Contents lists available at ScienceDirect

International Journal of Law and Psychiatry

Measuring psychopathic traits in children through self-report. The development of the Youth Psychopathic traits Inventory—Child Version ☆

Yoast van Baardewijk [a,*], Hedy Stegge [a], Henrik Andershed [b], Sander Thomaes [c], Evert Scholte [d], Robert Vermeiren [a]

[a] *Curium/Leiden University Medical Centre, The Netherlands*
[b] *Örebro University, Sweden*
[c] *University of Utrecht, The Netherlands*
[d] *Leiden University, The Netherlands*

ARTICLE INFO

ABSTRACT

The current article investigates whether self-reports of children provide reliable and valid information concerning psychopathic personality traits and behaviours. For this purpose, we developed a downward extension of an existing adolescent self-report measure; the Youth Psychopathic traits Inventory [YPI; Andershed, H., Kerr, M., Stattin, H., & Levander, S. (2002). Psychopathic traits in non-referred youths: Initial test of a new assessment tool. In E.S. Blaauw, L. (Ed.), Psychopaths: Current international perspectives (pp. 131–158): The Hague: Elsevier], called the Youth Psychopathic traits Inventory—Child Version (YPI-CV). The reliability and validity of the YPI-CV were tested in $n = 360$ children from the general population. The YPI-CV had good internal consistency and a three factor structure similar to the original adolescent version. Test–retest reliability over a 6-month period was adequate. In validating the instrument, both self, teacher and peer report were used. The convergent and divergent validity of the three YPI-CV dimensions was examined by relating each of them to an external criterion measures assessing the same construct. It was concluded that psychopathic traits can be measured reliably and meaningfully through self-report in 9 to 12 year olds and that the YPI-CV is potentially a useful instrument for doing so.

© 2008 Elsevier Inc. All rights reserved.

1. Introduction

The concept of psychopathy has proven useful in understanding and predicting frequent and severe adult antisocial behaviour. Recent studies have shown that psychopathic traits can be observed in children as well. Existing instruments for assessing psychopathic traits in pre-adolescent children, however, focus almost uniquely on obtaining third party information, leaving the child's own perspective out of consideration. Therefore, the current study was designed to investigate whether children's self-report could provide valuable information concerning psychopathic personality traits and behaviours. For this purpose, we developed a downward extension of an existing self-report measure of psychopathy. This article represents the initial evaluation of the reliability and validity of this measure.

Psychopathy is widely regarded to be a constellation of three personality dimensions: an Arrogant and Deceitful Interpersonal Style (e.g., lying, manipulation and glibness or superficial charm); a Deficient Affective Experience (e.g., a lack of guilt and remorse, shallow affect and callousness); and an Impulsive and Irresponsible Behavioral Style (e.g., impulsiveness, and excitement seeking)

(Andershed, Kerr, Stattin, & Levander, 2002; Cooke & Michie, 2001; Cooke, Michie, Hart, & Clark, 2004; Farrington, 2005; Johnstone & Cooke, 2004; Lynam & Gudonis, 2005).

The gold standard in measuring adult psychopathy is unarguably the Psychopathy Checklist–Revised (Hare, 1991, 2003). Because the PCL-R was developed as a forensic assessment instrument, many scientific studies have been conducted in forensic populations, with the aim of understanding and predicting criminal behaviour. Several of the diagnostic criteria or items included in the PCL-R involve actual criminal behaviours, in contrast to other items focused on basic psychopathic personality traits. However, criminal and antisocial behaviour does not have to be a central or even necessary component of psychopathy itself, but could rather be seen as a secondary behavioural consequence of the personality traits comprising psychopathy (see e.g., Andershed et al., 2002; Cooke et al., 2004). Studying psychopathy solely within forensic samples will therefore only yield information about a subgroup of individuals with psychopathic traits: those that committed crimes, and were arrested for doing so. Some individuals do however comply with the rules set by society despite their high psychopathy scores (or perhaps commit their crimes too skillfully to get caught) (Ishikawa, Raine, Lencz, Bihrle, & Lacasse, 2001; Levenson, Kiehl, & Fitzpatrick, 1995; Salekin, Trobst, & Krioukova, 2001). Therefore, to understand the full breadth of the manifestation of psychopathy and to gain insight into the relation between psychopathic traits and maladaptive behaviour in society, it is important to also focus on non-forensic samples. A key question here is whether studies on psychopathic personality traits in the general population are also relevant for the understanding of full-blown or clinical psychopathy. Psychopathy is considered by many to be at the extreme end of a normal population trait distribution (Benning, Patrick, Blonigen, Hicks, & Iacono, 2005; Lilienfeld, 1994; McHoskey, Worzel, & Szyarto, 1998) and recent studies show no support for psychopathy as being underpinned by a latent taxon (Edens, Marcus, Lilienfeld, & Poythress, 2006; Guay, Ruscio, Hare, & Knight, 2007), which supports the contention that psychopathy should be seen as a dimensional rather than a categorical construct. In this light, research on psychopathic personality traits in the general population is indeed relevant for our understanding of full-blown psychopathy.

The concept of psychopathy has been extended downwards towards adolescence (for a review see Farrington, 2005; Lynam & Gudonis, 2005) and over the past decade, researchers have shown interest in psychopathic traits in childhood as well. This is not surprising since offenders with psychopathic personality generally show an earlier onset of dysfunctional behaviour compared with other offenders (e.g., Hare, 1991; Johansson, Kerr, & Andershed, 2005; Lynam, 1996). For several reasons, the study of psychopathic traits in children is highly important. Greater knowledge of the presence and expression of psychopathic personality traits at a young age will provide greater understanding of the heterogeneity in the developmental pathways leading to serious conduct problem behaviour. Also, it could help us identify and understand early precursors and causes of adult psychopathy. In the future this knowledge could provide us with early prevention and interventions strategies aimed at decreasing the risk that these children will grow up to be adolescent and adult offenders and/or psychopaths.

The majority of studies focussing on psychopathic traits in children to date suggest that these traits manifest themselves similarly to those in adults (see also Lynam & Gudonis, 2005). Johnstone and Cooke (2004) reviewed literature on developmental psychology and psychopathology and concluded that the manifest variables making up the three core personality dimensions of psychopathy (such as lying, manipulation, shallow affect, (lack of) guilt and impulsivity) can all be observed and measured in children. More specifically, using caretaker and teacher ratings, these manifest variables have been shown to cluster into the three core personality dimensions central to adult psychopathy in children as well (Frick, Bodin, & Barry, 2000). Also, psychopathic traits in children assessed by caretakers and teachers have been shown to be related to aggression, delinquency and antisocial behaviour (Christian, Frick, Hill, & Tyler, 1997; Frick, Kimonis, Dandreaux, & Farell, 2003; Lynam, 1997). In addition, a number of cognitive and affective deficits found in psychopathic adults, such as an impaired reactivity to other people's distress cues, have been described in children with similar personality traits (teacher report; Blair, 1999; Blair, Colledge, Murray, & Mitchell, 2001).

Recently, several excellent reviews were published that provide detailed descriptions of our current knowledge of psychopathic traits in youth and children (Blair, Peschardt, Budhani, Mitchell, & Pine, 2006; Farrington, 2005; Johnstone & Cooke, 2004; Kotler & McMahon, 2005; Lynam & Gudonis, 2005). These reviews identified some fruitful avenues for future research. One of the recommendations was the development of new instruments for studying and clinically assessing psychopathic traits in children (Farrington, 2005; Johnstone & Cooke, 2004). Currently, two research instruments are available for the use in childhood, both of which were developed as parent/teacher rating instruments: the Anti Social Process Screening Device (APSD; Frick & Hare, 2001) and the Childhood Psychopathy Scale (CPS; Lynam, 1997). The APSD is a 20-item measure of psychopathic traits and antisocial behaviour in children modelled after the Psychopathy Checklist–Revised (Hare, 1991). Much of the current knowledge about psychopathic traits in children is derived from research using this instrument. The CPS is a 41-item measure that is also modelled after the PCL-R but comprises items drawn from existing instruments such as the Child Behaviour Checklist (CBCL; Achenbach, 1991). Only two studies to date have used the CPS in a child sample (Lynam, 1997; Lynam et al., 2005) each using a different version of the instrument, so its applicability for the use in child samples requires additional support.

Both the APSD and the CPS take a third party perspective on psychopathic traits in children, but there is reason to assume that pre-adolescent children themselves are capable of rating these traits through self-report. Young children tend to hold unrealistically positive self-views (Harter, 1990; Marsh, Craven, & Debus, 1991) but this changes towards a more realistic view of the self during development. From approximately 8 years of age, children hold realistic views of themselves and their social and intellectual capacities (Nicholls, 1990). Specifically to psychopathy, it has been demonstrated that children from approximately 9 years of age are able to report reliably and meaningfully on emotions such as empathy (Bryant, 1982) and guilt (Ferguson, Stegge, Eyre, Vollmer, & Ashbaker, 2000; Ferguson, Stegge, Miller, & Olsen, 1999) which are closely (inversely) related to the affective component of psychopathy. Also, children of this age have been shown to report reliably and validly on narcissism (Barry, Frick, & Killian, 2003; Thomaes, Stegge, Olthof, & Bushman, in press) which bears resemblance to the interpersonal component of

psychopathy and on hyperactivity-inattention (Muris, Meesters, Eijkelenboom, & Vincken, 2004). Self-report has several benefits. First, a self-report measure can more easily be administered to large samples, which makes it a convenient instrument for research purposes. More important, self-report measures might produce better insight into the core affective traits of psychopathy. Subjective feelings of empathy or guilt (or the lack thereof) for example might be difficult to observe, especially to untrained observers such as parents or teachers (Andershed et al., 2002; Lilienfeld & Andrews, 1996). Finally, correlations between scores on measures of psychopathy using different informants have generally been low, possibly indicating that a single (external) source of information is not covering the full manifestation of the construct.

Studies in adults have provided evidence for the usefulness of self-report in psychopathy research. Validation studies have found that self-reported psychopathic traits in adults correlated positively with observer ratings of psychopathy and indices of narcissism, aggression and antisocial behaviour (Edens, Poythress, & Watkins, 2001; Lilienfeld & Andrews, 1996; Sandoval, Hancock, Poythress, Edens, & Lilienfeld, 2000). In psychopathy research in adolescents using self-report, similar results were found. Several self-report measures of adolescent psychopathy exist, but most of them are still in the experimental phases of development and have only been tested in a very small number of studies and solely in offender samples, see Vaughn and Howard (2005) for a review. Mainly, two measures have been used: the self-report version of the previously mentioned APSD (Frick & Hare, 2001), and the Youth Psychopathic traits Inventory (YPI; Andershed et al., 2002). In both the APSD self-report and the YPI, a three factor structure has been demonstrated (Andershed et al., 2002; Larsson, Andershed, & Lichtenstein, 2006; Vitacco, Rogers, & Neumann, 2003). Also, both measures have shown the ability to identify a more severe and aggressive subgroup of antisocial adolescents (Andershed et al., 2002; Caputo, Frick, & Brodsky, 1999; Dolan & Rennie, 2007; Kruh, Frick, & Clements, 2005; Salekin, Leistico, Neumann, DiCicco, & Duros, 2004) and the validity of the two measures has been demonstrated in both community, forensic and other institutional settings (e.g., Andershed, Hodgins, & Tengström, 2007; Andershed et al., 2002; Marsee, Silverthorn, & Frick, 2005; Skeem & Cauffman, 2003; Vitacco et al., 2003).

The YPI self-report may, however, carry a number of advantages over the self-report version of the APSD. First, the internal consistencies of the three YPI dimensions have generally been described as good to excellent (Andershed et al., 2002; Larsson et al., 2006; Skeem & Cauffman, 2003) whereas a recent review on the APSD self-report summarized consistently poor internal consistency indices across studies for the Callous-Unemotional dimension (Poythress et al., 2006b). Second, the YPI has multiple (5) items per trait enabling the possibility to be used in research on trait-level. The APSD has only one or two items per trait (Falkenbach, Poythress, & Heide, 2003). Third, the YPI describes feelings and opinions as competences, rather than deficiencies. The psychopathic individual will probably not think of him or herself as lacking feelings of empathy, but rather as having the convenient ability not to care about others. The APSD, in contrast, assesses the traits directly, making it obvious that socially undesirable attitudes are measured, and this is likely to increase response bias (Andershed et al., 2002). For these reasons the YPI may be considered a promising instrument in youths, and the instrument was therefore chosen as a preferable candidate for adapting its content for use in pre-adolescent children.

In the current study, a number of key characteristics of the newly developed Youth Psychopathic traits Inventory—Child Version were explored. These included the internal consistency of the scale, the test–retest reliability over a period of 6 months and the underlying factor structure. Three concurrent factor models were specified. The first model comprised the original three factor structure as specified in the original YPI work (Andershed et al., 2002). However, recently Poythress, Dembo, Wareham, and Greenbaum (2006a) reported that the subscale Lying loaded both on the Grandiose-Manipulative dimension and the Impulsive-Irresponsible dimension. The second model to be tested comprised this modification. Alternatively, these authors suggested to remove the Lying subscale completely from the YPI model. The third model to be tested comprised this modification. Finally, we differentially validated the three dimensions of the YPI-CV by comparing each of them with an external criterion measuring the same construct, thus examining the convergent and divergent validity of the dimensions, as was recently suggested by Farrington (2005). If the Callous-Unemotional dimension of the YPI-CV does indeed measure callous and unemotional traits in children one would expect to find a unique relation to a similar construct, i.e. empathy. A lack of empathy is one of the traits that constitute the Callous-Unemotional personality dimension of psychopathy and is considered by some to be the core of psychopathy (Blair, 2005). As for the Grandiose-Manipulative dimension, we expected it to correlate primarily with narcissism. Grandiosity and selfish and deceitful behaviour are central to narcissism (APA, 2000) and to the Grandiose-Manipulative personality dimension of psychopathy. In fact, the corresponding interpersonal dimension in the APSD is named Narcissism (Frick et al., 2000). Finally, we validated the Impulsive-Irresponsible dimension with measures of Attention-deficit/Hyperactivity/Impulsivity problems. Because impulsivity, monotony avoidance, and stimulation seeking, traits that are central to the Impulsive-Irresponsible dimension, are also included in the operational criteria for ADHD (APA, 2000; Johnstone & Cooke, 2004) we expected Attention-deficit/ Hyperactivity/Impulsivity to be primarily related to this dimension.

2. Method

2.1. Participants

The data were obtained from four medium sized primary schools and were part of a larger study. All schools were located in suburban areas of medium sized cities in the Netherlands. Participants were 360 children (52% boys) ranging in age of 9–12 with an average age of 10.9 (sd = .9). Most children (85%) were Caucasian, 15% had other (e.g., Surinam/Lesser Antilles, (North) African) or mixed ethical/cultural origins. This resembles the composition of Dutch society in which approximately 10% of youth is of non-western origin (Statline CBS, 2005).

Table 1
Sample items of the YPI—Child Version

Dimension	Subscale	Sample items
Grandiose-Manipulative	Dishonest charm	Often I act extra nice and sweet to get what I want, even with people I don't like.
		When someone asks me something, I usually have a quick answer that sounds believable, even if I have just made it up.
	Grandiosity	I will become a well-known and important person, I know that already.
		The world would be a better place if I were the boss.
	Lying	I like to exaggerate when I tell about something.
		Sometimes I find myself lying for no special reason.
	Manipulation	Fooling others is the best way to get what I want from them.
		It's easy for me to make other people to do things that suit me well.
Callous-Unemotional	Remorselessness	It's weak to feel guilty when you have hurt others.
		Feeling bad when you have done something wrong is a waste of time.
	Unemotionality	It's weak to feel nervous or worried.
		Feelings are less important to me than they are for others.
	Callousness	If I watch sad things on TV or in a movie, it usually does not get to me.
		When others are sad, I don't really care.
Impulsive-Irresponsible	Thrill-seeking	I like to do things just because they feel cool or exciting.
		I like to get into situations that give me a thrill.
	Impulsiveness	It often happens that I do things without thinking ahead.
		I prefer to spend my money right away rather than save it.
	Irresponsibility	I find rules to be nothing but a nuisance.
		I don't think it is necessary to tell my parents what I am going to do when I go outside.

2.2. Procedure

Parental consent was obtained. Consent rate was 95%. Children completed the self-report questionnaires in two one and a half hour sessions during regular school time. It was emphasized that the results would remain confidential and that neither parents nor teachers would be informed of their individual answers. Teachers were instructed and asked to return questionnaires within 3 weeks, all of which were returned. Schools and teachers were paid €200 for their corporation in gift vouchers.

2.3. Measures

2.3.1. Psychopathy

Youth Psychopathic trait Inventory—Child Version. The Youth Psychopathic trait Inventory (YPI; Andershed et al., 2002) is 50-item self-report instrument for adolescents measuring the well-established three core personality dimensions of psychopathy, which are described in the Introduction. The Grandiose-Manipulative dimension is composed of four subscales: Dishonest Charm, Lying, Grandiosity, and Manipulation; the Callous-Unemotional dimension is composed of three subscales: Callousness, Unemotionality and Remorselessness and the Impulsive-Irresponsible dimension is composed of three subscales: Impulsiveness, Irresponsibility, and Thrill-seeking. The YPI intends to measure personality traits and does not contain reference to antisocial behaviour. Items are scored on a 4-point scale (1=*does not apply at all*—4=*applies very well*).

A child version of this instrument was created for use in 9 to 12 year olds. It was decided to keep the structure of the instrument intact, with ten subscales of five items each. Our aim was to create an age-appropriate version of the instrument that matched the cognitive, emotional and verbal development and social realities of 9 to 12 year olds. Both the Dutch authorized translation (Das & De Ruiter, 2002) of the adolescent YPI and original English adolescent YPI (Andershed et al., 2002) were used as a reference in developing the child version. Most changes were minor and many involved the comprehensibility of the items. We used simplified wording and/or shortened the length of the item. For example: 'To be nervous and worried is a sign of weakness' was changed to: 'It's weak to feel nervous or worried'. Some changes were specific to the Dutch language. Sample items of the YPI-CV are presented in Table 1.

A pilot study[1] was conducted in *n*=224 unreferred children to assess the basic psychometric characteristics and the validity of the newly developed measure. Principal components analysis revealed a three factor structure identical to the original YPI. In addition, a correlation with the teacher report APSD (Frick & Hare, 2001) of *r*=.44 (*p*<.01), a correlation with self-reported problem behaviour (SDQ; Goodman, 1997) of *r*=.45 (*p*<.01) and a correlation of *r*=.34 (*p*<.01) with a measure of teacher reported problem behaviour (DBD; Pelham, Gnagy, Greenslade, & Milich, 1992; Dutch version: Oosterlaan, Scheres, Antrop, Roeyers, & Sergeant, 2000) was found. Finally, scores were stable over a 2-month period (total score ICC=.77). These findings gave sufficient reason to further test the YPI-CV, which is reported in the current study.

---

[1] Due to space limitations, the pilot data are not reported, but are available from the first author.

2.3.2. Empathy

Empathy Continuum. Situational empathy was assessed using an adaptation of the Dutch version of the Empathy Continuum (EC; Strayer, 1993; Dutch version: De Wied, Goudena, & Matthys, 2005), a system for measuring an individual's affective-cognitive response to emotional evocative stimuli. Six stimulus videoclip vignettes were used to induce children's empathic responses. Five vignettes were clips from Dutch documentary or commercial films featuring children of approximately the same age as the participants showing facial and verbal emotional reactions. The sixth vignette featured a little bear having just lost its mother. In three vignettes, sadness was portrayed, in two happiness and in one clip the prominent emotion could be identified both as anger and as sadness. The clips were presented in random order on a television set in front of the classroom. Before each clip, a brief introduction was read by the experimenter explaining the circumstances of the clip the participants were about to see. Children read along in their own copies of the text. After each vignette was viewed, participants scored the quality and intensity of the emotion of the protagonist by circling one or more of four cartoon-like pictures of a child experiencing either happiness, anger, fear or sadness. A neutral (no emotion) picture was also provided. The intensity was scored on a 5-point rating scale. Participants rated the quality and intensity of the emotion they themselves experienced while watching the protagonist expressing his or her emotion in the same way. In addition, they were asked to write down the reason why they themselves experienced the reported emotion.

The EC scoring system by Strayer (1993) was used. Concordant affect with the protagonist is scored on four levels of affect match (*no emotion-similar emotion – same emotion – same emotion with similar intensity*). In addition seven levels of cognitive emotional attribution are scored ranging from *irrelevant* (e.g., 'I didn't like it') to *explicit perspective-taking* (e.g., 'I'd be sad too, in her place, when one gets bullied'). The scores range from 0 to 19 indicating the joint operation of affective and cognitive empathy. Higher scores indicate more empathy. Reliability and validity was reported to be satisfactory in unreferred children (5–13 years old; Strayer, 1993) using the interview version and clinically referred children (8–12 years old; De Wied, Goudena, & Matthys, 2005) using a self-report adaptation. In this study, the self-report measure was used (Cronbach's alpha was .65).

Self-reported empathy: Index of Empathy for Children and Adolescents. An abbreviated 10-item version of the Index of Empathy for Children and Adolescents (Bryant, 1982) was used as a measure of dispositional empathy. Sample item: "It makes me sad to see a girl who can't find anyone to play with" to which children respond with a *yes* or *no*. The internal consistency of the original measure has been established in other work (Bryant, 1982). In the current study, the alpha of the abbreviated version was .78.

Peer-nominated empathy: Best-friend-rated empathy procedure. Items for the peer-nomination measure of empathy were taken from the best-friend-rated empathy procedure (Strayer & Roberts, 2004; Dutch version: Thomaes et al., in press). Children nominated up to three classmates who best fit items describing empathic behaviour. We chose a peer-rating measure because school-aged children spend a great deal of direct interaction with their classmates, offering an important and unique perspective on children's functioning (Weiss, Harris, & Catron, 2002). Sample item: "These kids feel bad if they see another kid without a friend to play with". Cronbach's alpha was .88.

2.3.3. Narcissism

Self-reported narcissism: Childhood Narcissism Scale. Narcissism was assessed using the Childhood Narcissism Scale (CNS, Thomaes et al., in press). The CNS is a short, one dimensional self-report measure that taps a comprehensive range of characteristics central to narcissism. Many items of the CNS reflect the dynamics between a grandiose or entitled self versus inferior or undeserving others. The measure is designed for use in the general population. Items are positively worded so children do not feel they are rating negative or socially undesirable traits. Sample items: "Kids like me deserve something extra" and "It often happens that other kids get the compliments I actually deserve". Children respond on a 4-point scale ranging from 0 (*not at all true*) to 3 (*completely true*). The validation article reported the measure to be reliable and valid. Cronbach's alpha's ranged from .78 to .87 (Thomaes et al., in press).

2.3.4. Attention-deficit/Impulsivity/Hyperactivity problems

Teacher reported attention-deficit/hyperactivity problems: Problem Behavior at School Interview—ADHD scale. Attention-deficit and hyperactivity problems were assessed using the ADHD scale from the Problem Behavior at School Interview (PBSI, Erasmus, 2000) a 32-item interview assessing problematic behavior in children. In the current study a paper and pencil version was used. Teachers rated each child's behavior on a 5-point scale. The ADHD symptoms scale comprises eight items, including "This child is impulsive". Cronbach's α of the paper and pencil version in this study was .92.

PMIEB peer-rated Hyperactivity/Impulsivity/Inattention. Peer-rated Hyperactivity/Impulsivity/Inattention was assessed using the Peer-report Measure of Internalizing and Externalizing Behavior (PMIEB; Weiss et al., 2002), a well-established peer-nomination inventory that assesses psychopathology in school-aged children. Participants are asked to select up to three of their classmates who best fit the description of Hyperactivity/Impulsivity/Inattention type behaviour. For example: "These children have trouble doing their classwork when there are a lot of other things going on in the class". The PMIEB validation article reported a Cronbach's alpha of .89 for this scale (Weiss et al., 2002).

3. Results

Table 2 presents the internal consistencies of the YPI-CV total score, dimension scores and subscale scores for the full sample. All CITCs and MICs were above the conventionally recommended values of .30 (Nunnally & Bernstein, 1994) and .15 (Clark & Watson, 1995) respectively. An alpha coefficient above .70 is generally considered acceptable. Compared to this criterion, reliabilities of total scores and dimension scores were good. All three of the subscales comprising the Callous-Unemotional

Table 2
Descriptives and internal consistency of the YPI—Child Version ($n = 360$)

Dimension/subscale	Number of items	Alpha	MIC	CITC
YPI-CV Grandiose-Manipulative	20	.89	.29	.51
Dishonest charm	5	.77	.42	.55
Grandiosity	5	.78	.43	.50
Lying	5	.73	.37	.50
Manipulation	5	.72	.33	.48
YPI-CV Callous-Unemotional	15	.80	.22	.42
Callousness	5	.55	.23	.35
Unemotionality	5	.58	.23	.35
Remorselessness	5	.61	.24	.37
YPI-CV Impulsive-Irresponsible	15	.85	.27	.47
Impulsiveness	5	.66	.29	.43
Irresponsibility	5	.71	.32	.47
Thrill-seeking	5	.73	.35	.49
YPI-CV total score	50	.92	.20	.43

Note: MIC=mean inter-item correlation; CITC=corrected item-to-total correlation.

dimension (Remorselessness, Unemotionality and Callousness) had somewhat lower reliability than what is commonly recommended. This matches findings in earlier studies by Skeem and Cauffman (2003) and Poythress et al. (2006a) who have reported similar Cronbach's alphas for subscales comprising the Callous-Unemotional dimension of the adolescent YPI.

Table 3 presents the average scores and standard deviations for boys and girls. Boys scored significantly higher on all subscales except for the Impulsiveness subscale. Total score and dimension scores all were significantly higher for boys than for girls.

3.1. Test–retest reliability

Test–retest reliability was tested in a randomly selected sub sample of 120 children (52% boys) over a 6-month period. Average age was $M = 10.85$, sd = .84. The 6-month intraclass correlation coefficient was .76 for the total score. The ICC for the Grandiose-Manipulative dimension was .75, for the Callous-Unemotional dimension .61 and for the Impulsive-Irresponsible dimension 72.

3.2. Factor analyses

Confirmatory factor analysis was performed to examine the fit of the YPI factor model, with EQS as the computational program. To correct for possible deviations from multivariate normality the Robust Maximum Likelihood Estimation method was used (Bentler, 1995; Byrne, 2006). A widely used method to determine the model fit is the χ^2-test. In general it is assumed that significant χ^2-values represent poor fits. The value of the χ^2-'goodness of fit'-test is, however, strongly determined by the number of cases in the sample, with large numbers of cases inflating the χ^2. In this case it is recommend to use fit indices that are less dependent of the sample size: the normed fit index (NFI) and the comparative fit index (CFI) (Bentler, 1995). Both the NFI and the CFI range from zero to one. Models with a fit of .95 and above are usually considered to represent the observed covariance matrix

Table 3
Mean scores, standard deviations of the YPI—Child Version total score, dimension scores and subscale scores for boys and girls

Dimension/subscale	M	sd	Range	M	sd	Range	t-value
	Boys ($n = 180$)			Girls ($n = 160$)			
YPI-CV Grandiose-Manipulative	1.52	.42	1.00–2.95	1.34	.37	1.00–3.40	4.12***
Dishonest charm	1.59	.57	1.00–4.00	1.39	.51	1.00–4.00	3.42**
Grandiosity	1.48	.60	1.00–4.00	1.28	.44	1.00–4.00	3.37**
Lying	1.57	.56	1.00–3.60	1.42	.52	1.00–3.20	2.57**
Manipulation	1.43	.47	1.00–3.40	1.28	.38	1.00–3.40	3.32**
YPI-CV Callous-Unemotional	1.73	.42	1.07–3.40	1.42	.35	1.00–3.47	7.43***
Callousness	1.73	.50	1.00–3.40	1.32	.37	1.00–3.40	8.35***
Unemotionality	1.95	.54	1.00–3.60	1.58	.46	1.00–3.40	6.68***
Remorselessness	1.52	.54	1.00–3.60	1.35	.41	1.00–3.60	3.33**
YPI-CV Impulsive-Irresponsible	2.05	.55	1.00–3.67	1.83	.50	1.00–3.60	4.00***
Impulsiveness	1.99	.58	1.00–4.00	1.89	.53	1.00–3.40	1.63 n.s.
Irresponsibility	1.72	.65	1.00–4.00	1.55	.59	1.00–3.50	2.58*
Thrill-seeking	2.44	.75	1.00–4.00	2.05	.63	1.00–4.00	5.03***
YPI-CV total score	1.74	.38	1.02–2.94	1.51	.35	1.02–3.40	5.74***

Note: * $p < .05$ ** $p < .01$ *** $p < .00$.

Table 4
Results of testing of three models of the YPI—Child Version using Confirmatory Factor Analysis in the full sample ($n=360$)

Dimension/subscale	Model 1 (Andershed et al., 2002)		Model 2 (model 1 revised by Poythress et al., 2006a,b)[a]		Model 3 (final model Poythress et al., 2006a,b)[b]	
	Standardized load	Error	Standardized load	Error	Standardized load	Error
Grandiose-Manipulative (GM)						
Dishonest charm	.80	.60	.82	.58	.83	.56
Grandiosity	.59	.81	.61	.71	.63	.78
Manipulation	.82	.57	.83	.55	.81	.59
Lying	.67	.74	.28/48[c]	.71	–	–
Impulsive-Irresponsive (II)						
Thrill-seeking	.83	.55	.83	.56	.83	.55
Impulsivity	.66	.75	.68	.74	.66	.75
Irresponsibility	.75	.66	.76	.65	.75	.66
Callous-Unemotional (CA)						
Remorselessness	.66	.75	.66	.75	.67	.75
Unemotional	.76	.65	.76	.65	.76	.65
Callousness	.81	.59	.81	.59	.81	.59
Correlations between factors						
GM with II	.76		.70		.70	
GM with CA	.63		.62		.64	
II with CA	.70		.67		.70	
Model fit statistics						
Satorra–Bentler $\chi 2$	$\chi 2=103$ (32); $n=367$; $p<.0001$		$\chi 2=80$ (31); $n=367$; $p<.0001$		$\chi 2=52$ (24); $n=367$; $p=.0006$	
NFI	.87		.90		.92	
CFI	.91		.94		.96	
RMSEA	.08		.07		.06	
AIC	39.8		18.4		4.9	

[a] The revised model allows Lying subscale to load on the Impulsive-Irresponsive factor.
[b] In this model the Lying subscale is removed.
[c] The second figure represents the standardized load on the Impulsive-Irresponsive factor.

satisfactorily (Loehlin, 2004). In addition to these fit indices, the Root Mean Square Error of Approximation can be calculated. The RMSEA reflects the lack of fit of a model. Smaller values thus represent a better fit. Models with values of .08 or smaller are usually considered to represent the data well, whereas values of .05 or smaller represent a good model fit (Loehlin, 2004). Finally, Akaike's Information Criterion (AIC) can be calculated. This criterion takes into account both the statistical goodness of fit and the number of parameters that have to be estimated to achieve that degree of fit. The model that produces the minimum value may be considered the most useful (Dunn, Everitt, & Pickles, 1993). In Table 4 the results of the confirmatory factor analysis are presented, using the above mentioned fit indices.

Table 5
Validity of the three individual YPI—Child Version dimensions

Criterion construct	Criterion measure	YPI-CV Grandiose-Manipulative		YPI-CV Callous-Unemotional		YPI-CV Impulsive-Irresponsible		YPI-CV total score
		Zero-order correlation	Semi-partial correlation	Zero-order correlation	Semi-partial correlation	Zero-order correlation	Semi-partial correlation	Zero-order correlation
Narcissism	Childhood Narcissism Scale ($n=338$)	**51****	**.35*****	.38**	.14**	.31**	−.07	.48**
Empathy	EC total score ($n=343$)	−.06	−.02	**−.13***	**−.12***	−.03	−.05	−.08
	EC sad ($n=343$)	−.11	−.03	**−.19****	**−.16****	−.06	−.06	−.13*
	EC happy ($n=343$)	−.00	.01	−.02	−.03	−.01	.03	−.01
	Bryant's Empathy Index ($n=338$)	−.05	.09	**−.26***	**−.26*****	−.10	.00	−.15*
	Peer-nominated empathy ($n=345$)	−.12*	.04	**−.27****	**−.26****	−.13*	.02	−.20*
Impulsivity/ Hyperactivity/ Inattention	Teacher-rated PBSI ADHD scale ($n=338$)	.16**	.03	.21**	.08	**.26****	**.18****	.25**
	Peer-nominated Hyperactivity/ Inattention (PMIEB) ($n=345$)	.19**	.01	.18**	.02	**.28****	**.18*****	.26*

Note: EC=Empathy Continuum (Strayer, 1993), number of clips: EC Sad=3, EC Happy=2. PBSI=Problem Behavior at School Interview (Erasmus, 2000). PMIEB=Peer-report Measure of Internalizing and Externalizing Behavior (PMIEB; Weiss et al., 2002). Correlations between YPI-CV dimensions and criterion measures that were hypothesized are bold-faced.
* $p<.05$ ** $p<.01$ *** $p<.00$.

Table 4 shows that the first model fitted the data the least well, just failing to meet the minimum requirements of model fit as set out above. The second model gives a better representation of the data. Removing the subscale Lying as was done in the third model presents the data best, producing the highest NFI/CFI and the smallest RMSEA and AIC, suggesting the best fit to the data. To test the robustness of these findings the models were also tested across the gender groups. Largely the same pattern emerged. For boys the third model fitted best, as in the total sample (model 1: CFI=.93, RMSEA=.08, AIC=2.6; model 2: CFI=.94, RMSEA=.07, AIC=−2.6; model 3: CFI=.97, RMSEA=.05, AIC=−11.2). For girls, the third model also had a good fit, but the second model fitted best (model 1: CFI=.81, RMSEA=.08, AIC=3.0; model 2: CFI=.95, RMSEA=.04, AIC=−21.3; model 3: CFI=.92, RMSEA=.06, AIC=−11.7).

Our findings thus give support to the final modified three factor YPI model with the Lying subscale removed from the Grandiose-Manipulative dimension as proposed by Poythress et al. (2006a). This model has the best overall fit and prevents ambiguities in interpretation of a model with cross-loading subscales.

3.3. Validity of the YPI-CV factors

Table 5 displays zero-order correlations between the YPI-CV total score, the three dimensions (Grandiose-Manipulative, Callous-Unemotional and Impulsive-Irresponsible) and their individual criterion measures Narcissism, Empathy and Attention-deficit/Hyperactivity/Impulsivity problems, respectively. The semi-partial correlations in the table display the unique association between each YPI-CV dimension and the criterion measures, controlled for the other two YPI-CV dimensions. As expected, we found that all three personality dimensions comprising psychopathy were predominantly related to their respective criterion measures.

As Table 5 shows, Callous-Unemotional traits were negatively related to situational empathy, measured by empathetic reactions to video vignettes (EC), whereas the other dimensions were not. When dividing the videos into the ones convening sadness (e.g., a crying girl explains how she's bullied and ignored by her classmates on a daily basis) and happiness (e.g., a boy expresses joy after having won a tennis tournament) the sad videos turned out to be the ones the Callous-Unemotional dimension was most strongly negatively related to. None of the psychopathy dimensions were related to the happy videos. Self-reported trait empathy (Bryant's Empathy Index) was significantly negatively related to the Callous-Unemotional dimension but not to both other dimensions. An identical pattern was found for empathic traits reported by classmates (peer-nominated empathy). No significant gender differences were found (using Fisher Z-transformation).

Both the total score and the individual dimensions of the YPI-CV were strongly positively related to self-reported Narcissism (CNS). The highest correlation was found between self-reported narcissism and the corresponding Grandiose-Manipulative dimension. Semi-partial correlations indicated that the Grandiose-Manipulative and the Callous-Unemotional dimensions were positively associated with self-reported narcissism, with the relation between Grandiose-Manipulative being the strongest. No relation between the Impulsive-Irresponsible dimension and self-reported narcissism was found when the other two dimensions were controlled for. No significant gender differences were found.

Two measures of Attention-deficit/Hyperactivity/Impulsivity problems were used. Both the teacher report (PBSI) and the peer-report measures of Attention-deficit/Hyperactivity/Impulsivity problems (PMIEB) were significantly positively correlated to all psychopathy dimensions. As expected the correlations between both measures of Attention-deficit/Hyperactivity/Impulsivity and the corresponding Impulsive-Irresponsible dimension were the strongest. Semi-partial correlations showed that only the Impulsive-Irresponsible dimension was uniquely associated with measures of Attention-deficit/Hyperactivity/Impulsivity problems. No significant gender differences were found.

4. Discussion

The current article described the initial evaluation of the Youth Psychopathic traits Inventory−Child Version (YPI-CV), a self-report instrument of psychopathic traits in children. The endeavor of developing a valid measure of psychopathic traits for children is important because gaining knowledge about the early development, manifestations, and etiology of these traits are early but necessary steps towards the development of effective interventions.

Overall, the results were promising. Good to excellent internal consistencies were found for the YPI-CV total score and the three dimension scores. Boys scored higher on psychopathic traits than did girls, which is in line with previous research using the YPI (Andershed et al., 2002), and with the general finding that adult psychopathic traits are more prevalent in men than they are in women (Hare, 1991, 2003). Scores on the YPI-CV were stable over a 6-month period. This held for the total score and all three dimensions, though the ICC was somewhat lower for the Callous-Unemotional dimension. These stability scores match earlier findings using the YPI in adolescents over a period of 1 month (ICC=.65–.79; Skeem & Cauffman, 2003) and findings using the mother reported CPS (Lynam, 1997) over a period of 6 months in adolescents (total score ICC=.74; Lynam & Gudonis, 2005). Stability scores reported over a period of 2–4 years using the parent reported APSD were somewhat higher (ICC=.72–.88; Frick et al., 2003) but it should however be noted that these stability coefficients may be inflated as this study selected children based on their extreme scores on the dimensions of the APSD (Lynam & Gudonis, 2005).

Factor analyses showed that a comprehensive three factor structure fit the data quite well and removing the Lying subscale from the model resulted in the best fit. This result is in line with results in a juvenile justice involved sample (Poythress et al., 2006a) although it differs somewhat from adolescent community samples (Andershed et al., 2002; Larsson et al., 2006). The pattern was very similar for boys and for girls, which was also the case for the relationship with external validation criteria. No significant gender differences were found when comparing the YPI-CV dimensions individually to instruments measuring similar constructs. This finding supports the notion by Andershed et al. (2002) that the YPI seems to work equally well for boys and girls. Both the Grandiose-Manipulative dimension and the

Impulsive-Irresponsible dimension showed to be uniquely related in the expected direction to their counterpart (narcissism and Attention-deficit/Hyperactivity/Impulsivity problems, respectively), after controlling for the other psychopathy dimensions. The Callous-Unemotional dimension was both inversely related to the two measures of empathy but also to self-reported narcissism after controlling for the other psychopathy dimensions. These findings support the construct validity of the YPI—Child Version, but do also show that there is substantial overlap between the three dimensions, especially between Callous-Unemotional traits and Grandiose-Manipulative traits. This finding is not surprising given the fact that a two factor structure of psychopathy, in which these two concepts form one factor, has often been reported, both in children and adults. The finding that Callous-Unemotional traits were negatively related to empathic reactions to sadness but not to happiness fits research showing that children and adults with high psychopathic traits are insensitive specifically to signs of distress in others, but not to other emotions (Blair & Coles, 2000; Blair, Morris, Frith, Perrett, & Dolan, 1999; Stevens, Charman, & Blair, 2001).

Overall, the results suggest that psychopathic traits can be measured reliably and meaningfully through self-report in 9 to 12 year old children from the general population and that the Youth Psychopathic traits Inventory—Child Version (YPI-CV) is a promising instrument for doing so. With only relatively minor modifications to the original instrument, results similar to those in adolescents were found (Andershed et al., 2002). These findings support the growing notion that psychopathic traits manifest and relate similarly across ages. To our knowledge, the study presented in this article is the first to focus exclusively on assessing psychopathic traits in children from the community through self-report. The few studies to date on this topic have been hampered by mixed samples, in which children and adolescents, and community and clinical samples were combined (Marsee et al., 2005; Vasey, Kotov, Frick, & Loney, 2005).

One of the major caveats in current psychopathy literature is the lack of knowledge of the stability of psychopathic traits across the lifespan. No studies have been conducted that test to what extent children who display high levels of psychopathic traits do grow up to be psychopathic adults. The YPI and YPI-CV could prove to be serviceable instruments for this type of longitudinal research because almost identical questionnaires are now available for children and adolescents. Longitudinal studies using the YPI could even reach into adulthood as there is some support for the applicability of the YPI to adults (Kansi, 2003). The use of a self-report measure avoids problems related to external rater variance that are likely to complicate research, which occurs because teachers change over time, or because parents themselves develop and transform over time as well. It is important that this type of longitudinal research takes place not only in high risk or forensic samples but also in the community because there it would be possible to study risk- and protective factors behind the traits as well as the "normal" development of the traits over time.

The present results should be viewed in the light of a number of limitations. First, because of the cross-sectional nature of our data, the predictive utility of the YPI-CV has yet to be established. Second, the current studies supports the validity of the YPI-CV solely as a research instrument. No conclusion can be drawn about the use of the YPI-CV as a clinical assessment instrument. Third, analogous to the validation article of the original adolescent YPI (Andershed et al., 2002) factor analysis was done on the subscales rather than on the individual items. Therefore, the relationship with the items has gone out of sight in both our study and the original adolescent study. Future studies should look deeper into the relationship between items, dimensions and the latent trait of psychopathy in both children and adolescents. A first step to be taken in future research however, is the cross-cultural validation of the YPI-CV. The instrument has currently been tested in Dutch children only. Additionally, the reliability and validity of the YPI-CV need to be tested in clinical or high risk samples, as the adolescent version of the instrument has proven reliable and valid in both community and adjudicated samples (Andershed et al., 2002; Dolan & Rennie, 2006; Dolan & Rennie, 2007; Larsson et al., 2006; Poythress et al., 2006a; Skeem & Cauffman, 2003). Another important topic in a future evaluation study of the YPI-CV is to test whether the subscale Lying should be included in the Grandiose/Manipulative dimension or not. Both the current article and a previous study in adolescents (Poythress et al., 2006a) suggest that the three factor model of the YPI has a better fit without this subscale. Secondary support for these findings is provided by factor analyses of the APSD in which the one item assessing Lying ('Lies easily and skillfully') has remained unclassified in both the two and three factor structure of the measure (Frick, O'Brien, Wootton, & McBurnett, 1994; Frick et al., 2000). Research on the adult psychopathy construct, however, clearly suggest that lying is part of the construct (Cooke & Michie, 2001), at least in adults. Therefore, it is preliminary to subtract the Lying subscale from the YPI model. An important strength of the current study is that the YPI-CV was validated using multiple informants: self, teachers and peers. None of these however provide objective criterion measures. Therefore, future research could validate the YPI-CV using measures that are independent of rater characteristics, such as physiological measures and experimental paradigms that assess responsiveness to emotional stimuli (Rutter, 2005).

Gaining a fuller understanding of the development of psychopathic personality disorder is an important endeavor that can have major implications for society. People who develop this socially devastating personality deficit cause substantial harm to society, both economically through legal processes, institutionalization, and treatments as well as humanistically through their harm to their family members, children, and the victims of their crimes. Early prevention of this disorder should thus receive high priority. Effective early preventive interventions need to be built on research, which up to date is sparse on children. A basic but essential starting point for this line of research is the development of valid and reliable measures of psychopathic traits in children, and the present research shows the YPI-CV to be one of those.

References

Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4–18 and 1991 Profile.* Burlington, VT: University of Vermont Department of Psychiatry.

American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders: DSM-IV,* ed. 4 Washington: American Psychiatric Association text revision.

Andershed, H., Hodgins, S., & Tengström, A. (2007). Convergent validity of the Youth Psychopathic Traits Inventory (YPI): Association with the Psychopathy Checklist: Youth Version (PCL:YV). *Assessment*, 14, 144−154.

Andershed, H., Kerr, M., Stattin, H., & Levander, S. (2002). Psychopathic traits in non-referred youths: Initial test of a new assessment tool. In E. Blaauw, J. M. Philippa, K. C. M. P. Ferenschild, & B. van Lodensteijn (Eds.), *Psychopaths: Current international perspectives* (pp. 131−158). The Hague: Elsevier.

Barry, C. T., Frick, P. J., & Killian, A. L. (2003). The relation of narcissism and self-esteem to conduct problems in children: A preliminary investigation. *Journal of Clinical Child and Adolescent Psychology*, *32*(1), 139−152.

Benning, S. D., Patrick, C. J., Blonigen, D. M., Hicks, B. M., & Iacono, W. G. (2005). Estimating facets of psychopathy from normal personality traits: A step toward community epidemiological investigations. *Assessment*, *12*(1), 3−18.

Bentler, P. M. (1995). *EQS Structural Equations Program Manual*. Encino, CA: Multivariate Software Inc.

Blair, R. J. R. (1999). Responsiveness to distress cues in the child with psychopathic tendencies. *Personality and Individual Differences*, *27*, 135.

Blair, R. J. R. (2005). Responding to the emotions of others: Dissociating forms of empathy through the study of typical and psychiatric populations. *Consciousness and Cognition*, *14*(4), 698−718.

Blair, R. J. R., & Coles, M. (2000). Expression recognition and behavioral problems in early adolescence. *Cognitive Development*, *15*, 421−434.

Blair, R. J. R., Colledge, E., Murray, L., & Mitchell, D. G. V. (2001). A selective impairment in the processing of sad and fearful expressions in children with psychopathic tendencies. *Journal of Abnormal Child Psychology*, *V29*(6), 491−498.

Blair, R. J. R., Morris, J. S., Frith, C. D., Perrett, D. I., & Dolan, R. J. (1999). Dissociable neural responses to facial expressions of sadness and anger. *Brain*, *122*(Pt 5), 883−893.

Blair, R. J. R., Peschardt, K. S., Budhani, S., Mitchell, D. G., & Pine, D. S. (2006). The development of psychopathy. *Journal of Child Psychology and Psychiatry*, *47*(3–4), 262−276.

Bryant, B. (1982). An index of Empathy for Children and Adolescents. *Child Development*, *53*, 413−425.

Byrne, B. M. (2006). *Structural equation modeling with EQS : Basic concepts, applications and programming*, 2nd [rev. and exp.] ed. Mahwah, NJ: Lawrence Erlbaum.

Caputo, A. A., Frick, P. J., & Brodsky, S. L. (1999). Family violence and juvenile sex offending: Potential mediating roles of psychopathic traits and negative attitudes toward women. *Criminal Justice and Behavior*, *26*, 338−356.

Christian, R. E., Frick, P. J., Hill, N. L., & Tyler, L. (1997). Psychopathy and conduct problems in children: II. Implications for subtyping children with conduct problems. *Journal of the American Academy of Child Psychology*, *36*, 233.

Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, *7*, 309−319.

Cooke, D. J., & Michie, C. (2001). Refining the construct of psychopathy: Towards a hierarchical model. *Psychological Assessment*, *13*(2), 171−188.

Cooke, D. J., Michie, C., Hart, S. D., & Clark, D. A. (2004). Reconstructing psychopathy: Clarifying the significance of antisocial and socially deviant behavior in the diagnosis of psychopathic personality disorder. *Journal of Personality Disorders*, *18*(4), 337−357.

Das, J., & De Ruiter, C. (2002). Nederlandse vertaling van de Youth Psychopathic traits Inventory.

De Wied, M. de, Goudena, P. P., & Matthys, W. (2005). Empathy in boys with disruptive behavior disorders. *Journal of Child Psychology and Psychiatry*, *46*(8), 867−880.

Dolan, M. C., & Rennie, C. E. (2006). Psychopathy checklist: Youth version and youth psychopathic trait inventory: A comparison study. *Personality and Individual Differences*, *41*, 779−789.

Dolan, M. C., & Rennie, C. E. (2007). The relationship between psychopathic traits measured by the Youth Psychopathic trait Inventory and psychopathology in a UK sample of conduct disordered boys. *Journal of Adolescence*, *30*(4), 601−611.

Dunn, G., Everitt, B. S., & Pickles, A. (1993). *Modelling co-variances and latent variables using EQS*. London: Chapman Hall.

Edens, J. F., Marcus, D. K., Lilienfeld, S. O., & Poythress, N. G. (2006). Psychopathic, not psychopath: Taxometric evidence for the dimensional structure of psychopathy. *Journal of Abnormal Psychology*, *115*(1), 131−144.

Edens, J. F., Poythress, N. G., & Watkins, M. M. (2001). Further validation of the psychopathic personality inventory among offenders: Personality and behavioral correlates. *Journal of Personality Disorders*, *15*(5), 403−415.

Erasmus, M. C. (2000). *Problem behavior at school interview*. Rotterdam: Department of Child and Adolescent Psychiatry.

Falkenbach, D. M., Poythress, N. G., & Heide, K. M. (2003). Psychopathic features in a juvenile diversion population: Reliability and predictive validity of two self-report measures. *Behavioral Science & the Law*, *21*(6), 787−805.

Farrington, D. P. (2005). The importance of child and adolescent psychopathy. *Journal of Abnormal Psychology*, *33*(4), 489−497.

Ferguson, T. J., Stegge, H., Eyre, H. L., Vollmer, R., & Ashbaker, M. (2000). Context effects and the (mal)adaptive nature of guilt and shame in children. *Genetic, Social, and General Psychology Monographs*, *126*(3), 319−345.

Ferguson, T. J., Stegge, H., Miller, E. R., & Olsen, M. E. (1999). Guilt, shame, and symptoms in children. *Developmental Psychology*, *35*(2), 347−357.

Frick, P. J., Bodin, S. D., & Barry, C. T. (2000). Psychopathic traits and conduct problems in community and clinic-referred samples of children: Further development of the psychopathy screening device. *Psychological Assessment*, *12*(4), 382−393.

Frick, P. J., & Hare, R. D. (2001). *The antisocial process screening device*. Toronto: Multi-Health Systems.

Frick, P. J., Kimonis, E. R., Dandreaux, D. M., & Farell, J. M. (2003). The 4 year stability of psychopathic traits in non-referred youth. *Behavioral Science & the Law*, *21*(6), 713−736.

Frick, P. J., O'Brien, B. S., Wootton, J. M., & McBurnett, K. (1994). Psychopathy and conduct problems in children. *Journal of Abnormal Psychology*, *103*(4), 700−707.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry*, *38*, 581−586

Guay, J. P., Ruscio, J., Hare, R. D., & Knight, R. A. (2007). A taxometric analysis of the latent structure of psychopathy: Evidence for dimensionality. *Journal of Abnormal Psychology*, *116*(4), 701−716.

Hare, R. D. (1991). *The Hare Psychopathy Checklist—Revised: Manual*. North Tonawanda, NY: Multi-Health Systems, Inc.

Hare, R. D. (2003). *The Psychopathy Checklist—Revised*, 2nd ed. Toronto: Multi-Health Systems.

Harter, S. (1990). Causes, correlates and the functional role of global self-worth: A life-span perspective. In J. Kolligan & R. Sternberg (Eds.), *Perceptions of competence and incompetence across the life-span* (pp. 67−98). New Haven, CT: Yale University Press.

Ishikawa, S. S., Raine, A., Lencz, T., Bihrle, S., & Lacasse, L. (2001). Autonomic stress reactivity and executive functions in successful and unsuccessful criminal psychopaths from the community. *Journal of Abnormal Psychology*, *110*(3), 423−432.

Johansson, P., Kerr, M., & Andershed, H. (2005). Linking adult psychopathy with childhood hyperactivity-impulsivity-attention problems and conduct problems through retrospective self-reports. *Journal of Personality Disorders*, *19*(1), 94−101.

Johnstone, L., & Cooke, D. J. (2004). Psychopathic-like traits in childhood: Conceptual and measurement concerns. *Behavioral Science & the Law*, *22*(1), 103−125.

Kansi, J. (2003). The narcissistic personality inventory: Applicability in a Swedish population sample. *Scandinavian Journal of Psychology*, *44*(5), 441−448.

Kotler, J. S., & McMahon, R. J. (2005). Child psychopathy: Theories, measurement, and relations with the development and persistence of conduct problems. *Clinical Child and Family Psychology Review*, *8*(4), 291−325.

Kruh, I. P., Frick, P. J., & Clements, C. B. (2005). Historical and personality correlates to the violence patterns of juveniles tried as adults. *Criminal Justice and Behavior*, *32*, 69−96.

Larsson, H., Andershed, H., & Lichtenstein, P. (2006). A genetic factor explains most of the variation in the psychopathic personality. *Journal of Abnormal Psychology*, *115*(2), 221−230.

Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, *68*(1), 151−158.

Lilienfeld, S. O. (1994). Conceptual problems in the assessment of psychopathy. *Clinical Psychology Review*, *14*, 17−38.

Lilienfeld, S. O., & Andrews, B. P. (1996). Development and preliminary validation of a self-report measure of psychopathic personality traits in noncriminal populations. *Journal of Personality Assessment*, *66*(3), 488−524.

Loehlin, J. C. (2004). *Latent variable models: An introduction to factor, path, and structural equation analysis*, 4th ed. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Lynam, D. R. (1996). Early identification of chronic offenders: Who is the fledgling psychopath? *Psychological Bulletin, 120*(2), 209−234.

Lynam, D. R. (1997). Pursuing the psychopath: Capturing the fledgling psychopath in a nomological net. *Journal of Abnormal Psychology, 106*(3), 425−438.

Lynam, D. R., & Gudonis, L. (2005). The development of psychopathy. *Annual Review of Clinical Psychology, 1*(1), 381−407.

Lynam, D. R., Caspi, A., Moffitt, T. E., Loeber, R., & Stouthamer-Loeber, M. (2005). Adolescent psychopathy and the big five: Results from two samples. *Journal of Abnormal Child Psychology, 33*(4), 431−443.

Marsee, M. A., Silverthorn, P., & Frick, P. J. (2005). The association of psychopathic traits with aggression and delinquency in non-referred boys and girls. *Behavioral Science & the Law, 23*(6), 803−817.

Marsh, H. W., Craven, R., & Debus, R. (1991). Self-concepts of children 5 to 8 years of age: Measurement and multidimensional structure. *Journal of Educational Psychology, 81*, 57−69.

McHoskey, J. W., Worzel, W., & Szyarto, C. (1998). Machiavellianism and psychopathy. *Journal of Personality and Social Psychology, 74*(1), 192−210.

Muris, P., Meesters, C., Eijkelenboom, A., & Vincken, M. (2004). The self-report version of the Strengths and Difficulties Questionnaire: its psychometric properties in 8- to 13-year-old non-clinical children. *British Journal of Clinical Psychology, 43*(Pt 4), 437−448.

Nicholls, J. G. (1990). What is ability and why are we mindful of it? A development perspective. In R. J. Sternberg & J. Kolligian Jr. (Eds.), *Competence considered* (pp. 11−40). New Haven, CT: Yale University Press.

Nunnally, J., & Bernstein, I. (1994). *Psychometric theory*, 3rd ed. New York: McGraw-Hill.

Oosterlaan, J., Scheres, A., Antrop, I., Roeyers, H., & Sergeant, J. A. (2000). *Vragenlijst voor Gedragsproblemen bij Kinderen: Handleiding [User's manual for the Disruptive Behavior Disorder Rating Scale].* Lisse, The Netherlands: Swets Test Publishers.

Pelham, W. E., Jr., Gnagy, E. M., Greenslade, K. E., & Milich, R. (1992). Teacher ratings of DSM-III-R symptoms for the disruptive behavior disorders. *Journal of the American Academy of Child and Adolescent Psychiatry, 31*(2), 210−218.

Poythress, N. G., Dembo, R., Wareham, J., & Greenbaum, P. (2006). Construct validity of the Youth Psychopathic traits Inventory (YPI) and the Antisocial Process Screening Device (APSD) with justice involved adolescents. *Criminal Justice and Behavior, 33*(1), 26−55.

Poythress, N. G., Douglas, K. S., Falkenbach, D., Cruise, K., Lee, Z., Murrie, D. C., et al. (2006). Internal consistency reliability of the self-report antisocial process screening device. *Assessment, 13*(1), 107−113.

Rutter, M. (2005). Commentary: What is the meaning and utility of the psychopathy concept? *Journal of Abnormal Child Psychology, V33*(4), 499−503.

Salekin, R. T., Leistico, A. M., Neumann, C. S., DiCicco, T. M., & Duros, R. L. (2004). Psychopathy and comorbidity in a young offender sample: Taking a closer look at psychopathy's potential importance over disruptive behavior disorders. *Journal of Abnormal Psychology, 113*(3), 416−427.

Salekin, R. T., Trobst, K. K., & Krioukova, M. (2001). Construct validity of psychopathy in a community sample: A nomological net approach. *Journal of Personality Disorders, 15*(5), 425−441.

Sandoval, A. M., Hancock, D., Poythress, N., Edens, J. F., & Lilienfeld, S. O. (2000). Construct validity of the psychopathic personality inventory in a correctional sample. *Journal of Personality Assessment, 74*(2), 262−281.

Skeem, J. L., & Cauffman, E. (2003). Views of the downward extension: Comparing the youth version of the psychopathy checklist with the youth psychopathic traits inventory. *Behavioral Science & the Law, 21*(6), 737−770.

Statline CBS (2005). *Centraal Bureau voor de Statistiek.* CBS.

Stevens, D., Charman, T., & Blair, R. J. (2001). Recognition of emotion in facial expressions and vocal tones in children with psychopathic tendencies. *Journal of Genetic Psychology, 162*(2), 201−211.

Strayer, J. (1993). Children's concordant emotions and cognitions in response to observed emotions. *Child Development, 64*(1), 188−201.

Strayer, J., & Roberts, W. (2004). Empathy and observed anger and aggression in five-year olds. *Social Development, 13*, 1−13.

Thomaes, S., Stegge, H., Olthof, T., & Bushman, B. J. (in press). Development and validation of the Childhood Narcissism Scale. *Journal of Personality Assessment.*

Vasey, M. W., Kotov, R., Frick, P. J., & Loney, B. R. (2005). The latent structure of psychopathy in youth: A taxometric investigation. *Journal of Abnormal Child Psychology, V33*(4), 411−429.

Vaughn, M. G., & Howard, M. O. (2005). Self-report measures of juvenile psychopathy: A comparative review. *Journal of Emotional and Behavioral Disorders, 11*, 152−162.

Vitacco, M. J., Rogers, R., & Neumann, C. S. (2003). The antisocial process screening device: An examination of its construct and criterion-related validity. *Assessment, 10*(2), 143−150.

Weiss, B., Harris, V., & Catron, T. (2002). Development and initial validation of the Peer-report Measure of Internalizing and Externalizing Behavior. *Journal of Abnormal Child Psychology, 30*(3), 285−294.