Comparison of Behaviors of Suspected Sexually Abused and Nonsexually Abused Preschool Children Using Anatomical Dolls

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COMPARISON OF BEHAVIORS OF SUSPECTED SEXUALLY ABUSED AND NONSEXUALLY ABUSED PRESCHOOL CHILDREN USING ANATOMICAL DOLLS

by

Rita Kenyon-Jump

A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Master of Arts
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Western Michigan University
Kalamazoo, Michigan
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Using anatomical dolls, the play behaviors of nine sexually abused preschool children (five males, four females), ranging in age from 3-5 years, were compared with nine preschool children with whom there was no suspicion of sexual abuse and who were matched on the basis of age, gender, race, family status, and socioeconomic status. There was no significant difference between the two groups on explicit sexual behavior (vaginal, oral, and anal intercourse with thrusting motions between the dolls or between the child and dolls and masturbation by the child). The groups were significantly ($t (8) = 2.19, p < .05$) different when behaviors with suspicious sexual implication were combined with explicit sexual behaviors. There were no differences between the groups on measures of aggression, anxiety, and nonsexual behavior. The occurrence of the suspicious sexual behaviors is discussed and reviews of previous doll research and physical evidence of child sexual abuse are provided.
ACKNOWLEDGEMENTS

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Rita Kenyon-Jump
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Comparison of behaviors of suspected sexually abused and nonsexually abused preschool children using anatomical dolls

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Western Michigan University, 1990
# TABLE OF CONTENTS

ACKNOWLEDGEMENTS .................................................................................................................. ii

LIST OF TABLES ................................................................................................................................... vi

CHAPTER

I. INTRODUCTION .............................................................................................................................. 1
   Prevalence of Child Sexual Abuse ................................................................................................. 1

II. REVIEW OF THE SELECTED LITERATURE ............................................................................... 8
   Anatomical Doll Research .............................................................................................................. 8

III. DESIGN AND METHODOLOGY .............................................................................................. 14
   Subjects .......................................................................................................................................... 14
   Setting ........................................................................................................................................... 17
   Apparatus ...................................................................................................................................... 18
   Procedure ...................................................................................................................................... 19
   Observation ................................................................................................................................... 21
   Experimental Design .................................................................................................................... 21
   Dependent Variables ...................................................................................................................... 22

IV. RESULTS ...................................................................................................................................... 23
   Observational Reliability .............................................................................................................. 23
   Play Behaviors ............................................................................................................................... 23

V. DISCUSSION .................................................................................................................................. 28
   Interpretation of Doll Play Behaviors ........................................................................................... 28
   Recommendations .......................................................................................................................... 32
   Conclusions .................................................................................................................................... 33
APPENDICES

A. Preschool Observation Scale of Anxiety ................................................. 35
B. Doll Play Observation Form ................................................................. 37
C. Parental Consent Form ............................................................................. 39
D. Approval Letters From the Human Subject Institutional Review Board ............................................................................. 42

BIBLIOGRAPHY ...................................................................................................... 45
LIST OF TABLES

1. Subject Characteristics ................................................................. 15
2. Referred Subject Characteristics .................................................... 16
3. Results ......................................................................................... 24
4. Frequency of Sexual (Explicit & Suspicious) Doll Play Behaviors .......... 26
5. Frequency of Nonsexual Doll Play Behaviors ..................................... 27
CHAPTER I

INTRODUCTION

Prevalence of Child Sexual Abuse

Child sexual abuse, the exploitation of a child for the sexual gratification of an adult or any significantly older person (Committee for Children, 1986), is a prevalent phenomenon. In the United States, one in four girls will have been sexually assaulted prior to the age of 18 years (De Francis, 1969; Finkelhor, 1979; Harborview Medical Center, 1980) whereas one in ten boys will have been sexually assaulted by age 18 (National Committee for Prevention of Child Abuse, 1979).

Precise incidence rates of sexual abuse among preschool children have been difficult to obtain. Estimates of abuse generally come from cases reported to various sources, such as hospitals, police, or child protection agencies or from surveys of adults asking of previous molestation experiences. It is not surprising that such methods often underestimate the true prevalence; not only are all cases of sexual abuse not reported, but also when the abuse has occurred over a period of years, adult survivors of child sexual abuse cannot remember the exact onset of the abuse. Further, when child sexual abuse is discovered and reported, the age of the child at the time of disclosure is typically reported rather than the age at which the abuse began (Waterman & Lusk, 1986). In a study by Hunter, Kilstrom, and Loda (1985), the average age at which abuse was identified was 9 years old, but the abuse had been occurring for an average of 2-3 years prior to detection. Thus, reported ages are often artificially high.
Even given this caveat, children under the age of 6 years were reported victims of child sexual assault in 15-25% of the cases in studies done by Finkelhor (1979) and Harborview Medical Center (1979). In addition, over 20% of the sexual abuse cases in Los Angeles County, California in 1983 involved children under the age of 5 (Waterman & Lusk, 1986).

Generally, there is little or no demonstrable medical evidence to support an allegation of sexual abuse, especially in preschool children (Durfee, Heger, & Woodling, 1986). Demonstrable medical evidence is typically categorized as: (a) the presence of sperm, seminal fluid, or sexually transmitted disease, (b) recent or healed lacerations of the hymen, vaginal, or anal openings, or (c) scarring (irregularity and/or discoloration dissimilar from adjacent tissue) of the hymen, vaginal wall, or anus. Although definitive physical signs of abuse have been identified, evidence of sexually transmitted diseases or seminal fluid are rarely found in cases of child sexual abuse (De Jong, 1986; Emans, Woods, Flagg, & Freeman, 1987; Enos, Conrath, & Byer, 1986; S. T. White, Loda, Ingram, & Pearson, 1983).

An obvious problem with the medical detection of sexual abuse is the time delay between the abuse and the physical examination. Liquid seminal fluid is rarely present greater than 4-6 hours following the latest molestation (Indest, 1989) while nonmotile sperm can remain in the "vagina for 3-5 days in exceptional cases and in the endocervical canal for up to 17 days following coitus" (Woodling & Kossoris, 1981, p. 494). Thus, not only must a child be examined relatively shortly after an assault but also must go to a physician that is familiar with the various testing procedures for the presence of sperm. Woodling and Kossoris caution that "interpretation . . . is extremely important and an understanding of the variability is essential to the forensic examiner" (p. 494).
Evidence of anal and vaginal abuse are also time-dependent. Although acute single acts of anal penetration may result in dilation and swelling of the anal margin, such signs of abuse disappear within 7-10 days; even when chronic abuse produces deep anal fissures and distended veins, complete healing, even in children as young as 1-2 years old, is possible within months (Hobbs & Wynne, 1989). In addition, few anally abused children or their parents report any anal complaints even when physical abnormalities from injury are discovered as there is surprisingly little disturbance of function, such as constipation, incontinence, or diarrhea, following anal abuse at any age (Hobbs & Wynne, 1989). Durfee et al. (1986) reported that 50% of all cases in which anal penetration does occur manifest a normal-appearing anus since the anus is capable of adapting to large, hard stools without injury.

It is argued that physical detection is difficult to obtain with preschool children because penetration occurs less frequently in preschool children than in older children (Waterman & Lusk, 1986); however, Hobbs and Wynne (1989) found anal penetration in 40% of the girls and 90% of the boys in the 0-5 year age group. However, their findings of vaginal penetration were similar to those of others, with only 7% of the preschool children showing evidence of attempted or partial penetration of a digital nature (Hobbs & Wynne, 1989).

Further evidence of the crucial role of time in the detection of vaginal abuse is found in a study by Muram (1989). Although all the subjects were confirmed victims of sexual abuse, medical exams failed to find any abnormality in 29% of the girls; and, in an additional 26%, the anomaly that was observed could have been caused by irritation, scratching, or infection rather than sexual abuse. When the examination was performed greater than one week after the assault, no inflammatory reaction was noted in any of the victims. Further, even within one week of the assault, irritation and inflammation were found in only 43% of the cases. In a study of sexually abused
boys aged 1 to 17 years of age, physical evidence was found in only 68% of the victims (Spencer & Dunklee, 1986). Thus, lack of physical evidence of sexual contact should not be taken to mean that no sexual contact took place.

Historically and legally, the status of the hymen has held a central albeit controversial role in the determination of sexual abuse. Although popular belief contends that penetration necessarily results in a nonintact hymen, experts emphasize that the presence of an intact hymen does not preclude the potential of vaginal penetration (Enos et al., 1986; Herman-Giddens & Frothingham, 1987; Indest, 1989). Of the children examined by Enos and colleagues (1986), almost 64% of the females with positive findings of sexual abuse had intact hymens.

In an effort to ascertain the relevance of genital-hymenal measurements, S. T. White, Ingram, and Lyna (1989) measured the transverse diameter of the hymenal orifice in a sample of sexually abused, at risk for abuse, and nonabused females. They found that a vaginal introital diameter of greater than 4 mm was found in 88% of the children who complained of vaginal-penile penetration compared with 18% of those without penetration; in addition, they found 46% of the children who reported digital-vaginal penetration compared with 14% of those with no such reports had vaginal introital diameters of greater than 4 mm. Moreover, they found that 58% of the children who reported more than one sexual encounter had vaginal introital diameters of greater than 4 mm compared to 29% with only one encounter. Thus, a vaginal introital diameter of greater than 4 mm was highly associated with a history of sexual contact. Others, however, contend that hymenal openings greater than 4 mm can be considered normal (Claytor, Barth, & Shubin, 1989; Emans et al., 1987) and actually increase as a function of increasing age as well as sexual contact (Adams, Ahmad, & Phillip, 1988; Claytor et al., 1989). Thus, no firm agreement exists regarding what constitutes hymenal evidence of sexual abuse.
Although progress has been made in the medical diagnosis of child sexual abuse, physical evidence cannot be the sole or deciding factor in the determination of sexual abuse. Many forms of sexual abuse, such as fondling or oral-genital contact, produce no evidence and, therefore, are rarely detected through physical evidence. As previously emphasized, even when the abuse does produce physical evidence, a time delay between the molestation and the physical exam is likely to obviate the detection of the abuse. Thus, strategies other than physical examination are necessary for the determination of sexual abuse in children.

Without physical evidence, substantiation of abuse depends upon a confession of the perpetrator, eyewitness accounts, and/or statements of the child victim. Commonly the responsibility for determining whether or not abuse has occurred rests on the child with the "evaluator's judgment about the validity and truthfulness of the child's statements" the deciding factor (Everson & Boat, 1989, p. 230). Given a preschool-aged child's limited and unsophisticated command of language and overall verbal communication level, it can be difficult to obtain information about sexual abuse from a young child.

Children between the ages of 2 and 5 are said to have a cognitive style in which they perceive and define objects only in relation to particular functions (deYoung, 1988) and perceive objects to be totally different objects when the physical appearance of such objects changes (Singer & Reveson, 1978). DeYoung (1988) articulated how this developmental style could create difficulty in assessing the veracity of child sexual abuse cases; for example, children may refer to ejaculation as urination because that is their only perceived function of the penis, or children may think that an erect penis is no longer a penis because its size and shape have changed.

Further, preschool-aged children frequently communicate in a "seemingly disjointed free association style" which compromises their credibility (Quinn, 1988,
Because of their immaturity in language and concreteness of thought, children answer questions too literally (Benedek & Schetky, 1987); this also reflects negatively upon their credibility. In a study of prosecutorial discretion in screening decisions for child sexual abuse cases, victims under the age of five were more likely to have their cases result in nonprosecution than cases with older victims (MacMurray, 1989).

Further, the status of young children's credibility in allegations of child sexual abuse is disturbingly articulated in the American Academy of Child and Adolescent Psychiatry's (1988) guidelines for the clinical evaluation of child and adolescent sexual abuse. The guidelines state that "the possibility of false allegations needs to be considered if allegations are coming from the parent rather than the child, if the parents are engaged in a dispute over custody or visitation, and/or if the child is a preschooler" (p.656). This suggests that abuse of preschool children should be viewed initially within a context of potential false allegations.

Given the preponderance of child sexual abuse allegations, assessment strategies other than medical or primarily verbal approaches are needed to assist in the assessment of child sexual abuse in young children. For this very reason, anatomically correct (having genitalia) dolls were introduced to assist young children in describing behaviorally what had happened to them in terms of sexual abuse.

Although anatomically correct dolls have only been used in child sexual abuse evaluations since 1976 (Friedemann & Morgan, 1985), the use of toys and play in therapy have a very long and rich history in child psychiatry (Yates & Terr, 1988). Moreover, recent research has demonstrated that early trauma is recalled from visual rather than verbal memory and is thus remembered through behavior (Terr, 1988). Terr found that children as young as 28 months can relay memories of traumatic events. In this study, 15 of the 20 children who suffered trauma prior to the age of 5
demonstrated memory of their traumatic experience through play in the therapist's office; all six of the children whose traumatic events consisted of sexual abuse demonstrated their abuse through play. Thus, anatomically correct dolls would prove useful in helping very young sexually abused children relay nonverbally what they have difficulty expressing verbally.
CHAPTER II

REVIEW OF THE SELECTED LITERATURE

Anatomical Doll Research

Although anatomical doll use has proliferated over the past 15 years, relatively few empirical studies have been conducted to substantiate their use. To date, only four studies (August & Forman, 1989; Gabriel, 1985; Jampole & Weber, 1987; S. White, Strom, Santilli, & Halpin, 1986) comparing the behavior of sexually abused and nonsexually abused children using anatomically correct dolls have appeared in peer-reviewed journals. Two additional comparative studies (Cohn, 1988; Harnest & Chavern, 1985, cited in S. White & Santilli, 1988) have been presented as conference papers while another (McIver & Wakefield, 1987) is unpublished.

Four normative studies addressing doll play behaviors of nonabused children have been conducted; two have been published in peer-reviewed journals (Glaser & Collins, 1989; Sivan, Schor, Koeppi, & Noble, 1988); another is in press (Everson & Boat, in press), and the other (Aman & Goodman, 1987) has been presented at a conference. Additionally, Boat and Everson (1988) conducted a large survey of child protection workers, law enforcement officers, mental health practitioners, and physicians to determine their use of anatomical dolls in child sexual abuse evaluations and their subsequent interpretations of children's behaviors with the dolls.

The comparative studies of referred and/or sexually abused and nonreferred and/or nonsexually abused children have consistently demonstrated that children referred for sexual abuse display significantly more sexually related behaviors with
anatomical dolls than do those in the nonreferred groups. S. White et al. (1986) compared 25 children, ranging in age from 2-6 years, using a structured doll protocol and free play. The children suspected of having been abused displayed significantly ($p < .0001$) more sexualized doll play and verbally reported significantly ($p < .0001$) more sexual abuse than did the controls.

In addition to its status as the first published study in the area of anatomical doll use among referred and nonreferred children, this study had the following strengths: (a) two separate and independent scores of abuse suspicion; (b) interviewers specifically trained in the doll interview protocol and experienced with child interviews; (c) blindness of the interviewers to the abuse status of the children; and (d) use of nonleading questions.

Limitations of the study primarily center around the differences in the characteristics of the referred and nonreferred groups. Twenty-four of the subjects in the control group were white and 23 were from intact families while the referred group had only 20 white children and 7 intact families. In addition, the parents' marital status differed greatly between the two groups; 22 of the nonreferred children had married parents, 2 had divorced parents, and 1 had parents who had never married. In the referred group, 7 had married parents, 4 had divorced parents, 6 had separated parents, 6 had parents who had never married, and there was no information on the remaining two subjects. Also, the gender distribution differed between the groups; the referred group consisted of 9 males and 16 females whereas the nonreferred group consisted of 12 males and 13 females.

The study by Jampole and Weber (1987) utilized a smaller sample, 10 subjects in each group with the ages ranging from 3 to 8 years, and involved nondirective play as opposed to a structured interview protocol. The sessions lasted one hour, 15 minutes of which the child was left alone with the dolls undressed. All sessions were viewed.
through a two-way mirror and scored by an observer who was unaware of the children's abuse status. Significant differences between the two groups emerged from the doll play; 9 of the 10 children in the sexually abused group demonstrated sexual behavior with the dolls, whereas only 2 of the 10 in the control group displayed such behavior.

Although the children were matched on race, age, and gender, obvious differences existed in the family status and socioeconomic status of the two groups. All ten of the subjects in the sexually abused group were in, or previously had been in, legal custody of the state, but four of the control subjects were sons or daughters of agency employees. Although the remaining six control subjects were under the legal custody of the state (for reasons other than sexual abuse), their previous experience in interviews regarding their own abuse and/or neglect may have biased their behavior in this research. In addition, an hour may be too long of a period to sustain the attention of young children.

August and Forman's (1989) research utilized two groups of 16 female subjects, ranging in age from 5 to 8 years. The study included a 15 minute warm-up condition where the researcher and child played with crayons and paper, followed by a 5 minute period in which the child was left alone with the anatomical dolls after being told to change the dolls' clothes and play with them. In the final segment of the study, the child was asked to tell a story (3 minutes) about the dolls to the researcher.

The referred and nonreferred groups had statistically significant differences in the alone condition on measures of aggression, freeplay and private parts reference with the referred group displaying more sexually related behavior. In the storytelling condition, the groups differed significantly only on measures of freeplay and avoidance; the children in the nonreferred group engaged in more freeplay behaviors while those in the referred group engaged in more avoidant behavior.
A criticism of this study is a lack of clarity regarding what behaviors constituted the various measures; for example, freeplay was said to occur "when aggression, avoidance, or private parts reference behaviors were absent" and was "not negatively emotionally charged" (p. 42). Further, the "private parts" reference behaviors included "pointing at or touching genital areas or breasts, giggling while looking at genitals or breasts, removing, looking at or playing with undergarments" (p. 42). Since the children were instructed to change the dolls' clothing, it seems biased to count removing, looking at or playing with the undergarments as sexualized behavior. In addition, neither giggling nor merely touching the dolls warrants inclusion as sexually oriented behaviors, especially in light of the findings of doll play among nonreferred children (Everson & Boat, in press; Glaser & Collins, 1989; Sivan et al., 1988). Moreover, the observers in this study were aware of the abuse status of the children.

The normative studies conducted to date have demonstrated that children inspected the dolls (i.e., touched the genitals and breasts) but generally did not display sexually explicit behavior (Everson & Boat, in press; Glaser & Collins, 1989; Sivan et al., 1988). From interviewing and observing 209 2-, 3-, 4-, and 5-year-olds' interactions with anatomical dolls, Everson & Boat (in press) concluded that manual exploration of an undressed doll's breasts, anus, or genitals were common behaviors among nonsexually abused preschool children and, thus, should not be interpreted as sexualized play. They also found that 6% of the children demonstrated sexual intercourse with the dolls during sessions involving both directed and free play with the dolls. Because there were several demographic variables (older, poorer, black, and male) associated with the children displaying intercourse, Everson and Boat suggest that there may be a subset of preschool children who have knowledge of sexual intercourse but were not themselves sexually abused. They also point out that
their directions ("Show me what the dolls can do together") may account for such children demonstrating explicit intercourse in the directed play segment.

In all of the studies utilizing nonreferred/nonabused children, the possibility exists that sexually abused children may be present among this sample despite efforts to prevent such inclusion. S. White et al. (1986) assessed the suspicion of abuse on several different indicators obtained from the child and from parental and professional reports. Others questioned parents about suspicions of sexual abuse or previous referrals for sexual abuse prior to classifying the children as nonabused/nonreferred (August & Forman, 1989; Everson & Boat, in press; Jampole & Weber, 1987). Others (e.g., Glaser & Collins, 1989) assumed that parents whose children were abused would not consent to their participation in the research, thus excluding them from the nonabused sample. Although the presence of sexualized play in the nonabused sample raises the question as to the possibility of abused children within this group, it also suggests that the demonstration of intercourse alone cannot be considered a definitive marker of sexual abuse. Thus, additional research with both abused and nonabused children is necessary to determine if there are any interactions between a child and anatomical dolls that could be viewed as definitive markers of sexual abuse. In addition, a pressing call for more research comes from the California Court of Appeals. A recent decision (Amber B. v. Ron B., 1987) rejected evidence obtained through use of anatomical dolls on the basis that the scientific community in which doll interviews were developed has not accepted their use as reliable.

The purpose of the present study was to compare the anatomical doll play of preschool children who had been referred for suspected sexual abuse with children who have not been referred and who indicated no suspicion of sexual abuse. The primary hypothesis was that referred children would demonstrate sexual behaviors, such as oral-genital contact, anal-genital contact, or intercourse, whereas the
nonreferred children would not display such behaviors. By including toys other than the anatomical dolls, the researcher hoped to gather information regarding the frequent assertion that the dolls themselves elicit sexual behavior on the part of children and that the novelty of dolls with body parts stimulates children to play with them (Terr, 1988). Observations of children's anxiety throughout the session were also noted to address the contention that any child would become anxious when presented with anatomically correct dolls.

This study improved upon previous research in the following ways:

1. Subjects were matched on socioeconomic status in addition to age, gender, and race.

2. Subjects were matched on the basis of family status (i.e., intact and nonintact).

3. The age range was limited to 3-, 4-, and 5-year-old children, the ages at which the doll play is most likely to be relied upon for assessment purposes.

4. Allowing the children to play freely with whichever toys they chose rather than utilizing a standard interview protocol ruled out the problem of leading questions and provided a noninvasive and objective means of determining the play behaviors with the dolls.

5. While touching and exploring of the dolls were recorded, only specified behaviors, such as oral-genital contact, anal-genital contact, and clearly expressed intercourse were defined as explicit sexual behavior. Masturbation by the child was also coded as sexually explicit behavior.
CHAPTER III

DESIGN AND METHODOLOGY

Subjects

Subjects were 18 children ranging in age from 3 years-4 months to 5 years-5 months. Characteristics of the two groups are presented in Table 1. The sample was proportionate regarding gender, race, and age, with an equal number of children in each age group (3-, 4-, and 5-year olds).

Subjects in the referred group were recruited through Riverwood Center, the community mental health center in Berrien County, Michigan. Seven of the 9 subjects had presented to the mental health center because of confirmed sexual abuse or a strong suspicion of sexual abuse. The remaining two subjects were not currently seeing a therapist but there was definite substantiation of their abuse. The 9 nonreferred subjects were selected through letters and notices posted in daycare centers and preschool programs throughout the county. There were two pairs of siblings within the referred group.

Sessions with three additional nonreferred subjects were attempted but data were not collected; the video equipment malfunctioned during a session with a 4-year-old white male, and two 5-year-old white females terminated the sessions within the first ten minutes of the sessions. Both female children expressed boredom and said they did not want to play any longer. The wishes of each child were respected and the sessions were stopped.
Of the referred group, 7 of the 9 children were confirmed victims of abuse by physical evidence, a confession of the perpetrator, and/or an eye witness account. While there was no substantiation of the sexual abuse with the remaining two children, there was a strong suspicion based upon the child's behavior and reports of

Table 1

<table>
<thead>
<tr>
<th>Subjects Characteristics</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Referred</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Number</td>
</tr>
<tr>
<td>Mean Age (Yr-Mos)</td>
</tr>
<tr>
<td>Age Range</td>
</tr>
<tr>
<td>Race</td>
</tr>
<tr>
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</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>Family Status</td>
</tr>
<tr>
<td>Intact</td>
</tr>
<tr>
<td>Single Mother</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
</tr>
<tr>
<td>Low</td>
</tr>
<tr>
<td>Middle</td>
</tr>
<tr>
<td>High</td>
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</tbody>
</table>

the parent(s) and therapist. Table 2 describes the age, gender, and race of the child victims, nature of the abuse, relationship of the offender to the victim, and substantiation of the abuse.

Two of the children in the sexually abused sample had been removed from their homes and placed with relatives because of the sexual abuse and a third child (one of

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<table>
<thead>
<tr>
<th>Age (Yr-Mos)</th>
<th>Race</th>
<th>Gender</th>
<th>Confirmation of Abuse</th>
<th>Nature of Abuse</th>
<th>Victim/Offender Relationship</th>
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<td>Black</td>
<td>Male</td>
<td>Eye-witness</td>
<td>Oral Sex; Suspected Anal Penetration</td>
<td>Familial / Adolescent Male</td>
</tr>
<tr>
<td>5-5</td>
<td>White</td>
<td>Male</td>
<td>Eye-witness</td>
<td>Genital Fondling</td>
<td>Nonfamilial / Adult Male</td>
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<tr>
<td>4-0</td>
<td>Black</td>
<td>Female</td>
<td>Suspicion</td>
<td>Vaginal Penetration; Genital Fondling</td>
<td>Nonfamilial / Adult Male</td>
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<td>Male</td>
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<td>Nonfamilial / Adult Male</td>
</tr>
<tr>
<td>4-5</td>
<td>White</td>
<td>Male</td>
<td>Suspicion</td>
<td>Genital Fondling</td>
<td>Nonfamilial / Adult Male</td>
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<tr>
<td>5-5</td>
<td>White</td>
<td>Female</td>
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<td>Oral Penetration; Genital Fondling</td>
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<tr>
<td>3-7</td>
<td>White</td>
<td>Female</td>
<td>Confession</td>
<td>Oral Penetration; Genital Fondling</td>
<td>Familial / Adolescent Male</td>
</tr>
<tr>
<td>5-0</td>
<td>White</td>
<td>Male</td>
<td>Eye-witness</td>
<td>Genital Fondling; (Anal Penetration)</td>
<td>Familial / Adolescent Female* (Adult Male**)</td>
</tr>
</tbody>
</table>

* Confirmed (Adolescent who molested the subject was vaginally penetrated by the same adult male as suspected here.)
** Suspected anal penetration by adult male.
the unsubstantiated cases) in this sample was removed from the home as a result of the mother's neglect and the mother's physically abusive boyfriend. For the purposes of matching, the family status at the time of the abuse rather than at the time of the research participation was taken into account. Because all three of these children lived with their single-parent mothers at the time of the abuse or alleged abuse, they were matched with control subjects from single-parent mothers.

The researcher spoke individually with each parent in the nonreferred group regarding previous or current sexual abuse or suspicions of such prior to the child's involvement in the study. There were neither confirmations nor suspicions of any sexual abuse among the children recruited for the nonabused sample. None of the children in either group had previous exposure to anatomical dolls.

All parents and/or legal guardians gave written informed consent prior to their child's participation. Parents and/or legal guardians received a $10.00 stipend for transportation and child care costs to facilitate involvement in the study.

Setting

The study took place in the children's group room at Riverwood Center in Benton Harbor, Michigan. Although the room itself was 21 ft (6.40 m) long and 12.66 ft (3.86 m) wide, the experimenter rearranged the furniture to create a smaller area, 12 ft (3.65 m) x 9 ft (2.74 m), for closer viewing via the observation window and video camera. The room was furnished with a matching sofa, loveseat and stuffed chair, several straight-back chairs, and two end-tables with lamps. The walls were decorated with framed cloth pictures. The child and female experimenter were in the group room while the parent(s) were in an adjacent observation room where they were able to observe the sessions via the two-way mirror and the video monitor. The
parent(s) and experimenter were always in a position to view the child, but there were points when the child briefly moved out of the range of the camera.

Apparatus

Two sets of four anatomical dolls, Teach-A-Bodies (Harnest, 1981), were used in the study. Each set contained two 22 in (55.88 cm) adult dolls, one male and one female, and two 17 in (43.18 cm) child dolls, one male and one female. A set of black dolls was used with black children and a set of white dolls was used with white children. All the dolls had mouth and anal openings and the female dolls had vaginal openings. The adult dolls had pubic hair and all dolls had fingers.

Crayons, drawing paper, a yellow plastic dump-truck, and a set of four books, Babar's Trunk (de Brunhoff, 1969), were available for play in addition to the four anatomical dolls. Video-taping was done with the following equipment: RCA video camera (Model No. CLC025) mounted on the wall above the observation window, RCA video cassette recorder (Model No. VMT285), and RCA color television monitor (Model No. FLR622TR). A microphone was mounted on the ceiling over the area used.

A demographic questionnaire was designed using Hollingshead's Four Factor Index of Social Status (Hollingshead, 1975) to enable matching of the experimental and control subjects. The Hollingshead Four Factor Index measures social status on the basis of gender, marital status, education, and occupation using seven educational levels and nine occupational levels. The basic social class categories are low, middle, and high socioeconomic status.

Anxiety was appraised using the Preschool Observation Scale of Anxiety (Glennon & Weis, 1978) which assesses situationally induced anxiety in young children. The Preschool Observation Scale of Anxiety consists of 30 behaviors, such
as whispering, silence to questions, crying, leaving the room, gratuitous hand, leg, and foot movements, rigid posture, needing to go to the bathroom, and touching the genital area. A complete list of behaviors comprising this scale is in Appendix A. An observation form (see Appendix B) for recording each child's doll play was designed based upon behaviors studied in previous research (Everson & Boat, in press; Jampole & Weber, 1987; Sivan et al., 1988; S. White et al., 1986).

Procedure

The author greeted and introduced herself to the parent and child in the waiting room and the parent/legal guardian completed the written informed consent. Next the parent(s), child, and author walked together to the children's group room. The child was shown the room where the study was to take place as well as the adjacent observation room. The author told the child that his/her parent(s)/guardian would be right next door. If the child was unwilling to separate from the parent, the parent was allowed to stay in the room with the child and author. Only one child required her aunt to remain with her.

The author told each child that she had brought some toys for him/her to play with and that they could play with anything they wanted. The toys were arranged in a semi-circle on the floor and the child and author sat on the floor. The child was allowed to play freely for 10 minutes. After 10 minutes had passed, the author said, "These dolls are different than most dolls you might have played with because they have all their body parts." The child was allowed to play freely for another 10 minute period. Next, the author picked up the child doll of the same gender of the child and said, "Let's say this is you, (name). Who might these other dolls be?" Next the author conducted a body parts inventory, asking the child to name the various body parts as she pointed on the adult dolls. If the child had not undressed the adult dolls,
the author did so casually as the child was naming body parts. After the author had gone through the body part inventory from head to toe, the child was asked to point to the man doll and then to the woman doll to ensure that the child could differentiate between the two. During the body parts inventory, the author repeated the question once when it was clear that the child had not heard or seen where the author was pointing. When the child did not answer following the question a second time, the author proceeded to the next body part.

Finally, the author stated that she needed to go next door to talk with the child's parent(s) or guardian. The author stated that she would be gone several minutes and asked the child to stay in the room and play with whatever he/she wished until the experimenter returned. The child was allowed 10 minutes of free play. At the end of the 10 minute period, the session ended.

After the session, the author and parent(s) or guardian joined the child in the children's group room for refreshments. Closing the session with refreshments provided the opportunity for the child to show his/her parent(s) or legal guardian the dolls and other toys. Parents/legal guardians were given the cash stipend. Parents in the nonreferred group received child safety materials for child sexual abuse prevention.

Each child participated in one session lasting approximately 35 minutes followed by a 15 minute period for refreshments. The children were not told that they were being video-taped nor were they told that their parent(s)/legal guardian could see them through the two-way mirror. When children noticed the camera or microphone, they were told that it was a camera or microphone but were not told its purpose. One of the children in the referred group discovered that the mirror was a window and realized that her parents were able to see her.
Observation

Two advanced graduate psychology students served as observers. Observers received thorough instruction regarding the behaviors to be coded and the two coding forms. Prior to coding the tapes, the observers watched a video in which each of the specified behaviors was demonstrated with adult male and female dolls of both races. Using a video created for training, the observers then scored a session of a preschool child using the exact protocol of the study. Finally, the observers scored one session of the actual data.

The sessions were scored in four segments: (1) the first 10 minutes of free play, (2) the 10 minute period of free play following the prompt of the dolls having body parts, (3) the structured play involving the body part inventory, and (4) the child playing alone in the absence of the experimenter.

Observers were blind to the abuse status of the children throughout the study. Reliability was calculated using Pearson product-moment correlation coefficients.

Experimental Design

The author utilized a static-group comparison design (Campbell & Stanley, 1963) which compares one group of individuals who have experienced "X" with a group of individuals who have not. In this research, "X" referred to suspected sexual abuse. Unlike random assignment to groups, this type of classification does not allow one to formally determine if the groups would have been equivalent prior to the suspected sexual abuse. Although this is a weakness of the study, the nature of the research topic (i.e., sexual abuse) prohibited random assignment and manipulation of the independent variable of suspected sexual abuse. Data were analyzed in a two group design utilizing dependent t-tests on the various identified behaviors.
Dependent Variables

Demonstrations of explicit sexual behaviors were of primary interest. Explicit sexual behaviors were defined as the child inserting a doll's penis into another doll's vagina, anus, or mouth or into his/her own mouth or anus or her vagina. Placing unclothed dolls face-to-face or face-to-back and moving the dolls in a rocking or thrusting motion, as if in vaginal or anal intercourse, also constituted sexual behavior. Placing a doll to his/her own genital area with an accompanying thrusting motion was coded as explicit sexual behavior. In addition, masturbating by the child warranted classification as explicit sexual behavior.

Observers recorded behaviors in addition to explicit sexual behaviors; for example, they recorded insertion of the doll's and the child's finger(s) into the mouth, vaginal, and anal openings as well as touching and rubbing of the dolls. Observers noted aggressive play, such as kicking, throwing, hitting, or running over the dolls with the truck, and affectionate behavior, such as displays of kissing between the dolls and/or the child.
CHAPTER IV

RESULTS

Observational Reliability

The author computed reliability utilizing the Pearson product-moment correlation coefficient ($r$). The Pearson correlation provided an estimate of agreement across all periods in which reliability was checked rather than an estimate of agreement on any particular episode. Each coefficient was based on 24 of the 72 intervals in the study. Pearson correlation coefficients were as follows: Explicit Sexual Behavior, $r = .999$; Nonsexual Behaviors, $r = .774$; and, Anxiety, $r = .855$.

Play Behaviors

Contrary to the prediction, there was no significant difference on the measure of explicit sexual behavior between the children referred for sexual abuse and those children who had not been referred; however, inclusion of behaviors which may have suspicious sexual implication, such as touching one's genitals, straddling a clothed doll, kissing doll breasts, and putting one's hands between one's legs, did reveal statistical significance between the two groups. Inferential and descriptive statistics for the explicit and suspicious sexual behaviors, anxiety, and some specific nonsexual behaviors are summarized in Table 3. Table 4 displays the frequency of explicit and suspicious sexual behaviors by gender and condition (in the presence of the experimenter or with the child alone).

23
In the referred group, 44% (4 of 9) of the children performed behaviors defined as sexually explicit compared with 22% (2 of 9) of those in the nonreferred group. All of the children displaying such behaviors from the referred group were male while a male and female from the nonreferred group displayed these behaviors. When explicit and suspicious behaviors were combined, 56% (5 of 9) of those in both groups displayed such behaviors. Four males and one female and three males and two females engaged in these behaviors in the referred and nonreferred groups, respectively.

Table 3

Results

<table>
<thead>
<tr>
<th></th>
<th>Referred</th>
<th>Nonreferred</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit Sexual Behavior</td>
<td>M = 3.89</td>
<td>M = .89</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD = 7.21</td>
<td>SD = 2.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Range = 0 - 22</td>
<td>Range = 0 - 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E &gt; .05*</td>
<td>t(df=8) = 1.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explicit Sexual Behavior &amp; Suspicious Behavior</td>
<td>M = 5.89</td>
<td>M = 1.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD = 8.04</td>
<td>SD = 2.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Range = 0 - 24</td>
<td>Range = 0 - 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E &lt; .05*</td>
<td>t(df=8) = 2.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touching &amp; Rubbing of Genitals, Anus, &amp; Breast &amp; Inserting Fingers in Anus, Vagina, &amp; Mouth</td>
<td>M = 5.11</td>
<td>M = 2.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD = 6.72</td>
<td>SD = 3.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Range = 0 - 22</td>
<td>Range = 0 - 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E = .373</td>
<td>t(df=8) = .94**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety Measure</td>
<td>M = 9.67</td>
<td>M = 7.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD = 6.36</td>
<td>SD = 5.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Range 1 - 20</td>
<td>Range 1 - 17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E = .227</td>
<td>t(df=8) = 1.31**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*One-tailed t-test

**Two-tailed t-test

There was no difference between the two groups in behaviors indicative of manual exploration. Children in both groups touched and/or rubbed the dolls' genitals, breasts, and anuses and inserted their fingers into the dolls' mouths. In
addition, there was no significant difference in anxiety. The frequency of nonsexual play behaviors in regard to abuse status, gender, and condition (with experimenter versus alone) is presented in Table 5.

On the measure of aggression, the total frequency for each group was 11. Three males in the referred group performed 11 distinct acts while 3 males and 2 females in the nonreferred group were responsible for the 11 acts of aggression. The modal (5) act in the referred group involved running over dolls with the dump truck while pushing on the dolls (3) occurred most frequently in the nonreferred group.
Table 4
Frequency of Sexual (Explicit & Suspicious) Doll Play Behaviors

<table>
<thead>
<tr>
<th></th>
<th>Referred</th>
<th></th>
<th>Nonreferred</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Exp. Alone</td>
<td>Exp. Alone</td>
<td>Exp. Alone</td>
<td>Exp. Alone</td>
</tr>
<tr>
<td>Explicit Sexual Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insertion of Penis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vagina</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Anus</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mouth</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Face to Face Push/Rub</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Intercourse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self to Doll</td>
<td>0</td>
<td>9*</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Doll to Self</td>
<td>0</td>
<td>11**</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Masturbation</td>
<td>0</td>
<td>6***</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Doll Mouth to Doll Vagina</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Own Mouth to Doll Vagina</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Suspicious Sexual Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touches Own Genitals</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Hands Between Legs</td>
<td>1</td>
<td>9</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Straddled Clothed Doll</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Mouth to Breast</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

*Child removed his pants and underwear on 3 of the 9 occasions.
**Child removed his pants and underwear on 1 of the 11 occasions.
***A child masturbated on two separate occasions for > 3 minutes each.
Table 5

Frequency of Nonsexual Doll Play Behaviors

<table>
<thead>
<tr>
<th></th>
<th>Referred Male</th>
<th>Referred Female</th>
<th>Nonreferred Male</th>
<th>Nonreferred Female</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Exp. Alone</td>
<td>Exp. Alone</td>
<td>Exp. Alone</td>
<td>Exp. Alone</td>
</tr>
<tr>
<td>Touching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penis</td>
<td>12</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Vagina</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Anus</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Breasts</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Rubbing</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Penis</td>
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<td>1</td>
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<tr>
<td>Vagina</td>
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<td>0</td>
<td>2</td>
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<tr>
<td>Anus</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Breasts</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Finger Insertion</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mouth</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Anus</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Vagina</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Placing Dolls</td>
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<tr>
<td>Face to Face</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Showing Dolls</td>
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<tr>
<td>Kissing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Kissing Doll</td>
<td>0</td>
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<tr>
<td>Hugging Doll</td>
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</table>

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CHAPTER V

DISCUSSION

Interpretation of Doll Play Behaviors

In this sample of preschool children referred for sexual abuse or suspected sexual abuse and a matched control group, there was no statistically significant difference in explicit sexual play with anatomical dolls. Explicit sexual play was confined to the display of sexual intercourse (vaginal, anal, and oral) with thrusting or rocking motions between the dolls or between the child and dolls and the display of masturbation. In regard to specific explicit sexual behaviors, there were no acts of insertion of a penis into a vagina, genital-to-genital intercourse between a child and the dolls, or masturbation by children in the nonreferred group while such acts did occur by children in the referred group. Two children in the referred group did place a male and female doll on top of one another and pushed or rubbed the dolls together without insertion of the penis during the alone condition. While none of the referred children demonstrated oral intercourse on a female doll, one nonreferred male placed the adult male doll's mouth as well as his own mouth to the adult female doll's vaginal area. Finding explicit sexual behavior among nonreferred children is consistent with Everson & Boat's (in press) findings; in their sample of over 200 nonabused preschool children, 4.3% demonstrated clear genital intercourse positioning, 2.6% demonstrated oral intercourse between the dolls, and 2.6% demonstrated oral intercourse between the child and dolls when observed alone.
Since the basic premise for utilizing doll play with sexually abused children is to provide a means for expressing their own experiences of sexual molestation, it is reasonable to examine each child's doll play with regard to the specific abuse inflicted upon the child. Using this rationale, one would expect a child who has experienced penile-vaginal penetration to insert the penis of a male doll into the vagina of a female doll. It follows that one would not expect a child to demonstrate insertion of a penis into a vagina if this were not part of her molestation.

Therefore, children whose sexual victimization consisted of genital fondling may masturbate, but it is not expected that they would demonstrate any of the other explicit behaviors since none of these behaviors were part of their experience. Two of the referred children's abuse consisted solely of genital fondling. While touching and rubbing of genitals and digital insertion are important behaviors in genital fondling, they are not good indicators of such sexual abuse through doll play. In this study the nonreferred group could not be distinguished from the referred group on these measures. These results support findings of other research (Everson & Boat, in press) which suggested that manual exploration of doll genitals is a normal play behavior among preschool children.

It is important to note that none of the referred females demonstrated any explicit sexual behaviors despite the fact that all had experienced some form of explicit sexual abuse. While an explanation was offered above for children who experienced genital fondling, other feasible explanations exist for the lack of explicit sexual behaviors among the referred females. One of the referred females requested that her aunt/guardian join her in the room shortly after the session began. This request was respected and the aunt stayed with the child for the remainder of the session. Although this child's abuse consisted of penile-vaginal penetration and genital fondling, the presence of an adult may have inhibited her from playing with the dolls.
in a sexual manner. She did undress and redress the dolls, but she spent the majority of the session either drawing with colors or sitting next to her aunt and reading books. Another of the females may have been inhibited when she discovered that the two-way mirror was a window and saw that her parents could observe her. She frequently went to the window during the session, made faces, and attempted to talk to her parents.

Although children's exposure to explicit sexual stimuli (e.g., adult-oriented cable-television, videos, or sexual behavior between parents) was not assessed, the parent of the nonreferred male who demonstrated explicit behaviors stated that she does subscribe to an adult-oriented cable-television channel and it is feasible that her son may have watched it without her knowledge. This child and parent have participated in a sexual abuse prevention program at their preschool. Given this information, it is feasible that this child demonstrated behaviors that he may have seen but not necessarily experienced.

A statistically significant difference was found between the two groups when explicit and suspicious sexual behaviors were combined. Thus, children referred for sexual abuse or suspicion of sexual abuse were more likely than children with no referral or suspicion of sexual abuse to engage in behaviors with suspicious sexual implications. Two of these suspicious behaviors, touching own genitals and placing hands between legs, warrant discussion.

Two of the males in the referred group touched their penises on a total of five separate occasions. At the end of the session, one boy held his penis and stated that he had to go to the bathroom. The other boy held his penis on four separate occasions when left alone in the room. His mother stated that he had to go to the bathroom and the session was stopped to allow him to do so. Of the two males who touched their
penises in the nonreferred group, one articulated a need to go to the bathroom shortly after the session began.

Given that preschool children often touch their genital area when they have to urinate, it is possible that the sexually abused males who held their penises were doing so out of a physical need to go to the bathroom rather than as an expression of sexual behavior. Having the children use the bathroom before the session began would have been one way to discover if touching genitals was an artifact of having to go to the bathroom and unrelated to the sexual abuse status of the children.

Four of the referred children put their hands between their legs on a total of 13 separate occasions compared with one nonreferred child on one occasion. Two of the referred children who put their hands between their legs also displayed masturbatory behavior. One of these children engaged in masturbation for the majority of the alone session. The other appeared to masturbate while laying face down on a couch on four separate, brief occasions; however, this was the same child whose mother stated that he had to go to the bathroom. Although this boy’s behavior was indicative of masturbation (i.e., hands on genitals, laying face down, thrusting/humping movements), it is possible that he merely had to go to the bathroom. Yet, given that touching own genitals, hands between legs, and masturbation were all distinct behaviors and were coded separately, this boy displayed a considerable amount of behavior. Information is needed on the different ways children respond when needing to urinate to fully understand the function of this child’s behavior.

While needing to go to the bathroom and/or putting one’s hands between one’s legs are behavioral signs of anxiety in young children (Glennon & Weis, 1978), there was no statistically significant difference between the two groups on the anxiety measure. If sexually abused preschool children are more likely than controls to place their hands between their legs, this may be an important finding. However, additional
research is needed and caution should be taken in interpreting such a benign behavior as being indicative of sexual abuse.

Although no statistical analysis was done on aggression, there was no difference between the two groups since both displayed an equal number of aggressive behaviors. This is consistent with Cohn's (1988) finding of similar frequency counts on aggressive acts by referred and nonreferred preschool children.

Lack of significant findings on the measure of anxiety refuted the notion that anatomical dolls induce anxiety in children. Neither group of children was noticeably anxious when the dolls were undressed or when they were left alone with the undressed dolls. In addition, the notion that "anatomically correct dolls make but one request, 'play sex'" (Yates & Terr, 1988, p. 256) was refuted by the overall low frequency of sexualized behavior in either group. In fact, not only did the nonreferred children not engage in much sexual behavior, but also not even all of the referred children whose sexual victimization was confirmed displayed sexualized behavior with the dolls. Thus, one can conclude that anatomical dolls do not elicit sexual behavior in and of themselves.

Recommendations

A larger sample size would enable a more sophisticated statistical analysis which could separate the effects of gender, race, age, condition (experimenter present and child alone), and abuse status on anatomical doll play. Everson and Boat (in press) found an interaction between age, socioeconomic status, race, and gender among their sample of nonreferred preschool children. A similar analysis of both sexually abused and nonsexually abused children would provide a major contribution to the literature.

Confirmation of the sexual abuse of all children in the referred group would remove the doubt that a nonabused child was improperly classified. Moreover,
definitive proof that all of the children in the control group had not been sexually abused would improve the research. Yet, neither of these stipulations are pragmatically sound. The very nature of child sexual abuse makes it difficult to either prove or disprove. Continued research even with these limitations may be the best way to find conclusive proof of child sexual abuse.

Classifying preschool children according to the nature of the abuse and studying their play with anatomical dolls would provide critical information. All of the studies on anatomical doll play with sexually abused children have combined types of abuse. Comparing and contrasting the behaviors of children across types of abuse, such as penile-vaginal penetration, digital-vaginal penetration, oral-vaginal penetration, and so forth, would provide useful evidence regarding children's tendency to reenact what they have experienced.

Ensuring that children are not aware that they are being observed or taped would reduce inhibition to play with the undressed dolls during the alone condition. Research on the conditions under which preschool children touch their genitals and place their hands between their legs would provide beneficial information. Research on the general sexual knowledge of preschool children and their exposure to sexual stimuli would also prove invaluable to therapists and child protection workers who are faced with determining whether or not a child has been molested.

Conclusions

Although significant differences were found on combined measures of suspicious and explicit sexual behavior between preschool children referred for sexual abuse and those who were neither referred nor suspected of having been sexually abused, these results should be interpreted cautiously. When only explicit sexual behaviors were analyzed, no statistically significant difference was found. Moreover, possible
explanations were provided for the occurrence of some of the suspicious sexual behaviors.

Anatomical doll play cannot be used as a litmus test for child sexual abuse. The fact that not all sexually abused preschool children perform sexual behavior in play with the dolls coupled with the fact that two of the nonreferred children displayed explicit sexual behavior suggests that there are no definitive doll play behaviors associated with having been sexually molested. While anatomical dolls can be extremely helpful in helping a young child to relay his/her sexual victimization, there is not enough evidence to support their use as a diagnostic tool. Anatomical doll play is but one of several important factors in determining whether or not a young child has been sexually abused.
Appendix A

Preschool Observation Scale of Anxiety
Preschool Observation Scale of Anxiety

FREQUENCY OF OCCURRENCE:

1. Physical complaint: Child says s/he has a headache, stomachache, or has to go to the bathroom.
2. Desire to leave: Child says s/he wants to leave the room, makes excuses why s/he must leave; desire to leave must be explicit.
3. Expression of fear or worry: Child complains about being afraid or worried about something; must use the word afraid, scared, worried, or a synonym.
4. Cry: Tears should be visible.
5. Scream.
6. Whine or whimper.
7. Trembling voice.
8. Stutter.
9. Whisper: Child speaks softly, without vocal cords; should not be a playful whisper.
10. Silence to one question in the interval. (Applied only to third interval in this study.)
11. Silence to more than one question in the interval. (Applied only to third interval in this study.)
12. Nail-biting: Child actually bites his or her nails in the testing room.
13. Lip-licking: Tongue should be visible.
14. Fingers touching mouth area: Not counted if bites nails while touching mouth.
15. Sucking or chewing object: Not fingernails.
16. Lip contortions.
17. Trembling lip.
18. Gratuitous hand movement at ear.
19. Gratuitous hand movement at top of head.
20. Gratuitous hand movement at an object separate from body or at a part of clothing separate from body.
21. Gratuitous hand movement at some part of body (not ear, hair, mouth, or genitals).
22. Gratuity hand movement.
23. Gratuitous leg movement.
24. Gratuitous foot movement: Below ankles, distinguish from foot merely moving along with leg.
25. Trunk contortions (e.g., arching back).
26. Rigid posture: Part of body is held unusually stiff or motionless for a 30 second interval.
27. Fearful facial expressions.
28. Distraction: Must be indicated by a verbal reminder for the child to pay attention.
29. Avoidance of clear eye contact: Examiner should be having clear trouble making eye contact with the child.
   (This item was not scored due to the difficulty in distinguishing eye contact via the video tapes.)
   (Touching genitals and masturbation were coded separately on the doll play recording form.)
Appendix B

Doll Play Recording Form
**SUBJECT:______________________ OBSERVER:__________**

<table>
<thead>
<tr>
<th></th>
<th>ADULT MALE</th>
<th>ADULT FEMALE</th>
<th>CHILD MALE</th>
<th>CHILD FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENIS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touches with hand(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubs with hand(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts doll penis into doll vagina</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts doll penis into doll anus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts doll penis into doll mouth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts doll penis into own mouth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAGINA:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touches with hand(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubs hands over doll vagina area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts own finger(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts doll finger(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANUS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touches with hand(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts own fingers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts doll fingers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BREASTS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touches doll breasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubs hand(s) over doll breasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puts one doll on top of the other face-to-face</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puts one doll on top of the other face-to-back</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubs one doll over the other face-to-face</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubs one doll over the other face-to-back</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puts doll to self as if in intercourse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shows dolls kissing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shows self kissing doll</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masturbates self (rub genital area with hand(s) or rubs genital area against floor or toys other than the dolls)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puts hands between own legs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COMMENTS:**
Please note if child throws, kicks, hits, steps on, or runs over dolls with trucks.
Appendix C

Parental Consent Form
Parental Informed Consent

I understand that my child is being invited to participate in a research study designed to evaluate doll play of preschool-age children using anatomical (sexually explicit) dolls.

As the parent of the participant, I agree to complete a questionnaire concerning demographic information. I agree for my child to participate in one 45-minute session with the experimenter, a female graduate student. My child's involvement will consist of the following:

After the experimenter has introduced herself to the child, the child will be allowed to play freely with several available toys, such as a truck, crayons and paper, books, and four anatomical dolls. The experimenter will be in the room with the child and both will be sitting on the floor near the toys. After 10 minutes of free play if the child hasn't noticed the anatomical dolls, the experimenter will present him/her with the dolls. She will tell the child that these dolls are different than most dolls he/she might have played with in that they have all of their body parts. The child will then be allowed to play freely for another 10 minute period. After 10 minutes has passed, the experimenter will begin to interact with the child with the dolls. She will pick out a doll of the same gender as the child and say, "Let's say this is you." She will ask the child who the other dolls in the family could be. The experimenter will then ask the child to name the body parts of the adult dolls from head to foot. If the dolls aren't undressed at this time, the experimenter will do so casually as the child is naming body parts. The child will then be asked to identify a male and female doll to ensure that he/she can differentiate between the two. The experimenter will then leave the room for 10 minutes to allow the child to play freely.

I agree for my child to be video-taped during the play session. I understand that all information obtained from my child and me will be held in the strictest of confidence. All information gathered will be used for research purposes only and not identified by name. All data (including video-tapes) will be coded by numbers with the names removed to insure confidentiality. No names will ever be used in the report of this study. The video-tape will be held in a secure location until notification of publication; after which, the tapes will be destroyed. I understand that I can

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withdraw my child's participation at any time without penalty. If I withdraw from the study, I understand that the video-tape will be erased. I understand that our participation is voluntary. There is no cost to me nor is there any payment.

I understand that this research involves minimal risk to my child. The doll play session is intended to be fun or neutral.

I understand that any questions or complaints that I have now or anytime in the future can be directed to Dr. Malcolm Robertson, Ph.D., at 616-387-4486.

My signature below indicates that I have read and understood the above information and have decided to allow my child to participate in the study. I will be given a copy of this form to keep.

Signature___________________________________________Date_________

Signature of Investigator__________________________________________
Appendix D

Approval Letters from the Human Subject
Institutional Review Board
TO: Rita Kenyon-Jump
FROM: Ellen Page-Robin, Chair
RE: Research Protocol
DATE: November 4, 1988

This letter will serve as confirmation that your research protocol, "Comparison of Behaviors of Suspected Sexually Abused and Non-sexually Abused Preschool Children Using Anatomical Dolls" has been approved at no more than minimal risk after full review by the HSIRB.

In addition, the Board appreciates the fine presentation, both written, and orally, of your protocol materials.

If you have any additional questions, please contact me at 387-2657.
Date: February 7, 1990

To: Rita Kenyon-Jump

From: Mary Anne Bunda, Chair

This letter will serve as confirmation that your research protocol, “Comparison of Behaviors of Suspected Sexually Abused and Nonsexually Abused Preschool Children Using Anatomical Dolls”, has been re-approved by the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now continue to implement the research as described in the approval application.

You must seek reapproval for any change in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

xc: M. Robertson, Psychology

HSIRB Project Number 88-11-05

Approval Termination February 7, 1991
BIBLIOGRAPHY


Hollingshead, A. B. (1975). *Four factor index of social status.* Unpublished manuscript, Yale University, Department of Sociology, New Haven, CT.


