Social-cognitive abilities of children with disorders related to autism.

Serra, Marike

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
1996

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):
Summary

Children who experience severe and pervasive social and communicative problems can be classified as having a Pervasive Developmental Disorder (PDD, DSM-III-R, 1987). In its most serious form, these problems fit the diagnostic category Autistic Disorder (DSM-III-R, 1987). However, a group of children does not meet the criteria for Autistic Disorder, but experiences a common and core problem, namely the inability to interact with people in a reciprocal way. These problems may be classified as 'Pervasive Developmental Disorders Not Otherwise Specified' (PDDNOS, DSM-III-R). However, for this remainder category, no explicit and positively formulated diagnostic criteria are available.

The social and communicative problems of children with Autistic Disorder have been explained in terms of underlying social-cognitive problems, namely an inability to attribute and understand mental states (e.g., beliefs or intentions) of other people. Several authors have extended this hypothesis to children with non-autistic PDD’s (Minderaa, 1990; Gillberg, 1991). The aim of the research project described in this thesis is to explore if children diagnosed as having a PDDNOS have less optimal social-cognitive abilities. Such studies may contribute to the formulation of more explicit criteria for adequately diagnosing these children (Chapter 1).

Chapter 2 describes developments in the classification of Pervasive Developmental Disorders and discusses several disadvantages of the 'categorical' approach to diagnosing PDD. It is suggested that research data concerning non-autistic PDD groups could be integrated using an approach which is 'dimensional' rather than 'categorical'. Several developmental domains were described in which children with PDD generally experience problems. The different clinical groups which may meet the very global DSM-III-R criteria for PDDNOS were characterized in terms of problems on these different domains.

Chapter 3 discusses theories on children’s social and social-cognitive development. Two broad theoretical approaches to cognitive development in general can be distinguished. The representational approach explains children’s cognitive development in terms of the development of mental representations.
The interactional/transactional approach stresses the importance of social interaction for the development of cognition. A number of more specific, social or social-cognitive theories or models are discussed which are characteristic of each approach. These theories or models are evaluated in terms of their ability to describe and explain the social and social-cognitive problems of children with PDD. The Theory-of-Mind theory (i.e. representational approach) characterizes the social and communicative problems of PDD children in terms of underlying problems in mental representations of the mind. Hobson's 'affective' theory provides a complementary view because he describes the interactional processes which are thought to be essential for the development of adequate knowledge of the mind (i.e. interactional approach). These theories predict that children with PDD have problems in the perception of the emotional states of others (affective theory) and lack adequate Theory-of-Mind skills (Theory-of-Mind theory).

These global hypotheses are further specified in chapter 4 on the basis of a review of studies on emotion perception abilities and Theory-of-Mind skills of children with PDD. Expectations are formulated with respect to the above abilities of normally intelligent children with PDDNOS.

Two studies, each consisting of different experiments, are described in this thesis. The first study used two different tasks to investigate Theory-of-Mind abilities in a group of normally intelligent, 7 to 12 year-old children with PDDNOS. For comparison purposes, a group of normal, healthy children of the same age and sex was included. Chapter 5 describes an experiment in which the PDDNOS children were compared with the control children on three different emotional role-taking tasks. In these tasks, children had to use person-specific information to make an inference about another child's emotional reaction and behaviour. Significant differences were found between the PDDNOS group and the control group: the PDDNOS children performed worse on all three role-taking tasks. However, the differences on one of these tasks could be completely explained by intelligence differences between the two groups. On the other tasks, differences could not or could only partially be explained by intelligence differences.

The experiment described in chapter 6 investigates differences in person-perception abilities in the above groups. Person-perception, a social-cognitive skill, concerns the way in which children conceptualize other people, their intentions, attitudes, behaviour and their psychological characteristics. In this study, the child was asked to describe another person's behaviour and to explain emotions. A second study investigated differences in emotion perception abilities and Theory-of-Mind skills of children with PDD. Expectations are formulated with respect to the above abilities of normally intelligent children with PDDNOS.

A second study investigated differences in emotion perception abilities and Theory-of-Mind skills of children with PDDNOS. Expectations are formulated with respect to the above abilities of normally intelligent children with PDDNOS. Two studies, each consisting of different experiments, are described in this thesis. The first study used two different tasks to investigate Theory-of-Mind abilities in a group of normally intelligent, 7 to 12 year-old children with PDDNOS. For comparison purposes, a group of normal, healthy children of the same age and sex was included. Chapter 5 describes an experiment in which the PDDNOS children were compared with the control children on three different emotional role-taking tasks. In these tasks, children had to use person-specific information to make an inference about another child’s emotional reaction and behaviour. Significant differences were found between the PDDNOS group and the control group: the PDDNOS children performed worse on all three role-taking tasks. However, the differences on one of these tasks could be completely explained by intelligence differences between the two groups. On the other tasks, differences could not or could only partially be explained by intelligence differences.

The experiment described in chapter 6 investigates differences in person-perception abilities in the above groups. Person-perception, a social-cognitive skill, concerns the way in which children conceptualize other people, their
importance of social
of more specific,
which are
evaluated in
f-Mind theory (i.e. 
theory provides a 
theories which 
that children with 
rates knowledge of the 
hypothesis 
children with 
ability to infer emotions of other people, their 
abilities' (chapter 9) in a group of 6 to 12 year-old, 
children with PDDNOS. Although roughly the same tasks 
were used as in the first study, improvements were made with respect to 
standardization of the materials and the procedure. New subject samples were 
selected, and the clinical and the control groups were carefully matched for 
intelligence. The experiment presented in chapter 7 re-examines the ability of 
children with PDDNOS to infer emotions of other people on the basis of 
person-specific information, in comparison with the ability of normal children 
to carry out these social-cognitive inferences. No significant differences 
emerged. However, when only those PDDNOS children with the most severe 
social and communicative problems were selected and compared with a 
matched sub-sample of the control group, some differences in the ability to 
explain emotions were found.

Chapter 8 describes a further study of the person perception abilities of 
the above groups of children. It aimed to investigate whether normally 
intelligent children with PDDNOS lack the skills to infer ‘inner, psychological’ 
characteristics (e.g. mental states) of other people, or whether they fail to use 
this skill spontaneously. The children with PDDNOS were compared with the 
control children with respect to their performance on the ‘free person 
description’. The subjects were asked spontaneously to describe two other 
children. Interview questions were added to test whether children were able 
to provide information about psychological characteristics even though they 
had not provided it spontaneously. The children with PDDNOS used fewer 
psychological characteristics than the control children to describe others, but 
they seemed to be as able as the control children to provide information about 
these features when they were explicitly prompted. This study supports the 
hypothesis that normally intelligent children with PDDNOS might have
adequate Theory-of-Mind skills, but fail to use these skills spontaneously. These results are in line with other studies on Theory-of-Mind abilities of higher functioning children with autism or autistic-like problems.

In the study presented in *chapter 9*, the children with PDDNOS were compared with the control children with respect to their performance on three sub-tests of a standardized test for non-verbal communication. These sub-tests measured children’s ability to recognize four basic emotions in different expressive modalities (i.e. facial expressions, bodily postures and gestures). No significant differences were found between the PDDNOS group and control group on either of the sub-tests. It was suggested that children with PDDNOS might have problems in recognizing more ‘complex’ emotions or that children with PDDNOS might use different, more cognitively based strategies in processing emotional stimuli.

*Chapter 10* summarizes the findings of the studies on emotion perception and Theory-of-Mind skills of children with PDDNOS. In addition, the chapter discusses whether these findings are in line with the hypotheses formulated in chapters 3 (global) and 4 (further specified on the basis of a review of literature). No evidence was found for emotion perception problems in children with PDDNOS. These children’s problems with regard to a Theory of Mind seem to concern problems in the application of skills, rather than skill deficits. Several important problems concerning the clinical diagnosis of PDDNOS are discussed. Alternative hypotheses and directions for further research are suggested.