

Genital Findings in Cases of Child Sexual Abuse: Genital vs Vaginal Penetration



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ABSTRACT

Study Objective: To (1) examine the prevalence of abnormal genital findings in a large cohort of female children presenting with concerns of sexual abuse; and (2) explore how children use language when describing genital contact and genital anatomy.

Design: In this prospective study we documented medical histories and genital findings in all children who met inclusion criteria. Findings were categorized as normal, indeterminate, and diagnostic of trauma. Logistic regression analysis was used to determine the effects of key covariates on predicting diagnostic findings. Children older than 4 years of age were asked questions related to genital anatomy to assess their use of language.

Setting: A regional, university-affiliated sexual abuse clinic.

Participants: Female children (N = 1500) aged from birth to 17 years (inclusive) who received an anogenital examination with digital images.

Interventions and Main Outcome Measures: Physical exam findings, medical history, and the child's use of language were recorded.

Results: Physical findings were determined in 99% (n = 1491) of patients. Diagnostic findings were present in 7% (99 of 1491). After adjusting for age, acuity, and type of sexual contact reported by the adult, the estimated odds of diagnostic findings were 12.5 times higher for children reporting genital penetration compared with those who reported only contact (95% confidence interval, 3.46-45.34). Finally, children used the word "inside" to describe contact other than penetration of the vaginal canal (ie, labial penetration).

Conclusion: A history of penetration by the child was the primary predictor of diagnostic findings. Interpretation of children's use of "inside" might explain the low prevalence of diagnostic findings and warrants further study.

Key Words: Child sexual abuse, Genital injury, Adolescent sexual assault, Penetration

Introduction

As the body of knowledge in the field of child sexual abuse has grown over the past 3 decades,¹⁻⁴ most providers now understand that the history from a child is the most important diagnostic element when determining if sexual abuse has occurred.^{5,6} Despite this knowledge, professionals tasked with the safety and well-being of children continue to struggle when a child reporting genital penetration has a normal exam. As a result, the credibility of these children is often brought into question. Commonly accepted explanations for normal anogenital examinations include the nature of the sexual contact,⁷ delays in disclosure, and the body's ability to heal quickly and often completely.⁷⁻¹¹ Additionally, researchers have speculated that some children, because of limited understanding of their anogenital anatomy or their experience of sexual contact, describe labial penetration rather than penetration through the hymen.^{3,4}

How children describe genital contact has been previously explored by researchers.¹²⁻¹⁴ To our knowledge, none have explored how children use language and its possible

influence on how they describe an experience of sexual abuse; specifically, how children use the word "inside" when describing genital penetration and their genital anatomy.¹⁵

Because of the limited number of prevalence studies in the past decade, the primary aim of this study was to examine the prevalence of abnormal physical findings in a large sample of female children who presented with concerns of sexual abuse. The secondary aim was to explore how children use language when describing genital contact and their genital anatomy.

Materials and Methods

Patients were recruited from October 2010 to June 2013 from children evaluated at Our Kids Center (OKC), an outpatient clinic of Nashville General Hospital at Meharry, affiliated with Vanderbilt University Medical Center. OKC provides specialized forensic medical evaluations for children when there are concerns of sexual abuse and/or a pediatric gynecological complaint.

Study inclusion criteria were female children aged from birth to 17 years (inclusive) who presented with concerns of sexual abuse. Patients were excluded if an examination was not performed or digital images of the genitalia were not captured. Children in state custody were also excluded as an

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additional level of protection for this population because they had no parent present to consent to the medical evaluation. Approval from the Institutional Review Boards of Meharry Medical College and Vanderbilt University Medical Center was obtained. A waiver of consent for the study was obtained from both institutions. Consent/assent for the medical examination is obtained from the accompanying adult/children as part of the protocols of OKC. Data including demographic information, medical history from the parent, medical history from the child, and the examination results were prospectively captured on data collection forms and entered into an electronic database which was maintained in accordance with hospital and state rules of evidence and confidentiality.

All children received a comprehensive evaluation by a nurse practitioner, physician assistant, or physician and a master's prepared social worker. Children and adults were interviewed in their preferred language using a clinician fluent in that language, certified interpreter, or language line. Children were examined acutely if the reported sexual abuse occurred within the past 72 hours or there were complaints of pain or bleeding. Before the medical examination, a history was gathered from the adult without the child present. OKC social workers also obtained a medical history from children 5 years of age and older, without the adult present. This included questions about general health, anogenital complaints, behavioral symptoms, and any sexual contact (including peers). The medical history was gathered using a structured interview format on the basis of guidelines outlined in the National Children's Advocacy Center Child Forensic Interview Structure regarding the use of open-ended questions and interview flow.^{16,17} Questions were nonleading and typically progressed from broad such as, "Do you know why you are here today?" to more specific questions to follow-up or clarify answers to previous questions, such as "Did any other part of his body touch your pee-pee?" or "Did it feel like his pee-pee went on the inside or the outside of your pee-pee?" The exact questions varied because some children provided detailed narratives in answer to "Do you know why you are here today?" and other children required more specific and/or direct questions such as "Has anyone ever touched your private part?" or "Did you see anything come out of his private?"

The type of sexual contact reported by the adult was recorded on a data collection form during or immediately after the interview. Similarly, the type of contact described by the child was recorded on a separate data form. Classification of the type of genital contact (nonpenetrating genital contact or genital penetration) was determined on the basis of whether the child and/or the adult reported that an object, the perpetrator's finger(s), or the perpetrator's penis went "inside" the child's genitalia. Reported contact to only the "outside" of the genitalia was classified as "nonpenetrating genital contact."

During the medical history, children were asked a series of questions to grossly assess their use of language when describing genital contact and their genital anatomy, including questions about names and purpose of private parts. A key question in this study was "When you wipe after you pee, does it feel like you are wiping on the inside

or the outside of your private part (or name provided by child)?" The child was given 3 response options to the wiping question: "inside," "outside," or "both." This question was chosen because toileting is an activity children engage in daily involving contact with their genitalia.

Before the examination, the social worker shared the information collected during the medical history with the medical provider. If additional or clarifying information was needed, the child was asked during or immediately after the exam. A complete physical examination was performed by an OKC medical provider. Children were examined in the supine frog-leg or lithotomy position using labial separation and traction. Anogenital images or high definition digital video were captured with a Canon EOS 7D camera attached to a Leisegang colposcope with 3.75 \times , 7.5 \times , and 15 \times magnifications. Findings concerning for chronic injury were verified using a cotton swab, instillation of normal saline, or the prone knee–chest position. These methods were used in acute cases when necessary. The genital examinations were categorized as normal, indeterminate, and diagnostic of trauma.^{18,19} Diagnostic findings were defined as acute hymenal injury (laceration/tear, partial or complete, of the hymen, and/or hymenal bruising/petechiae), acute trauma to the posterior fourchette, fossa navicularis, labia, or perineum and/or nonacute trauma consisting of a complete hymenal transection, or missing portion of hymenal tissue in the posterior rim between 4 and 8 o'clock. Deep hymenal notches between 3 and 9 o'clock were categorized as indeterminate. To assess inter-rater reliability of physical findings, genital images from all study participants were subject to blind review by the 2 most experienced OKC medical providers, each having performed more than 3000 anogenital examinations.

To enroll a large enough sample to examine the prevalence of physical findings, female children were enrolled over 3 years resulting in a total of 1500 patients. A 5% prevalence of diagnostic findings was anticipated, which would result in a large enough sample for tests of association.

The distributions of continuous variables were summarized according to mean and median. Categorical variables were summarized according to frequencies and percentages. Pearson's χ^2 tests (with no continuity correction) were used to test for associations between specific pairs of categorical variables. Nonparametric Wilcoxon rank-sum tests were used to test for associations between a continuous and categorical variable. Percentage of agreement was calculated to determine the inter-rater reliability of the physical findings. Logistic regression analysis was used to determine the effects of age, acuity, and genital contact or penetration reported by the child/adult (as separate covariates) on predicting diagnostic findings. *P* values less than .05 were considered statistically significant and all tests were 2-sided. Statistical analyses were performed using IBM SPSS Statistics for Windows, version 22.0.

Results

During the study period, 2392 children were evaluated at OKC, of whom 1873 were female. Of these female children,

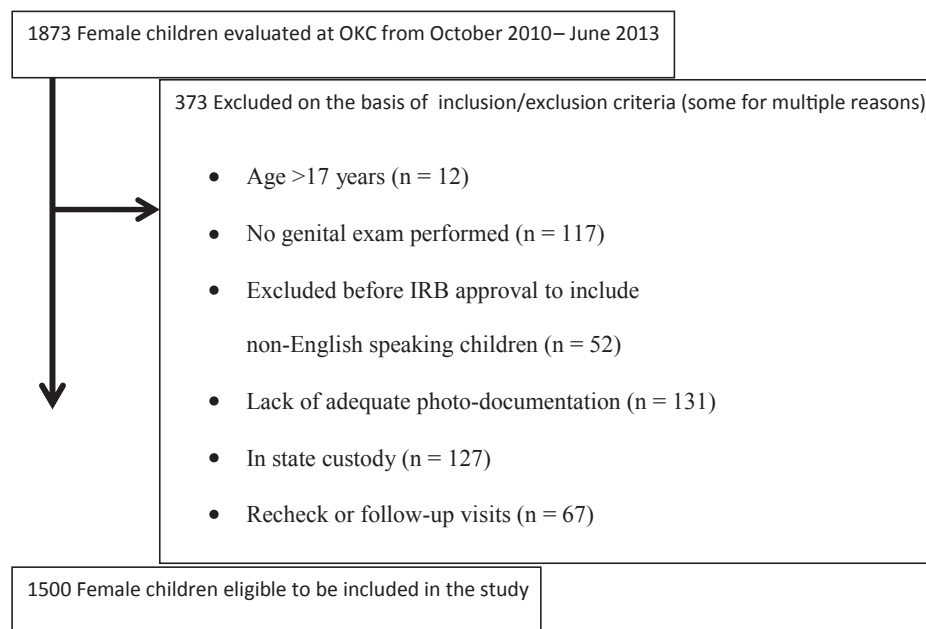


Fig. 1. Flow of study participants. IRB, institutional review board.

373 were excluded on the basis of the inclusion/exclusion criteria. The remaining 1500 children met study criteria. The complete flow of study participants is shown in Figure 1.

The age, race, genital Tanner stage, and hymenal estrogen status of the 1500 children are presented in Table 1. The mean age was 6.70 years, with a median of 5 years. Seventy-two percent (1073 of 1495) were Caucasian and 72% (1084 of 1499) were genital Tanner stage 1. Seventy-three percent (1093 of 1500) had unestrogenized hymens. Most children (77%; 1160 of 1500) were examined nonacutely (>72 hours).

A history from the adult was provided for all 1500 children. In addition, 57% of the children (854 of 1500) were years of age or older, of whom 91% provided a medical history (777 of 854). A medical history was not collected from children who were nonverbal and/or had cognitive or language impairment.

The type of sexual contact from 38% of adults (577 of 1500) and 35% of children (275 of 777) was either unknown or not specified although all 1500 children were referred because of concerns of sexual abuse. Of the remaining histories, genital penetration was reported by 47% of adults (433 of 923) and 56% of children (279 of 502). Genital contact was reported by 53% of adults (490 of 923) and 44% of children (223 of 502). The discordance of reported genital contact or penetration between the adult and child was 16% (75 of 464; 57 + 18, respectively). The breakdown of this information is shown in Table 2. Tables 3 and 4 highlight some of the statements children made when describing nonpenetrating genital contact or genital penetration. Physical findings were determined in 99% of the children (1491 of 1500). Findings could not be determined in 9 children who initially had inconclusive examinations and did not return for follow-up. Most of these 1491 children

had normal genital examinations (93%; 1380 of 1491). Less than 1% (12 of 1491) had indeterminate findings, indicating the presence of a deep notch between 3 and 9 o'clock, and 7% (99 of 1491) had 1 or more diagnostic findings.

Acute trauma to the labia, perineum, or fourchette/fossa and nonacute hymenal transection/absence of tissue were the most common diagnostic findings (33%; 33 of 99) and 32% (32 of 99), respectively. Table 5 provides a breakdown of the diagnostic findings, which were not mutually exclusive, in these 99 children. Accidental injury was reported by the child and/or adult for 11 of the 99 children with diagnostic findings. The findings were consistent with a history

Table 1
Clinical Characteristics of the N = 1500 Female Children Included in the Study

	Value
Age	
Birth-7 years	64% (961/1500)
8-12 Years	20% (303/1500)
13-17 Years	16% (236/1500)
Race	
White/not Hispanic	72% (1073/1495)
Black/not Hispanic	16% (239/1495)
Multiracial	7% (101/1495)
Hispanic	4% (58/1495)
Other	2% (24/1495)
Acuity of visit	
Acute	23% (340/1500)
Nonacute	77% (1160/1500)
Tanner stage	
1	72% (1084/1499)
2	4% (58/1499)
3	3% (50/1499)
4	16% (244/1499)
5	4% (63/1499)
Estrogen Status	
Nonestrogenized	73% (1093/1500)
Partially estrogenized	5% (71/1500)
Estrogenized	22% (336/1500)

Table 2

Genital Contact Versus Penetration and Type of Genital Penetration Reported by Adult and Child, and Disagreement Between Histories Collected From Adults and Children

Genital Contact vs Penetration Reported by Adult and Child	Reported by Adult (N = 923)	Reported by Child (N = 502)
Genital contact	53% (490/923)	44% (223/502)
Genital penetration	47% (433/923)	56% (279/502)
Type of genital penetration (nonmutually exclusive) reported by adult and child	Reported by adult (N = 433)	Reported by child (N = 279)
Penile	65% (281/433)	74% (207/279)
Digital	37% (162/433)	37% (104/279)
Object	6% (27/433)	4% (10/279)
Disagreement between histories collected from adult and child in the 464 records in which a history from the adult and the child were collected and information regarding the sexual contact was specified		
Reported by adult	Reported by child	
	Genital contact	Genital penetration
Genital contact	144	18
Genital penetration	57	245
Total	201	263
		Total
		162
		302
		464

of accidental injury in 9 of 11 children. Ninety-six percent ($n = 1436$) of the 1491 children for whom physical findings were determined had exams documented with digital images sufficient for expert review. The reviewer agreed with the examiner in 99% of the cases (1421 of 1436; Cohen $\kappa = 92.4$).

As expected, significant associations between diagnostic findings and (1) age; (2) acuity; and (3) history of genital penetration were found (all P values $< .001$). Among children with diagnostic findings, (1) the median age was older (13 years compared with 5 years); (2) more were seen acutely (73%; 73 of 99; [Table 6](#)); and (3) more children and

Table 3

Examples of Statements Made by Children That Were Categorized as "Nonpenetrating Genital Contact"

Ages 5-12	Ages 13-17
When asked to say more about what happened, child said, "He kept touching me there. I told him no, and he kept on. He was rubbing me there." When asked specifically where he was rubbing her, child pointed to her genital area and said, "Down here on top of my private parts." 6-year-old	"He would lift up my shirt. He would also check my va-jayjay and make sure I shaved really good, and he would touch it." When asked what he would touch her va-jayjay with, she stated, "His hands." When asked if he touched her va-jayjay on top of her clothes or on her skin, she stated, "On my skin." When asked if he touched her va-jayjay on the inside or the outside, she stated, "On the outside. He was just making sure I shaved so he was just rubbing to see if it felt soft." 15-year-old
Child reported, "He laid on top of my front and back and his private was just touching on my private and other parts of my body. That's all. He just laid there on me." 5-year-old	When asked if he touched her private part with any other part of his body, she stated, "Yes, his private part, but we didn't have sex. He was just laying it on top of my private part." 13-year-old
Child said she was at the hospital because of what happened with her "Pa." When asked what happened with her "Pa," child said, "He pressed on it." When asked what part he pressed on, child pointed to her genital area. When asked if it hurt when he pressed on it, child said, "It hurt when he put it in my butt, but he only pressed on my private. I didn't like it, but it didn't hurt like my butt." 8-year-old	Child stated that he put his hand on her "vaginal part" area and would not remove it when she asked him to move it. When asked if his hand went inside her vaginal part, child said, "uh, no. He just kept putting his hand on my vaginal part and I could see it (his hand) the whole time. That means I am still a virgin right? It has to go in to make me not a virgin right?" 14-year-old
When asked what happened, child reported, "He touched me down there with his hands." When asked what she meant by "down there," the child reported, "My private area where I pee from." When asked if he touched her private area on the inside, outside, or both, child reported, "outside." 10-year-old	Upon asking why she was at the Center today, child said, "To make sure that I'm okay because of what happened." When asked to elaborate, child stated that her father had done some things to her. When asked what he had done to her, child said, "He came in the room behind me and pulled down my pants and stuck his front private in my bottom. When asked if he touched any other part of her body with his front private, child said, "He touched my breasts and my front area with his hands." When asked if anything went in her front area, the child said, "No he put his front private in my bottom. He just touched my front area with his hands on the outside. He didn't put anything in my front area. He knew it wouldn't fit in there, I think." 14-year-old
Child reported "...has been touching me on my private parts for as long as I can remember. When asked if the touching was on the inside or the outside of her private part or both, child stated, "He put his hands on the outside of my private part on the skin." 11-year-old	Child reported that the alleged perpetrator "Touched me with his hand on top of my underwear." Child stated numerous times that there was no skin-to-skin touching. 15-year-old

Table 4
Examples of Statements Made by Children That Were Categorized as “Genital Penetration”

Ages 5-12	Ages 13-17
<p>Child stated that he “Told me to come in the house, and then he pulled my pants down, and he pulled his pants down, and then he tried to put it in.” Child stated, “When he tried to put it in my privates, it wouldn’t go.” She stated that it was too big. When asked for clarification, child stated that he tried to “put his front private into my front private.” She stated that “it was too big and would not go.” She stated that it went “inside some and almost all the way, but it wouldn’t go all the way in.” Child also said, “It hurted a little.” 9-year-old</p> <p>Upon asking her why she was at the Center today, child said, “It was because I had sex with my brother.” She also stated, “I saw my mom have sex,” and “I had sex with my brother because my mom didn’t teach me it was wrong.” Child continued to talk unprompted for several minutes. She stated that she also “Had sex with my cousin.”</p> <p>When asked to define “sex,” child stated that it is when a boy’s private goes in her “don don.” (“don don” is child’s word for genital area.) 7-year-old</p> <p>“I am here today because my uncle put his pee pee in my pee pee hole and it hurt and my mom said I needed a check-up to be healthy.” 5-year-old</p>	<p>She stated that it hurt really “badly” and “Felt like everything was ripping down there when he first stuck it in.” 13-year-old</p> <p>When asked if anyone had ever touched her “boobs” or “private part,” child stated, “My Paw.” Child stated, “He raped me.” When asked what she meant by rape, child said, “When his private part went inside my private part.” 15-year-old</p> <p>Child reported she was at the hospital because she “Had sex with my boyfriend”</p> <p>“It wasn’t rape. I didn’t say no.” When asked what she meant when she used the word “sex,” child said, “What do you think I mean? He put his dick in my pussy and nutted in me. That’s sex ain’t it?” 14-year-old</p> <p>Upon being asked why she was at the Center today, child stated, “Because of what happened.” When asked what happened, child reported she was “touched” “in her private parts” by someone she did not want to touch her. She stated she was in the lobby of the theatre area at school and he stopped to talk with her. She reported that as they were talking he put his hand down her pants and his fingers “all the way inside” her private part. 15-year-old</p> <p>When asked about the reason for her visit to the hospital, the child said, “They called it rape.” When asked what she meant, the child said, “He put his penis in my vagina. The cops said it was rape. I don’t know if it was rape because he did it a lot since I was little.” 14-year-old (Suspect was mom’s boyfriend)</p>
<p>When asked if anyone had touched her private part she said, “They asked me that at the other place. They asked if it went inside. I told them it did go inside, but I am not sure. I mean he kept poking my private, but my private is not that big. It felt like it was inside my body though.” 7-year-old</p>	
<p>Upon entering the exam room the child said spontaneously, “Gramps put his thingy in my thingy. He did my sister too. It hurted and bleded.” 10-year-old</p>	

adults provided a history of genital penetration (91% of the children [58 of 64], and 82% of the adults [60 of 73]; [Tables 7 and 8](#), respectively).

A total of 464 children (with complete nonmissing data) were included in the logistic regression analysis. Of these, 62 children had diagnostic findings. After adjusting for age, acuity, and type of sexual contact reported by the adult, the estimated odds of diagnostic findings were 12.5 times higher for a child who reported genital penetration compared with ones who reported only genital contact (95% confidence interval, 3.46–45.34). The estimated effect of genital contact vs penetration reported by the adult, when adjusted for the other covariates, was an odds ratio of 0.27 (95% confidence interval, 0.09–0.84). This odds ratio appeared counterintuitive, but could be explained by the large agreement between genital contact vs penetration reported by the child and adult in children who had diagnostic physical findings (94%; 58 of 62). The estimated effects of each covariate are specified in [Table 9](#).

Table 5
Breakdown of the Injuries in the 99 Female Children Who Had Diagnostic Findings

Injury	Value
Acute trauma to labia, perineum, or fourchette/fossa not involving the hymen	33% (33/99)
Acute tear (partial or complete) of hymen	18% (18/99)
Hymenal bruising/petechiae	27% (27/99)
Hymenal transection/absence of tissue	32% (32/99)

In the 777 children who provided a medical history, 72% (n = 585) provided names for their private parts. One hundred four different names were used to identify the genital area. For children between the ages of 5 and 11 years, the most common word was “private” (or privates, private part, privacy; 165 of 346). The word “vagina” was used infrequently in this age group (22 of 346). Interestingly, in children aged 12 to 17 years, “vagina” was the most common word used to identify their genital area (117 of 239) and “private” was used less often (61 of 239). Common names according to age group are provided in [Table 10](#).

Sixty-nine percent (n = 533) of the 777 children who provided a medical history answered the “when you wipe” question. Specifically, 41% (n = 221) stated “inside,” 35% (n = 187) stated “outside,” and 23% (n = 125) stated “both.” The remaining 244 children included those that answered the question with “I don’t know” (n = 127); failed to provide a response (n = 102); declined to answer the question (n = 9); or provided an “other” response (n = 6) that did not include “inside” or “outside.”

Table 6
Cross-tabulation of Diagnostic Findings by Acuity of Visit

Acuity of Visit	Diagnostic findings		
	No	Yes	Total
Acute	267 (19%)	73 (73%)	340
Nonacute	1134 (81%)	26 (26%)	1160
Total	1401	99	1500

Table 7

Cross-tabulation of Diagnostic Findings According to Type of Sexual Contact Reported by the Child

Type of Sexual Contact Reported by the Child	Diagnostic Findings		
	No	Yes	Total
Genital contact	217 (50%)	6 (9%)	223 (44%)
Genital penetration	221 (50%)	58 (91%)	279 (56%)
Total	438	64	502

A significant association was found between categorized age (≤ 12 vs ≥ 13 years) and how the child answered the “when you wipe” question ($P = .002$). Most of the children 12 years of age or younger answered “inside” or “both” (69%; 252 of 364), whereas only 55% (94 of 170) of the children aged 13 years of age or older answered “inside” or “both.” This finding suggests a possible shift in how children perceive/understand their genital anatomy as they grow older. The exact frequencies of the cross-tabulation are given in Table 11.

Discussion

As in previous studies, most female children in our study had normal genital examinations.^{1–4,20} We found that the primary predictor of diagnostic findings was the history reported by the child, more so than age, timing of the examination, and history conveyed by the adult. Children who reported genital penetration were more likely to have diagnostic findings than children who only reported contact, although the prevalence was low for both groups.

As noted in earlier studies, children evaluated acutely are more likely to have genital injury than children examined weeks or months after the last episode of sexual abuse.^{2,7,20} Because most children do not disclose immediately,^{21,22} injury could have occurred but healed before their examinations. In the case-controlled study of Berenson et al,² the median length of time from the last episode of abuse was 42 days and they reported that less than 5% of 3- to 8-year-old female children evaluated had diagnostic findings. Additionally, in the healing injury study from Heppenstall-Heger et al,⁷ persistent anatomic changes were reported in only 14.6% of female children with acute genital injuries. In our study, 73% of the children with diagnostic findings were evaluated acutely (Table 4). If these same children had been examined nonacutely, it is very likely that most of their genital injuries would have healed, except for those with complete hymenal transections.

When investigating the type of sexual contact a child reports and diagnostic findings, Heppenstall-Heger also reported an association between history of penetration and

Table 8

Cross-tabulation of Diagnostic Findings According to Type of Sexual Contact Reported by the Adult

Type of Sexual Contact Reported by the Adult	Diagnostic Findings		
	No	Yes	Total
Genital contact	477 (56%)	13 (18%)	490
Genital penetration	373 (44%)	60 (82%)	433
Total	850	73	923

Table 9

Logistic Regression Results

Covariate	Comparison	β	SE	OR	95% CI
Acuity of visit	Acute vs nonacute	1.88	0.32	6.54	3.45–12.40
Age	1 Year increment	0.14	0.06	1.15	1.02–1.31
Sexual contact reported by adult	Genital penetration vs genital contact	–1.3	0.58	0.27	0.09–0.84
Sexual contact reported by child	Genital penetration vs genital contact	2.5	0.66	12.53	3.46–45.34
Constant	–	–5.3	0.75	0.01	–

CI, confidence interval; OR, odds ratio; SE, standard error

injury. The most significant injuries in their 2003 study⁷ were in children who reported penile-vaginal penetration, including 12 of the 17 children with hymenal transections. In contrast, the only significant predictors of abnormal genital findings in the 1994 landmark study from Adams et al¹ was time since last episode of sexual contact and a history of bleeding.

Although a history of penetration from the child was associated with diagnostic findings in our study, most children who reported penetration had no genital trauma (79%; 221 of 279). In an attempt to explain the lack of findings, previous studies have suggested that children might be describing penetration when nonpenetrative genital contact occurred or are unable to distinguish labial penetration from penetration of the vaginal canal.^{3,4} During an investigation, children are often asked to differentiate whether the sexual contact was “inside” or “outside” the genitalia and the child who answers “inside” is often categorized as having experienced penetration of the vagina. An interesting aspect of this study was the answers that children gave to the “when you wipe” question. Sixty-nine percent of children 12 years of age or younger who answered the question reported they wipe inside or both inside and outside their private part (or name provided by child). Children 13 years of age or older answered inside or both 55% of the time. It seems unlikely that these children are wiping inside their vaginal canal after urination. More plausible is they are referring to anything posterior to the labia as “inside” and as they age, they begin to understand and communicate differently about their genital anatomy and possibly their sexual abuse experiences.

Of the genital injuries noted in this study, 66% involved the hymen/vagina. Thirty-four percent were located external to the hymen, including injuries to the posterior fourchette, fossa navicularis, labia minora, and inner aspects of the labia majora, etc. The children whose injuries were external to the hymen raise the question of how we as

Table 10

Common Genital Names According to Age Group

Most Common Words Used to Describe Genital Area	Children Who Provided Word for Genital Area (N = 585)	Age, 5–11 Years (59%; 346/585)	Age, 12–17 Years (41%; 239/585)
Vagina	139	6% (22/346)	49% (117/239)
Private parts	226	48% (165/346)	25% (61/239)
Tutu	19	5% (19/346)	0% (0/239)
Pee pee	15	3% (12/346)	1% (3/239)
Other word	186	37% (128/346)	24% (58/239)

Table 11
Cross-tabulation of Categorized Age (≤ 12 vs ≥ 13 years) and How the Child Answered the “When You Wipe” Question ($P = .002$)

Categorized Age, Years	How Child Answered the “When You Wipe” Question	
	Inside/Both (n = 346)	Outside (n = 188)
12 or younger	69.2% (252)	30.8% (112)
13 or older	55.3% (94)	44.7% (76)

professionals and clinicians define penetration. In Tennessee, the legal definition of penetration is “sexual intercourse, cunnilingus, fellatio, anal intercourse, or other intrusion, however slight, of any part of a person’s body or of any object into the genital or anal openings of the victim’s, the defendant’s or any other person’s body, but emission of semen is not required.”²³ There is no legal impetus to differentiate vaginal penetration from genital penetration and yet medically, certain genital structures internal to the labia majora are categorized as “external.”⁶ As a result, confusion arises when the legal definition and medical terminology are incongruent, prompting the question of what must be penetrated for penetration to occur?

The low prevalence of diagnostic findings in this study supports previous research and suggests it is the definition of penetration and the child’s understanding of anatomy that must be carefully considered when questioning a child and interpreting exam findings.^{3,4} Because the history from the child remains the single best indication that sexual abuse occurred, those obtaining information from children must first determine what information they are seeking. Are we making an inquiry that is specific to whether vaginal penetration occurred or are we making an inquiry whether the child experienced penetration of her genitalia? This question represents a challenge to our understanding of sexual assault and the terminology we use to define rape.

One of the greatest challenges of the study was the “when you wipe question.” The question was asked using the child’s name for their genital area (which was sometimes the word, “vagina”). There was no way to know if the child used this word to describe their entire genital area or specifically the vagina. Therefore, when a child answered “inside,” it was unclear if that child was describing wiping inside her vagina or wiping inside the labia. Alternately, if a child described wiping “outside,” it was unclear if the child was referring to wiping outside the labia or outside the vaginal canal but inside the labia. Because of the ambiguity of the question and the interpretation of the answer, there was no “correct” answer. Although this question was admittedly imperfect, it still has value. This question illustrates the great care needed by professionals in understanding and interpreting how children use language to describe genital anatomy and their experience of sexual contact/penetration. Also, this study lacked a control group. All of the female children in this study were referred to the OKC for concerns of sexual abuse. We do not know how similarly aged children who were not being evaluated for concerns of sexual abuse would answer the “when you wipe” question.

Additionally, children were questioned by highly skilled interviewers, and the questions were standardized to the extent possible; however, to obtain the most accurate information, questions were at times individualized to meet the developmental level of children and the flow of the interview. Attempts to create standardized interview protocols^{16,17} have improved the interview process in child sexual abuse cases, but the nature of interviewing children will always contain some degree of subjectivity. Children in this study were also potentially subjected to previous questioning related to sexual contact, which could have influenced their answers during their clinic visit.

Most children who were evaluated for concerns of sexual abuse in this study had normal genital examinations (93%). When adjusted for age, acuity, and type of sexual contact reported by the adult, the primary predictor of diagnostic findings was a history of genital penetration reported by the child. Additionally, children used the word “inside” to describe contact other than penetration of the vaginal canal (ie, labial penetration). A clinician’s interpretation of a child’s use of “inside” might explain the high prevalence of normal genital examinations and warrants additional inquiry aimed at investigating how children use language to describe contact to their genitalia.

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