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Treatments for Children with Severe Aggressive and Antisocial Behavior

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CHAPTER 14: TREATMENT OF PSYCHOLOGICAL DISORDERS

Please describe your current position and research interests.
I am the John M. Musser Professor of Psychology and Child Psychiatry and the Director of the Yale Parenting Center. My interests are in developmental psychopathology, which consists of the study of psychiatric disorders and impairment among children and adolescents. My research has focused primarily on aggressive and antisocial behavior and depression. The study of child dysfunction invariably leads to other topics including parent, family, and contextual factors that are often linked with child functioning. For example, we have also studied parent psychiatric dysfunction, interpersonal violence in the home, child-rearing practices, and stress to help understand child and parent functioning.

How did you become interested in this area of work?
My primary interest has been on developing treatments for clinical dysfunction. This interest in treatment began in graduate school. I became interested in applying methods and findings from psychological science, particularly learning research, to treat clinical dysfunction. There also was an overarching zeitgeist in clinical psychology to place psychotherapies on much firmer empirical ground than was the case at the time. Added to that, experiences including a part-time job during and after graduate school and then a mid-career Job change guided me toward intervention research, as I highlight further later in this essay. In each case, there was a need and even explicit demand to do something to help individuals with significant psychological impairment.

What has been the real-world impact of this work?
We have developed two effective psychosocial treatments for children with severe aggressive and antisocial behavior. Other researchers have worked with this population and now there is a well-supported set of interventions that can be used with children ranging in age from preschool through late adolescence

and from mild to extreme aggressive and antisocial behavior. As for impact, the personal suffering mental disorders cause for children and their families and the societal monetary costs are enormous. We have made a direct impact in addressing these burdens with the couple thousand children with whom we have worked. Of course, we hope that the children who did not participate in our work will see the benefits of it through evidence-based treatments of our work as well as that of other researchers. To extend our impact, we train mental health professionals throughout the world to carry out the treatments; we work with television, radio, newspapers, and print and online magazines to disseminate information about available options for parents; and we provide resources for clinicians in practice and parents.

A few times in my career, I have been in a position where there is a need to change the behavior of children or adults who are not functioning well in everyday life. These individuals have difficulties getting along with others, meeting the demands of school or work, and managing to stay out of trouble. I found myself in this position for the first time in graduate school when I took a part-time job at a facility for children, adolescents, and adults with a range of emotional and behavioral problems and developmental disabilities. At the job interview, the director asked me to develop interventions that would make genuine differences in the functioning of the clients and to begin working with adolescents and adults in the sheltered workshop part of the facility. I eagerly confessed I was quite interested in behavior change, but as a graduate student I knew little (maybe even less) about the clinical prob lems experienced by the clients, let alone how to change them. The director reassured me by noting that the staff included the full range of mental health professionals, but added that none of them was focusing on actually changing functioning of the clients in concrete ways. He invited me to take the job and sit in my office for as many weeks or months as it took to learn what I needed and then to come out and actually try to change the clients' behaviors. I did what graduate students do-I read many articles from key leaders throughout the country, and began to study the budding literature on interventions, especially those based on applications of operant conditioning. The most familiar of these interventions provide reinforcing consequences after specific behaviors to increase the likelihood of these behaviors in the future. However, there is much more to operant conditioning including what is done before the behavior *(antecedents),* how the *behavior* is gradually developed to achieve the goals, and *consequences* used along the way to achieve them. Within each category there are many different techniques, but for them to be effective, they have to be provided in a very systematic way. For example, rewarding a specific behavior almost every time the behavior occurs-at least in the beginning of the program, reinforcing consistency in performance, and explicitly specifying what behavior led to.the consequence, is much more effective than rewarding a behavior once in awhile.

After a few months, I began some modest programs with individual clients. The programs were carried out by the staff in the setting and we collected data to see if behaviors of the clients were changing. I began with the use of token reinforcement programs in which individuals earn tokens (which can be points, stars, chips, and checkmarks) for specific behaviors that are to be developed. We used plastic (colored but otherwise blank) credit cards as the tokens that individuals could use to exchange for backup reinforcers such as free time, use of various games, purchase of magazines, and so on. Depending on the individual and the goals of the program, behaviors that earned the tokens included socializing with others (for someone who was isolated and withdrawn), speaking respectfully (for someone who was

regularly sarcastic and swore when speaking to staff), and handling change by being calm (for someone who had an explosive tantrum in response to even the slightest change in her activities or routines).

We paired the tokens with praise because both together are likely to be more effective than either one used individually. The tokens and praise need to be timed carefully to be effective. In some cases, tokens and praise can be provided when the desired behavior occurs; at other times they can be provided as the behavior moves closer and closer to the desired behavior. This process is a lot like learning a musical instrument where the learner practices small segments of behaviors (playing notes, scales, chords), then simple pieces, and then more complex musical pieces. In other cases, the individual practices the desired behaviors in role-play or simulated situations to increase the likelihood that the behaviors, will occur in real life. The key to this approach is not in the tokens or the praise. Rather, we want the individual to practice and engage in the behavior repeatedly and under different circumstances to lock in the behavior. Tokens and praise help foster that repeated practice.

We collected data to see how, whether, and the extent to which changes occur in this approach. This means that we could identify when the intervention is not working or not working very well and adjust it as needed. We focused on interpersonal behaviors because these behaviors usually precluded individuals from functioning in community settings. Often we were able to change behavior in ways that had a clear impact on individual functioning.

A superintendent of schools invited me to evaluate several elementary school classrooms and implement similar interventions on a larger scale. Disruptive behavior was a problem in these classrooms. For example, children walked on desks during lessons, destroyed other students' work, threw things at the teacher, and shouted out whenever they wanted. Coincidentally, I was looking for a dissertation topic and was able to use these classrooms to test various hypotheses about interventions and how they could be implemented to change behavior. I began by training teachers to carry out token economies, training observers to record disruptive classroom behavior reliably, and monitoring the classrooms daily to ensure the interventions were implemented correctly. So at this time, still in graduate school, I had moved down a path of intervention research.

A decade later, I faced another situation that provided an even greater challenge in changing behavior. I moved from an academic psychology department to a psychiatry department at a medical school. I was placed in charge of an inpatient service (Children's Psychiatric Intensive Care Service) for children 5-12 years of age. The children were referred for severe psychiatric problems such as attempted suicide, major depression, and violent behavior, all of which required hospitalization and intensive care. No inpatient program, group or individual therapy, or medication had been shown to be effective with these children. We tried virtually all reasonable options including novel medications·(because standard medications for various psychiatric problems did not work); group sessions that focused on social skills; developing a close relationship in individual therapy sessions with a therapist; a structured milieu with routines, unlike many of the environments from which these children had come; and an attentive and caring staff. Occasionally we even allowed parents to try options they viewed as reasonable, but for which there was no scientific evidence, such as exorcism. There was no evidence that exorcism would do anything at all,

but humility was required. There was not much in the way of evidence for what we were doing either. Trying to help and great intentions can only go so far.

The goals of our interventions were to improve child functioning at home, at school, and in the community. Setting goals was the easy part.·But how could we alter deeply ingrained antisocial behavior patterns and replace them with prosocial behavior? I remembered well the lesson from my undergraduate days, namely, that the difference between psychologists and magicians is that psychologists pull habits out of rats! Maybe I could do that-psychology knows a great deal about building habits!

Aggressive and Antisocial Behavior

Consider for a moment the problem of antisocial behavior and its challenges. Antisocial behavior or actions that violate social norms include hitting others, breaking other people's possessions, vandalism, theft, cruelty to animals and people, lying, setting fires, and running away from home. Some of these behaviors, such as lying and vandalism occur, at least occasionally, as part of development among children who do not have any clinical problems. For some children, however, these behaviors are frequent, intense, enduring, and impair daily functioning. These children become difficult and sometimes impossible to manage at home or at school.

The extremes of antisocial behavior constitute a recognized psychiatric disorder referred to as Conduct Disorder (CD) (American Psychiatric Association, 2013). Many of the behaviors noted earlier and those exhibited by the children I studied make up the criteria for CD. Individuals receive a diagnosis of CD if these behaviors continue for months at a time (up to 12 months). Indeed, the children we saw usually had long histories of these behaviors.

CD is associated with a variety of other outcomes such as academic failure, expulsion from school, and poor peer relations. Adults with a history of CD are at great risk for psychiatric disorders, substance abuse, criminal behavior, financial problems, chronic job loss, and violence (for example, spouse/ partner or child abuse). Moreover, such individuals are more likely *to* have a compromised immune system, a condition that may have.emerged early in life from prolonged stress, conflict, or exposure to violence. A compromised immune system places them at risk for early death and makes them more susceptible to cancer, heart disease, and chronic respiratory diseases.

As a psychiatric disorder, CD is one of the most expensive. During childhood and adolescence, monetary costs mount due *to* placement in special education classes or schools, hospitalizations, emergency room visits, encounters with the law, visits to the home by family service agencies, and foster placement. If left untreated or ineffectively treated, the problems and costs associated with CD can be enduring. In addition, many children exhibit behaviors associated with CD. In the United States, for example, the lifetime prevalence of CD is approximately 9.5 percent. This amounts to millions of children who will suffer from the dysfunction at some point and need treatment.

What are the causes of CD? Surely if we knew, we could move toward effective treatment and prevention. The disorder encompasses many different symptoms and symptom combinations. In fact, an individual can meet the psychiatric diagnostic criteria of CD with over 32,000 possible combinations of symptoms.

Consequently, few researchers believe CD is a single disorder. Research tries to break down the large category into subtypes and investigate salient symptoms such as aggression and its causes. For example, it appears now that children who have CD beginning early in life.are more aggressive and have a greater likelihood of psychiatric impairment in adulthood than individuals who develop CD in adolescence. Child versus adolescent onset of CD may have important implications for understanding the disorder and what treatments will be effective. In relation to the CD and its subtypes, understanding how the environment, genes, and the brain interact is crucial in understanding clinical dysfunction including CD.

What Can Be Done in the Way of Treatment?

My research team and other researchers have taken on the challenge of developing effective interventions. The Children's Psychiatric Intensive Care Service admitted an endless stream of severely disturbed children, who were often brought to our locked ward strapped to a gurney by an ambulance team or by the police. Once admitted, the children and their parents completed many psychological measures to describe systematically the scope and nature of the child's symptoms and functioning at home, at school, and in the community. Parents also completed several measures to evaluate their own functioning, such as their history of psychiatric disorder and treatment, home life, conflict and exposure to violence, and child-rearing practices. This information enabled us to understand functioning of the child for example problems at school, more than one psychiatric disorder), potential influences that might need to be addressed (for example, marital conflict, child abuse), and also helped us to identify whether some children and families are more responsive to treatment.

Children lived in the hospital for 4-8 weeks and participated in a milieu that included several activities such as group therapy and school classes. We developed two treatments for children with severe antisocial and aggressive behavior: parent management training and cognitive problem-solving skills training for children. We devoted the next decade to investigating these treatments and refining them based on our clinical experience and research findings.

Parent management training (PMT) teaches parents very concretely on ways of interacting with their children in the home. The procedures draw on several principles and techniques derived from human and nonhuman animal research in operant conditioning. The techniques focus on how to eliminate behaviors through reinforcement and very mild punishment; how to develop desired behaviors through positive reinforcement and how to maintain the behaviors once they are developed. Parents met individually with a therapist and without the child. In the sessions, parents learn how to administer antecedents, such as instructions, prompts, or cues on how to perform the behavior; to focus the child on practicing the behavior by gradu ally reinforcing approximations of the behavior; and about consequences to increase prosocial behaviors by delivering praise and tokens. Training parents in how to understand and administer specific techniques to develop and eliminate behavior is the core part of treatment. Individual sessions use role playing of parent-child interactions, repeated practice, modeling of the desired parent behaviors by the therapist, feedback to the parent, and praise to shape parent behavior. The therapists focus on the parents' behaviors; as in PMT, the parents are the ones who actually change the child's behaviors by implementing the techniques they have. Occasionally, the child joins the session so the therapist can observe the parent-child interaction and refine the parents' skills.

Therapists adjust the focus of treatment as children improve a behavior that was problematic (for example, aggression at school) or more intensively focus on areas that have not responded tci change or have yet to be addressed (for example, stealing). The critical feature of treatment is reinforced practice; that is, the therapist's goal is for the parent to practice the desired behavior and to this end, the therapist works with parents, offering praise and guidance to improve parenting behavior, very much the way a coach works with an athlete. In effect, the parent is trained to do this with their children, but with careful coaching by a therapist.

PMT had been used with children who engage in antisocial behavior in pioneering work by Gerald Patterson and his colleagues (Patterson, Reid, & Dishion, 1992). Among the pioneering contributions were studies in the home showing that parent and child interaction can develop and maintain aggressive child behavior. We expanded on the intervention procedures to apply them to a severely impaired population. That expansion included drawing on a broad range of behavior-change techniques including my own research on methods of changing behavior. In my prior work, I had evaluated interventions with children and adults in rehabilitation, special education, and institutional settings for individuals with intellectual disabilities.

We found that PMT worked well as a treatment for children who had a parent or guardian (for example, grandparent serving in the parental role). Yet, many children we saw did not have a parent or guardian with whom we could work. The parent or guardian was seriously debilitated-he or she was on drugs or had a psychiatric disorder; was in and out of prison; or engaged in illicit activities, such as selling drugs or prostitution. For these children, we focused on cognitive problem-solving skills training (PSST) as an individual treatment that did not require parent participation.

Cognitive problem-solving skills training (PSST) is a treatment in which a therapist meets individually with the child. The child engages in a sequence of steps or self-statements designed to help the child look carefully at the demands of the situation, consider what might be alternative positive (rather than aggressive) ways of responding, consider the consequences of different actions, select one of those responses, and actually act out the solution in a role-play situation in the treatment session. We developed these steps to guide behavior based on research indicating that children with aggressive and antisocial behavior have deficits in how they identify social cues, in how they consider their options in responding, and then of course in how they respond. PSST focuses on these thought processes, but also on practicing positive behaviors in the treatment sessions and in everyday situations outside of treatment.

The steps are self-statements, or what children learn at the beginning of treatment to break down social situations and to respond prosocially. The steps include questions such as: What am I supposed to do? What could I do (identifying solutions) and what would happen (consequences)? I need to make a choice (selecting one of the solutions), and I need to find out how I did (self-evaluation). The child states the sequence of statements out loud while role playing the situation with the therapist. In the sessions, the child and therapist practice many different social situation scenarios, including being bullied, being threatened, and being asked to steal something by a friend. The therapist models how to apply the self-statements to situations the child may encounter and how to complete the sequence of steps. Over time, the child is instructed to eliminate the self-statements gradually (first to a whisper, then saying them to oneself silently), and li, or she continues to practice in more role-play situations. PSST sessions

include intensive practice in using the steps and in responding to increasingly more complex social situations. Over the course of treatment, children have "homework" assignments (called super solvers) to solve problems using the steps at home, at school, and at any other place where the child exhibits behavior problems. Points are provided for homework practice and they can be exchanged for small prizes.

To evaluate the effectiveness of treatment, we began a series of randomized controlled trials---studies in which children are randomly assigned to receive one of the treatments or one of the control conditions. In our studies, control conditions included usual hospital care only or usual hospital care and individual sessions of play therapy with a therapist. In this way, we could evaluate whether the treatments actually improved the behavior or if the behavior would have improved anyway over time or with more routine care. Table 1 summarizes the results from some of our studies.

Essentially, the two treatments made a difference not only by reducing symptoms, but also by improving positive prosocial behaviors in interactions with parents, siblings, teachers, and peers. Children in the various control groups did not show these changes. But are the changes enough to make a real difference? That is hard to tell because there is no agreed-on measure or definition of "real difference." To approximate that, we looked at whether the symp toms and social behaviors of children in our treatment program fell within the range of these behaviors among children of the same age and sex functioning well in everyday life. Many children who received the treatment fell within this normative range, but certainly not all. Are the effects of treatment enduring and will they make the adult lives of these children better? We do not know. What we do know from our work is that the benefits of treatment continue for at least two years, but we have not made longer-term evaluations.

The Effects of Parent Management Training and Cognitive Problem-Solving Skills Training

- ❑ Reduction in aggressive and antisocial behavior and increase in prosocial behavior among children referred for inpatient or outpatient treatment;
- ❑ Gains that surpass the effects of other treatment conditions (for example, routine hospital care by itself, play, and relationship therapy);
- ❑ Changes in behavior that are evident at home, at school, and in the community immediately after treatment and up to 2 years later;
- ❑ Clinically significant changes (that is, many individuals fall within normative levels of functioning for same sex and age peers by the end of treatment);
- ❑ Effective with children who have multiple disorders (in addition to CD) and with families with severe stressors, parent clinical dysfunction, and socioeconomic disadvantage; and
- ❑ Additional positive changes not specifically targeted that include improvement in peer relations at school, parental decreases in depression, decreases in stress at home, and improvements in family member relations.

To read more about these findings, see Kazdin (2010).

The overview of our treatments and studies belies several challenges in developing and providing treatment. Families of children with antisocial behavior often suffer enormous stressors (for example, financial, marital), have little or no social system support (for example, single parents with no relatives or friends to help), and may experience psychiatric dysfunction themselves. The lack of financial resources often means they are suffering both physical and mental health problems that are not treated. These obstacles often result in families canceling appointments or not showing up for treatment, and dropping out of treatment. These challenges have prompted us to conduct related lines of research to:

- identify child, parent, and family factors that influence who carries out the treatment procedures well and who profits from treatment;
- understand who drops out of treatment and why;
- treat (reduce) parental stress as a means to improve treatment outcomes of the children; and
- understand the relationships between parent and therapist and child and therapist during the course of treatment and how these relationships influence participation in treatment and therapeutic change (see Kazdin, 2010 for a review).

Conclusion

My work has developed PMT and PSST for children with severe aggressive and antisocial behavior. In the past 30 years, researchers have developed many psychosocial treatments for a wide range of psychiatric disorders among children, adolescents, and adults. A recent count noted over 320 psychosocial treatments that have a strong evidence base (U.S. Department of Health and Human Services, 2014). The treatments focus on many different disorders and their subtypes including anxiety, depression, bipolar disorder, eating disorders, autism spectrum disorders, and attention-deficit/hyperactivity disorder, among others.

A current challenge is to disseminate treatments from clinical research settings where the treatments are developed and carefully evaluated to clinical practice where they are applied. At the Yale Parenting Center where we study treatment, we also provide training opportunities for mental health professionals through webinars, in-service training, direct case supervision, and online training with the goal of sharing what we have learned about treatment well beyond the confines of our setting. To help professionals, we have developed detailed guidelines for treatment sessions (Kazdin, 2009). To help parents, we offer materials they can use on their own as a first line of intervention to overcome the challenges of raising a child with conduct problems or in handling the everyday challenges of parenting (Kazdin & Rotella, 2008, 2013). I work with television, radio, and online and print news services and prepare magazine articles to pre_sent to parents options to help with both the common challenges of child rearing (for example, getting children to eat vegetables, complete their homework, and go to bed on time, or getting teenagers to stop eye-rolling, swearing at their parents, or treating them as if they had the plague), as well as more severe clinical problems that impair the children's everyday lives.

There is an enormous unmet need to provide psychological services to children and their families. This need is related to CD but applies more generally to children, adolescents, and adults with psychological problems. For example, in the United States, approximately 70 percent of individuals in need of psychological services receive no treatment at all. Worldwide too, most individuals who need care for their emotional, cognitive, or behavioral problems receive nothing. Another challenge is to deliver treatment in novel ways, such as through the use of technology and social media (for example, texting, apps) and training non-professionals to deliver treatment (Kazdin & Rabbitt, 2013). Our work for families has evolved to providing our interventions online-live, face-to-face, to families anywhere where there is access to the Internet. Online delivery is a way to bring treatment into peoples' homes, and in many circumstances it is more convenient than bringing people to clinics. Another means to extend treatment is to train non-professionals (lay people including other parents and adults without a background in mental health) to deliver the treatments. Evidence related to treatments of psychological problems other than CD indicates that non-professionals are often as effective as mental health professionals in providing psychological services, Our emphasis is now shifting from developing techniques for treatments to developing novel ways of delivering those treatments.

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Foundation, The Rivendell Foundation of America, and The William T. Grant Foundation). I am extremely grateful for that support.

Thinking Critically

1. The treatments that Kazdin describes develop prosocial behavior in children by training behaviors gradually, having the children repeatedly prac tice approximations of the behaviors and until they perform the desired behaviors, modeling the behaviors by the therapist, providing feedback and praise to refine and lock in performance, and applying the skills to new situations and contexts. How do Alan Kazdin's treatments to encourage prosocial behavior in children with CD resemble teaching individuals to learn to play a musical instrument or learn to dance?
2. Therapy does not solely change a specific, narrow human behavior-its effects often lead to many changes that affect many areas of the client's life. Apart from changes in antisocial and aggressive behaviors, how else did Kazdin's treatments affect children, parents, and families?

Suggested Further Readings

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