

**CHILDREN WITH SEXUAL BEHAVIOR
PROBLEMS: ASSESSMENT AND TREATMENT**

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TABLE OF CONTENTS

		Page
	Preface	
4		
I.	Executive Summary	5
II.	Statement of Problem	7
III.	Goals and Objectives	10
IV.	Methodology	14
	A. Subjects	14
	B. Assessment Measures	15
	C. Procedure	21
V.	Results	24
	1. Demographic Data	24
	2. Typology Development	32
	3. Treatment Outcome	37
VI.	Discussion	39
VII.	Problems	43
VIII.	Implications for Research and Practice	46
IX.	References	49
	Appendix	
	Table 1 Child Demographic Information	53
	Table 2 Referral Sources	57
	Table 3 Demographic Information for Biological Parents	58
	Table 4 Means and Standard Deviations for Children’s Scores on Assessment Instruments	62
	Table 5 Means and Standard Deviations for Biological Parent Ratings of Children on Assessment	69
	Table 6 Means and Standard Deviations for Biological Parent Scores on the Assessment Instruments	70
	Table 7 Means and Standard Deviations for Children’s Scores on the Assessment Instruments by Sexual Behavior Group	71
	Table 8 Means and Standard Deviations on Biological Parent	

	Ratings of Children on Assessment Instrument by Sexual Behavior Group	73
Table 9	Means and Standard Deviations on Biological Parent Scores on Assessment Instrument by Sexual Behavior Group	74
Table 10	Means and Standard Deviations for Expert Ratings of Children's Behavior by Sexual Behavior Group	76
Table 11	Pre/Post Scores for Children Completing Treatment	77
Table 12	Comparison of Pre/Post Scores by Dynamic Play and Cognitive-Behavioral Treatment Approaches	78

Preface

This research project could not have been completed without the contributions of numerous professionals and students. We want to express our appreciation to Sam Martin, Barton Turner, and Vicki Jean, for their assistance with data analysis, Catherine Hostetler and Vicki Jean for serving as project coordinators, Honora Hanly for test administration, Bill Friedrich for his invaluable contributions as a consultant, and to Brenda Gentry for her numerous retypings of this report.

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I. EXECUTIVE SUMMARY

The principal objectives of this study were to assess and treat a broad range of children ages 6-12 with sexual behavior problems in order to develop a typology and compare the efficacy of two approaches to treatment through a controlled treatment outcome study. The study was conducted at two sites, the Center on Child Abuse and Neglect at the University of Oklahoma Health Sciences Center (OUHSC) and the Sexual Assault Center at the University of Washington (UW).

Two group treatment approaches that have been found to be effective in reducing children's behavior problems, cognitive-behavioral and dynamic play therapy, were utilized as treatment interventions for the children with sexual behavior problems. Parents, foster parents, or other adult caregivers were also involved in adult groups that had a cognitive behavioral or dynamic approach.

Children with sexual behavior problems (N=201) and their caregivers were assessed for the development of the typology at the OUHSC site (N=158) and the UW site (N=43). A comparison group of children (N=52) ages 6 to 12 with no reported or known sexual behavior problems and their parents/caregivers were recruited to participate in the assessment phase of the project.

Treatment was provided at the OUHSC site and consisted of 12 one hour group sessions for children and 12 separate, one hour group sessions for their parents or caregivers.

For children who qualified for the treatment phase of the project, attendance at 9 of the 12 treatment sessions was required to be counted as a treatment subject. Of the 147

children who were eligible for treatment, 110 (75%) agreed to participate in the treatment groups and 69 (63%) of the participants completed the required 9 of 12 treatment sessions. Thirty-nine caregivers (56%) completed the follow-up assessment following the 12th treatment session, 25 caregivers (36%) completed the one-year telephone follow-up assessments, and 20 caregivers (29%) completed the two-year telephone follow-up assessment.

A typology of children with sexual behavior problems was developed utilizing a logical analysis of the referral behavior. A three group typology was developed: Group I, Sexually Inappropriate Children; Group II, Sexually Intrusive Children; and Group III, Sexually Aggressive Children. Significant differences were found between the groups on factors such as age, gender, history of physical abuse, and levels of inappropriate and aggressive sexual behavior.

Both approaches to treatment were found to be effective in reducing children's inappropriate or aggressive sexual behavior. Neither treatment approach was found to be significantly more effective than the other. At the two year follow-up, approximately equal numbers of children in each group (CBT – 15% vs. DPT – 17%) had an additional report of sexual behavior problems.

II. STATEMENT OF PROBLEM ¹

Children exhibiting sexual behavior problems are increasingly being referred for treatment. Some of these children have a history of sexual abuse; the abuse history, as well as their own inappropriate sexual behaviors, may place them at risk of becoming sexual offenders as they mature. Evidence that sexually aggressive behavior patterns may emerge in pre-adolescent years has been supported by a study conducted in the state of Washington. In this study of 73 sexually aggressive youth, 26% were children between the ages of 6 and 12 (Division of Children, Youth, & Family Services, 1987).

Although the research is minimal at this time, it is apparent that sexual behavior problems in young children exist and that these behaviors are possibly associated with the development of offending behaviors in adolescence and adulthood.

The current published literature refers to these children as child perpetrators (Johnson, 1988), children who molest (Johnson & Berry, 1989), sexually reactive children (Friedrich, 1990), and juvenile sex offenders. The term “children with sexual behavior problems” appears to be more appropriate and descriptive for two reasons. First, current knowledge about these children and the etiology of their sexual behavior is limited, and second, due to their young age, they are typically not charged with a sexual offense.

Sexual behaviors in young children fall along a continuum from age-appropriate exploration to highly aggressive sexual behaviors. Sexually aggressive behaviors in young children include forcing younger children to undress and sexually experiment with siblings and peers (e.g., Pomeroy, Behar, & Stewart, 1981; Smith & Israel, 1987).

Johnson (1989) described 13 girls ages 4 to 13, all with a history of sexual abuse whose sexual behaviors involved the use of coercion or force with an average of 3.5 child victims. Two studies

¹ This section reflects the current state of the literature in 1991.

on sexually aggressive boys indicated that their behaviors are similar to older sex offenders and that these boys all used coercion to gain the victims' compliance (Friedrich & Luecke, 1988; Johnson, 1988). Inappropriate or aggressive sexual behaviors have been reported more frequently in sexually abused children; the history of sexual abuse discriminates them from normal, physically abused, and psychiatric child populations (Friedrich, Beilke, & Urquiza, 1987; Gale, Thompson, Moran, & Sack, 1988; Goldston, Turnquist, & Knutson, 1989; Kolko, Moser, & Weldy, 1988).

Currently, there is a paucity of information on treatment approaches specifically designed to address sexually aggressive behaviors in young children. Johnson and Berry (1989) described a group treatment program with activities focused on cognitive and affective dimensions, while another approach used the cycle of reoffense model which teaches the children to recognize and avert the cycle (Isaac, 1990). Neither study has treatment outcome data available at this time.

Although the literature focuses on children with significant sexual behavior problems, these behaviors appear to fall along a continuum from normal sexual behavior to inappropriate sexual behavior to sexually aggressive behavior. A classification system for problematic sexual behaviors in children has been proposed which delineates three levels of disturbance: precocious, inappropriate, and coercive sexual behaviors (Berliner, Manaois, & Monastersky, 1986). These three levels are described below:

1. Precocious sexual behavior involves behaviors such as oral-genital contact or intercourse between pre-adolescents with no evidence of force or coercion. This behavior may be a temporary, unsocialized response to victimization or a response to exposure to sexually explicit behavior. It may cease upon disclosure, increased supervision, or therapeutic intervention. These children should have further assessment to determine the necessity and level of appropriate intervention.

2. Inappropriate sexual behavior includes persistent and/or public masturbation, excessive interest or preoccupation with sexual matters, and highly sexualized behavior or play. These children may be in the incipient process of developing a deviant sexual arousal pattern. Intervention for these children would depend on the frequency, persistence, and consequences of the behavior.

3. Coercive sexual behavior refers to sexual acts in which force is used or threatened, or where a significant disparity in development or size exists. These children may engage in sexually aggressive behavior in conjunction with other antisocial activity. The sexual behavior may be more reflective of anger and hostility than a search for gratification. Children with coercive sexual behavior are seen as requiring immediate, intensive intervention.

In summary, the literature on children ages 6 to 12 with sexual behavior problems is quite limited. There have been no studies of large numbers of these children in order to assess the existence of a continuum of inappropriate sexual behavior and few attempts have been made to establish a typology. Additionally, there has been no clear relationship established between early childhood sexual victimization and the development of sexually aggressive behavior in children. Further, there are no empirical studies comparing different approaches to treatment with this population of children.

III. GOALS AND OBJECTIVES

This study was designed to (a) assess a large number of children ages 6 to 12 with sexual behavior problems in order to develop a continuum of problematic sexual behaviors in this age group, (b) suggest a typology for children with sexual behavior problems, and (c) compare the efficacy of two approaches to treatment for children with sexual behavior problems through a controlled treatment outcome study. The study was conducted at two sites to increase the generalizability of the findings:

- 1) Center on Child Abuse and Neglect, Department of Pediatrics, University of Oklahoma Health Sciences Center in Oklahoma City, Oklahoma (OUHSC), and
- 2) The Sexual Assault Center, Harborview Medical Center, University of Washington in Seattle, Washington (UW).

The project was designed in three phases. Phase one (1991-92) encompassed the first year of the project. During this time, the following activities were accomplished: (a) the grant was established within the OUHSC and the UW systems; (b) the Institutional Review Board requirements for recruiting and testing subjects and obtaining informed consent from the participants were met at OUHSC and UW; (c) the Project Coordinator was hired and trained in the testing protocol; (d) therapists were hired for the children's and parents' groups; (e) individual test packets were created in which the tests were administered in random order; (f) the Principal Investigators met with professionals at various agencies and organizations to establish the referral process; (g) children and caregivers were recruited and assessed; (h) the manuals for two approaches to group treatment were developed for pilot testing; and (i) the two treatment protocols were pilot tested.

The assessment of subjects for the typology and of comparison subjects was conducted at OUHSC and UW in order to assess a broader range of children. All treatment groups for

children and the caregivers were conducted only at OUHSC to ensure standardization of the treatment approaches.

Phase two (1993-95) included years two through four of the study. During this period, the following activities were accomplished: (a) based on the pilot groups, the treatment manuals were revised; (b) 16 groups of children and their caregivers were assessed and randomly assigned to one of the two treatment groups (8 groups per treatment approach); (c) 52 comparison subjects and their caregivers were assessed at OUHSC and UW; (d) the treatment manuals for replication of the twelve treatment sessions were finalized; (e) data entry files were established and preliminary data analyses were conducted; (f) immediate, one-year, and two-year follow-up evaluations of the children completing at least 9 of 12 sessions were conducted; and (g) preliminary findings were presented at 6 local, 17 national, and 4 international conferences.

During the final phase of the project (1996-98), the following activities were accomplished: a) follow-up assessments of children attending 9 of 12 treatment sessions were completed; b) data entries were verified and final analyses were computed; c) news releases were prepared and submitted for publication; d) the treatment manuals were readied for distribution; e) presentations were conducted at 12 local, 14 national, and 7 international conferences; f) a book contract on the project was finalized with Sage Publications; g) the initial drafts were developed for three articles on the project to be submitted for publication; and h) the final report was submitted to the National Center on Child Abuse and Neglect.

The results of this research project will have significant benefits for children with sexual behavior problems, their potential victims, parents/caregivers of children and their victims, and mental health professionals who provide treatment for these children. By assessing a large number of children with and without sexual behavior problems, a greater understanding of the children's problems has been obtained, a continuum of their inappropriate or aggressive sexual

behaviors has been documented, and the efficacy of two different treatment approaches has been established.

Benefits for the children and parents involved in the study included: reducing the children's inappropriate sexual behaviors, increasing their self-esteem, and improving the parent-child relationships. These benefits should generalize to the child's school environment and to the child's relationships with peers and other family members. The project will have significant benefits for the mental health, child welfare, and possibly the juvenile justice systems who deal with these children.

The development of a typology of children with sexual behavior problems will be useful in determining the level of intervention necessary for a particular child. Conducting a carefully controlled study that compares two approaches to treatment, as well as the development of treatment manuals that outline and explain the rationale for procedures used in the group programs, will have long-term benefits for mental health professionals in planning effective treatment programs for these children. The treatment manuals are specific and non-technical so that replication can be easily implemented. All materials developed by this project are prepared in a format that will ensure maximal distribution and utilization.

This project addressed the following hypotheses:

1. Three specific categories of childhood sexual behavior (precocious, inappropriate, and coercive) will be derived by applying a cluster analysis to data obtained from the psychological assessment. Additionally, assessment techniques will distinguish between children who demonstrate aggressive sexual behavior and children who exhibit other types of aggressive behavior.
2. Children who receive highly-structured cognitive behavioral group therapy will show greater movement toward more normal, positive behaviors. Those

behaviors include an increase in self-esteem and a decrease in the frequency of inappropriate sexual behaviors. Children who receive the dynamically-oriented group therapy will show less, but some, movement toward normal behavior.

3. Children who receive highly-structured cognitive behavioral group therapy will show a greater reduction in inappropriate sexual behaviors than those receiving dynamically-oriented group therapy.
4. Children who receive highly-structured cognitive behavioral treatment group therapy will show a lower rate of repeated inappropriate or aggressive sexual behavior than those receiving dynamically-oriented group therapy.
5. The cognitive behavior therapy will maintain more positive changes in outcome measures over a 24-month follow-up period.

IV. METHODOLOGY

A. Subjects

Children ages 6-12 with and without sexual behavior problems and their parents/caregivers participated in this study. Two hundred eighty-three ($N=283$) children and their caregivers were assessed for this project. Thirty children did not meet criteria for inclusion in the study. Of the remaining 253 children, 201 were children with sexual behavior problems (158 assessed at OUHSC and 43 assessed at UW); the remaining 52 children had no known sexual behavior problems and served as a comparison group (31 assessed at OUHSC and 21 assessed at UW).

The children with sexual behavior problems (CSBP) were referred for assessment and/or treatment by Child Protective Services (CPS) caseworkers from the Oklahoma and Washington State Departments of Human Services, law enforcement, physicians, foster parents, school personnel, other mental health professionals, and parents.

Although a research project such as this is strengthened by the inclusion of a control group, i.e., children ages 6 to 12 who had sexual behavior problems but did not receive treatment, it was determined to be unadvisable or unethical to withhold or delay treatment for this population of children. Therefore, a group of children ages 6 to 12 who had no known or reported sexual behavior problems and their parents/caregivers was recruited to serve as a comparison group for the study.

The comparison group (CG) was composed of children ages 6 to 12 and their parents or caregivers who (1) were self or agency referred for assessment, (2) had no known inappropriate sexual behavior, and (3) were fluent in the English language. These children were referred by CPS caseworkers, parents, foster parents, and other mental health professionals.

All children and caregivers gave informed, written assent and consent for assessment, treatment, and videotaping that met OUHSC and UW Institutional Review Board guidelines. Following the assessment, children who agreed to participate were referred to the treatment program at OUHSC. Children and caregivers who did not agree to participate in the study were referred for therapeutic services at OUHSC, UW, or to other community agencies. [Note: At the UW site, only the assessment process was explained as the treatment groups were conducted at the OUHSC site.]

In order to participate in the treatment program for children with sexual behavior problems, children had to be (a) referred for inappropriate sexual behavior, (b) between the ages of 6 and 12 at the time of treatment, and (c) fluent in the English language. Exclusionary criteria included: (a) a global intelligence quotient less than 68, or (b) significant psychological or behavior problems that hindered their ability to function in a group setting.

B. Assessment Measures

The 201 children with sexual behavior problems and the 52 children without sexual behavior problems and their parents/caregivers completed a battery of questionnaires and standardized tests in order to assess their affective and behavioral problems, cognitive ability, sexual behavior problems, and family functioning.

Data were also collected by child self-report, caregiver report, reports from the referral sources, and records obtained through the Oklahoma and Washington Department of Human Services. The test battery required 3.5 to 4.5 hours to complete; due to the length of administration and the sensitive nature of some questions, the children did not always complete the entire test battery. Breaks for refreshments and play were provided, as necessary, to ensure that the child was able to complete as many test items as possible. Children were not required to answer any questions that appeared to cause them distress; the instruments most frequently not

completed included the Rorschach, the PTSD Symptom Scale, and the Family Environment Scale (see descriptions below).

The complete battery consisted of the following instruments:

1. Child Evaluation

a. General Intelligence

The Kaufman Brief Intelligence Test (K-BIT) (Kaufman & Kaufman, 1990). The K-BIT is an individually administered screening device that provides three IQ scores: vocabulary (verbal), matrices (non-verbal), and composite (global) as well as a categorical descriptor (e.g., below average, average). This test was used to assess the child's intelligence level and was utilized as one indicator of his/her ability to participate in the group therapy sessions.

b. Overall Psychopathology and Adjustment

The Child Assessment Scale (CAS) (Hodges, Stern, Cytryn, & McKnew, 1982). The CAS is a 226-item structured interview developed for the assessment of school-age children in clinical or research settings. The instrument is tied to the DSM-III-R and provides a standardized diagnosis. Abnormal responses are summed across the 226 items for a general pathology score and subscales are generated that provide assessments of depression, anxiety and fear, self-image, conduct disorders, and somatic complaints.

The PTSD Symptom Scale, Interview Form (PTSD) (Dancu, Riggs, Rothbaum, & Foa, 1991). The PTSD is a 17-item self-report measure used to obtain or rule out a diagnosis of PTSD based on the DSM-III-R diagnostic criteria for PTSD. It was developed for use with adults but has been used with children; for this administration, it was added at the end of the CAS questionnaire.

The Rorschach Inkblot Test (Rorschach, 1942). The Rorschach Inkblot Test is a standardized projective measure designed to explore an individual's personality by

systematically studying the person's responses to a stimulus. All Rorschach test batteries were scored by one clinician trained in the Exner (1978,1986) scoring system.

Draw a Person (DAP). Children were instructed to "draw a person" on a blank sheet of paper with no additional instructions. After the child completed the first drawing, the child was asked whether it was a boy or a girl. Then a clean sheet of paper was presented to the child and he/she was asked to draw a person of the opposite gender. The child was asked whom each picture represented and was asked to identify any unusual markings or depictions. The pictures were judged on two criteria: presence of sexual parts and immaturity of drawing by the Principal Investigator, Barbara L. Bonner, PhD.

c. Sexual Behavior

The Child Sexual Behavior Inventory, Version 2 (CSBI-2) (Friedrich, Beilke,& Purcell, 1989). The CSBI-2 is a 35-item instrument completed by a parent or caregiver to determine the presence and intensity of a range of sexual behaviors in children ages 2 to 12 over a six-month period. The instrument assesses the child's sexual behaviors on a continuum ranging from mild to aggressive and provides separate clinical scores based on the child's age and gender. This instrument is the only checklist created to specifically assess sexual behavior problems in children ages 6 to 12. Studies conducted by Friedrich et al. (1991) have indicated that sexually abused children differ from non-abused children on critical items as well as on the total sexual behavior score, with sexually abused children showing significantly higher scores.

d. Behavior Problems and Social Competence

Child Behavior Checklist-Parent Form (CBCL) (Achenbach, 1991). The CBCL is a 134 item standardized checklist of childhood behavior problems and social competence that is completed by the parents or caregivers. The CBCL measures factors such as depression, somatic complaints, hyperactivity, sexual behavior, aggressiveness, and delinquent behavior as

reported by the parent. The CBCL also provides subscales for total, externalizing, and internalizing behavior problems. This instrument has been used in numerous studies of the effects of sexual abuse.

Behavior Change Rating Scale (BCRS). This instrument was based on Goal Attainment Scaling and was completed by the parent or caregiver. The parent reported the three specific misbehaviors that were of greatest concern to them, with at least one misbehavior being sexual in nature. The parents reported the date the misbehavior was first observed as well as the frequency of the behavior on a weekly basis. The parents were also asked to report three specific prosocial behaviors that they would like their child to exhibit on a weekly basis and the current frequency of that behavior. These indices were to be used as baseline rates of behavior for the immediate, one-year, and two-year follow-up assessments conducted after the conclusion of the treatment program. However, this proved to be problematic as the project PIs and consultants were not able to find a suitable scoring system to weight the behaviors in a standardized manner. Analysis of these data, therefore, are not included in the present report but will be addressed in future reports.

e. Affective Problems

Revised Children's Manifest Anxiety Scale (RCMAS) (Reynolds & Richmond, 1985). The RCMAS is a 37-item inventory that assesses a variety of anxiety symptoms. Three factor scores and a validity score are obtained to detect a social desirability response bias. Reliability and validity studies indicate that the instrument may act as a satisfactory measure of chronic anxiety.

f. Self-Concept

The Self-Perception Profile for Children (SPPC) (Harter, 1985). The SPPC is a 36-item structured alternative format measure of self-concept including competence and self-adequacy for children ages 8 through 13. The instrument provides subscales of scholastic competence, social acceptance, athletic competence, physical appearance, behavioral conduct, and global self-worth.

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPC) (Harter & Pike, 1983). The PSPC is a 24 pictorial assessment of self-reported self-concept for children ages 5 through 7. This assessment provides subscales of cognitive competence, physical competence, peer acceptance, and maternal acceptance.

g. Family Functioning

The Child Version of the Family Environment Scale (CVFES-C) (Pino, Simmons, & Slowksi, 1984). The CVFES contains 30 items with 3 items for each of 10 dimensions. Children's perceptions of family functioning are assessed through pictorial representations of three differing interactions between mother, father, and children. Children rate their families on subscales encompassing cohesion, expressiveness, conflict, independence, achievement, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis, organization, and control. The subscale t-scores are used to obtain a categorical description of the child's perception of the family based on a hierarchical system. These criteria should be able to characterize approximately 90% of families.

2. Parent/Caregiver Evaluation

a. Psychological Status

The Brief Symptom Inventory (BSI) (Derogatis, 1991). The BSI is a shortened version of the Symptom Checklist 90-Revised (Derogatis, 1983). This 53-item self-report measure provides

nine primary symptom dimensions and three global indices of distress. T-scores equal to or greater than 70 are considered clinical. Scores obtained on the BSI correlate significantly with the clinical and content scales of the MMPI.

b. Level of Stress

The Parenting Stress Index (PSI) (Abidin, 1983). The PSI is a 120-item self-report instrument designed to measure the relative degree of stress in a parent-child system and to identify the sources of distress. Three major sources of stress, characteristics of the child, characteristics of the parent, and situational-demographic life stress, are assessed by the instrument.

c. Attitude Toward the Child

The Index of Parental Attitudes (IPA) (Hudson, 1982). The IPA is a 25 item self-report instrument that measures the degree of contentment that the parent or caregiver has regarding the relationship with their child. The parent or caregiver rated each item on a 7-point Likert-type scale indicating the frequency of their subjective feelings about the child.

d. Family Functioning

The Family Environment Scale Form R (FES-R) (Moos & Moos, 1981). The FES-R is a 90-item true-false instrument that measures the social-environmental attributes of various kinds of families or the perception of family members about their family. The FES assesses three dimensions of family functioning: relationships, personal growth, and system maintenance based on ten different subscales. The subscales assess levels of: cohesion, expressiveness, conflict, independence, achievement, intellectual-cultural orientation, active recreation, moral-religious emphasis, organization, and control. Subscale t-scores are used to obtain a categorical description of the adult's perception of the family based on a hierarchical system. These criteria should be able to characterize approximately 90% of families.

e. The Demographic Questionnaire (Bonner, Walker, & Berliner, 1991). This measure was developed for this study and assesses the demographics, employment status, income, substance abuse and use, adult and child abuse histories, as well as behaviors observed in the child before and after the target date (the date at which the inappropriate sexual behavior was first observed).

C. Procedure

1. Children with Sexual Behavior Problems

The children and caregivers were referred for assessment and/or treatment to the two sites (OUHSC and UW) through professional and self-referral. Various professionals referred the children, including child protection service workers, physicians, mental health professionals, and teachers. The project was discussed initially by phone with the parent/caregiver by the project director. This was to inform the adult about the research aspects of the project, to determine if the child met the criteria for inclusion in the treatment or comparison group, and answer any questions the parent might have. If the parent or caregiver was willing, an appointment was scheduled for an assessment session for the child and adult.

At the assessment session, the project was again explained to the parents/caregivers and the children, including the assessment process, the random assignment to treatment, the time limited group treatment approach, and the two-year follow-up period. Written consent (child) and consent (adult) forms were explained and signed by all participants. The children and caregivers completed the instruments and measures described above. The assessment session lasted from 3.5 to 4.5 hours, depending on the child's ability to attend and complete the measures.

If the child met criteria for treatment, the child and parent/caregiver were randomly assigned to the Dynamic Play Treatment (DPT) group or the Cognitive Behavioral Treatment (CBT) group. If there was more than one child in the same family who met criteria, they were randomly assigned together to avoid the parents/caregivers participating in both treatment approaches.

The groups were 12 sessions scheduled one hour weekly for the children followed by a one hour session for the parents. The therapists were a male and female doctoral level psychology student or post-doctoral psychologists. The same male/female pair conducted the children's and parent's groups, i.e., two therapists conducted the CBT groups and two different therapists conducted the DPT groups.

The groups met on different evenings of the week in the same rooms at Children's Hospital of Oklahoma. While the parents were in their session, the children were in two adjoining rooms for a one hour free play period. They were closely supervised by two female undergraduate psychology students. For example, they were escorted to and from the restrooms or drinking fountain; the children were directly supervised at all times to prevent any inappropriate behavior occurring at the treatment site. The two principal investi-

gators at OUHSC (Bonner and Walker) reviewed the weekly videotapes and provided weekly supervision for the therapists. (A complete description of the CBT and DPT children's and parent's groups can be found in the attached manuals.)

At the final treatment session in both groups, the parents were asked to complete the post treatment instruments. If the children needed additional treatment, this was discussed and referral sources were given to the parents/caregivers.

At one and two years post-treatment, the parents/caregivers were contacted by phone to

assess the child's current level of functioning and to obtain information on any sexual behavior problems post treatment.

2. Comparison Group Children

The assessment session for these children was conducted in the same manner as described

above. Following the assessment process for these children, a session was scheduled to provide information to the caregiver about the results of the testing and to provide referral sources for any suggested follow-up for the children.

V. Results

All data analyzed in connection with this final report are presented in Tables 1-12 which can be found in the Appendix. Selected results are presented and discussed in the following four sections. The first section describes the demographic data on a) the children with sexual behavior problems (CSBP; $N=201$) and the comparison group (CG; $N=52$) as completed by the 253 parents/caregivers, and b) demographic data on the biological parents of the two groups. The other three sections present information on the assessment, the development of the typology, and treatment outcome.

A. Demographic Data

1. Children*

The 201 children with sexual behavior problems referred for assessment included 126 (63%) boys and 75 (37%) girls. By age, this included 29 boys and 33 girls at age 6, 36 boys and 11 girls at age 7, 22 boys and 12 girls at age 8, 10 boys and 11 girls at age 9, 9 boys and 4 girls at age 10, and 20 boys and 4 girls at age 11. The average age of the children with sexual behavior problems was 7 years, 8 months.

The children's race reflected the populations of Oklahoma and King (WA) counties. The participants included 154 (76.6%) Caucasian children, 24 (12%) African-American children, and 10 (5%) Native American children. Another 11 (5%) children were Hispanic, Pacific Islander, or Asian, and 5 (3%) did not answer the item (See Table 1). Almost 60% ($n=120$) of the children had a history of receiving mental health counseling in the past.

*It should be noted that all totals do not equal 201 due to missing data on some items.

The children's history of abuse, including physical, sexual, emotional, and neglect, was primarily assessed through parental/caregiver or caseworker report. To check for additional

incidents that were not known or reported by the parents, two additional measures were utilized: a) a subset of children was directly interviewed regarding possible incidents of abuse or neglect, and b) a review of Oklahoma Child Protective Services records was conducted. No additional reports of abuse were obtained from these sources.

Of the 201 children with sexual behavior problems, a total of 119 (59%) had a reported history of maltreatment, including physical abuse, sexual abuse, emotional abuse, and/or neglect; this included 64 (51%) of the 126 boys and 55 (73%) of the 75 girls. Of the total sample of 201 children, 64 (32%) had a reported a history of physical abuse, 97 (48%) sexual abuse, 70 (35%) emotional abuse, and 33 (16%) neglect. (These figures total more than 201 as 77 children were reported to have experienced multiple forms of abuse.) In this sample, 51 (25%) reported no history of abuse and 31 (16%) did not answer the item. In summary, of the 201 participants, 119 (59%) of the children (64 boys, 55 girls) with sexual behavior problems had experienced at least one form of abuse or neglect and 97 (48%; 49 boys, 48 girls) had a reported history of sexual abuse.

It should be noted that 104 (52%) of the 201 children with sexual behavior problems were not reported to have experienced sexual abuse, and 82 (41%) had no reports of any form of abuse or neglect. Only one child disclosed a history of abuse or neglect during the treatment phase of the project that was not known previously. This incident was reported by a member of the project staff and was investigated and substantiated by the Oklahoma Department of Human Services.

The comparison group (CG) ($N=52$) were children ages 6 to 12 with no reported sexual behavior problems. The group was comprised of 25 children (9 boys, 16 girls) who had reported histories of abuse or neglect and 27 children (15 boys, 12 girls) with no reported history of maltreatment. Overall, 48% of the comparison group had a reported or substantiated abuse or

neglect history. Of this sample of 52 children, 10 (19%) had a reported history of physical abuse, 16 (31%) sexual abuse, 10 (19%) emotional abuse, and 8 (17%) neglect. The children's race was less reflective of Oklahoma (OK) and King (WA) counties, having 33 (63%) Caucasians, 11 (21%) African Americans, 2 (4%) Native Americans, and 5 (10%) Hispanic, Pacific Islander, or Asian. The average age of the comparison group was 8 years 5 months; this is statistically different from the CSBP group, although the average age is only six months more than the CSBP group.

The children with sexual behavior problems (CSBP; $N=201$) were compared on demographic items to the comparison group (CG; $N=52$) who had no reported sexual behavior problems. The significant differences between the groups are listed below. (For a complete review of the demographic data on the two groups as reported by the parents/caregivers, see Table 1 in the Appendix.)

1. Age: The CSBP group was significantly younger than the CG group ($p = .05$).
2. Gender: There were significantly more males in the CSBP group ($p = .05$).
3. Race: The CSBP group had significantly more Caucasians and fewer African Americans ($p = .05$).
4. History of sexual abuse: More children in the CSBP group had a history of sexual abuse ($p = .001$).
5. Age at which emotional abuse and neglect occurred: The CSBP group was significantly older when both forms of abuse were reported to have occurred ($p = .05$).
6. Behavior problems at school: Children in the CSBP had significantly more problems at school ($p = .05$).
7. Witnessing human sexual behavior: Significantly more children in the CSBP group had witnessed human sexual behavior ($p = .05$).

8. Parental divorce: Parents of CSBP children had higher rates of divorce ($p = .05$).
9. Experiencing death in family: CSBP children were significantly more likely to have had a member of their immediate family die ($p = .05$).

There was a significant difference between the history of sexual abuse in the CSBP and CG children, with 48% of CSBP vs. 31% of CG having a reported history of sexual abuse. No significant differences were found between the two groups on having a history of physical abuse, neglect, or emotional abuse. Overall, 48% of the comparison group had a reported or substantiated abuse or neglect history, which is not significantly different from the rate for children with sexual behavior problems (59%).

The children with sexual behavior problems were referred for assessment and treatment from a variety of sources, including other mental health professionals and agencies ($n=71$; 35%), Oklahoma and Washington Departments of Human Services ($n=39$; 20%), school personnel ($n=15$; 8%), foster care ($n=13$; 6%), local advertisements ($n=4$; 2%), the legal system ($n=4$; 2%), physicians ($n=4$; 2%), and other sources ($n=6$; 3%); no information was available on some children ($n=45$; 22%). The two leading referral sources for the comparison group were the Department of Human Services ($n=12$, 23%) and foster care ($n=7$, 13%) (See Table 2).

2. Biological Parents

This section will describe data only on the biological parents due to the varying amounts of time that foster parents and other caregivers had cared for and observed the children. The adults who accompanied the children with sexual behavior problems to the assessment included 136 (68%) biological parents, 27 (13%) foster parents, and 31 (15%) other adults such as grandparents, stepparents, adoptive parents, and kinship caregivers; 7 (4%) did not answer the item.

A total of 136 biological parents of children with sexual behavior problems completed the instruments in the assessment phase of the project. This included 113 (83%) females and 21 (16%) males; 2 (1%) did not answer the gender item. The current marital status of the CSBP biological parents was quite varied, including 20 (15%) in their first marriage, 33 (24%) divorced, 39 (29%) in a second marriage, 15 (11%) who had not been married, 12 (9%) who were separated, 13 (10%) living with a significant other, 3 (2%) who were widowed, and 1 who did not answer the item. The average age of the adults answering this item ($n=131$) was 32 years. The average number of years the adults ($n=135$) had known the child was 7 years, 7 months, and the average years of their education was 12 years, 2 months.

The ethnicity of the 136 biological parents was 116 (85%) Caucasian, 11 (8%) African American, 4 (3%) Native American, 3 (2%) Hispanic, Asian, and Pacific Islander, and 2 (2%) did not respond. Of the 136 parents, 69 (51%) reported a history of physical abuse, 68 (50%), had a history of sexual abuse, 77 (57%) emotional abuse, and 12 (9%) had experienced neglect. Almost 38% ($n=52$) reported witnessing violence as a child. Overall, 96 (71%) of the biological parents reported a history of abuse or neglect with 73 (54%) reporting multiple forms of abuse. Sixty-nine (51%) of the CSBP biological parents had received mental health counseling, 11 (8%) had received substance abuse treatment, and 39 (29%) reported that they were using drugs at the time of intake. The biological parents had an average of 2.1 children, with a range of one to six children. In this group, 78 (57%) were employed with a median family income of \$17,500 per year.

The 31 biological parents in the comparison group (CG) included 28 (90%) females, and 3 (10%) males with an average age of 32 years, 1 month. They had known the child an average of 8 years, 5 months and had an average of 12 years, 6 months of education.

The current marital status of the CG parents was also varied, with 11 (35%) in their first marriage, 10 (32%) divorced, 4 (13%) in a second marriage, 1 (3%) who had never been married, 3(10%) separated, and none living with a significant other or widowed; 2 (5%) did not answer the question. The ethnicity of the biological CG parents was 25 (81%) Caucasian, 2 (6%) African American, and 2 (6%) Hispanic and Pacific Islander. Almost 23% ($n=7$) reported witnessing violence as a child. The abuse history of the CG biological parents was similar to the parents in the CSBP group, as 19 (61%) of the parents reported at least one form of abuse. Of the 31 parents, 13 (42%) reported physical abuse, 13 (42%) sexual abuse, 14 (45%) emotional abuse, and 2 (6%) neglect.

Similar to the CSBP parents, 52% ($n=16$) had received mental health counseling, and 5 (16%) had been in treatment for substance abuse treatment. Seven parents (23%) reported using drugs at the time of intake; the other 22 parents (71%) did not answer the item. The CG parents had an average of 1.9 children with a range of one to four children. Twenty (65%) of the parents were employed with a median annual income of \$22,500 per year.

The biological parents of the two groups were compared on a series of demographic items. The significant differences are listed below (see Table 3).

1. Number of years known child: The CG parents had known the child significantly longer as the children in this group were significantly older (8.4 years vs. 7.7 years) than the children in the CSBP group ($p = .05$).
2. Marital status: The CG is significantly more likely to be married to their first spouse than the CSBP group ($p = .05$).
3. Family income: The CG group has significantly more parents in the \$40,000+ range than the CSBP group ($p = .05$).

B. Assessment Results

1. Child Reported Information

The 253 children were given a battery of instruments to assess their current level of intelligence, behavior, affect, self-perception, and view of the family environment (See Table 4). There were no significant differences in the CSBP and CG on intelligence or self-esteem measures; both groups scored in the normal range of intelligence and reported mid-to-high levels of self-esteem.

Other measures indicated significant differences between the two groups of children. Children with sexual behavior problems reported significantly higher levels of anxiety, post-traumatic stress, ADHD, oppositional and conduct disorder, depression, and dysthymia. In general, the CSBP children reported significantly more problems with school, friend, activities, physical complaints, and in their families.

There were also significant differences between the two groups of children on the Rorschach. (It should be noted that this was the most frequently refused instrument in the battery.) The differences were generally consistent with and reflective of the groups of children that were evaluated. The CSBP group showed higher levels of intensity and lack of modulation in their outbursts, were less interested in people, more avoidant of affect, less likely to anticipate that people would be cooperative, and more likely to view the world as aggressive.

2. Biological Parent Reported Information

The biological parents of the two groups completed two instruments that provided information on the child's behavior, affect, social and school competence, personal living skills, and level of sexual behavior. There were numerous significant differences between the two groups that are similar to those reported by the children themselves (see Table 5). The CSBP children were found to be significantly higher in levels of overall problems in behavior, affect,

and sexual behavior. (It should be noted that the CSBP children's average scores on the CBCL fell into the at-risk as opposed to the clinical range.)

In addition, the parents completed instruments assessing their own current symptomology, the family environment, the level of their stress related to parenting and their life in general, and their attitude toward the child (See Table 6). The results indicate that there were no significant differences between the groups of parents in current symptoms or their views of their families. There were, however, numerous differences in their levels of stress. Parents of CSBP children reported significantly more stress in 11 of the 17 categories assessed. It appears that parenting a child with sexual behavior problems causes significant stress to the adult. This difficulty is also reflected in the parental attitude toward the child as parents of CSBP children reported significantly less positive attitudes toward their children.

C. Typology Development

The original data analysis strategy called for developing clinically useful subcategories of children with sexual behavior problems by subjecting data gathered on the children in this experiment to cluster analysis. Using the SPSS Cluster procedure, several attempts were made to derive clusters from the data from the 201 children referred for sexual behavior problems.

Various combinations of scales and demographic data were employed in these clustering attempts. In keeping with the goals of the project, data selected for the cluster analyses concentrated primarily on measures of inappropriate and aggressive behavior, particularly with respect to sexual behavior. None of the cluster analyses yielded stable clusters that appeared to have clinical relevance or utility.

Examination of the variables available for use in generating the clusters revealed that there were very few variables dealing explicitly with the children's sexual behavior and virtually none that dealt with aggressive sexual behavior in children. Therefore, the failure to obtain useful clusters was thought to be due to the fact that suitable scales for assessing this behavior were not available. (It should be noted that although the Child Sexual Behavior Inventory (CSBI-Version 2) measures sexual behaviors and differentiates sexually abused children from non-sexually children, this version does not contain highly aggressive sexual behavior items and, thus, did not subtype children in this study based on the severity of their sexual behavior.)

In order to further clarify the nature of the behavior for which children were referred, the referral behaviors were rated on two scales by five selected mental health professionals who were experts in child behavior and had considerable experience in working with children with sexual behavior problems (Mark Chaffin, PhD, Eliana Gil, PhD, Laura Merchant, MSW, Robert Wheeler, PhD, and Anthony Urquiza, PhD). The referral behaviors for each child were typed on a separate sheet of paper, along with the child's sex and age. These were submitted to the experts who were asked to rate each case on two 7-point Likert scales. One scale dealt with the degree of appropriateness vs. inappropriateness of the behavior. The other scale was constructed to determine the degree of aggression in the behaviors reported. Reliability of these ratings was determined to be adequate. A reliability coefficient of .91 was obtained for the overall reliability of the ratings using the Cronbach Alpha technique. However, inclusion of these scales in additional attempts at cluster analysis was unsuccessful.

While the attempts at cluster analysis were unsuccessful due to the lack of reliable and valid scales measuring the dimensions of behavior necessary to produce meaningful clusters, familiarity with the data suggested that there were distinctions to be made among the children in

this study. This led to an attempt to classify the subjects based on the manifest behavior present in the referral information given at the time they entered the project. This is very similar to strategies used by other sex researchers including Kinsey and his colleagues. Examination of the content of the referral behaviors indicated that they could be divided into three groups:

Group I, Sexually Inappropriate Children, represented behaviors in which there was inappropriate sexual behavior but no contact with another person. These behaviors included making sexual remarks, gestures, touching or exposing one's self, and so forth.

Group II, Sexually Intrusive Children, was composed of behaviors in which the child made sexual contact with another person in an inappropriate manner, but did so only briefly. Behaviors in this group included individuals who ran up to another child and grabbed the child's genitals after which they would retreat and run away; rubbing against another person in a sexually provocative manner; briefly fondling another person but stopping when the other person indicated displeasure; and similar behaviors.

Group III, Sexually Aggressive Children, involved behaviors in which there was significant or prolonged contact resulting in completion of a sexual act such as oral sex, vaginal or anal penetration, mutual masturbation, and similar behaviors. In most instances, the behaviors in Group III were implicitly and/or explicitly coercive or aggressive.

Two of the Principal Investigators (BLB & CEW) served as expert judges and independently sorted the actual cases in the sample into the three predetermined categories based on the referral behaviors. Examination of these sorts indicated an initial agreement rate of 88% regarding classification of subjects into one of the three groups. At this point, the two judges met to examine and discuss those cases in which there was disagreement. This led to clarification of the criteria as to what constituted minimal contact versus full contact. Following this, the cases in question were independently resorted by each of the judges. There was 98%

agreement on classification of the cases following clarification. Cases in which disagreement continued to exist following clarification were classified by discussion and consensus by the two judges. At the completion of this classification process, it was found that Group I, Sexually Inappropriate children, contained 40 cases, 23 males and 17 females; Group II, Sexually Intrusive children, contained 74 cases, 39 males and 35 females; and Group III, Sexually Aggressive children, contained 87 cases, 64 males and 23 females. These three groups are briefly described below.

Group I, ($n=40$), Sexually Inappropriate Children, was made up of 23 boys and 17 girls which is a similar distribution between the genders. These children were rated the lowest on inappropriate and aggressive behavior on the Likert Scales by the five experts. In fact, these two scales showed a step-wise progression from Group I to Group III. The Sexually Intrusive Children (Group II) were higher on these two variables than the Sexually Inappropriate Children (Group I), and the Sexually Aggressive Children (Group III) were higher than both Group I and Group II children on these two measures. In addition, Group I had higher sexual content on the Rorschach than the other groups, indicating a significant degree of preoccupation internally with sexual matters. Group I had the lowest scores on the Child Sexual Behavior Inventory, indicating the least overt sexual behavior.

These results indicate that the children in Group I are somewhat less disturbed and less sexually aggressive in their behavior as opposed to the other two groups. However, they are quite preoccupied with sexual thoughts and behave inappropriately when compared to normal children. The biological parents ($n=23$) reported that in general, the children have not experienced high levels of physical abuse (17%) or neglect (9%), but 57% of them have a reported history of sexual abuse and 30% experienced emotional abuse.

Group II, ($n=74$), Sexually Intrusive Children, was composed of 39 boys and 35 girls, again basically equivalent in terms of gender. This group was seen to have higher self-concept scores on the Harter than the children in Group III, but lower than Group I. As noted previously, these children were intermediate in the ratings of their inappropriateness and aggressiveness with respect to sexual behaviors, being higher than those in Group I but not as high as Group III. As reported by the biological parents ($n=47$), they had similar scores on the Child Sexual Behavior Inventory as Group III, indicating high levels of sexual behavior, although not specifically highly aggressive sexual behavior. The biological parents reported higher levels of physical abuse (35%) and neglect (15%) than Group I, but similar rates of sexual abuse (58%) and emotional abuse (38%).

Group III, ($n=87$), Sexually Aggressive Children, is composed of children who are significantly older and significantly more likely to be male (64 boys vs. 23 girls). They were rated as the most aggressive and most inappropriate by the five experts reviewing their referral sexual behaviors. The biological parents in this group ($n=63$) reported similar levels of physical abuse (35%), neglect (17%), and emotional abuse (40%) as Group II, but somewhat lower levels of sexual abuse (48%) than both of the other groups.

Scores on the assessment instruments for children in each of these three groups are presented by group in Table 7. It is interesting that there are few significant differences among the three groups based on data obtained by the children's self-reports. This lack of differences by group is also reflected in the biological parents' reports on the children shown in Table 8. In addition, there was only one significant difference reflected on the parents' reports of their own current status (See Table 9). Significant differences are shown among the three groups, however, in Table 10; these figures show the levels of appropriateness and aggressiveness of the children's sexual behaviors as rated by the five experts. The groups are significantly different from each

other in both appropriateness and aggressiveness in the expected direction, that is, the groups are increasingly less appropriate and more aggressive from Group I to Group III.

All of the variables available for the subjects, including demographic characteristics and test scale scores, were analyzed using Chi Square for frequency data and analysis of variance for other data. Statistically significant differences among the three groups were found for age; gender; history of physical abuse; inappropriateness and aggressiveness of sexual behavior; Rorschach sexual content, white space, and cooperation scores; and Child Assessment Schedule scores on Conduct Disorder, Total Primary Diagnosis, and Expression of Anger.

D. Treatment Outcome

Of the 147 children eligible for group treatment at the OUHSC site, 110 (75%) agreed to participate in the treatment groups. Sixty-nine (63%) of these participants were considered to have completed treatment, in that they attended at least 9 of the 12 treatment sessions. Thirty-nine caregivers (56%) completed the follow-up assessment immediately following the twelfth treatment session, 25 caregivers (36%) completed the one-year telephone follow-up assessment, and 20 caregivers (29%) completed the two-year telephone follow-up assessment.

There were no significant differences in abuse history, age, or overall assessment scores for the children who completed and those who did not complete the treatment program. Parents who had previously received mental health counseling were significantly less likely to complete the treatment program. There were no other significant differences in demographic or assessment variables for the two groups of parents.

The 110 children were randomly assigned to one of two treatment approaches, dynamic play ($\underline{n} = 59$) or cognitive-behavioral therapy ($\underline{n} = 51$). Thirty-five of the 59 children enrolled in the dynamic-play group completed at least nine of the twelve sessions (59%), while 34 of the 51

children enrolled in the cognitive-behavioral group completed a minimum of nine sessions (67%).

Treatment outcome was measured in two ways: a) by administering two of the tests at the beginning and at the end of treatment; and (b) by a structured interview assessing the incidence of additional sexual behavior problems at one and two years following treatment. Data were obtained on the 69 children who completed treatment in one of the two group therapy approaches at the end of treatment. The tests readministered at the end of treatment were the Child Sexual Behavior Inventory and the Child Behavior Checklist. One indication of the overall effectiveness of the program is the significant difference between the children's pre and post test scores on the CBCL and the CSBI (See Table 11). Behaviorally, affectively, in social competence, and in their sexual behavior, the children showed significant changes in a positive direction over the course of therapy. This finding is further reflected in a significant decrease in their level of sexual behavior problems.

An indication that both approaches were effective in increasing the children's social competencies while reducing their behavioral, affective, and sexual behavior problems is shown in Table 12. Examination of these data indicates no significant differences between the two treatments, thus, one treatment cannot be considered to be more effective than the other.

Data were gathered through a structured phone interview at one-and two-year follow-up periods. At one year, 36% of the caregivers were located and participated in the follow-up interview and 29% at the two-year follow-up. The data indicated that there were no significant differences in the rates of subsequent inappropriate or aggressive sexual behavior between the two treatment approaches, with 15% of the cognitive-behavioral group and 17% of the dynamic play group reporting additional sexual behavior problems.

VI. DISCUSSION

Examination of the demographic data for the children in this project reveals some interesting and provocative findings. The first finding has to do with the composition of the sample. As the project began, it was somewhat difficult to locate suitable subjects for the investigation. However, as word about the project got out to the community, the number of referrals steadily increased. Thus, sexual behavioral problems in children are not rare, in fact, they may be much more common than is generally recognized.

The children that participated in this research, in general, reflected the demographics in the communities (Oklahoma City and Seattle) in terms of racial composition. There was also good representation of children across the age range from 6 to 12. Cases involving children with sexual behavior problems were found at all socioeconomic levels, but as might be expected, there was an over-representation of lower socioeconomic patients in the current project. Additional findings indicated that children with sexual behavior problems tend to experience more stress in their lives than in those in the comparison group. A significantly higher number of them had parents who were divorced, experienced a death in the immediate family, witnessed human sexual behavior, and behavior problems at school.

One interesting and remarkable finding in the demographic data has to do with the male/female ratio. At the younger ages, males and females are equally represented. As age increased, there was a tendency for males to outnumber females. The fact that females were well represented in the sample of subjects is striking in that sexual offenses are rare among adolescent and adult females. However, it should be noted that as the level of aggressiveness increased, the number of females involved decreased. An interesting area of research might be to determine why it is that at younger ages there are numerous occurrences of sexual behavior problems in females, but by puberty and later, sexual occurrences are more uncommon.

The demographic data on the children's history of child maltreatment are equally interesting. Overall, there were no significant differences between the children with sexual behavior problems and the comparison group on history of physical abuse, neglect, or emotional abuse. This is due to the fact that the comparison group was chosen to be as close to the experimental group as possible, except for the presence of inappropriate sexual behavior. Thus, many of the children in the comparison group had been identified by the Department of Human Services or other clinical agencies as in need of services and the abuse rate was correspondingly high. However, the children with sexual behavior problems did have a significantly higher rate of sexual abuse than the control group ($p = .001$). Before this research project, the limited literature on this population indicated that the children would have high levels of abuse in their history, and particularly high levels of sexual abuse (e.g., Johnson, 1988; 1989). However, in studying this larger sample, it was found that 52% of the children with sexual behavior problems did not have a reported history of sexual abuse and 41% did not have an abuse report of any type. The present data would support the idea that child maltreatment might increase the probability of children behaving inappropriately sexually; however, it is not a necessary or sufficient variable in accounting for such behavior.

The data obtained from the children's and the parents' answers on standard psychological instruments indicate numerous significant differences between the children with sexual behavior problems and the comparison group, with virtually all the differences being in the direction of the children with sexual behavior problems being more disturbed and more pathological. This was particularly true for inappropriate and aggressive sexual behavior, externalizing behaviors, and conduct problems.

The failure to identify subgroups within the data by means of cluster analyses was at first surprising. However, on further reflection it became apparent that none of the measures employed in the current study adequately assessed the main variables of sexually inappropriate and aggressive behavior in children. The inadequate assessment of these crucial variables made it impossible for clinically useful clusters to be derived. It should be noted that the best measures available in the research were utilized. Therefore, the development of more adequate measures for sexual behavior in children would, no doubt, be an area for future research.

An examination and classification of the referral sexual behaviors by expert judges was successful in classifying the children into three subgroups: Sexually Inappropriate, Sexually Intrusive, and Sexually Aggressive. There were few significant differences on the assessment measures for these three groups, undoubtedly due to the same reason that these assessment instruments did not initially classify the subjects. While standardized instruments were not useful in grouping the children, the expert clinicians' ratings of inappropriate and aggressiveness were significantly different for the three groups with inappropriateness and aggressiveness increasing from Group I to Group II, and from Group II to Group III. Thus, the three group classification appears to have merit and warrants further investigation. The most important need for future investigation is more adequate instruments and techniques to assess inappropriate

sexual behavior and sexual behavior problems of children, especially those involving aggressiveness.

Examination of the outcome data indicates a significant improvement on test scores from pre-treatment to post-treatment. Thus, the children were much healthier in terms of standard psychological assessment measures at the end of the treatment than they were at the beginning. This was true for both forms of group treatment (cognitive-behavioral and dynamic play). There were no interactions between forms of treatment and test scores, indicating that neither treatment was significantly more effective than the other. Since this project used a comparison group rather than a true control group, it is not possible to attribute the change with certainty to the treatments employed. It should be noted that the decision not to employ a true control group was made due to ethical considerations.

The changes in scores could result from a variety of other factors, including developmental changes, behavior changes induced by parental reactions and other factors outside of the treatment, statistical regression of their scores toward the mean, as well as others. Nevertheless, it is significant to note that following treatment the children were functioning better than prior to treatment. In addition, for most children, the inappropriate sexual behavior was no longer present.

In summary, data from this project indicate that sexual behavior problems in young children are by no means a rare phenomenon. In fact, we have probably just touched the tip of the iceberg in the present investigation. Females at this age level are much more likely to be identified as having sexual behavior problems than are females at any other age. Standard psychological assessment measures indicate high levels of behavioral and affective disturbances among these children, in addition to their sexual behavior problems. The project further documented that it is possible to identify subgroups of children with sexual behavior problems.

The crude typology developed in this project warrants further investigation and refinement. However, accomplishment of this would depend on the development of more sophisticated and precise measurement instruments for use with this population.

This project had other heuristic results. Several programs have been established nationally based on the treatment models utilized in the study. At the conclusion of the research project, clinical services for children with sexual behavior problems were continued at the University of Oklahoma Health Sciences Center (OUHSC) through a service grant from the Oklahoma Department of Human Services. This is currently an ongoing project involving 10-15 children in two groups and there is always a waiting list for the groups. In addition, as a result of this project, an additional research project for children ages 5 and younger was conducted and continues as an ongoing service at OUHSC.

VII. PROBLEMS AND OBSTACLES

There are numerous problems that are encountered in conducting research on treatment outcome in clinical settings. These problems are typically magnified when the subjects a) are children, particularly when the children have been abused or neglected, b) are involved with the legal or Child Protection Services system (CPS), or c) have a serious behavior problem. This project dealt with children who met all three of the above criteria. This particular problem, i.e., a sexual behavior problem, is a highly sensitive one and the research project team had to be well trained in responding to the child, the caregivers, CPS workers, teachers, and other family members.

Subject Recruitment

One major problem encountered in conducting this project is one frequently found in research studies, that of adequate subject recruitment. While it is sometimes difficult to recruit adequate numbers of subjects from a broad clinical population, this study focused on a small

subset of children in the clinical population, which increased the likelihood of problems. In addition, the study utilized a time-limited group format and it was necessary to have an adequate number of children available every 3 to 4 months in order to randomly assign them to the two treatment approaches.

It was initially planned that the majority of the children would be referred to the project by the Oklahoma and King County Child Protective Service agencies. This was true for King County for the assessment phase of the study. However, in Oklahoma County, the results indicated that only about 25% of the children were referred by CPS. This necessitated a great deal of unexpected work on the part of the project staff to advertise the program and increase the base of referral sources.

Subject recruitment was increased through a variety of techniques at the OUHSC site: (a) program announcements were sent to Oklahoma Child Protective Services (CPS) personnel on a regular basis; (b) the Principal Investigators (Bonner and Walker) described the research at CPS staff meetings and answered questions about the project; (c) announcements were published in the OUHSC Department of Psychiatry and Behavioral Sciences newsletter; (d) contact was established with the Special Services section of the Oklahoma City schools and the PIs met with elementary school counselors to describe the program; (e) the PIs spoke at local and state psychology and other mental health conferences to advertise the project; (f) an advertisement was placed in the Oklahoma City daily newspaper; and (g) flyers were placed around the OUHSC campus to recruit participants for the comparison group. At the UW site, the PI (Berliner) made regular, weekly visits to the CPS offices to speak directly to case workers and recruit subjects.

Subject History

It was frequently difficult to obtain adequate information on the children participating in the project. A sizable portion of the children were brought to the intake by adults other than their natural parents, i.e., foster parents, step-parents, or other family members. While these adults may have known the children for an extended period of time, they often did not have detailed knowledge of the child's behavioral, developmental, or academic history. Obtaining a complete history on the children from the CPS caseworker was often difficult as they lacked the information.

In addition, it was extremely difficult to obtain accurate, detailed information on the child's actual sexual behavior. What was reported by the adults at intake was sometimes what had been told to them by another adult, another child, or the child coming for treatment. Only in rare cases was an actual investigation conducted by CPS or the police. Without a formal investigation, it was hard to determine exactly who had done what to whom, how many times the behavior occurred, and the circumstances surrounding the behavior.

Subject Attrition

Another problem typically found in this type of research is that of subject attrition. Only one of these children was actually ordered by the juvenile court to attend while other children and caregivers/foster parents were encouraged to participate by their CPS caseworkers. But, in general, the caregivers were attending on a voluntary basis. While 147 were eligible to participate in the treatment program, only 110 (75%) chose to begin treatment, and of those 110, only 69 (63%) attended the required number of sessions (9 of 12) to be counted as research participants. Further attrition was found at follow-up when only 25 (36%) completed the one-year follow-up and 20 (29%) completed the two-year follow-up assessment.

Instruments

Another significant problem was the lack of standardized instruments to measure inappropriate or aggressive sexual behavior in children. While the study utilized the Child Sexual Behavior Inventory, a standardized instrument that measures the frequency of certain sexual behaviors in children, there were no items that assessed the level of inappropriate or aggressive sexual behavior found in this population of children.

Problems were also encountered in measuring treatment outcome as there are no instruments designed to measure the reduction of inappropriate or aggressive sexual behavior in children. Goal Attainment Scaling was initially used to document behavior to be decreased (sexual and other problematic behaviors). However, this technique proved to be problematic as the project PIs and consultants could not find a suitable scoring system to use for weighting the behaviors in a standardized format.

VIII. IMPLICATIONS FOR RESEARCH AND PRACTICE

This research study highlights the need for a strong subject recruitment and retention plan, particularly when working with a child population. While the project was able to recruit and retain sufficient subjects for data analyses, this issue will continue to be problematic in future child treatment outcome research.

One question that arose during the planning stage was that of mixed gender and age groups. The groups were initially designed to be mixed gender but divided by age, i.e., children ages 6-8 in one group and 9-11 in another group. Boys and girls at these ages were thought to be able to work together in groups, but the age difference between 6 and 11 was seen as possibly problematic. However, due to the number of children available each four months to be randomly assigned to groups, it became necessary to randomly assign without regard to age. Children ages 6 to 12 were placed in groups together and there were no problems. While this was not seen as

an optimal solution, it worked quite well and continues to be used in the groups continuing today.

A decision was made early in the development of the project to not have a control group, i.e., a no treatment group. This was based on the ethical concerns of withholding treatment to children with sexually inappropriate or aggressive behavior. A group of children with no sexual behavior problems was then recruited for comparison purposes. As there was a group of children who did not complete treatment, these children could be used as a control group. This could be an important group to follow-up as pointed out by Finkelhor and Berliner (1995).

Several clinical recommendations can be made based on the experience of this project. First is the importance of involving the parent/caregivers and impressing on them the importance of attendance and supervision. As children are unable to seek or attend treatment on their own, they are dependent on adults to make and keep appointments. Therefore, it is necessary to engage and keep the caregivers actively involved in the treatment process.

With this particular behavior problem, it is necessary to be highly sensitive to the nature and effect of the children's behavior on their parents/caregivers and the children themselves. It is difficult for many adults to discuss sexual issues and behavior in private, much less in a group with adults they do not know. This was also found to be true for the children, who had to be encouraged to discuss their inappropriate sexual behavior. The use of the Sexual Behavior Rules was found to be highly useful, as the child's behavior was couched in terms of "breaking a rule" rather than as a precursor to becoming an adult sex offender. This tended to reduce the parents' and children's anxiety and reluctance to discuss the actual behavior.

Although the treatment approaches assessed in this project were conducted in a group format, it should be noted that the techniques utilized in the cognitive-behavioral approach have been found to reduce sexual behavior problems in individual therapy with children ages 5 to 12

at OUHSC. While the group model has been reported in the literature as having numerous advantages over individual treatment for adolescents and adults with sexual behavior problems, there is not clear evidence to date that a group approach is the model of choice for children.

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Table 12. Comparison of Pre/Post Scores by Dynamic Play and Cognitive-Behavioral Treatment Approaches

	Psychodynamic		Cognitive-Behavioral		Sig.
	Pre-test	Post-test	Pre-test	Post-test	
<i>Child Behavior Checklist</i>					
CBCL-T	67.47 (8.05)	62.60 (10.01)	67.40 (12.11)	62.84 (12.59)	ns
Internalizing	62.73 (8.77)	58.37 (11.87)	61.64 (10.53)	59.32 (10.45)	ns
Externalizing	67.00 (7.79)	61.27 (9.12)	66.36 (11.21)	61.68 (12.47)	ns
Withdrawn	60.33 (7.70)	57.17 (8.51)	62.36 (11.18)	59.28 (9.90)	ns
Somatic Complaints	59.27 (7.86)	58.27 (8.50)	60.16 (8.81)	59.84 (8.20)	ns
Anxious – Depressed	62.97 (9.94)	60.57 (9.99)	60.60 (8.59)	58.72 (8.39)	ns
Social Problems	63.57 (9.42)	62.60 (9.78)	63.80 (11.31)	63.32 (13.13)	ns
Thought Problems	62.87 (10.50)	61.43 (8.60)	65.36 (11.92)	60.84 (10.51)	ns
Attention Problems	65.20 (9.99)	63.27 (11.52)	67.80 (12.48)	65.16 (12.84)	ns
Delinquent Behavior	66.87 (8.27)	63.37 (8.77)	66.72 (9.90)	62.40 (11.72)	ns
Aggressive Behavior	66.50 (8.99)	60.87 (8.52)	66.96 (12.63)	62.00 (12.00)	ns
Sex Problems	71.83 (8.51)	62.33 (12.29)	69.32 (10.23)	59.76 (12.13)	ns
Social Competence	38.77 (9.85)	41.13 (9.35)	34.60 (7.86)	40.68 (9.66)	ns
Activities Competence	46.87 (6.91)	47.50 (5.58)	43.68 (6.32)	48.08 (5.42)	ns
School Competence	37.47 (9.85)	38.57 (10.26)	36.36 (10.07)	37.28 (11.25)	ns
Total Completing		30		25	
<i>Child Sexual Behavior Inventory</i>					
	20.77 (13.67)	11.26 (10.81)	21.71 (15.61)	14.55 (15.55)	ns
Total Completing		31		31	

