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**Young children treated
because of ODD/CD:
conduct problems and social
competence in day-care
and school settings**

Thesis for the degree philosophiae doctor

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Norwegian University of Science and Technology
Faculty of Medicine
Department of Neuroscience
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2 List of papers

Paper I: Drugli, M.B., Larsson, B., Clifford, G. and Fossum, S. *Pervasive and nonpervasive conduct problems in a clinic sample aged 4-8 years: child, family and day-care/school factors*. Forthcoming in Scandinavian Journal of Educational Research (2007), <http://www.tandf.co.uk/journals>.

Paper II. Drugli, M.B. and Larsson, B. *Children aged 4-8 years treated with parent training and child therapy because of conduct problems: generalisation effects to day-care and school settings*. European Child and Adolescent Psychiatry (2006), 15 (7), 392-399.

Paper III. Drugli, M.B., Larsson, B. and Clifford, G. *Changes in social competence in young children treated because of conduct problems as viewed by multiple informants*. Submitted: European Child and Adolescent Psychiatry.

Paper IV. Drugli, M.B., Clifford, G. and Larsson, B. *Teacher's experience and management of young children treated because of home conduct problems. A qualitative study*. Forthcoming in Scandinavian Journal of Educational Research (2007), <http://www.tandf.co.uk/journals>.

3 Abbreviations

ADHD	Attention Deficit/Hyperactivity Disorder
CBCL	Child Behavior Checklist
CD	Conduct Disorder
CT	Child Terapy
DSM IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition
ECBI	Eyberg Child Behavior Inventory
KIDDIE-SADS	Schedule for Affective Disorders and Schizophrenia
INVOLVE-T	Involve Teacher
LSC	Child Loneliness and Dissatisfaction Questionnaire
ODD	Oppositional Defiant Disorder
PBQ	Preschool Behavior Questionnaire
PCOMP	Parent Social Competence Scale
PPI	Parent Practices Interview
PT	Parent Training
RCT	Randomized Controlled Trial
SCBE	Social Competence and Behavior Evaluation
SD	Standard Deviation
STRS	Student Teacher Relationship Scale
TRF	Teacher Report Form
WALLY	Wally Child Social Problem-Solving Detective Game
WLC	Waiting List Control

4 Summary

The main aim of the present thesis was to study conduct and social problems in day-care and school settings in children treated with “The Incredible Years” parent training (PT) or parent training combined with child therapy (PT+CT). One hundred and twenty-seven children were included in a randomized controlled treatment study.

Assessment was based on multiple informants (parent, teacher and child) before and after treatment and at a one-year follow-up. Most children from both treatment conditions showed a positive development in regard to conduct problems and social competence at home.

Before treatment, a great proportion of the children (83%) exhibited conduct problems both at home and in day-care/school settings, e.g. having pervasive conduct problems. According to teacher reports, children with pervasive conduct problems also exhibited significantly more internalizing and attention problems as well as social problems in their relationships both with peers and teachers as compared to those with only conduct problems at home. This finding indicates that children with pervasive conduct problems also have a range of serious emotional and social problems associated with their conduct problems in day-care and school. This picture was also corroborated in our qualitative study as reported in interviews with children’s teachers in day-care and school.

Only limited positive generalisation effects to day-care and school settings were found after treatment and at the one-year follow-up. Although the combined PT+CT treatment approach produced somewhat more positive generalisation effects as compared to PT treatment, most of these positive results were not maintained at the one-year follow-up. Neither was any positive development found in regard to child social competences or peer-interactions in day-care or school settings. In spite of reductions in child conduct problems and enhanced social competence at home, most children still showed serious behavioral and

social problems in day-care and school after treatment, meaning that they still were at increased risk for lasting problems throughout childhood. In spite of engaged and devoted work evident in our qualitative study, teachers expressed difficulties providing support to children with conduct problems, They also seemed to have limited knowledge about how to work systematically and in cooperation with parents and other professionals with child conduct problems in day-care and school settings.

It is concluded that broad assessment including the use of multiple informants is needed when a child displays conduct problems. Further, it is important that generalisation effects are examined after the use of parent treatment methods as well as development of powerful maintenance strategies. The quality of support offered to children with conduct problems in day care/school settings needs to be further examined. Controlled intervention studies should be carried out in day-care and school to evaluate effects on child conduct problems in these settings.

5 Introduction

Children with conduct problems have a long history in mental health services. Already in the early nineteenth century, children with such problems were treated in special institutions. In the beginning of the 20th century, child guidance clinics were established in the USA to offer help to antisocial young people. In Scandinavia, these clinics were the precursors of regular service offered within child psychiatric inpatient as well as outpatient clinics, and in Norway the first child guidance clinic was established in 1947 (Sommerschild and Moe, 2005).

Children with conduct problems are still one of the main patient groups referred to child psychiatry, accounting for about one-third to one-half of all referrals (Kazdin, 1996).

Oppositional Defiant Disorder (ODD) in preschool children and Conduct Disorder (CD) in school-aged children constitute the most frequently diagnosed psychiatric disorders in childhood (Essau, 2003).

In modern society, socialization of children is to a high degree shared between parents and the pedagogical institutions, in that most children spend a lot of their time in day-care and school settings. Bäck-Wicklund and Lundtröm (2003) use the term double socialization of children indicating that both parents and day-care and school settings play an important role in contributing to developmental processes in the child. In spite of this, the way conduct problems in children are influenced by day-care or school factors, and how these problems are dealt with by day-care/school personnel, is not well researched (Sørli, 2000).

Any child may display disruptive behaviour to some degree at specific times or in certain settings as part of its normal development. However, when such behaviours exceed the range of normal variation for the child's age group in terms of frequency, pervasiveness, severity and interference with the child's ability to function adaptively, it becomes a clinically significant or a social problem (Frauenglass and Routh, 1999). Children with severe aggression and conduct problems which do not improve during the preschool period are at

increased risk for developing violent behaviours, other mental health problems, school dropout, chemical dependency during adolescence and occupational difficulties, marital and family problems and criminal offending as adults (Bloomquist and Schnell, 2002; Moffitt, 1993). Thus, such problems in childhood should be considered as a potential public health problem indicating a need for increased knowledge about how they should be managed and effective interventions should be carried out.

Most studies of treatment of children with conduct problems have been carried out in the USA and UK, and to date very few studies have been performed in Scandinavian countries. Because of cross-cultural variations in parental reports of behavioural problems in children, with lower problem scores found in Swedish children as compared to those for children in other countries (Crijnen, Achenbach and Verhulst, 1999), it is of particular interest to study conduct problems and effects of treatment within a Norwegian context.

The main aim of the present thesis was to examine behavioral and social problems in day-care and school settings in young children treated with “The Incredible Years” parent training (PT) or parent training combined with child therapy (PT+CT).

5.1 Common developmental problems?

Many child behaviours can reflect symptoms of a specific disorder (i.e. not listening, being overactive, attention problems, fighting with other children, low frustration tolerance), exhibited by many children in specific situations or at a particular period of their development. Common problems in childhood such as temper tantrums, defiance, separation distress, and sleep disturbances, may result from a variety of environmental stressors or developmental challenges, both in biologically vulnerable children and in those without specific biological risk factors for psychopathology. The intensity of the disturbance and its outcome will vary as a function of multiple factors in the child and the family environment

(Campbell, 2002; Sameroff, 2002). A small proportion of preschool children, those with the most severe levels of disturbance, have a greater likelihood of having persistent conduct problems into the school years (Campbell, 2002).



In particular, aggression is a normal and highly frequent behaviour in developing children at certain periods. For example, the age of 2 has been labelled as “the terrible two” because of the peak of problematic behaviour and dysregulation found in this age period in community samples (Egger and Angold, 2006).

Connor (2002) reported that about 50% of social interchanges in nursery schools between young children can be viewed as disruptive or conflictual, however, about the age of three, such conflicts had decreased to 20%.

In preschool years, most children use aggression to obtain objects, territory or privileges from others (instrumental aggression). Such aggression is mostly adaptive in that children learn social skills during conflicts with peers. Between the ages of 2-4, there is a tendency for physical aggression, such as hitting, to decrease, and verbal aggression to increase (Connor, 2002). Older children increasingly engage in person-directed, hostile, retaliatory aggression. However, both kinds of aggression normally decrease in frequency and intensity in school-

aged children. They channel aggressive impulses and drives into more socially acceptable activities as sports, social and academic achievement. Most children will learn to use alternatives to physical aggression before they enter primary school, and those who do not, seem to be at highest risk for developing more serious and violent behaviour during adolescence and adulthood (Tremblay et al., 2004; Côte et al., 2006). Some conduct problems such as stealing, are quite rare among young children. However, if present, they are often indicative of a socially important problem (Connor, 2002).

Table 1. Childhood age trends in development of normative aggression (Connor, 2002, page 30).

Aspect of aggression	Younger age	Older age
Percent time spent in		
social conflict	High	Low
Form of aggression	Physical	Verbal
Type of aggression	Overt confrontation	Covert and hidden
Goal of aggression	Instrumental (obtaining possessions)	Hostile (self-esteem maintenance)
Triggers	Environmental demands	Social threats

Connor (2002) stated that it is important to distinguish between adaptive and maladaptive aggression in children. One needs to know if aggression in the child occurs because of individual psychopathology or in the service of environmental adaptation. Maladaptive aggression tends to occur independent of a usual, definable social context, in the absence of antecedent social cues, and occurs out of proportion to its apparent causes in intensity, frequency, duration and severity, and does not terminate appropriately (Connor, 2002).

Further, aggression can be of overt or covert types (Connor, 2002). Overt aggression is an openly confrontational act of physical aggression (for example, fighting, bullying, using weapons, blaming others, screaming), while covert aggression is a hidden, furtive, clandestine act of aggression (for example, stealing, fire setting, truancy, running away from home). Oppositional defiant behaviour appears to lie on the midpoint of the over-covert continuum (Connor, 2002).

A definition of a disorder in young children includes a pattern of symptoms that has been troublesome for some time and is evident in more than one social situation, also being relatively severe, and negatively affecting the child's psychosocial functioning (Campbell, 2002).

5.2 Etiology

There are multiple and complex pathways to the development of conduct problems in children. For example, twin studies have shown that genetic factors have a strong influence on antisocial development in early childhood (Arseneault et al., 2003; Ehringer et al., 2006), and heritability estimates of antisocial behaviour have been found to be about 50% (Moffitt, 2005). Larger estimates of genetic effects have been found for more severe than for less severe antisocial behaviours (Connor, 2002). However, results from studies of genetically identical monozygotic twins have also shown that each child's unique environmental experiences may play a casual role in the development of conduct problems (Caspi et al., 2004). Interaction between genetic and environmental influences has been found in that effects of environmental risk are most evident in children who are at high genetic risk (Rutter, Moffitt and Caspi, 2006).

Development of psychopathology in children is now often described in terms of continuous dynamic interactions between individuals and social contexts, e.g. family, day-

care, peer-group and school (Reid, Eddy, Fetrow and Stoolmiller, 1999; Sameroff, 2000).

Different combinations of risk factors are likely to converge to produce good adjustment or disorder in each child, and to determine whether or not a problem once apparent, also persists (Campbell, 2002).

5.2.1 Individual risk factors

Prenatal risk factors such as mothers' adjustment, health and substance use, and genetic risk factors may put the baby at risk for low birth weight, irritable temperament, attention problems, social and cognitive deficits during infancy and toddlerhood, and may predict the occurrence of later conduct problems (Granic and Patterson, 2006; Reid et al., 1999). Gender has also been found to be an individual risk factor in that more boys than girls develop early onset conduct problems (Alvarez and Ollendick, 2003).

Table 2. Factors associated with the development of behaviour problems in preschool-aged children (Campbell, 2002, page 29)

Child factors	development
Biological risk/vulnerability	Deficits in social skills
Temperamental difficulties	Family composition and interaction
High reactivity	Single-parent family
High negative affect	Marital discord
Limited ability to regulate arousal and negative affect	Parental psychological disorder
	Parental disagreements over child rearing
Insecure attachment	
Uneven or delayed cognitive	

Parenting behaviour**Family environment/social context**

Insensitivity/unresponsiveness

Low educational level

Unavailability

Unemployment or underemployment

Lack of warmth and engagement

Limited financial/marital resources

Limited social and/or cognitive
stimulation

Low social support

Inadequate institutional support

Harsh, inflexible control strategies

Inadequate child care facilities

Strict physical punishment

Family stress

Overly lax control strategies

Neighbourhood disadvantage

Inappropriate developmental
expectations

Moffitt (2003) reported from the Dunedin study that individual risk factors that predicted life-course-persistent conduct problems in children were undercontrolled temperament at age of 3, neurological abnormalities and delayed motor development at age of 3, low intellectual ability, reading difficulties and hyperactivity. Genetic risk factors are more likely to be linked to conduct problems with early onset, antisocial behaviour over time and across settings, impulsive aggression, severe and early onset of alcohol and substance use, and a positive family history of antisocial behaviour and substance use (Pliszka, 1999; Moffitt, 2003).

5.2.2 Parenting and family risk factors

During infancy and early childhood, the most proximal antecedents of conduct problems have been found within the interaction between the child and its parents in home settings (Reid et al., 1999). Children with genetic or prenatal risk factors usually present challenges more than usual to parents and their parenting skills. If special needs of the child are not met by

constructive parenting, conduct problems in the child will often escalate over time and parenting style will be less adequate and more negative. Negative parenting is characterized by insensitivity/unresponsiveness, unavailability, lack of warmth and engagement, limited social and/or cognitive stimulation, harsh, inflexible control strategies, strict physical punishment, overly lax control strategies and inappropriate developmental expectations (Campbell, 2002).

Attachment processes are believed to influence the risk of young children's disruptive behaviours in several ways (Speltz, DeKlyen and Greenberg, 1999). In relationship with parents, the child develops generalized expectations on how it will be met in interactions with other persons. Attachment history seems to operate as a risk or protective factor influencing child behaviour in the context of other risk factors. Avoidant, insecure attachment combined with high levels of infant negativity has been found to be associated with stable disruptive problem trajectory starting early in childhood, whereas secure attached children with the same risk status did not show this trajectory (Keller, Spieker, Gilchrist, 2005).

Patterson (1982) refers to the reciprocal processes between children with conduct problems and their parents as "the coercive circle" in parent-child relationship, meaning that negative behaviour in the child and negative parenting strategies escalate and reinforce each other during destructive interactions. When coercive processes have been established, fewer positive interactional options will be available in the child-parent dyad (Granic and Patterson, 2006). However, parents with greater capacity for adequate parenting are able to respond to early coercive child behaviours in a non-harsh manner, leading to a decrease in negative behaviour in the child and adaptive functioning.

The quality of parenting is influenced by both family and environmental factors such as parental psychopathology, separation, divorce and marital discord, socioeconomic disadvantage, low social and inadequate institutional support, family stress and living in

neighbourhoods with high crime rates (Campbell, 2002; Granic and Patterson, 2006).

Tremblay et al. (2004) reported that children with the highest risk for not learning to regulate physical aggression in early childhood had mothers with a history of antisocial behaviour during their school years, early childbirth and were smokers during pregnancy, and lived in families with low income and serious relationship problems among the parents. Further, Côté et al. (2006) reported from a longitudinal study that children with stable high aggression levels from 2 to 11 years mostly were boys coming from families with low income, with mothers who had not completed high school, and where parents used hostile/ineffective parenting strategies. In the Dunedin study, Moffitt (2003) found that life-course-persistent conduct problems in children were predicted by parental and family risk factors such as teenage single parent, mothers with poor mental health, harsh and inconsistent discipline, family conflicts, many changes of primary caretaker and low family socioeconomic status. A combination of individual risk factors in the child and a negative family environment has been found to enhance the risk for early onset conduct problems (Lacourse et al., 2006).

5.2.3 Context

As the environment of the child expands beyond the family to day-care/school and community settings, each of these new contexts has its own set of influences on the course of child development (Reid and Eddy, 2002; Sameroff, 2000). Every major life transition of a child with early difficulties and problems may be a turning point (Schulenberg, Sameroff and Cicchetti, 2004). Both day-care and school may be negative or positive turning points for a child with early conduct problems. If coercion processes become a regular part of the child's interactions in the new context, conduct problems in the child will be reinforced (Reid and Eddy, 2002). Examples of day-care/school risk factors escalating conduct problems in children are poor classroom management skills on the part of teachers, high levels of

classroom aggression, peer rejection, negative child and teacher relationships and low parent-teacher involvement (van Lier, Muthen, van der Saar and Crijinen, 2004; Moffitt, 2003; Ogden, 2001; Pianta, 1996). It is also possible that a healthy child develops conduct problems in day-care/school based on previous experiences in these settings. For example, Nordahl (2000) has shown that conduct problems in schools for some children may be seen as a mastering strategy, and that such problem behaviours should be understood in their context. Conduct problems shaped in day-care or school settings may be generalised to the home context (Snyder, Cramer, Afrank and Patterson, 2005).

5.3 ODD and CD diagnoses

Psychiatric diagnoses represent a categorical approach in defining the presence or absence of a particular disorder. To meet the criteria for a psychiatric diagnosis according to the DSM IV classification system, a child's ability to function adaptively also has to be impaired.

5.3.1 Diagnostic criteria for ODD and CD

Oppositional defiant disorder (ODD) refers to a childhood pattern of developmentally inappropriate levels of negativistic, defiant, disobedient, and hostile behaviours towards authority figures, often leading to impairment in the child's social life. The behaviour problems are almost always present in the home, and are reflected in the child's relationships with family members, i.e. parents and siblings (Greene, Ablon and Goring, 2003). According to the DSM-IV the diagnostic criteria for ODD (see table 3) consists of the presence of four out of eight symptoms of uncooperative behaviour and negative affect causing impairment of the child's everyday functioning (American Psychiatric Association, 2000). Conduct disorder (CD) refers to a repetitive and persistent pattern of behaviour in the child violating the basic rights of others and major age-appropriate norms or rules (Loeber et al., 2000). The diagnostic

criteria for CD (see table 3) include the presence of three out of fifteen symptoms, causing impairment in one or several domains of child functioning (American Psychiatric Association, 2000).

In DSM-IV, childhood ODD is viewed as a less severe manifestation of CD, and therefore ODD is usually not diagnosed in the presence of CD. However, this practice has been challenged by, for example, Rowe, Maughan, Costello and Angold (2005) arguing that there is good evidence that CD and ODD are sufficiently different from each other to be regarded as two separate disorders. If treated separately, the authors suggest that the threshold for a diagnosis of ODD should be reduced to three behavioral symptoms. For example, in a study of their own, Angold and Castello (1996) found that children who scored one criterion less than those 4 required for a formal DSM-IV ODD diagnosis, or the 3 items required for a formal DSM-IV CD diagnosis, and had diminished function, faced as high risk for lasting conduct problems as children who scored above the number of formal DSM-IV criteria.

Table 3. Diagnostic criteria of ODD and CD according to the DSM IV (APA, 2000).

Oppositional Defiant Disorder (ODD)

A. A pattern of negativistic, hostile, and defiant behavior lasting at least 6 months, during which four (or more) of the following criteria are present:

- 1) often loses temper
- 2) often argues with adults
- 3) often actively defies or refuses to comply with adult's requests or rules
- 4) often deliberately annoys people
- 5) often blames others for his or her mistakes or misbehavior
- 6) is often touchy or easily annoyed by others
- 7) is often angry or resentful

8) is often spiteful or vindictive

Note: Consider a criterion met only if the behavior occurs more frequently than is typically observed in individuals of comparable age and developmental level.

B. The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning.

C. The behaviors do not occur exclusively during the course of a psychotic or mood disorder.

D. Criteria are not met for conduct disorder, and if the individual is 18 years or older, criteria are not met for an Antisocial Personality Disorder.

Conduct Disorder (CD)

A. A repetitive and persistent pattern of child behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by the presence of three (or more) of the following criteria in the past 12 months, with at least one criterion present in the past 6 months:

- 1) often bullies, threaten, or intimates others
- 2) often initiates physical fights
- 3) has used a weapon that can cause serious physical harm to others
- 4) has been physically cruel to people
- 5) has been physically cruel to animals
- 6) has stolen while confronting a victim
- 7) has forced someone into sexual activity
- 8) has deliberately engaged in fire setting with the intention of causing serious damage
- 9) has deliberately destroyed other's property (other than by fire setting)

- 10) has broken into someone else's house, building, or car
- 11) often lies to obtain goods or favours or to avoid obligations
- 12) has stolen items of nontrivial value without confronting victim
- 13) often stays out at night despite parental prohibitions beginning before age 13 years
- 14) has run away from home overnight at least twice while living in parental or parental surrogate home (or once without returning for a lengthy period)
- 15) is often truant from school, beginning before age 13

B. The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning.

C. If the individual is 18 years or older, criteria are not met for an Antosocial Personality Disorder.

Egger and Angold (2006) stated that there has been considerable controversy related to the presence of ODD and CD diagnoses in preschool children with among others, the following concerns raised: 1) developmentally normal aggression, noncompliance, defiance and oppositionality will be inappropriately labelled as pathological, 2) young children are not capable of engaging in some of the behaviours described in the CD criteria, and 3) manifestations of ODD/CD symptoms in young children are not clinically or conceptually equivalent to manifestations of these behaviours in older children. In spite of these controversies, Egger and Angold (2006) and Keenan and Wakschlag (2004) stated that there is good evidence that ODD and CD symptoms and diagnostic criteria identify groups of young children with clinically significant behavioural problems. For example, Keenan and Wakschlag (2004) found that preschool children, who were referred to a child psychiatric

clinic for behaviour problems, were distinguished from nonreferred children in that they had significantly higher rates of ODD and CD symptoms.

5.3.2 Prevalence of ODD and CD

Prevalence rates of ODD in various epidemiological studies among children have been found to range from 0.3 % to 22 % in boys and girls combined, with a median of 3.2 %, while prevalence rates of CD range from 0 % to 12 % in with a median of 2 % (Lahey, Miller, Gordon and Riley, 1999). In a more recent epidemiological study, Rowe, Maugham, Costello and Angold (2005) reported that 2.1 % of children aged 5-15 years met the formal criteria for an ODD diagnosis, while 1.8 % received a diagnosis of CD. In a review of epidemiological studies on preschoolers, Egger and Angold (2006) reported that prevalence rates for ODD varied between 4 % and 16.8 % and between 0 % and 4.6% for CD.

The prevalence rates of conduct problems in children have been found to be lower in Scandinavian countries as compared to those in other European countries and from the USA (Crijnen, Achenbach and Verhulst, 1999; Larsson and Frisk, 1999). In Norway, 1-2 % of children and adolescents may exhibit serious conduct problems (Sørli, 2000). However, reported differences between countries and cultures may be due to different definitions of conduct problems or differences in thresholds in parental perceptions of child problems.

5.3.3 Sex and age trends

From preschool and until mid-adolescence, boys are engaged in more aggressive and nonaggressive antisocial behaviours than girls. Young girls score higher on empathy and language skills as compared to boys, and may be more protected from engaging in early-onset conduct problems (Alvarez and Ollendick, 2003). Although both ODD and CD diagnoses are

more frequent in boys than in girls (Maughan et al., 2004), the largest sex difference has been observed for CD in that the disorder is 3-5 times more prevalent in boys than in girls (Egger and Angold, 2006). Reports of ODD prevalence in children also depend on type of informant being used in research. For example, according to parent reports of ODD, there is no sex difference in prevalence rates, while teachers have reported a higher prevalence of ODD in boys as compared to girls (Maughan et al., 2004).

However, it should be noted that in spite of overall lower prevalence rates of conduct problems among girls than boys, once such behaviours become apparent in girls, they remain as stable as in boys (Burke, Loeber and Lahey, 2002). Clinically significant levels of ODD have been found to remain stable throughout childhood for both boys and girls (Maughan et al., 2004). Although prevalence rates of CD are lower both in preschool boys and girls, such problems are stable across time. For example, in a longitudinal study, Kim-Cohen et al. (2005) reported that half of the children diagnosed with CD at the age of five also met the same inclusion criteria two years later. They also found that children who no longer met the criteria at the age of 7, still were significantly more impaired with increased rates of educational difficulties as compared to those who never met criteria for CD. For boys, the rates of CD increase steadily after the age of 8, and the majority of them also show oppositional features (Rowe et al., 2005). ODD seems to be a stronger risk factor for CD in boys than in girls (Rowe et al., 2005), in particular, if boys also live in families with atypical family structure. For girls, the rates of CD remain low until early teens, and about 50 % of girls with CD also meet the criteria of ODD (Rowe et al., 2005). Among preadolescents, the prevalence rates of ODD and CD among boys and girls have been found to be quite similar (Essau, 2002).

Rowe et al. (2005) reported that the age of onset for ODD was 2.5 and 5.5 years for boys and girls, respectively, and 4.5 years for both boys and girls with CD. They further noted that children with both ODD and CD had shown antisocial behaviour from early childhood.

Early-onset conduct problems have been found to be associated with a poor prognosis for adjustment in adolescence and adulthood (Moffitt, Caspi, Harrington and Milne, 2002).

Moffitt and Caspi (2001) reported that the following childhood risk factors differed between lifetime persistent problems and antisocial development limited to adolescence: inadequate parenting, neuro-cognitive problems, and behavioural and temperament problems. Girls with early-onset conduct problems had the same high risk levels as boys. Early onset conduct problems remaining stable throughout childhood and adolescence are also associated with adult antisocial personality, violence, maladjustment in work life and victimization of partners and children (Moffitt, et al., 2002).

5.3.4 Comorbid diagnoses

Comorbidity, i.e. meeting the criteria for two or more psychiatric disorders during the same period (Lahey et al., 1999) is associated with a greater impairment in the child as compared to having only one disorder (Egger and Angold, 2006). Although there is substantial overlap between CD and ODD in that more than half of children with CD also meet criteria for ODD, the overlap for children with ODD is less marked (Maughan et al., 2004).

For both ODD and CD, comorbidity with ADHD has been found to be strong for both ODD and CD in 30-50% of children, while combined ODD and CD show higher rates of comorbid ADHD than CD alone (Maughan et al., 2004). Costello et al. (2003) reported that ADHD predicted a diagnosis of ODD but not CD, and that much of the association between ODD/CD and ADHD in fact was influenced by ODD rather than CD. A combination of CD

and ADHD diagnoses has also been found to increase the risk of chronic offending into adulthood as compared to having only one of these diagnoses (Simonoff et al., 2004).

Costello et al. (2003) reported that comorbidity between ODD and depression was strong, however comorbidity between CD and depression was significant only for girls. Maughan et al. (2004) reported a substantial overlap between ODD and CD in regard to both depression and anxiety. Boys with a history of CD were more likely to continue their antisocial behaviour, while girls with ODD or CD were more likely to shift into depression and anxiety as adults (Rowe et al., 2005).

5.4 Conduct problems in day-care/school and pervasive conduct problems

ODD, CD and ADHD are among the most frequently diagnosed psychiatric disorders in school-aged children (House, 1999). Children who are noncompliant with school or classroom rules, often disrupt others, actively refuse to co-operate or follow teacher instructions, fight, behave cruelly, have peer problems and are often identified by teachers as having conduct problems. These problems mostly manifest themselves in repeated conflictual encounters with peers, teachers and other school personal (House, 1999; Ogden, 2001).

Teachers often experience that children with conduct problems present a great challenge in their work (Gray and Noakes, 1994, Ogden, 2001) and report having limited competence in dealing with such problems (Martin, Linfoot and Stephenson, 1999). Previous research has shown that teachers tend to perceive conduct problems as individual traits of the child (Sktric, 1991; Nordahl and Overland, 1998), and in doing so, avoid critical evaluation of their own possible contribution to the development of conduct problems in children (Sktric, 1991).

Poorly managed classrooms have been found to relate to higher levels of student aggression and rejection, which in turn influence and even escalate individual child conduct problems (Webster-Stratton, 1999). Further, many teachers seem to lack confidence and training in

how to work in a collaborative way with parents (Webster-Stratton, 1999), and only to a limited degree involve other professionals outside the school setting when dealing with child conduct problems (Bloomquist and Schnell, 2002). In spite of the fact that teachers often struggle when dealing with such problems (Martin, Linfoot and Stephenson, 1999), little systematic research has been conducted in regard to assessment and intervention in school, and day-care settings (Sørli, 2000).

Fifty to sixty percent of children with conduct problems exhibited at home also show clinically significant problem behaviours in day-care or school settings, i.e. displaying pervasive conduct problems (Campbell, 2002; Ramsey, Patterson and Walker, 1990; Webster-Stratton, Reid and Hammond, 2004). Such children are also likely to be more aggressive but also have problems in their interactions with parents, peers and teachers. Further, they are at higher risk for developing serious problems later on as compared to children with conduct problems exhibited only in one setting (CPPRG, 2002; Moffitt, 1993). For example, Ramsey, Patterson and Walker (1990) reported that antisocial boys, who were extremely deviant in more than one setting, also were more deviant in general than those showing deviance in only one setting. Further, Campbell (2002) reported that children exhibiting conduct problems both at home and in preschool or school had lower social competence than those having problems in only one setting, as reported by parents, teachers or the children themselves. Webster-Stratton and Hammond (1998) found that mothers of children aged 3-8 years with pervasive problems used more critical statements and displayed more negative emotions toward their children. They were also more harsh and inconsistent in their discipline strategies than mothers of children with nonpervasive problems. In addition, a higher percentage of single mothers was found among children with pervasive conduct problems as compared to those with nonpervasive conduct problems.

5.5 Conduct problems, peers and social competence

Children with conduct problems often have difficulties forming and maintaining positive relationships with their peers. A number of studies have documented a causal role of peer-rejection along with aggressive child behaviour in prediction of later psychosocial problems (Hay, Payne and Chadwick, 2004; Miller-Johnson et al., 2002). Aggressive children rejected by their peers, are at particular risk for developing a range of conduct problems throughout childhood and adolescence (Dodge and Pettit, 2003), while peer-acceptance seems to counteract a negative development in children with aggression (Prinstein and La Greca, 2004).

Social competence in childhood has been found to predict positive psychosocial outcome later in life and a child's ability to function successfully in peer groups is viewed as an indicator of social competence (Hay, Payne and Chadwick, 2004). Prosocial behaviors in the child seem to be a key factor in its development of social competence and gaining acceptance with peers. Lack of such skills predicts rejection of the child later on (Hay, Payne and Chadwick, 2004). Aggressive children may display cognitive and behavioural social skills deficits when they interact with peers. For example, Webster-Stratton and Lindsay (1999) found that children with conduct problems also showed more negative attributions, fewer prosocial problem-solving strategies, and a significant delay in their social skills during play interactions with friends, as compared to those without conduct problems. Lacourse et al. (2006) reported that especially boys from low socioeconomic areas identified in kindergarten as hyperactive, fearless and infrequently prosocial, were at a much heightened risk of antisocial problems in adolescence when attending deviant peer-groups at an early age.

5.6 Informant source and assessment of conduct problems

Parent and teacher reports are the most common sources for identifying behavioural problems in young children. Standardized checklists such as the Eyberg Child Behavior Inventory (ECBI), Child Behavior Checklist (CBCL) and Teacher Report Form (TRF) are frequently used in epidemiological as well as clinical studies (Gross, Fogg, Garvey and Julion, 2004). Research has repeatedly shown that parent evaluations of children correlate with judgements made by clinicians (Kazdin, 1996). However, parental evaluations of the child may be influenced by parents' own experience of stress and psychopathology, and they may therefore fail to detect problems identified by child and teacher reports or direct observations. Bank, Duncan, Patterson and Reid (1993) found that teachers' predictive power of antisocial and delinquent behaviors was significantly greater than that of either mothers or fathers. However, Verhulst, Koot and Van der Ende (1994) noted that combined parent and teacher information improved the predictive power of poor outcome for school behaviour problems in the child and the need for professional help after 6 years, as compared to relying on only one informant. In another study, the authors noted that parent, teacher and youth reports each made a unique contribution to the prediction of child maladjustment (Verhulst, Dekker and Van der Ende, 1997).

Self-report is not frequently used in the assessment of preschoolers when identifying their emotional and behavioural problems. However, children can reliably report symptoms and identify specific problems not always evident to their parents and teachers (Kazdin, 1996). Low correlations between child and adult reports indicate that children contribute unique information about themselves. Although young children have the ability to observe, remember, and to be truthful (Zwiers and Morrisette, 1999), eliciting reliable self-reports from them is complicated by a variety of developmental factors such as short attention span, less developed language and cognitive skills (Measelle, Ablow, Cowan and Cowan, 1998).

In a meta-analytic study and review of cross-informant correlations of emotional/behavioural problems in children aged 6-19 years, Achenbach, McConaughy and Howell (1987) reported a mean correlation of .60 for informant pairs, who played similar roles toward the child (e.g. mothers and father, pairs of teachers), a mean correlation of .28 between different categories of informants such as teachers and mothers, and a mean correlation of .22 between children's self report and other informants. More recent studies have continued to show low to moderate correlations between different types of informants for psychosocial problems in children (De Los Reyes and Kazdin, 2004; Gross, Fogg, Garvey and Julion, 2004).

Informant bias, i.e. the demands of the context in which the child's behaviour has been assessed, and poor measurement reliability are possible explanations of low agreement noted between various informants viewing the child in different settings (Gross et al., 2004). Different informants may observe different aspects of child behaviours, but may also have different expectations as to how a child should behave. Moreover, the child may actually behave in different ways in different settings (Gross et al., 2004).

To overcome the limitations of any single modality or method, multiple measures and multiple informants should be used to identify different facets and perspectives in research and clinical evaluations of various child conduct disorders (Loney and Lima, 2002).

5.7 Clinic-based treatment of conduct problems in young children

5.7.1 Parent management training

Social learning theories have generated the basis for the development of different parent training methods most frequently used in the treatment of children with severe conduct problems and their families (Taylor and Biglan, 1998). The theoretical basis of these methods is that the prime problem is not in the child, but in the contingencies supplied by the social

environment, so the aim of parent training is to change the child's behaviour by changing parental behaviours toward the child (Webster-Stratton and Herbert, 1994).

With parent management training, parents are trained to alter their child's behaviour at home. They meet with a therapist, who teaches them how to use specific procedures to alter their own interactions with the child, to promote its prosocial behaviour, and to decrease deviant behaviour (Kazdin, 1996). Parents are first trained to identify, define and observe child problem behaviours in new ways. Training sessions cover social learning principles and procedures including positive reinforcement (e.g. praise, token rewards) and mild punishment (e. g. ignoring, loss of privileges, time out) with the goal to develop and increase specific interaction skills in the parents (Kazdin, 1996).

Parent management training methods have been well researched and shown to produce positive changes in parental skills and children's behaviour at home (Kazdin, 1997; Patterson, DeGarmo and Forgatch, 2004; Scott, 2005; Webster-Stratton and Hammond, 1998; Webster-Stratton, Reid and Hammond, 2004). Scott (2005) reported that parent training also worked well for families with a range of risk factors, such as one-parent household, families with low income and mothers' low educational level, indicating that positive effects of such treatment are not restricted to more privileged families. However, about one third of the children whose parents have received parent training have been found to still exhibit problems in peer relationships, academic and social difficulties at school 2-3 years later (Webster-Stratton, Reid and Hammond, 2004).

5.7.2 Child training

A variety of specific child training programs have been developed, in particular for children with conduct problems (Kazdin, 1996). Some of them have targeted social behaviours (coach social skills as play, friendship and conversational skills) in the child based on the hypothesis

of social skills deficits, while other programs have focused on cognitive (problem-solving, self control) or affective processes (empathy training, perspective taking) (Webster-Stratton and Herbert, 1994).

Research has shown that when children are taught adaptive social behaviour skills, their aggressive behaviour also declines and adaptive social behaviours increase (van Lier, Vuijk and Crijnen, 2005; Webster-Stratton and Hammond, 1997). However, in their review of 19 studies, Taylor, Eddy and Biglan (1999) reported that specific child treatment programs were moderately effective, and of limited value. In another review, Beelman, Pflingsten and Lösel (1994) found only weak long-term and clinically significant effects. The authors therefore recommended that child social competence training should only be used as a part of a more comprehensive approach including evidence-based parent and school interventions. Such suggestions are also in line with the findings of Kazdin, Siegel and Bass (1992), Lacourse et al. (2006) and Webster-Stratton, Reid and Hammond (2004), who reported positive outcomes for child therapy approaches targeting social competence in the child when added to the effects of parent training, in particular in respect of social problems with peers.

5.7.3 Generalisation of treatment effects to day-care and school settings

Whether parent training approaches also improve child behaviours not only at home but also in daycare or school is a less clear-cut issue having received limited attention in the literature. Existing research has also shown conflicting findings (Little and Hudson, 1998; Taylor and Biglan, 1998).

For example, in an early study of generalisation effects conducted by Wahler (1975), behavioural contrast effects were reported, indicating that children's behaviour problems in school increased after successful home-based treatment. While others have reported positive generalisation effects after child treatment with parent training methods (Funderburk et al.,

1998; Gross et al., 2003; McNeil, et al, 1991; Webster-Stratton, Reid and Hammond, 2004), outcomes of a number of subsequent studies have not shown positive changes in the children's behaviour in daycare/school after parent training (Breiner and Forehand, 1981; Forehand et al., 1979; Little and Hudson, 1998; Taylor and Biglan, 1998; Webster-Stratton and Hammond, 1997). Thus the overall results of these studies regarding generalisation effects are inconsistent and difficult to interpret because of methodological limitations, in particular in the earliest studies including very small samples of children, failure to obtain pretreatment evaluations, or lack of appropriate comparison groups. Further, in some studies children also showed normal classroom behaviour before treatment, making it impossible to assess positive generalisation effects from home to school setting (McNeil et al., 1991).

Research results have shown that treatments targeting risk factors both in school and home settings may produce more profound changes in children's behaviour problems in these settings (Brestan and Eyberg, 1998; Eddy, Reid, Stoolmiller and Fetrow, 2003; Reid, Webster-Stratton and Hammond, 2003). For example, Reid, Webster-Stratton and Hammond (2003) reported that in particular children with pervasive problems, needed teacher training added to parent or child training to achieve positive outcomes both at home and in school, as reflected by evaluations two years after treatment.

5.8 School-based treatment

Research has also shown that school-based interventions are effective in reducing conduct problems in day-care/school settings (Wilson, Lipsey and Derzon, 2003). Whether positive generalisation effects to home setting actually occur is not clear. (Han, Catron, Weiss and Marcei, 2005). However, Axberg, Hansson, Broberg and Wirtberg (2006) reported positive generalisation effects from school to the home setting after a school-based intervention. Overall, school-based treatment programs have been found to produce more positive effects

when they are implemented well and relatively intense, and they are most effective in contexts where the base rate of aggressive behavior are high enough for meaningful reductions to be possible (Wilson, Lipsey and Derzon, 2003).

6 Aims of the present thesis

The present thesis is based on data collected among a clinical population of 127 children aged 4-8 years referred to a randomized controlled treatment trial (RCT) because of conduct problems at home. Families were offered “The incredible years” (Webster-Stratton and Hammond, 1998) parent training (PT) or parent training combined with child therapy (PT+CT). Data were collected from parents, children and teachers in day-care/school before and after treatment as well as at a one-year follow-up.

The overall aim of the present thesis was to study the children’s social and behavioural problems in day-care/school settings across treatment and one-year later, addressing the following specific questions:

- What proportion of children in the study show pervasive conduct problems, i.e. conduct problems both at home and in day-care/school settings? Are there differences in child, parental/family and day-care/school characteristics regarding children showing conduct problems only at home as compared to those having pervasive conduct problems? (Paper I)
- Do positive changes occurring in children’s behaviour at home generalise positively to day-care/school settings, and what is the contribution of treatment? (Paper II)
- How do multiple informants report changes in child social competence levels and relationship to treatment? (Paper III)
- How do teachers in day-care/school settings describe conduct problems in children manifested in these settings, and what are their reported management strategies for such problems? (Paper IV)

7 Method

7.1 Participants

The subjects consisted of 127 children, 4-8 years old, referred and treated at two child psychiatric outpatient clinics because of oppositional or conduct problems as experienced by parents. The study was conducted in two university cities in Norway, Trondheim and Tromsø. Exclusion criteria were children with gross physical impairment, sensory deprivation, intellectual deficit or autism. Two families (1.6 %) dropped out early during treatment and were removed from the analyses. All but one family were native Norwegians. Child and family characteristics are presented in table 4. There were no significant differences between treatment groups (PT, PT+CT and WLC) regarding child and family characteristics.

7.1.1 Participants in the qualitative study (paper IV).

Twenty-seven children participating in a qualitative study were randomly chosen from those scoring above clinical levels of conduct problems on the TRF/PBQ (see below) in day-care or school before treatment. Teacher interviews were conducted during the spring 2003 (the last semester of the treatment study). At this time-point, 14 children had finished treatment, 12 children were still in treatment and one child had been assigned to the waiting-list control-group. Nine of the children were in day-care (child age ranged from 4 to 6 years) and 18 in school (child age ranged from 5 to 10 years). There were 4 girls and 23 boys and their mean age was 7.8 years. Eight of the teachers were educated as day-care teachers, 13 as school-teachers, and 6 had no formal educational training. Twenty-two of the informants were women and 7 were men recruited from day-care establishments and schools in 6 local authorities of Central Norway.

Table 4. Child and family characteristics.

	%	(n)
Child		
Gender		
Boys	80 %	(101)
Girls	20%	(26)
Age (Mean, SD)	6,6	(1,3)
Setting		
In day care	31 %	(39)
In school	69 %	(87)
Living situation		
Both parents ^a	47 %	(60)
Mother and stepfather	21 %	(26)
Single mothers	32 %	(41)
Mother education		
College or university	14 %	(16)
High school or partial college	78 %	(90)
Partial high school or lower	8 %	(9)
Father education		
College or university	19 %	(18)
High school or partial college	72 %	(69)
Partial high school or lower	9 %	(9)
Child psychiatric diagnoses		
ODD, possible diagnoses	13 %	(16)
ODD, confirmed diagnoses	87 %	(111)

CD, possible diagnoses	11 %	(14)
CD, confirmed diagnoses	8 %	(10)
ADHD	35 %	(45)
Anxiety/depression	10 %	(13)
Enuresis	14 %	(18)
Encopresis	7 %	(9)
Tourette/tics	4 %	(5)

Note.^a Including 8 adoptive- and foster parents and 4 parents with shared custody.

7.2 Assessment

7.2.1. Home-based problems

All clinically referred children were first screened by means of the Eyberg Child Behavior Inventory (ECBI) (see description in the papers) using the 90th percentile as a cut-off score according to Norwegian norms (Reedtz and Morch, 2005). Children who attained such a cut-off score or higher were subsequently interviewed by one of three trained interviewers using the KIDDIE-SADS (see description in the papers), and those who received a possible or definitive diagnosis of ODD and/or CD were offered participation in the intervention study.

The term “possible diagnosis” refers to those children who scored one criterion less than those 4 required for a formal DSM-IV ODD diagnosis or the 3 items required for a formal DSM-IV CD diagnosis, and had diminished function, a procedure suggested by Angold and Castello (1996). Thus, all children included had severe conduct problems at home as rated by their parents on the ECBI.

7.2.2. Day-care/school problems

To assess conduct problems in day-care the aggression subscale on the Preschool Behavior Questionnaire (PBQ) (see description in the papers) was used, and for school children, the aggression subscale on the Teacher Report Form (TRF) (see description in the papers) was used. To estimate optimal cut-off points between our clinic group and normative data obtained from a national survey (Clifford and Lurie, 2004), ROC curve analysis was used. The results of these analyses showed that a value of 9 corresponding to the 80th percentile was found to be the optimal cut-off point for the PBQ, and a value of 6 was the optimal cut-off point for the TRF, corresponding to the 88th percentile. Eighty three percent of the children in the present study scored above these clinical cut-off points before treatment either on the PBQ or the TRF.

7.3 Treatment

Information about the study was given to referral agencies or professionals such as teachers, physicians, health nurses, and child welfare workers throughout the project period.

7.3.1 Parent training (PT)

In this treatment condition, ten to twelve parents met in groups with 2 therapists at the clinic during 12-14 weeks for a weekly 2-hour session and participated in the Basic Incredible Years Parenting Program (Webster-Stratton and Hammond, 1998). This program teaches parents the use of positive child discipline strategies, effective parenting skills, ways to strengthen children's social skills and strategies for coping with their own stress.

7.3.2 Child therapy (CT)

Six children and 2 therapists met weekly in 2-hour session during 18 weeks at the Incredible Years Dinosaur School Program administered at the clinic. The treatment program addresses interpersonal difficulties in young children with ODD and aims at increasing social skills, conflict resolution skills, playing and cooperation with peers. For further descriptions of the two treatments, see Webster-Stratton and Hammond (1998). Forty-seven of the children were randomized to PT treatment and 52 to combined PT+CT treatment.

7.3.3 Waiting-list condition (WLC)

Twenty-eight families were assigned to the waiting-list condition and had no contact with the clinic or researchers between pre- and postassessment conducted for the treatment groups. For ethical reasons, families in the waiting-list control group were offered treatment after 6 months, and were thus excluded in the one-year follow-up assessment.

7.3.4 Strategies to promote involvement between therapists and teachers

All parents in the study were asked to inform the children's teachers about their work with promoting positive behaviours in the child in the PT program. The teachers were encouraged to participate in one meeting together with parents and one of the therapists, so as to receive information about the treatment program. About 60% of the teachers participated in such a meeting. Therapists in the CT condition sent six letters to the teachers and had 1-2 telephone calls about current issues addressed in child therapy sessions.

7.4 Assessment

The following assessment instruments were used, further described in the separate papers:

Parent measures

- Eyberg Child Behavior Inventory (ECBI), paper I, II and III
- Child Behavior Checklist (CBCL), paper I and III.
- Social Competence Scale-Parent (PCOMP), paper I.
- Parent Practices Interview (PPI), paper I and II.

Parent interview

- Kiddie-SADS (semi-structured diagnostic interview), paper I, II and III.

Teacher measures

- Preschool Behavior Questionnaire (PBQ), paper I, II and III.
- Teacher Report Form (TRF), paper I, II and III.
- Social Competence and Behavior Evaluation (SCBE), paper I, II and III.
- Student Teacher Relationship Scale (STRS), paper I and II.
- Involve-Teacher (INVOLVE-T), paper I and II.

Child measure

- The Wally Child Social Problem-Solving Detective Game (WALLY), paper II and III.
- The Child Loneliness and Social Dissatisfaction Questionnaire (LSC), paper III.

7.4 Statistics

To examine associations between categorical variables, chi-square tests were used. Bivariate correlations were analysed by means of Pearson product-moment coefficients. Correlations between .30 and .50 were regarded as moderate and coefficients exceeding .50 as high (Kraemer et al., 2003). Differences between correlations were tested with Fisher's z.

For analysis of differences between group means, independent t-tests were employed. Analyses of differences between the three treatment groups (PT, PT+CT and WLC) were conducted by means of ANCOVAs using pretreatment scores as covariate, followed by Bonferroni post hoc test when overall effects were significant. For analyses of follow-up data, repeated measures of ANOVA were used to examine main and interaction effects from posttreatment to the one-year follow-up. Effect sizes (eta square) were estimated using Cohen's criteria (Cohen, 1988) for small (1% to 5.9%), medium (5.9% to 13.8 %) and large (13.8 % and more) effects. Multivariate logistic regression with backward elimination procedures was used to examine the most powerful predictors of pervasive versus nonpervasive conduct problems that emerged as significant in bivariate analyses.

PBQ and TRF scores were combined and transformed into z-scores. An alpha level of $p < .05$ indicated a statistically significant result.

7.4.1 Qualitative interview

Qualitative methods were chosen for paper 4 because these methods are specially relevant to research questions concerning subjective perspectives of individuals, construction of meaning and sense-making processes (Ulin, Robinson and Tolley, 2005). An individual, open interview was held with each of the 27 teachers ranging from 45 to 70 minutes. Main topics of the interview were description of the child conduct problems as they were observed by the teachers in the day-care/school setting, and their perceived reason for the problems, interactions with peers and teachers, and collaboration with parents, colleagues and other professionals. Each topic was introduced by an open ended question and pre-formulated follow-up questions were used if needed. The interviews were recorded and then transcribed to text.

The data were analysed using elements from the grounded theory approach (Strauss and Corbin, 1990) in which categories are inductively derived from the study of the phenomena they represent. In this method, the researcher abstracts qualitative data into concepts and categories using three major types of coding: open coding, axial coding and selective coding (Strauss and Corbin, 1990; Webster-Stratton and Spitzer, 1996). Variations and similarities in concepts and categories are addressed during constant comparison. In the open coding process, data in the present study were broken down by naming small meaningful units in the text. Similar units were then labelled and grouped to form categories. Axial coding was the first step of putting the data together. In this process, the categories were compared and contrasted to detect similarities and differences among them. An axial code is an overriding category encompassing two or more codes. Double coding was performed in the open and axial coding process by two persons. Selective coding is a process of focusing selectively on higher-order categories that seem to make sense. Relationships and connections among categories were explored and integrated into more abstract levels than in axial coding. The goal of this phase of the analysis was to create higher-order categories and if possible to develop a theory.

Because methods and aims of qualitative studies differ from those used in quantitative research, the criteria for evaluating the scientific integrity of qualitative research must differ accordingly (Webster-Stratton and Spitzer, 1996), i.e. it is necessary for qualitative researchers to be aware of their own subjectivity (Ulin, Robinson and Tolley, 2005).

Paper I. Pervasive and nonpervasive conduct problems in a clinic sample aged 4-8 years: child, family and day-care/school factors.

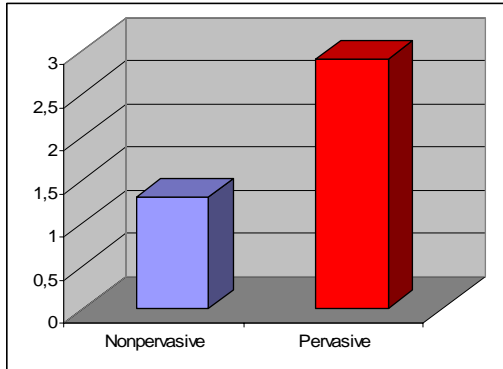
Based on the cut-off points on the PBQ and the TRF, 83 % of the children in the present clinic sample showed conduct problems both at home and in day-care/school settings, i.e. exhibited pervasive problems. Seventy-seven percent of the children in day-care and 87% of those in school showed pervasive problems.

Teachers rated children in the pervasive problem group as having significantly lower social competence scores but also significantly higher levels of both attention and internalizing problems as compared to those in the nonpervasive group (see figure 1a and 1b). Children in the pervasive group also showed significantly more problems in their peer-interactions than those in the nonpervasive group in that they were rated by their teachers as being both more egoistic (see figure 1c) and isolated in their peer-interactions. Further, teachers reported that children in the pervasive group had significantly more negative student-teacher relationships (see figure 1d), and higher conflict levels in these relationships than those in the nonpervasive group. However, closeness in student-teacher relationship did not differ between the two groups. The results of logistic regression analyses showed that a model including social competence and egoism in peer-interactions significantly predicted pervasive vs. nonpervasive conduct problems.

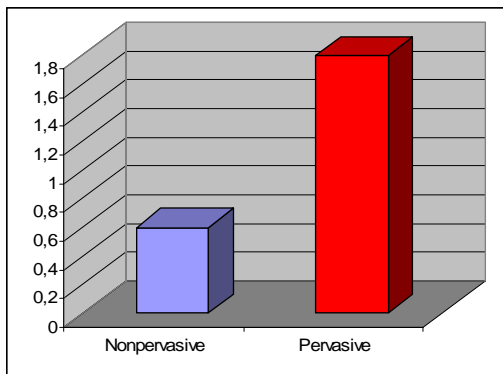
However, child and family factors as rated by parents did not differ significantly between children in the pervasive and nonpervasive group.

Figure1. Attention and internalizing problems, peer-interaction (egoistic-prosocial) and student-teacher relationship in children with nonpervasive and pervasive conduct problems

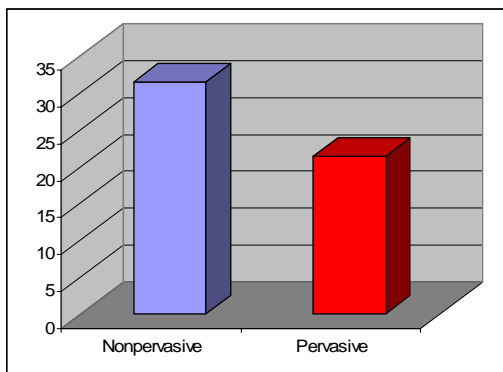
Child attention problems (1a)



Child internalizing problems (1b)

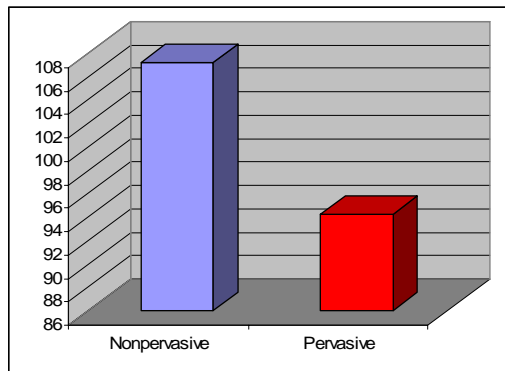


Peer-interactions, egosentric-prosocial (1c)



Note. High scores indicate high levels of prosociality.

Student-teacher relationship, overall quality (1d)



Note. High scores indicate good overall quality in student-teacher relationship.

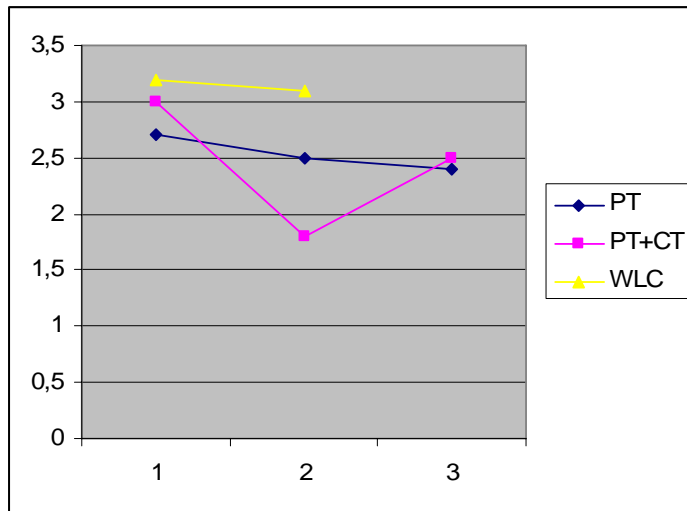
Paper II. Children aged 3-8 years treated with parent training and child therapy

because of conduct problems: generalisation effects to day-care and school settings

Children in combined PT+CT treatment significantly reduced their aggression levels in day-care/school settings after treatment as compared to those in the PT and the WLC groups.

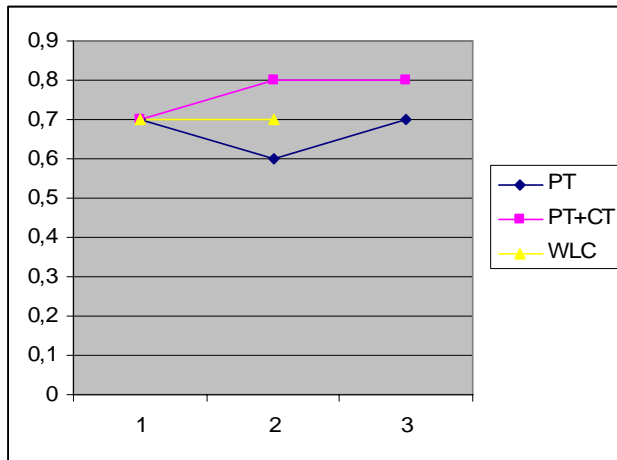
Aggression scores for the combined PT+CT group showed a significant increase from posttreatment to follow-up evaluations however, the scores at follow-up were still reduced as compared to pretreatment levels. Changes among children in the PT group were nonsignificant from posttreatment to follow-up, indicating stable and high aggression levels for this treatment group across all three assessment points. After treatment, 74% (n=84) of the children exhibited clinical levels of conduct problems in day-care/school settings and at the one-year follow-up, 83% (n=70) of the children exhibited such levels of conduct problems in these settings.

Figure2. Aggression scores on the TRF/PBQ pre-and posttreatment and at the one-year-follow-up.



Children treated with combined PT+CT also showed a significant increase in social problem-solving strategies from pre to posttreatment (see figure 3). This treatment condition showed stable levels in social problem-solving strategies one year later, while children in the PT condition increased their positive strategies during the same time period. Because children in the latter treatment group showed a decrease from pre to posttreatment, at the one year follow up they showed scores at the same level as before treatment.

Figure 3 Social problem-solving strategy scores pre-and posttreatment and at the one-year follow-up.



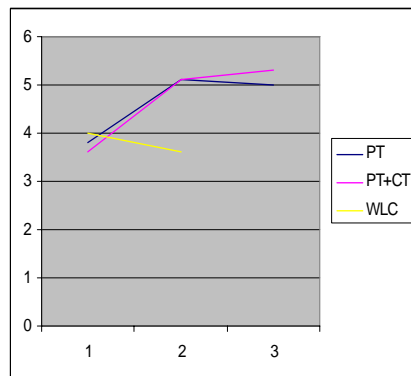
However, significant generalisation effects were not found in regard to teacher reports of child attention and internalising problems, social competence, peer-interactions, student-teacher relationships or parent-teacher involvement.

Paper III. Changes in social competence in young children treated because of conduct problems as viewed by multiple informants

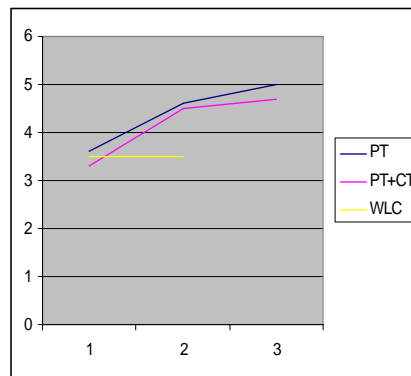
Fathers reported a increase in social competence scores both for children treated with PT and those in the combined PT+CT condition (see figure 4), a finding underlined by high effect size (ES = 15.3%). Mother reports showed a borderline significant ($p=.06$) treatment effect for children in the combined PT+CT treatment condition regarding social competence in the child, while children reported a significant increase in the number of prosocial solutions. All positive changes reported after treatment were well maintained one year later. However, no significant changes in peer-relationships in day-care or school were reported by either the child or the teacher.

Figure 4. Father and mother reports of social competence level in the child pre-and posttreatment and at the one-year-follow up.

Father reports



Mother reports



Mother and father reports showed high correlations across treatment and at the one-year follow-up. Although no significant difference between parents' reports before treatment was found, untreated mothers and fathers in the WLC condition showed significantly higher correlations at postassessment as compared to treated parents. Informants from different settings showed low and nonsignificant levels of association both before and after treatment.

A diagnosis of ADHD was found to be significantly associated with father reports of changes in child social competence scores in that children with ADHD showed the most positive development.

Paper IV. Teacher's experience and management of young children treated because of home conduct problems. A qualitative study.

Teachers described most children as having a range of behaviour problems, however, the descriptions were given with warmth and a positive engagement in relationships to these children. Most teachers believed that other child psychopathology (such as the presence of

ADHD) and family factors (for example, negative parenting and parental health problems) were the prime reasons behind child conduct problems.

Children with conduct problems attracted the teachers' attention as compared with other children in the classroom, in that the teachers reported using a substantial amount of time and energy thinking about the child and how to deal with its behavioural problems. They mostly worked with the child alone, or with some support from close colleagues. Few teachers seemed to have knowledge about the work directed toward the child and its family delivered from external services outside the day-care/school such as child care and child psychiatry. The majority of teachers stated that they had to find their own ways of dealing with the child's problem behaviour related to each child's individual needs. Evidence-based methods and systematic management of conduct problems were rarely used. Parental involvement seemed to work at best if the parents themselves were positive and engaged in their contact with teachers and when few worries existed about the home situation of the child.

9 Discussion

9.1 Strengths and limitations

The present randomized controlled treatment study was carried out in two regular child psychiatric outpatient clinics affiliated to university. The therapists were recruited and trained in particular for the present study, and were not engaged in other clinical work during the project period. This is likely to represent more optimal work conditions for therapists than those usually prevailing in regular clinic service.

The findings of the present intervention study are highly valid because of the experimental design and the low drop-out rate. Stringent screening procedures for children, both for meeting clinical cut-off criteria on the ECBI and the diagnostic DSM-IV criteria of ODD and repeated assessments with use of multiple informants represent further strengths of the study.

However, the inclusion of a selected sample of children with severe conduct problems, represents both a strength and a limitation of the present study. These children represent a group of children hard to treat, and the positive results obtained should be quite robust. On the other hand, the results of the present study sample may not be valid for children with low to moderate levels of conduct problems at home, or for those who are referred to regular outpatient clinics, child care or to school psychology services.

Another limitation of the study was the restricted number of children included, thus limiting statistical power and the chances to obtain significant differences between treatment groups related to type II errors.

9.2 Discussion of main findings

All children in the present study scored above clinical cut-off scores on the ECBI and met the DSM-IV criteria for an ODD diagnosis before treatment. The children were randomized to The Incredible Years parent training program, parent training combined with child training or waiting list condition. After treatment about 60 % of the children scored within normal variation on the ECBI, and at the one-year follow-up, 67 % of the children no longer met diagnostic criteria for ODD (Morch et al., 2006). These findings indicate that most children showed a positive development in regard to their conduct problems at home after treatment. The present study focuses on systematic evaluations of child conduct problems and social competencies in day-care and school settings.

Of clinical importance is that a majority of the children in the study also showed severe conduct problems in day-care/school settings before treatment in that 83% scored above the clinical cut-off score, indicating that they had pervasive conduct problems, i.e. conduct problems both at home and in day-care/school. This figure is higher than typically reported in other treatment studies in which 50-60 % (Campbell, 2002; Ramsey et al., 1990; Webster-

Stratton and Reid, 2003) exhibit pervasive conduct problems. Thus, a higher population of children included in the present study showed more serious conduct problems in that these were manifested in more than one setting, implicating a greater risk of persistence throughout childhood and adolescence as compared to those with conduct problems in only one setting (Ledingham, 1999).

Differences in rates of children with pervasive problems in studies may be due to different measures used to define conduct problems, or depend on the use of different inclusion criteria and procedures in various studies. The difference may also stem from the fact that before this treatment project, children with conduct problems in Norway did not have access to a comprehensive treatment program in child psychiatry clinics. The development and testing of such an intervention is of great clinical and social interest, and increases the likelihood that children with severe conduct problems will receive effective help.

Because children with pervasive conduct problems have a more negative prognosis than those with conduct problems displayed in only one setting (Ledingham, 1999), we wanted to investigate whether child, family and day-care/school characteristics differed between the two groups. Such differences could help indicate what should be targeted in assessment and treatment conducted among children with pervasive conduct problems. Only teacher ratings showed significant differences between children with nonpervasive and pervasive problems, in that the latter also had significantly more attention and internalizing problems, social competence problems, problems with peer-interactions, and lower quality of student-teacher relationship as compared to those with conduct problems only at home. This means that children with pervasive conduct problems also exhibit a range of serious emotional and social problems in day-care and school settings, a finding supported also by the qualitative study. These results are important and have implications for interventions offered to children with conduct problems, the more so because negative student-teacher relationships and problems in

peer-interactions have been found to predict negative outcomes for children with conduct problems (Dodge and Petit, 2003; Hamre and Pianta, 2001). Children with pervasive conduct problems may also need to be treated because of their internalizing and attention problems.

Overall, these findings underline the great challenge young children with conduct problems represent for day-care and schools in their role as socialising agents. In the modern society responsibility for socialization of children is shared between family and pedagogical institutions (Bäck- Wicklund, and Lundström, 2003), and the quality of day-care and schools as socialization systems is of great importance for children's development.

Contrary to findings in previous studies (Webster-Stratton and Hammond, 1998; Reid, Webster-Stratton and Hammond, 2003), no child factors such as age, sex or diagnosis, family factors, e.g. single parent status, parents' educational level or their ratings of child emotional, behavioural and social problems at home or parenting style differed between the pervasive and nonpervasive groups. These differences may be due to differences in characteristics between samples referred to treatment because of conduct problems in the USA and in Norway. It is more likely that more homogeneous groups of families are referred in Norwegian settings, in contrast to the USA where many more disadvantaged families are likely to have been referred. Findings in the present study underline the importance of carrying out thorough assessment of children with conduct problems to identify those with problems in more than one setting, as well as those showing comorbid problems. The use of teachers as informants is necessary in the assessment of a spectrum of child behavioural or emotional problems displayed in day-care and school settings.

When the effects of PT and PT+CT were examined in these settings, the combined PT+CT treatment produced somewhat stronger positive generalisation effects as compared to PT treatment, findings in line with previous studies (Taylor, Eddy and Biglan, 1999; Webster-Stratton and Hammond, 1998; Webster-Stratton, Reid and Hammond, 2004). Levels of

aggression in day-care/school were significantly lower for children in the combined treatment group after treatment, although these positive results were not maintained one year later.

Child reports of social problem-solving skills also showed a significant, positive development after combined PT+CT treatment, in this case the results were maintained at one-year follow-up. However, according to teacher reports internalizing and attention problems and social competence in the child, peer-interactions, student-teacher relationship or parent-teacher involvement did not change significantly during treatment or follow-up. Further, positive generalisation effects found on most measures after treatment, were not found one year later. This finding indicates the need for developing effective strategies to maintain positive treatment effects obtained after treatment with PT+CT. Children in this treatment condition seemed to lack necessary support in day-care school settings in the longer term, this may affect their ability to continue to use new behavioural skills acquired during treatment. In many other respects, children in the PT condition showed a more positive development during the one-year follow-up as compared to those in the PT+CT condition, though the differences between treatment groups were not significant. This finding indicates the strength of the PT intervention and implies that parents in this condition continued to work with their children at home after treatment.

No generalisation effects were obtained in regard to social competencies (teacher reports) and peer-interactions (both teacher and child reports) in day-care/school, in spite of a positive development in social problem-solving skills as reported by the child. Overall, these findings emphasise that in spite of pronounced improvement at home, the treated children still showed serious behavioural and social problems in day-care and school, and are therefore at risk for lasting problems throughout childhood (Dodge and Petit, 2003; Hamre and Pianta, 2001).

The limited positive generalization effects obtained in the present study underlines the importance of examining such effects across settings, here to day-care/school settings, when

parent training is administered to children with conduct problems at home. The results further indicate that the effects of additional child therapy were limited. Therefore, severe child conduct problems and correlates with other emotional and social problems need to be targeted in each setting, where they occur.

In our qualitative study, we wanted to examine teachers' experience and their reported management of conduct problems in the study children to see how they were handled by teachers in regular day-care and school settings. It was evident that work with these children was carried out with much involvement and engagement from teachers. However, their efforts were in large part restricted to the classroom and teachers had limited long-term goals and perspectives. It was striking that teachers to such a very small extent, believed that day-care or school settings were contributing to conduct problems as observed in the children. Teachers gave the impression that children attended to day-care or school bringing their conduct problems, and that the main task of the pedagogical settings was to handle the problems from day to day. If and how day-care and schools by themselves as educational and socialization systems might actually contribute to the children's problems, was not in focus. This finding is significant because when defining child conduct problems as a matter of individual traits or family problems, day-care/school systems may then avoid critical self-questioning and evaluation (Skrtic, 1991), or more importantly, are less likely to change the child's environment.

In spite of their engaged and devoted work, teachers felt that they faced difficulties providing support to children with conduct problems and at the same time taking care of other children in the classroom, a finding supported by previous studies (Gray and Noakes, 1994; Ogden, 2001). Teachers also had limited knowledge regarding how to work systematically with long-term goals for children with severe conduct problems, a finding in line with previous studies (Martin, Linfoot and Stephenson, 1999; Myers and Holland, 2000).

As in other previous studies (Royer, 2001), it was obvious that teachers struggled with their role in parental contacts, especially when problems existed within the family or when parents showed little interest in contact with the teacher. This is worrying because both at school and home, parent-teacher involvement has been found to be associated with improvement in child school behavior, social competence and school performance (Izzo, Weissberg, Kaspro and Fendrich, 1999), aspects even of greater importance for children with pervasive conduct problems. In a previous study of the present sample, Lurie and Clifford (2005), found that many parents felt constantly exhausted after years of trying to deal with their child's home behavior, indicating that these parents did not have very much energy left to invest in involvement with day-care or school. Probably these parents need teachers who are able to actively involve themselves in a partnership with parents working together on child socialization both at home and in day-care/school settings.

Overall, teachers seemed to prefer to work alone with the child with conduct problems in the classroom, or together with colleagues in day-care and school, while in many municipalities cooperation with other professionals outside the system was uncommon. Our results indicate that help provided to young children with severe conduct problems in day-care and school settings was too often a hit-and-miss affair influenced by personal preferences on the part of teachers. Day-care and schools seemed to function as isolated systems for children with conduct problems. Based on these findings, it is doubtful that children with conduct problems are given the support and help they need to manage and develop in day-care/school settings.

9.3 Conclusions and recommendations

-When a child displays severe conduct problems at home, it is important to examine further if such problems also are displayed in another setting, i.e. having pervasive conduct problems.

Because then the child is at enhanced risk for lasting and serious psychosocial problems and in need of interventions according to its special problems.

-When a child displays conduct problems in day-care or school, the existence of comorbid problems associated with aggression problems also needs to be investigated. A broad assessment including the use of multiple informants is needed to evaluate if the child with conduct problems also has a wide range of other problems to be targeted in treatment offered to the child and the family. In particular, social problems in relationships with both peers and teachers have to be assessed and dealt with in an appropriate way. The quality of support offered in day-care and school is of great importance for children today, because of the double-socialization process. The child needs that home and day-care/school environments are able to cooperate about the shared responsibility for child socialization and education.

-Although parent training methods are very important and have been found to be powerful approaches to reduce conduct problems in children at home, here parent training alone or added to child training was not sufficient to reduce conduct problems displayed in day-care or school for young children with pervasive conduct problems. Further research should therefore address generalization effects from clinic-based treatment to home and other settings.

-It is likely that children with pervasive conduct problems need multi-component treatment, focusing on reduction of problems in each setting, where they occur. It is necessary to carry out controlled intervention studies in day-care and school settings in various cultural contexts, e.g. Norway, to evaluate the effects on child conduct problems displayed in these settings, in addition to long-term effects. Contextual factors within the day-care and school settings also have to be addressed to understand how these factors contribute to the development and maintenance of child conduct problems.

-The findings of the qualitative study should be further examined in a larger sample of children with less severe and moderate problems. If the findings also hold for such samples,

teachers are likely to profit from better knowledge on how to work with children with severe behavioural problems. They also need systematic training on how to apply specific and structured evidence-based methods in the classroom and in school generally, in addition to better resources to be able to deal more effectively with the child with conduct problems as well as other children in the classroom. Teachers would also benefit from having a clearer role in their work with parents, in particular with parents who themselves do not engage actively in day-care/school issues. Finally, better structures for teacher cooperation with other professionals have to be addressed at the local authority levels.

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Paper I

Pervasive and non-pervasive conduct problems in a clinic sample aged 4-8 years:
child, family and day-care/school factors.

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In this study differences between pervasive (home and day-care/school) versus non-pervasive conduct problems (home only) were examined in regard to various child, parent/family and day-care/school characteristics in an outpatient clinic sample of 120 children aged 4-8 years. All children scored above the 90th percentile on the Eyberg Child Behavior Inventory (ECBI) for home problems, and met the criteria for a possible or a confirmed diagnosis of oppositional defiant behaviours. The proportion of children with pervasive conduct problems was high, 83%. Teachers in day-care and school reported children in the pervasive group to have significantly more attention and internalizing problems as well as lower social competence scores than those in the non-pervasive group. Children in the pervasive group also showed consistently more problems in their relationships both with teachers and peers than those in the non-pervasive group. The implications for assessment and treatment of children with conduct problems in these age-groups are discussed.

Keywords: ODD, conduct problems, day-care, school.

Introduction

Oppositional Defiant Disorder (ODD) in preschool children, and Conduct Disorder (CD) in school-aged children are among the most frequently diagnosed psychiatric disorders in childhood, accounting for about one-third to one-half of all referrals to child and adolescent psychiatric clinics (House, 1999; Kazdin, 1996). The prevalence of ODD in children is reported to range from 0.3 % to 22 %, with a median of 3.2 %, while the prevalence of CD range from 0.0 % to 12 %, with a median of 2 % (Lahey, Miller, Gordon & Riley, 1999). In Scandinavia prevalence rates of total problem levels as well as externalising problems among school-aged children have been reported to be lower than in other countries (Crijnen, Achenbach & Verhulst, 1997).

According DSM-IV guidelines ODD is not diagnosed in the presence of CD because it is seen as a less severe manifestation of CD (Rowe, Maughan, Costello, Angold & 2005), and prevalence rates for ODD therefore in most studies fall with age, while CD increase in prevalence with age. Maughan, Rowe, Messer, Goodman & Meltzer (2004) found that this fall in ODD is not determined by any age-changes in the frequency of oppositional behavior. The majority of children with CD are reported to have significant levels of oppositional behavior from early childhood to middle adolescence. ODD and CD show high levels of overlap in that a proportion of children with ODD later develop CD and both diagnoses show substantial comorbidity with other disorders (Loeber, Burke, Lahey, Winters & Zera, 2000; Maughan et al., 2004).

Fifty to sixty percent of children referred because of conduct problems at home also exhibit clinically significant problem behaviours in day-care and school settings (Campbell, 2002; Ramsey, Patterson & Walker, 1990; Reid, Webster-Stratton & Hammond, 2003). Children with an early onset of serious conduct problems that are manifest in more than one setting are at greater risk of having problems persisting throughout childhood and adolescence, than

among those with conduct problems exhibited in only one setting (Ledingham, 1999). In spite of these findings, few studies have focused on cross-setting consistency of conduct problems in children, particularly in preschool children.

According to the theoretical model presented by Moffitt, Avshalom, Harrington & Milne (2002) persistent conduct problems in a child emerges from inherited or acquired neuro-psychological problems manifested as cognitive problems, difficult temperament, or attention/hyperactivity problems combined with environmental risk factors as inadequate parenting, disrupted family bonds and poverty. The environmental risk expands beyond the family as the child gets older and will then include relational problems with persons outside the family as peers and teachers. Although most theories assume that conduct problems originated and shaped in the home also generalize to peer-interactions and to other settings, e.g. the school, research indicates that generalization effects may flow in both directions (Snyder, Cramer, Afrank & Patterson, 2005). Early conduct problems in the child may result in a cycle of cumulative events that increasingly affect the psychosocial functioning of the child over time (Reid, Eddy, Fetrow & Stoolmiller, 1999; Webster-Stratton and Taylor, 2001; Snyder et al., 2005). The risk of a child developing serious conduct problems and poor social adjustment increases with each additional risk factor (Moffitt et al., 2002).

Few consistent findings have emerged in clinic studies addressing differences between children with conduct problems at home, and those who have such problems both at home and in day-care/school, i.e. having pervasive problems. Ramsey et al. (1990) noted that antisocial boys who were extremely deviant in more than one setting also were more deviant in general than those who were deviant in only one setting. Campbell (2002) noted that children exhibiting conduct problems both at home and in pre-school/school had lower social competence than those having problems in only one setting, as reported by parents, teachers or the children themselves. Webster-Stratton and Hammond (1998) reported that mothers of

children aged 3-8 years with pervasive problems used more critical statements and displayed more negative emotions toward their children. They were also more harsh and inconsistent in their discipline than mothers of children with non-pervasive problems. In addition, there were a higher percentage of single mothers of children with pervasive conduct problems. Reid, Webster-Stratton & Hammond (2003) further reported that children with pervasive problems, needed teacher training added to parent or child training to achieve positive outcomes both at home and in school, two years after treatment.

Because of a higher risk of lasting negative development among children exhibiting conduct problems in more than one setting, important differences between such individuals and those with conduct problems in one setting should be further addressed. Such information is important to gather to identify those children being at the greatest risk, but also to tailor and optimise interventions for children with pervasive and non-pervasive conduct problems.

The purposes of the present study were: 1) to estimate the level of conduct problems in day-care and school in a clinic sample of children aged 4-8 years exhibiting conduct problems at home; 2) investigate child, parenting, family and day-care/school factors differentiating children with conduct problems only at home (non-pervasive group) from those with conduct problems both at home and in day-care/school (pervasive group); 3) examine predictors of pervasive conduct problems in day-care/school in multivariate analyses.

Method

Participants

The subjects in the present study consisted of 127 children, 4-8 years old, referred to two child psychiatric outpatient clinics to be treated for oppositional defiant disorder or conduct disorder. Out of the 127 children, 7 were excluded because of no assessment performed in day-care or school, so 120 children participated. The mean ECBI total scores for the 7

dropouts were almost identical to those in the total sample, 149.5 vs. 150.6 (mothers' report). The study was conducted in two university cities in Norway, Trondheim and Tromsø. Exclusion criteria were children with gross physical impairment, sensory deprivation, intellectual deficit or autism. All but two parents in the study were native Norwegians. Child and family characteristics are presented in table 1.

Insert table 1 about here

Procedures

Information about the study was given to referral agencies or professionals such as teachers, physicians, health nurses, and child welfare workers throughout the project period.

All clinically referred children were first screened by means of the Eyberg Child Behavior Inventory (ECBI; Robinson, Eyberg, & Ross, 1980) using the 90th percentile as a cut-off score according to Norwegian norms (Bertelsen, Reedtz & Mørch, 2004). Those who attained this cut-off score were subsequently interviewed by one of three trained interviewers using the KIDDIE-SADS (see details below). Those who received a possible or definitive diagnosis of ODD and/or CD were offered to participate in the study. The term "possible diagnosis" refers to those children who scored one criterion less than the 4 required for a formal DSM-IV ODD diagnosis or the 3 items required for a formal DSM-IV CD diagnosis, and had diminished function, a procedure suggested by Angold & Castello (1996) and Rowe et al. (2005).

All clinic children included had severe conduct problems at home as rated by their parents on the ECBI. To assess conduct problems in day-care the aggression subscale of the Preschool Behavior Questionnaire (PBQ; Behar, 1977) was used, and for children in school, the aggression subscale of the Teacher Report Form (TRF; Achenbach, 1991) was used. To estimate the optimal cut-off points between our clinic group and Norwegian normative data,

ROC curve analysis was used. The results of these analyses showed that a value of 9 corresponding to the 80th-percentile was found to be the optimal cut-off point for the PBQ, and a value of 6 was the optimal cut-off point for the TRF, corresponding to the 88th percentile.

Assessment

All data in this study are based on assessment of the children before participating in treatment.

Eyberg Child Behavior Inventory (ECBI) is a 36-item inventory for parents to assess child conduct problem behaviours among children aged 2-16 years (Boggs, Eyberg & Reynolds, 1990; Robinson et al., 1980). Scores range from 1-7. In this study only the total intensity scores were used to indicate frequency of conduct problems. Reliability for internal consistency was .82 and test-retest has been reported to be .86 (Webster-Stratton, 1998).

Child Behavior Checklist (CBCL) consists of 118 items rated on a 0-2 scale, addressing emotional and conduct problems in children (Achenbach, 1991). In this study the aggression and attention subscales were used (consisting of 20 and 11 items, respectively), in addition to the internalizing syndrome scale (31 items). Test-retest reliability has been found to be high and inter-parent agreement to range from .65 to .75 for the subscales (Achenbach, 1991). Internal consistency was .84, .74 and .84, respectively (mothers report).

Social Competence Scale-Parent (PCOMP). This measure developed by the Conduct Problem Prevention Research Group (Webster-Stratton & Hammond, 1998) consists

of 12 items rated on a 1-5 scale, addressing parental perceptions of their child's social competence. A total social competence score is computed and internal consistency was found to be high ($\alpha = .87$).

KIDDIE-SADS. This is a semi-structured diagnostic interview designed to assess psychopathology in children and adolescents according to DSM-IV criteria (Kaufman, Birmaher, Brent, Flynn & Morcei, 1997). Here only the diagnoses most relevant for the 4-8 age group were included being based on parents' reports of current episodes of psychopathology among children. Three trained persons conducted the diagnostic interview
ws. All interviews were recorded and random checks showed high inter-rater reliability in that all Kappa scores were above .90.

Parent Practices Interview (PPI). The PPI was adopted from the Oregon Social Learning Center's discipline questionnaire and revised for young children. (Webster-Stratton, Reid & Hammond, 2004). Two summary scores were used here: harsh discipline (14 items including use of parental force such as verbal or physical aggression), and positive parenting (15 items including verbal encouragement, praise and reinforcement and use of incentives or privileges). The scores ranged from 1-7, and an average summary score was computed. Internal consistency has been found to be .85 and .65, respectively.

Pre-school Behavior Questionnaire (PBQ). The PBQ includes 30 items of conduct problems and are completed by day-care teachers for children aged 4-6 years (Behar, 1977). In this study, the aggression, hyperactive/distractible and internalization subscales were used. Items were scored on a 0-2 scale. Internal consistency was .80, .63 and .82. In the Behar study

(1977) test-retest reliabilities for these subscales were .93, .94 and .60, respectively. We also used the aggression subscale from a Norwegian normative study to estimate an optimal cut-off point between this sample and our clinical group (Clifford & Lurie, 2004).

Teacher Report Form (TRF). The TRF consists of teacher ratings of school children's academic performance, four general adaptive characteristics, and 112 conduct problems for children in school (Achenbach, 1991). In this study, the aggression (25 items) and attention (20 items) subscales, and the internalizing syndrome scale (35 items) with items scores ranging from 0-2, were used. Test-retest reliability for the problem scales has been found to be .90, and .55 for inter rater agreement (Achenbach, 1991), and internal consistency was .94, .90 and .87, respectively. Again, scores on the aggression subscale from the Norwegian normative study were used to estimate the optimal cut-off point between these data and our clinical group (Clifford and Lurie, 2004).

Social Competence and Behavior Evaluation (SCBE). The SCBE includes 80 items designed for teacher/day-care teachers to assess patterns of social competence, affective expression, and adjustments difficulties in children (LaFreniere & Dumas, 1995). In this study, we used the sub-scales for social competence (consisting of 40 items) and peer interactions (isolation-integration and egotistic-pro-social, each scale consists of 10 items). Scores range from 0-5 and an average score was computed for each subscale. Test-retest reliabilities are reported to range from .74 to .87 (LaFreniere & Dumas, 1995), and alpha coefficients for internal consistency was .67, .80 and .77, respectively.

Student Teacher Relationship Scale (STRS). The STRS is a 30-item rating scale with scores ranging from 1-5, designed to assess teacher perceptions of their relationships with a

particular child (Pianta, 1996). In this study, the conflict (12 items) and the closeness (11 items) subscales, and the total score for overall relational quality (30 items) were used. For each scale an average score was derived. Internal consistency for these scales was .80, .66 and .67, respectively.

Statistics

To identify child, parent, family and day-care/school categorical variables distinguishing children with pervasive from those with non-pervasive conduct problems, chi-square tests were used, and for analysis of differences between group means, independent t-tests were employed. Effect sizes (ES) were estimated using Cohen's criteria (1988) for small effect (1% to 5.9%), medium effect (5.9% to 13.8%) and large effect (13.8% or more). Multivariate logistic regression with backward elimination procedures was used to examine the most powerful predictors of pervasive versus nonpervasive conduct problems emerged as significant in bivariate analyses. An alpha level of $p < .05$ was used to indicate a statistically significant result.

Results

Prevalence of clinical levels of conduct problems

Based on the cut-off points on the PBQ and the TRF, 83 % ($n = 100$) of the children in the present clinic sample showed conduct problems both at home and in day-care/school, i.e. having pervasive problems, and 17% of the children ($n = 20$) had conduct problems only in the home. Seventy seven percent ($n = 30$) of the children in day-care and 87% ($n = 71$) of those in school showed pervasive problems.

Child, family, parenting and school characteristics among children with pervasive or non-pervasive conduct problems

The results of analyses of child factors including gender, age-group, psychiatric diagnosis and symptoms and social competence in the child, showed that none of these factors differed between children in the non-pervasive and pervasive groups, as reported by parents. However, teachers rated children in the pervasive group as having significantly lower social competence scores and significantly higher levels of both internalizing and attention problems as compared to those in the non-pervasive group (see table 2).

Further analyses of various family factors showed that living situation (single parent, living with both parents or living with one parent and one step-parent) and education level of parents did not differ significantly between the non-pervasive and pervasive groups. For parenting factors, only father's harsh parenting differed significantly between the two groups. However, contrary to expectation, the highest level was found for fathers of children in the non-pervasive group (see table 2).

Additional analyses of day-care/school-related factors (peer-interactions, student-teacher relationship), showed that children in the pervasive group had significantly more overall negative student-teacher relationships, and higher conflict levels in these relationships than those in the non-pervasive group. Closeness in student-teacher relationship did not differ between the two groups. Children in the pervasive group also showed significantly more problems in their peer-interactions than those in the non-pervasive group in that children in the pervasive group were rated by their teachers as being both more egoistic and isolated in their peer-interactions (see table 2).

Insert table 2 about here

Effect sizes (ES) are presented in table 2 and show that the highest ES were found for egoism in peer-interactions (ES=28.2%), conflict in student-teacher relationships (20.9%) and overall quality of student-teacher relationships (ES=17.6%).

Predictors of pervasive conduct problems

In bivariate analyses attention and internalizing problems, social competence, egoism and isolation in peer interactions, conflict and overall quality in student-teacher relationship were found to be significantly associated with aggression level in day-care/school. The results of logistic regression analyses showed that a model including social competence and egoism in peer-interactions significantly predicted group membership, i.e. having pervasive or non-pervasive conduct problems (for social competence: $B = .09$, $SE = 0.4$, $\text{Exp}(B) = 1.09$, $p < .05$; for egoism in peer-relations: $B = -.55$, $SE = .17$, $\text{Exp}(B) = .58$, $p < .01$). Nagelkerke's R square was 64.5% and overall the model classified 92 % of the subjects correctly (69% of the subjects in the non-pervasive group and 96% of the subjects in the pervasive group).

Discussion

In the present study differences between children exhibiting conduct problems only at home (non-pervasive problems) and those having conduct problems both at home and in day-care/school (pervasive problems) were examined in a clinic sample of children aged 4-8 years, referred to treatment because of ODD or CD.

The present clinic sample of children was characterised of a high prevalence of pervasive conduct problems. In similar treatment studies of young children, the proportion of children with pervasive problems has been reported to be 50-60 % (Campbell, 2002; Ramsey et al., 1990; Reid & Webster-Stratton, 2001; Webster-Stratton & Reid, 2003). In the present study, this proportion was found to be substantially higher, 83%. The discrepancies are likely to be

due to differences in the use of screening and referral procedures and populations, in addition to differences in definitions of pervasive problem levels.

No difference between children in the non-pervasive and pervasive groups was found in the present study in regard to parental perception of psychiatric symptoms or diagnoses in their children. In this study all children exhibited ODD diagnoses and about 20 % of them also had a CD diagnoses. The prevalence of CD or other diagnoses (e. g. ADHD) did not differ significantly among children with pervasive and non-pervasive conduct problems, indicating children with ODD both with and without other related diagnoses are at risk for showing conduct problems in more settings. Because CD indicates more serious behavior problems than ODD (Rowe et al., 2005) one should suppose that young children with CD diagnosis also had higher levels of aggression problems in day-care/school. Our results show such a tendency, although not significant. This may be because of the low number of children with CD diagnosis, making it difficult to exhibit significant group differences. Children in the pervasive group had lower social competence scores and higher levels of attention and internalizing problems than those in the non-pervasive group as reported by their teachers. These findings are in line with outcomes of other studies addressing characteristics in children with conduct problems in school (Campbell, 2002; House, 1999; Kavale, Forness & Walker, 1999; Ogden, 2001).

Contrary to the theoretical model of development of conduct problems in more settings and to findings of the studies by Webster-Stratton and Hammond (1998) and Reid et al.(2003), we did not find expected differences between children in the pervasive and non-pervasive groups in regard to family or most parenting factors. In our sample conduct problems in day-care and school children cannot be explained by differences between parental child rearing practices at home, parental educational level or marital status. This statement is supported by the unexpected finding of fathers in the non-pervasive group being harsher in

parenting than fathers in the pervasive group. Neither single parent status nor negative parenting is in this study associated with conduct problems in more settings. A possible explanation is that children and their families referred for treatment because of primarily oppositional-defiant problems in Norway constitute a more homogenous group than those included in treatment studies in other countries.

In the present study, teacher ratings of their relationships with the students in the pervasive group were characterised by higher levels of conflicts and lower scores on overall quality than those in the non-pervasive group. Negative relationships potentially erode the value of the student-teacher relationship as a developmental resource. In negative relations the teacher more often attempts to control the child's negative behaviour, rather than to support its pro-social behaviour (Pianta, Stuhlman & Hamre, 2002). Hamre & Pianta (2001) reported that a negative teacher-student relationship was more predictive of outcomes for children with problem behaviour, than teachers' views of the child's behaviour problem or assessment of cognitive ability. For children in our pervasive group teachers' experience of the quality of relationship with the child suggest that this aspect constitute a greater risk factor for lasting child conduct problems than levels of aggressive behaviours.

Another important issue is the increased risk for the aggressive child to be rejected by the peers (Coie, Lochman, Terry & Hyman, 1992) and pro-social behaviour in the child is a key factor in gaining peer acceptance (Hay, Payne & Chadwick, 2004). Overall, children in the pervasive group were found to be more aggressive, less pro-social, and more isolated in their peer relations than those in the non-pervasive group. Hughes, Cavell & Willson (2001) reported important connections between child-teacher relationships and child-peer interactions in that children who had more supportive relationships and less conflicts with teachers also were more accepted by their peers. Increased praise or positive attention from teachers toward specific children seems to result in more positive peer preferences and

perceptions (White & Kistner, 1992). This may indicate that interventions targeting teacher-child relationships are needed for children with pervasive conduct problems. Improved quality of teacher-child relationship is likely to increase positive responses both from the teacher and peers, but also to reduce the child's aggression in settings outside the home. Each of these important aspects will reduce the risk of a further negative development for the child with conduct problems.

The most powerful predictors of pervasive conduct problems were found to be low social competence scores and egoism in peer-interactions as rated by the teachers. When effect sizes were studied, egoism in peer-interactions, overall quality and conflict of student-teacher relationship were found to have high effect sizes. These findings underline the significance of social problems in children with high aggression levels in day-care and school.

A limitation of this study was the inclusion of a highly selected clinic sample of children with defined oppositional or conduct disorders recruited to a controlled treatment study because of serious conduct problems at home. The recruitment procedures are likely to contribute to the high levels of children with pervasive problems. Secondly, the small number of children in the non-pervasive group limited the statistical power in the statistical analyses, and the likelihood of obtaining significant differences between the two groups. Although day-care and school problems among children were assessed only by means of questionnaires, optimal cut-off scores were computed in comparisons with normative data.

One implication of the present study is that the broader spectre of problems in children with pervasive conduct problems has to be targeted both in assessment and interventions offered to the child. Further, our study indicates that teacher-reported aggression among young children occurs together with both peer and teacher interaction problems. This should have implications for support and interventions offered young children with conduct problems in day-care and school. These children need high quality relationships with their teachers and

they need support regarding their social interactions with peers in the pedagogical settings.

Our findings indicate that for children with pervasive conduct problems, intervention may be needed in more settings, both at home and in day-care/school and according to different types of emotional, behavioral and social problems in the child.

Further research is needed to investigate differences in characteristics between children with pervasive and non-pervasive conduct problems in larger clinic samples and as well as community samples.

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Table 1. Child and family characteristics of the total sample (N=127). Percentages and number of subjects within parenthesis.

	% (n)
Child	
Sex	
Boys	80 % (101)
Girls	20% (26)
Age ^a	6,6 (1,3)
Children in day care	31 % (39)
Children in school	65 % (82)
Child diagnoses	
ODD, possible diagnoses	13 % (16)
ODD, confirmed diagnoses	87 % (111)
CD, possible diagnoses	11 % (14)
CD, confirmed diagnoses	8 % (10)
ADHD	35 % (45)
Anxiety/depression	10 % (13)
Enuresis	14 % (18)
Encropesis	7 % (9)
Tourette/tics	4 % (5)
Living situation	
Both parents ^b	47 % (60)
Mother and stepfather	21 % (26)
Single mothers	32 % (41)

Parent

Mother education 14 % (16)

College or university 78 % (90)

High school or partial college 8 % (9)

Partial high school or less

Father education

College or university 19 % (18)

High school or partial college 72 % (69)

Partial high school or less 9 % (9)

Note^a Mean and SD.

^b Including 8 adoptive- and foster parents and 4 parents with shared custody.

Table 2. Significant differences in characteristics between children with pervasive and non-pervasive conduct problems.

	Pervasive group (n=100)		Non-pervasive group (n= 20)		t-value	Effect size (ES)
	M	(SD)	M	(SD)		
<hr/>						
Attention problems in day-care/school (PBQ/TRF)	2.9	(1.6)	1.3	(1.4)	-4.18**	.13
Internalizing problems in day-care/school (PBQ/TRF)	1.8	(1.8)	0.6	(1.4)	-2.81**	.06
Harsh discipline, fathers report (PPI)	2.2	(0.5)	2.6	(0.7)	2.04*	.05
Peer-interaction Egoistic-prosocial	21.4	(6.4)	31.5	(4.2)	6.61**	.28
Isolated-integrated (SCBE)	29.6	(8.3)	34.7	(8.1)	2.47*	.05
Student-teacher relationship (STRS)						
Total-score	94.3	(11.1)	107.3	(8.7)	4.66**	.18
Conflict-score	38.9	(9.0)	27.2	(5.8)	-5.34**	.21

Note *p<.05, **p<.01

PBQ= Preschool Behavior Questionnaire; TRF= Teacher Report Form; PPI= Parent Practices Interview; STRS= Student Teacher Relationship Scale (negative items are recoded in the total score, a high score indicates a positive relationship); SCBE= Social Competence and Behavior Evaluation.

Table 3. Significant predictors of pervasive vs. non-pervasive conduct problems

	B	(SE)	95% CI for exp b		
			Lower	exp b	Upper
Social competence (SCBE)	.09*	(.04)	1.02	1.09	1.18
Egoistic-prosocial (SCBE)	-.55**	(.17)	.41	.58	.81

Note *p<.05, **p<.01

SCBE= Social Competence and Behavior Evaluation

Paper II

Paper II is not included due to copyright

Paper III

Paper III is not included due to copyright.

Paper IV

Teacher's experience and management of young children treated because of home conduct problems. A qualitative study.

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In the present study a sample of 27 teachers' were interviewed regarding their experience and management of young children with conduct problems, in day-care or school settings. The children had been referred and treated because of oppositional and conduct problems at home. Qualitative analysis of data was performed by using elements of a grounded theory approach. Although the children had complex conduct problems, presenting considerable challenges for their teachers, most teachers described a close and engaged relationship with these children. Teachers used a within-discipline and within-classroom approaches in their work with a main focus on managing the child's daily life in day-care or school, supported by close colleagues. Their practices were not deeply rooted in evidence-based knowledge and methods. Most teachers reported collaboration with parents as positive and necessary however, they only pursued it to a limited extent. Representatives from supplementary services such as school psychologist, child protection care and child psychiatry were rarely involved in the work of teachers. Implications of the findings are discussed.

Keywords: conduct problems; day-care and school; teacher experience; teacher management

Introduction

Earlier, many children with conduct problems were educated in special schools.

Today they are educated in mainstream day-care or schools and most teachers expect to have to deal with different kinds of conduct problems as a part of their normal duties, adjusting their classroom organization and management style (Chazan, Laing & Davies, 1994).

Teachers often report that children with conduct problems present a major challenge in their work (Gray & Noakes, 1994, Ogden, 2001). Minor child conduct problems such as talking without turn, disrupting other children, breaking rules in the classroom or school, and noisy behaviour are seen as the most troublesome aspects of daily life in school (Ogden, 1998). Most teachers report feeling distressed, and that much energy is required to manage children with conduct problems in day-care or in the classroom, where there are many other children (Webster-Stratton, 1999).

Previous research has shown that teachers often think that they have limited competence in dealing with child conduct problems, and that they become frustrated when the strategies they adopt are ineffective (Martin, Linfoot & Stephenson, 1999; Myers & Holland, 2000; Webster-Stratton, 1999).

Traditionally, the discourse of special education in schools has been based on an understanding of conduct problems as a psycho-pathological condition of the child (Skrtic, 1991; Fylling and Sandvin, 1996; Nordahl and Overland, 1998). Skrtic (1991) argues that because it is important for the educational system to present the school as a rational organisation, it implicitly presupposes that child school failure is due to its psycho-pathological predispositions. By defining conduct problems in school as a matter of individual traits, the school system avoids critical self-questioning and evaluation. Teachers' beliefs about the causes of the child's misbehaviour, and

evaluations of quality of pupil-teacher relationships, have been found to be related to their actual behaviour toward the child (Pianta, 1999; Scott-Little & Holloway, 1992). If teachers attribute misbehaviour to causes controllable by the child, they respond to the misbehaviour with more power-assertive strategies (Scott-Little & Holloway, 1992). In negative relationships, teachers more often attempt to control children's negative behaviour, rather than supporting their pro-social behaviour (Pianta, Stuhlman and Hamre, 2002). Furthermore, both day-care and school personnel emphasize the importance of developing good relationships with parents. However, previous studies have shown that in work with children with special needs, these relationships do not always function as intended (Fylling & Sandvin, 1998; Hughes, Wikeley & Nash, 1994).

Royer (2001) stated that the family is often ignored, excluded or blamed by the school, and according to Bastiani (1993) parents are often seen by teachers as being either too interested, or not interested. Hughes et al. (1994) found that teachers tend to perceive most parents as having one of the following roles: partners, consumers or problems. In special education, Fylling & Sandvin (1998) also described two more typical parental roles; implementers and clients. Of these different roles, only the partner-role is likely to promote a reciprocal relationship between parents and teachers. In respect of cooperation between school and other professions, Martin et al. (1999) reported that teachers tend to deal with conduct problems in children on a within-school basis, rather than involving professionals outside the school, such as psychologists or medical personnel. This is regrettable because children with severe conduct problems often need different kinds of services (Bloomquist & Schnell, 2002).

There are many quantitative studies in this field, but only a few qualitative studies of children with conduct problems exist. Webster-Stratton & Spitzer (1996) carried out a qualitative study among parents to obtain more in-depth knowledge of their experience of living with a child with conduct problems. To supplement their study, we in the present study wanted to use a qualitative approach to focus on the perspectives of teachers. Children today are socialized both by their parents and teachers, and given the lack of in-depth knowledge regarding this issue we wanted to further explore the perspectives used by teachers in their work with young children with severe conduct problems using a qualitative approach. Teachers' management of children with conduct problems is likely to be much influenced by their understanding of these children and their perceptions about the reasons for their misbehaviour (Scott-Little & Holloway, 1992). Teachers are the most valid informants regarding how children typically display their conduct problems in day-care and school settings, and can evaluate child behaviors as compared to other children at the same age, and how such problems are generally dealt with in day-care and school settings.

In the present study, qualitative data collected from 27 teachers of children aged 4-10 with clinical levels of conduct problems in day-care/school were analysed, addressing the following topics: 1) Teachers' descriptions of problem behaviours in the children and the reasons for these behaviours. 2) Teachers' descriptions of how they dealt with conduct problems.

Method

Participants

Of a sample of 127 children aged 4 – 8 participating in a controlled treatment study, qualitative interviews with teachers of 27 children were conducted (Morch, Clifford,

Larsson, Rypdal, Drugli & Fossum, 2006). The children had been referred to outpatient child psychiatric clinics because of conduct problems at home and where treated with The Incredible Years parent training and child therapy program (Webster-Stratton, Reid & Hammond, 2004). All children in the study scored above the 90th percentile on the Eyberg Child Behaviour Inventory (ECBI) for home problems, and met the criteria for a sub-threshold or a confirmed diagnosis of oppositional defiant behaviours (ODD) and/or conduct disorder (CD). Eighty-three percent of the children were also found to have conduct problems at clinical levels in day-care/school before treatment, i. e. they had pervasive conduct problems (Drugli et al., 2006).

The 27 children in the present study were randomly selected from a sub-sample of children scoring above clinical levels of conduct problems in day-care or school before treatment. At the time of the interview, 14 children had finished treatment, 12 children were in active treatment and one child had been assigned to the waiting-list control-group. In this study we should not focus on treatment effects and differences between treatment conditions, however on teacher's perceptions of day-care and school conduct problems.

Thirty three percent (9) of the children were from day-care (age of children ranged from 4 to 6 years) and 67% (18) from school (age of children ranged from 5 to 9 years), reflecting the proportion of children in the intervention study. The mean age was 7.8 years. There were 15% (4) girls and 85% (23) boys, leading to an under-sampling of girls as compared to the intervention study where the proportions of girls and boys were 20% and 80%, respectively. Forty-one percent (11) of the children in the present sample had a CD diagnosis and 59 % (16) were diagnosed with ADHD, in addition to an ODD diagnosis, leading to an over-sampling of CD and ADHD

diagnoses as compared to the intervention study were the proportions for these diagnoses were 19% and 35%, respectively.

Eight of the teachers were educated as day-care teachers, 13 as school-teachers, and 6 had no formal educational training. In the following, we use the term “teacher” for all these three groups. Twenty of the informants were women and 7 were men. The informants were from day-cares and schools in 6 local authorities in Central Norway.

The study was approved by the Regional Committee of Ethics on Medical Research, University of Tromsø.

Data collection

Qualitative methods were chosen for the present study because these are specially relevant for research questions concerning subjective perceptions of individuals, construction of meaning and sense-making processes (Ulin, Robinson & Tolley, 2005), and because we wanted to supplement findings from our previous quantitative studies, with in-depth knowledge from qualitative data. We have referred to findings from the quantitative studies carried out among the total sample of 127 children when we found them relevant for findings in the present qualitative study.

An individual, open interview was carried out with each teacher. Interview time ranged from 45 to 70 minutes. Main topics of the interview were description of the conduct problems as they were manifested in the day-care/school setting, how teachers managed the conduct problems, reasons for the problems, interactions with peers, interactions with the teacher, and collaboration with parents, colleagues in school, and other professions. Each topic was introduced by an open ended question

and pre-formulated follow-up questions were used only if needed. The interviews were recorded and then transcribed to text.

Data analyses

The data were analysed using elements from a grounded theory approach (Strauss & Corbin, 1990). Grounded theory is inductively derived from the study of the phenomena it represents. The researcher abstracts qualitative data into concepts and categories using three major types of coding: open, axial and selective coding (Strauss & Corbin, 1990; Webster-Stratton and Spitzer, 1996). Variation and similarities in concepts and categories are systematically examined during constant comparison. In the open coding process, data is broken down by naming small meaningful units in the text. Similar units are then labelled and grouped to form categories. Axial coding is the first step of putting the data together. In this process, the categories are compared and contrasted to detect potential similarities and differences among them. An axial code is an overriding category encompassing two or more codes. Selective coding is a process of focusing selectively on higher-order categories that make sense. Relationships between categories are explored and integrated in a more abstract level than in axial coding. The goal of this phase of analysis is to create higher-order categories and if possible to develop a theory.

The coding, categorising and analysing of data was discussed with two supervisors throughout the process of analysing.

Results

From our analyses of interview data four core categories emerged; “Complex problems”, “Management inside the class-room“, “Limited parental involvement” and “Within discipline approach”. These four categories will be discussed in detail below.

Complex problems

When teachers were asked to describe behaviour problems in the child, they gave nuanced descriptions of different types of such behaviour. Only three children were described as having one or two types of problem behaviour. The majority of children seemed to display a broad spectrum of problem behaviours in day-care and school settings. Different combinations of oppositional problems (anger, quarrels, won't follow rules or requests), attention problems (short attention span, easily distracted), impulsivity problems (restlessness, walking around, acts without thinking), more serious conduct problems (fighting, hitting, damaging, lying and stealing) and social problems (always wants to decide in play, gets into conflicts, not knowing how to initiate contact) were described. The majority of the children got along quite well with some of their peers, but they often had conflicts with other children, while a few children were described as not having friends at all, because their peers were afraid of them.

When teachers were asked to describe possible reasons behind conduct problems in the child, their answers fell into three categories: one quarter reported that “it has something to do with the child” (e.g. a disorder such as ADHD, minor brain damage, or a neurological problem), another quarter stated “it has something to do with the parents or family situation” (e.g. negative parenting style, conflicts after divorce, negative relations with step-parent, parents' psychiatric symptoms, low degree of

support), while half of the teachers thought that “it has to do both with the child and the parents or family situation” (e.g. “I think it has something to do with the child and the situation at home does not make it better”, “he has ADHD and the mother has enough with her own problems”).

Management inside the class-room

The children’s behaviour in the classroom was reported by teachers as having considerable impact on their daily work, in that they used a substantial amount of their time and energy in planning to meet the children’s special needs (“This child is my last thought in the evening and my first thought in the morning”, “I get very tired, I use so much of my energy on this child”, “I don’t like to say it, but the days when the child stay at home are easy days for me”). Children were also described as much more difficult to handle compared to other children who sometimes displayed negative behaviours.

When teachers were specifically asked how they handled conduct problems in the study child, they reported using different types of strategies. No teacher used only one particular method or only one type of strategy. The majority of the teachers reported that they had to search for solutions that worked for a particular child (“No method works for all children”, “I have to try out different strategies”, “What worked last year, does not work now”). Proactive and organizing strategies inside the classroom/department such as defining clear rules, organizing small groups of children, making plans for the day to adapt to the child with conduct problems and being conscious of own feelings seemed to be frequently used. These strategies were sometimes combined with use of praise of positive behaviour, but not all teachers were convinced that such strategies worked. A few teachers mentioned that they tried

to reward the child's positive behaviour, however, this strategy was used infrequently ("Last year we tried to use rewards, maybe we should do that again", "I have tried to use rewards, but often I forget"). Social problems were mostly dealt with by talking with the child about social problem-solving strategies and explaining other people's feelings and reactions. About half of the teachers reported to have used the Second Step Program (Nasjonalforeningen for Folkehelsen, 1998) in their work with social competence in children. However, they did not use it systematically at the time of the interview. More serious conduct problems such as hitting, fighting or vandalism led the teacher to remove the child from the situation or hold the child until he/she had calmed down. Ignoring was also used ("When he runs away, we only wait for a while. If we run after, he gets worse. He always comes back", "We try to ignore some negative behaviour, and then she stops doing it").

The majority of the teachers reported that it was necessary to follow the child with conduct problems very closely throughout the day. In this way, the teacher was able to support the child when needed and intervene quickly in negative episodes ("If I do not stay close to him, everything may happen in few seconds"). Teachers who had received extra help from an assistant in the day-care or classroom reported that child negative behaviours had been reduced. Teachers without such help stated that they had to choose whether to give support to the child with conduct problems or to all the other children in the group or class. They had difficulties supporting the child with conduct problems and the other children at the same time, also experiencing a bad conscience towards both parts regardless of their choice of priority.

When the teachers were asked to define their own relationship with the child, the majority described it as "a good relationship" ("I feel we are very close and I believe I mean a lot to him", "She is glad when she sees me and I feel glad when I see her").

However, about a quarter of the teachers reported that they did not have a close relationship with the child (“I try to understand his problems and I do like him, but our relationship is difficult. We are not very close”, “I try to give her what she needs, but I do not exactly know what to do”).

The majority of the teachers thought that their work with the child led to a reduction of problem behaviours, and most of them were quite satisfied with their way of dealing with conduct problems.

Limited parental involvement

The majority of the teachers described their relationship with parents as positive and these parents seemed to be defined as partners (“I have very good contact with the father. If something happens in school, I call him. When we meet I also tell him about positive episodes. It is important to cooperate with the father, he knows the boy best of all. I have to do my job, but the parents also have to work with the boy. I cannot do everything on my own”, “The mother and I have a very good relationship. I call her, and she calls me. We also often have meetings. We agree about how to support the boy”, “The parents are interested and positive. They often want to talk about the boy. We cooperate very well. We discuss what had happened and what to do. This means a lot to me”). About one quarter of the teachers reported that their relationship with the parents “could have been better”. (“I think we should have a better relationship. I have to remember to support the mother because she has many problems at home. Sometimes cooperation with mother is difficult, but sometimes we have good conversations, where we discuss what to do”, “Mother tells me a lot about what they do at home, but I don’t think she is always honest. She has a lot of trouble in her life. I feel I can’t trust her and this is difficult when we discuss the boy’s needs”). Only a

few teachers described their relationship with parents as difficult (“The mother is very positive when we talk, but it is only talk. The girl gets too little support at home and there are too few rules, e.g. she stays out very late in the evening”, “It is frustrating. I get angry because I think they speak to the boy in a negative way and they do not help him with practical stuff like clothes, food and so on”, “It should have been better. I should have known more about the situation at home. It doesn’t seem like the parents want to have a close relationship with us”). In the more negative relationships parents were defined as problems and/or clients by the teachers.

Within discipline approach

A majority of the teachers reported that they received very good support from their colleagues in day-care and school, in their work with the problem child. Some day-cares and schools had organised special teams, where teachers could bring up issues and discuss worries and problems they had in their work with children. Such support from colleagues within the day-care or school setting was regarded as very important by the teachers (“I get a lot of support and this is important for me. I don’t know how I could have handled all these problems without it”, “My colleagues tell me that I do a good job and I need this feedback”).

Many teachers also described their workplace as having competence in dealing with conduct problems in children (“We work very well with these children, we have the knowledge and experience”, “In this day-care, we have good special needs staff and they have taught me a lot”, “We have a lot of know-how and are used to children with conduct problems, I think we work well with them”), but most of them also felt that there was always more to learn (“you never have enough knowledge in regard to such problems”, “I want to learn more”). Only a few teachers reported feeling lonely

in their work with the child or that there was too little time for cooperation. They regarded their work with the child as a difficult situation to handle and felt insecure in their work with the child.

With regard to collaboration with other professions and services outside the day-care/school (such as school psychologists, child protection services and child psychiatry) the majority of the teachers expressed dissatisfaction with their degree of collaboration and involvement. They did not know very much about the work of these professionals (“The school psychologist is here too seldom. She does not know much about our situation and therefore she is not able to give good advice”, “The child protection service asks for information from us, but they do not give anything back. I do not know much about their work with the family”, “The child protection service wanted to stop their work with the family. I got really crossed and phoned them many times. The situation at home was not good for the boy”, “The school psychologist was here many times, doing observations. We have not heard anything from them since”, “Child psychiatry was not interested in our information about the child”, “Child psychiatry is too remote. I know nothing about their work”).

However, two teachers reported about positive and close relationships with other professions which were much appreciated (“I cooperate very well with the school nurse. She knew the family from before and has helped me a lot”, “In this day-care, we have very positive and useful collaboration both with the child protection service and the school psychologists. So we have with the family. This means a lot to me in my work. We find solutions together with the family”).

Discussion

In the present study, 27 teachers in day-care/school were interviewed about their experience in meeting, and managing conduct problems in young children. The teachers described most children in the study as having a range of behaviour problems, a finding supported by a previous study (Drugli et al., 2006) in which children with pervasive conduct problems (conduct problems both at home and in the day-care/school setting) were according teachers report found to be more aggressive, have more attention and internalising problems and lower social competence, as compared to children with conduct problems only at home. A main finding is that the teachers approached the challenge of child conduct problems with a within-discipline perspective, and a focus upon everyday events. Inside the classroom they attempted to help the child as best they could, mostly working alone, with some support from close colleagues. In the present study children with conduct problems attract the teacher's attention and their time as compared with other children in the day-care/classroom. Although teachers described conflicts and difficulties in dealing with child misbehaviour, their descriptions of the children concerned were warm and engaged. They seemed to care very much about the child. The findings regarding teachers' own perceptions did not clearly support findings in earlier studies which describe largely negative relationships between teachers and children with conduct problems (Pianta et al., 2002). However, the qualitative data in the present study support findings in a previous quantitative analysis of the total sample in our study, in which teacher relationships with children with pervasive conduct problems were found to be more conflict-ridden but not less close, compared with children who displayed conduct problems only in the home setting (Drugli et al., 2006).

The teachers found it difficult to handle the child with complex conduct problems and at same time have enough capacity for the rest of the children in the group. This may be because they described that they had to stay very close to the child with conduct problems for most of the time to be able to give it support and prevent misbehaviour. However, at the same time they felt not being able to give the same degree of attention to other children in the classroom, a dilemma described as very energy-consuming. Only teachers with an extra person in the day-care/classroom felt able to deal with both tasks.

Overall in their work with the child with conduct problems, teachers had a “here-and-now” approach, the most important issue for them being reduction of everyday kinds of child misbehaviour. Teachers did not believe in the use of special methods or strategies used systematically, and therefore searched for individual solutions when dealing with a particular child and his/her needs. Few teachers seemed to have a broad and systematic focus and a long-term perspective in this regard on the contrary; they seemed rather to try “to survive” from day to day. The lack of systematic teacher management of child conduct problems found in the present study is interesting, because previous studies have found that intervention effects with conduct problems to a high degree depend on systematic and well administered interventions (Wilson, Lipsey & Derzon, 2003).

Parental and family-related factors were primarily used as causes behind conduct problems for many of the children, sometimes combined with child-related factors, i. e. the supposed presence of ADHD. This reflects teacher’s view and understanding of parents as having great impact on the child’s psychosocial development. This view is in line with Patterson’s theory (1982) about coercive circles in the development of child conduct problems, and goes beyond individual and psycho-pathological

definitions of conduct problems found in earlier studies among teachers (Skrtic, 1991; Fylling and Sandvin, 1996; Nordahl and Overland, 1998). Surprisingly, day-care/school factors were not mentioned as contributing to the development of child conduct problems, indicating that teachers in the present study did not explicitly relate processes in day-care/school settings as possible and negative turning points (Sameroff, 2000). It may be the methods used in the present study that did not support the teachers to reflect about these issues. However, the impression was that teachers hold the view that children enter day-care or school with already established conduct problems, and that the role of these settings is to deal with the misbehaviour of the child as best they can. Such a view may prevent day-care/school teachers adopting a critical attitude to themselves, and their possible contribution to development of conduct problems in children (Skrtic, 1991).

Most teachers described positive cooperation with parents, but when its content was specified, it mainly consisted of exchange of information regarding the child. Although, many teachers expressed worries about the child's home situation, this view was not very apparent in their actual exchanges with parents. Such matters were only discussed if parents themselves invited to a discussion, and then only briefly. Parent-teacher cooperation seemed to function best when there were no worries about the home situation and when the parents were engaged and positive. Most teachers expressed some feelings of helplessness when they had to bring up topics which the parents did not themselves introduce, and teachers raised such topics infrequently.

Supplementary services outside the day-care/school setting were often experienced as absent in daily work in day-care/school. If such services were involved in work with the child and family, teachers were mostly unaware of the contents of such help. The typical picture in the present study was an engaged teacher who worked mostly

alone with the child inside regular day-care and school settings. However, it contrasts to the view among most professionals agreeing that coordinated services are much needed (Bloomquist & Schnell, 2002), and most local authorities also maintain that they have good routines for coordinating different services for children with special educational or psychological needs.

One important pedagogic implication of the present study is the need for day-care/schools to critically evaluate their own contribution to the development of conduct problems in children. This perspective was absent in most teachers' descriptions of potential causes of conduct problems in children. Further, findings in the study support use of specific school-based implementing strategies when dealing with child conduct problems in day-care/school settings. Teachers and administrators in these settings seem to need to share knowledge and strategies to provide more effective help to children with such problems. Another implication is the evident need for discussion among professionals, both inside and outside the day-care/school setting, of how young children with severe conduct problems should be helped. Currently, teachers are very much left to themselves in deciding how to translate the principles of integration of children with special needs in mainstream day-care/schools into practical routines. Severe conduct problems are likely to be managed optimally by coordinated services and evidence-based practices (Bloomquist & Schnell, 2002; Webster-Stratton et al., 2004).

Limitations

One important limitation is that the present study was conducted among a highly selected sample of children referred for clinic treatment. Other teachers working with children with less severe conduct problems may therefore not recognize the findings.

However, the selected sample also may be seen as a strong point in this study. We have explored teachers' perceptions in regard to one of the most challenging groups of children in day-care and school.

Another limitation is that children were included based on pre-treatment scoring of conduct problems in day-care/school, and at the time of the interview they were in different phases of their parent and child treatment. This may have influenced conduct problems differently because of different treatment gains achieved in the child.

However, in a previous study (Drugli & Larsson, 2006), we found positive generalisation effect of treatment conducted in clinic setting being very limited across day-care/school settings, implying that most children had stable high levels of conduct problems at school or day-care throughout treatment and the follow-up period.

In the present study the prime goal was to study teacher experience of children with conduct problems. Most children in the study were treated with PT or combined PT+CT. However, inclusion of more children from the WLC would also have made possible to examine differences in teacher perceptions of child problems in regard to treatment condition.

Another possible limitation is that teachers in day-care and schools may have a professional bias leading to quite a stereotyped understanding and reports of children with conduct problems. However, some of this is offset by focusing the interview on a particular child and one teacher in each class instead of issues pertaining to conduct problems in general.

Conclusion

Overall, teachers in the present study were highly engaged in their work with children affected by severe conduct problems, and they worked hard to try to help the child inside the day-care and school settings. However, teachers seemed to base their work with children affected by conduct problems more on subjective and individual perspectives and preferences, rather than professional evaluations. Their practices were not deeply rooted in evidence-based knowledge and methods, and more attuned to “practice-based evidence” (Kam & Midgley, 2006). This may lead to too infrequent and fitful support offered to children with conduct problems, who need extensive help in day-care and school settings. Its consequences may be serious, especially for children with pervasive conduct problems. These children are at higher risk for developing lasting problems throughout childhood and adolescence, compared with children with conduct problems exhibited only in one setting (CPPRG, 2002; Moffitt, 1993).

Complex issues are raised in the present study, and the conclusions need to be further investigated in larger samples in future research.

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