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Randomized Trial of Treatment for Children With Sexual Behavior Problems: Ten-Year Follow-Up

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This study prospectively follows 135 children 5–12 years of age with sexual behavior problems from a randomized trial comparing a 12-session group cognitive–behavioral therapy (CBT) with group play therapy and follows 156 general clinic children with nonsexual behavior problems. Ten-year follow-up data on future juvenile and adult arrests and child welfare perpetration reports were collected. The CBT group had significantly fewer future sex offenses than the play therapy group (2% vs. 10%) and did not differ from the general clinic comparison (3%), supporting the use of short-term CBT. There were no group differences in nonsexual offenses (21%). The findings do not support assumptions about persistent or difficult to modify risk and raise questions about policies and practices founded on this assumption.

Keywords: sexual behavior problems, sexual offenses, children, recidivism, treatment

Juvenile justice, child welfare, and mental health systems have devoted increasing attention to aggressive, victimizing, or highly inappropriate sexual behavior by preadolescent children (Araji, 1997; Baker, Schneiderman, & Parker, 2002; Chaffin, Letourneau, & Silovsky, 2002). Sexual behavior problems (SBP) do not represent a syndrome or diagnosable condition, but rather a set of behaviors. Although definitions of childhood SBP vary and persistent and developmentally atypical self-focused behaviors may be included in the definition, the dominant focus has been on children 12 years of age and under with intrusive sexual behaviors, usually directed at other and often younger children.

Increased attention has been fueled by concerns over sexual aggression and child sexual abuse in general, and by efforts to intervene early in what has been perceived as a progressive behavior pattern beginning in childhood and continuing on into adolescent and then adult sex offenses. Progression into adolescent offenses has been described in retrospective studies (D. L. Burton, 2000; Zolondek, Abel, Northey, & Jordan, 2001). Progression into adult sex offenses is also a common concern. Retrospective studies have noted that up to one half of adult sex offenders report a childhood or adolescent onset for their abusive sexual behaviors or interests and that early onset cases have particularly high numbers of offenses and victims (Abel et al., 1987; Hanson & Slater, 1988; Marshall, Barbaree, & Eccles, 1991). Although retrospective data do not accurately portray prospective risk, these findings have been interpreted as cause for long-term concern, and children with SBP have been viewed as posing a unique and potentially long-term risk to children in the community. For example, some state child welfare systems have promulgated special tracking systems for registering, segregating, and handling children identified as having SBP. Children with SBP may be segregated within facilities and limited to specialized SBP units. Because preadolescent children as young as 9 years old or occasionally younger are adjudicated as delinquent for sex crimes, some states include these children on lifetime public sex offender registries and Internet sites, and federal legislation has been proposed and passed in the U.S. House of Representatives that would mandate including all adjudicated children with SBP on lifetime public Internet sex offender registries (Children's Safety Act, 2005).

To date and to our knowledge, no prospective study has been published that follows children with SBP through adolescence and into early adulthood (the peak ages for committing sex offenses) and directly measures their risk for future sex offenses. Thus, the central premise for many policies and for many clinical practices, namely a persistent and difficult to modify risk for future sex offenses, lacks empirical support with prospective data. The present study prospectively measures this risk through adolescence and into early adulthood. This study tracked children with SBP prospectively across three surveillance systems that collect reports of sexual abuse perpetration and sex offenses—child welfare, juvenile justice and adult criminal justice, and compared rates between children with SBP and children with common nonsexual behavior problems such as attention-deficit/hyperactivity disorder (ADHD).

In addition to the question of overall risk, there are questions of treatment benefit. The number of specialized treatment programs

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for children with SBP grew considerably in the 1990s (Araji, 1997; D. L. Burton, Smith-Darden, Levins, Fiske, & Freeman-Longo, 2000; McGrath, Cumming, & Burchard, 2003). Treatment programs vary in duration, intensity, restrictiveness, and focus, depending perhaps on whether the clinician views these children as having long-term and difficult to modify risk. Some clinical programs are directly derived from adult sex offender treatment models (Araji, 1997). These treatment models presume a fairly stable, long-term proclivity for deviant sexual behavior and a corresponding need for longer term, more intensive, more restrictive, and often more confrontational sexual deviancy-oriented intervention. These programs may use concepts such as deviant sexual interest, poor empathy, cycles of sexual offense behavior, victim grooming, and predation. Other clinicians have emphasized that children with SBP are qualitatively different from adult sex offenders, have conceptualized children with SBP as similar to children with nonsexual behavior problems, and have suggested less intensive psychoeducational and behavioral parenting interventions (Berliner & Rawlings, 1991; Chaffin et al., 2002; Friedrich, in press). Still others have conceptualized SBP as reactions to sexual victimization and focused interventions on trauma sequelae (J. E. Burton, Rasmussen, Bradshaw, Christopherson, & Huke, 1998).

A small number of controlled intervention trials have examined shorter term outcomes by means of caregiver reports of child SBP. Pithers and colleagues (Pithers & Gray, 1993; Pithers, Gray, Busconi, & Houchens,1998) randomly assigned 115 children with SBP, ages 6 to 12, and their families to 32 weeks of either expressive therapy or a relapse prevention-based group cognitive–behavioral therapy (CBT) program. Both group programs were psychoeducational, structured, and cognitive–behavioral in nature; however, the relapse prevention model focused on risk factors and building a prevention team, whereas the expressive approach addressed sexual behavior rules, boundaries, emotional management, effects of sexual abuse, problem solving, and social skills (Araji, 1997). Midway through the program, children in both groups had improved, and a subgroup of children with serious traumatic stress symptoms demonstrated relatively greater improvement with relapse prevention treatment (Pithers et al., 1998). Ultimately, the improvements seen in both groups did not significantly differ (reported in Bonner & Fahey, 1998).

In an earlier report based on the cohort followed in the present study, Bonner and colleagues (Bonner, Walker, & Berliner 1993, 1999) randomly assigned children with SBP to receive either 12 sessions of sexual behavior-focused CBT or 12 sessions of group play therapy (PT). Significant SBP reductions were found over time for both groups, but there were no statistically significant 1- and 2-year follow-up differences in parent-reported outcomes within a small subsample of cases that were followed up. One- and 2-year SBP rates were low overall.

In another randomized trial, Cohen and Mannarino (1996, 1997) tested short-term CBT and focused primarily on traumatic stress symptoms, but that also included a component focused specifically on managing SBP and compared this with individual nondirective supportive therapy (NST). Participants were sexually abused preschool children with significant traumatic stress symptoms, several of whom also had SBP. The CBT cases demonstrated significant SBP reductions from pre- to posttreatment, whereas the NST cases did not. Improvements were maintained at 1-year follow-up (Cohen & Mannarino, 1997). Further, 6 children who received NST had persistent SBP and were consequently removed from the NST arm of the study and provided with CBT, after which their SBP improved (Cohen & Mannarino, 1997). Silovsky, Niec, Bard, and Hecht (2005) used a waiting list control design to evaluate a 12-week CBT treatment program for preschool children with SBP. Participants were evaluated weekly throughout wait and treatment periods. Significant time effects and an increased rate of SBP symptom reduction related to treatment were found among children with the highest initial rates of SBP. In other words, given the usual steps accompanying detection of SBP and service referral, children tended to improve with the passage of time even without treatment, but the rate of improvement accelerated once children entered CBT treatment. Similarly, Stauffer and Deblinger (1996) tracked SBP among children in CBT treatment for sexual abuse-related traumatic stress symptoms and noted greater reductions during treatment than during a waiting list period, and found that these reductions were maintained at 3-month follow-up. Basic prepostreductions in SBP have also been reported among children in outpatient psychotherapy treatment (Friedrich, Luecke, Beilke, & Place, 1992).

From this group of findings, it appears that children with SBP do respond favorably to treatment. CBT has performed well where studied, and findings across studies are usually but not universally in favor of CBT. It remains unclear whether the short-term treatment benefits noted thus far in the literature translate into fewer sex offenses in the long term or whether CBT would perform better in this regard, although we hypothesized that it would.

Method

Participants

Children with SBP were recruited from child welfare, law enforcement and juvenile court, physicians, school personnel, and mental health centers between 1992 and 1995. A total of 178 cases were referred and screened for potential study inclusion. Referred cases were included if (a) the referred child had clinically significant SBP, not simply developmentally normal sexual behavior (6 did not meet this criterion), (b) the child was between 5 and 12 years of age (1 did not meet this criterion), and (c) the child and caregiver were fluent in English (none excluded). Cases were excluded after assessment if (a) the child's Kaufman Brief Intelligence Test (KBIT; Kaufman & Kaufman, 1990) IQ score was less than 65 for both verbal and matrices (7 excluded), (b) the child was judged by clinicians as too severe for outpatient treatment (2 excluded), or (c) the child and parent(s) dropped out prior to randomization (15 excluded) or declined to be randomized to treatment (7 excluded). An additional two cases were excluded because they were siblings of other enrollees. Three cases were removed from treatment (all within the first few sessions) and referred to more restrictive care because of concerns about suicidal and out-of-control aggressive behavior. The final randomized intent-to-treat sample was 135.

A comparison group of 156 children was drawn from the same child outpatient clinic. Inclusion criteria for the comparison group included the following: (a) the child was seen during the same time frame; (b) the child was between 5 and 12 years of age; (c) the presenting problem was disruptive behavior, (d) the child had no reported history of SBP (because the SBP trial was ongoing at the clinic, inquiry into SBP was routine), and (e) there were no indications in the child's file of a diagnosis of autism, pervasive developmental disorder, or childhood psychosis. The modal clinical chart primary diagnosis for children in the comparison group was ADHD (64% of comparison cases), followed by adjustment disorder (10% of comparison cases), oppositional defiant disorder (5% of comparison

cases), and a variety of learning, parent–child relationship, and school behavior problems.

Measures

Child Behavior Checklist—Parent Form (CBCL). The CBCL (for children 4–18 years of age; Achenbach, 1991) is a 134-item standardized checklist of childhood behavior problems and social competence. The CBCL has been used extensively in clinical research with children and has demonstrated internal consistency (.95), stability (1 week; Total Problems Scale = .93), and construct validity (Achenbach, 1991).

Child Sexual Behavior Inventory, Version 2 (CSBI–2). The CSBI–2 (Friedrich, Beilke, & Purcell, 1989) is a 35-item caregiver-completed instrument that assesses the presence and frequency of a range of sexual behaviors in children 2–12 years of age over a 6-month period. The CSBI−2 assesses the child's sexual behaviors on a continuum ranging from mild to intrusive and provides clinical scores based on the child's age and gender. This instrument is the only standardized scale created specifically to address sexual behavior problems among children. The CSBI is now in its third edition (i.e., CSBI–III), with most recent data providing support for its internal consistency (.72 for normative sample and .92 for sexually abused sample), stability (.91), and convergent, discriminant, and construct validity (Friedrich, 1997).

Ratings of SBP aggressiveness. Short descriptions of the referral behaviors for each child with SBP were sent to five independent national experts on childhood SBP. Each expert was asked to rate the interpersonal aggressiveness of the child's sexual behavior on a scale of 1 (*not aggressive*) to 7 (*highly aggressive*). The intraclass correlation across raters was .87, suggesting good interrater reliability. The mean rating for children with SBP in the study was symmetrically distributed, centered around the midpoint of the rating scale, and included ratings of both 1 and 7.

KBIT. The KBIT is a brief (about 15–30 min) individually administered screening measure of verbal and nonverbal intelligence for people who are 4–90 years of age. It provides a measure of crystallized thinking and fluid thinking, with two subscales, Vocabulary and Matrices, which correlate highly with more comprehensive tests of cognitive functioning.

Treatment Protocols

Two treatment protocols were used in the trial: CBT and PT. Both followed manualized, session-by-session protocols for twelve 60-min sessions. Each session involved separate groups for children and collateral parent groups. All sessions were conducted at the same facility. Therapists for each condition were separate, and cases in each group did not interact at the clinic.

The CBT treatment condition relied on behavior modification and psychoeducational principles. The group was highly structured, used a teaching–learning model, and addressed topics including acknowledging and identifying the inappropriate sexual behavior, learning concrete sexual behavior rules, learning behavioral self-control techniques, and sex education. The CBT caregiver group provided educational material on developmentally normal and atypical childhood sexual behavior and taught specific behavioral child management skills for preventing and responding to problematic sexual behavior. This included suggestions for supervision and minimizing opportunities or situations in which SBP tended to occur.

The PT group treatment condition was much less structured and was based on a combination of client-centered and psychodynamic play therapy principles. A different set of play activities or play materials was used for each session. Common play therapy activities, such as drawing self-outlines, were included. However, beyond introducing the play materials and activities for the session, therapists were minimally directive. Therapists were trained to give reflections, probe into feelings, and interpret patterns of play. Each caregiver PT group began with a discussion theme. The themes were similar to those in the CBT caregiver group—sexual behavior problems, boundaries, parenting strategies, sex education, and self-esteem, but rather than providing a structured educational curriculum, the PT caregiver group was less directive and the therapist followed the caregivers' lead in the group discussion, providing reflections.

Treatment Model Fidelity

Therapists for both child and parent groups were male/female dyads who were doctoral psychology trainees or postdoctoral psychologists. The same male/female dyad conducted the children's and caregivers' groups for each condition. All therapists were trained in applying the manualized treatments and the underlying treatment theory and were provided with weekly supervision and training to prevent drift throughout the course of the intervention. All sessions were videotaped and reviewed each week by the investigators to ensure adherence to the respective treatment manuals.

Procedure

The procedures for the original clinical trial and the follow-up study were reviewed and approved by the local institutional review board prior to recruitment of participants and data collection. Enrolled participants received a baseline assessment at an outpatient clinic prior to randomization to group. A simple randomization procedure with a random number table was used, and group assignment was determined after the investigators verified inclusion criteria were met through the baseline assessment. Posttreatment, 1-year, and 2-year parent report follow-up data were collected on a subsample and are reported elsewhere (Bonner et al., 1999). Data for the general clinic comparison group used in this follow-up study were collected from archival chart reviews. All charts meeting inclusion criteria for the general comparison group were coded. Only objective data (child's age and gender, chart diagnosis code, CBCL scores, etc.) were coded from the charts.

Postbaseline event reports were drawn in 2005 from juvenile justice, adult criminal justice, and child welfare databases in the state where the study was conducted. The juvenile justice and adult criminal justice databases were queried for arrests, and the child welfare database was queried for maltreatment perpetration reports. Matching between study and administrative databases was accomplished by means of a similar sequential matching strategy for each database. First, databases were queried for social security number matches where this was available. Next, databases were queried for matches on a combination of name and date of birth. The query for name allowed for misspellings and name similarities. The unique database system identifiers obtained from these two matches were then aggregated and the resulting set of system identifiers was used to retrieve the final set of records. Matches were examined by hand to confirm the match identity.

Events within each database were aggregated. First, for child welfare reports, events were broken down by maltreatment perpetration report type (i.e., neglect, physical abuse, sexual abuse). Reports that were screened out or ruled out by child welfare were excluded, and then reports were aggregated across dates and victims to yield unduplicated events. In the juvenile justice and adult criminal justice databases, arrests often involved multiple alleged crimes. Each alleged crime was categorized as one of the following: (a) a sex offense, such as rape or lewd molestation; (b) a violent offense, such as assault or strong-arm robbery; (c) a property offense, such as burglary or unauthorized use of a motor vehicle; (d) a drug or alcohol offense, such as possession of a controlled substance; (e) a status offense, such as curfew violations or truancy; (f) a procedural violation, such as failing to appear or failing to follow probation rules; or (g) a miscellaneous category involving a range of misdemeanor complaints. An additional category for adjudications as a child in need of supervision or in need of treatment also was coded. Traffic offenses were not included. Where multiple crimes were reflected in a single arrest, these were aggregated into

the most severe category, in the order of sex offenses, violent offenses, property offenses, drug or alcohol offenses, status offenses, and procedural or other offenses. Sexual abuse reports made to child welfare were categorized as sex offenses in the final merge across all databases. Events across databases were combined by collapsing events occurring within 2 weeks of each other to yield an unduplicated set. The final merged database yielded a single combined temporal sequence of unduplicated events, each collapsed into the most serious event type, along with event dates.

Results

Participant Characteristics

Demographic characteristics for the two randomized SBP groups (i.e., CBT and PT) and the comparison group are shown in Table 1. The two randomized SBP treatment groups did not meaningfully differ at baseline on gender, race, ethnicity, CBCL scores, CSBI scores, or aggressiveness ratings. Overall, the three groups differed slightly but significantly on age and gender. Of the 291 total cases followed, 13 (11 boys and 2 girls) had one or more sex offense arrests or child welfare perpetration reports. The sex offenses reported included (a) lewd molestation ($n = 4$); (b) sexual abuse perpetration report to child welfare ($n = 4$); (c) forcible sodomy ($n = 2$); (d) indecent exposure ($n = 2$); and (e) one each of rape by instrumentation, Peeping Tom, juvenile pornography, and rape in the first degree. There were two girls who committed sexual offenses, both of which were lewd molestation.

Treatment Group Effects and Contrast With Clinic Comparisons

Sexual offenses. A Cox proportional hazards survival model (Lee & Wang, 2003) was tested comparing the CBT group with the PT group for future sex offense arrest or report survival. Initial testing of baseline variables indicated that baseline age was significantly associated with sex offense survival ($\beta = 0.59$, Wald = 6.8, $p < .01$), so age was included in the final model. Time × Group effects did not approach significance and supported the proportionality assumption. Treatment group assignment significantly predicted survival ($\beta = 2.5$, Wald = 5.1, $p < .05$), with the CBT group showing significantly better survival than the PT group. Next, the clinic comparison group was subsequently added to the analysis, and group contrasts were structured to compare each of the SBP treatment groups with the clinic comparison group. Both the overall group effect (Wald = 6.5, $p < .05$) and the contrast between the children receiving PT and clinic comparisons ($\beta = 1.3$, Wald = 4.2, $p < .05$) were significant. The contrast between the children receiving CBT and the clinic comparison group was not significant ($\beta = -0.88$, Wald = 0.65, $p = .42$). The survival functions for the three groups are shown in Table 2 and Figure 1. Because the clinic comparison group differed on gender, a series of Cox models were run testing whether gender participated in the three-group model, either as a factor or as a factor and an interaction term with grouping variables. Gender effects did not approach significance, so the final model included only age and grouping variables.

Nonsexual offenses. Nonsexual offense arrests were far more common than sex offense arrests or reports. Property offenses, drug or alcohol offenses, and probation or procedural violations were the most common. Overall, not including adjudications as a child in need of supervision or treatment, the number of nonsexual offense arrests was approximately 12 times greater than the number of sexual offense arrests or reports. The total number of arrests or reports was highly skewed, with most cases having 0 (79%), 1(11%), or 2 (3%) but with 7% of cases ranging from 3 to as many as 14 separate unduplicated events. Thus, mean numbers of overall

Table 1
Group Characteristics at Baseline

Characteristic	SBP–CBT treatment group ($n = 64$)	SBP–PT treatment group ($n = 71$)	Clinic comparison ($n = 156$)
Gender, %			
Boys*	63	60	78
Girls	37	40	22
Race/Ethnicity, %			
African American	11	9	8
White, not Hispanic	84	83	87
American Indian	3	6	3
Other	2	3	2
Age at baseline, *M* (*SD*)*	8.8 (2.0)	8.1 (1.6)	8.8 (2.0)
Family income, $, *Mdn*	15,000–20,000	15,000–20,000	—[a]
Length of follow-up in years, *M* (*SD*)*	11.5 (1.2)	11.4 (1.0)	10.0 (2.4)
CBCL total score, *M* (*SD*)	69 (11)	66 (9)	70 (9)
CBCL Externalizing score, *M* (*SD*)	67 (12)	66 (9)	69 (10)
CBCL Internalizing score, *M* (*SD*)	64 (11)	61 (11)	64 (10)
CSBI total score, *M* (*SD*)	20 (17)	19 (13)	
1–7 scale rating of sexual behavior aggressiveness, *M* (*SD*)	4.7 (1.4)	4.6 (1.5)	

Note. SBP = sexual behavior problems; CBT = group cognitive–behavioral therapy; PT = group play therapy; CBCL = Child Behavior Checklist—Parent Form; CSBI = Child Sexual Behavior Inventory.
[a] Income information not available for the comparison group.
* $p < .05$.

Table 2
Number of Future Sex Offense Arrests or Reports by Group

Group	Number of future sex offense arrests or reports							
	0		1		2		3	
	n	%	*n*	%	*n*	%	*n*	%
Children with SBP–CBT	63	98	1	2				
Children with SBP–PT	64	90	5	7	1	1.5	1	1.5
Comparison group	151	97	5	3				
Total	278	95	11	4	1	0.5	1	0.5

Note. SBP = sexual behavior problems; CBT = group cognitive–behavioral therapy; PT = group play therapy.

arrests may be misleading and survival or Poisson approaches are better suited to comparing groups.

Of all cases followed, 21% had one or more nonsexual offense arrests, not including those in need of supervision or treatment adjudications. Initial Cox proportional hazards survival models identified three factors that might participate in nonsexual arrest survival: older age at baseline ($\beta = 0.15$, Wald = 4.4, $p < .05$), male gender ($\beta = 0.68$, Wald = 3.5, $p = .06$), and CBCL Externalizing score ($\beta = 0.03$, Wald = 4.4, $p < .05$). Time × Group effects did not approach significance and supported the proportionality assumption. Group differences (CBT vs. PT vs. comparison), either singly or controlling for significant baseline factors, did not approach significance, nor were there any interactions between group and other variables that approached significance. Because several cases had multiple nonsexual offense events for which the survival analyses did not account, these analyses were rerun by means of an overdispersed Poisson regression for nonsexual arrest count outcomes, controlling for follow-up time. A similar pattern of findings was observed for age ($\beta = 0.12$, Wald = 3.7, $p = .06$), male gender ($\beta = 0.66$, Wald = 12.1, $p < .01$), CBCL Externalizing ($\beta = 0.04$, Wald = 9.3, $p < .01$), with no significant group effect (Wald = 0.72, $p = .70$).

Discussion

This study is a long-term prospective follow-up of children with SBP. The main findings from this study are twofold. First, the findings support the use of short-term, focused, educative CBT for children with SBP and their caregivers. Second, the findings dispute the assumption that a large proportion of children with SBP are destined to grow up to become adolescent or adult sex offenders. Children with SBP who were provided with short-term CBT had future sex offense rates that were both very low in absolute terms but moreover were indistinguishable from those of a comparison group of clinic children with common nonsexual behavior problems such as ADHD. After receiving short-term CBT, children's long-term risk for sex offense arrests or reports was not only significantly less than children receiving PT but was reduced to baseline, general-clinic population levels that are so low that they would be difficult to lower further. This finding is at odds with assumptions that these children pose an unusually high and difficult to manage risk for becoming future adolescent or adult sex offenders or that they require long-term, intensive, or highly restrictive treatments to reduce that risk.

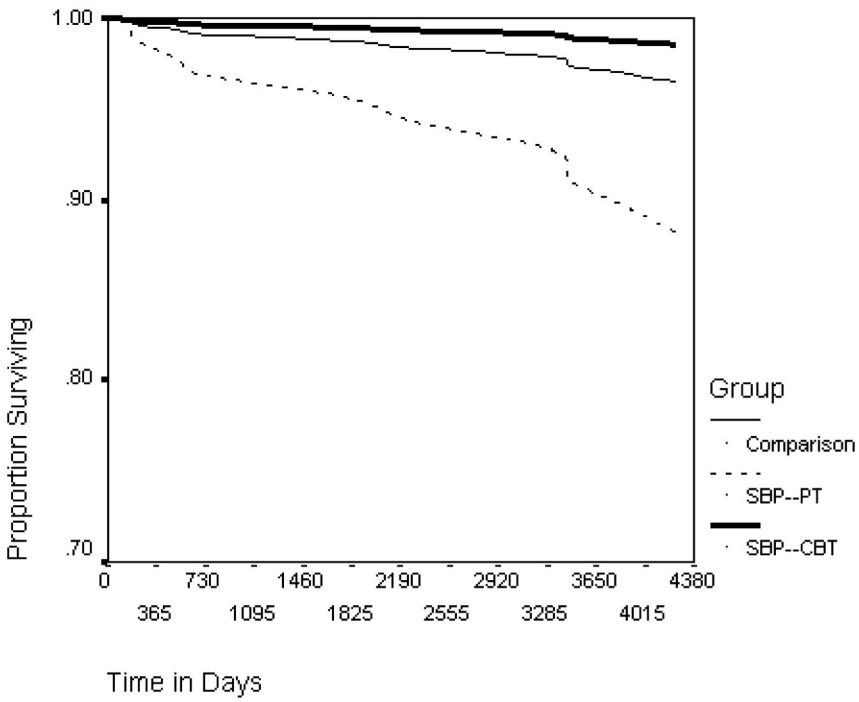

Figure 1. Survival for future sex offense arrests or reports as a function of group. SBP = sexual behavior problems; CBT = group cognitive–behavioral therapy; PT = group play therapy.

The highest rate of future sexual offenses was only 10%, for those children randomized to the PT group. This runs counter to the underlying philosophy driving some public policy as well as administrative practices of many child welfare and juvenile justice programs to maintain these youth on registries and require restrictive placement requirements (such as, routine placement in segregated, specialized, out-of-home facilities).

However, this does not imply that short-term monitoring or vigilance is unimportant. Part of the CBT treatment involved educating caregivers about the need for supervision and limiting opportunities in which SBP might occur. Reduced opportunity may have contributed to SBP reductions in the short-term. But it is unlikely that increased caregiver vigilance and supervision remained in effect through late adolescence and early adulthood, suggesting that there were enduring risk reductions derived from the overall CBT treatment beyond simply the immediate effects of limiting opportunity. We also would point out that the state in which the study was conducted does not place these children on sex offender registries, the state child welfare system does not operate a tracking system or use any special risk designation for children with SBP, and state agencies do not have specific policies for segregating these children as a class. Consequently, the low rates of future arrests and reports found could not be attributed to such policies.

Significant findings in favor of the CBT treatment group were not found in an earlier report from this trial (Bonner et al., 1999). However, the current study relied on administrative follow-up data which was collected for all the children randomized in the study, whereas the earlier follow-up relied on parent reports and used complete data only and therefore included only about a third of the total sample because of low recontact rates. Further, given the low base rate of future sex offenses in this population and the moderate sample size, it is not surprising that longer term follow-up that used the full sample was required for statistically significant treatment condition differences to emerge. Given that the proportionality assumption was supported in the Cox models, irregular treatment difference trajectories may be a less likely explanation for the difference between short-term versus long-term findings, and method differences may be a more likely explanation.

Interpretations of these findings should consider the study's strengths and limitations. This study used a prospective design, and therefore has intrinsic design advantages over retrospective data for estimating risk. To our knowledge, long-term prospective follow-up of children with SBP are rare. Replication and extension will be important. Systematic, regular follow-up of children with SBP from early childhood through early adulthood that used self-report, caregiver report, as well as administrative data would greatly enhance our knowledge about developmental trajectories for these behaviors.

Second, it is important to bear in mind that because the treatments tested were outpatient models, children with unusually severe SBP or unusually severe comorbidities may have been underrepresented in our sample. Nevertheless, we are quite familiar with the case handling practices for children with SBP in our region and believe that this number is very small. At the time children in this study were treated, the clinic operated the only treatment program for children with SBP in the region. Only 2 of 178 children referred for screening were believed at initial assessment to be too severe for outpatient treatment. Three children were removed during the study because of suicidality or severe out-of-control behavior. Participants enrolled and retained in the study included a large number of children with very aggressive behaviors, multiple comorbid problems, and family disruption. Consequently, we believe our results can be generalized to all but a small number of unusually severe cases.

Third, it was not possible to confirm how many children in the sample were still living in the state during the entire follow-up period. To the extent that children moved out of state, state-based arrest or child welfare report rates could be conservatively biased. However, this would not necessarily bias group comparisons. In addition, all cases in the sample received some sort of intervention. Consequently, long-term risk findings may not generalize to undetected cases or to cases receiving no intervention. Finally, it might be argued that official report data underestimate actual sex offense rates because sex offenses often go unreported. Although this is undoubtedly true to some extent, three aspects of the study may mitigate this concern. First, the study included data from child welfare as well as juvenile justice and adult criminal justice system databases, which is rarely done in follow-up studies of sex offenses. Use of multiple data sources increases sensitivity. Second, underreporting may have far less impact if survival data are collected across long follow-up periods. When a behavior persists over time, the probability that at least one event will be detected increases exponentially with the true number of events, and the true number of events can only increase with increased follow-up time. Third, the much higher rate of nonsexual arrests and the higher rate of sex offenses found among children receiving PT suggests that underascertainment in general cannot fully explain the very low rates of sex offenses found for the CBT and comparison groups and the consequent absence of differences between the children with SBP who received CBT and the comparison group.

In summary, the better outcomes for short-term CBT found in this study, along with the findings reported by Cohen and Mannarino (1996, 1997), Deblinger and Heflin (1996), and Silovsky, Niec, Bard, and Hecht (2005) support the use of focused, short-term CBT treatment approaches for children with SBP. These protocols are focused directly on changing SBP and include elements such as teaching children clear sexual behavior rules and self-control skills and teaching caregivers basic behavioral parenting and supervision skills. Moreover, our findings demonstrate that the benefits of short-term focused CBT can impact important policy-relevant outcomes occurring years later. The effect was specific to the focus area of the treatment (i.e., sexual behavior) rather than a broad reduction in general delinquency (e.g., nonsexual arrests). The CBT approaches demonstrated as effective in these studies should not be confused with the CBT approaches sometimes used with adolescent and adult sex offenders. The CBT treatment used in this trial, and in the Deblinger and Heflin (1996) study, the Cohen and Mannarino studies (1996, 1997), and the Silovsky et al. (2005) study were all short-term, educational treatments. They were not adaptations of adult sex offender treatment models; they did not include elements such as confrontation, arousal management procedures, requirements for detailed admission of all behaviors, or exploration of sexual fantasies; and they did not involve concepts such as cycles, grooming, compulsivity, or predation. Given that a short-term, low-burden CBT was found to reduce long-term sex offense risk to baseline general clinic

population levels, the findings raise doubts about policies and practices founded on the assumptions that these children have difficult to modify and persistent risk. These include policies such as the placement of these children on public sex offender registries, the segregation of these children, or practices involving long-term, intrusive or highly restrictive treatments on more than an occasional basis.

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