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The relationship between psychopathology and psychopathic traits, among offending and non-offending male youths

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The relationship between psychopathology and psychopathic traits, among offending and non-offending male youths, in the Portuguese population

Abstract: The prevalence of mental health problems among the adolescent population raises concerns around the developmental path and the outcomes for the youths with mental health needs. Especially, the high prevalence of mental health problems among juvenile offenders highlights the urgent need for reliable and efficient assessment methods, in order to better understand how these needs affect the development and behavior of those youths, and to make better use of the limited resources of the mental health and juvenile justice systems.

The main goal of the present investigation is to give continuity to the validation program of *Massachusetts Youth Screening Instrument (MAYSI-2)* in the Portuguese population, analyzing to what extent the relations between psychopathology symptoms and psychopathic features are high in adolescent males, given the possibility that mental health syndromes may reflect or be a reflex of common or overlapping psychopathological expressions and symptoms, and result in similar behavioral outcomes. Simultaneously, we also examined to what extent brief assessment and screening tools, namely *Massachusetts Youth Screening Instrument – Second Version (MAYSI-2)* and *Youth Psychopathic Trait Inventory (YPI)*, could assist in the assessment and comprehension of these interactions.

We assessed a total of 76 adolescent males, distributed by a community (N=43) and a forensic sample (N=33), between ages 12 and 19, and 14 and 19, respectively. The protocol was composed by MAYSI-2, YPI and *Coimbra's Social Desirability Scale (EDSC)*.

The analysis of the prevalence rates of self-reported mental health needs and psychopathic traits, revealed a higher prevalence of both in the detained youths, compared to youths with no history of offending. Findings also revealed a positive association between the behavioral dimensions of both measures used, and a significant interaction between history of traumatization and psychopathy and psychopathic traits in the juvenile delinquents sample. These relations are not influenced by social desirability.

The combined administration of MAYSI-2 and YPI may be of value as screening tools for cases requiring further assessment, although a more extensive evaluation protocol is advised.

Key words: mental health, psychopathic traits, delinquency, comorbidity, MAYSI-2, validity

Relação entre psicopatologia e traços psicopáticos, numa amostra de jovens delinquentes e numa amostra de jovens não ofensores.

Resumo: A prevalência de problemas de saúde mental entre a população adolescente levanta preocupações em torno do percurso desenvolvimental e dos desfechos nas vidas dos jovens com necessidades de saúde mental. Especificamente, a elevada prevalência de psicopatologia entre os jovens delinquentes evidencia a necessidade de métodos e instrumentos de avaliação fiáveis, a fim de melhor compreender como essas necessidades afectam o desenvolvimento e comportamento dos jovens, e a rentabilizar os recursos limitados dos sistemas de saúde mental e de justiça juvenil.

A presente investigação tem como principal objectivo continuar o programa de validação do *Massachusetts Youth Screening Instrument* (MAYSI-2) para a população portuguesa procurando analisar as relações entre necessidades de saúde mental, identificadas por este instrumento, e a presença de traços psicopáticos identificados através do *Youth Psychopathic Traits Inventory* (YPI).

Foram avaliados 76 jovens do sexo masculino, distribuídos por uma amostra de jovens da comunidade (N=43) e de jovens institucionalizados contexto forense (N=33), de idades compreendidas respectivamente entre os 12 e 19, e 14 e 19 anos. O protocolo administrado integra os instrumentos MAYSI-2, YPI e a *Escala de Desejabilidade Social de Coimbra* (EDSC), uma medida de controlo do estilo e validade das respostas.

A análise da prevalência de necessidades de saúde mental e traços psicopáticos revelou predomínio dos mesmos nos jovens que integram a amostra forense. Os resultados revelaram igualmente uma associação positiva entre as dimensões do domínio comportamental de ambas as medidas centrais, e uma relação positiva entre história prévia de vitimização e traços de psicopatia, na amostra de jovens delinquentes. Estas relações não sofrem a influência da desejabilidade social.

A administração combinada dos instrumentos MAYSI-2 e YPI revelou poder ser útil, enquanto instrumentos de rastreio e triagem de casos que necessitem de uma avaliação mais compreensiva, sendo no entanto recomendável o recurso a um protocolo de avaliação mais exaustivo.

Palavras-chave: saúde mental, traços psicopáticos, delinquência, comorbidade, MAYSI-2, validade

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Introduction

The existence and intervention of the juvenile justice system is based on the premise that, once adolescence is a developmental stage, it is possible that the youths, at some point, no longer persist in antisocial behavior if the system provides adequate treatment and rehabilitation (Grisso, 1999). Therefore, it becomes fundamental the development and integration of assessment and rehabilitation plans to deal with the increased rates of psychopathology among detained delinquent youths, and help to reduce recidivism (Grisso, 2005; Hammond, 2007).

Various research groups have not only found a high prevalence of externalizing symptomatology, but also internalizing psychopathology in delinquent youth (Teplin, Abram, McClelland, Dulcan, Mericle & Washburn, 2006; Vermeiren, 2003). Comorbidity of mental health disorders is estimated to be present for more than half of criminal adolescents (Vermeiren, 2003), emphasizing the urgent need to conduct more research on the coexistence of comorbid disorders in adolescents.

Additionally, recent studies with juvenile delinquent samples have emphasized the overlap between antisocial behaviors and delinquency and psychopathology, such as depression, suicidal behavior, anxiety, post-traumatic stress disorder (PTSD), conduct disorder (CD), substance use disorder and attention deficit hyperactivity disorder (ADHD) (Vermeiren, Jaspers, & Moffit, 2006). Although delinquency is relatively prevalent among adolescents, there is only a small group of youths that persist in this behavior through adulthood. This small group is considered to be responsible for up to half of all crimes committed by youths (Verschuere, Candel, Van Reenen & Korebrits, 2012). The early identification of this group of young offenders would enable an early intervention.

According to some prominent researchers, up to 50% of adolescent offenders entering Youth Detention Centers (YDCs) in Europe meet criteria for one or more mental health disorders (Colins, Vermeiren, Schuyten, & Broekaert, 2009; Vreughdenhil, Doreleijers, Vermeiren, Wouters, & Van den Brink, 2004).

In the last few years, researchers and practitioners have manifested an increasing interest in the construct of psychopathy applied to younger ages,

mostly because of its utility in predicting aggressive and violent behavior (Edens, Skeem, Cruise, & Cauffman, 2001).

Psychopathy, or psychopathic personality, refers to a pathologic syndrome, encompassing prominent behavioral deviancy and distinctive emotional and interpersonal features. The phenomenon of psychopathy has been of longstanding interest to psychological researchers and practitioners, as its study offers a comprehension of basic affective and behavioral-control processes, and because of the impact of the psychopathic behavior, mostly in offenders, has on society (Patrick, Fowles, & Krueger, 2009).

Especially due to the behavioral and antisocial component of the psychopathy construct, a great deal of attention has been devoted in recent years to how psychopathic personality develops and what can be done to prevent it, meaning a greater focus on child and adolescent psychopathy.

Preceding any conceptualization of the psychopathy construct in children and adolescent psychopathology, it is the distinction between the concept of externalizing psychopathology and psychopathy, as psychopathy is distinguished by a lack of normal emotional sensitivity and social relatedness (Cleckley, 1976), i.e. a deficiency of affective reactivity, rather than an excess. From this perspective, understanding the phenomenon and the construct of psychopathy requires an understanding of the factors that characterize a psychopathic personality and its distinctive manifestations.

With increasing recidivism and turnover rates, it is difficult to YDCs staff members to perform comprehensive mental health assessments for all entering youths. This difficulty highlights the urgent need to develop and validate measures that are brief, standardized and reliable, in assessing this specific population. Therefore, brief self-report questionnaires are very useful in YDCs, as they help clinicians to classify incoming youths according to their level of urgency and mental health needs, providing a much efficient comprehension of the underlying problems, and subsequent intervention and treatment.

The *Massachusetts Youth Screening Instrument-2* (MAYSI-2; Grisso & Barnum, 2006) was knowingly designed to suppress the specific needs of juvenile justice personnel, especially at the intake moment. MAYSI-2 (MAYSI-2; Grisso & Barnum, 2006), is a self-report inventory, targeting youths aged between 12 and 17 in emergent need for mental health care.

I - Conceptual Framework (Prior research)

1. Mental health disorders prevalence rates among juvenile offenders

The prevalence of mental health disorders among youths enrolled with the juvenile justice systems is, consensually, considered to be high, although several studies point to different percentages (Teplin et al, 2006). Most studies point to values between 60% to 70%, of prevalence rates of mental disorders among juvenile offenders (Shufelt & Coccozza, 2006). However, research has shown prevalence rates ranging from 20% (Coccozza & Skowyra, 2000) up to 100% (McManus, Alessi, Grapentine, & Brickman, 1984).

The psychopathology manifestations most commonly identified among juvenile offenders are conduct disorders, mood disorders, substance use disorders, and attention-deficit hyperactivity disorders (Teplin, Abram, McClelland, & Dulcan, 2003; Wasserman, McReynolds, Lucas, Fisher, & Santos, 2002), with conduct disorders being the most frequently identified.

Other studies, state that, in a descending order, the most commonly identified disorders are substance use disorders, ranging from 49,3% to 50,7% (Teplin, et al., 2003; Wasserman et al., 2002), disruptive behavior disorders (31,8% to 41,4%; Teplin, et al., 2003; Wasserman et al., 2002), anxiety disorders (18,9% to 21,3%; Teplin, et al., 2003; Wasserman et al., 2002) and mood disorders (9,1%; Wasserman et al., 2002).

Among the disruptive behavior disorders, most commonly identified among these youths, are conduct disorder (CD), ranging from 31,7% to 37,8%, Oppositional Defiant Disorder, from 2,8% up to 14,5%, and Attention-Deficit Hyperactivity Disorder, from 2,3% to 16,6% (Teplin, et al., 2003; Wasserman et al., 2002).

It is important to note that, psychopathic individuals are mainly considered to represent a subset of individuals who meet diagnostic criteria for antisocial personality disorder (APD), that can only be diagnosed after 18 years of age, so, when considering younger ages, diagnostic criteria for conduct disorder has to be taken into consideration, as it is assumed to be APD's precursor in childhood. Thus, conduct disorder, among juvenile offenders assumes representative prevalences. In adults, rates of APD range

between 0.2% and 3.3% in general population, and reach up to 70% among forensic settings populations.

CD is considered to be associated with higher risk for persistent antisocial behavior, substance abuse, criminal convictions, anxiety and depression. Adolescents with CD have also shown higher levels of self-reported psychopathic traits, revealing these individuals more severe conduct problems, aggressive behavior and an elevated risk for persistent offending, than those with no criteria for CD (Hemphälä & Hodgins, 2014).

Nevertheless, with the symptoms of conduct disorders often being the actions that conduct to an arrest, and because delinquent behaviors are a symptom of these disorders, the prevalence of them disorder is expected to be elevated in juvenile offender samples (Goldstein, Olubadewo, Redding, & Lexcen, 2005).

Despite the above mentioned overlap between conduct disorders and juvenile delinquency, and the high prevalence of this form of psychopathology among these youths, it is not the primary disorder identified in various studies, as some mood disorders, such as depressive disorder that has been identified as a more common primary diagnose (e.g., McManus et al., 1984) although, more often among girls.

According to the studies conducted by Teplin and colleagues (2002), as also Wasserman and colleagues (2002), major depressive disorder prevalence among the youthful offender population can range from 7,2% up to 13%.

The most frequent anxiety disorders are Obsessive Compulsive Disorder (4,5% to 8,3%; Teplin et al., 2003; Wasserman et al., 2002), Post Traumatic Stress Disorder (4,5%; Wasserman et al., 2002) and Separation Anxiety Disorder (12,9%; Teplin et al., 2003).

A reality among youths, and consequently among juvenile offenders, is also the concurrent diagnostic of two or more mental health disorders, with significant interactions between them (Grisso, 2004).

In addition, there was also found substantial evidence that psychopathology varies in its expression according to the nationality and ethnicity, among others, both in community and detained adolescent populations. Therefore, it is questionable to what extent and how these findings can be generalized to European countries, such as Portugal, also

because they have a different socio-demographic make-up and organization of the juvenile justice and mental health systems (Vermeiren, Jones, Ruchkin, Deboutte & Schwab-Stone, 2004; Richter, Sagatun, Heyerdahl, Oppedal, & Roysamb, 2011)

Nevertheless, Ferreira (2012), in a study conducted with a sample of adolescents detained in Portuguese YDC facilities, found that 78% of the young offenders scored in at least one MAYSI-2 subscale, and 44% scored in two or more. Of those who scored in at least one dimension, 76% score above the *Caution* cut-off scores, and 20% above *Warning* cut-off scores. Those youths who scored in two or more dimensions, 44% scored above the *Caution* cut-off scores, and 18% above the *Warning* cut-off scores. In general, the dimension on which the juveniles scored above the clinical cut-off, was the *Thought Disturbance* dimension (37%), followed by the dimensions *Angry-Irritable* (33%), *Depressed-Anxious* (30%), *Somatic Complaints* (26%), *Alcohol/Drug Use* (25%) and *Suicide Ideation* (13%). Moreover, 47% reported the presence of three or more traumatic experiences symptoms.

2. Psychopathy in Youth: Downward Extension

The construct of psychopathy is characterized by a number of interpersonal, affective and behavioral characteristics, and is now established in the assessment of the adult offenders (Hare, 1998). Although the vast majority of research has been conducted with adult samples, in recent years, is now emerging a number of developments in the assessment of the psychopathy construct among adolescents.

Although, some authors argue that the adolescence period is characterized by a considerable developmental change, and a more intensive sensation seeking and impulsivity, what can translate into higher scores on psychopathic traits, which may have negative implications for the young person (Dolan & Rennie, 2007; Edens et al., 2001; Seagrave & Grisso, 2002), and therefore the extension of this construct to the adolescence period must be taken carefully, some researchers argue that personality traits remain relatively stable across the lifespan and that the external correlates of psychopathy are similar not only across lifespan, but also across cultures (Frick, 2002; Lynam, 2002).

By reviewing several large scale longitudinal studies, Lynam (1996) found that boys, who display antisocial behaviors, as well as Attention Deficit Hyperactivity Disorder symptoms, are most at risk for chronic offending. Frick and White (2008) have, on the other side, argued the need of not relying only on these behavioral symptoms and showed the utility and prediction improvement by including callous/unemotional (CU) traits when assessing these youths. Observing closely, the constellation of the mentioned traits highly resembles the psychopathy construct present in the adult literature.

Although there is a growing effort to understand the causes and ramifications of aggressive and antisocial behavior in children, little was known about psychopathic traits in children and adolescents until recently. DSM-5 offers no diagnostic conceptualization of psychopathy for children or adolescents. The diagnosis most similar to psychopathy comprising young ages is that of CD, although there is no direct link to psychopathy conceptualizations (Frick, Barry, & Bodin, 2000).

There were made attempts to develop differentiations of CD subtypes, and further investigate youths with psychopathic traits. Therefore, researchers suggest that the DSM-5 childhood onset CD subtype is the most closely related to the concept of psychopathy in adulthood (Frick et al., 2000), as clinic-referred CD youths who score high on measures of CU traits have been proven to show higher rates of justice contacts and higher rates of parental diagnoses of APD (Christian, Frick, Hill, Tyler, & Frazer, 1997).

To date, the importance of studying the psychopathy construct and its relation to delinquency stems from the assumption that there is a group of youthful offenders that will tend to persist in serious and regular antisocial behaviors into adulthood, when the typical precursor traits of adult psychopathy are present (Forth & Burke, 1998).

According to Hare (1998), psychopaths qualitatively differ from others who engage in criminal behaviors, and early studies of psychopathic personality in youths also have shown the possibility of the existence, among conduct disordered adolescents, of a subset characterized by psychopathic features and a subset who do not endorse these traits (Frick et al., 2000).

Recent findings indicate that higher psychopathy scores are related to increases in general delinquency, hostile aggression, and some indicators of

early onset delinquency, such as offending, police contact and juvenile court referral (Vaughn, Howard, & DeLisi, 2008). Still, groups of young individuals endorsing high psychopathy scores are known to exhibit more negative personality traits and are judged to be at a higher risk for violence (Lee, Salekin, & Iselin, 2010).

Additionally, Hemphälä and Hodgins (2014) found that adolescents with higher scores on the dimensions of PCL:YV related to antisocial and conduct problems, and higher number of CD symptoms, were more likely to be indicated to receive treatment for associated psychopathology and substance abuse.

Moreover, adolescents with conduct problems and psychopathic traits are known to their difficulty in engaging in treatment and poor response to offender rehabilitation programs (Hemphälä & Hodgins, 2014). Thus the presence of these traits in delinquent offenders may indicate a need for a specific assessment and treatment approach.

It has also been argued that an early identification of psychopathic traits in younger samples enables more targeted interventions for high risk groups (Frick, 2002; Salekin, Rodgers, & Machin, 2001).

Furthermore, the study of psychopathy in adolescence may prove to be useful if it enables an accurate prediction of future offending and to develop and adapt timely therapeutic strategies, when the criminal career has not, yet, been completely established. This would allow an increment in the efficiency of treatments, and lower recidivism rates (Frick et al., 2000).

Central concerns on this subject are focused on the reliability and validity of the currently used assessment tools and the downward extension of the construct – the developmental appropriateness of the construct and the measures and tools used to assess it (Dolan, 2004).

Historically, the efforts towards the investigation of psychopathy in youth have focused more in the behavioral deviance and the externalizing dimensions of psychopathy, rather than in the core affective-interpersonal features. Much of this work has utilized downward extensions of PCL-R, such as *Psychopathy Checklist: Youth Version* (PCL:YV; Forth, Kosson, & Hare, 2003), a modified variant from the adult version, with 18 items, for use with offender youth samples, aged between 13 to 18. Research indicates that the youth version of this measure parallels to PCL-R, regarding the

factor structure and associations with external criterion measures (Forth et al., 2003).

Therefore, psychopathy construct may help differentiate *life-course persistent* from *adolescent-limited* antisocial behavior (Hare, Clark, Grann, & Thornton, 2000). This attempt requires reliable and valid measurements to assess psychopathy in youths. In fact, some measures have already been developed, such as *Antisocial Process Screening Device* (ASPSD; Frick & Hare, 2001), the PCL:YV (Forth et al., 2003), the *Child Psychopathy Scale* (CPS; Lynam, 1997) and YPI (Andershed et al., 2002).

Psychopathy in adolescence has traditionally been assessed using interview-based checklists, like PCL:YV (Forth et al., 2003) which consists of a derivation of the adult version, a *downward extension* of the adult PCL-R (Hare, 2003).

The PCL-YV (Forth et al., 2003) relies on intensive case file reviews and interviews, what is time and resource consuming and complex. Because of these aspects, there has been an attempt to develop self-report measures of psychopathic traits targeting youths, suitable for the application to a larger sample, and that can be used as a screening measure, enabling the distinction of which subjects are in need of a more detailed assessment (Dolan, & Rennie, 2007). One measure designed to overcome this for a quicker assessment, is the YPI (Andershed et al., 2002), developed in Sweden. Another measure, this one developed in the US, is the APSD (Frick & Hare, 2001).

However, self-report assessment of psychopathy carries some challenges. As lying and manipulation are core features of psychopathy, makes it harder to get truthful responses, mainly in responding to questions about negative personality characteristics, which adds to the lack of the insight into the own behavior (Kotler and McMahon, 2010). Also, beside to the observer, the psychopathic individual may present lack of empathy, he may not consider himself as callous, and might not endorse those traits positively (Andershed et al., 2002). In response to these concerns, the authors developed an instrument that presents some psychopathic traits in a manner that the person with those traits may view as positive or admirable, not tempting the people who answer to lie.

The YPI (Andershed et al., 2002) is theoretically based on the three-factor model of the PCL-R (Hare, 1991), and it has been proven to have good reliability and validity, and it was designed based on a three-factor structure, similar to the one underlying the adult PCL-R, reported by Cooke and Michie (2001). Besides YPI has been developed for use in community samples, there are studies proving its applicability and validity in forensic samples. There is some evidence of its usefulness in forensic settings, as were found meaningful correlations with external measures of psychopathology that are seen in psychopathic youths from community samples (Andershed et al., 2002) as in correctional settings (Skeem & Cauffman, 2003).

There is a growing body of work suggesting that CD, ADHD, and ODD are linked to later criminal offenses (Langbehn, Cadoret, Yates, Troughton, & Stewart, 1998), and, additionally, ADHD has been also showed to be correlated with psychopathy (Lynam, 1996). Accordingly, the researchers suggest that YPI (Andershed et al., 2002) may be useful in the assessment of how psychopathy and these disorders correlate, and contribute to subsequent criminal and antisocial behaviors (Dolan and Rennie, 2007).

3. Relationship between Child and Adolescent Psychopathology and Psychopathy

The existence of positive correlations between psychopathic features and symptoms of other disorders raises the possibility that mental health syndromes may reflect common or overlapping factors. Patterns of comorbidity may provide a light to understand the pathophysiology underlying psychopathy.

Additionally, given the suggestions that individuals with psychopathic features represent a heterogeneous group comprising several distinct, regardless of being related, syndromes, distinct patterns of comorbidity within individuals with psychopathic features, may aid in the identification of subtypes of psychopathy.

Other disorders may also produce symptoms that resemble psychopathic features. Individuals with other disorders may appear to be characterized by psychopathic features that actually result from another psychiatric syndrome. As a result, the presence of a concurrent psychiatric disorder may increase the difficulty of diagnosis. Therefore, it is important,

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when assessing psychopathic features, to be able to distinguish features of psychopathy, from features of other mental illnesses (Sevecke & Kosson, 2010).

The study of the comorbidity of mental health needs, and of the associations and co-occurrence of psychopathic traits with other forms of psychopathology, may help a more efficient mobilization of resources and assist in the comprehension and rehabilitation of youths institutionalized at Youth Detention Centers.

Beyond this, and for what matters to the present study, beside some symptoms may appear to reflect psychopathic features, other psychiatric/psychopathological syndromes may influence the expression of psychopathic features, hindering or facilitating the assessment (Sevecke, & Kosson, 2010). Sevecke and Kosson (2010), exemplify this relation, recurring to the example of the common belief that depressive disorders are negatively correlated with psychopathic traits in adulthood. In first place, the relation between both of these pathologies needs to be clarified, as there is very little evidence of this negative correlation in youths. And second, if a youth exhibits both depressive and psychopathic features, probably the affective disorder will attenuate some behaviors, and consequently reduce the likelihood of disinhibited behavior in social interactions, and, similarly, as the affective disorder will also attenuate bragging, it will difficult the identification of the presence of grandiosity, beside this indicator remains latent.

Externalizing Disorders

Recent studies substantiate that early behavior problems commonly precede the development of antisocial behavior. These externalizing behavior problems emerge with higher prevalence not only for those youth who grow up to engage in criminality and substance abuse (Rasmussen, Storsaeter, & Levander, 1999) but also in children with later diagnosis of APD and psychopathy (Vitelli, 1998).

Schmidt, McKinnon, Chattha, and Brownlee (2006), in a community-based sample of adjudicated youth, shown that PCL: YV scores revealed concurrent validity with externalizing behavior problems. Of all the externalizing disorders, psychopathy is the syndrome considered to be

associated with the most negative outcomes, such as violence, recidivism and higher resistance to treatment efforts. In this respect, the prominence of disruptive behavior disorders emerging in the childhood period of the individual's lives, who later display psychopathy features, has been leading to the suggestion that similar biological and ecological factors that lead to Attention Deficit Hyperactivity Disorder and conduct disorders, may also be some of the factors contributing to the causes of psychopathy (Sevecke, & Kosson, 2010).

Evidence shows that there are common genetic factors contributing to variance in alcohol and substance abuse/dependence, conduct disorders, and Attention-Deficit Hyperactivity Disorder (Kendler, Prescott, Myers, & Neale, 2003). Investigation have shown some evidences of a relationship between psychopathic features/traits and symptoms of externalizing disorders, what may mean that, probably, the same genetic factors that contribute to the presence of externalizing disorders, also contribute to the development of psychopathic features (Sevecke & Kosson, 2010).

Sevecke, Lehmkuhl, & Krischer (2009) found a positive relation between externalizing disorders and all psychopathy dimensions, and, simultaneously, a negative relationship between anxious-depressive behavior and the affective dimension, as well as, the total score of psychopathy.

In the study of Dolan & Rennie (2007), the mean summed and averaged scores for the YPI scales were found to be comparable to those referenced by Skeem and Cauffman (2003) in their study with a sample of incarcerated male youth offenders, what may indicate that descriptive statistics for this measure are relatively stable across cultural settings.

Dolan and Rennie (2007) also found in their study that YPI (Andershed et al.,2002) correlated positively with measures of impulsivity and caregiver ratings of delinquent and externalizing behavior, assessed through the *Child Behavior Checklist* (CBCL; Achenbach, 1991). It was also found a negative correlation between YPI Affective score and IVE empathy, suggesting that this subscale is related to core empathic responses. This finding is supported by previous literature, which points that youths that endorse psychopathic traits also evidence deficits in empathic understanding and affective information processing (Hare, 1998). These researchers reported a positive correlation between CBCL attentional problems and the

affective component of psychopathy. Previous studies on this matter, have reported evidences of attentional problems on behavioral tasks in individuals with psychopathic traits, in an adult population (Kosson, 1996). Comparing the lower and higher scorers in YPI (Andershed et al., 2002), Dolan and Rennie (2007) were also able to confirm the existence of a *psychopathic-like* subgroup, characterized by higher levels of deviant behaviors – e.g. aggression, delinquency and attentional problems. This group was also found to present lower empathy scores and higher impulsivity scores than the *non-psychopathic-like* subgroup. These findings found corroboration in previous reports showing moderate correlations between YPI and previous antisocial and offending behaviors (Andershed et al., 2002).

Some authors have argued that the early emergence of CD is a significant indicator of the individual's likelihood of engaging in serious criminal activities throughout his life-span. Additionally, several studies highlight the retrospective relation between adult psychopathy and childhood conduct problems (Lynam, 1996). However, these relations become evident by conducting retrospective, follow-back, studies (Sevecke, & Kosson, 2010).

Studies with youth samples, also suggest the existence of a positive association between psychopathic traits and childhood disruptive behavior disorders. Gretton, McBride, Lewis, O'Shaughnessy, & Hare (1994) shoed in their study, conducted in North America, that incarcerated adolescent males displaying high psychopathy scores, measured through PCL:YV (Forth et al., 2003), also displayed an elevated prevalence of disruptive externalizing behaviors. Forth and Burke (1998), in a sample with similar characteristics, also found that higher scores on PCL:YV were positively associated with greater alcohol and substance abuse, when compared to males who scored lower on this psychopathy measure.

ADHD embodies one of the most frequently observed disorders in children and adolescents, with prevalence rates ranging from 3 to 9% in the normal population (Spencer, Biederman, Wilens, & Faraone, 2002; in Sevecke & Kosson, 2010). Prevalence of this disorder is also elevated in antisocial adolescent samples, as Vermeiren (2003) reported, having found that 4% of detained adolescents, 14 to 19% of adjudicated adolescents, and 20 to 72% of incarcerated adolescents, met criteria for ADHD diagnosis.

Several researchers have pointed that the relation between disruptive antisocial behavior and adult psychopathy, may be true and particularly strong for young people with both ADHD or impulsivity and CD (Lynam, 1996). Comparing to children with “pure” diagnoses and control groups, children with comorbid ADHD and CD display early onset, frequent, severe, cross-situational and versatile forms of externalizing behavior, ranging from aggression and stealing, to substance consumption (Piatigorsky & Hinshaw, 2004). These children also present response patterns on physiological measures resembling the neurocognitive and psychophysiological functioning seen in adult psychopaths (Lynam, 1996).

Frick et al. (2000) also showed that in a clinic-referred sample of children with ages ranging from 6 to 13, with symptoms of ADHD combined with severe conduct problems, showed high rates of CU traits, preference for adventure-seeking activities, fearlessness, and had a higher probability to present a reward-dominant response style, i.e., features associated with psychopathy.

The abuse and dependence of substances have also been considered to be related to psychopathy in male samples (Hare et al., 2000), and this relation was also replicated and established in several studies for male adolescents (e.g. Mailloux, Forth, & Kroner, 1997).

Roussy and Toupin (2000), also reported that violent incarcerated male adolescent offenders with high scores on the PCL:YV were more likely diagnosed with alcohol and/or drug abuse (56%), comparing to 21% for low scoring offenders.

Internalizing Disorders

In contrast to externalizing disorders, internalizing psychopathology is often assumed to be negatively correlated with psychopathic traits. When querying Cleckley’s (1976) clinical description of what he considered to consist in the adult psychopath, he defended that a core characteristic of the psychopathic individual was an “absence of nervousness”. Thus, the absence of anxiety has been interpreted as one aspect of a general absence of emotional experience. Other authors argue that fearlessness of the absence of behavioral inhibition is a central disposition underlying psychopathy, a perspective corroborated by the study conducted by Sevecke et al. (2009),

indicative of a negative association between one of the core symptoms of psychopathy (affective) and the total score of PCL:YV. These researchers also found a positive relation between the *Youth Self Report* (YSR; Achenbach, 1991) internalizing subscale and the affective dimension, as well as, the total score of psychopathy. They explain this finding as a result of the composition of the internalizing syndrome scale based on physical problems and social withdrawal, phenomena associated with psychopathy (Forth et al., 2003).

However, some researchers (Zoccolillo, Pickles, Quinton, & Rutter, 1992; Robins, 1991) have documented a positive correlation between anxiety and antisocial behavior in children and adults. According to Zoccolillo and colleagues (1992), the rates of anxiety disorders in children with CD range from 22 to 33% in community samples, and from 60 to 75% in clinic-referred or institutionalized samples. Additionally, according to Lilienfeld (1994), APD correlates positively with trait anxiety scores and anxiety disorders diagnoses.

Regardless, some authors address this issue, suggesting the existence of two kinds of psychopathic individuals, however, to date, only proven to be consistent for adult samples. These authors pointed the existence of two groups of adult psychopathic individuals: *primary psychopaths*, characterized by low anxiety and *secondary psychopaths*, individuals with high levels of anxiety (Blackburn, 1998). More recently, cluster analysis, conducted in several studies, have reported that the differentiation between these two groups can be substantiated by differences in anxiety levels (e.g. Lee et al, 2010).

Although prior adult studies suggested negative correlations between psychopathy features and internalizing disorders, among a sample of male juvenile offenders, Epstein, Douglas, Poythress, Spain, and Falkenbach (2002), as cited in Sevecke & Kosson (2010), found that PCL:YV total scores were unrelated to mood disorders diagnoses.

There are also a small number of studies conducted with adults, which identified positive correlations between PCL-R scores and scores of some negative affectivity measures (Hale, Goldstein, Abramovitz, Calamari, & Kosson, 2004). Regarding adolescent samples, some studies have reported negative relationships between psychopathic traits and internalizing

psychopathology, like Murrie and Cornell (2000), who found that adolescent male inpatients scoring high on PCL:YV, scored significantly lower on an anxiety scale, comparing to those scoring low on PCL:YV. Likewise, Dolan and Rennie (2007) reported a negative correlation between PCL:YV scores and fearfulness scores, in a sample of incarcerated male youths.

Against adult findings, several studies reported no relationships between psychopathic traits and self-report measures of negative affectivity or internalizing psychopathology (depression and anxiety; O'Neill, Lidz, & Heilbrun, 2003). Campbell, Porter and Santor (2004) reported no correlation between PCL:YV scores and scores on the internalizing subscales of the YSR.

Nevertheless, Kosson, Cyterski, Steuerwald, Newmann, and Walker-Matthews (2002), as cited in Sevecke & Kosson (2010), reported significant positive correlations between psychopathic traits and self-reports of negative affectivity.

Positive associations were found in adolescent males on probation, between PCL:YV scores and self-reports of negative affectivity and parental ratings of internalizing pathology (Schimdt et al., 2006).

Other studies reported positive correlations with internalizing pathology for some, but not for other, measures of psychopathic traits. Salekin, Neumann, Leistico, DiCicco, and Duros (2004) reported no relationships between PCL:YV scores and self-reported depression or internalizing problem scale scores, but found positive correlations between scores of APSD and symptoms of internalizing disorders.

Kosson, Allen, McBride, Walsh, Tercek, and Greco (2007), in their communication presented at the *2nd annual meeting of the Society for the Scientific Study of Psychopathy*, and as cited in Sevecke and Kosson (2007), reported that in a mixed sample of detained youths (83% male), scores of self-reported depression were significantly correlated with scores on the Interpersonal dimension of psychopathy.

Regarding the relationship between psychopathic features and self-directed aggression, there is the common assumption, based on Cleckley's (1976) perspective, that suicidal behavior in the adult psychopathic population is generally manipulative. However, several studies conducted with adult incarcerated population found positive correlations between

psychopathy and suicide attempts. In the US, in a sample of adult male prisoners, suicide attempts were positively correlated with Antisocial Lifestyle scores, but had no correlation with Interpersonal-Affective scores (Verona, Patrick, & Joiner, 2001).

Douglas, Herbozo, Poythress, Belfrage, and Edens (2006) reported that the small positive correlation found between suicidal behavior and the antisocial life-style component of psychopathy is consistent, but that, in general, there is no association between the interpersonal-affective dimension and suicidality.

There are a reduced number of studies addressing this relation between self-directed aggression and psychopathic traits in youths.

Chabrol and Saint-Martin (2009), using the YPI (Andershed et al., 2002), evaluated the importance of psychopathic traits in predicting suicidal ideation among adolescent from a community sample, and found that scores on the affective dimension of the YPI uniquely correlated with suicidal ideation, concluding that in youth, psychopathic traits do not act as a protective factor for suicidal ideation and behavior.

The relationship between psychopathic traits and internalizing disorders in youth are less consistent than those established between psychopathic traits and externalizing disorders. Despite the differences observed, the literature reviewed suggests that, among children and adolescents, the relationships between internalizing psychopathology and psychopathic traits are different than those reported in studies with adult samples. These differences can be understood in light of what Cleckley (1976) defined as a “*mask of sanity*”: a relatively normal-seeming façade concealing underlying emotional deficits. As proposed by Sevecke and Kosson (2010), whereas the adult psychopath is characterized by this *mask of sanity*, adolescents with psychopathic features may have not yet been able to develop this façade and, subsequently, be more affected and evidence more the negative affect.

Traumatic experiences

Despite the lack of literature on the relation between traumatization and psychopathic traits, some researchers have decided to address it, mostly concerning about the influence of adverse family contexts.

Early traumatization is commonly seen as a causal or mediating risk factor for aggressive behavior (Jaffee, Caspi, Moffit, & Taylor, 2004). Early experiences of traumatization are, therefore, seen as having a negative influence on the development in the regulation of anger and affect.

Other studies focused on the relation between child maltreatment and traumatic experiences, and adult psychopathy. Moeller and Hell (2003) found evidences of a correlation between total PCL-R scores, in a Swiss sample of male offenders of ages ranging from 17 to 27, and the number of prior threatening events experiences (Moeller & Hell, 2003).

Campbell et al., (2004) evaluated the clinical, psychosocial and criminal correlates of psychopathic traits, in a sample of 226 adolescent offenders from both genders, and found that the only psychosocial factor to predict PCL:YV scores was a history of nonparental living arrangements.

Lastly, Krischer and Sevecke (2008), by examining the link between psychopathic traits and histories of abuse, in male and female adolescent delinquents, found an association between early physical and emotional traumatic experiences and psychopathy, for detained boys.

II - Goals

To our knowledge, this is the first research in Portugal to examine the validity of the *Massachusetts Youth Screening Instrument* (MAYSI-2), a mental health and substance abuse disorders screening tool, in relation to *Youth Psychopathic Traits Inventory*.

The main goal of the present study is to continue the examination and establishment of the validity and clinical utility of MAYSI-2 in Portugal, especially with youths in contact with the juvenile justice system. We aim to analyze the relation between scores on the psychopathic traits measure (YPI) and the various subscales on MAYSI-2, for both forensic and community samples, and to highlight the differences presented between these two samples regarding the relationship between psychopathy dimensions and concurrent psychopathology. Thus, the key goal of the present investigation is to analyze in what extent the correlations between psychopathic features and symptoms of other forms of psychopathology are high, and simultaneously examine if brief assessment and screening tools, like MAYSI-2 and YPI, could be useful in assisting in the assessment and

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comprehension of these correlations.

We expect to find higher prevalence rates of both mental health needs and psychopathic traits in the forensic sample, as better correlations between them for these youths. Statistically significant differences are also expected to be observed between both groups, on MAYSI-2 and YPI scores.

We also hypothesize the existence of statistically significant differences, regarding the social desirability measures, between both samples. Taking into consideration each group individually, there are not expected influences and statistically significant differences, between high and low social desirability on the scores obtained on MAYSI-2 and YPI.

With the juvenile offenders group being our central focus, we hypothesized that YPI scores would positively correlate with the MAYSI-2 dimensions conceptually associated to externalizing behaviors and substance abuse, and also correlate, although at a less significant level, with those subscales conceptually associated to internalizing psychopathology. We also expect to find good correlations between early history of traumatic experiences and YPI dimensions of a behavioral dominion.

III - Method

1. Participants

The present study is based on a community sample and a forensic sample, both including only young males.

The participants from the control group (i.e. community) had established residency at Coimbra's district, and the forensic group was obtained by collecting the same protocol in 33 youths who were under Educational Guardianship Act (EGA), at an YDC, also in the center region of the country. On the whole, 76 youths were enrolled in the present study. Their participation was voluntary; having their legal tutors signed the informed consent form.

The control group included youths aged between 12 and 19 years of age, with an average age of 14.74 (SD=1.878) (Table 1).

Regarding to the education level, the sample was distributed between 6 to 11 completed school years (M=8.26; SD=1.853). 65.1% of the youths never failed and the rest failed to pass at least once.

In terms of nationality, 100% of the sample is Portuguese.

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Table 1. Community group: Age, education, and nationality

Community group (N=43; 100%)	
Age	14.74 ± 1.878 (12-19)
Completed school years	8.26 ± 1.853 (6-11)
Number of school failures	0.47 ± 0.702 (0-2)
None	28(65.1%)
One	10(23.3%)
Two	5(11.6%)
Nationality	
Portuguese	43(100%)

The forensic sample comprises 33 young male offenders, complying a detention measure at an YDC, with ages ranging from 14 to 19 years of age (M=16.45; SD=1.277). Of the total group under study, 21 youths comply the detention measure in a semi-open regime – 14 at the intake unit, and the remaining 7 in the progression unit; and 12 are in a closed detention regime (Table 2).

Table 2. Forensic group: age of first contact with the juvenile justice system, number of days between intake and assessment, regime, and housing unit

Forensic group (N=33;100%)	
Age of first contact with the juvenile justice system	12.58 ± 2.5 (5-16)
Number of days between intake and assessment	274 ± 236.007 (7-870)
Regime	
Semi-open	21(63.6%)
Closed	12(36.4%)
Housing unit	
Intake	14(42.4%)
Progression	7(21.2%)
Closed regime	12(36.4%)

Regarding the education level, it ranges from 4 to 11 completed school years (M=6.33; SD=1.614). Concerning the number of school failures years, the average is 3.33 (SD=1.898), ranging from 0 to 10 missed years. Only one youth (3%) has never failed to pass a school year, 6.1% failed to pass once, 24.2% failed to pass twice, and 66.5% of the youths have failed a school year three times or more (Table 3)

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Regarding the birthplace, 93.9% have Portuguese nationality, as the remaining 6.1% are from African Portuguese speaking countries (PALOP).

Asked about the age of the first contact with the juvenile justice system, the answers range from 5 to 16 years of age ($M=12.58$; $SD=2.3$). The number of days between the intake and the evaluation range from 7 to 870 days, with an average of 274 days spent in the current detention or preventive measure ($SD=236.007$).

Table 3. Forensic group: Age, education, and nationality

Forensic group (N=33; 100%)	
Age	16.45 ± 1.277 (14-19)
Completed school years	6.33 ± 1.614 (4-11)
Number of school failures	3.33 ± 1.898 (0-10)
None	1(3%)
One	2(6.1%)
Two	8(24.2%)
Three or more	22(65.5%)
Nationality	
Portuguese	31(93.9%)
PALOP	2(6.1%)

2. Measures

Massachusetts Youth Screening Instrument - Second version (MAYSI-2; Grisso & Barnum, 2006; Ferreira, Simões, & Fonseca, 2012). The MAYSI-2 (MAYSI-2; Grisso & Barnum, 2006) is a 52 yes/no item, self-report, screening tool on which youths report the presence or absence of perceived symptoms or behaviors related to emotional, behavioral and psychological disturbances experienced “*within the past few months*”.

Contains seven subscales/dimensions assessing (a) history of substance use (ADU scale), (b) irritability and frustration (*Angry-Irritable* scale), (c) experience with nervousness or depressed mood (*Depressed-Anxious* scale), (d) physiological symptoms of anxiety (*Somatic Complaints* scale), (e) self-harm (*Suicide Ideation* scale), (f) detachment from reality (*Thought Disturbance* scale), and (g) exposure to traumatic events (*Traumatic Experiences* scale).

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There is no total score, as six of the seven MAYSI-2 scales have two types of cut-off scores: *Caution* and *Warning*. *Caution* cut-off scores were determined by the MAYSI-2 authors in order to identify those youths who scored with *clinical significance* on other validated tests of similar symptoms, such as the YSR (Achenbach, 1991). *Warning* cut-offs identify scores in the top 10% of youths in the original Massachusetts norm sample, enabling the identification of youths in need of clinical attention.

The official Portuguese version of MAYSI-2 was developed in 2012 and showed good psychometric properties (Ferreira, 2012).

MAYSI-2 *User's Manual and Technical Reports – Language Translations Edition* (Grisso & Barnum, 2014) is available, providing guidance to the measure's administrations, and technical information about the instrument, including also official translations of the questionnaire, scoring key, scoring summary and profile, including in Portuguese.

Youth Psychopathic Traits Inventory (YPI; Andershed, Kerr, Stattin, & Levander, 2002; Simões, Abrunhosa Gonçalves & Lopes, 2010). The authorized Portuguese translation of the YPI (Andershed, Kerr, Stattin, & Levander, 2002; Simões, Abrunhosa Gonçalves & Lopes, 2010) was used in the present study, to obtain self-reports on traits of psychopathy.

The *Youth Psychopathic traits Inventory* (YPI; Andershed, Kerr, Stattin, & Levander, 2002) is a brief, 50-item self-report measure, originally designed to assess psychopathic traits in community adolescents. Although the YPI (Andershed et al., 2002) was initially developed for youth without a criminal past, this measure seems to be suitable to the assessment of young offenders, with the advantage of being quick and easy to administer.

The YPI measures measuring three core personality dimensions of psychopathy, corresponding to three higher order factors: an Interpersonal grandiose/manipulative factor, an Affective callous/unemotional factor, and a Lifestyle impulsive/irresponsible factor. The subscales measure different aspects of the glibness and superficial charm (*Dishonest Charm*), the grandiosity/egocentricity aspects of the psychopathic personality constellation (*Grandiosity*), the tendency to lie frequently and with ease (*Lying*), the conning and manipulation traits (*Manipulation*), callousness and lack of empathy (*Callousness*), the shallow affect/poverty in affective

reactions (*Unemotionality*), the relative lack of adequate feelings of remorse and guilt (*Remorselessness*), impulsivity (*Impulsiveness*), irresponsibility (*Irresponsibility*), the need for stimulation and excitement, and proneness to boredom (*Thrill-seeking*).

Respondents are asked to rate the degree to which the individual items apply to them. Items are scored according to a four-point Likert scale (1 = *Does not apply at all*, 2 = *Does not apply well*, 3 = *Applies fairly well*, 4 = *Applies very well*). The final scores of the total scale and subscales, or dimensions, are obtained by summing up the results of the items divided by the total number of items. Results greater than 2.5 indicate the presence of psychopathic traits.

Coimbra's Social Desirability Scale (Escala de Desejabilidade Social de Coimbra - EDSC; Simões, Almiro & Sousa, 2014).

Considering that the remaining instruments are based on a self-report methodology, relying solely on the youths' answers, and also knowing that in the juvenile population the social desirability plays an important role on how truthful are the given answers to a self-report measure, it became necessary to understand the weight of this variable on the youths' answers.

The EDSC comprises 22 items, to which the respondents answer "Yes" on "No", according to what they believe to better correspond to what they think about themselves.

A total score is calculated based on the sum of all items, and the results range from 0 up to 22. A cut-off score, set at 17 points, indicates that scorers above that point may have given answers to the remaining measures that are a result of high levels of social desirability, and should be interpreted carefully.

3. Procedures

The first phase of the investigation started by asking all measures Portuguese researchers their permission to include the instruments in the investigation protocol.

On a second moment, after receiving permission to conduct the research from the official entity, the *Direção Geral de Reinserção e Serviços Prisionais* and from the YDC's (*Centro Educativo dos Olivais*)

administration, the youths were approached in order to explain the purpose of the investigation and to ensure the anonymity and confidentiality of the data collected. All the youths who voluntarily agreed to participate also read and signed an informed consent form.

The community group consists of youths with established residency in Coimbra's district. After being explained about the purpose of the investigation and, after being ensured of the confidentiality and anonymity of the data, the youth's legal tutors signed an informed consent form.

Of a total sample of 80 youths, only 76 produced valid protocols. The remaining 4 protocols were excluded due to a large number of missing answers. Whereas the community group answered the protocol individually, the forensic group answered in groups of three to four individuals. The protocol was the same for both groups and took 60 to 90 minutes to be completed.

The research protocol included the above mentioned measures, administered in the following order: sociodemographic questionnaire, *Massachusetts Youth Screening Instrument- Second version* (MAYSI-2), *Youth Psychopathic Traits Inventory* (YPI) and *Coimbra's Social Desirability Scale* (Escala de Desejabilidade Social de Coimbra – EDSC).

Data analysis was conducted through the use the software SPSS (version 20.0). To analyze the normality of the response distribution it was used the Kolmogorov-Smirnov and Shapiro-Wilk tests. The p values ($p=.00$) indicated that the responses don't follow a normal distribution, so that the statistical analysis is essentially non-parametric.

IV - Results

1. MAYSI-2: Descriptive statistics analysis

Analyzing the scores obtained by both groups on each MAYSI-2 dimension (Table 4), overall, the youths from the forensic sample, on average, score higher than the youths with no previous offending history.

Table 4. MAYSI-2 dimensions: means and standard deviations (SD), by group, and differences between groups (Mann-Whitney U test) in MAYSI-2 dimensions

	Community (N=43)		Forensic (N=33)		U	Z	P
	Mean	SD	Mean	SD			
ADU*	.069	.338	2.273	2.183	235	-5.958	.000
AI*	.977	1.371	3.273	2.684	347	-3.931	.000
DA*	.744	1.274	1.909	1.958	417.5	-3.261	.001
SC*	.767	1.065	1.424	1.370	515.5	-2.168	.030
SI*	.209	.773	1.030	1.468	433	-3.748	.000
TD*	.256	.621	.667	.890	497	-2.757	.006
TE*	.767	1.109	2.576	1.275	216	-5.345	.000

*AD=Alcohol/Drug Use; AI = Angry-Irritable; DA=Depressed-Anxious; SC= Somatic Complaints; SI= Suicide Ideation; TD= Thought Disturbance

Once the results do not follow a normal distribution, Mann-Whitney U test was used in order to examine the differences between groups.

The results reveal the existence of statistically significant differences between the two samples for all MAYSI-2 dimensions (Table 4): *Alcohol/Drug Use* ($U=235$, $p<.05$), *Angry-Irritable* ($U=347$, $p<.05$), *Depressed-Anxious* ($U=417.5$, $p<.05$), *Somatic Complaints* ($U=515.5$, $p<.05$), *Suicide Ideation* ($U=433$, $p<.05$), *Thought Disturbance* ($U=497$, $p<.05$), and *Traumatic Experiences* ($U=216$, $p<.05$)

Moreover, we can verify that an higher percentage of youths belonging to the forensic sample score above the *Caution* cutoff at least in one MAYSI-2 dimension (21.2%), when compared to the community sample (14%) (Table 5). The higher percentage occurs also in youths who score above the *Caution* cutoff in two or more dimensions, being the difference between the two samples even more significant, with the forensic group percentage of 48.5%, when compared with only 7% in the community group. Regarding the *Warning* cutoff, when considering youths who score above this cutoff in one MAYSI-2 dimension, the prevalence is similar between forensic and community samples, with 9.1% and 9.3%, respectively. Considering youths who score above the *Warning* cutoff in two or more MAYSI-2 dimensions, the forensic sample manifests a higher percentage (of 15.2%), when compared to the 2.3% in the community sample.

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Table 5. Percentage of youths who score above the cutoff *caution* and *warning*

	<i>Caution</i>		<i>Warning</i>	
	Percentage		Percentage	
	Community (N=43;100%)	Forensic (N=33;100%)	Community (N=43;100%)	Forensic (N=33;100%)
In any of the dimensions	79%	30.3%	88.4%	75.8%
In at least one dimension	14%	21.2%	9.3%	9.1%
In two or more dimensions	7%	48.5%	2.3%	15.2%

Looking at each MAYSI-2 dimension, we verify that there are dimensions which had a bigger prevalence among the community youths, apart from their schooling and age characteristics (Table 6). The dimensions which deserve more concern in this group are *Depressed-Anxious* (11.6%) and *Somatic Complaints* (9.3%), when considering the *Caution* cutoff. The dimensions *Suicide Ideation* and *Thought Disturbance* do not represent a concern when considering the *Caution* cutoff, but are the only MAYSI-2 dimensions on which community youths score above the *Warning* cutoff, with 4.7% and 9.3%, respectively.

Among the forensic sample youths, the MAYSI-2 dimensions are endorsed in the following decreased order, for the *Caution* cutoff: *Thought Disturbance* (36.4%), *Angry-Irritable* (30.3%), *Alcohol/Drug Use* (21.2%) and *Depressed-Anxious* (21.2%), and *Suicide Ideation* (9.1%). For the *Warning* cutoff, the prevalence does not follow the same order, as *Suicide Ideation* (15.2%) appears in first place, followed by *Thought Disturbance* (12.1%), *Depressed Anxious* (9.1%), *Alcohol/Drug Use* (6.1%), *Angry-Irritable* (3%), and *Somatic Complaints* (0%).

Although in the original study (Grisso, et al., 2001) it was not considered a cutoff to the dimension *Traumatic Experiences*, for the present study, it was considered a cutoff point at 3 points, suggested by Cauffman (2004). Thus, the dimension *Traumatic Experiences* shows a 11.6% prevalence in the community group, significantly lower if compared to the 57.6% prevalence in the forensic group.

Table 6. Comparison of the frequencies, for the community and forensic groups, according to both cutoff *caution* and *warning* by MAYSI-2 dimension

	<i>Caution</i>		<i>Warning</i>	
	Percentage		Percentage	
	Community (N=43;100%)	Forensic (N=33;100%)	Community (N=43;100%)	Forensic (N=33;100%)
ADU*	0%	21.2%	0%	6.1%
AI*	2.3%	30.3%	0%	3%
DA*	11.6%	21.2%	0%	9.1%
SC*	9.3%	24.2%	0%	0%
SI*	0%	9.1%	4.7%	15.2%
TD*	7%	36.4%	9.3%	12.1%

*AD=Alcohol/Drug Use; AI = Angry-Irritable; DA=Depressed-Anxious; SC= Somatic Complaints; SI= Suicide Ideation; TD= Thought Disturbance

2. MAYSI-2: Internal Consistency

The internal consistency was examined through Cronbach's alpha for each MAYSI-2 dimension, and for both groups.

Cronbach's alpha assumes alpha values between .494 and .824 (Table 7) for the community group, and between .356 and .819 for the forensic group (Table 8).

More specifically, for the community group: *Suicide Ideation* ($\alpha=.824$), *Angry-Irritable* ($\alpha=.664$), *Depressed-Anxious* ($\alpha=.662$), *Traumatic Experiences* ($\alpha=.610$), *Somatic Complaints* ($\alpha=.547$), and *Thought Disturbance* ($\alpha=.494$). As for the forensic sample, alpha assumes the following values for each MAYSI-2 dimension: *Angry-Irritable* ($\alpha=.819$), *Alcohol/Drug Use* ($\alpha=.799$), *Depressed-Anxious* ($\alpha=.719$), *Suicide Ideation* ($\alpha=.675$), *Somatic Complaints* ($\alpha=.519$), *Traumatic Experiences* ($\alpha=.517$) and *Thought Disturbance* ($\alpha=.356$).

Internal consistency was also calculated for the total 52 MAYSI-2 items, for both samples, assuming alpha the values of .874 and .912 for the community sample and the forensic sample, respectively.

Table 7. Comparison of internal consistency (Cronbach's Alpha), by dimension, for the community and forensic groups

	Community (N=43)	Forensic (N=33)
ADU*	.796	.799
AI*	.664	.819
DA*	.662	.719
SC*	.547	.519
SI*	.824	.675
TD*	.494	.356
TE*	.610	.517
Total measure	.874	.912

*AD=Alcohol/Drug Use; AI = Angry-Irritable;

DA=Depressed-Anxious; SC= Somatic Complaints;

SI= Suicide Ideation; TD= Thought Disturbance

Table 8 shows the comparison between the forensic group of the current investigation and the research conducted by Ferreira (2012), also with young offenders at YDC's. Both investigations show similar internal consistencies for each MAYSI-2 dimension, as for the total 52 MAYSI-2 items.

Table 8. Comparison of the internal consistency (Cronbach Alpha), by dimension, for forensic samples, from Ferreira's (2012) and Flórido's (2015) investigations

	Ferreira (2012) (N=100)	Flórido (2015) Forensic group (N=33)
ADU*	0,77	0,799
AI*	0,73	0,819
DA*	0,65	0,714
SC*	0,36	0,519
SI*	0,81	0,675
TD*	0,42	0,356
TE*	0,54	0,517
Total measure	0,865	0,912

*AD=Alcohol/Drug Use; AI = Angry-Irritable; DA=Depressed-

Anxious; SC= Somatic Complaints; SI= Suicide Ideation;

TD= Thought Disturbance

3. MAYSI-2: Construct validity

Internal validity was verified through inter-dimensions correlation. Given that the results do not follow a normal distribution, Spearman's Rho coefficient was used.

The existence of positive correlations was verified for both groups.

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More specifically, to the community group (Table 9), it can be noted the existence of large positive statistically significant correlations between the following dimensions: *Depressed-Anxious* and *Angry-Irritable* ($\rho=.644, p<.01$), *Thought-Disturbance* and *Alcohol/Drug Use* ($\rho=.540, p<.01$), and *Suicide Ideation* and *Depressed-Anxious* ($\rho=.513, p<.01$). It were also found moderate positive, statistically significant, correlations between the MAYSI-2 dimensions: *Thought Disturbance* and *Depressed-Anxious* ($\rho=.435, p<.01$), *Depressed-Anxious* and *Alcohol/Drug Use* ($\rho=.418, p<.01$), *Traumatic-Experiences* and *Alcohol/Drug Use* ($\rho=.395, p<.01$), *Traumatic Experiences* and *Thought Disturbance* ($\rho=.383, p<.05$), *Traumatic Experiences* and *Depressed-Anxious* ($\rho=.367, p<.05$), *Angry-Irritable* and *Alcohol/Drug-Use* ($\rho=.357, p<.05$), *Suicide Ideation* and *Angry-Irritable* ($\rho=.354, p<.05$), *Somatic Complaints* and *Alcohol/Drug Use* ($\rho=.337, p<.05$), *Suicide Ideation* and *Alcohol/Drug Use* ($\rho=.326, p<.05$), and *Thought Disturbance* and *Suicide Ideation* ($\rho=.326, p<.05$).

Table 9. Inter-correlations between MAYSI-2 internal dimensions for the community sample

	ADU	AI	DA	SC	SI	TD	TE
ADU	-						
AI	.357*	-					
DA	.418**	.644**	-				
SC	.337*	.200	.209	-			
SI	.326*	.354*	.513**	.124	-		
TD	.540**	.286	.435**	.156	.326*	-	
TE	.395**	.234	.367*	.260	.232	.383*	-

** $p<.01$

* $p<.05$

Note: DA (Depressed-Anxious), SC (Somatic Complaints), SI (Suicide Ideation), TD (Thought Disturbance), ADU (Alcohol-Drug Use), AI (Angry-Irritable), TE (Traumatic Experiences).

Considering the forensic sample (Table 10), and according to Cohen's classification criteria, were found large positive statistically significant correlations between the following MAYSI-2 dimensions: *Somatic Complaints* and *Depressed-Anxious* ($\rho=.749, p<.01$), *Depressed-Anxious* and *Angry-Irritable* ($\rho=.737, p<.01$), *Thought Disturbance* and *Depressed-Anxious* ($\rho=.636, p<.01$), *Suicide-Ideation* and *Depressed-Anxious* ($\rho=.588, p<.01$), *Suicide Ideation* and *Somatic Complaints* ($\rho=.569, p<.01$), and *Somatic Complaints* and *Angry-Irritable* ($\rho=.524,$

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$p < .01$). At a moderate level, were found significant positive correlations between the dimensions: *Angry-Irritable* and *Alcohol/Drug Use* ($\rho = .498$, $p < .01$), *Thought Disturbance* and *Alcohol/Drug Use* ($\rho = .498$, $p < .01$), *Traumatic Experiences* and *Angry-Irritable* ($\rho = .475$, $p < .01$), *Traumatic Experiences* and *Depressed-Anxious* ($\rho = .453$, $p < .01$), *Thought Disturbances* and *Somatic Complaints* ($\rho = .407$, $p < .05$), *Traumatic Experiences* and *Somatic Complaints* ($\rho = .403$, $p < .05$), *Suicide Ideation* and *Angry-Irritable* ($\rho = .383$, $p < .05$), *Traumatic Experiences* and *Alcohol/Drug Use* ($\rho = .376$, $p < .05$), and *Thought Disturbance* and *Angry-Irritable* ($\rho = .371$, $p < .05$).

Table 10. Inter-dimensions correlations (MAYSI-2) for the forensic sample

	ADU	AI	DA	SC	SI	TD	TE
ADU	-						
AI	.498**	-					
DA	.333	.737**	-				
SC	.153	.524**	.740*	-			
SI	.204	.383*	.588**	.569*	-		
TD	.498**	.371*	.636**	.407*	.310	-	
TE	.376*	.475**	.453**	.403*	.258	.217	-

** $p < .01$

* $p < .05$

Note: DA (Depressed-Anxious), SC (Somatic Complaints), SI (Suicide Ideation), TD (Thought Disturbance), ADU (Alcohol-Drug Use), AI (Angry-Irritable), TE (Traumatic Experiences).

4. YPI: Descriptive statistics analysis

The forensic group scores higher on every dimension, factor and on the total score, with the exception of the dimension *Remorselessness* (community sample: $M = 2.032$, $SD = 1.627$; forensic sample: $M = 2$, $SD = .552$) (Table 11).

Table 11. YPI dimensions, factors and total score: means and standard deviations, by group

	Community (N=43)		Forensic (N=33)	
	Mean	SD	Mean	SD
Dishonest Charm	1.744	.558	1.976	.599
Grandiosity	1.744	.504	1.897	.539
Lying	1.791	.587	1.195	.719
Manipulation	1.651	.515	2.012	.649
Callousness	1.911	.446	2.333	.537
Unemotionality	2.121	.458	2.339	.501
Remorselessness	2.032	1.627	2.000	.552
Impulsiveness	2.132	.523	2.527	.563
Thrill-seeking	2.255	.584	2.830	.704
Irresponsibility	1.791	.518	2.697	.570
Factor1: Interpersonal	1.728	.478	1.941	.517
Factor2: Affective	1.924	.334	2.151	.412
Factor 3: Lifestyle	2.066	.479	2.687	.537
Total Score	1.896	.380	2.231	.382

Given that the results do not follow a normal distribution, Mann-Whitney U test was calculated in order to examine the differences between the two groups, in YPI dimensions, factors and Total Score (Table 12).

Statistically significant differences were found for the dimensions: *Manipulation* ($U=472$, $p<.05$), *Callousness* ($U=439.5$, $p<.05$), *Unemotionality* ($U=508$, $p<.05$), *Impulsiveness* ($U=443$, $p<.05$), *Thrill-seeking* ($U=352$, $p<.05$), and *Irresponsibility* ($U=177$, $p<.05$). *Dishonest Charm* ($U=537$, $p=.215$), *Grandiosity* ($U=592$, $p=.215$), *Lying* ($U=642.5$, $p=.479$), and *Remorselessness* ($U=568$, $p=.136$) did not revealed statistically significant differences between the two samples. The found differences between samples in the factors Factor 2: *Affective* ($U=487.5$, $p<.05$) and Factor 3: *Lifestyle* ($U=250$, $p<.05$) are also statistically significant.

Table 12. Differences between groups (U of Mann Whitney test) in YPI dimensions, factors and total score

	Community	Forensic	U	Z	p
	Mean	Mean			
Dishonest Charm	1.744	1.976	537	-1.817	.215
Grandiosity	1.744	1.897	592	-1.240	.215
Lying	1.791	1.195	642.5	-.708	.479
Manipulation	1.651	2.012	472	-2.512	.012
Callousness	1.911	2.333	439.5	-2.851	.004
Unemotionality	2.121	2.339	508	-2.145	.032
Remorselessness	2.032	2.000	568	-1.491	.136
Impulsiveness	2.132	2.527	443	-2.811	.005
Thrill-seeking	2.255	2.830	352	-3.758	.000
Irresponsibility	1.791	2.697	177	-5.605	.000
Factor 1: Interpersonal	1.728	1.941	531	-1.873	.061
Factor 2: Affective	1.924	2.151	487.5	-2.331	.020
Factor 3: Lifestyle	2.066	2.687	250	-4.819	.000
Total Score	1.896	2.231	375	-3.506	.000

The dimensions that register the highest prevalence amongst the community group are *Thrill-seeking* (34.9%) and *Impulsiveness* (30.2%), followed by *Dishonest Charm* (11.6%), *Unemotionality* (11.6%), *Remorselessness* (9.3%), *Grandiosity* (7%), *Lying* (7%), *Callousness* (7%), *Irresponsibility* (7%), and *Manipulation* (2.3%). The YPI factor that registers the highest prevalence rate is Factor 3: *Lifestyle* (16.3%) (Table 13).

Regarding the forensic group, the dimensions that register the highest prevalence rates are: *Thrill-seeking* (78.8%), *Irresponsibility* (66.7%), and *Impulsiveness* (54.5%), followed by, in decreased order: *Callousness* (36.4%), *Unemotionality* (30.3%), *Manipulation* (24.2%), *Dishonest Charm* (15.2%), *Grandiosity* (12.1%), and *Lying* (12.1%) (Table 13).

The youthful offenders also show higher percentages of scoring above the 2.5 points in all YPI factors, being Factor 3: *Lifestyle* the most endorsed in both the forensic (69.7%) and community samples (16.3%) (Table 13).

The forensic group also evidences the highest prevalence in the total score of the inventory (24.2%).

Table 13. Comparison of the frequencies, for the community and the forensic groups, by YPI Dimension, Factor, and Total Score

	Percentage	
	Community (N=43; 100%)	Forensic (N=33;100%)
Dishonest Charm	5(11.6%)	5(15.2%)
Grandiosity	3(7%)	4(12.1%)
Lying	3(7%)	4(12.1%)
Manipulation	1(2.3%)	8(24.2%)
Callousness	3(7%)	12(36.4%)
Unemotionality	5(11,6%)	10(30,3%)
Remorselessness	4(9.3%)	7(21.2%)
Impulsiveness	13(30.2%)	18(54.5%)
Irresponsibility	3(7%)	22(66.7%)
Thrill-seeking	15(34.9%)	26(78.8%)
Factor 1: Interpersonal	4(9.3%)	4(12.1%)
Factor 2: Affective	2(4.7%)	9(27.3%)
Factor 3: Lifestyle	7(16.3%)	23(69.7%)
Total score	4(9,3%)	8(24.2%)

When compared to the community sample, the youths in the forensic sample score above the 2.5 point in a higher percentage and in a larger number of dimensions (Table 14)

Considering the community sample, the majority of the youths (46.5%) do not score above 2.5 points in any of the 10 YPI dimensions, whereas the forensic sample shows a 33.3% percentage of youths scoring above that point in five or more YPI dimensions.

The youths belonging to the community sample also score above the 2.5 point in a fewer number of YPI factors, with 83.7% not exceeding that point in any of the three factors of the inventory. 39.4% of the youths belonging to the forensic sample score above that point in one dimension of the total three, 33.3% do not meet that score in any of the dimensions, 15.2% score above the point in two factors, and 12.1% meet that score in all of the three factors (Table 14).

Table 14. Comparison of the percentage of youths who score above 2.5 points, by YPI Dimension and Factor

	Percentage	
	Community (N=43; 100%)	Forensic (N=33; 100%)
Dimensions		
In any of the dimensions	20(46.5%)	2(6.1%)
In one dimension	11(25.6%)	5(15.2%)
In two dimensions	6(14%)	5(15.2%)
In three dimensions	2(4.7%)	5(15.2%)
In four dimensions	1(2.3%)	5(15.2%)
In five or more dimensions	3(2.3%)	11(33.3%)
Factors		
In any of the factors	36(83.7%)	11(33.3%)
In one factor	3(7%)	13(39.4%)
In two factors	3(7%)	5(15.2%)
In three factors	1(2.3%)	4(12.1%)

5. YPI: Internal Consistency

The internal consistency was examined through Cronbach's alpha for each YPI dimension and factor for both groups.

Cronbach's alpha assumes values between .391 and .824 for the community group, and between .472 and .852 for the forensic group (Table 15).

More specifically, for the community group: *Manipulation* ($\alpha=.825$), *Dishonest Charm* ($\alpha=.817$), *Lying* ($\alpha=.803$), *Thrill-seeking* ($\alpha=.753$), *Grandiosity* ($\alpha=.703$), *Remorselessness* ($\alpha=.680$), *Irresponsibility* ($\alpha=.630$), *Impulsiveness* ($\alpha=.590$), *Unemotionality* ($\alpha=.527$), and *Callousness* ($\alpha=.391$). Regarding the YPI factors, for the community sample, the factors *Interpersonal*, *Affective* and *Lifestyle*, register alpha values of .926, .676, and .852, respectively. As for the forensic sample, alpha assumes values, for the following dimensions, of: *Lying* ($\alpha=.852$), *Thrill-seeking* ($\alpha=.788$), *Manipulation* ($\alpha=.762$), *Dishonest Charm* ($\alpha=.656$), *Grandiosity* ($\alpha=.631$), *Remorselessness* ($\alpha=.647$), *Impulsiveness* ($\alpha=.620$), *Unemotionality* ($\alpha=.596$), *Callousness* ($\alpha=.515$), and *Irresponsibility* ($\alpha=.472$). In the YPI factors, alpha assumes values of .891, .739, and .850, to the factors *Interpersonal*, *Affective* and *Lifestyle*, respectively.

Internal consistency was also calculated for the YPI total score, for both samples, assuming alpha the values of .938 and .908 for the community and forensic groups, respectively.

Table 15. Comparison of the internal consistency (Cronbach's Alpha) by YPI Dimension, Factor, and Total Score, for the community and forensic groups

	Community (N=43)	Forensic (N=33)
Dimensions		
Dishonest Charm	.817	.656
Grandiosity	.703	.631
Lying	.803	.852
Manipulation	.824	.762
Callousness	.391	.515
Unemotionality	.527	.596
Remorselessness	.680	.647
Impulsiveness	.590	.620
Thrill-seeking	.753	.788
Irresponsibility	.630	.472
Factors		
Interpersonal	.926	.891
Affective	.676	.739
Lifestyle	.852	.850
Total	.938	.908

6. YPI: Internal Validity

Internal validity was verified through inter-dimensions correlations, for both samples. Given that the results do not follow a normal distribution, Spearman's Rho coefficient was calculated. To the community sample, correlation coefficients assume *rho* values between -.004 and .789 (Table 16, Appendix A), and between -.360 and .789, for the forensic sample (Table 17, Appendix A).

The community sample registers a larger number of statistically significant correlations (Table 16, Appendix A). Accordingly to Cohen's classification criteria, large, positive and statistically significant correlations between the following dimensions were found: *Manipulation* and *Lying* ($rho=.789, p<.01$), *Manipulation* and *Dishonest Charm* ($rho=.786, p<.01$), *Irresponsibility* and *Manipulation* ($rho=.745, p<.01$), *Lying* and *Dishonest Charm* ($rho=.711, p<.01$), *Irresponsibility* and *Lying* ($rho=.693, p<.01$), *Thrill-seeking* and *Lying* ($rho=.675, p<.01$), *Irresponsibility* and *Dishonest*

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Charm ($\rho=.666, p<.01$), *Manipulation* and *Grandiosity* ($\rho=.665, p<.01$), *Impulsiveness* and *Lying* ($\rho=.644, p<.01$), *Unemotionality* and *Grandiosity* ($\rho=.629, p<.01$), *Grandiosity* and *Dishonest Charm* ($\rho=.595, p<.01$), *Impulsiveness* and *Dishonest Charm* ($\rho=.591, p<.01$), *Impulsiveness* and *Manipulation* ($\rho=.589, p<.01$), *Thrill-seeking* and *Manipulation* ($\rho=.588, p<.01$), *Thrill-seeking* and *Impulsiveness* ($\rho=.585, p<.01$), *Remorselessness* and *Unemotionality* ($\rho=.563, p<.01$), *Remorselessness* and *Lying* ($\rho=.560, p<.01$), *Remorseless* and *Manipulation* ($\rho=.542, p<.01$), *Lying* and *Grandiosity* ($\rho=.549, p<.01$), *Unemotionality* and *Manipulation* ($\rho=.524, p<.01$), and *Remorselessness* and *Dishonest Charm* ($\rho=.500, p<.01$). At a moderate level, were found significant positive correlations between the dimensions: *Irresponsibility* and *Impulsiveness* ($\rho=.492, p<.01$), *Impulsiveness* and *Remorselessness* ($\rho=.485, p<.05$), *Impulsiveness* and *Grandiosity* ($\rho=.470, p<.01$), *Irresponsibility* and *Remorselessness* ($\rho=.460, p<.01$), *Irresponsibility* and *Grandiosity* ($\rho=.446, p<.01$), *Unemotionality* and *Dishonest Charm* ($\rho=.426, p<.01$), *Remorselessness* and *Grandiosity* ($\rho=.402, p<.01$), *Irresponsibility* and *Callousness* ($\rho=.388, p<.05$), *Unemotionality* and *Lying* ($\rho=.378, p<.05$), *Impulsiveness* and *Unemotionality* ($\rho=.371, p<.05$), *Irresponsibility* and *Unemotionality* ($\rho=.318, p<.05$), *Thrill-seeking* and *Grandiosity* ($\rho=.310, p<.05$), and *Thrill-seeking* and *Remorselessness* ($\rho=.301, p<.05$).

Considering the forensic sample (Table 17, Appendix A), we found large positive statistically significant correlations between the following YPI dimensions: *Manipulation* and *Dishonest Charm* ($\rho=.789, p<.01$), *Remorselessness* and *Unemotionality* ($\rho=.717, p<.01$), *Lying* and *Dishonest Charm* ($\rho=.706, p<.01$), *Manipulation* and *Lying* ($\rho=.668, p<.01$), *Unemotionality* and *Dishonest Charm* ($\rho=.661, p<.01$), *Irresponsibility* and *Thrill-seeking* ($\rho=.653, p<.01$), *Unemotionality* and *Manipulation* ($\rho=.611, p<.01$), *Unemotionality* and *Lying* ($\rho=.605, p<.01$), *Remorselessness* and *Lying* ($\rho=.587, p<.01$), *Thrill-seeking* and *Impulsiveness* ($\rho=.585, p<.01$), *Remorselessness* and *Manipulation* ($\rho=.569, p<.01$), and *Impulsiveness* and *Remorselessness* ($\rho=.522, p<.01$). At a moderate level, were found significant positive correlations between the dimensions: *Thrill-seeking* and *Dishonest Charm* ($\rho=.497,$

$p < .01$), *Irresponsibility* and *Impulsiveness* ($\rho = .492, p < .01$), *Manipulation* and *Grandiosity* ($\rho = .491, p < .01$), *Remorselessness* and *Dishonest Charm* ($\rho = .481, p < .01$), *Irresponsibility* and *Unemotionality* ($\rho = .461, p < .01$), *Grandiosity* and *Dishonest Charm* ($\rho = .461, p < .01$), *Thrill-seeking* and *Unemotionality* ($\rho = .419, p < .05$), *Impulsiveness* and *Unemotionality* ($\rho = .398, p < .05$), and *Unemotionality* and *Grandiosity* ($\rho = .393, p < .05$). Additionally, it was also found a negative, moderate and statistically significant correlation between the YPI dimensions *Thrill-seeking* and *Callousness* ($\rho = -.360, p < .05$).

All YPI dimensions have positive and statistically significant correlations with the corresponding YPI factors, for both samples. For the community sample correlation coefficients assume ρ values between .511 and .924 (Table 18). In the forensic sample correlation coefficients assume ρ values between .547 and .899 (Table 18).

Table 18. Comparison of the correlation coefficients (Spearman's Rho), for the community and forensic groups, between each YPI Dimension and the corresponding YPI Factors

	Community (N=43)	Forensic (N=33)
Factor Interpersonal		
Dishonest Charm	.883**	.894**
Grandiosity	.781**	.547**
Lying	.876**	.823**
Manipulation	.924**	.899**
Factor Affective		
Callousness	.511**	.523**
Unemotionality	.647**	.711**
Remorselessness	.699**	.818**
Factor Lifestyle		
Impulsiveness	.834**	.798**
Thrill-seeking	.872**	.883**
Irresponsibility	.804**	.827**

** $p < .01$

* $p < .05$

Regarding the correlations between each YPI dimension and the YPI Total (Table 19), correlation coefficients assume ρ values between .333 and .872, to the community group, and between .128 and .869, to the forensic group.

In the community group, according to Cohen's classification criteria,

all correlations between the YPI dimensions and the inventory total are positive, large and statistically significant, with the exception of the correlation between the dimension *Callousness* and the Total Score ($\rho=.333$, $p<.05$), positive and statistically significant at a moderate level (Table 20).

The correlation between the dimension *Callousness* and the total score is not statistically significant in the forensic group. The dimension *Irresponsibility* moderately and positively correlates with the YPI Total score ($\rho=.393$, $p<.05$), as the remaining correlations between the YPI dimensions and the inventory total score are large, positive and statistically significant. The correlations between all YPI factors and the YPI total score are positive, large and statistically significant for both samples, ranging between .797 and .913 to the community sample, and between .573 and .843, to the forensic sample (Table 19).

Table 19. Comparison of the correlation coefficients (Spearman's Rho), for the community and forensic samples, between each YPI Dimension and YPI Total Score

	Community (N=43)	Forensic (N=33)
	YPI Total Score	
Dimensions		
Dishonest Charm	.804**	.818**
Grandiosity	.640**	.525**
Lying	.856**	.668**
Manipulation	.872**	.760**
Callousness	.333*	.128
Unemotionality	.623**	.869**
Remorselessness	.669**	.815**
Impulsiveness	.733**	.495**
Thrill-seeking	.719**	.538**
Irresponsibility	.790**	.393*
Factors		
Interpersonal	.913**	.843**
Affective	.797**	.746**
Lifestyle	.888**	.573**

** $p<.01$

* $p<.05$

7. Analysis of the correlations between MAYSI-2 and YPI

Analyzing the correlation coefficients between each YPI Dimensions and each MAYSI-2 Dimensions (Table 20), correlation coefficients assume ρ values between $-.238$ and $.473$, in the community sample.

Statistically significant correlations were found, according to Cohen's classification criteria, at a moderate level, between YPI *Irresponsibility* and MAYSI-2 *Angry-Irritable* ($\rho=.473$, $p<.01$), YPI *Dishonest Charm* and MAYSI-2 *Angry-Irritable* ($\rho=.430$, $p<.01$), YPI *Impulsiveness* and MAYSI-2 *Angry-Irritable* ($\rho=.408$, $p<.01$), YPI *Manipulation* and MAYSI-2 *Angry-Irritable* ($\rho=.380$, $p<.05$), YPI *Lying* and MAYSI-2 *Angry-Irritable* ($\rho=.372$, $p<.01$), YPI *Thrill-seeking* and MAYSI-2 *Somatic Complaints* ($\rho=.335$, $p<.05$), YPI *Impulsiveness* and MAYSI-2 *Thought Disturbance* ($\rho=.322$, $p<.05$), YPI *Thrill-seeking* and MAYSI-2 *Angry-Irritable* ($\rho=.319$, $p<.05$), and YPI *Remorselessness* and MAYSI-2 *Angry-Irritable* ($\rho=.302$, $p<.05$). Correlations between YPI Factors and MAYSI-2 Dimensions assume ρ values between $-.103$ and $.429$. Only the YPI Factor *Lifestyle* and MAYSI-2 *Angry-Irritable* ($\rho=.429$, $p<.01$), and YPI Factor *Interpersonal* and MAYSI-2 *Angry-Irritable* ($\rho=.418$, $p<.01$), being these correlations statistically significant, at a moderate level. Considering the correlation coefficients between YPI Total Score and the MAYSI-2 dimensions, these assume ρ values between $-.049$ and $.443$, and it was found a positive and moderate statistically significant correlation between YPI Total Score and MAYSI-2 *Angry-Irritable* ($\rho=.443$, $p<.01$).

Table 20. Correlation coefficients (Spearman's Rho) between YPI Dimensions, Factors and Total Score, and each MAYSI-2 Dimension, for the community group.

		Community (N=43)					
		MAYSI-2 Dimensions					
YPI Dimensions	ADU	AI	DA	SC	SI	TD	TE
Dishonest Charm	.010	.430**	.223	-.015	-.152	.089	-.144
Grandiosity	-.061	.238	.150	.089	-.046	.087	.030
Lying	.033	.372*	.268	-.003	-.042	.300	.184
Manipulation	-.122	.380*	.223	.126	-.008	.024	-.085
Callousness	-.121	.075	-.031	.026	-.238	-.094	-.098
Unemotionality	-.004	.266	.208	.123	-.009	-.008	.076
Remorselessness	.078	.302*	.187	.154	-.039	.170	.104
Impulsiveness	.110	.408**	.281	.156	.142	.322*	.081
Thrill-seeking	.156	.319*	.236	.335*	.012	.224	.225
Irresponsibility	.055	.473**	.222	.040	-.109	.180	.094
YPI Factors							
Factor Interpersonal	-.030	.418**	.238	.025	-.063	.160	.005
Factor Affective	.007	.271	.095	.036	-.103	-.048	.120
Factor Lifestyle	.128	.429**	.276	.136	.006	.280	.151
YPI Total score	.033	.443**	.237	.112	-.049	.146	.085

**p<.01

*p<.05

NOTE: ADU (Alcohol/Drug Use), AI (Angry-Irritable), DA (Depressed-Anxious), SC (Somatic Complaints), SI (Suicide Ideation), TD (Thought Disturbance), TE (Traumatic Experiences)

Analyzing the correlation coefficients between each YPI dimensions and each MAYSI-2 dimensions (Table 21), correlation coefficients assume *rho* values between $-.429$ and $.500$, in the forensic sample. A positive, large, and statistically significant correlation was found between YPI *Thrill-seeking* and MAYSI-2 *Traumatic Experiences* ($rho=.500$, $p<.01$). A negative, moderate, statistically significant correlation was found between YPI *Callousness* and MAYSI-2 *Traumatic Experiences* ($rho= -.429$, $p<.05$). The remaining correlation coefficients are either too small or not statistically significant. Correlations between YPI factors and MAYSI-2 dimensions assume *rho* values between $-.198$ and $.398$. Statistically significant correlations were found, at a moderate level, between YPI Factor *Lifestyle* and YPI *Traumatic Experiences* ($rho=.398$, $p<.05$), and YPI Factor *Lifestyle* and MAYSI-2 *Angry-Irritable* ($rho=.356$, $p<.05$). Correlation coefficients between YPI Total Score and the MAYSI-2 dimensions range from $-.020$ to $.137$, but no statistically significant correlation was found (Table 21).

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Table 21. Correlation coefficients (Spearman's Rho) between YPI Dimensions, Factors and Total Score, and each MAYSI-2 Dimension, in the forensic sample

		Forensic (N=33)					
		MAYSI-2 Dimensions					
YPI Dimensions	ADU	AI	DA	SC	SI	TD	TE
Dishonest Charm	.117	-.097	.007	.143	.106	.094	.228
Grandiosity	.140	-.033	-.068	-.235	.004	.222	-.154
Lying	-.166	-.265	-.153	-.050	.106	-.111	.082
Manipulation	.078	-.102	-.090	-.088	.031	-.001	.122
Callousness	.000	.025	-.129	-.152	-.031	-.172	-.429*
Unemotionality	-.112	-.081	-.021	.194	.149	-.024	.049
Remorselessness	-.098	-.040	-.081	-.040	.162	-.194	-.039
Impulsiveness	-.117	.220	.120	.136	.049	-.182	.254
Thrill-seeking	.204	.340	.159	.302	.089	.076	.500**
Irresponsibility	.203	.193	.026	.201	.080	-.038	.257
YPI Factors							
Factor Interpersonal	.074	-.071	-.028	.013	.152	.040	.173
Factor Affective	-.078	-.006	-.057	.074	.108	-.198	-.106
Factor Lifestyle	.157	.356*	.154	.267	.061	-.024	.398*
YPI Total score	.033	.019	-.006	.092	.137	-.020	.118

**p<.01

*p<.05

NOTE: ADU (Alcohol/Drug Use), AI (Angry-Irritable), DA (Depressed-Anxious), SC (Somatic Complaints), SI (Suicide Ideation), TD (Thought Disturbance), TE (Traumatic Experiences)

8. Analysis of the tendency to give responses socially desirable

Considering the 17 points cutoff in the EDSC, suggested by the authors to the population in study, only 7% of the community sample, and 6% of the youths in the forensic sample, surpass this cutoff point, answering the self-report measure in accordance with what is socially desirable.

The mean total score for the community group (M=9.861; SD=4.544) is lower when compared to the mean total score for the forensic group (M=13.061; SD=3.968), although both do not come near to the 17 cutoff point. U of Mann Whitney test revealed statistically significant differences between both samples ($U=422.5$, $p<.05$).

Analyzing, now independently, for both samples, the differences in MAYSI-2 and YPI scores based on EDSC cutoff, for the community sample, scoring above the 17 points cutoff seems to only influence the scoring on MAYSI-2 *Alcohol/Drug Use* ($U=41$, $p<.05$) and *Thought Disturbance* ($U=28$, $p<.05$) (Table 22). No statistically significant differences were found

for MAYSI-2 in the forensic sample, based on high and low desirability (Table 23).

Table 22. Differences between high and low desirability (based on EDSC) – Mann-Whitney U test, in MAYSI-2 dimensions, for the community group

	High Desirability	Low Desirability	U	Z	P
	Mean	Mean			
ADU*	.67	.02	41	-2.482	.013
AI*	1.67	.93	45.5	-.749	.459
DA*	1.33	.70	56.5	-.194	.847
SC*	1.00	.75	60	.000	1.000
SI*	.000	.22	54	-.568	.570
TD*	1.00	.20	28	-2.376	.018
TE*	2.00	.67	33.5	-1.419	.156

NOTE: ADU (Alcohol/Drug Use), AI (Angry-Irritable), DA (Depressed-Anxious), SC (Somatic Complaints), SI (Suicide Ideation), TD (Thought Disturbance), TE (Traumatic Experiences)

Table 23. Differences between high and low desirability (based on EDSC) – Mann-Whitney U test, in MAYSI-2 dimensions, for the forensic group

	High Desirability	Low Desirability	U	Z	P
	Mean	Mean			
ADU*	1.50	2.44	68.5	-.596	.551
AI*	4.17	3.07	62	-.900	.368
DA*	3.33	1.59	47.5	-1.599	.110
SC*	1.67	1.37	72.5	-.411	.681
SI*	1.83	.85	54.5	-1.343	.179
TD*	.67	.67	71	-.517	.605
TE*	2.83	2.52	65.5	-.748	.485

NOTE: ADU (Alcohol/Drug Use), AI (Angry-Irritable), DA (Depressed-Anxious), SC (Somatic Complaints), SI (Suicide Ideation), TD (Thought Disturbance), TE (Traumatic Experiences)

Conducting the same analysis, but now with YPI dimensions, results have shown that for the community sample, only the dimension *Lying* seems to suffer alterations induced by social desirability ($U=18$, $p<.043$). The remaining dimensions do not reveal statistical significant differences based on social desirability (Table 24).

Table 24. Differences between high and low desirability (based on EDSC) - U of Mann Whitney test), in YPI dimensions, for the community sample

	High Desirability	Low Desirability	U	Z	P
	Mean	Mean			
Dishonest Charm	1.867	1.735	44.5	-.747	.455
Grandiosity	1.667	1.750	54.5	-.265	.791
Lying	2.533	1.735	18	-.202	.043
Manipulation	1.667	1.650	56.5	-.169	.866
Callousness	2.000	1.905	40.5	-.943	.346
Unemotionality	2.133	2.120	59.5	-.024	.981
Remorselessness	2.267	2.015	26	-1.632	.103
Impulsiveness	2.533	2.145	36	-1.154	.249
Thrill-seeking	2.533	2.235	39	-1.008	.313
Irresponsibility	2.267	1.755	22.5	1.804	.071

In the forensic sample, and regarding the measure YPI, no statistically significant differences were found, based on social desirability (Table 25).

Table 25. Differences between high and low desirability (based on EDSC) – Mann-Whitney U test, in YPI dimensions, for the forensic group

	High Desirability	Low Desirability	U	Z	P
	Mean	Mean			
Dishonest Charm	2.000	1.970	73	-.377	.706
Grandiosity	1.666	1.948	60	-.987	.324
Lying	2.033	1.889	78	-.142	.887
Manipulation	1.800	2.059	63	-.847	.397
Callousness	2.000	2.285	58	-1.083	.279
Unemotionality	2.100	2.392	59	-1.044	.296
Remorselessness	1.800	2.044	61.5	-.916	.360
Impulsiveness	2.200	2.600	45.5	-1.673	.094
Thrill-seeking	2.467	2.911	62.5	-.872	.383
Irresponsibility	2.233	2.800	43.5	1.776	.076

V - Discussion

The present study showed good results for MAYSI-2 internal consistency for both samples tested (forensic and community). The measure was originally normed based on a sample of detained youths in the United States of America, and therefore originally designed to assess forensic samples. Nevertheless, in the present study internal consistency, examined through Cronbach's alpha, showed similar results for this measure with both samples – between .494 (*Thought Disturbances*) and .824 (*Suicide Ideation*), in the community sample, and between .356 (*Thought Disturbances*) and

.829 (*Angry-Irritable*), in the forensic sample.

In the present study, and now only taking into consideration the forensic sample, MAYSI-2 internal consistency assumes alpha values similar to those found by Ferreira (2012), that ranged between .36 (*Somatic Complaints*) and .81 (*Suicide Ideation*). These results are also partially consistent with previous MAYSI-2 studies, on which alpha values ranged from .61 to .86 (Grisso et al., 2001), and from .50 and .86 (Butler et al., 2007). The similarities between both samples in the internal consistency reaffirm the utility and applicability of MAYSI-2 to populations unrelated to the forensic field.

The different internal consistency and prevalence rates values throughout different investigations, regarding MAYSI-2, but also YPI, may be due to different methodologies, and variables not controlled in the present study, such as ethnicity, education, number of institutionalizations, or other demographic variables. The limitations of the study (mentioned below) also must be taken into consideration.

Regarding the psychopathology most reported by the youths belonging to the community sample, the MAYSI-2 dimensions registering higher prevalence rates, are *Thought Disturbance* (16.3%), *Depressed Anxious* (11.6%), *Traumatic Experiences* (11.6%) and *Somatic Complaints* (9.3%), followed by, *Suicide Ideation* (4.7%), *Angry Irritable* (2.3%), and *Alcohol/Drug-Use* (0%). Although *Suicide Ideation* is not one of the most endorsed dimensions, the prevalence rate associated to it occurs due to the youths scoring above the *Warning* cutoff point, and therefore should be considered a concerning area in the community youths mental health.

Prevalence rates among the youth offenders, as expected, do not follow the same distribution, with the dimensions most conceptually correlated to the externalizing psychopathology evidencing higher prevalence rates, after *Traumatic Experiences* (57.6%), *Thought Disturbance* (36.4%), *Angry-Irritable* (33.3%), *Depressed-Anxious* (30.3%), are the dimensions with higher prevalence rates in the forensic sample, followed by *Alcohol/ Drug Use* (27.3%), *Suicide Ideation* (24.3%) and *Somatic Complaints* (24.2%). These results are similar with the prevalence rates found by Ferreira (2012). This distribution is also in part similar to those found in the literature.

The present study also found that a bigger percentage of youths, in the forensic sample, score above the *Caution* (21.2%) and *Warning* (9.1%) cutoffs in least one MAYSI-2 dimension, when compared to the community sample (14% and 9.3%, respectively). The differences between the two samples are even more evident if taken into consideration that 48.5% of the youths in the forensic sample score above the *Caution* cutoff, and 15.2% above the *Warning* cutoff, in two or more MAYSI-2 dimensions.

The differences found between the two samples revealed statistical significance.

The results show evidences of higher rates of mental health problems in youths in contact with the juvenile justice system, as also higher rates of comorbidity. This is in part consistent with previous investigations, like the study conducted by Teplin and colleagues (2002), stating that approximately 66% of detained youths meet criteria for at least one mental health problem, and the study conducted by Shufelt and Coccozza (2006), stating that 70.4% of youth offenders meet criteria for at least one mental health problem, and that 79% of those youths meet criteria for two or more diagnosis.

Despite the higher percentage of youth offenders scoring above the clinical cutoff point, and in a larger number of MAYSI-2 dimensions, these rates were not as high as the ones found in previous investigations. This may be due to some limitations, like the over testing that the group has been subjected, the tendency to under report some mental health issues, and the duration of the institutional measures, better addressed later on this paper.

The existence of higher levels of comorbidity in youths, in contact with the juvenile justice system, also gains consistency by analyzing inter-dimensions correlations in the MAYSI-2 measure, in the forensic sample. A larger number of positive, large and statistically significant correlations between MAYSI-2 dimensions, when compared to the community sample. The correlations with most relevance are the ones found between the dimensions *Somatic Complaints* and *Depressed Anxious, Thought Disturbances* and *Depressed-Anxious, Suicide Ideation* and *Depressed-Anxious, Suicide Ideation* and *Somatic Complaints*, *Somatic Complaints* and *Angry-Irritable*, *Angry-Irritable* and *Alcohol/Drug Use*, *Thought Disturbances* and *Alcohol/Drug Use*, *Traumatic Experiences* and *Angry-Irritable*, and *Traumatic Experiences* and *Depressed-Anxious*. These large

correlation coefficients alert us to the importance of considering the interaction between mental health problems and symptoms, and how they may affect the mental health, social reintegration, and the youth's conduct, and reinforce the good psychometric properties of MAYSI-2 applied to forensic settings youths.

Directing the attention to the psychopathic traits, as expected, the youths in the forensic sample score higher, and in a larger number, of YPI dimensions, as well in YPI factors and in the inventory total score. These differences revealed to be statistically significant, with the exception of the scores on *Remorselessness* dimension. The YPI dimensions with the highest prevalence rates, in the forensic sample, are *Thrill-seeking* (78.8%), *Irresponsibility* (66.7%), *Impulsiveness* (54.5%), *Callousness* (36.6%), and *Unemotionality* (30.3%), followed by *Manipulation* (24.2%), *Remorselessness* (21.2%), *Dishonest Charm* (15.2%), *Grandiosity* (12.1%) and *Lying* (12.1%). Prevalence rates in the YPI factors, for the same sample, are distributed as follows: Factor 3: *Lifestyle* (69.7%), Factor 2: *Affective* (27.3%) and Factor 1: *Interpersonal* (12.1%).

The higher prevalence attributed to the dimensions/traits *Thrill-seeking*, *Irresponsibility* and *Impulsiveness*, may reveal and sustain one of the major critics to the psychopathy construct applied to youths: the adolescence is a period characterized by considerable developmental changes, and more intensive sensation seeking, impulsivity, what can translate into higher scores on psychopathic traits (Dolan & Rennie, 2007; Edens et al., 2001; Seagrave & Grisso, 2002). Although this should not motivate a lack of regard for these high rates, as these traits play an important role in youths engaging in risk conducts and offending behaviors.

Prevalence rates in the YPI dimensions (psychopathic traits) and factors not only do not follow the same distribution as the forensic sample, as are substantially lower. *Thrill-seeking* (34.9%), *Impulsiveness* (30.2%) and *Unemotionality* (11.6%) are the dimensions with the highest prevalence rates for the community sample, followed by *Remorselessness* (9.3%), *Grandiosity*, *Lying*, *Callousness* and *Irresponsibility* (all with a percentage of 7%), and *Manipulation* (2.3%). For the community sample, the Factor 3: *Lifestyle* (16.3%), followed by Factor 1: *Interpersonal* (9.3%) and Factor 2: *Affective* (4.7%). Regarding YPI Total Score, 24.2% of the youth offenders

surpass the 2.5 cutoff point, compared to the 9.3% of community youths who score above the same point, and meet criteria for a psychopathy diagnostic, although this cannot be established without further comprehensive assessment.

The youths in the forensic sample, also endorse a higher number of combined dimensions (psychopathic traits), with 33.3% of the youths scoring high in five or more dimensions.

These higher psychopathic traits prevalence in the youth offenders find corroboration and gain consistency in previous reports of moderate correlations between YPI and previous antisocial and offending behaviors (Andershed et al., 2002).

The present study also revealed good psychometric properties for YPI internal consistency for both samples tested. The inventory was originally normed based on a sample of youths with no previous contacts with the juvenile justice system in Sweden, and therefore originally designed to assess community samples. Nevertheless these data, in the present study internal consistency, examined through Cronbach's alpha, showed similar results for this measure with both samples – between .391 (*Callousness*) and .817 (*Dishonest Charm*), in the community sample, and between .472 (*Irresponsibility*) and .788 (*Thrill-seeking*), in the forensic sample. These values, especially for the forensic sample, are consistent with the alpha values found by Silva, Motta and Rijo (2015), in a sample of detained youths, ranging between .605 and .795.

The similarities in the internal consistency reaffirm the utility and applicability of YPI, as for MAYSI-2, to both samples, as already was confirmed by previous authors and investigations. These similarities are extended to the internal consistency calculated to the three YPI factors, and to YPI Total Score, that assumed alpha values of .938 and .908, for the community and the forensic samples, respectively. These results are also consistent with previous investigations as the first (unpublished study) conduct with Portuguese (community) samples showed an alpha value of .936 for the total scale (Simões, Gonçalves e Lopes; *cit in* Silva, Motta and Rijo, 2015), and with the alpha value of .939 obtained in the investigation conducted by (Silva, Motta and Rijo, 2015) with a sample of detained youths.

Analyzing the correlations between the measures YPI and MAYSI-2, and the relations between self-reported psychopathic traits and the perceived presence of mental health issues, were found moderate positive correlations between YPI *Irresponsibility* and MAYSI-2 *Angry-Irritable* (.473), YPI *Dishonest Charm* and MAYSI-2 *Angry-Irritable* (.430), YPI *Impulsiveness* and MAYSI-2 *Angry-Irritable* (.408), YPI *Manipulation* and MAYSI-2 *Angry-Irritable* (.380), YPI *Lying* and MAYSI-2 *Angry-Irritable* (.372), YPI *Thrill-seeking* and MAYSI-2 *Somatic Complaints* (.335), YPI *Impulsiveness* and MAYSI-2 *Thought Disturbance* (.322), YPI *Thrill-seeking* and MAYSI-2 *Angry-Irritable* (.302), in the community sample. These results must be understood carefully, as the prevalences for both mental health needs and psychopathic traits in this sample were low.

Nevertheless, as high scores on MAYSI-2 *Angry-Irritable* are known to be related to impulsive reactions in ways that the youths can cause harm to themselves or others, and given that this dimension is the most significantly correlated to YPI scales and factors, we may consider that these instruments, in the community sample, may be helpful in signaling those youths at risk of impulsive behaviors or aggression, when under frustration (Grisso & Barnum, 2014).

The number of significant correlations between YPI and MAYSI-2 is lower in the forensic sample, unlike what was initially expected. A positive, large correlation was found between YPI *Thrill-seeking* and MAYSI-2 *Traumatic Experiences* (.500). It was also found a negative, moderate correlation between YPI *Callousness* and MAYSI-2 *Traumatic Experiences* (-.429), showing that the experience of victimization, may not be related to the emotional blunting in these youths.

It is important to note that the YPI dimensions most endorsed by the youths from both samples, and the ones with better correlations with the self-reported mental health needs, are the ones related to a behavioral dominion and acting out, theoretically associated with more frequent and severe antisocial behaviors. These also emerge often moderately associated with MAYSI-2 *Angry-Irritable*, proven to be useful in signaling conduct, behavioral and anger-management problems, also theoretically associated to higher risk and more severe offenses.

In light of Forth and Burke's findings (1998), it was expected to be

found in the present study a positive association between psychopathic traits and YPI Total score, and the MAYSI-2 dimension *Alcohol/Drug Use* in youth offenders sample. As the *Alcohol/Drug Use* prevalence is also lower than expected, these findings may be influenced by the duration of the measure applied to each youth. As MAYSI-2 reports to the last 6 months, considering that the average number of days elapsed between the youths intake to the YDC and the date of assessment is 274 days (SD=236.01), and that the institutions internal rules do not allow the consumption of any substance, the majority of the subjects did not take any substance it that time span, and therefore, did not reported it.

Despite the opposed findings on previous investigations regarding the relation between psychopathic traits and negative affect and suicide ideation, no significant relations were found between these in the present study in any of the samples, when correlating the measures YPI and MAYSI-2. For both samples the correlations are statistically insignificant and very close to zero.

In the forensic sample, both YPI Factor *Lifestyle* and YPI Factor *Interpersonal* positively correlate with the MAYSI-2 dimension *Angry-Irritable*. As for the forensic sample YPI Factor *Lifestyle* positively correlates with MAYSI-2 dimension *Angry-Irritable* and *Traumatic Experiences*.

The MAYSI-2 dimension that shows a higher correlation with YPI Total Score is the dimension *Angry-Irritable*, in the community sample. In the forensic sample there are no significant correlations between YPI Total Score and any of MAYSI-2 dimensions.

Consistent with findings from previous researches, higher prevalence of *Traumatic Experiences* were found in the youth offenders sample, when compared to the youths in the community sample, as also, the forensic sample is the only with positive associations between this MAYSI-2 dimension and psychopathic traits. These findings are also partially consistent with the findings of Lastly, Krischer and Sevecke (2008), who found an association between early physical and emotional victimization and psychopathy, in detained boys. Early physical and emotional traumatic experiences are seen as having a negative influence on the development of the self-regulation of anger and affect, raising the risk factor for these youths to be involved in more numerous and severe offenses.

MAYSI-2 and YPI revealed convergent validity, mainly on scales theoretically related to the expression of conduct problems, attention problems, and aggressive and impulsive behavior. Their combined administration may be useful in order to signal youths at risk of social misconduct and delinquent or aggressive behaviors, in community or institutional settings.

The findings obtained in the present investigation must be read and understood in light of some limitations.

First, the finding of mental health needs prevalence and psychopathic traits relied solely on information from self-reports, not being possible to obtain information from parents or teachers.

As mentioned before, youths in forensic settings tend to underreport some mental health needs, especially substance use disorders. In the present forensic sample, the group is constituted by youths who comprise detention measures for an average of 274 days, not being able to use drugs or ingest alcohol, as also, the strict rules of the YDC also do not allow a large number of behaviors that would probably be reported if the youth was in his habitual surrounding, such as direct aggressions to others or stealing, for example. It was of significant relevance for future investigations to be able to administrate the same measures, but only with samples of youths at the moment of intake, or few days later, as it is recommended by MAYSI-2 authors (Grisso et al., 2001).

Also considering the forensic sample, it would have been useful and of interest to include a measure of verbal intelligence. Although all measures are validated to the reading levels of both samples, it was possible to observe, at the moment of the administration of the protocol, reading difficulties on the forensic setting youths, that would be relevant to assess and quantify in order to understand their influence in the responses given, as all measures are based on self-reports.

Other limitation that may be hindering the findings of the present study is the overtesting under which both populations are subjected, especially in the forensic setting. With the increased interest in the mental health needs in the adolescence period, there is a growing number of investigations being conducted with these age brackets. As juvenile delinquents are a minority, compared to the general adolescent population,

and with these youths contacting repeatedly with the system, starting at very young ages, they have been subjected to repeated assessments and integrated various investigations. It is also important to take into account that the number and variety of validated measures for these populations in the Portuguese context is also reduced, raising the possibility of the youths already knowing the measures and instruments at the time of the administration of the protocol.

The length of the protocol may also have been an issue, as youths tended to lose focus throughout the answering process.

Additionally, the nature of the study, although facilitating some clues about the relations between psychopathy and other forms of psychopathology, does not permit the drawing of conclusions about any causal linkage between the variables in study or about the stability of these traits.

Also, it is important to note that the increased interest in applying the psychopathy construct to the youthful populations is not risk free. Labeling psychopathy in childhood/adolescence may prove to be difficult as the psychopathy “classification” tends to have a weight in legal procedures. Thus, it is important to ensure greater accuracy in psychopathy assessment and in the diagnoses made. Identifying young psychopaths can help the justice system identify youths at risk of getting involved in delinquency (Frick, 2002), and also improve and optimize therapeutic interventions. The objective has to be early intervention, while personality traits are relatively flexible, leading adolescents towards more prosocial behaviors (Frick, 2002).

Despite the findings not being representative to the populations of which the samples were extracted, as these are also quite small, both measures revealed good psychometric properties for both samples tested.

MAYSI-2 revealed to be an important instrument in the identification of youths’ mental health needs, as also in the identification of youths at risk for conduct problems, impulsive and/or aggressive behaviors, due to the relations identified between this instrument and YPI, mainly for the community sample. Further investigation is needed in order to understand why the relation between both measures did not follow the results expected, and found in previous investigations.

We consider that the combined administration of MAYSI-2 and YPI may be of value as screening tools for cases requiring further assessment, although a more extensive protocol and evaluation is advised, in order to clarify these relations and the impact on the youths.

VI - Conclusions

The main goal of the present investigation was to continue the MAYSI-2 validation program in the Portuguese population, and to analyze to what extent the relations between psychopathology symptoms and psychopathic features are high in adolescent males.

Confirming the data obtained in previous studies, MAYSI-2 identified a higher prevalence of comorbidity of mental health problems in the forensic sample, as the prevalence of psychopathic traits identified through YPI was also higher in the same sample. Therefore, the results suggest that forensic setting youths are in great need for mental health interventions, and at greater risk of harming themselves and others. The findings of this study justify the increasing attentions being paid to the mental health needs of the youths enrolled with the juvenile justice system. The high mental health needs prevalence found, support the identified and estimated need of accurate assessment and identification of those specific most urgent issues, for a better identification of those youths in greater risk for mental-health related issues and of recidivism and more frequent and severe offenses.

MAYSI-2 and YPI revealed convergent validity on scales theoretically related to the expression of conduct problems, attention problems, and aggressive and impulsive behavior. Their combined administration may be useful in order to signal youths at risk of social misconduct and delinquent or aggressive behaviors, in community or institutional settings.

The high mental health needs ratings are motive of concern given their potential impact on the rehabilitation process, especially if considered the high self-reported anger and irritability. These are of particular importance for the most chronic and severe juvenile offenders, who are more prone to experience greatest intensity of mental health concerns (Stewart & Trupin, 2003). Although the recidivism is not a variable in study, considering the age

of first contact with the juvenile justice system, the vast majority of the youths in the forensic sample had previous, and repeated offenses, and therefore it would be interesting and of relevance to conduct posterior investigations in order to understand the relation between these repeated contacts with the juvenile justice system and self-reported mental health needs and psychopathic traits, and how both interact to facilitate or hinder the youths rehabilitation and social reintegration process.

Previous researches and literature, as the findings of the present study, do not point to a specific and established pattern of relations between mental health needs and psychopathy and psychopathic traits. Many have reservations in extending the construct and some diagnosis to the adolescence period, as findings throughout different methodologies, samples and countries, are not consistent to each other, and due to the inconsistency and change that characterize the adolescence period.

For posterior investigations, it would be interesting and important to evaluate sex differences in community and forensic setting samples, as also to resort to regression models to calculate and evaluate the influence of externalizing and internalizing variables on predicting psychopathy.

The findings of the present study point some clues of relevant interactions, but additional research is needed to explore the developmental trajectories associated with psychopathic features in youths, and its relation to other mental health needs.

A way to better understand the influence and interaction of different traits and disorders is to analyze their expression and impact over time. When psychopathic traits appear only after the onset of another form of psychopathology, it is likely that the initial syndrome has influenced the appearance of the psychopathic features, facilitating or even hindered their expression. Longitudinal methods are essential in order to clarify the onset and developmental trajectories of the psychopathic traits, when and if associated to other forms of psychopathology, especially on those who end up compromising a prosocial integration.

MAYSI-2 continues to reveal its utility and validity among juvenile delinquents, to identify mental health needs among this population, and have also revealed to be useful in identifying those youths with higher probability of reoffend or causing harm to themselves or to others, for both samples.

For future studies, for better establishment of the applicability of the measure in identifying more aggressive and impulsive youths, the analysis of concurrent validity with specific measures of these constructs is recommended.

More validity studies with this measure are needed in order to establish its validity for the Portuguese population, in other mental health needs identified.

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Appendix A – YPI: Internal Validity

Table 16. Inter-dimensions correlations (YPI) for the community sample

	Community (N=43)									
	Dishonest Charm	Grandiosity	Lying	Manipulation	Callousness	Unemotionality	Remorselessness	Impulsiveness	Thrill-seeking	Irresponsibility
Dishonest Charm	-									
Grandiosity	.595**	-								
Lying	.711**	.540**	-							
Manipulation	.786**	.665**	.789**	-						
Callousness	.204	.061	.188	.195	-					
Unemotionality	.426**	.629**	.378*	.524**	.118	-				
Remorselessness	.500**	.402**	.560**	.542**	.229	.563**	-			
Impulsiveness	.591**	.470**	.644**	.589**	-.004	.371*	.485**	-		
Thrill-seeking	.525**	.310*	.675**	.588**	.245	.253	.301*	.585**	-	
Irresponsibility	.666**	.446**	.693**	.745**	.388*	.318*	.460**	.492**	.653**	-

**p < .01

*p < .05

Table 17. Inter-dimensions correlations (YPI) for the forensic sample

		Forensic (N=33)									
		Dishonest Charm	Grandiosity	Lying	Manipulation	Callousness	Unemotionality	Remorselessness	Impulsiveness	Thrill-seeking	Irresponsibility
Dishonest Charm	-										
Grandiosity	.461**	-									
Lying	.706**	.230	-								
Manipulation	.789**	.491**	.668**	-							
Callousness	-.157	.056	.072	.045	-						
Unemotionality	.661**	.393*	.605**	.611**	.092	-					
Remorselessness	.481**	.329	.587**	.569**	.224	.717**	-				
Impulsiveness	.172	.120	.155	.064	-.029	.398*	.522**	-			
Thrill-seeking	.497**	.232	.041	.224	-.360**	.419*	.277	.585**	-		
Irresponsibility	.125	.214	-.151	-.018	-.143	.461**	.301	.492**	.653**	-	

**p<.01

*p<.05