The Inventory of Callous–Unemotional Traits: Psychometric properties among referred and non-referred Portuguese female juveniles☆,☆☆

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ABSTRACT

The presence of callous–unemotional (CU) traits delineates a subgroup of male youth with severe conduct disorder and antisocial behavior, but little research has been done among female youth. Drawing on 377 female adolescents (103 selected from forensic settings and 274 selected from school settings) from Portugal, the current study is the first to simultaneously examine the psychometric properties of the Inventory of Callous–Unemotional Traits (ICU) in incarcerated female youth and community youth. The results support the use of the ICU in terms of its factor structure, and internal consistency despite the fact an item had to be removed from the Callousness dimension. Statistically significant positive associations were found with measures of psychopathic traits and aggression, as well as non-significant associations with empathy and social anxiety. Significant associations were also found with several indicators of delinquent careers including age of criminal onset, age of first contact with the law, Conduct Disorder symptoms and diagnosis, crime seriousness, previous violent offending, number of criminal charges, alcohol use, and drug use. Findings are discussed in terms of the use of the ICU among female juvenile offenders and community youths.

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1. Introduction

Psychopathy is a multidimensional personality disorder consisting of interpersonal (e.g., narcissistic, superficial, and manipulative), affective (e.g., callous, guiltless, and remorseless), and behavioral (impulsive and antisocial behaviors) dimensions (e.g., Hare & Neumann, 2008). Individuals with psychopathic traits tend to show a particularly persistent and severe pattern of antisocial behavior (e.g., violence, aggression, and legal transgressions; e.g., Gendreau, Goggin, & Smith, 2002; Hemphill, Hare, & Wong, 1998). The extension of psychopathy to

youth has become a salient goal of research (e.g., Pechorro, Jiménez, Nunes, & Hidalgo, 2016). One potentially fruitful approach to this has been through the application of the affective features of psychopathy to youth. As such, the construct of callous–unemotional (CU) traits have been found to demarcate a subgroup of conduct-disordered youth who begin engaging in problematic behaviors at a very early age and have a tendency to persist in such behaviors with increasing frequency and severity (Barry et al., 2000). Youth with CU traits are characterized as lacking remorse or guilt, having a deficient affect, and a callous disregard for others (Frick, Ray, Thornton, & Kahn, 2014). Recently, the "With Limited Prosocial Emotions" specifier to conduct disorder was adopted into the DSM-5 in order to help guide clinical diagnoses of this subgroup of youth who tend to show a particularly stubborn responsiveness to treatment reflecting the clinical relevance of identification of these youth (Frick et al., 2014). Therefore, accurate measurement of CU traits for both clinical and research purposes has become paramount.

Given the recent downward extension of psychopathy to youth, several measures have been developed to assess the psychopathy construct including semi-structured assessments such as the Psychopathy Checklist: Youth Version (PCL: YV; Forth, Kosson, & Hare, 2003) as well as several self-report measures including the Antisocial Process Screening Device (APSD; Frick & Hare, 2001), the Childhood Psychopathy Scale (CPS; Lynam, 1997), and the Youth Psychopathy Index (YPI;

Andershed, Kerr, Stattin, & Levander, 2002). While these measures include subscales specifically tapping the CU component of the general psychopathy construct, the Inventory of Callous–Unemotional (ICU) traits (Kimonis et al., 2008) was designed as a stand-alone, comprehensive measure of CU traits. An extensive body of research has emerged that has provided evidence for the ICU as a valid measure of the CU construct (Frick et al., 2014).

Despite the emergence of such measures and the importance of CU traits in identifying a clinically important subgroup of antisocial youth, few studies have been concerned with the assessment of these traits among female youth. Results from a few studies have suggested that measures of CU traits, namely the ICU, performs equally well for both girls and boys (e.g., Essau, Sasagawa, & Frick, 2006; Fanti, Frick, & Georgiou, 2009; Kimonis et al., 2008). However, these studies have typically relied on mixed-gender, community-based samples of youth. More research is needed to evaluate the psychometric properties of the ICU among justice involved samples of female juveniles.

1.1. CU traits among girls

There is some evidence to suggest that there may be gender difference in both the level and manifestation of CU traits. It has been suggested that gender differences in socialization processes as well as biological differences between males and females may account for differences in average levels of CU traits (Hipwell et al., 2007). For instance, cultural norms shape gender specific socialization processes that tend to promote empathic concern, fearfulness, risk-taking, and emotional expression among girls (Byrnes, Miller, & Schafer, 1999; Hipwell et al., 2007; Keenan & Hipwell, 2005). Girls are also more likely to experience internalizing disorder (e.g., depression, anxiety, phobias) that co-occur with externalizing behaviors such as conduct disorder (e.g., Wasserman, McReynolds, Ko, Katz, & Carpenter, 2005). Such traits are inconsistent with the concept of CU traits and suggest gender differences in pathways leading to severe conduct disorder (CD), which may account for differences in mean levels of CU traits among males and females. Indeed, research consistently finds that males show significantly higher mean levels of CU traits across different samples regardless of the measure (Declercq, Markey, Vandist, & Verhaeghe, 2009; Essau et al., 2006; Fanti et al., 2009; Kimonis et al., 2008). Most notably, Essau et al. (2006) and Kimonis et al. (2008) compared mean scores on the ICU across males and females. Both studies found that males scored higher on the ICU total and its three subscales compared to females.

Nonetheless, a few studies have suggested that CU traits play an important role in understanding pathways to severe conduct disorder among females (Essau et al., 2006; Frick, Cornell, Barry, Bodin, & Dane, 2003; Marsee, Silverthorn, & Frick, 2005) and that CU traits may identify a particularly deviant subgroup of antisocial females (e.g., Hipwell et al., 2007). Importantly, a growing body of research suggests that CU traits may manifest differently among females compared to males as evidenced in gender differences in the association between CU traits and externalizing behaviors. For instance, Frick et al. (2003) found that CU traits alone (i.e., occurring without CD) are predictive of delinquency while CU traits were only predictive of delinquency when co-occurring with CD for boys. Similarly, Marsee et al. (2005) found that CU traits were associated with relational and overt aggression for females but not males. Although Essau et al. (2006) found a positive association between CU traits and conduct disorder for males and females, the association was stronger among females. Kimonis et al. (2008) also found CU traits to be associated with violent delinquency for females but not males among a detained sample of youth. Declercq et al. (2015) recently found that, among a community sample of adolescents, CU traits were associated with serious property offending for girls but not boys. Thus, it appears that there may be gender specific manifestations of CU traits and that CU traits may be an especially relevant factor in understanding female externalizing behaviors.

Research has also suggested that CU traits may manifest themselves differently across gender with regard to other life domains leading to unique negative outcomes for males and females. For instance, research has suggested that CU traits associate differently among girls and boys with regard to psychosocial impairment. One study found that the association between CU traits and negative peer associations was significant for girls but not boys (Essau et al., 2008). Research has also found that CU traits show some unique associations with certain individual characteristics for girls, particularly internalizing disorders. Among a sample of girls, Hipwell et al. (2007) found that CU traits were associated with depressed mood and generalized anxiety, an association not typically found among male or mixed-gender samples (e.g., Frick, Lilienfeld, Ellis, Loney, & Silverthorn, 1999; Frick & Ray, 2015; Rowe et al., 2010). Likewise, Essau et al. (2006) found that CU traits were positively associated with internalizing disorders and emotional instability for girls but not boys and also found a positive association between CU traits and experience seeking for girls but not boys. Although not thoroughly explored, these findings do suggest that associations between CU traits and certain external criteria differ across gender and highlight the importance of evaluating measures designed to assess CU traits among samples of females.

1.2. Psychometric properties of the ICU

The ICU (Kimonis et al., 2008) was developed to address the limitations of the Antisocial Process Screening Device (APSD; Frick & Hare, 2001). That is, the ICU was designed to be a more comprehensive measure of CU traits and expanded the number of items that tapped into the CU construct from the four items of the APSD to 24 items. Based on empirical evaluations, six items were derived from each of those four items of the APSD that continued to show the most construct validity regarding CU traits (Forth et al., 2003; Frick, Bodin, & Barry, 2000). In order to limit response bias, the ICU was developed to have an even number of positively and negatively worded items in which individuals respond using a 4-point response set (see measure description below; Kimonis et al., 2008).

Several studies examining the psychometric properties of the ICU across a diverse range of samples have found fairly consistent support for both the reliability and validity of the ICU. That is, the majority of studies examining the factor structure of the ICU support a bi-factor model in which a general CU factor accounts for associations among all items as well as three distinct factors (Callousness, Uncaring, and Unemotional) accounting for unique associations among groupings of items (Byrd, Kahn, & Pardini, 2013; Ciucci, Baroncelli, Franchi, Golmaryami, & Frick, 2014; Essau et al., 2006; Ezpeleta, de la Osa, Granero, Penelo, & Domenech, 2013; Fanti et al., 2009; Houghton, Hunter, & Crow, 2013; Kimonis, Branch, Hagman, Graham, & Miller, 2013; Kimonis et al., 2008; Pechorro, Ray, Barroso, Maroco & Gonçalves, 2016; Roose, Bijttbier, Decoene, Claes, & Frick, 2010; Waller et al., 2015; for a 5-factor alternative solution see Feilhauer, Cima, & Arntz, 2012). Across these studies the reliability of the ICU and its subscales has been less consistent. For instance, reliability coefficients (i.e., Cronbach's alphas) ranged from .77–.93 for the ICU total, .59–.88 for the Callousness scale, .55–.87 for the Unemotional scale, and .47–.87 for the Uncaring scale. The majority of studies, however, have examined the psychometric properties of the ICU among all male or mixed-gender samples and only a few studies have examined whether the CU construct differs across gender as measured by the ICU.

For the most part, studies suggest that there is consistency across males and females with regard to both factor structure and reliability of the ICU (Essau et al., 2006, Fanti et al., 2009; Houghton et al., 2013; Kimonis et al., 2008; Waller et al., 2015). Studies utilizing mixed gender samples have found adequate fit for the three bi-factor model (Fanti et al., 2009; Kimonis et al., 2008; Roose et al., 2010). The majority of those studies that have examined gender differences in the factor structure of the ICU suggest that the identified bi-factor structure is invariant