Fowles, D., & Krueger, R. (2009). Triarchic conceptualization of psychopathy: Developmental origins of disinhibition, boldness, and meanness. \*Development and Psychopathology, 21\*(3), 913–938. <http://doi.org/10.1017/S0954579409000492>
66. Patrick, C., Venables, N., & Drislane, L. (2013). The role of fearless dominance in differentiating psychopathy from antisocial personality disorder: Comment on Marcus, Fulton, and Edens. \*Personality Disorders: Theory, Research, and Treatment, 4\*(1), 80–82. <http://doi.org/10.1037/a0027173>
67. Pechorro, P. (2013). \*Traços psicopáticos em delinquentes juvenis: Investigações sobre o início da atividade criminal, etnicidade e género\* [Tese de doutoramento, Universidade do Algarve].
68. Pechorro, P., Poiares, J., Marôco, J., Xavier, R., & Vieira, R. (2012). Traços psicopáticos e perturbação do comportamento em adolescentes institucionalizados. \*Psicologia, Saúde & Doenças, 13\*(2), 399–409.
69. Pechorro, P., Vieira, R., & Vieira, D. (2013). Adaptação e validação preliminar duma versão portuguesa do Dispositivo de Despiste de Processo Antisocial. \*Laboratórios de Psicologia, 10\*(1), 97–110.
70. Raiker, J., Greening, L., Stoppelbein, L., Beker, S., Fite, P., & Luebbe, A. (2015). Mediating effect of psychopathy on the risk of social problems among children with ADHD versus sluggish cognitive tempo symptoms. \*Child Psychiatric Human Development, 45\*(4), 523–532. <http://doi.org/10.1007/s10578-014-0493-z>
71. Rijo, D., Brazão, N., Silva, D., & Vagos, P. (2017). \*Intervenção psicológica com jovens agressores\*. Pactor.
72. Rodríguez, A., Sanabria, A., Orcasita, L., & Barreto, J. (2016). Conducta antisocial y delictiva en adolescentes y jóvenes colombianos. \*Informes Psicológicos, 16\*(2), 103–109. <http://doi.org/10.18566/infpsicv16n2a07>
73. Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling. \*Journal of Statistical Software, 48\*(1), 1–36. <http://doi.org/10.18637/jss.v048.i02>
74. Schulreich, S., Pfabigan, D., Derntl, B., & Sailer, U. (2013). Fearless dominance and reduced feedback-related negativity amplitudes in a time-estimation task: Further neuroscientific evidence for dual-process models of psychopathy. \*Biology Psychology, 93\*(3), 352–363. <http://doi.org/10.1016/j.biopsycho.2013.04.004>
75. Sellbom, M., & Phillips, T. (2013). An examination of the triarchic conceptualization of psychopathy in incarcerated and nonincarcerated samples. \*Journal of Abnormal Psychology, 122\*(1), 208–214. <http://doi.org/10.1037/a0029306>
76. Shafique, N., Khalily, M., & McHugh, L. (2017). Translation and validation of Symptom Checklist-90. \*Pakistan Journal of Psychological Research, 32\*(2), 545–561. <https://www.semanticscholar.org/paper/Translation-and-Validation-of-SymptomChecklist-90-Shafique-Khalily/0bb568122a58cda7201e250f96c9b0067c9751c1#paper-header>



77. Shane, M., & Groat, L. (2018). Capacity for upregulation of emotional processing in psychopathy: All you have to do is ask. *\*Social Cognitive and Affective Neuroscience*, 13\*(18), 1163–1176. <http://doi.org/10.1093/scan/nsy088>
78. Shou, Y., Selbom, M., Xu, J., Chen, T., & Sui, A. (2017). Elaborating on the construct validity of the Triarchic Psychopathy Measure in Chinese clinical and nonclinical samples. *\*Psychological Assessment\**, 29(9), 1071–1081. <http://dx.doi.org/10.1037/pas0000398>
79. Sica, C., Drislane, L., Caudek, C., Angrilli, A., Bottesi, G., Cerea, S., & Ghisi, M. (2015). A test of the construct validity of the Triarchic Psychopathy Measure in an Italian community sample. *\*Personality and Individual Differences\**, 82, 163–168. <http://doi.org/10.1016/j.paid.2015.03.015>
80. Simões, M., Almeida, L., & Gonçalves, M. (2017). *\*Psicologia forense: Instrumentos de avaliação\**. Pactor.
81. Somma, A., Borroni, S., Drislane, L., & Fossati, A. (2016). Assessing the Triarchic Model of Psychopathy in adolescence: Reliability and validity of the Triarchic Psychopathy Measure (TriPM) in three samples of Italian community-dwelling adolescents. *\*Psychological Assessment\**, 28(4), 36–48. <http://doi.org/10.1037/pas0000184>
82. Toupin, J., Basque, C., Côté, G., & Deshaies, C. (2008). Adaptation de la PCL-SV à l'évaluation des adolescents suivis en centre de jeunesse: Une étude préliminaire. *\*Revue Canadienne de Criminologie et de Justice Pénale\**, 50(1), 83–110. <http://doi.org/10.3138/cjccj.50.1.83>
83. Tucker, L., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *\*Psychometrika\**, 38, 1–10. <http://doi.org/10.1007/BF02291170>
84. Villar-Torres, P., Luengo, M., Romero, E., Sobral, J., & Gómez-Fraguela, X. (2014). Assessing psychopathy in young people: The validity of the Psychopathic Checklist: Youth Version for a sample of Spanish offenders. *\*Psychology, Crime and Law\**, 20(9), 865–883. <http://doi.org/10.1080/1068316X.2014.885970>
85. Warren, J., & South, S. (2006). Comparing the constructs of antisocial personality disorder and psychopathy in a sample of incarcerated women. *\*Behavioral Sciences and the Law\**, 24(1), 1–20. <http://doi.org/10.1002/bsl.663>
86. Weidacker, K., O'Farrell, K., Gray, N., Johnston, S., & Snowden, R. (2017). Psychopathy and impulsivity: The relationship of the triarchic model of psychopathy to different forms of impulsivity in offenders and community participants. *\*Personality and Individual Differences\**, 114(1), 134–139. <http://doi.org/10.1016/j.paid.2017.03.069>
87. Yoon, D., Mokros, A., Rettenberger, M., Briken, P., & Brunner, F. (2021). Triarchic Psychopathy Measure: Convergent and discriminant validity in a correctional treatment setting. *\*Personality Disorders: Theory, Research, and Treatment\**. Advanced online publication, 1–12. <http://doi.apa.org/doi/10.1037/per0000478>
88. Zwieten, A., Meyer, J., Hermens, D., Hickie, I., Hawes, D., Glozier, E., Naismith, S., Scott, E., Lee, R., & Guastella, A. (2013). Social cognition deficits and psychopathic traits in





young people seeking mental health treatment. \*PLOS ONE\*, 8(7), e67753.  
<http://dx.doi.org/10.1371/journal.pone.0067753>