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General introduction
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Introduction

The absolute majority of children behaves bad at times. However, some children show extreme and hence worrisome levels of ‘badness’. They lie, they bully, they fight or steal. These children are known to be at risk for developing a persistent pattern of antisocial behavior, delinquency and aggression. There are many risk-factors associated with these types of conduct problems. These include, in addition to individual characteristics, peer, familial and neighborhood factors. In particular, the study of children’s personality traits may help further our understanding of the development of serious problem behavior in youth. In adulthood and adolescence, a specific constellation of personality traits named ‘psychopathy’ has proven useful in identifying a particularly recalcitrant form of antisocial and criminal behavior (Cleckley, 1941; Forth, Kosson, & Hare, 2003; Hare, 2003). Recent studies have shown that psychopathic traits can be reliably measured in children age 12 and younger as well, and that they may help to identify unique pathways in the development of antisocial behavior in youth (see Frick & White, 2008; Frick & Dickens, 2006; Johnstone & Cooke, 2004; Kotler & McMahon, 2005; Lynam & Gudonis, 2005 for reviews).

As current research on psychopathic traits at a young age is still limited, insight in the phenomenon is far from complete. Therefore, the present thesis seeks to enhance our understanding of this concept in preadolescent children (age 9–12). First, it investigates a new assessment tool which provides a previously unexplored perspective on psychopathic traits in preadolescent children: that of the child itself. This is important because children are in the unique position to report on feelings, attitudes and behaviors across a range of situations, including the home, the classroom and the playground. Second, it seeks to provide a deeper understanding of the nature of psychopathic traits and their relations to problematic socio-emotional functioning.

Psychopathy

Even though recent years have seen a notable increase in research on psychopathy, particularly in adolescents, the concept is by no means new. First known descriptions date from at least two centuries ago, around 1800. Philippe Pinel, (1745–1826) viewed by many as the father of psychiatry, used the term insanity without delirium (‘manie sans délire’) to describe behavior marked by remorselessness but without loss of reason. However, it was not until Hervey Cleckley’s book ‘The Mask of Sanity’ was published in 1941 that the specific traits of this disorder were first listed (Cleckley, 1941). In his book, Cleckley described 15 male and female patients that he considered prototypical psychopaths. Because these patients showed severely disturbed behaviors, but were free from obvious signs of mental illness such as delusions or irrational thinking, he considered them to wear ‘a mask of sanity’. He identi-
fied 16 personality traits that he believed captured the core of the psychopathic personality. Among these were: superficial charm, untruthfulness and insincerity, a lack of remorse and shame, pathological egocentricity and incapacity for love and a failure to follow any life plan. In the ‘80s and ‘90s of the twentieth century, it was attempted to operationalize the Cleckley psychopath by developing the Psychopathy Checklist (PCL, Hare, 1980) and its revised version the PCL-R (Hare, 1991, 2003). Currently, this instrument is considered to be the gold standard for assessing psychopathy and it has been the basis of much of what we know about adult psychopathy.

Over 25 years of research on psychopathy in adults, predominantly by means of the PCL-R, has shown it to be a reliable and valid construct, solidly related to concurrent and future socially harmful behaviors (e.g. Douglas, Vincent, & Edens, 2006; Hare, 2003). For example, offenders high in psychopathic traits commit both more and more varied crimes than offenders with low levels of these traits (e.g. Hare, 2003; Kosson, Smith, & Newman, 1990). The crimes they commit are more violent in nature, and they show a particular disposition toward a premeditated, cold-blooded type of violence (Cornell et al., 1996; Porter & Woodworth, 2006).

More recently, the concept of psychopathy was extended downward to adolescents. In this age group, findings have been very similar to adults (e.g. Das, De Ruitter, Lodewijks, & Doreleijers, 2007; Forth et al., 2003; Vitacco, Neumann, Caldwell, Leistico, & Van Rybroek, 2006).

While it is commonly accepted that psychopathy is multi-faceted phenomenon, considerable debate exists as to exactly how many facets (also referred to as dimensions or factors) psychopathy comprises. Some consider antisocial behaviors to be central to construct of psychopathy and call for its inclusion in the assessment of psychopathy (Hare, 1991, 2003). Others have criticized this view on historical, theoretical and empirical (i.e. factor analytic) grounds, and exclude antisocial behavior from the assessment of psychopathy and focus more on the ‘clinical’, and not necessarily criminal, manifestations of this disorder (Cooke & Michie, 2001; Cooke, Michie, Hart, & Clark, 2004). In other words, they argue that criminality and antisocial behaviors are not a symptom of psychopathy but rather a likely, though not necessary, consequence of the core psychopathic personality traits. They show these personality traits to combine into three dimensions, named an arrogant and deceitful interpersonal style, a deficient affective experience, and an impulsive and irresponsible behavioral style. Both views do agree on the fact that psychopathy is a dimensional rather than a categorical construct (Benning, Patrick, Blonigen, Hicks, & Iacono, 2005; Lilienfeld, 1994; McHoskey, Worzel, & Szyarto, 1998; Marcus, John, & Edens, 2004, Edens, Marcus, Lilienfeld, & Poythress, 2006; Guay, Ruscio, Knight, & Hare, Murrie et al., 2007; Neumann & Hare, 2008), meaning that ‘psychopaths’ with extreme scores on a measure of psychopathy are not qualitatively but quantitatively different from those with milder or low psychopathic
traits. As a consequence of both the personality based perspective as well as the dimensional view, psychopathic traits are not only studied in forensic populations but also within the general population. This type of research allows for a better understanding of psychopathy by separation of the effects of psychopathic personality traits from overt criminality and may also help bring to light protective factors that shield those with high psychopathic traits in the community from an antisocial or criminal development. At the same time, it is also relevant for our understanding of ‘full-blown’ criminal psychopathy.

**Psychopathic traits in children**

*Historical and developmental considerations*

While research on psychopathy has until now foremost focused on adult and adolescent age groups, there are a number of historical and developmental reasons to assume that psychopathic traits may already be observable in preadolescent children. First, historically, the existence of psychopathic-like traits in children has been recognized repeatedly. For example, Cleckley, in *The Mask of Sanity*, acknowledged that psychopathic traits had their roots in early childhood (Cleckley, 1941). A decade later McCord and McCord (1959/1964) recognized the existence of a subgroup of children with conduct problems that also showed psychopathic traits. They highlighted the importance of the early identification of this group. In the 1980s, the third version of the DSM-III (APA, 1980) distinguished between children with conduct disorder (CD) who were either ‘socialized’ or ‘undersocialized’, with the latter type showing similarities to the affective and interpersonal characteristics of adult psychopathy. The label ‘undersocialized’ was chosen rather than psychopathic, as this was considered to be less pejorative. This subtyping was abandoned in the DSM-III-R in favor of a subtyping by level of aggression, as this was easier to operationalize into clear behavioral measures (Connor, 2004; p. 67). Second, developmentally, it has been shown that age appropriate representations of the traits that make up the dimensions of psychopathy can already be observed at a young age (Johnstone & Cooke, 2004). For example, moral emotions relevant to the affective component of psychopathy, such as empathy, guilt and remorse, develop at a young age and individual differences between children can be observed (Hoffman, 2000; Kochanska, 1997; Kochanska & Aksan, 2006; Zahn-Waxler & Radke-Yarrow, 1990; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). Likewise, narcissism, bearing close resemblance to the interpersonal dimension of psychopathy, can be present and is measurable in children (Barry, Frick, & Killian, 2003; Thomaes, Stegge, Olthof, & Bushman, 2008). The same holds for impulsivity (Achenbach et al., 2008; Pelham, Gnagy, Greenslade, & Milich, 1992), which bears resemblance to the behavioral dimension of psychopathy. To conclude, there are both historical and developmental indications to believe that psychopathic traits may already be present and measurable in children.
Empirical studies on psychopathic traits in children

Several empirical studies on psychopathic traits in young children conducted over the last decade have indeed shown that psychopathic traits can be measured reliably and validly in childhood. In childhood, these traits show notable similarities to those in adults and adolescents in a number of respects: factor structure, stability over time and construct validity. With respect to the factor structure, psychopathic traits in children have been demonstrated to combine into the same three dimensions that comprise psychopathy in older age groups (Cooke & Michie, 2001), an affective one, an interpersonal one and a behavioral one (Dadds, Fraser, Frost, & Hawes, 2005; Fite, Greening, Stoppelbein, & Fabiano, 2009; Frick, Bodin, & Barry, 2000). It should, however, be noted that, like in adulthood, other factor structures have been described as well (Dadds et al., 2005; Frick, O’Brien, Wootton, & McBurnett, 1994). With respect to stability, psychopathic traits have been shown to be quite stable over time. Stability was shown during childhood and from childhood into adolescence over periods ranging from 1 to 9 years (Barry, Barry, & Lochman, 2008; Dadds, Fraser, Frost, & Hawes, 2005; Frick, Kimonis, Dandreaux, & Farell, 2003; Obradovic, Pardini, Long, & Loeber, 2007), although it is yet unclear to what extent children with high psychopathic traits grow up to be adults with high psychopathic traits. With respect to construct validity, as in older age groups, psychopathic traits have shown to be related to antisocial behaviors and aggression both cross-sectionally (Christian, Frick, Hill, & Tyler, 1997; Kimonis, Frick, Fazekas, & Loney, 2006) and prospectively (Dadds et al., 2005; Lynam, 1997; Piatigorsky & Hinshaw, 2004; Kimonis, Frick, Boris, Smyke, Cornell, Farell, & Zeanah, 2006). In addition, a number of affective, cognitive and social deficits found in psychopathic individuals have also been described in children with high levels of these traits, such as low empathy or an impaired reactivity to other people’s distress (Blair, 1999; Blair, Colledge, Murray, & Mitchell, 2001; Woodworth & Waschbusch, 2007), low arousal from unpleasant stimuli (Sharp, Van Goozen, & Goodyer, 2006), low levels of anxiety (Frick, Lilienfeld, Ellis, Loney, & Silverthorn, 1999), a reduced responsiveness to punishment when a reward-orientated response was primed (O’Brien & Frick, 1999) and problematic social relationships (Barry, Barry, Deming, & Lochman, 2008; Piatigorsky & Hinshaw, 2004).

To conclude, these findings show that psychopathic traits can indeed be identified early in life. Reliability and validity data show that psychopathic traits in this age group combine into a structure also seen in older samples, that these traits show significant stability over time and that children with elevated levels of these traits demonstrate a number of behavioral, affective, cognitive and social characteristics similar to their older counterparts. Needless to say, however, insight in this phenomenon is incomplete and much is still to be learned.
The present thesis

The present thesis focuses on two topics in child psychopathy that are in need of further study. First, there is a need to extend beyond the currently used methods for assessing psychopathic traits in children. Most or all studies investigating psychopathic traits in this group to date have made use of parent- or teacher report. The use of self-report has been shown valid in adolescent and adult psychopathy research (Andershed, Hodgins, & Tengstrom, 2007; Andershed, Kerr, Statin, & Levander, 2002; Edens, Poythress, & Watkins, 2001; Lilienfeld & Andrews, 1996; Sandoval, Hancock, Poythress, Edens, & Lilienfeld, 2000) and may provide an important additional perspective on preadolescent children’s psychopathic traits. Some authors have expressed their concerns about the possible lack of reliability of self-report of psychopathy in preadolescent age groups (Kamphaus & Frick, 1996). However, it has been demonstrated that children from approximately nine years of age are able to report reliably and meaningfully on concepts related to psychopathy such as empathy (Bryant, 1982) and guilt (Ferguson, Stegge, Eyre, Vollmer, & Ashbaker, 2000; Ferguson, Stegge, Miller & Olsen, 1999), narcissism (Barry, Frick, & Killian, 2003; Thomaes, Stegge, Olthof, Bushman, & Denissen, 2008) and hyperactivity-inattention (Muris, Meesters, Eijkelenboom, & Vincken, 2004). Therefore, we hypothesize that preadolescent children can, in fact, be reliable and valid reporters of psychopathic traits. No instruments for measuring psychopathic traits in preadolescent children currently exist. The first aim of the present thesis is, therefore, to develop and validate a self-report instrument for measuring psychopathic traits in preadolescent children.

Second, while the relation between psychopathic traits and overt problematic behaviors like conduct problems and aggression in children has been firmly established, much less is known about how it relates to socio-emotional functioning in this group. Studying socio-emotional processes in children with high psychopathic traits may help to better understand their socially harmful behaviors and may serve as a potentially valuable point of intervention. For example, very little research is available on social relations and social relationship problems in children with high psychopathic traits. However, gaining more knowledge on this topic is important because problematic social adjustment is known to be highly predictive of future psychological maladjustment (Moffitt, 1993, 1996; Parker & Asher, 1987) and antisocial behaviors and aggression (Hoglund, Lalonde, & Leadbeater, 2008; Lochman & Lampron, 1986; Lochman & Wayland, 1994; Lochman, Wayland, & White, 1993; Pardini, Barry, Barth, Lochman, & Wells, 2006). Preliminary evidence suggests that children with psychopathic traits are not well liked by their peers (Barry et al., 2008; Piatigorsky & Hinshaw, 2004) and social relationship problems may aggravate existing psychopathic traits (Barry et al., 2008). With respect to emotional functioning, studies to date have focused on very basic emotional processing such as electrodermal response to distress cues (Blair, 1999), recognition of emotional expression (Blair & Coles, 2000;
Woodworth & Waschbusch, 2007) or emotional reactivity to affective pictures (Sharp, Van Goozen, & Goodyear, 2006). There is, however, a need for research on how these emotional deficits explain problematic behavior (i.e. aggression) observed in children.

The second aim of the current thesis, therefore, is to investigate the relationship between psychopathic traits and socio-emotional functioning in children.

**Overview of the studies**

Chapter 2 describes the development and validation of the Youth Psychopathic traits Inventory – Child Version (YPI-CV), a 50-item self-report instrument measuring the three core personality dimensions of psychopathy (Cooke & Michie, 2001) in a 9–12 year old community sample. The study describes the internal consistency and test-retest reliability of the instrument, as well as its factor structure and construct validity.

In Chapter 3, the YPI-CV is further investigated in the same sample. The study reports on the concurrent and the 18-month prospective associations between self-reported psychopathic traits and conduct problems and proactive as well as reactive aggression. Furthermore, it examines the stability of these traits and investigates whether high level stability is related to higher levels of follow-up conduct problems and aggression.

The aim of Chapter 4 is, using large community adolescent and child datasets, to develop short versions of the adolescent and child YPI instruments. Such versions can be of use for large data collections in which administration time is valuable and limited.

Chapter 5 investigates the relationship between psychopathic traits, measured through the short version of the YPI-CV (YPI-SCV), and a range of social functioning variables: social emotions, social goals and social status in 9–12 year old children from the community.

Chapter 6 proposes that the relationship between psychopathic traits and aggression in children may be explained by their reduced sensitivity to signs of distress in others. Emotional cues such as fear and sadness function to make a perpetrator aware of the victim’s distress and supposedly inhibit aggression (Blair, 1995). As children high in psychopathic traits show a reduced sensitivity to others’ distress, the aggression inhibiting function of these emotional cues may be lacking. Using an experimental paradigm the hypothesis is tested that aggression in 9–12 year old children from the community with psychopathic traits can be attenuated by making their opponents’ distress cues more salient.

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1. Please note that each study was submitted or published individually. Therefore, some overlap between the introductions and discussions of the studies may occur.
Finally, in Chapter 7, the findings of the five studies are summarized, and their theoretical and practical implications are discussed, along with several topics for future research.