DOCUMENT RESUME

ED 379 568 CG 026 047

AUTHOR Adams, Julie; And Others
TITLE Sexually Inappropriate Behaviors in Seriously Mentally Ill Children and Adolescents.
PUB DATE [95]
NOTE 28p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Adolescents; Behavior Disorders; *Behavior Problems; Child Abuse; *Child Behavior; *Correlation; *Mental Disorders; Problem Children; *Sexual Abuse; Sexuality; Victims of Crime
IDENTIFIERS *Sex Offenders; Sexual Violence

ABSTRACT

This study examined the prevalence and clinical correlates of sexually inappropriate behaviors in all youth treated at a tertiary care public sector psychiatric hospital over a 5-year period. A retrospective chart review was completed on 499 subjects. Subjects were grouped in four mutually exclusive categories: no inappropriate sexual behaviors (N=296), hypersexual (N=82), exposing (N=39), and victimizing (N=82) behaviors. Those with histories of sexually inappropriate behaviors had much higher rates of being sexually abused (82 percent versus 36 percent), and also had higher rates of physical abuse and neglect, behavior disorders, developmental problems, and family histories of antisocial behavior. However, they were less likely to have affective disorders than group members with no history of sexually inappropriate behavior. The hypersexual group contained a higher proportion of females and was associated, in part, with variables relating to sexual abuse and post-traumatic stress disorder. The more severe offending groups (exposing and victimizing) were associated with variables related to sexual abuse, developmental delays, lower IQ's, peer problems, and other acting-out behavior problems. These finding underscore the importance of evaluating for sexually inappropriate behaviors in seriously mentally ill youth, especially in those with histories of sexual abuse. (Author/RJM)

Sexually Inappropriate Behaviors In Seriously Mentally Ill Children and Adolescents

Julie Adams, Psy.D.
Post-doctorate Psychologist
University of Washington's Department of Psychiatry

Jon McClellan, MD.
Assistant Professor
University of Washington's Department of Psychiatry

Donna Douglass, M.S.W.
Chief Social Worker (now retired)
Child Study and Treatment Center

Chris McCurry, M.A.
Research Assistant
University of Washington's Department of Psychiatry

Mick Storck, MD.
Clinical Instructor
University of Washington's Department of Psychiatry

The corresponding author is Jon McClellan, MD., Child Study and Treatment Center, 8805 Steilacoom Blvd. S.W., Tacoma, WA., 98498-4771, 206-756-2504, (fax) 206-756-3911.

Sexually Inappropriate Behaviors
In Seriously Mentally Ill Children and Adolescents

Abstract

This study examined the prevalence and clinical correlates of sexually inappropriate behaviors in all youth treated at a tertiary care public sector psychiatric hospital over a 5 year period. A retrospective chart review was completed on 499 subjects. Subjects were grouped in 4 mutually exclusive categories: no inappropriate sexual behaviors (n=296), hypersexual (n=82), exposing (n=39) and victimizing (n=82) behaviors. Those with histories of sexually inappropriate behaviors had much higher rates of being sexually abused (82 versus 36%), and also had higher rates of physical abuse and neglect, behavior disorders, developmental problems, and family histories of antisocial behavior. They were less likely to have affective disorders. The hypersexual group had a higher proportion of females, and was associated in part with variables relating to sexual abuse and post-traumatic stress disorder. The more severe offending groups (exposing and victimizing) were associated with variables related to sexual abuse, developmental delays, lower IQ's, peer problems, and other acting-out behavior problems. These findings underscore the importance of evaluating for sexually inappropriate behaviors in seriously mentally ill youth, especially in those with histories of sexual abuse.

Key Words: Sexual Offending, Sexually Inappropriate Behaviors, Children, Adolescents.

Sexually Inappropriate Behaviors In Seriously Mentally Ill Children and Adolescents

Sexually inappropriate behaviors in youth encompass a wide range of acts, including excessive flirtatiousness and promiscuity, public or repetitive masturbation, repeatedly touching other children or adults, self-exposure, and sexual acts committed against a person's will in an exploitative or threatening manner such as molestation, incest and rape (Fehrenbach, Smith, Monastersky & Deisher, 1986; Ryan, Lane, Davis, & Issac, 1987; Berliner, 1989). Such behaviors are not isolated incidents in normally developing individuals, but rather are manifestations of emotional disturbance within the perpetrator and/or those in his/her environment (Keith, 1984; Gil, 1993).

Clinical features associated with sexual offending youth include abusive and neglectful families, comorbid acting-out behavior disorders, peer problems and academic frustration (Johnson, 1993). However, the existing research is limited due to numerous methodologic shortcomings. Most of the available studies lack control groups, and treat juvenile offenders as a single group, even though they are a heterogeneous population (Becker, 1990). Other methodological problems include the lack of reliable assessment measures, inconsistent use of variable definitions, small sample sizes, and referral populations biased either towards outpatients, or towards incarcerated offenders. In this study, we hope to expand upon the current research by comparing subgroups of sexually offending youth (based on types of offenses committed) to nonoffending seriously mentally ill youth on a variety of clinical, environmental and demographic variables.

Sexual abuse, with or without accompanying physical abuse and neglect, is the risk factor most often associated with inappropriate sexual behavior. Rates of

sexual abuse are typically 50 percent or more, while at least 25 percent of offending youth have noted histories of physical abuse (Becker, Kaplan, Cunningham-Rather, & Kavoussi, 1986; Fehrenbach et al., 1986; Saunders and Awad, 1988; Kahn and LaFond, 1988; Smith, 1988; Ryan, 1989; Johnson, 1993). Family dysfunction is common, including problems with lack of structure, marital instability, poor parenting, and substance abuse (Sefarbi, 1990; Davis and Leitenberg, 1987; Bolton, Morris, and MacEachron, 1989; Johnson, 1993). Many offending youth have been exposed to either sexually explicit materials, overt sexual behaviors between family members, and/or the sexual victimization of others (Saunders, Awad, & White, 1986; Kahn and LaFond, 1988; Bolton et al., 1989).

The vast majority of youth with sexually inappropriate behaviors have had difficulties with aggression towards persons and property, poor anger control, impulsiveness, lack of empathy, denial of actions, and truancy (Fehrenbach et al., 1986), and inasmuch have high rates of both conduct disorder and attention-deficit disorder (Kavoussi, Kaplan, & Becker, 1988; Johnson, 1993). They frequently have disturbed peer relationships, and are often socially isolated, scapegoated, and blamed (Johnson, 1993). Adolescents who offend against children are often lonely and socially isolated from peers, and prefer the company of younger children (Kahn and LaFond, 1988; Sefarbi, 1990; Saunders and Awad, 1988).

Many sexually aggressive youth have current or past histories of significant academic delays, despite average intelligence (Johnson, 1993; Bolton et al, 1989). Adolescent sexual offenders may have greater than expected rates of IQ scores less than 80 (Saunders et al., 1986). Other problems in this population include early developmental lags such as motor and speech delays, which occasionally may be traced to neurological conditions such as prenatal or perinatal insults, central nervous system infections, and head injuries (Keith, 1984).

All of the findings described above are far from definitive given the noted

methodologic limitations. In this study, we will be retrospectively examining salient background and clinical variables related to sexually inappropriate behaviors in a sample of all seriously mentally ill youth treated over a five year period at a public-sector tertiary care psychiatric hospital. This design addresses some of the problems within the existing literature by including a comparison group (those seriously mentally ill subjects without histories of inappropriate sexual behavior); and by examining three mutually exclusive categories of sexually inappropriate behaviors: hypersexuality, exposing behaviors, and victimizing offenses. These categories were defined a priori by the authors in an attempt to subdivide the larger heterogeneous group by behaviors that have clinical relevance.

While this type of design is limited by the inherent nature of chart review studies, the use of specific variable definitions, including defining subgroups of offending behaviors, and the inclusion of a comparison group, should provide important information regarding the prevalence of, and associated clinical and environmental factors related to, sexually inappropriate behaviors in seriously mentally ill youth. Furthermore, the use of the comparison group will allow us to examine which clinical features represent specific risk factors for juvenile offenders, rather than those more broadly associated with mental illness.

Specific questions we will address include: 1) Do seriously mentally ill youth with sexually inappropriate behaviors have higher ratings of being sexual abused than the comparison group? 2) Do seriously mentally ill youth with sexually inappropriate behaviors differ on other potential clinical predictors, such as diagnoses, peer problems, histories of physical abuse and neglect, and/or developmental problems? and 3) Can seriously mentally ill youth with sexually inappropriate behaviors be differentiated by the types of sexual acts committed?

Methods

This study involved a retrospective chart review of all patients treated at Child Study and Treatment Center (CSTC) between 1987 and 1992. CSTC is the only public sector tertiary care psychiatric hospital for children and adolescents in Washington State, thus the referral base is statewide. The facility has a total of 48 inpatient beds, and also serves 16 children in a preadolescent day treatment program. Patients range in age from 5 to 18 years, and all are seriously mentally ill. The average length of stay is approximately 6 months for adolescents, and 1 year for preadolescents.

Data Collection

The records of 499 patients were reviewed, using a form designed specifically for this study. Subjects were not differentiated by whether they were inpatient, or day treatment, since those admitted to the day treatment program also must qualify as seriously emotionally disturbed, and they clinically resemble the inpatient preadolescent sample (in fact, several subjects were in both programs over time). Given the prolonged lengths of stay, all subjects had extensive records, including detailed referral and past historical records from community mental health providers. Per the policies of the State's Division of Mental Health, the clinical histories of all children referred to CSTC were reviewed by an independent committee to document the need for admission. The information requirements of this committee are extensive, and include social histories, past psychiatric treatment reports, educational records, and social-welfare agency reports. Furthermore, while not standardized, the social history form used by CSTC (completed by parent/guardian prior to admission) includes specific inquiries regarding concerns over sexual behavior, and abuse history. All of this information is included in the patients' medical records.

Variables included in the chart review form were based on review of the literature and a preliminary investigation of twenty-five subjects' charts. A

comprehensive list of background variables was developed, including: 1) diagnoses; 2) developmental history; 3) medical history; 4) academic and intellectual test scores; 5) family of origin and current family information about income, intactness, stability, separation (parental divorce/loss); 6) family psychiatric history of mental illness, substance abuse and/or antisocial behaviors; and 7) a symptom checklist (independent of diagnosis) including behavioral, emotional, interpersonal, and substance abuse variables.

The review form also included an extensive checklist of physical abuse, sexual abuse, and neglect histories. The types of sexual abuse noted were touching/fondling, oral sex, intercourse, and/or ritualized abuse. Physical abuse was characterized as either minor injuries (e.g., bruises, harsh corporal punishment, slapping) and significant physical injury (e.g., burns, skeletal injuries, internal organ damage). Neglect was defined as the lack of provision of basic needs (e.g., cases of failure to thrive) or a gross lack of parental supervision. Other pertinent information recorded included: ages of occurrence, severity and frequency of episodes, whether incidents were documented or suspected, and the status of the perpetrator (parent, sibling, relative, known or unknown nonrelated adult or child). Abuse was only coded as documented if there were confirmed reports from either the police or child protective services. Cases of abuse were considered suspected if there were definitive reports of the abuse occurring by either the child, or other potential witnesses/evaluators, but formal police/child protective service evaluations were inconclusive. Cases which lacked definitive reports were not coded, even if abuse was suspected based on the child's symptomatology.

Eight types of sexually inappropriate behaviors were rated as being present if they occurred prior to admission, or during the actual hospitalization. Flirtatious behaviors were those that did not involve extensive touching but whose primary intent was to show sexual interest in someone inappropriate for the child's age or

situation. Prostitution was defined as engaging in sexual behaviors for money. Public masturbation included the touching of one's genitalia/buttocks in view of others. Self exposure involved showing one's private parts to others in inappropriate situations. Touching involved the intrusive touching or grabbing of others' private parts. Molesting was considered more serious than touching and involved the forcible and extensive or repeated fondling of another that is inappropriate for the victim's age or situation, and/or carried on against the victim's will. Incest was defined as inappropriate sexual contact between relatives during which the subject engaged in some form of coercive behavior. However, overt cases of either molestation or rape were coded in their respective categories, regardless of relationship of abuser to victim. Rape was defined as coercive or forced intercourse. Definitions of offending behaviors were strictly observed and no offenses were charted that did not meet the above criteria.

The above behaviors were then grouped into four categories; no offending, hypersexual (flirtatious, touching), exposing (public masturbation, self-exposure) and victimizing (molestation, incest and/or rape). These categories were developed a priori, based on the author's subjective clustering of these behaviors. Specifically, we sought to differentiate sexually provocative youth (hypersexual) from those with offending behaviors. Within the offending group, we then chose to separate those whose offenses involved public displays rather than victimization by direct sexual contact. Subjects were placed in the category of their most serious offending behaviors, so that the subtypes were mutually exclusive.

Reliability

The subject's charts were co-reviewed by the author's JA and DD, with some cross-validation assessments performed during the review process. In addition, the senior author (JM) reviewed several of the charts to check accuracy, and also consulted with the reviewers when discrepancies or disagreements occurred.

Twenty-two charts were independently reviewed to establish reliability. There were potentially 175 variables scored, although many were subcategories under primary topics (e.g., offender types, abuse characteristics). A minimum kappa value of 0.30 was chosen to offset the potential problems with using kappa to quantify agreement for low frequency events (Spitznagal and Helzer, 1985). The vast majority of kappa values were above 0.40 (range 0.30 to 1.0), with the scores for the main study variables being: offender subcategories, 0.59; any sexual abuse, 0.79; any physical abuse, 0.73; and any neglect, 0.30. Variables excluded from the analysis due to low kappa scores included having a history of antidepressant medication therapy, and five items from the symptom checklist (oppositional behavior, somatic complaints, formal thought disorder, suspicious/paranoid, and blames others).

Analysis

The four mutually exclusive sexual offending groups (none, hypersexual, exposing, and victimizing) were compared to one another in regards to basic demographic, diagnostic and abuse history variables. Chi-square analysis was used for categorical data, and a one-way analysis of variance (ANOVA) was used for continuous variables. If the ANOVA was significant, a Tukey's post hoc analysis (Honestly Significant Differences test) (Norusis, 1990) was used to determine where the group differences occurred. Since approximately 50 analyses were done, it is expected that two or three comparisons will be significant by chance, using $p < 0.05$ as representing statistical significance.

Each offending subtype (i.e., hypersexual, exposing, victimizing) was compared to the group with no inappropriate sexual behaviors, by using two sequential forward stepwise (using likelihood ratios) logistic regressions to identify variables predictive of the respective subgroups. Statistical significance was set at $p < .05$, with trends of $p < 0.10$ reported. The first regression equation examined 75 variables (using 5 iterations of 15 variables each to insure an adequate sample size

per variable) which encompassed all of the basic demographic, diagnostic, family, developmental and abuse data, as well as the symptom checklist variables. Then the three abuse variables (sexual, physical and neglect) were removed from the equation and subgroups of these categories (e.g., type of abuse, relationship of abuser) were included in a second analysis. All variables identified as significant predictors in the second run, plus any of the main abuse categories found to be significant in the first analysis, are reported.

Results

Sample Characteristics

Table 1 presents sociodemographic and social characteristics of each offending category and the comparison group. The entire sample was predominately male, of lower socioeconomic classes (ses), with a history of disrupted family status, numerous out-of-home placements, academic delays and developmental problems (including intrauterine exposure to substance abuse). The distribution of ethnic groups approximates that of the State's public school system (Trupin et al., 1988). Forty-one percent of the sample had engaged in one or more types of inappropriate sexual behaviors. There were 372 incidents of sexually inappropriate behaviors reported in 202 subjects. Eighty-eight percent of the hypersexual group, 87% of the exposing group, and 68% of the victimizing group were rated as having committed repeated/persistent inappropriate sexual behaviors (versus single/isolated events).

In Table 1, other pre/perinatal hx. refers to any noted history of significant prenatal maternal illness and/or perinatal problems (e.g., prematurity, delivery complications and birth hypoxia). Special education reflects placement for either academic delays and/or behavior dysfunction.

Insert Table 1 Here

Clinical and Diagnostic Status

Table 2 outlines the subjects' diagnostic status, IQ, admission score on the global assessment of functioning scale (GAF) (Axis V in DSM-III-R, APA, 1987) and family psychiatric history (first degree relatives only). Only 200 subjects had complete WISC-R test IQ results. However, no subjects without IQ scores were rated as having any evidence of significant mental retardation (based on partial test results and academic assessments), and only those with valid WISC-R test scores were scored as having IQ's below 71. For the diagnostic categories, behavioral refers to either conduct disorder, oppositional defiant disorder, and/or attention-deficit hyperactive disorder; affective includes major depressive disorder, bipolar disorder, dysthymic disorder, and/or depressive disorder nos; psychotic refers to either schizophrenia, schizophreniform disorder, schizoaffective disorder, or psychosis nos; substance abuse is either an abuse or dependence diagnosis, and anxiety represents either separation anxiety disorder, overanxious disorder, panic disorder, avoidant disorder, obsessive-compulsive disorder, phobias and/or anxiety disorder nos.

Insert Table 2 Here

Abuse Data

Rates of abuse (sexual and physical) and neglect are presented in Tables 3 and 4. The rates of both sexual and physical abuse are significantly higher in those subjects with inappropriate sexual behaviors, with rates of sexual abuse being 79% or greater. Compared to the nonoffender group, all three groups with inappropriate sexual behaviors had significantly higher rates of chronic sexual abuse (occurring more than once per month over prolonged periods), while the exposing and victimizing groups were much more likely to histories of chronic physical abuse (Tables 3 & 4). A broad range of both types of abuse and relationship to abusers was found, with fathers/stepfathers being the most common abuser (either sexual or physical), fondling/molestation the most common type of sexual abuse, and minor

injuries being the most common outcome of the physical abuse. The overall rates of abuse, and the mean number of abusers, are substantial, and clearly reflect the selection bias of a tertiary care state hospital setting.

Insert Tables 3 and 4 Here

Predictor Variables of Offending Subtypes

Table 5 presents variables which significantly predicted membership in the three offending categories. The logistical regressions fit the data well for each category (hypersexual, model chi-square (3df) = 26.0, $p < 0.00005$, 84.1% overall classified correctly; exposing, model chi-square (3df) = 30.1, $p < 0.00005$, 94.3% overall classified correctly; victimizing, model chi-square (3df) = 73.2, $p < 0.00005$, 90.0% overall classified correctly). The variables identified as predictors in Table 5 are self-explanatory. A history of sexual abuse was highly predictive of all three groups. Of all the the various family measures (e.g., ses, marital discord, domestic violence, number of out-of-home placements), only nonsupportive parents was predictive of the exposing group.

Insert Table 5 Here

Discussion

In this paper, we have compared seriously mentally ill youth with and without sexually inappropriate behaviors on numerous demographic, social, and clinical variables. Limitations of the study include its retrospective nature, and potential reporter biases and inconsistencies since the variables came from charts completed by many different professionals across a five year period. Although the study included several reliability checks to control for rater biases, none of the original clinical information, i.e., diagnostic status, symptom checklists, family psychiatric history, abuse status, or offending history, was obtained using standardized measures or interviews. Since standardized techniques were not used to collect the

original clinical data, variables not specifically inquired about may have been missed, including information regarding sexual offending behaviors if they were not among the presenting complaints. Similarly, the reported rates of abuse may be underestimated given the difficulty in documentation (although the high rates argue against this).

While there is no way to recollect the original data, there is reason to support its validity. First, subjects had extensive medical records, both from the hospitalization itself as well as records from community providers. Second, although not assessed using a standardized form, information regarding sexually inappropriate behavior and abuse history was sought routinely at the time of admission. Finally, while chart reviews clearly lack the benefits of prospective research designs, they still reflect the information base and the decision-making processes of clinical practice, and therefore have pragmatic importance. The fact that our data strongly replicates the findings of others supports their validity.

An additional limitation is the sample bias in terms of using the most serious mentally ill population of youth in Washington State. While these findings are quite pertinent to public sector programs that treat seriously mentally youth, whether or not they generalize requires further study. In fact, it is expected that other populations would not have the degree of abuse histories, offending behaviors, or chaotic environments found in this sample.

Several findings are worth noting. Forty-one percent of all patients treated over a 5 year period at a public sector tertiary care hospital had some form of sexually inappropriate behavior, with 16% committing some type of victimizing offense. The referral criteria for this facility are directed towards seriously mentally ill youth, and are not biased toward referrals from the juvenile justice system nor towards court ordered evaluations for sex offenders (although a minority may fall into this category). These high rates underscore the importance of screening for,

and developing treatment programs for mentally ill youth who sexually act-out.

Compared to other seriously mentally ill subjects, youth with inappropriate and/or offending sexual behaviors had significantly higher rates of abuse histories (sexual, physical and neglect), behavioral disorders, developmental problems (i.e., speech and motor delays), placement in special education programs, and family histories of antisocial behavior. As a group, they were less likely to have affective disorders. Since chart review data most likely will lead to false negatives due to lack of documentation, it is possible that some variables which might also be associated with sexually inappropriate behaviors were not identified as being significant.

A history of sexual abuse was a highly significant predictor of all three offending subtypes. Although this finding is not surprising given the existing literature (Green, 1993), the rates of sexual abuse are extraordinary. Overall, 82% of youth with sexually inappropriate behaviors have some history of being sexually abused. However, 36% of the comparison group had similar histories, so that such a history, while predictive in this sample, should not be considered as necessary nor sufficient for offending behaviors.

Some of the sexual abuse variables relating to either the type, chronicity, age of occurrence and/or relationship of abuser were associated with specific subgroups of offending behavior (see Tables 3 & 5). However, although the association between different developmental and experiential components of sexual abuse, (i.e., age of occurrence, type of offense, and relationship of abuser) and offending subtypes raises several interesting hypotheses, one cannot assume causality given both the limitations of the study design, as well as the complexity inherent to the interactions between all of the study variables and an outcome of inappropriate sexual behavior. Moreover, since many of the children had more than one abuser, and most had multiple occurrences (at varying ages) of different types of abuse, the importance of

an identified association must be interpreted with caution. The large overlap between the different types of abuse and abusers, as well as the clustering with other clinical and environmental factors, decreases the likelihood that any single variable is uniquely predictive.

Perhaps the most clinically pertinent finding was that victimizing behaviors were predicted by both chronicity of sexual abuse and number of abusers, which suggests that those with more severe histories were more likely to offend against others. Although it did not emerge as a predictor variable, the association between sexually acting-out youth and sexual abuse by a mother/stepmother was noteworthy, since females overall are much less often offenders (Green, 1993) (although the rates in our sample are strikingly high). Sexual abuse by mothers/stepmothers may well be a specific risk factor for offending behaviors, given that they are most often the primary caretakers for these youth, and therefore such abuse would have a particularly devastating impact on the child's social and psychological development. It may also provide some form of increased genetic loading if the abuser is the biologic mother. Alternatively, such a history is often an associated phenomenon with more severe and pervasive histories of abuse, since in many cases the abuse by the mother/stepmother was not done in isolation, but rather in combination with abuse by other individuals, including the father/stepfather.

Rates of physical abuse and neglect were also significantly higher amongst offenders. However, their predictive value was not nearly as robust, possibly in part due to their high association (and therefore shared variance) with sexual abuse. Physical abuse with a major injury (e.g., burns, broken bones, internal injuries) significantly predicted exposing behaviors, and approached significance (as did any history of physical abuse) as a predictor of victimizing behaviors. How much physical abuse and neglect specifically increase the risk of engaging in victimizing and/or exposing behaviors (possibly by interacting with sexual abuse to increase the

likelihood of sexual aggression) requires further study. It should be noted that the definition of neglect was at the low end of our reliability scores (kappa = 0.30). This undoubtedly reflects some of the general ambiguity of this term. We sought to use a narrow definition (e.g., failure to thrive, gross lack of basic provisions), since broadly speaking the vast majority of this sample experienced some form of neglect.

The three different offending subtypes were created a priori, rather than by using a statistical clustering procedure. Although some clinically relevant group differences emerged, similar types of variables were associated with each of the respective groups (i.e., sexual abuse variables, behavioral disorders/problems, and developmental lags). This suggests that these categorical distinctions may in fact represent points on a continuum.

The hypersexual group was unique in that the majority of subjects were female. Whether or not this reflects a gender difference in response to abuse, or alternatively reflects cultural biases towards how sexually inappropriate behaviors were initially recorded (e.g., girls are felt to be promiscuous while boys may be considered predatory) cannot be answered with this data set. Males predominate the more serious offending categories, which is consistent with all the existing sexual offending literature. However, females still represented more than one fourth of subjects engaging in exposing or victimizing behaviors, and are a group for which sufficient research is lacking (Fehrenbach and Monastersky, 1988).

The hypersexual group also had the highest rate of post traumatic stress disorder (PTSD). This, plus the association with variables related to sexual abuse and nightmares, suggests that this group may represent youth referred to in the literature as "sexually reactive" (Gil, 1993) (children whose inappropriate sexual behavior is in direct response to sexual abuse). While this term has a more benign connotation given its focus on the individual's victimization history rather than their victimizing behavior, whether or not it is a valid discriminator from children who are

considered sexually aggressive or predatory is unclear (Gil, 1993). The equally high rates of sexual abuse across the three different offending subgroups suggest that most youth with offending behaviors have some sexually reactive component.

Both the exposing and victimizing groups were associated with variables related to sexual abuse, physical abuse, peer problems, developmental delays, and other acting-out behavioral problems, although the actual variables within these larger categories varied. Variables associated with the exposing group included: being younger, having a lower IQ, no friends, scapegoated by peers, animal cruelty, and substance abuse. Although not identified as a predictor variable by the regression equation, this group also had very high rates of in utero exposure to maternal substance abuse. Unfortunately, the data were not sufficient to make accurate estimates of the rates of fetal alcohol syndrome in this sample. This is obviously an important question given the high rates of in utero exposure to substance abuse among the offender groups, and the noted characteristics of poor impulse control and behavior disorders in individuals with fetal alcohol syndrome (Steinhausen, Willms, & Spohr, 1993).

Variables associated with the victimizing group included: behavioral disorders, vandalism, scapegoated by peers, prenatal or perinatal problems, and no speech at two years of age. The similarity between these predictors, and those associated with exposing behaviors, suggests that these two categories may actually reflect a dimension of behaviors differentiated by the severity of offending. The younger age of the exposing group suggests that the continuum may be in part developmental. Longitudinal follow-up studies are needed to determine whether or not the exposing group displays more victimizing behaviors over time.

Both affective disorders (victimizing group) and suicidal acts (hypersexual, exposing groups) were negative predictors, which is consistent with a report that adolescent sex offenders have low rates of major affective disorder and dysthymia

(Kavoussi et al., 1988). These findings may support the notion that individuals who victimize have an impaired ability to experience empathy and remorse in regards to their behaviors. However, it is important to note that a significant minority of these two groups (26% of the victimizing group, and 33% of the exposing group) did have an affective disorder. Moreover, studies of conduct disordered youth have found significant comorbidity with affective disorders (Woolston et al., 1989), and conduct problems have also been associated with suicidal behaviors (Pfeffer, 1991). Since the negative predictor variables are actually predictors of the comparison sample, these (and the other noted negative predictors) most likely reflect a selection bias regarding youth referred for reasons other than sexually provocative behaviors.

In regards to family status, youth with inappropriate sexual behaviors were more likely to come from disrupted homes, and from lower socioeconomic settings. However, of the varying family measures (including marital status, inconsistent parenting, enmeshment, domestic violence, and out-of-home placements), only "nonsupportive parents" was significantly predictive of membership in an offending subgroup (exposing). Since chaotic environments were almost ubiquitous in this sample, these family variables may be associated with psychopathology in general, rather than specifically with offending behaviors as reported by others (Sefarbi, 1990; Davis and Leitenberg, 1987; Bolton et al., 1989). Inasmuch, this finding highlights the importance of using comparison groups. Alternatively, the association between family chaos and sexually inappropriate behaviors may have been obscured due to the overlap in variance between the abuse history variables and the family functioning variables. Regardless, it is clear that these youth often experience multiple adverse conditions and/or traumatic events that place them at risk for a variety of psychopathologic outcomes.

Conclusions

In support of the current literature, our study found that youth with inappropriate

sexual behaviors have increased rates of abuse histories (especially sexual abuse), peer problems, and developmental delays, even when compared to other seriously mentally ill children and adolescents. Our data also raise questions as to whether the noted association between offending behaviors and family dysfunction and/or chaos is specific, or rather an associated phenomenon with either an abuse history, or psychopathology in general. Although distinguishing characteristics were found for the three different subgroups of sexually inappropriate behaviors (primarily differences in age, gender, peer problems and developmental risk factors), the three groups generally resembled each other in regards to associated clinical features.

Our research could be improved upon by following similar populations longitudinally using more standardized measures of assessment. This would provide more accurate data regarding predisposing factors, course and prognosis of inappropriate sexual behaviors.

Our data clearly highlight the need for routine assessment of, and intervention for, sexually inappropriate behaviors in seriously mentally ill youth. The profound association between inappropriate sexual behaviors and histories of sexual abuse strongly suggests the need for prevention programs, both primary prevention and early detection and intervention. Such programs are of paramount importance given the limited empirical data supporting the efficacy of available treatments for juvenile sex offenders (Becker et al., 1988).

Table 1: Demographic and Social Characteristics by Subgroup

	None (N) N=296	Hypersexual (H) N=82	Exposing (E) N=39	Victimizing (V) N=82
Mean Age[a] years/SD (Range)	13.5/2.9 (5-17)	12.9/3.3 (6-17)	11.6/3.2 (6-17)	13.3/2.8 (6-18)
Male Gender**	189 (64%)	38 (46%)	24 (62%)	63 (77%)
SES Status[b]				
Middle/Upper	77 (26%)	12 (15%)	8 (21%)	14 (17%)
Laborer	105 (36%)	37 (45%)	9 (23%)	25 (31%)
Lower	114 (39%)	33 (40%)	22 (56%)	43 (52%)
Ethnicity				
Caucasian	242 (82%)	61 (74%)	30 (77%)	70 (85%)
African American	8 (3%)	4 (5%)	0 (0%)	5 (6%)
Native American	8 (3%)	4 (5%)	0 (0%)	2 (2%)
Asian	6 (2%)	0 (0%)	1 (3%)	0 (0%)
Hispanic	0 (0%)	3 (4%)	2 (5%)	1 (1%)
Mixed/other	32 (11%)	10 (11%)	6 (15%)	4 (5%)
Family Status[b]				
Intact	52 (18%)	9 (11%)	4 (10%)	9 (11%)
Disrupted <6 yrs (age)	172 (58%)	61 (74%)	28 (72%)	47 (57%)
Disrupted >5 yrs (age)	72 (24%)	12 (15%)	7 (18%)	26 (32%)
Adopted*	29 (10%)	7 (9%)	4 (10%)	17 (21%)
Out-of-Home Placements				
None	25 (8%)	6 (7%)	4 (10%)	3 (4%)
1 - 10	238 (80%)	68 (83%)	28 (72%)	64 (78%)
> 10	33 (11%)	8 (10%)	7 (18%)	15 (18%)
Developmental History				
In utero Sub. Abuse****	27 (9%)	12 (15%)	15 (39%)	18 (22%)
Other Pre/perinatal Hx.	60 (20%)	21 (26%)	9 (23%)	27 (33%)
No Speech @ 2 yrs***	36 (12%)	22 (27%)	7 (18%)	24 (29%)
No Walking @ 18 mos#	30 (10%)	14 (17%)	7 (18%)	16 (20%)
Retained in School	56 (19%)	10 (12%)	10 (26%)	20 (24%)
Special Education****	137 (46%)	50 (61%)	29 (74%)	64 (78%)

[a]One-way ANOVA, F ratio=5.1 (3df) $p<0.002$, Tukey $p<0.05$, V>E, N>E
[b] X^2 (6df), $p<0.05$
**** X^2 (3df) $p<0.00001$
*** X^2 (3df) $p<0.0005$
** X^2 (3df) $p<0.001$
* X^2 (3df) $p<0.05$
# X^2 (3df) $p<0.07$

Table 2: Clinical and Diagnostic Characteristics by Subgroup

	None (N) N=296	Hypersexual (H) N=82	Exposing (E) N=39	Victimizing (V) N=82
Mean Number of Hospitalizations (range)	3.1 (0-13)	3.0 (0-9)	2.7 (0-7)	2.8 (0-9)
IQ >70*	275 (93%)	74 (90%)	32 (82%)	69 (84%)
Admission GAF mean/SD (range)	45.1/9.7 (10-75)	43.5/9.1 (10-60)	44.9/9.1 (25-70)	44.5/8.7 (25-70)
Diagnostic Status				
Behavioral****	159 (54%)	56 (68%)	29 (74%)	67 (82%)
Affective****	164 (55%)	36 (44%)	13 (33%)	21 (26%)
Anxiety*	12 (4%)	4 (5%)	2 (5%)	1 (1%)
PTSD#	52 (18%)	25 (31%)	8 (21%)	20 (24%)
Substance Abuse	69 (23%)	23 (28%)	6 (15%)	18 (22%)
Psychotic	31 (11%)	9 (11%)	5 (13%)	12 (15%)
Family Psychiatric Hx.				
Mood Disorders	111 (38%)	28 (34%)	16 (41%)	30 (37%)
Psychotic Disorders	24 (8%)	7 (9%)	2 (5%)	9 (11%)
Antisocial Behavior*	113 (38%)	44 (54%)	19 (48%)	42 (51%)
Substance Abuse	161 (54%)	54 (66%)	24 (62%)	49 (60%)

**** X^2 (3df) $p < 0.00001$
* X^2 (3df) $p < 0.05$
# X^2 (3df) $p < 0.07$

Table 3: Sexual Abuse Status by Offender Subgroups

	None (N) N=296	Hypersexual (H) N=82	Exposing (E) N=39	Victimizing (V) N=82
Sexually Abused****	106 (36%)	65 (79%)	34 (87%)	68 (83%)
Chronic****	47 (16%)	37 (45%)	21 (54%)	45 (55%)
Age First Incident[a]				
mean yrs/SD	7.2/3.9	6.1/3.8	4.9/3.8	4.4/3.0
(Range)	(1-16)	(1-16)	(1-16)	(1-15)
Mean number of abusers (range)	1.6 (1-5)	1.5 (1-3)	1.7 (1-4)	1.8 (1-4)
Relationship of Abuser(s)				
Father/Stepfather**	50 (17%)	20 (24%)	12 (31%)	28 (34%)
Mother/ Stepmother****	6 (2%)	5 (6%)	5 (13%)	14 (17%)
Siblings*	9 (3%)	6 (7%)	3 (8%)	7 (9%)
Other Relatives***	21 (7%)	7 (9%)	6 (15%)	19 (23%)
Nonrelatives****	69 (23%)	45 (55%)	22 (56%)	44 (54%)
Type(s) of Abuse				
Molestation ****	85 (29%)	48 (59%)	31 (80%)	60 (73%)
Oral Sex***	4 (1%)	5 (6%)	4 (10%)	9 (11%)
Intercourse**	38 (13%)	24 (29%)	11 (28%)	21 (26%)
Ritualistic/Sadistic	3 (3%)	2 (2%)	0 (0%)	5 (6%)

**** X^2 (3df) $p < 0.00005$
*** X^2 (3df) $p < 0.0005$
** X^2 (3df) $p < 0.005$
* X^2 (3df) $p < 0.01$
[a] One-way ANOVA, F ratio=9.3 (3df) $p < 0.00005$, Tukey $p < 0.05$, N > V, N > E, H > V

Table 4: Physical Abuse and Neglect Status by Offender Subtype

	None (N) N=296	Hypersexual (H) N=82	Exposing (E) N=39	Victimizing (V) N=82
Physically Abused**	155 (52%)	48 (59%)	27 (69%)	60 (73%)
Chronic**	110 (37%)	28 (34%)	22 (56%)	48 (59%)
Age first incident mean yrs/SD	3.9/3.1	4.0/3.1	2.8/2.3	3.0/2.3
(range)	(1-14)	(1-11)	(1-10)	(1-11)
If Abused, mean number of abusers[a] (range)	1.3 (1-4)	1.4 (1-3)	1.7 (1-3)	1.5(1-4)
Relationship of Abuser(s)				
Father/stepfather	119 (40%)	26 (32%)	18 (46%)	38 (46%)
Mother/ stepmother****	46 (16%)	19 (23%)	15 (39%)	30 (37%)
Other***	25 (8%)	20 (24%)	9 (23%)	16 (20%)
Type(s) of Abuse				
Minor Injury*	151 (51%)	46 (56%)	25 (64%)	58 (71%)
Major Injury**	10 (3%)	4 (5%)	5 (13%)	11 (13%)
Neglect ****	47 (16%)	26 (32%)	16 (41%)	28 (34%)

[a] F-ratio=3.2 (3df), $p<0.05$, Tukey E>N, $p<0.05$
**** X^2 (3df) $p<0.00005$
*** X^2 (3df) $p<0.0005$
** X^2 (3df) $p<0.005$
* X^2 (3df) $p<0.01$

Table 5: Predictor Variables of Sexual Offending Behaviors

Predictor Variables	B	S.E.	Wald	Sig
Hypersexual Behaviors				
History of Sexual Abuse	0.96	0.18	28.51	0.00005
Sex. Abused ages 0 - 3 yrs.	0.98	0.26	14.82	0.0001
Sex. Abused ages 7 - 12 yrs.	0.69	0.17	14.47	0.0001
No Sex. Abuse by Father/St.Fath.	0.50	0.22	5.10	0.02
No Chronic Physical Abuse	0.62	0.18	11.24	0.0008
Nightmares	0.62	0.19	11.08	0.0009
No Speech by 2 years of Age	0.60	0.19	9.84	0.002
Behavior Disorder(s)	0.54	0.17	9.54	0.002
Family Hx. Antisocial Beh.	0.46	0.16	8.02	0.005
No suicidal acts	0.44	0.17	6.35	0.01
Physical Abuse, Other (nonparent)	0.49	0.22	4.89	0.03
Neglect, ages 4 -6 years	0.35	0.20	3.07	0.08
Exposing Behaviors				
History of Sexual Abuse	1.22	0.30	16.77	0.00005
Number of Sex. Abusers	1.37	0.34	16.20	0.0001
Sex Abuse: Oral	1.56	0.63	6.24	0.01
No Sex Abuse by Sibling	1.54	0.76	4.09	0.05
No Friends	1.39	0.44	9.96	0.002
Scapegoated by peers	1.04	0.33	9.86	0.002
Nightmares	1.03	0.33	9.80	0.002
No suicidal acts	1.69	0.57	8.92	0.003
Age (younger)	-0.30	0.11	7.41	0.007
Physical Abuse: Major Injury	1.48	0.59	6.31	0.01
IQ less than 71	1.08	0.44	6.09	0.01
Animal Cruelty	0.87	0.37	5.64	0.02
Substance Abuse Dx.	0.98	0.42	5.56	0.02
Nonsupportive Parents	0.58	0.27	4.44	0.04
Not Verbally Abusive	0.57	0.33	3.00	0.08
Victimizing Behaviors				
History of Sexual Abuse	1.51	0.22	45.26	0.00005
Number of Sex. Abusers	0.75	0.25	8.96	0.003
Sex. Abuse ages 4 - 6 yrs.	0.66	0.26	6.63	0.01
Chronic Sexual Abuse	0.70	0.30	5.64	0.02
No Depression Diagnosis*	0.91	0.24	14.39	0.0001
Male Gender	0.76	0.22	12.28	0.0005
Vandalism	0.62	0.23	7.17	0.007
Scapegoated by peers	0.66	0.26	6.33	0.01
Other Pre/Perinatal Problems	0.56	0.22	5.93	0.02
Behavior Disorder	0.60	0.25	5.72	0.02
No Speech at 2 years of age	0.62	0.27	5.29	0.02
No History of Seizures	0.87	0.40	4.78	0.03
Neglect: ages 7 - 12 years	0.65	0.31	4.34	0.04
Physical Abuse	0.36	0.20	3.22	0.07
Physical Abuse: ages 4 - 6 years	0.37	0.21	3.16	0.08
Physical Abuse; major injury	0.62	0.36	2.96	0.09

Variables determined using two sequential Forward Stepwise Logistic Regressions (Likelihood Ratios).
Statistics listed are the logistic coefficients (B), standard error (S.E.), the Wald statistic, and the significance (Sig) (Norusis, 1990). All df=1.
*does not include bipolar disorder

References

Becker, J. (1990). Treating Adolescent Sexual Offenders. *Professional Psychology: Research and Practice*, 21:362-365.

Becker, J., Kaplan, M., Cunningham-Rather, J. & Kavoussi, R. J. (1986). Characteristics of Adolescent Incest Sexual Perpetrators: Preliminary Findings. *Journal of Family Violence*, 1:85-97.

Becker, J. V., Kaplan, M., & Kavoussi, R. J. (1988). Measuring the effectiveness of treatment for the aggressive adolescent sexual offender. *Annals of the New York Academy of Sciences*, 528: 215-222.

Berliner, L. Evaluation and Treatment of Children with sexual behavior problems. *Adolescent Sex Offenders: Prevention, Treatment and Management.* The Justice Institute of British Columbia, 1989

Bolton, F., Morris, L., & MacEachron, A. (1989). *Males At Risk.* California: Sage Publications.

Davis, G., & Leitenberg, H. (1987). Adolescent Sex Offenders. *Psychological Bulletin*, 101:417-427.

Fehrenbach, P., & Monastersky, C. (1988). Characteristics of Female Adolescent Sex Offenders. *American Journal of Orthopsychiatry*, 58:148-151.

Fehrenbach, P., Smith, W., Monastersky, C., & Deisher, R. (1986). Adolescent Sexual Offenders: Offender and Offense Characteristics. *American Journal of Orthopsychiatry*, 56:225-233.

Gil, E. (1993). Etiologic Theories. E. Gil, & T. C. Johnson (eds), *Sexualized Children. Assessment and Treatment of Sexualized Children and Children Who Molest*, (pp. 53-56). USA: Launch Press.

Green, A. H. (1993). Child Sexual Abuse: Immediate and Long-term Effects and Intervention. *Journal of the American Academy of Child and Adolescent Psychiatry*, 32:890-902.

Johnson, T. C. (1993). Preliminary Findings. E. Gil, & T. C. Johnson (eds), *Sexualized Children. Assessment and Treatment of Sexualized Children and Children Who Molest*, (pp. 67-89). U.S.A.: Launch Press.

Kahn, T., & LaFond, M. (1988). Treatment of the Adolescent Sex Offender. *Child and Adolescent Social Work Journal*, 5:135-148.

Kavoussi, R. J., Kaplan, M., & Becker, J. V. (1988). Psychiatric Diagnoses in Adolescent Sex Offenders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 27:241-243.

Keith, C. (1984). *The Aggressive Adolescent.* New York, N.Y.: Free Press.

Norusis, M. J. (1990). *SPSS-PC+, Advanced Statistics 4.0.* Chicago, IL: SPSS, Inc.

Pfeffer, C. (1991). Attempted Suicide in Children and Adolescents: Causes and Management. M. Lewis. (ed) *Child and Adolescent Psychiatry, A Comprehensive Textbook,* Baltimore, Md.: Williams & Wilkins.

Ryan, G. (1989). Victim to Victimizer. *Journal of Interpersonal Violence*, 4:325-341.

Ryan, G., Lane, S., Davis, J., & Issac, C. (1987). Juvenile sex Offenders: Development and correction. *Child Abuse and Neglect*, 11:385-395.

Saunders, E., & Awad, G. (1988). Assessment, Management, and Treatment Planning for Male Adolescent Sexual Offenders. *American Journal of Orthopsychiatry*, 38:571-579.

Saunders, E., Awad, G., & White, G. (1986). Male Adolescent Sexual Offenders: The offender and the offense. *Canadian Journal of Psychiatry*, 31:542-549.

Sefarbi, R. (1990). Admitters and Deniers Among Adolescent Sex Offenders and Their Families. *American Journal of Orthopsychiatry*, 122:783-789.

Smith, W. (1988). Delinquency and Abuse Among Juvenile Sex Offenders. *Journal of Interpersonal Violence*, 3:400-413.

Spitznagal, E. L., & Helzer, J. E. (1985). A Proposed Solution to the Base Rate Problem in the Kappa Statistic. Achives of General Psychiatry, 42:725-728.

Steinhausen, H. C., Willms, J., & Spohr, H. L. (1993). Long-term Psychopathological and Cognitive Outcome of Children with Fetal Alcohol Syndrome. *Journal of the American Academy of Child and Adolescent Psychiatry*, 32:990-994.

Trupin, E., Low, B., Forsyth-Stevens, A., Tarico, V., & Cox, G. (1988). Forgotten Children. The Mental Health Needs of Washington Children. Division of Community Psychiatry, University of Washington, Seattle, WA.

Woolston, J. L., Rosenthal, S. L., Riddle, M. A., Sparrow, S. S., Cicchetti, D., & Zimmerman, L. D. (1989). Childhood Comorbidity of Anxiety/Affective Disorders and Behavior Disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 28:707- 713.