

## Parental schemas in youngsters referred for antisocial behaviour problems demonstrating depressive symptoms

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### Abstract

Based on schema theory, this study aimed to investigate parental schemas in a sample of depressed and non-depressed youngsters referred for antisocial behaviour problems and in a non-depressed non-referred control group. A sample of 82 children and adolescents (aged 8–18 years) filled out the Children's Depression Inventory and the Young Parenting Inventory Mother (YPI-Mother) and Father (YPI-Father). On both the YPI-Mother and the YPI-Father, differences between groups were situated in the schema domain disconnection/rejection. On the YPI-Mother the referred depressed group scored higher than both non-depressed groups for the maladaptive schema defectiveness/shame. On the YPI-Father, the referred depressed group scored higher than both non-depressed groups for the maladaptive schemas abandonment/instability, emotional deprivation, and defectiveness/shame. Referred antisocial youngsters who demonstrate depressive symptoms perceive their parents as more cold, instable, unreliable, and unpredictable than do non-depressed controls. In treatment of antisocial youngsters the existence of a depressive subgroup characterized by specific parental schemas should be recognised.

**Keywords:** *Antisocial behaviour, depression, comorbidity, youth, parenting, cognitive theory*

### Introduction

With a prevalence rate of 4–10% in the general population, antisocial behaviour is the most common mental health problem in children and adolescents (Bierman et al., 1992). Moreover, the ability of therapeutic

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interventions to counteract antisocial behaviour in adolescents seems rather limited (Kazdin, 1987). Therefore, the annual figures on juvenile delinquency are still terribly high (Loeber, 1982; Loeber & Hay, 1997). The costs of children, and in particular adolescents, displaying antisocial behaviour are tremendous, for their families as well as for the educational system and society as a whole (Scott, Knapp, Henderson, & Maughan, 2001). Antisocial behaviour in children and adolescents can thus be considered a major social problem (Greenwood, Model, Rydell, & Chiesa, 1996; Loeber & Hay, 1997). Clinicians and researchers have paid much attention to disruptive behaviour disorders, urged on by an increasing concern for prevention and treatment. However, many questions remain unanswered, partly because the specific mechanisms related to treatment success and failure have not yet been identified (Burke, Loeber, & Birmaher, 2002).

A commonly neglected issue is the comorbidity of disruptive behaviour disorders and depression, which has been well established in community and referred samples of youngsters (Ben-Amos, 1992). In these cases, antisocial behaviour sometimes 'masks' the depression as it is mainly the externalizing problems that lead to referral (Hammen & Compas, 1994). The developmental sequence of depression and disruptive behaviour disorders has remained unclear (Loeber, Burke, Lahey, Winters, & Zera, 2000) but in identifying pathological processes, Angold, Costello, and Erkanli (1999) consider it unwarranted to distinguish between so-called primary and secondary disorders. However, in youngsters referred for antisocial behaviour, depressive symptoms frequently complicate intervention (Loeber et al., 2000). Furthermore, comorbid conduct and depressive conditions, rather than conduct problems alone, may be an important risk factor for substance use in early adolescence (Miller-Johnson, Lochman, Coie, Terry, & Hyman, 1998). Hence, further research is needed to highlight the clinical implications of this comorbidity.

A theory that has generated a vast body of empirical research on depression, even in children and adolescents, is Beck's cognitive theory (Beck, 1967; Beck, Rush, Shaw, & Emery, 1979). Cognitive theories try to explain the development and maintenance of depression by focusing on the role of schemas. Maladaptive schemas are defined as cognitive structures that bias information processing regarding the self, others, and the world and give rise to negative automatic thoughts and depressive feelings (Clark, Beck, & Alford, 1999). As such, within cognitive theory, these maladaptive schemas are considered a vulnerability or diathesis for the development of depression.

Little attention has been given to the mechanisms through which maladaptive self-schemas might arise. Research suggests that interpersonal processes, in particular disrupted parent-child interactions, play a prominent role in the pathogenesis of depression (Ingram, 2003). Cole

and colleagues investigated the impact of parental feedback on children and suggest that negative feedback from significant others may be internalized in the form of negative self-referent thoughts or schemas, which then function as a diathesis that mediates the relation between negative feedback and depression (Cole, 1991; Cole & Turner, 1993).

Less research has been done on the association between negative parental feedback and antisocial behaviour. There is some evidence that parental negativity influences disruptive behaviour (Burke et al., 2002), but not all antisocial youngsters experience depressive symptomatology. Therefore, the aim of the present study was to look for perceived parenting experiences in depressed and non-depressed antisocial youth.

Elaborating on Beck's theory, Young defines an early maladaptive schema as a broad, pervasive theme or pattern comprised of memories, emotions, cognitions, and bodily sensations regarding oneself and one's relationships with others, developed during childhood or adolescence, elaborated throughout one's lifetime, and dysfunctional to a significant degree (Young, Klosko, & Weishaar, 2003). Again, a child's experience of being parented is considered the fundament of self-schema. Based on clinical experience, Young distinguished various early maladaptive self-schemas, grouped within five domains reflecting basic childhood needs: acceptance, autonomy, limit setting, reciprocity, and free expression. He developed an instrument to assess these schemas, the Young Schema Questionnaire (YSQ; Young & Brown, 1990) and a questionnaire to measure the parenting origins of each schema, the Young Parenting Inventory (YPI; Young, 2003). Young's schema theory might thus help to distinguish between different types of parenting experience, which will be denoted as parental schemas. Table I gives an overview of the different early maladaptive schemas/domains, a description of the typical family of origin of people endorsing these, and an exemplary YPI item for each parental schema.

Studies of the YSQ in adults support its psychometric properties (e.g., Lee, Taylor, & Dunn, 1999; Rijkeboer & van den Bergh, 2006; Rijkeboer, van den Bergh, & van den Bout, 2005; Schmidt, Joiner, Young, & Telch, 1995) and suggest that early maladaptive schemas in the first domain (acceptance or, negatively formulated, disconnection/rejection) are consistently linked to depression (for an overview, see Calvete, Estevez, de Arroyabe, & Ruiz, 2005). Recently, Sheffield, Waller, Emanuelli, Murray, and Meyer (2005) used the YPI to study perceived parenting experiences in a student sample. The incorporation of Young's model into child and adolescent psychopathology research is still in its infancy. Until now, only three studies have made use of the YSQ to investigate maladaptive schemas in youth (Cooper, Rose, & Turner, 2005; Muris, 2006; Turner, Rose, & Cooper, 2005). As far as we know, the link between parental schemas on the one hand and psychopathology on the other hand has not yet been investigated, either in adults or in children.

Table I. The domains and constituting schemas of the YPI (Young et al., 2003).

Domains/schemas	Description	Typical family of origin	Exemplary YPI item
<i>Disconnection/rejection</i>	<i>Expectation that one's needs for security, safety, stability, nurturance, empathy, sharing of feelings, acceptance, and respect will not be met in a predictable manner</i>	<i>Detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive</i>	
Abandonment/instability	The perceived instability or unreliability of those available for support and connection		'My mother/father withdraws or leaves me alone for extended periods'
Mistrust/abuse	The expectation that others will hurt, abuse, humiliate, cheat, lie, manipulate, or take advantage		'My mother/father lies to me, deceives me or betrays me'
Emotional deprivation	The expectation that one's desire for a normal degree of emotional support will not be adequately met by others		'My mother/father spends time with me and pays attention to me'
Defectiveness/shame	The feeling that one is defective, bad, unwanted, inferior, or invalid in important respects or that one would be unlovable to significant others if exposed		'My mother/father makes me feel ashamed of myself in important aspects'
<i>Impaired autonomy and performance</i>	<i>Expectations about oneself and the environment that interfere with one's perceived ability to separate, survive, function independently, or perform successfully</i>	<i>Enmeshed, undermining of child's confidence, overprotective, or failing to reinforce the child for performing competently outside the family</i>	
Dependence/incompetence	The belief that one is unable to handle one's everyday responsibilities in a competent manner without considerable help from others		'My mother/father treats me as if I am younger than I really am'
Vulnerability to harm/illness	Exaggerated fear that imminent catastrophe will strike at any time and that one will be unable to prevent it		'My mother/father worries excessively that I will get sick'

(continued)

Table I. (Continued).

Domains/schemas	Description	Typical family of origin	Exemplary YPI item
Enmeshment/undeveloped self	Excessive emotional involvement and closeness with one or more significant others (often parents) at the expense of full individuation or normal social development		'My mother/father and me, we are so close that we understand each other almost perfectly'
Failure	The belief that one has failed, will inevitably fail, or is fundamentally inadequate relative to one's peers in areas of achievement		'My mother/father expect me to be a failure in life'
<i>Impaired limits</i>	<i>Deficiency in internal limits, responsibility to others, or long-term goal orientation; leads to difficulty respecting the rights of others, cooperating with others, making commitments, or setting and meeting realistic personal goals</i>	<i>Characterized by permissiveness, overindulgence, lack of direction, or a sense of superiority rather than appropriate confrontation, discipline, and limits in relation to taking responsibility, cooperating in a reciprocal manner, and setting goals</i>	
Entitlement/grandiosity	The belief that one is superior to other people, entitled to special rights and privileges, or not bound by the rules of reciprocity that guide normal social interaction		'My mother/father make me feel special, better than most other people'
Insufficient self-control/ self-discipline	Pervasive difficulty or refusal to exercise sufficient self-control and frustration tolerance to achieve one's personal goals or to restrain the expression of one's emotions and impulses		'My mother/father set few rules or responsibilities for me'
<i>Other-directedness</i>	<i>An excessive focus on the desires, feelings, and responses of others at the expense of one's own needs in order to gain love and approval, maintain one's sense of connection, or avoid retaliation</i>	<i>Based on conditional acceptance: children must suppress important aspects of themselves in order to gain love, attention, and approval; parents' emotional needs and desires (or social acceptance and status) are valued more than the unique needs and feelings of each child</i>	

(continued)

Table I. (Continued).

Domains/schemas	Description	Typical family of origin	Exemplary YPI item
Subjugation	Excessive surrendering of control to others because one feels coerced – submitting in order to avoid anger, retaliation, or abandonment		'My mother/father treats me as if my opinions or desires don't count'
Self-sacrifice	Excessive focus on voluntarily meeting the needs of others in daily situations at the expense of one's own gratification		'My mother/father is unhappy a lot and relies on me for support and understanding'
Approval-seeking/ recognition-seeking	Excessive emphasis on gaining approval, recognition, or attention from other people or on fitting in at the expense of developing a secure and true sense of self		'My mother/father is concerned with social status and appearance'
Overvigilance/inhibition	<i>Excessive emphasis on suppressing one's spontaneous feelings, impulses, and choices or on meeting rigid, internalized rules and expectations about performance and ethical behaviour, often at the expense of happiness, self-expression, relaxation, close relationships, or health</i>	<i>Grim, demanding, and sometimes punitive: performance, duty, perfectionism, following rules, hiding emotions, and avoiding mistakes predominate over pleasure, joy, and relaxation; usually an undercurrent of pessimism and worry that things could fall apart if one fails to be vigilant and careful at all times</i>	
Negativity/pessimism	A pervasive, lifelong focus on the negative aspects of life while minimizing or neglecting the positive aspects		'My mother/father has a pessimistic outlook; often expects the worst outcome'
Emotional inhibition	The excessive inhibition of spontaneous action, feeling, or communication, usually to avoid disapproval by others, feelings of shame, or losing control of one's impulses		'My mother/father is private, rarely discusses his/her feelings'
Unrelenting standards/ hypercriticalness	The belief that one must strive to meet very high internalized standards of behaviour and performance, usually to avoid criticism		'My mother/father expects me to do my best at all times'
Punitiveness	The belief that people should be harshly punished for making mistakes		'My mother/father becomes angry or harshly critical when I do something wrong'

Based on Young's schema theory, the present study aimed to examine parental schemas in a group of youngsters referred for severe externalizing problems who also report considerable depressive symptoms. This group was compared with two control groups: a group of referred youngsters without depressive symptoms on the one hand and a non-referred group of children and adolescents without depressive symptoms on the other hand. Including two control groups enabled us to gain insight into cognitive content that might be ascribed to the comorbid conditions (depression and conduct problems) rather than solely to referral status or to externalizing problems.

Based on theoretical assumptions (Clark et al., 1999; Stark & Smith, 1995) and on previous research into self-schemas in depression (Calvete et al., 2005), it was hypothesized that negative parental schemas within the disconnection/rejection domain would be found in the comorbid group. This domain covers the perception that parents do not fulfil the child's need for security, stability, empathy, and acceptance, and is comprised of the following schemas: abandonment/instability, emotional deprivation, mistrust/abuse, and defectiveness/shame.

Further, most studies of children's perceptions of their parents have focused exclusively on mother representations; little is known about the association between father-child interactions and depression (Kane & Garber, 2004). The present study aimed to extend previous findings by assessing children's perceptions of both the mother and the father.

## **Method**

### *Participants*

The sample included 82 children and adolescents. One group of 41 youngsters was recruited from two inpatient settings. Both institutes are officially recognized psychosocial services for the re-education of children and adolescents with severe externalizing problems. Youngsters are referred by juvenile court if their behaviour is considered a danger to themselves and/or their environment. Another group of 41 children and adolescents were recruited via schools (non-referred group). The mean age of the children and adolescents was 12.60 ( $SD = 2.40$ , range 8–18). There were 62 boys and 20 girls.

### *Measures*

*Structured Clinical Interview for DSM-IV – Childhood Version.* The disruptive behaviour and mood disorder module of the Structured Clinical Interview for DSM-IV – Childhood Version (KID-SCID; Dreessen, Stroux, & Weckx, 1998; Hien et al., 1994) was administered to the children and

adolescents from the referred group. The KID-SCID is based on the SCID for adults (Spitzer, Williams, & Gibbon, 1986), a widely used diagnostic interview that has acceptable reliability and validity (Spitzer, Williams, Gibbon, & First, 1992; Williams et al., 1992). Similar to the adult version, the KID-SCID is a semi-structured instrument designed to generate childhood DSM-IV diagnoses for clinical research studies. Psychometric studies are still ongoing, but preliminary results show fair to excellent test–retest reliability for the disruptive behaviour disorders (between .63 and .84; Matzner, Silva, Silvan, Chowdhury, & Nastasi, 1997). Pilot data also indicate excellent interrater reliability in the disruptive behaviour module (.84 for oppositional defiant disorder and conduct disorder and 1.0 for attention deficit hyperactivity disorder; Matzner, 1994). Timbremont, Braet, and Dreessen (2004) found similar values for interrater reliability in the disruptive behaviour and mood disorders modules.

*Children's Depression Inventory.* The children and adolescents completed a Dutch version of the Children's Depression Inventory (CDI; Kovacs, 1992; Timbremont & Braet, 2002) to assess current mood. The CDI is used with children and adolescents aged 7–17 and includes 27 items measuring the cognitive, affective, and behavioural symptoms of depression in children. Each item consists of three statements, and children select the statement that characterised them best during the previous two weeks. The statements are graded in order of increasing severity from 0 to 2; item scores are combined into a total depression score. The original questionnaire has relatively high levels of internal consistency, test–retest reliability, and predictive, convergent, and construct validity, especially in non-clinical populations (Craighead, Smucker, Craighead, & Ilardi, 1998). Psychometric results for the Dutch version are promising. The internal consistency of the Dutch CDI is .80, and the one-month test–retest reliability is .81 (Timbremont & Braet, 2002).

*Young Parenting Inventory.* The Young Parenting Inventory (YPI; Young, 2003) is a self-report questionnaire assessing perceived parental experiences in youth. The YPI is designed to identify the parental origin of the maladaptive self-schemas identified by Young (Young et al., 2003). The questionnaire consists of 72 items which break down into 17 parental schemas that are clustered into five domains. Respondents are asked to rate items about their experience of their parents' attitude and behaviour towards them on a six-point Likert scale (1 = 'Completely untrue', 6 = 'Describes him/her perfectly'). Two versions were administered: a version with statements about the mother and a version with statements about the father.

The first domain, disconnection/rejection, refers to the expectation that parents should provide stability, security, and empathy and consists of the schemas abandonment/instability, mistrust/abuse, emotional deprivation,



and defectiveness/shame. The second domain is related to impaired autonomy and performance, and refers to the perception that parents are overprotective and undermining of the child's confidence. It includes the schemas dependence/incompetence, vulnerability to harm or illness, enmeshment/undeveloped self, and failure. The third domain, impaired limits, refers to permissiveness and lack of direction by the parents and consists of two schemas: entitlement/grandiosity and insufficient self-control/self-discipline. The fourth domain is other-directedness. It includes subjugation, self-sacrifice, and approval-seeking/recognition-seeking, and refers to the perception that parents' emotional needs are valued more than the unique needs of the child. Finally, the inhibition domain concerns a demanding and punitive parenting style in which performance and perfectionism predominate over pleasure. This domain includes negativity/pessimism, emotional inhibition, unrelenting standards/hypercriticalness, and punitiveness. An overview of the different schemas/domains, a description of the typical family of origin of people endorsing these, and an exemplary YPI item for each schema is given in Table I.

The YPI was translated in Dutch, and some items were rephrased to be more comprehensible to children and adolescents. The Dutch translation was piloted with a small group of youngsters and adaptations were based on the children's comments. The internal consistency for both versions of the questionnaire in the present study was promising (Cronbach's  $\alpha$  YPI-Mother = .90, YPI-Father = .89).

Psychometric research on the YPI is scarce. As far as we know, only Sheffield and colleagues (2005) have used the YPI, with a student sample ( $n = 422$ ; age range 18–61). Sheffield et al. undertook a preliminary psychometric evaluation of the YPI in order to test the link between parenting (YPI) and maladaptive self-schemas (YSQ) as identified by Young. Based on factor analyses of both the mother version and the father version, a revised YPI (YPI-R) was constructed, including only those items and factors common to both parents that showed acceptable internal consistency and test–retest reliability. Nine factors (with a total of 37 items) common to both parents were retained. All nine scales showed good test–retest reliability. Significant and clinically meaningful correlations between this YPI-R and the YSQ were found (Sheffield et al., 2005). However, when the present study was conducted, no research on the YPI was available, and therefore the original YPI was used.

### *Procedure*

The institutional review board of Ghent University fully approved this study. Children and adolescents between 8 and 18 years with normal intelligence and without pervasive developmental disorder were included. After explaining the objectives and the procedure of the study, informed

consent was obtained from 45 (100%) youngsters and parents in the referred group and from 58 (96.67%) in the non-referred group. The CDI, the YPI-Mother, and the YPI-Father were administered in random order. Four children (8.8%) withdrew from the referred group during the study. One child from the non-referred group accidentally skipped some pages of the YPI and was therefore omitted from further analyses. Hence, 98 participants were eligible.

All youngsters completed the CDI, and in addition the referred youngsters were interviewed with the KID-SCID. As suggested by Kovacs (1992), a cut-off score of 13 on the CDI was used to define depressive symptomatology. The group of referred children and adolescents with a KID-SCID mood disorder diagnosis and/or a CDI score of 13 or above were denoted the 'referred symptomatic group' ( $n = 13$ ).<sup>1</sup> Referred children and adolescents with a CDI total score below 13 comprised the 'referred non-depressed group' ( $n = 28$ ). A non-referred control group of non-depressed youngsters was created out of the children and adolescents recruited via schools ( $n = 57$ ) by omitting those with a CDI score of 13 or above (21.05%). Of the 45 youngsters in this non-referred group, four young girls were randomly omitted from further analyses to equalize the referred and the non-referred in terms of number, age, and gender.

### *Statistical analyses*

First of all, a MANOVA was run with the total domain scores as individual variables. For the domains that significantly differed between groups, a separate MANOVA was conducted, one for each domain, with the schemas as individual variables. This was done separately for the YPI-Mother and the YPI-Father.

## **Results**

### *Descriptives*

The referred symptomatic group consisted of nine boys and four girls, the referred non-depressed group included 25 boys and three girls, and the non-referred group consisted of 28 boys and 13 girls. The three groups did not differ in gender distribution ( $\chi^2[2] = 4.32$ ,  $p = .12$ ) or in age ( $F[2,79] = 2.80$ ,  $p = .07$ ). Group differences on CDI scores were found ( $F[2,79] = 34.10$ ,  $p < .001$ ): the referred symptomatic group scored more highly than both the referred non-depressed group ( $p < .001$ ) and the non-referred group ( $p < .001$ ). The two non-depressed groups did not differ from each other in terms of CDI scores ( $p = .99$ ). Mean ages and CDI scores are given in Table II.

Table II. Group characteristics.

	Referred symptomatic ( <i>n</i> = 13)		Referred non-depressed ( <i>n</i> = 28)		Non-referred non-depressed ( <i>n</i> = 41)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	14.00	2.74	12.43	2.47	12.27	2.12
CDI score	15.54	3.97	6.46	3.51	6.56	3.56

Based on the structured clinical interview administered to the children and adolescents in the referred group, 27 youngsters (65.85%) received a disruptive behaviour disorder diagnosis: attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), or conduct disorder (CD). Furthermore, 11 youngsters (26.83%) did not meet DSM-IV criteria for a full-blown diagnosis but suffered from severe subclinical symptomatology. Disruptive behaviour disorder diagnoses were equally distributed in the referred symptomatic and the referred non-depressed group ( $\chi^2[1] = 2.52$ ,  $p = .11$  for ADHD;  $\chi^2[1] = .15$ ,  $p = .70$  for ODD;  $\chi^2[1] = 2.45$ ,  $p = .12$  for CD). Five youngsters (12.2%) received a diagnosis of mood disorder – four on top of their disruptive behaviour disorder diagnosis. Eight youngsters were assigned to the referred symptomatic group because of high levels of depressive symptomatology (mean CDI score = 16.25) although they received no mood disorder diagnosis.

### Maternal schemas

An overall MANOVA comparing the three groups on the domain scores of the YPI-Mother revealed an overall significant effect ( $F[5,74] = 3.96$ ,  $p < .001$ ) due to group differences on the disconnection/rejection domain ( $F[2,78] = 8.97$ ,  $p < .001$ ,  $\eta^2 = .03$ ). Post-hoc analyses for this domain revealed that the referred symptomatic group scored more highly than both the referred non-depressed group ( $p < .05$ ) and the non-referred group ( $p < .001$ ). No differences were found between the latter two groups ( $p = .18$ ). As this MANOVA revealed no significant differences in the other maternal schema domains, these will not be included in further analyses.

A MANOVA performed separately for the disconnection/rejection domain revealed significant differences for all constituent schemas: abandonment/instability ( $F[2,79] = 5.98$ ,  $p < .01$ ,  $\eta^2 = .05$ ), mistrust/abuse ( $F[2,79] = 4.07$ ,  $p < .05$ ,  $\eta^2 = .02$ ), emotional deprivation ( $F[2,79] = 7.55$ ,  $p < .01$ ,  $\eta^2 = .06$ ), and defectiveness/shame ( $F[2,79] = 8.95$ ,  $p < .001$ ,  $\eta^2 = .04$ ). Post-hoc analyses revealed that the referred symptomatic group had significantly higher scores on the abandonment/instability schema ( $p < .01$ ), the mistrust/abuse schema ( $p < .05$ ), and the emotional

deprivation schema ( $p < .01$ ) than the non-referred group. The referred symptomatic group had higher scores on the defectiveness/shame schema than the referred non-depressed group ( $p < .01$ ) and the non-referred group ( $p < .001$ ). The referred non-depressed group had a significantly higher score than the non-referred group only for the emotional deprivation schema. The results for the disconnection/rejection domain on the YPI-Mother are displayed in Table III.

### Paternal schemas

An overall MANOVA comparing the three groups on the domain scores of the YPI-Father revealed an overall significant effect ( $F[5,71] = 4.15$ ,  $p < .001$ ), again due to group differences on the disconnection/rejection domain ( $F[2,75] = 13.90$ ,  $p < .001$ ,  $\eta^2 = .05$ ). The referred symptomatic group scored more highly than the referred non-depressed ( $p < .001$ ) and the non-referred group ( $p < .001$ ). No differences were found between the latter two groups ( $p = .58$ ). As this overall MANOVA revealed no significant differences in the other paternal schema domains, these will not be included in further analyses.

A MANOVA performed separately for the disconnection/rejection domain revealed significant differences in all constituent schemas: abandonment/instability ( $F[2,75] = 11.64$ ,  $p < .001$ ,  $\eta^2 = .05$ ), mistrust/abuse ( $F[2,75] = 4.19$ ,  $p < .05$ ,  $\eta^2 = .02$ ), emotional deprivation ( $F[2,75] = 12.20$ ,  $p < .001$ ,  $\eta^2 = .06$ ), and defectiveness/shame ( $F[2,75] = 6.84$ ,  $p < .01$ ,  $\eta^2 = .04$ ). Post-hoc analyses demonstrated that the referred symptomatic group had significantly higher scores on the abandonment/instability schema than the referred non-depressed group ( $p < .001$ ) and the non-referred group ( $p < .001$ ). The referred symptomatic group had significantly higher scores on the mistrust/abuse schema than the non-referred group ( $p < .05$ ). The referred symptomatic group had

Table III. Means on the disconnection/rejection domain and constituting schemas of the YPI-Mother.

	Referred symptomatic ( $n = 13$ ) Mean (SD)	Referred non-depressed ( $n = 28$ ) Mean (SD)	Non-referred non-depressed ( $n = 41$ ) Mean (SD)
<i>Disconnection/rejection</i>	2.47 (1.20) <sup>ab</sup>	1.82 (0.78) <sup>a</sup>	1.49 (0.43) <sup>b</sup>
Abandonment/instability	2.19 (1.30) <sup>a</sup>	1.62 (0.93)	1.33 (0.38) <sup>a</sup>
Mistrust/abuse	1.98 (1.22) <sup>a</sup>	1.48 (0.93)	1.27 (0.44) <sup>a</sup>
Emotional deprivation	2.92 (1.34) <sup>a</sup>	2.53 (1.24) <sup>b</sup>	1.83 (0.64) <sup>ab</sup>
Defectiveness/shame	2.79 (1.80) <sup>ab</sup>	1.63 (0.80) <sup>a</sup>	1.51 (0.67) <sup>b</sup>

Note: Values with the same superscript letters differ significantly ( $p < .05$ ) from each other.

significantly higher scores on the emotional deprivation schema than the referred non-depressed ( $p < .01$ ) and the non-referred group ( $p < .001$ ). Finally, the referred symptomatic group had higher scores on the defectiveness/shame schema than the referred non-depressed group ( $p < .05$ ) and the non-referred group ( $p < .01$ ). No differences were found between the referred non-depressed and the referred group for these schemas. The results for the disconnection/rejection domain for the YPI-Father are displayed in Table IV.

## Discussion

Based on Young's schema theory, the present study investigated perceived parenting experiences or parental schemas in youngsters referred for antisocial behaviour problems. As hypothesized, the results indicated that within the referred group, a subgroup displaying comorbid depressive symptoms scored significantly more highly on the disconnection/rejection schema domain for both mother and father, compared with referred and non-referred youngsters without depressive symptoms. Apparently, children and adolescents with externalizing problems who also exhibit depressive symptomatology perceive their parents to be cold, rejecting, unpredictable, or abusive more than non-depressed controls. Generally speaking, these youngsters expect to a larger extent that their parents will not meet their need for security, stability, empathy, acceptance, and respect in a predictable manner (Young et al., 2003).

The YPI-Mother findings revealed that the antisocial youngsters with comorbid depressive symptoms experienced being treated as bad, unwanted, inferior, or invalid by their mothers to a greater extent than either control group. These youngsters also had higher scores on the abandonment/instability, mistrust/abuse, and emotional deprivation schemas than the non-referred group. However, this cognitive content

Table IV. Means on the disconnection/rejection domain and constituting schemas of the YPI-Father.

	Referred symptomatic ( $n = 11$ ) Mean ( $SD$ )	Referred non-depressed ( $n = 26$ ) Mean ( $SD$ )	Non-referred non-depressed ( $n = 41$ ) Mean ( $SD$ )
Disconnection and rejection	2.85 (1.22) <sup>ab</sup>	1.75 (.77) <sup>a</sup>	1.57 (.48) <sup>b</sup>
Abandonment/instability	2.66 (1.10) <sup>ab</sup>	1.57 (.77) <sup>a</sup>	1.46 (.60) <sup>b</sup>
Mistrust/abuse	2.02 (1.51) <sup>a</sup>	1.40 (.70)	1.28 (.43) <sup>a</sup>
Emotional deprivation	4.07 (1.73) <sup>ab</sup>	2.42 (1.37) <sup>a</sup>	2.09 (.83) <sup>b</sup>
Defectiveness/shame	2.66 (1.58) <sup>ab</sup>	1.62 (1.13) <sup>a</sup>	1.43 (.61) <sup>b</sup>

Note: Values with the same superscript letters differ significantly ( $p < .05$ ) from each other.

did not discriminate between referred depressed and referred non-depressed youth.

Findings for paternal schemas were even more pronounced. Apparently, depressed youth viewed their fathers as more unstable and unreliable than non-depressed controls (abandonment/instability schema). Furthermore, these youngsters reported less nurturance, empathy, or protection by their fathers (emotional deprivation) yet reported being treated as bad, unwanted, inferior, or invalid by their fathers (defectiveness/shame). Again, although the referred depressed group differed from the non-referred group on the mistrust/abuse schema, no significant differences were found between the referred depressed group and the referred non-symptomatic group. The mistrust/abuse schema refers to a child's expectation that his/her mother or father will hurt, abuse, humiliate, cheat, lie, or take advantage.

Based on present maternal and paternal findings, it seems justifiable to differentiate antisocial youngsters who exhibit depressive symptoms from those who do not, and focus specifically on the schemas that discriminate between these groups.

The findings regarding the disconnection/rejection domain are consistent with theoretical assumptions and empirical findings on familial risk factors associated with depression in youth and adults (Clark et al., 1999; Cole & Turner, 1993; Ingram, 2003; Shirk, Gudmundsen, & Burwell, 2005; Stark & Smith, 1995). These results can also be related to research into self-schemas in adults (Calvete et al., 2005). Schmidt and colleagues (1995), for instance, found that a high score on the Beck Depression Inventory was strongly correlated with self-schemas in the disconnection/rejection domain. The origin of these self-schemas is assumed to be based in parenting experiences as described above (Sheffield et al., 2005; Young et al., 2003). As a consequence, the present findings also confirm Beck's view of appraisal of loss and deprivation as primal cognitive schemas in depression.

This study extends research into parental schemas among youth. Although several studies have found evidence for an association between negative parental schemas and depression, they have usually focused on depressive symptoms in school samples. For example Rudolph, Hammen, and Burge (1994) found that schoolchildren aged 8–12 with elevated levels of depression showed increased negativity in beliefs about self and about family. However, in these studies the question of specificity has not been addressed: are negative parental schemas specific to depressive symptoms or are they characteristic of psychopathology in general? The present results indicate that schemas that concern parental rejection are not typical of all antisocial boys – only those with depressive symptomatology. We thus assume that depressed youngsters referred for antisocial behaviour problems have a complicated psychopathology and deserve specific

treatment for their depression. Consequently, services for antisocial youngsters should recognize the existence of maladaptive parental schemas in a depressive subgroup and attune their interventions accordingly.

Although this study contributes to research into perceived parental experiences in depression in general and in depressive antisocial youth in particular, several limitations need to be acknowledged. First, the study was based on self-reported data. Therefore, the association between depression and parental schemas may have been inflated because of shared method variance. This study deals only with perceived parental interactions, and perceptions may be biased by a negative information processing style – a characteristic of depression. Although various interpersonal theories stress that lack of social support is an important risk factor in the development and maintenance of depressive disorders (Cole & Rehm, 1986; Lewinsohn et al., 1994; Puigantich et al., 1993; Sheeber & Sorensen, 1998), perceived social interactions may not accurately reflect reality. Therefore, future research should also include a set of external evaluations or criteria to weigh against subjective experiences. However, in the context of depression, the appraisal of events is crucial in activating cognitive processes that trigger depressive feelings (Clark et al., 1999).

Second, the current study is also limited in terms of generalizability. The referred group consisted of court-referred youngsters with severe externalizing problems. Comparison of the referred youngsters with and without depressive symptoms justifies the conclusion that maladaptive parental schemas are due to the comorbid depressive condition rather than only to externalizing problems or to referral status. Although in line with former research on depression, it is not clear to what extent these findings can be generalized to purely depressed referred youngsters.

Next, the study is hampered by its small sample size, which raises questions about statistical power. In particular, the referred symptomatic group consisted of only 13 youngsters. However, exploratory research of this kind remains important – it sets the stage. It is remarkable that even in this small sample about one third of the referred group met the criteria for depressive symptoms, which indicates the importance and relevance of studying this comorbidity.

More controlled studies with larger samples will enable the examination of age and gender differences in parental schemas. In this study, the depressed sample contained more boys than girls and may therefore not be totally representative of depressive symptomatology as it appears in girls with externalizing problems. Previous research has demonstrated greater cognitive vulnerability to depression in girls (Hankin & Abramson, 2001), and therefore it seems especially relevant to explore gender effects in the context of parental schemas. However, because of the small number of girls in the three groups here, we considered it inappropriate to conduct such analyses on the present data.

Finally, future research will need to use longitudinal designs to gain insight into the mechanisms through which perceptions of parental rejection may be related to depression, and how the comorbidity with antisocial behaviour can be understood.

One could remark that in the referred group not all children and adolescents fully met the criteria for a psychiatric mood disorder as diagnosed by the clinical interview. However, undiagnosed individuals with subthreshold symptoms can also be severely impaired (Angold, Costello, Farmer, et al., 1999). As youngsters with a diagnosis of depression are usually referred to a psychiatric unit, in court-referred youth the presence of subclinical depressive problems is more likely than full-blown depression. Therefore, it seemed reasonable to use the CDI as a screening tool when assessing children and adolescents with antisocial behaviour. In this regard, the present study draws attention to comorbid depressive symptoms that often remain undiagnosed and therefore unaddressed. Specifically, maladaptive parental schemas that characterise this comorbid group were highlighted. This study stresses the importance of adverse parental experiences in depressed youngsters with antisocial behaviour; treatment for these children and adolescents should be multifaceted and include family intervention in addition to interventions directed at the child (Stark & Smith, 1995). This study also lends supports to the idea of re-installing constructive social networks to counter negative interpersonal perceptions.

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### **Note**

1 Although depression can be seen as a categorical variable, some authors draw attention to the fact that youngsters can be undiagnosed but seriously impaired (Angold, Costello, Farmer, Burns, & Erkanli, 1999). According to Timbremont and colleagues (2004), the CDI is an adequate screening instrument for depressive symptomatology. Therefore, antisocial youngsters who received no mood disorder diagnosis on the clinical interview but who exhibited severe depressive symptomatology (CDI score  $\geq 13$ ) were also included in the referred symptomatic group.



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