

The Effective Treatment of Juveniles Who Sexually Offend: An Ethical Imperative

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This article raises serious concerns regarding the widespread use of unproven interventions with juveniles who sexually offend and suggests innovative methods for addressing these concerns. Dominant interventions (i.e., cognitive-behavioral group treatments with an emphasis on relapse prevention) typically fail to address the multiple determinants of juvenile sexual offending and could result in iatrogenic outcomes. Methodologically sophisticated research studies (i.e., randomized clinical trials) are needed to examine the clinical and cost-effectiveness of cognitive-behavioral group interventions, especially those delivered in residential settings. The moral and ethical mandate for such research is evident when considering the alternative, in which clinicians and society are willing to live in ignorance regarding the etiology and treatment of juvenile sexual offending and to consign offending youths to the potential harm of untested interventions. Encouraging signs of a changing ethical climate include recent federal funding of a randomized clinical trial examining treatment effectiveness with sexually offending youths and the introduction of separate (i.e., developmentally informed) clinical and legal interventions for juvenile versus adult sexual offenders.

Keywords: ethics, juvenile sexual offenders, randomized clinical trial

Juveniles are responsible for a significant proportion of sexual violence, with official records indicating that minors account for 17% to 20% of all sexual crimes except prostitution (Pastore & Maguire, 2007), and victim reports and youth self-reports suggesting even higher rates of youthful sexual offending (Finkelhor & Dziuba-Leatherman, 1994). Sexual assault victims, including those whose offenders were minors, are at risk for a host of negative sequelae, including posttraumatic stress disorder, major depression, and substance abuse (Boney-McCoy & Finkelhor, 1996; Widom & Morris, 1997). Furthermore, the annual costs associated with sexual victimization in the United States are estimated to be between \$8 billion and \$26 billion (Cohen, Miller, & Rossman, 1994; Post, Mezey, Maxwell, & Wibert, 2002). Social and fiscal costs are also borne by sexual offenders, many of whom are removed from their families and placed in confinement for years and then required to publicly register for their offenses, often for 25 years to life. Therefore, effective interventions are needed for offending youth to reduce sexual victimization and to increase the likelihood that such youth can become law-abiding and productive citizens.

Specialized treatment programs have become increasingly available over the past 2 decades to address juvenile sexual offending (Knopp, Rosenberg, & Stevenson, 1986; McGrath, Cumming, & Burchard, 2003). However, the empirical investigation of the effectiveness of these treatment programs has lagged far behind their development and proliferation, and concerns have been raised that extant treatments are largely ineffective (see Borduin & Schaeffer, 2001; Laws, 1999, 2003) and potentially iatrogenic (see Chaffin & Bonner, 1998; Zimring, 2004). Indeed, Chaffin and Bonner (1998) argued that treatment approaches for adolescent sexual offenders represent “potentially harmful practices” and require scientifically sound studies of their effectiveness by clinical researchers (p. 315). To our knowledge, however, these concerns have not been addressed as ethical problems and, with the exception of Laws’s work (which focuses on the treatment of adult sexual offenders), have not been fully explicated.

The article presented here seeks to address what we believe are serious ethical concerns posed by the most widely used treatments for juveniles who sexually offend. We argue that the red flag raised by Chaffin and Bonner (1998) about the inadequacy of the empirical base for treating juvenile sexual offenders has not been lowered. Indeed, there has been an almost complete lack of rigorous research on effective interventions for juvenile sexual offenders. The research community’s failure—our failure—to subject the most widely used models of treatment to empirical investigation means that we have consigned vulnerable youth to untested and possibly ineffective or even iatrogenic procedures. We bear a moral duty to increase scrutiny of extant treatment approaches and to develop new and innovative approaches that are effective and that clearly do no harm. In the subsequent sections of this article, we describe characteristics of juveniles who commit sexual offenses, typical treatments for these juveniles, and the current state of treatment out-

come research with juvenile sexual offenders. We then describe treatment and research gaps and the ethical problems entailed by these gaps, and we end with suggestions for improving the current ethical climate in the treatment of juveniles who sexually offend.

CHARACTERISTICS OF THE POPULATION

The development of effective interventions for juveniles who sexually offend requires an understanding of the correlates and causes of sexual offending in youths. The extant research literature indicates that multiple characteristics of individual youths and their social systems (family, peers, school) are linked with juvenile sexual offending (Borduin & Schaeffer, 2001), and these characteristics can be viewed within a socioecological framework that views youths as embedded within increasingly complex systems, including family, peers, and school.

Individual Youth Factors

Juvenile sexual offenders report higher rates of emotional and behavioral problems than do nondelinquent youths but similar rates to those of violent nonsexual offenders or nonviolent nonsexual offenders (Ronis & Borduin, 2007). In addition, despite clinical lore, there is little evidence that the majority of juvenile sexual offenders have a history of sexual abuse; in fact, prevalence rates of self-reported abuse histories for sexually offending youth range from approximately 20% to 50% (Kahn & Chambers, 1991) and are similar to those for other types of juvenile offenders (Awad & Saunders, 1991). Likewise, juvenile sexual offenders have verbal skills (i.e., a proxy for intelligence) that are similar to those of juvenile nonsexual offenders (Tarter, Hegedus, Alterman, & Katz-Garris, 1983). Although there is some evidence that victim blaming is related to higher reoffense rates among juvenile sexual offenders (Kahn & Chambers, 1991), a higher prevalence of other potential cognitive distortions has not been demonstrated (e.g., Hastings, Anderson, & Hemphill, 1997).

Family Characteristics

Research has indicated that, similar to families of violent or nonviolent nonsexual offenders, families of juvenile sexual offenders evidence lower levels of positive communication and warmth than do families of nondelinquent youths (Blaske, Borduin, Henggeler, & Mann, 1989; Ronis & Borduin, 2007). In addition, consistent with findings for families of juvenile nonsexual offenders, families of juvenile sexual offenders show relatively low rates of parental monitoring (Wieckowski, Hartsoe, Mayer, & Shortz, 1998) and high rates of parent-child and interparental

conflict and violence (Davis & Leitenberg, 1987; Fehrenbach, Smith, Monaster-sky, & Deisher, 1986). There is also evidence that parents of juvenile sexual offenders have relatively high rates of substance abuse (Graves, Openshaw, Ascione, & Ericksen, 1996).

Peer Relations

Studies have shown that juvenile sexual offenders are more likely to be socially inept and isolated from same-age peers than are other juvenile offenders or non-delinquent youths (Blaske et al., 1989). Perhaps as a result of isolation from their own peer group, juvenile sexual offenders often turn to younger peers for relationships that are emotionally safer and easier to control (Fagan & Wexler, 1988; Fehrenbach et al., 1986). Although there is some evidence that isolation from same-age peers and preference for younger peers are more common among juveniles who molest younger children than among juveniles who sexually assault same-age peers or adults (Awad & Saunders, 1991; Graves et al., 1996), a recent study found no differences between subgroups of juvenile sexual offenders (i.e., offenders with younger vs. older victims) in maintaining close relations with same-age peers (Ronis & Borduin, 2007). Moreover, this latter study found that juvenile sexual offenders, similar to other delinquent youths, associate more extensively with deviant peers that do nondelinquent youths.

School Factors

Juvenile sexual offending has been linked with academic and behavioral difficulties in school, including low achievement, below expected grade placement (Fehrenbach et al., 1986), behavior problems (Fehrenbach et al., 1986; Gomes-Schwartz, 1984), suspension, and expulsion (Gomes-Schwartz, 1984). However, direct comparisons of sexually offending and nonsexually offending delinquents (e.g., Awad & Saunders, 1991; Ford & Linney, 1995; Ronis & Borduin, 2007) suggest that these school-related difficulties are not unique to juvenile sexual offenders.

In conclusion, predictors and correlates of juvenile sexual offending behavior parallel those of nonsexually delinquent youth and occur across the ecological systems in which youths are naturally embedded. Effective interventions would likely need to target these characteristics in much the same way as they are targeted in nonsexually delinquent youth (J. F. Alexander & Parsons, 1982; Chamberlain, 2003; Chamberlain & Mihalic, 1998; Henggeler & Borduin, 1990). As is described next, however, the most widely used treatment model for juveniles who sexually offend generally fails to address behavioral drivers that occur beyond the individual youth and focuses heavily on factors that might not predict youth sexual offending (e.g., deviant arousal).

CURRENT TREATMENTS

Specialized treatments for juveniles who have engaged in sexually aggressive behavior have been widely available since 1985 (see Knopp et al., 1986). Early treatments were modeled after those designed for adult sexual offenders, with few developmental adaptations for juveniles (Chaffin & Bonner, 1998). As is still true today, early programs adhered to a cognitive-behavioral treatment model with a focus on relapse prevention (CBT-RP; see Becker & Kaplan, 1993). A survey of current programs indicate few substantive changes since the development of specialized treatments (McGrath et al., 2003). Thus, more than 80% of community-based ($n = 418$) and residential ($n = 165$) juvenile sex offender treatment programs adhere to a cognitive-behavioral or relapse prevention model.

Nearly all programs responding to the McGrath et al. (2003) survey included the following core treatment targets for youths: taking full responsibility for all aspects of the sexual crime, reducing or correcting cognitions that support sexual offending against women or children), building intimacy/relationship skills and other social skills, promoting awareness of and empathy toward victims, preventing relapse, building family support networks, and controlling sexual arousal. These treatment targets are often addressed in separate modules that each last for several weeks and include specific homework assignments and group exercises. The interventions typically focus on the individual youth and attempt to change the youth's thinking and ownership of the offenses. One popular workbook for juvenile sexual offender treatment describes itself as "designed to help *you* help *yourself*" (Steen, 1993, p. 5). Separate chapters address "changing thoughts" (e.g., explaining that recidivism is "very much related to your thoughts"), replacing negative self-talk with positive self-talk, recognizing how thoughts and feelings lead to offending, and making better choices (e.g., "you always have choices"). A recently revised workbook begins with chapters that explain how youths' social relationships can precipitate or maintain offending behaviors, but the bulk of the material again focuses on the individual youth (Page & Murphy, 2007).

Compared to treatments for nonsexually delinquent youth or for nondelinquent, psychiatrically impaired youth, treatment for juveniles who sexual offend is typically quite lengthy, with the average community-based program lasting 18 ($SD = 8$) months and the average residential program taking 16 ($SD = 7$) months to complete (McGrath et al., 2003). Community-based treatment groups usually meet 1 to 2 hr per week, whereas residential treatment groups often meet for 10 to 20 hr per week (McGrath et al., 2003). Individual and family sessions are held less frequently, and neither peers nor schools are regularly targeted in typical interventions (McGrath et al., 2003).

Although the research literature reviewed earlier strongly indicates that sexually offending youths are influenced by multiple ecological systems, most current treatments focus heavily on presumed psychosocial deficits in the individual

youth. Furthermore, treatment goals or “targets” fail to map onto known influences. For example, a frequent emphasis on reduction of deviant sexual arousal does not correspond with what is known about juveniles who sexually offend. Indeed, the limited empirical literature in this area does not demonstrate a significant link between “deviant” arousal and future recidivism (see Gretton, McBride, Hare, O’Shaughnessy, & Kumka, 2001).

Another problem with the predominant approaches to treatment is the fact that many sexually offending youths desist from future offending (even in the absence of intervention). The same issue has been raised regarding the relapse prevention (RP) model as used with adult offenders (see, e.g., Hanson, 2000; Laws, 2003). Hanson suggested that the RP model’s “inability to conceive of untreated, low-risk offenders has diverted attention away from the majority of offenders who naturally desist and has contributed to some sex offenders receiving interventions poorly suited to their needs” (p. 36).

Given the apparent disconnect between the drivers of juvenile sexual offending behavior and the prevailing treatment approach (i.e., CBT-RP), it is perhaps not surprising that treatment outcome research, though limited, has not strongly supported this approach. This literature is reviewed next.

CURRENT RESEARCH

Although the CBT-RP approach represents the standard of care for juvenile sexual offenders in the United States (Letourneau, 2004; Letourneau & Miner, 2005), the limited research literature provides tentative support, at best, for this treatment approach when delivered in outpatient settings. Of three studies comparing CBT-RP with other intervention groups, one reported no between-groups differences in posttreatment recidivism rates (Lab, Shields, & Schondel, 1993), whereas two reported limited positive effects on recidivism for CBT-RP (Guarino-Ghezzi & Kimball, 1998; Worling & Curwen, 1998). Indeed, in these latter two studies, positive findings were based on a single instance of recidivism in the control group (Guarino-Ghezzi & Kimball, 1998) or on effects that were greatly diminished once dropouts were included in the treatment group (Worling & Curwen, 1998; also see Hanson et al., 2002). Of importance, *none* of these three studies involved random assignment to treatment conditions. It should also be noted that no published studies have examined CBT-RP when delivered in inpatient/residential settings, which are far more costly, restrictive, and invasive than community-based care.

There are several reasons why the CBT-RP treatment approach might not represent the most effective care for juvenile sexual offenders. First, as noted previously, core treatment targets in CBT-RP do not appear to map well onto known correlates of sexual offending behavior. To be effective, interventions need to move beyond a focus on the individual youth to address behavioral drivers that occur at

the family, peer, school, and community systems in which the youth is embedded. Second, the CBT-RP approach is delivered in settings (e.g., clinics and institutions) that provide little consideration of the real-world contexts in which youths develop. In fact, treatment outcomes might be negatively affected by the group and residential settings used in CBT-RP. Grouping delinquent youth together for treatment carries the risk of harmful side effects, such as making less delinquent youth even more delinquent (see Dishion & Dodge, 2005, for a review). Residential treatment carries additional risks beyond the potential for deviancy training. Indeed, interventions that require removing youth from their homes (often for several *years*) and housing them with other sexual offending youth carry the added dangers of engendering youth depression and anxiety, interfering with youth attainment of normative developmental and social milestones, increasing each youth's likelihood of victimization, and subjecting youth to an intense level of supervision that likely increases the risk for new charges (e.g., for illegal but consenting sexual interactions with peers) that would not otherwise be brought to bear (Caldwell, 2002; Trivits & Reppucci, 2002; Zimring, 2004). In sum, the need for more effective treatment approaches than the CBT-RP model for juvenile sexual offenders seems clear.

TREATMENT GAPS AND ETHICAL CONSIDERATIONS

The findings from the correlational literature on juvenile sexual offending are consistent with an ecological/systemic view of behavior and, for the most part, with findings from the literature on other types of serious antisocial behavior (i.e., nonsexual offending). Indeed, across studies and in spite of considerable variation in research methods and measurement (e.g., correlational vs. more sophisticated causal modeling studies), investigators have shown that nonsexual offending is determined by the reciprocal interplay of characteristics of the individual youth and the key social systems (family, peers, school, neighborhood) in which youths are embedded (for reviews, see Loeber, Farrington, & Waschbusch, 1998; McMahon, Wells, & Kotler, 2006).

The aforementioned literature and a recent report from a prospective, longitudinal study (van Wijk et al., 2005) suggest that (a) developmental pathways for juvenile sexual offending are similar to those for juvenile nonsexual offending and (b) juvenile sexual offending is multidetermined. Thus, we would argue that treatment approaches must have the flexibility to address the known correlates of such offending. Moreover, because there is considerable overlap in the correlates of juvenile sexual offending and nonsexual offending, it seems reasonable to suggest that broad-based treatments that are effective with nonsexually offending delinquent youths may hold some promise for the treatment of sexual offenders as well (Milloy, 1998).

Three intervention models that have been identified as effective for treating nonsexually offending delinquent youths are Functional Family Therapy (FFT; J. Alexander et al., 1998; J. F. Alexander & Parsons, 1982), Multidimensional Treatment Foster Care (MTFC; Chamberlain, 2003; Chamberlain & Mihalic, 1998), and Multisystemic Therapy (MST; Henggeler & Borduin, 1990; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998). These treatment models are family- and community-based, use behavioral intervention techniques, and are individualized and comprehensive to address multiple problems among juvenile offenders and their families. Furthermore, each of these models has strong quality assurance protocols to support treatment fidelity and to overcome barriers to desired clinical outcomes. In light of the strong evidence base supporting FFT, MTFC, and MST in the treatment of nonsexually offending delinquent youths (Henggeler & Sheidow, 2002), we believe that these models represent good candidates for the effective treatment of juvenile sexual offenders and should be evaluated with research clinical trials to test their effectiveness with this population. As described in subsequent sections of this article, findings from several studies already support the potential viability of MST with juvenile sexual offenders. Prior to reviewing the MST studies, we first suggest reasons why failing to subject interventions to empirical evaluation represents an ethical concern and why this failure has occurred specifically with regards to juvenile sex offender treatment.

Why Is the Lack of Empirically Rigorous Research an Ethical Concern?

Klin and Cohen (1994) argued persuasively for an ethical mandate to conduct empirically rigorous research in child and adolescent psychiatry. The moral and ethical mandate for such research is evident when considering the alternative, in which “unexamined hypotheses about etiology and treatment, even if they represent the state of the art and the standard of care, represents a willingness by clinicians and society to live with ignorance” (p. 210) and to consign children to the potential harm of untested interventions. Klin and Cohen noted that an acknowledgement of ignorance is ethical but insufficient—where there is ignorance there is also a mandate for responsible, respectful, and continued research. Professional associations such as the American Medical Association (AMA) and the American Psychological Association (APA) have also advocated for the utilization of scientific research to guide practice and policy. Members of these organizations are mandated to provide care that adheres to the highest scientific standards. For example, the AMA (2002) *Code of Medical Ethics* states that physicians should continue to study, apply, and advance scientific knowledge. Similarly, the APA (2002) *Ethical Principles of Psychologists and Code of Conduct* states in its preamble: “Psychologists are committed to *increasing scientific and professional knowledge* [italics added] of behavior and people’s understanding of themselves and others and to the use of

such knowledge to improve the condition of individuals” (APA, 2002, p. 3). In addition, psychologists are admonished to base their work on “established scientific and professional knowledge” (APA, 2002, p. 5).

Given these ethical imperatives and the numerous public and private agencies devoted to funding research on mental and behavioral health problems, why is there so little research on treatments for juveniles who sexually offend? As noted by Wagner, Swenson, and Henggeler (2000), some professionals who work with juvenile sexual offenders have argued that it is unethical to randomly assign youths to groups to evaluate treatment effectiveness and that the best care should be provided to everyone. This belief serves the dual function of supporting vested interests in extant care and providing a “self-justification for inaction” (Klin & Cohen, 1994, p. 210). Yet randomized clinical trials represent the most methodologically sound research design and are essential for determining treatment efficacy, a precursor for determining treatment effectiveness (Chambless & Hollon, 1998; Kendall, Holmbeck, & Verduin, 2004). A number of prominent researchers (e.g., Crits-Christoph, Wilson, & Hollon, 2005; Weisz, Weersing, & Henggeler, 2005) have argued that correlational research designs have far more serious limitations than randomized clinical trials when thoughtfully applied in real-world clinical settings and that such trials remain the most powerful way to test notions about causality. Both the intolerance to randomization and the willingness to deliver treatment as yet untested by rigorous research must be challenged. Randomized clinical trials are the most powerful and ethically defensible way to evaluate treatments for juveniles who sexually offend.

We believe that the lack of empirically rigorous evaluation of treatments for juvenile sexual offenders is also related to three other factors, including (a) disappointing results from treatment trials with adult sexual offenders, (b) the premature development of treatment “standards” for juvenile sexual offenders, and (c) an apparent consensus between experts, politicians, and lay persons that sexual offenders can not be “cured” and that the only effective strategy to reduce offender risk to the community involves lengthy punitive consequences.

Disappointing Results From CBT-RP Studies

Three clinical trials conducted in the 1980s and 1990s have failed to support CBT-RP for adult sexual offenders. The first was a federally funded study that began in 1986 and aimed to examine the feasibility of treating high risk sex offenders in community settings. Compromises to the original project design, low referral rates, and high attrition ultimately resulted in sample sizes too small to support treatment outcome analyses (D. R. Laws, personal communication, February 28, 2007). The second trial (i.e., the California Sex Offender Treatment and Evaluation Project [SOTEP]) was primarily state funded and aimed to reduce recidivism rates for high-risk sex offenders ($N = 704$) who were randomly assigned to either a special-

ized inpatient relapse prevention program or a volunteer control group, or who served as part of a nonvolunteer (and nonrandomized) control group. Results of this study, published between 1991 and 2005, failed to indicate significant differences in the recidivism rates of the different groups (see final report by Marques, Wiederanders, Day, Nelson, & van Ommeren, 2005). A third, nonrandomized study, similar to the SOTEP study, was conducted in Australia and examined the impact of a prison-based CBT-RP program on the incidence, frequency, and severity of sexual offense recidivism in a large ($N = 196$) sample of treated offenders (Schweitzer & Dwyer, 2003). The treated group was compared with an untreated group ($N = 164$) of offenders matched on type and year of offense, sentence length, prior convictions, and ethnicity. The treated and untreated groups did not differ in their sexual recidivism rates (i.e., 3.1% vs. 4.9%, respectively) over a 5-year follow-up period. We believe that the combined failure of these three studies to support CBT-RP had a chilling effect on federal funding for sex offender treatment research.

Premature Treatment Standards for Juvenile Sexual Offenders

In 1993 the National Adolescent Perpetrator Network (NAPN) published a 105-page report in the *Juvenile and Family Court Judges Journal* that set forth prescriptive treatment practices for juvenile sexual offenders, including recommendations regarding prosecution and probation/parole requirements. The report acknowledged an absence of empirical support for most assumptions about the characteristics of juvenile sexual offenders and relied on consensus by the report authors in making treatment recommendations. Following publication of this report, the NAPN assisted numerous states with the development of treatment programs, further establishing one set of treatment procedures as the “standard of care” within the field (Zimring, 2004). The treatment practices recommended by NAPN for juvenile sexual offenders were based largely on interventions developed for adult sexual offenders, with few adaptations to address salient developmental differences between these populations. Unfortunately the NAPN recommendations had the appearance of established and highly regarded treatment guidelines. We believe that the presumed need for specialized treatment for juvenile sexual offenders, coupled with the popularity of the CBT-RP model for adult sexual offenders, likely contributed to the unbridled acceptance of the NAPN recommendations and a willingness among professionals from various disciplines to ignore the lack of treatment outcome research for juvenile sexual offenders.

Pessimism About Sexual Offender Treatment Effectiveness

A third contributing factor to the lack of treatment outcome research is a general consensus that treatment does not work. For example, the aforementioned NAPN (1993) report stated, “At this time, research is not available to determine whether permanent

cessation of deviant impulses that lead to abusive sexual behaviors is possible in all clients” (p. 34). The report also stated that sexual behaviors can become addictive and/or compulsive, leaving little hope for a “cure” for most juvenile sexual offenders (other than very young or first time sexual offenders). These statements provided little hope that treated youth would or could improve. More recently, an Association for the Treatment of Sexual Abusers (ATSA) press release on adult sex offenders began with the statement that “sexual offending, like many mental and medical conditions, can not be cured” (ATSA, 2005a). Such pessimism seems largely unjustified. Indeed, the majority of adult sexual offenders never sexually reoffend, and this is even truer for juvenile sexual offenders, whose recidivism rates typically approach no more than 10% in most studies (M. A. Alexander, 1999; Caldwell, 2002).

Pessimism regarding treatment effectiveness is also reflected in state and federal legislation pertaining to juvenile sexual offenders. Sex offender-specific legislation began proliferating throughout the United States in the early to mid-1990s and continues unabated today. The recently enacted Adam Walsh Child Protection and Safety Act (2006), for example, requires juveniles who are as young as 14 years of age and convicted of certain sexual crimes (e.g., sexual abuse or aggravated sexual abuse) to register on a national sex offender registry Web site for a minimum of 25 years. Some individual state laws are even more draconian. For example, South Carolina requires lifetime registration of even the youngest offenders and recently passed a “sex offender death penalty act” (South Carolina General Assembly, 2005–2006) that includes *life in prison* for juveniles (with no lower age limit) convicted of a second sexual offense (individuals age 18 and older convicted of a second sexual offense are subject to the death penalty). In passing such bills, federal and state legislators have ignored or discounted evidence regarding the low recidivism rates of juvenile sexual offenders, suggesting that the majority of elected officials simply refuse to believe that juvenile sexual offenders can be effectively treated outside of prison walls. In addition, several states (e.g., Colorado, Illinois) have created Sex Offender Management Boards, whose assessment and treatment recommendations have become legally enforced standards of care. These laws can have the unfortunate effect of prohibiting the implementation of newer, evidence-based interventions. In direct response to this concern, some boards are developing protocols to permit the implementation of evidence-based interventions (M. Davies, Colorado Sex Offender Management Board member, personal communication, May 7, 2007).

NOVEL WAYS TO IMPROVE THE CURRENT ETHICS CLIMATE

We have presented a bleak picture of the state of research on treatment outcomes for juveniles who sexually offend. There are several encouraging signs, however,

that suggest the treatment and research communities are ready for change. These signs include a growing and methodologically rigorous evidence base for innovative treatments that match youths' psychosocial needs and an increasing recognition that juveniles who sexually offend have different developmental needs and legal requirements than do adult offenders.

Matching Treatment to Psychosocial Needs

MST has been in development for more than 25 years and is widely regarded as one of the best validated treatments for juvenile nonsexual offenders (Elliott, 1998; U.S. Department of Health and Human Services, 2001). Consistent with Kazdin's (1997) proposed model for developing effective child and adolescent treatments, the development of MST has emphasized the close integration and interplay of theory, research, and clinical practice. The theoretical foundation of MST draws on the identified correlates/causes of serious antisocial behavior, family systems theory (Hoffman, 1981; Minuchin, 1985), and the theory of social ecology (Bronfenbrenner, 1979). Family systems theory views the family as a rule-governed system and an organized whole that transcends the sum of its separate parts. From this perspective, it is assumed that problematic individual behaviors and symptoms are intimately related to patterns of interaction between family members and must always be understood within the context of those interaction patterns. Although there are differences in how various schools of family therapy interpret systems theory, most attempt to understand how emotional and behavioral problems "fit" within the context of the individual's family relations and emphasize the reciprocal and circular nature of such relations. Thus, a therapist working from a family systems conceptual framework would consider not only how parental discipline strategies influence youth antisocial behaviors but also how the antisocial behaviors of the youth shape and guide the behaviors of the parents, and what function the antisocial behaviors might serve in the family.

The theory of social ecology (Bronfenbrenner, 1979) shares some of the basic tenets of family systems theory but encompasses broader and more numerous contextual influences within a youth's life. The youth is viewed as being nested within a complex of interconnected systems that include the individual youth, the youth's family, and various extrafamilial (peer, school, neighborhood, community) contexts. The youth's behavior is seen as the product of the reciprocal interplay between the youth and these systems and of the relations of the systems with each other. Thus, although the interactions between the youth and family or peers are seen as important, the connections between the systems are viewed as equally important. It is assumed, then, that youth behavior problems such as sexual aggression can be maintained by problematic transactions within any given system or between some combination of pertinent systems. Of importance, social-ecological theory emphasizes the significance of "ecological validity" in understanding be-

havior, that is, the basic assumption that behavior can be fully understood only when viewed within its naturally occurring context.

MST interventions for antisocial behavior in youths are specified in a clinical volume (Henggeler & Borduin, 1990) and a treatment manual (Henggeler et al., 1998) that describe the empirical, conceptual, and philosophical bases of MST and delineate the process by which youth and family problems are prioritized and targeted for change. To more fully account for clinical issues relevant to juveniles who sexually offend, investigators have adapted MST for use with this population, specified the adaptation in a supplemental therapist training manual, and developed a training program for therapists and supervisors. Of importance, MST for juveniles who sexually offend is similar to standard MST in its broad focus on the many correlates associated with juvenile offending generally but goes beyond standard MST by specifically focusing on aspects of the youth's ecology that are functionally related to the youth's sexual offending.

To date, two completed studies have examined the efficacy of MST in addressing sexual offending by juveniles, and an ongoing study is examining the effectiveness of MST with this population. Although modest in scope and size ($N = 16$), Borduin and colleagues (Borduin, Henggeler, Blaske, & Stein, 1990) published the first randomized clinical trial with juvenile sexual offenders. Youths and their families were randomly assigned to treatment conditions: home-based MST delivered by doctoral students in clinical psychology versus outpatient individual therapy delivered by community-based mental health professionals. Recidivism results at 3-year follow-up were encouraging. Significantly fewer youths in the MST condition were rearrested for sexual crimes (12.5% vs. 75.0%), and the mean frequency of sexual rearrests was considerably lower in the MST condition (0.12 vs. 1.62). Furthermore, the mean frequency of rearrests for nonsexual crimes was lower for the youths who received MST (0.62) than for counterparts who received outpatient therapy (2.25).

In a more recently completed clinical trial, Borduin and colleagues (Borduin & Schaeffer, 2001; Borduin, Schaeffer, & Heiblum, 2007) used a multiagent, multimethod assessment battery to evaluate instrumental (i.e., theory driven) and ultimate (i.e., common to all treatments of juvenile sexual offenders) outcomes in aggressive (i.e., sexual assault, rape) and nonaggressive (i.e., molestation of younger children) juvenile sexual offenders ($N = 48$). Youth were randomly assigned to MST or usual services (a combination of cognitive-behavioral group and individual treatment administered in a juvenile court setting). Compared to youths who received usual services, youths who received MST showed improvements on a range of instrumental outcomes immediately following treatment, including fewer emotional and behavioral problems, less delinquent behavior (self-reported), improved peer relations, improved family relations, and better grades in school. An 8.9-year posttreatment follow-up of ultimate outcomes (Borduin et al., 2007) revealed that MST participants were significantly less likely than their usual services

counterparts to be rearrested for sexual (12.5% vs. 41.7%) and nonsexual (29.2% vs. 62.5%) offenses. In terms of frequency of rearrests, MST participants had 83% fewer rearrests for sexual crimes (an average of 0.13 vs. 0.79 arrests) and 70% fewer rearrests for other crimes (an average 1.46 vs. 4.88 arrests) than did those receiving usual services. MST youth also spent on average 75% fewer days in youth (22.50 vs. 97.50 days) and 80% fewer days in adult (365.00 vs. 1842.50 days) detention facilities. Of importance, these outcomes did not vary on the basis of youth and family background variables or pretreatment arrest characteristics.

In a study that applied a cost-benefit model for criminal justice programs (Washington State Institute for Public Policy, 2001) to the results of the Borduin and Schaeffer (2001) 8.9-year follow-up, Borduin and Klietz (2003) estimated that the net present value of MST ranged from \$171,882 (taxpayer benefits only) to \$262,271 (taxpayer and crime victim benefits combined) per juvenile sexual offender with peer/adult victims, and from \$67,615 to \$103,307 per juvenile sexual offender with child victims. The estimated benefit-to-cost ratio for every dollar spent on MST at present ranged from \$12.40 (taxpayer benefits only) to \$38.52 (taxpayer and crime victim benefits) in the years ahead.

The positive outcomes demonstrated by the two efficacy trials laid the foundation for our current effectiveness trial funded by the National Institute of Mental Health. The results of this trial will extend the findings of the previous studies by including a larger, more diverse sample of youths charged with sexual offenses. Effectiveness studies (e.g., studies completed in real-world practice settings) help determine whether outcomes found in efficacy studies (e.g., university-based controlled clinical trials) can be replicated in less-controlled settings (Silverman, Kurtines, & Hoagwood, 2004).

Another promising intervention, albeit one with less rigorous testing to date, is the "Wraparound Milwaukee" program, in which all adjudicated juvenile sex offenders are enrolled as a requirement of probation (Hunter, Gilbertson, Vedros, & Morton, 2004). In a nonrandomized study of juvenile sexual offenders ($N = 260$), Hunter and colleagues reported that this program was associated with fewer prison commitments, lower services costs, and shorter residential treatment stays than for juveniles treated prior to program initiation.

In summary, a small but growing body of evidence suggests that promising treatments for juvenile sexual offenders are comprehensive and flexible enough to address numerous contextual influences within youths' lives. Indeed, the success of such treatments may be because of to their explicit focus on ameliorating key social-ecological factors associated with sexual and other criminal offending in juveniles, including behavior problems, parental disturbance, problematic family relations, peer relations difficulties, and poor school performance. Moreover, the delivery of services in youth's natural environments (e.g., home, school, recreation center) enhances family cooperation, permits more accurate assessment of identified problems and of intervention results, and promotes long-term maintenance of

therapeutic changes. We believe that the major limitations of individually oriented treatments for juvenile sexual offenders is that such treatments address only a limited subset of factors in the youth's social ecology and are delivered with minimal ecological validity.

Juveniles Have Different Psychosocial and Legal Needs Than Adults

Whenever use is made of the adult treatment literature to try to inform child/adolescent treatments, there is a major failure to recognize and address developmental differences (for an excellent discussion of this issue, see Steinberg & Scott, 2003). There are, however, many encouraging signs that professionals responsible for the well-being of juvenile sexual offenders and their victims are beginning to question adult-based interventions (including legal policies) that target juvenile sexual offenders. Indeed, in 2007, NAPN hosted a conference titled "Countering the Counterintuitive: Moderating the Unintended Effects of Intervention with Youth Who Have Sexually Offended." Moreover, the legal response to juvenile sexual offending was taken to task in a recent publication sponsored by the MacArthur Foundation (Zimring, 2004). In addition, ATSA (2005b) recently took the step of developing separate assessment and treatment standards for adult and juvenile sexual offenders, based on the recognition that developmental differences between adults and children demand separate intervention strategies. International standards for the assessment and treatment of juvenile sexual offenders (as distinguished from adults) have also been recently published (Miner et al., 2006).

In some cases, legal policies are also beginning to reflect differences in attitudes toward juvenile (vs. adult) sexual offenders. For example, although the Adam Walsh Child Protection and Safety Act (2006) mandates the public registration of youth as young as 14 years of age, the U.S. House of Representatives version of that bill originally had no lower age limit. Apparently, members of the House ultimately were persuaded that children younger than age 14 ought not to be treated like adult sexual offenders. Likewise, Illinois legislators recently attempted to limit juvenile sexual offender registration requirements (Rozas, 2007).

Even so, continued work is needed to facilitate federal and state legislators' understanding of developmental and treatment issues pertinent to juvenile sexual offenders.

Social advocacy is also needed to increase the general public's understanding of sexual offender recidivism rates and differences in the drivers for adult versus juvenile sexual offending behavior. Such advocacy has been undertaken by professional membership agencies (e.g., American Professional Society on the Abuse of Children, ATSA), whose members are committed to reducing sexual violence. Social agencies whose professionals have the requisite expertise can work with the media to ensure an accurate portrayal of recidivism risk and can work with local,

state, and federal legislators to help ensure that language in new bills reflects differences between adult and juvenile sexual offenders. Partnering with victims rights advocates is likely to be an essential strategy to improve therapeutic and legal responses to juveniles who sexually offend. Newly created, federally funded centers such as the Center for Sex Offender Management also support the development, testing, and implementation of evidenced-based practices and offer small grants for treatment implementation. These agencies should continue to strive to ensure that the most scientifically sound information is used when making recommendations regarding treatment or legal interventions with juvenile sexual offenders.

RECOMMENDATIONS FOR FUTURE RESEARCH

Continued funding for large-scale trials that identify effective as well as ineffective or harmful interventions and policies is a necessity. Priority should be given to research projects that shed light on heretofore unstudied interventions in wide use. In particular, randomized clinical trials should be applied to the study of residential CBT-RP programs. Indeed, if we are to subject children to years of family separation, it is imperative that we ensure that treatment is effective at improving both instrumental and ultimate outcomes and that youth are not harmed in the process. Another priority is the development of effective alternatives to CBT-RP and to MST. Although outcome findings for MST have been favorable to date, it is unrealistic to expect that all youth will respond equally well to a single treatment model. Developers of experimental treatments should clearly articulate the links between known correlates of offending and treatment goals, and clinical trials involving these treatments should evaluate treatment processes (i.e., mechanisms of change) as well as outcomes. Research on transporting evidence-based interventions to real-world settings should also be prioritized, so that the best interventions are made widely available while retaining a high level of treatment integrity. Finally, research on several of the untested practices that are recommended by the early NAPN report and that remain in use (sometimes mandatory use, per sex offender management board requirements) is overdue. These practices include (but are not limited to) the use of polygraph to assess and monitor juvenile sex offenders and the use of penile plethysmography or other measures that purport to examine “deviant” arousal or interest but for which there are no data on nonoffending youth.

Randomized clinical trials are complicated and expensive, but the cost of these trials pales in comparison to what U.S. taxpayers already spend on sexual offenders. Existing intervention policies include lengthy incarcerations, expensive residential treatment programs, postincarceration civil commitment, and long-term community-based supervision and treatment programs. Incarceration, civil com-

mitment, and residential treatment programs regularly exceed \$100,000 per offender per treatment episode (DesLauriers & Gardner, 1999). Redistributing a portion of treatment and supervision dollars to fund sex offender treatment outcome research (and related issues) would hasten the development and deployment of clinically effective and cost beneficial treatments for this important population. Zimring (2006) recently called for the establishment of a federally funded institute similar to, for example, the National Institute of Drug Abuse, whose mission would be to identify research priorities and then fund well-designed research projects pertaining to sexual offending. Given the ubiquitous presence of sexual violence in the United States, it seems entirely appropriate to expect a dedicated funding stream to address sexual offending and to guide future efforts to develop empirically supported interventions.

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