



The role of child and parent mentalizing for the development of conduct problems over time

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BACKGROUND

Recent ethological and neuroscientific approaches to understanding impairments in social interaction have relied on the concept of theory of mind (Baron-Cohen & Leslie, 1985) or mentalizing (Frith & Frith, 2006) to operationalize social cognition. The construct of mentalizing is defined as an individual's ability to understand or reflect on the context of, or the causes of, self and others' thoughts and feelings (Fonagy, Steele, Moran, Steel, & Higgitt, 1991). Mentalizing provides children with the ability to attribute mental states to self and others and to take on various perspectives in understanding the thoughts, feelings, and intentions of others. Studies have examined children's distortions in mentalizing (O'Connor & Hirsch, 1999) and how it relates to the development of psychopathology (Sharp, Croudace, & Goodyer, 2007; David & Kistner, 2000). Previous studies have demonstrated a concurrent relationship between conduct problems and distorted mentalizing in that children with conduct problems were found to be more likely to engage in an overly positive mentalizing style (Sharp, et al., 2007; Sharp, Fonagy, & Goodyer, 2006).

Parent-child interaction is central to the development of child mentalizing capacities (Sharp & Fonagy, 2008). Early interactions provide the attachment environment in which the child may develop his/her capacity to reflect on the mental states of self and others. The extent to which the parent treats the child as a psychological agent, reflecting their child's experience and attributing intentionality to the child provides the foundation for secure attachment which in turn, provides the opportunity for the child's own development of mentalizing ability (Fonagy & Target, 1997; Sharp & Fonagy, 2008). In other words, children are more likely to develop secure attachment in an environment where caregivers have well-developed mentalizing capacities (Fonagy, Leigh, Steele, Steele, Kennedy, & Mattoon, 1996; Fonagy, Steele, Steele, Leigh, Kennedy, & Mattoon, 1995). Thus, factors such as maternal mind-mindedness (Meins, 1997), parental reflective function (Slade, 2005), and maternal accuracy (Sharp, Fonagy, & Goodyer, 2006) play a crucial role in the development of positive psychosocial outcomes in children.

Maternal mind-mindedness is operationalized as the mother's ability to engage with her child at a mental level and treat her child as a psychological agent (Meins, 1997), parental reflective function refers to a parent's capacity to reflect on her own child's experience (Slade, 2005), and maternal accuracy or parental mentalizing is defined as the appropriateness by which a mother reads her child's mental state (Meins, Fernyhough, Fradley, & Tuckey, 2001; Sharp, Fonagy, & Goodyer, 2006). In a longitudinal study, Ruffman, Slade, & Crowe (2002) demonstrated a relationship between mothers' use of mental state language and the development of theory of mind in toddlers even when controlling for language ability, age, mothers' education, and the toddler's own use of mental state language. In a recent study by Sharp, Fonagy & Goodyer (2006), a relationship between maternal accuracy and child socio-emotional development was found, where low maternal accuracy was associated with distorted mentalizing (overly positive mentalizing style), which in turn, predicted concurrent conduct problems in the child.

In summary, an overly positive mentalizing style in the child (distorted mentalizing) and poor parental mentalizing (maternal accuracy) have both been shown to predict concurrent conduct problems in children. As of yet, the etiological status of these variables in the onset and development of conduct problems remain unknown. Against this background, the aim of the current study was to determine whether distorted mentalizing in children and poor mentalizing capacity in parents would predict the development of conduct problems one year after baseline, controlling for other variables known to associate with both mentalizing and conduct problems.

METHODS

Participants

The current study is part of a larger study (the Child Behaviour Study) on the social-cognitive and emotional correlates of antisocial behavior conducted in a community sample of 7 – 11 year old children in Cambridgeshire, England ($N = 659$).

Measures

Parent- and teacher- reported conduct problems: Strengths and Difficulties questionnaire (SDQ; Goodman, et al., 2000; Goodman, 1997, 2001).

Self-reported conduct problems: 10 items on current disruptive behavior derived from the DSM-IV criteria for conduct disorder (Kelvin, Goodyer, Teasdale, & Berchin, 1999).

Child Mentalizing (Distorted Mentalizing): The Distorted Mentalizing Task (Sharp, et al., 2007).

Parent Mentalizing (Maternal Accuracy): parent ratings on how they think their child would respond on the Distorted Mentalizing Task (Sharp et al., 2006).

IQ: Vocabulary and Block Design of the WISC (Weschler, 1992).

Distorted Mentalizing Task

Scenario 1 (boys' version)
One day Peter went to school and during break he went out to the playground. A lot of other kids went out to the playground too, but Peter was the only one sitting alone by the tree. Nobody was sitting or playing with him.
Imagine you are Peter. If you were, what do you think the other kids would be thinking about you?

- They would think nobody likes me
- They would think I'm just sitting down to have a think and a rest
- They would think I'm cool not to play silly games with the rest of the kids

Scenario 5 (girls' version)
Geena is the fattest girl in her class. She is much bigger than the rest of the boys and girls. One day, she left her gym shorts at home and had to borrow from someone else, but because she's so fat, she could not find big enough gym shorts to borrow.
Imagine you are Geena. If you were, what do you think the other kids would be thinking about you?

- They would think it was bad luck forgetting my shorts
- They would think I'm really fat and ugly
- They would think I'm really cool because I don't have to do gym

RESULTS

Descriptive statistics

Table 1 summarizes the means and standard deviations on questionnaire measures for baseline and follow-up.

Table 1

Descriptive Statistics for Main Study Variables

Baseline	n	Mean (SD)		n	%
Self-report CP	649	1.49 (2.58)	Distorted Mentalizing	647	
Parent-report CP	570	2.63 (1.24)	Overly Negative	240	37.1%
Teacher-report CP	617	.91 (1.56)	Rational	243	37.6%
Age	659	9.56 (1.2)	Overly Positive	164	25.3%
IQ	652	104.40 (17.06)			
Maternal Accuracy	354	6.52 (2.38)			
Follow-up					
Self-report CP	439	.68 (1.40)	*note: CP = Conduct Problems		
Parent-report CP	442	1.88 (1.90)			
Teacher-report CP	388	2.88 (3.11)			
Age	659	10.57 (1.2)			

Multivariate Analyses

As expected, children who had an overly positive mentalizing style were more likely to be reported by teachers as having conduct problems at one year follow-up. These findings held when controlling for baseline conduct problems, IQ, and sex. See Table 2 below.

Table 2

Linear Regression Examining the Independent Contribution of Distorted Mentalizing with Teacher-report Conduct Problems at Follow-up while Controlling for the Effect of Baseline Conduct Problems, IQ, and Sex.

	Follow-up Teacher-report conduct problems		
	B	SE B	β
Distorted Mentalizing	1.20	.33	.16**
Baseline Teacher-report Conduct Problems	.51	.10	.26**
Sex	-1.68	.28	-.27**
IQ	-.05	.01	-.24**

**p < .001

Findings for maternal mentalizing were significant for follow-up parent-report conduct problem symptoms at the bivariate level of analyses, but not at the multivariate level when controlling for baseline conduct problems and age.

CONCLUSIONS

The investigation reported here provides compelling evidence for the importance of both child and parent mentalizing in their respective roles in the development and maintenance of conduct problems in middle childhood. The most important finding is that distorted mentalizing (an overly positive bias) in children is predictive of conduct problems one year later. It is essential to identify children who are at risk for the development of conduct problems, so that treatment may take place early to enhance accurate mentalizing, so that problems do not persist into adolescence and adulthood. This is the first study, to our knowledge, to investigate prospective parent and child mentalizing in its relationship to conduct problems in middle childhood.