

A Comparison of Sexually Abused and Nonsexually Abused Children's Behavioral Responses to Anatomically Correct Dolls

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ABSTRACT: Groups of 16 girls referred for evaluation and treatment of sexual abuse and 16 nonreferred girls between the ages of 5 and 8 years were compared on aggression, avoidance, private parts reference, and freeplay over two conditions: playing alone with anatomically correct dolls and telling a story about the dolls to an adult. Results indicated that sexually abused children displayed more sexually oriented behavior when alone but more avoidance of the dolls when interacting with an adult.

KEY WORDS: Sexual Abuse, Anatomically correct dolls

Sexual abuse of children has achieved recognition as a significant social problem within the past decade. Although more studies are needed to assure accuracy,¹ the incidence of child sexual abuse has been estimated at 150,000 to 200,000 cases annually in the United States,² and may be upwards of 50% of all female children under the age of 18.³

Legal, educational, mental health, and social services systems are ill prepared to address the needs of sexually abused children and

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their families. It is noteworthy that these children are often revictimized due to insensitivity and ignorance on the part of caregivers within the service delivery systems.^{4,5} Mental health professionals have begun seeking ways to reduce additional trauma to child victims. By 1985 legislation has been enacted in 14 states allowing the use of videotaping in place of live courtroom testimony.⁶ In addition, legislation providing for special children's courtrooms, admission of hearsay evidence from an investigator or mental health professional, and the use of anatomical drawings and anatomically correct dolls by children for the description of their sexual abuse continues to be enacted.⁷ The United States Attorney General's Task Force on Family Violence⁸ specifically recommends using anatomically correct dolls or anatomical drawings to aid children in describing their sexual abuse. It has been assumed that using anatomically correct dolls minimizes trauma and facilitates communication of the abuse,⁹ although this has not been tested empirically. Nonetheless, these dolls assist in circumventing cognitive, linguistic, and emotional limitations characteristic of young children.^{6,10} In a large scale survey of professionals who use anatomically correct dolls for investigative, evaluative, and educational purposes Harnest and Chavern¹¹ report that the majority believe the dolls are highly valuable in assisting children describe their abuse, but go on to raise concern over the lack of research on how nonabused children interact with the dolls.

Anatomically correct dolls have been in use since 1977 for interviewing sexually abused children.¹² However, to date, there have been only two published studies reporting on sexually abused children's responses to anatomically correct dolls. White and her colleagues¹³ compared 25 referred for suspected sexual abuse with 25 children who had not been referred for sexual abuse evaluation. Ages ranged from 2–6 years; males and females were represented in both samples. Results indicated that referred children exhibited significantly more sexualized behavior supportive of sexual abuse allegations. Since this study did not examine the children's behavioral responses, the work of Jampole and Weber¹⁴ represents an important advance. Ten sexually abused children were compared with a non-abused sample matched for age, race, and gender. Behavioral interactions with the dolls was limited to sexual and nonsexual categories. Results indicated that 9 of the 10 sexually abused children demonstrated various sexual behaviors. By contrast, only 2 of the non-abused group displayed sexual behaviors with the dolls.

Inasmuch as anatomically correct dolls are currently in wide use by

law enforcement, prosecutory, and mental health professionals for interviewing and treating sexually abused children more empirically-derived information appears to be needed. Children's descriptions of alleged sexual abuse based on behavioral responses to these dolls have been admitted into legal proceedings.⁶ The purpose of the present study was to extend and refine prior research comparing differences between sexually abused and non-abused children's responses to anatomically correct dolls.

Method

Subjects

The subjects in this study were 32 female children, ages five through eight years. Males were excluded due to possible confounding from different socialization regarding doll play and because the rates of reported sexual abuse are substantially greater for female children.^{15,16} Subjects were drawn from two groups. One group was comprised of children who were referred for evaluation of possible intrafamilial sexual abuse; the other group was made up of children who were not referred for allegations of sexual abuse and were not suspected of being sexually abused.

The referred group was drawn from one of four evaluation or treatment programs for sexually abused children in Metropolitan-Dade County, Florida. The protocol described in the present study was a component of the initial assessment procedures used when children were referred for formal investigation by appropriate governmental authorities (e.g., State's Attorney). As such, this experience was the child's first exposure to anatomically correct dolls. The nonreferred group was drawn from a pool of children in grades K-3 attending a public elementary school. They were assumed to be nonabused since they were not referred for evaluation or treatment of sexual abuse. Subjects were matched as closely as possible on age and race. Mean ages were 6 years, 7 months and 6 years, 8 months for the referred and nonreferred groups, respectively. The abused group contained 10 white, 5 black, and 1 hispanic children. The nonreferred group had 11 white, 5 black, and no hispanic children. Written consent for participation in the study was obtained from the parents of children in the nonreferred group. All but one parent complied; it was then discovered their child had been sexually abused. Verbal assent to participate was also obtained from children in both groups.

Rating Scale

Since no instrument was available to assess relevant behaviors one was developed to examine those behaviors hypothesized to be elicited from sexually abused children in response to anatomically correct dolls. Behavioral ratings were selected for use since they provide the greatest specificity and replica-

bility of measures for assessing child behavior.^{17,18} A behavioral checklist was designed to rate four categories of behavior in ten second intervals: aggression, avoidance, private parts reference, and freeplay. Ratings were made according to what the child was doing at the end of the interval, a procedure consistent with accepted practice with behavior rating scales. Aggression was defined as grabbing, pushing, hitting, pulling, kicking, smashing, tearing, breaking, name calling, cursing, belittling, criticizing, and commanding. Avoidant behavior included turning or moving away from doll or examiner, hiding, visual wandering, disinterest, avoiding interaction with doll, requiring repetitive requests to attend to doll, verbally refusing to tell a story or play with doll. Private parts reference included pointing at or touching genital areas or breasts, giggling while looking at genitals or breasts, removing, looking at or playing with undergarments. Finally, freeplay occurred when aggression, avoidance, or private parts reference behaviors were absent. Freeplay is not negatively emotionally charged.

Two examiners conducted ratings of videotaped segments of children's interaction with the dolls. Following two 2-hour practice sessions prior to the actual ratings, inter-rater reliability was established at 96% using the formula

$$\frac{\text{number of agreements}}{\text{number of agreements} + \text{number of disagreements}} = \text{reliability.}$$

Throughout the entire study, inter-rater reliability was 94% when performed on a random basis to reaffirm reliability. Due to the settings where interviews were conducted examiners had knowledge of whether subjects were in the referred or nonreferred group.

Procedure

Four female interviewers, holding master's degrees and having clinical experience with children, conducted a standard protocol which was videotaped. Interviewers were unaware of subjects' group membership. The interview rooms were void of toys in order to minimize distractions. The interviews consisted of three segments: warm-up, play alone, and storytelling. First there was a 15 minute rapport-building period in which the interviewer and child played with crayons and paper and just talked casually. Next, the interviewer removed the crayons and paper before introducing four dolls, which included two adult dolls and two child dolls of either gender. All were fully dressed except the adult male's trousers were removed but he was dressed in a shirt and underwear to serve as a visual prompt for the task assignment. Dolls were presented with one partially undressed since it is believed, in sexual abuse cases, that important details may otherwise be deleted from the child's descrip-

tion.¹² If dolls are presented without clothing removed, children may be reluctant to comply with the clothes changing task later. An extra pair of trousers, male and female underwear, and an extra dress were placed beside the dolls. The child was given the following instructions:

I have some dolls for you to play with. These dolls may be a little bit different than dolls that you have seen before. They are like grown-ups and children without their clothes on and they have all their body parts. There are some extra clothes for the dolls. Please change the doll's clothes and play with the dolls. I am going to make a phone call and I will be back in a few minutes.

The child was left alone for five minutes and was observed on an external video monitor to assure that potential problems the child might have could be managed. Upon return, the child was told the interviewer was interested in learning more about how children make up stories about these dolls. The child was then asked to tell a story about the family of dolls. The interviewer refrained from asking leading questions but could reflect the child's responses or ask the child to tell more. At the end of three minutes of storytelling the child was told that some children like the dolls while others do not. Then the child was asked for her opinion about the dolls as a means of debriefing and to ascertain whether there were any adverse reactions.

Results and Discussion

The referred and nonreferred groups were compared by a series of t-tests on the four behavioral categories for alone and storytelling conditions. Use of MANOVA was considered inappropriate due to sample and conditions characteristics. As may be seen in Table 1, referred and nonreferred groups were statistically different in three categories on which comparisons were made in the alone condition. Only the avoidance category failed to achieve significance.

During the storytelling condition, the groups were statistically different on freeplay and avoidance, but did not differ on aggression or private parts reference. These results are summarized in Table 2.

These results support the contention that there are differences in how sexually abused and nonsexually abused children respond behaviorally to anatomically correct dolls while playing alone with the dolls and when asked to tell a story about the dolls. There was moderate evidence that aggression is a characteristic response to anatomically correct dolls by the referred group. Most of the aggression

Table 1
Frequencies of Target Behaviors in Referred and Nonreferred Children in Alone Condition

		<i>Referred</i> <i>n = 16</i>	<i>Nonreferred</i> <i>n = 16</i>	<i>t</i>
Freeplay	<i>M</i>	19.64	26.06	4.53**
	<i>SD</i>	4.90	2.60	
Aggression	<i>M</i>	1.09	.00	2.06**
	<i>SD</i>	2.21	.00	
Avoidance	<i>M</i>	1.64	1.06	.94
	<i>SD</i>	1.63	1.56	
Private Parts	<i>M</i>	7.73	3.63	4.30**
	<i>SD</i>			
Reference	<i>SD</i>	2.88	2.34	

**p* .05
***p* .01

Note: Five minute period in Alone Condition.

Table 2
Frequencies of Target Behaviors in Referred and Nonreferred Children in Storytelling Condition

		<i>Referred</i> <i>n = 16</i>	<i>Nonreferred</i> <i>n = 16</i>	<i>t</i>
Freeplay	<i>M</i>	7.09	12.29	3.00**
	<i>SD</i>	4.18	4.66	
Aggression	<i>M</i>	1.09	.53	1.00
	<i>SD</i>	1.58	1.38	
Avoidance	<i>M</i>	9.18	4.35	2.92**
	<i>SD</i>	3.71	4.59	
Private Parts	<i>M</i>	.64	.82	.20
	<i>SD</i>			
Reference	<i>SD</i>	1.20	2.90	

**p* .05
***p* .01

Note: Three minute period in Storytelling Condition.

that was observed was accounted for by four children in the referred group. This finding suggests there may be a subgroup of sexually abused children who respond with high levels of aggression. They may be acting out internal conflict, expressing anger, modeling, or there may be some other explanation which remains an unanswered question. Similarly, there may also be a definable subgroup of abused children who are characteristically avoidant. These response styles may be useful indicators of, or may have been influenced by, such factors as degree or type of trauma experienced (e.g., whether physical threat was present, age of onset) and should be addressed empirically.

The involvement of an adult appears to have a significant inhibitory effect on aggression in abused children. An adult's interaction also affected references to private parts in both groups as compared to when the adult was absent. In view of observed differences in response patterns attributable to an adult's involvement, this variable may be an important factor in obtaining accurate information during investigative procedures and should be taken into consideration when planning interviews with sexually abused children. The question of the extent to which adult and active participation with the child influences behavioral responses to dolls is certainly worthy of further study. It is noteworthy that none of the children who participated in this study had any adverse reactions to the dolls. During the debriefing phase children were asked for their feelings about the dolls. Most replied that they liked the dolls. Three children commented that the "dolls are weird" because they have all their body parts, but added they liked the dolls anyway.

Summary

The results reported in this study support those reported in previous studies in that sexually abused children approached anatomical dolls differently than nonreferred children. However, little is still known about how children respond to anatomically correct dolls among nonsexually abused children. Moreover, virtually no data are available concerning how these dolls impact on children's psychological well-being. It is difficult to determine the extent to which responses observed in the present study may have been due to developmental factors, or other elements unique to the sample, the dolls themselves, or the methodology. It may be useful for some kind of standardized procedures to be developed for use in future research or

it may be difficult to compare results across studies. For example, dolls might be manufactured to agreed upon specifications such as size, materials, and have neutral expressions on their faces. Moreover, genitals should be made in realistic proportion and removable ones should be avoided.

Investigators are walking a fine line between responding to the demands for accurate information regarding child sexual abuse by professionals working in the field and the need for scientific rigor, while simultaneously being responsive to the needs of the child victims. In our zeal we must guard against overinterpreting the results of modest studies, such as the one reported here, and generalizing to all instances of child sexual abuse. There is a vast amount of research needed to address the many questions regarding how and why certain interaction patterns children display with anatomically correct dolls occur.

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