

Child Study Center Letter



Volume 10 • Number 4

May/June 2006

• clinical care • advanced training • scientific research • educational outreach • prevention •

Editors' Comment

During the last decade incidents of violence among young people have been increasing, and children have become involved in acts of aggression at younger ages. Research investigating the origins of conduct problems and antisocial behavior has delineated a pattern of multiple risks including both biological and social factors. Recently a number of intervention programs utilizing a variety of techniques have been instituted in an attempt to prevent the escalation of youth violence. Those programs with the most promise include parent training that builds on research demonstrating that the primary developmental pathway for serious conduct disorders in adolescence and adulthood is established in childhood.

This issue of The NYU Child Study Center Letter deals with the impact of conduct problems manifested by children during the preschool years on their later development. Also discussed are the recent studies on the prevention of conduct problems in preschool children at risk - the siblings of antisocial youths living in inner city communities. The Letter describes the ongoing research initiated at the Institute for Prevention Science at the NYU Child Study Center under the leadership of Dr. Laurie Miller Brotman. Their findings, published in several professional journals, demonstrate that a family-based program that teaches parenting skills is an effective strategy to treat children at risk for serious conduct problems.

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CONDUCT PROBLEMS IN YOUNG CHILDREN: Risk Factors and Prevention

Introduction

Conduct disorder in childhood and adolescence is a significant and costly problem with negative consequences for individuals, their families and their community. Children with conduct disorders display a repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated. Behaviors include aggression toward people and animals, destruction of property, deceitfulness or theft, and serious rule violations such as running away from home.

Extent and Importance of the Problem

Severe conduct problems or conduct disorders affect approximately 4 to 10% of children and adolescents and account for close to half of all referrals to mental health clinics. Children with conduct disorders are at an increased risk for juvenile delinquency and adult criminality. In fact, it is rare for an adult who commits high levels of criminal or antisocial behavior to have experienced the onset in adulthood; the disorder almost always originates in childhood. Children with conduct disorder are also likely to develop other serious impairing conditions, including academic underachievement, peer rejection, drug use, alcoholism, depression and interpersonal difficulties. In a classic follow-up study, only 16% of

children with conduct disorders grew up to be well-functioning adults (Robins, 1966). Children with severe conduct problems are likely to go on to have aggressive children, thereby perpetuating these deviant patterns across generations.

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) describes two subtypes of Conduct Disorder based on age of onset:

- 1) childhood-onset subtype (first symptoms before the age of 10), and
- 2) adolescent-onset subtype (no symptoms before age 10).

Youth with **childhood-onset** conduct disorders are typically male, frequently display physical aggression, tend to have disturbed peer relationships and are more likely to develop adult Antisocial Personality Disorder than youth with **adolescent-onset** conduct disorders. In contrast with adolescent-onset conduct disorders, those with childhood-onset tend to persist into adulthood. This *Child Study Center Letter* focuses on children with the childhood-onset subtype who exhibit symptoms in preschool, since they are likely to have the most negative outcomes, and because their problems can be identified early on as the focus of preventive interventions.

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Preschoolers and Conduct Problems

The development of a child with a prototype childhood-onset conduct disorder proceeds as follows:

As a preschooler, he throws temper tantrums and defies his parents, and is described by his teachers as oppositional and defiant. He becomes the child who initiates fights with his peers, lies and steals. Later, he vandalizes school property, tortures animals and sets fires. As an adolescent, he forces sex on acquaintances and is truant. As an adult he is likely to abuse his partner and his children.

The evolution of conduct disorders and antisocial behavior is the most extensively studied developmental psychopathology. The presence of early childhood conduct problems emerges clearly and consistently as the most robust predictor of later conduct disorders and antisocial behavior. There is strong empirical support for the notion that conduct disorders are relatively stable from early childhood to adulthood and that these behaviors become increasingly intractable over time. Many children who exhibit conduct problems early in life, in the form of non-compliance and oppositional and aggressive behavior, proceed to display symptoms of conduct disorder and escalate to more serious antisocial behavior. In fact, the primary developmental pathway for serious conduct disorders in adolescence and adulthood appears to be established during the preschool period.

Case example

Michael is a four-year-old boy who lives with his biological grandmother, her husband and two of his three siblings. Ms. Jones, Michael's grandmother, is the legal guardian of Michael and his siblings.

Michael's parents are separated; his father has moved to another state, and his mother, who was a crack cocaine user, is in a rehabilitation facility. Michael has a 17-year-old brother who was convicted on felony charges last year and is now in a group home.

At the initial assessment, Michael presented with oppositional and defiant behavior. He refused to comply with his grandmother's requests, blamed others for his mistakes and broke family rules. His grandmother reported that he often engaged in physical fights with his siblings, and his Head Start teacher described him as an angry and spiteful child who often bullied other children and initiated fights with peers.

Michael demonstrated poor social skills, was hesitant to explore age-appropriate play materials and showed no interest in books. Ms. Jones reported that she relied on harsh physical punishment to control his behavior and she was observed to engage in verbally abusive behavior towards him. She was inconsistent about setting limits and seldom praised or rewarded Michael for positive behaviors. Ms. Jones was completely frustrated with his behavior and started to pull away from him, spending less and less time engaged in positive interactions. She feared he might repeat his brother's behavior pattern and wondered how he would ever do well in school.

Theoretical Models for the Development and Maintenance of Conduct Problems

Most current models of developmental psychopathology consider the family to be one of the most important influences in a child's life. The child's relationship to his parents and siblings are

viewed within a context of larger systems – the neighborhood, the community and the broader society.

Longitudinal investigations demonstrate that children’s antisocial behavior emerges from a context that includes risk factors at the individual level, within the family, as well as at all of these other levels. For example, research suggests that child reading deficits and cognitive delays, poverty, low parental education, high levels of stress, community violence, parental psychiatric illness, inconsistent and harsh discipline, a family history of criminal behavior and substance abuse, marital discord, antisocial values and a deviant peer group all place children at risk for developing conduct problems. Moreover, the risk increases exponentially with the child’s exposure to each additional risk factor.

Patterson and colleagues (Patterson et al, 1992) proposed a four-stage social interactional model for the development of antisocial patterns that focuses on the early home environment. The underlying assumption of this model is that in many cases inadequate parenting practices, often coupled with the individual characteristics of the child, (e.g., difficult temperament) set the stage for producing high rates of coercive child behaviors and that these deviant behaviors cause further disruptions in parenting practices. The model posits that coercive parent interactions between parent and child start in the preschool period within the home environment. These negative interactions establish the pathway into school, peer group and other settings. Following are the four stages of this model:

- **Stage 1** provides the “basic training” for patterns of aggressive and noncompliant

behavior. The initial training takes place in the home with family members serving as the primary trainers. The process begins when some parents may deal ineffectively with everyday disciplinary confrontations that lead to an increase in coercive interactions between the child and other family members. Children learn that their own aversive behaviors (e.g., whining, crying) work to turn off the aversive behaviors of other family members (e.g., nagging). Patterson’s model also describes how parents’ lack of contingent use of reinforcement, problem-solving and involvement with their children influence children’s social competence.

- **Stage 2** occurs when the aggressive child enters school unequipped to meet the academic and social demands placed upon him. Thus the basic training that takes place at home, prior to school entrance places children at increased risk for school failure and peer rejection.
- **By Stage 3**, these unskilled children, who have endured many failure experiences with classmates, teachers and parents, seek out deviant peers who also hold negative attitudes about school and adult authority. Involvement with a deviant peer group places them at further risk for the development of substance abuses, truancy and delinquency.
- **Stage 4** involves the adoption of an antisocial lifestyle, which includes difficulties holding a job, poor interpersonal relations, problems with drugs and alcohol and criminal activities.

How Parent Training Changes Conduct Problems

Of all the intervention approaches for children with childhood-onset conduct problems that have been

subjected to carefully-conducted controlled studies, parent training is considered to be the most promising.

The parent training approach attempts to reduce or prevent child conduct problems by changing the family context. Intervention is based on the assumption that children’s conduct problems are learned and often inadvertently sustained by reinforcement by other family members. Intervention involves changing social contingencies in the family environment so that appropriate behaviors are positively reinforced and aversive and antisocial behaviors are consistently ignored or punished with nonviolent means. Parents learn strategies based on social learning principles. Parents are taught to identify, define, observe and monitor deviant child behavior so that it can be targeted for change. Parents learn to praise and reward children’s prosocial behaviors and provide consequences (e.g., time-out) for inappropriate and non-compliant behavior. In addition, parents are encouraged to anticipate and solve problems so that they can prevent and manage future problems on their own. Programs for younger children typically include an additional emphasis on parent-child play experiences. Through non-directive play experiences, positive parent-child interactions are promoted and the stage is set for the implementation of positive parenting strategies.

Returning to the case example of Michael and his grandmother, the primary focus of intervention was to improve Ms. Jones’ parenting practices through parent training. The overall goal was to decrease Michael’s aggressive and defiant behavior and to promote social competence. The specific goals for the parent training program were for Ms. Jones to:

- Improve her communication

skills with Michael (e.g., increase praise and positive feedback and reduce criticisms and commands)

- Improve her limit-setting skills by means of nonviolent discipline techniques (e.g., reduce spanking and other negative physical behaviors and increase use of time-out, ignoring, logical consequences and problem-solving skills)
- Improve her own problem-solving skills
- Learn effective methods of anger management
- Learn to get support from other family members and friends to facilitate her role as a parent, and
- Increase her involvement and communication with other adults who cared for Michael (e.g., Head Start teacher, her husband).

Within a parent training group, Ms. Jones learned the following skills:

- How to play with your child
- How to help your child learn
- How to prepare your child for school
- Using praise and encouragement
- Effective limit-setting
- Handling misbehavior
- Strategies for working with teachers and school, and
- Strategies for accessing community resources.

Ms. Jones participated in a weekly parenting group where she learned new skills through didactics, discussion and role-play. She practiced these skills with Michael under the direct supervision and guidance from a therapist, and she completed weekly homework assignments. Ms. Jones was able to achieve all the goals of the parenting program. Consequently, Michael entered kindergarten as a motivated and curious student with age-appropriate social skills and only occasional oppositional

and defiant behavior. Michael's accomplishments further reinforced Ms. Jones in her role as parent. She completed the program with new parenting skills, the necessary resources and social support to maintain the changes she made and great optimism for Michael's future.

Implications for Prevention in the Preschool Period

Findings from natural history and intervention outcome studies provide meaningful and rational guidelines for the prevention of childhood-onset conduct problems. Numerous efforts are currently taking place around the country to develop and test prevention programs that target parenting practices in families of very young children prior to school entrance. The aim of these programs is to prevent conduct problems and to avoid secondary complications, such as academic failure and peer rejection. There is growing empirical support for the utility of early intervention prevention programs designed to strengthen parenting competence as a successful strategy for preventing conduct problems in at-risk preschoolers (see for example, Miller, 1998; Webster-Stratton, 1998). Interventions that succeed in preventing conduct-disordered behavior by improving parents' child management techniques are likely to have enormous public health implications. In the long run, these programs could help to decrease juvenile delinquency, substance abuse and school dropout.

Many factors influence the design of preventive intervention programs. As noted earlier, there are many risk factors for conduct problems, and these wide ranging factors need to be taken into account in the design of a prevention program. For

example, many parents of children at risk for conduct problems are single, highly stressed, poor and isolated. Special measures need to be taken to engage such parents in a parenting program. This might involve providing transportation, child care and other incentives to insure participation; designing written materials and homework assignments to match the educational level of the parents; and providing parent training in group settings to provide a support system for isolated parents.

Ongoing Research in the CSC Institute for Prevention Science

There is growing empirical support for early intervention programs designed to strengthen parenting skills as a successful strategy for preventing conduct problems in at-risk children. In ongoing work at the Institute for Prevention Science, we have conducted several studies of family-based preventive intervention programs aimed at the prevention of early-onset conduct and related problems. Building on the literature on sibling antisocial behavior as well as prevention studies with families of at risk preschoolers (Webster-Stratton, 1998; Webster-Stratton, Reid & Hammond, 2001), we evaluated a family-based preventive intervention for preschool-aged siblings of antisocial youths.

We conducted a small pilot study with 30 families (Brotman et al., 2003) and a larger trial with 92 families of adolescents adjudicated in family court (Brotman, Gouley, O'Neal & Klein, 2004; Brotman et al., 2005) to test the utility of an adapted version of The Incredible Years Series, a videotape-modeling parenting program (Webster-Stratton, 1998), in the prevention of conduct problems in preschoolers at familial risk for conduct problems. In both trials

we documented the feasibility and acceptability of a family-based prevention approach for preschool-age siblings of antisocial youth living in low-income communities in New York City. These studies demonstrated that families with an adolescent who engaged in serious delinquent behaviors were motivated to participate in a prevention program focused on their preschool-aged child, even though the majority of preschoolers had not yet evidenced clinically significant conduct problems (Brotman et al., 2003; Brotman et al., 2004).

In the larger trial we found that the family-based intervention led to immediate improvements in parenting: intervention parents used fewer negative parenting practices (harsh discipline and criticism) and were observed to provide greater stimulation for learning at home immediately following intervention. In addition, preschoolers in the intervention were observed to exhibit enhanced peer entry and play skills relative to controls (Brotman, Gouley et al., 2005). Two years after the intervention program, the intervention resulted in decreases in observed child aggressive behavior at home and decreases in parent- and teacher-rated antisocial behavior in non-targeted adolescent siblings (Brotman, Dawson-McClure et al., 2005). Importantly, we also found that the program led to the prevention of child aggressive behavior during play interactions with parents over two years as children entered school (Brotman, Klein, et al., under review). These changes in family risk factors (i.e., harsh parenting, stimulation for learning, child social competence, sibling antisocial behavior) as well as early aggressive behavior are expected to contribute to the long-term prevention of conduct disorders in the targeted preschoolers. Finally, relative to

controls, children assigned to the intervention program had increased cortisol (a stress hormone) in anticipation of a social challenge (joining a group of unfamiliar preschoolers for play (Brotman, Gouley, Chesir-Teran, Fratto, & Pine, in preparation)). This finding suggests that this family-based prevention program changes the stress response of preschoolers as they anticipate a challenging social situation, and may also have implications for the development of psychopathology later in childhood.

As a result of these positive findings, Dr. Brotman and her team developed ParentCorps, a family and school program designed to be attractive and engaging to inner-city families. The program includes an after-school 13-week program for families of children attending public school Pre-Kindergarten programs delivered by NYU Child Study Center and school staff. The program includes a videotape series narrated by Al Roker and featuring three animated families living in an inner-city neighborhood. The program also includes training for Pre-K teachers and other school staff. The program has been pilot tested in Central Harlem and in 8 schools in Brooklyn, N. Y., and is now being evaluated in a large study funded by the US Department of Education in 20 New York City public schools with nearly 1000 children.

In sum, the developmental course of conduct problems is now fairly well understood. For many children, these conduct problems originate in the period prior to school entry. Early intervention that includes a systematic behavioral parent training component has been shown to be a promising strategy for preventing conduct problems in children at risk for antisocial behavior.

ABOUT THE AUTHORS

Laurie Miller Brotman, Ph.D., is the Corzine Family Associate Professor of Child and Adolescent Psychiatry at the NYU School of Medicine and the founding and current Director of the Institute for Prevention Science at the NYU Child Study Center. Since 1996, Dr. Brotman has been the principal investigator (PI) on seven studies examining the prevention of conduct problems in high-risk preschoolers. Dr. Brotman is currently the PI on an NIMH-funded study examining long-term preventive intervention outcomes in preschool-aged siblings of adjudicated youth and a US Department of Education-funded study of a universal school-based, family-focused preventive program for urban preschoolers. Dr. Brotman is the developer of ParentCorps, a program aimed at enhancing parenting practices, parent school involvement and socio-emotional development and preventing conduct problems in young children at risk for mental health and academic problems. Dr. Brotman is also the director of the Harris Obesity Prevention Effort (HOPE), an initiative aimed at preventing overweight and obesity in young ethnic minority children.

Kathleen Kiely Gouley, Ph.D., is an Assistant Professor of Psychiatry at the NYU School of Medicine and Associate Director of the Institute for Prevention Science at the NYU Child Study Center. She is a Co-Investigator and project director of Building Blocks, a 10-year, National Institute of Mental Health (NIMH) funded study examining long-term intervention outcomes in preschool-aged siblings of adjudicated youths. Dr. Kiely Gouley is a Clinical Child Psychologist with specialty training in early childhood. Her clinical practice and research focuses on the development of

social and emotional well-being during childhood. Dr. Kiely Gouley is the author of more than twenty publications in highly regarded scientific journals and the co-author of several book chapters. She lectures frequently on topics related to parenting and child development, and her parenting advice has also appeared in magazines including *Parents* and *Child*.

REFERENCES

- Brotman, LM, Klein, RG, Kamboukos, D, Brown, E.J, Coard, SI, & Sosinsky, LS. (2003). Preventive intervention for urban, low-income preschoolers at familial risk for conduct problems: A randomized pilot study. *Journal of Clinical Child and Adolescent Psychology*, 32, 246-257.
- Brotman, LM, Gouley, KK, O'Neal, C, & Klein, RG. (2004). Preschool-aged siblings of adjudicated youths: Multiple risk factors for conduct problems. *Early Education and Development*, 15, 387-406.
- Brotman, LM, Gouley, KK, Chesir-Teran, D, Dennis, T, Klein, RG, & Shrout, P. (2005). Prevention for preschoolers at high risk for conduct problems: Immediate outcomes on parenting practices and child social competence. *Journal of Clinical Child and Adolescent Psychology*, 34, 724-734.
- Brotman, LM, Dawson-McClure, S, Gouley, KK, McGuire, K, Burraston, B, & Bank, L. (2005). Older siblings benefit from a family-based prevention program for preschoolers at risk for conduct problems. *Journal of Family Psychology*, 19, 581-591.
- Brotman, LM, Klein, RG, Gouley, KK, Chesir-Teran, D, Huang, Y, Rosenfelt, A, & Shrout, P. Two-year outcomes on physical aggression from a randomized prevention trial in preschool-age siblings of adjudicated youths. Under review, *Journal of Consulting & Clinical Psychology*.
- Brotman, LM, Gouley, KK, Chesir-Teran, D, Fratto, C, & Pine, D. Effects of a randomized controlled trial on cortisol response to a social challenge in preschoolers at high risk for psychopathology. (Manuscript in preparation).
- Miller, L.S. (1998). Preventive intervention for preschoolers at risk for Conduct Disorders. In Briesmeister, J., Shaffer, C., eds. *Handbook of Parent Training, 2nd Ed.* Crocket, Texas: Publications Development Co., 177-201.
- Patterson, GR, Reid, JB, Dishion, TJ. (1992). *Antisocial Boys*. Eugene, OR: Castalia.
- Robins, LN (1966). *Deviant Children Grown Up: A Sociological and Psychiatric Study of Sociopathic Personality*. Baltimore, MD: Williams and Wilkins.
- Webster-Stratton, C. (1998). Preventing conduct problems in Head Start children: Strengthening parenting competencies. *Journal of Consulting & Clinical Psychology*, 66, 715-730.
- Webster-Stratton, C, Reid, MJ, & Hammond, M. (2001). Preventing conduct problems, promoting social competence: A parent and teacher training partnership in Head Start. *Journal of Clinical Child Psychology*, 30, 283-302.