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Children’s Allegations of Sexual Abuse in Criminal Trials: Assessing Defense Attacks on Credibility and Identifying Effective Prosecution Methods

Final Summary Overview

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Stolzenberg, Children’s Allegations of Sexual Abuse in Criminal Trials

Abstract

Due to delays in reporting, lacking witnesses, and infrequent medical and physical evidence, in criminal investigations of alleged child sexual abuse (CSA), children’s reports of abuse become central to determining whether a crime occurred. While researchers acknowledge that developmental vulnerabilities make children particularly susceptible to courtroom questioning, potentially influencing the reliability and validity of their in-court reports, little attention has been paid to how children are questioned in-court. Only one previous dataset, collected on older cases, can speak to questioning practices in the United States. This was the purpose of the present project: to examine how attorneys establish and attack children’s credibility. In addition, we were interested in assessing how attorneys would phrase questions, how children would respond, and whether questioning practices would exhibit developmental sensitivity.

Collecting cases prosecuted between 2005 and 2015 in Maricopa County, Arizona, we examined transcripts of 134 minors (5-17-year-olds) testifying about alleged child sexual abuse in criminal trials. The majority of cases involved allegations against a familiar, if not familial, adult. Children commonly alleged repeated abuse. All question and answer pairs were coded for whether questions assessed three areas of credibility: suggestibility and honesty, plausibility, and consistency. In addition, all question and answer pairs were systematically coded for the linguistic form of each attorney question and each child’s subsequent response.

Consistency concerns seemed to be embedded in nearly all questions in some capacity, representing 79% of prosecutor questions and 89% of defense questions. In addition, prosecutors devoted more time to establishing plausibility than did the defense, at the expense of addressing suggestibility and honesty, to which the defense gave proportionally more attention. Prosecutors also asked the fewest credibility questions of the youngest children, while defense attorneys did not differ in the proportion of credibility questions by the age of the child. Closed-ended questions accounted for three-out-of-four attorney questions; while children provided elaborative responses to open questions, they provided unleaborative responses to closed-ended questions. We found that declarative questions, or statements posed as questions (e.g. “He hit you?”) were common, representing 21% of overall questions, and indirect yes/no questions (e.g. “Do you remember if he hit you?”) were common, describing 11% of all questions asked. Children provided the most unelaborative and fewest elaborative responses to declarative questions, and the most non-substantive responses to indirect yes/no questions, when compared to other closed-ended questions. While prosecutors were more likely to ask open-questions, and less likely to ask suggestive questions, when compared to the defense, they had similar rates of closed-ended questions (including declarative and indirect yes/no questions). There were few differences in questioning practices, or response patterns, based on the age of the child.

Our data demonstrate that declarative and indirect yes/no questions produce problematic response patterns. In addition, the issues of consistency, or inconsistency, dominate in courtroom investigations of CSA, whereas issues of suggestive influence, honesty, and plausibility receive significantly less attention. Furthermore, according to the kinds of credibility questions observed, children may not be developmentally mature enough to answer the questions asked of them - a tactic that may in itself be undermining credibility, particularly by the defense. Researchers should work alongside prosecuting attorneys to develop effective training methods, as little is known about how attorneys learn how to question children in these cases.
Children’s Allegations of Sexual Abuse in Criminal Trials: Assessing Defense Attacks on Credibility and Identifying Effective Prosecution Methods

In 2017, the National Institute of Justice (NIJ) funded this project examining how children allege sexual abuse in criminal trials. In doing so, we conducted observational fieldwork of criminal investigations of recent child sexual abuse (CSA) cases, examining how children were questioned, with a particular focus on how they respond. The purpose was to assess how children’s credibility is established and questioned in courtroom investigations of sexual abuse allegations. In doing so, the goals were to: 1) examine how prosecuting and defense attorneys both establish and attack children’s credibility, and 2) to assess the form, appropriateness, and developmental sensitivity of attorneys’ questions. The intent was to provide practical recommendations for future cases, allowing for a better understanding of children’s vulnerabilities and competencies when acting as witnesses.

Background

In criminal investigations of alleged CSA, children’s reports of abuse become central to determining whether a crime occurred. This is because children’s reports are often the primary evidence against the defendant; in cases of CSA, witnesses are uncommon (Myers et al., 1989) and there is usually limited evidence to support allegations beyond what the child claims occurred (Bays & Chadwick, 1993; Stolzenberg & Lyon, 2014a). While other countries have modified their procedures to accommodate children as unique victims, lessening the need for children to testify in court, this is untrue of the United States. In addition, it is unlikely to occur in the United States because of the Supreme Court’s decision in Crawford v. Washington, upholdning the right of defendants to confront their accusers in court (Lyon & Stolzenberg, 2015). As such, in the United States, the criminal justice system is heavily reliant upon children’s in-
court testimony. Yet, children are vulnerable to courtroom processes, and their developing
cognitive and socio-emotional abilities may limit their ability to effectively participate as victims
unless appropriate techniques are utilized. However, little attention has been paid to how
children are questioned in-court, with only a handful of researchers, internationally, studying this
process. In addition, prior to the current investigation, the only data on children’s testimony in
the United States comes from a single sample of cases from the 1990’s in a single jurisdiction.
Furthermore, there have been no systematic assessments of how credibility is assessed when
children testify in the United States. The purpose of the present project was to do so by
examining how attorneys assess children on three areas that may influence credibility:
suggestibility and honesty, plausibility, and consistency. In addition, we were interested in how
attorneys would phrase their questions, how children would respond, and whether questioning
practices would exhibit developmental sensitivity.

Suggestibility and Honesty

Legitimate concerns exist over how others may influence children. Researchers have
examined how children’s reports can be coached by influential adults, but also by how children’s
reports can be altered by less overt methods such as leading questioning or suggestive techniques
(Ceci, Loftus, Leichtman & Bruck, 1994; Schuman, 1986). This is amplified by the fact that
before a trial occurs, children reporting alleged sexual abuse have disclosed to many adults
(Malloy, Brubacher, & Lamb, 2013; Malloy, Lyon & Quas, 2007), and there are often long
delays between these conversations and the child’s testimony (Ceci & Bruck, 1993; Stolzenberg
& Lyon, 2014b). As such, attorneys are likely to ask children about what they have said during
prior disclosures, and what recipients have said in return, in an attempt to assess potential
suggestive influence, as well as the child’s truthfulness in reporting their allegations (Stolzenberg
& Lyon, 2014a). We were interested in assessing how attorneys may establish or challenge children’s honesty, by asking about both lying and potential suggestive influence by others.

**Plausibility**

Credibility depends upon jurors understanding, and believing, that abuse occurred as the child alleges it did. Yet, the dynamics of CSA may make this challenging. Children often delay their disclosures for lengthy periods of time, may not be physically hurt by abuse, and may describe abuse as a gradual progression of seductive and grooming behaviors that border on normal caregiving activities with familiar of familial adults over lengthy periods of time (Finkelhor, 1984; Leclerc, Proulx, & Beauregard, 2009; Stolzeznberg & Lyon, 2014b). As such, abuse is rarely forceful or violent, and children rarely disclose immediately. Many cases may have some of these counterintuitive characteristics, and when they do, researchers find that jurors are more likely to acquit defendants (Stolzenberg & Lyon, 2014b). This then becomes a critical avenue for both establishing and attacking children’s credibility during courtroom testimony. Attorneys are likely to be concerned about jurors’ conceptions of what plausible CSA looks like. We were interested in examining how attorneys discuss the plausibility of abuse.

**Consistency**

Children’s reports, as with adults, are likely to contain inconsistencies. These may, or may not, be related to the validity of the overall report. For example, children may be inconsistent as a result of a large time delay between disclosure and trial, repeated questioning, an inability to remember specific details of the abuse (like time or location), and also difficulty distinguishing between different occurrences if abuse was chronic (Brubacher & La Rooy, 2014; Connolly, Gordon, Woiwod, & Price, 2016; Ghetti, Goodman, Eisen, Qin, & Davis, 2002; Roberts & Blades, 1999). Furthermore, children may have difficulty explaining their
inconsistencies (Malloy & Lamb, 2010). Due to this, attorneys are likely to address children’s consistency, as a means of assessing whether inconsistencies are significant enough to call into question children’s credibility (or for the prosecutors, as a means of demonstrating that central, allegation details are consistent and reliably reported). We were interested in how often, and how, attorneys might address children’s consistency when testifying about alleged CSA.

**Productivity and Language: How Attorneys Phrase Questions and How Children Respond**

Concerns exist over how to best question children in court. Prior to children’s courtroom testimony, protocol guidelines that dictate how to interview children during the investigative process recommend that interviewers ask non-suggestive, open-ended questions, resulting in longer, more detailed, and more accurate responses (Lamb et al., 2018). In the same vein, researchers consistently demonstrate that closed-ended questions, or those that can be answered with a proffered response (e.g. saying “yes” after being asked a yes/no question), can elicit inaccurate and incomplete responses from children (Malloy & Stolzenberg, 2019). Yet, researchers find that, internationally, closed-ended questions dominate in court (Andrews & Lamb, 2016; Hanna et al., 2012; Henderson et al., 2019; Zajac & Cannan, 2009; Zajac, Gross & Hayne, 2003; Zajac, O’Neill, & Hayne, 2012). This is sensible, as attorneys are advised to keep control of children through questioning (Myers, 1986). Furthermore, expediency in the courtroom process is valued, so effectively eliciting information quickly is necessary.

However, not all closed-ended questions are created equal. Researchers acknowledge that while somewhat risky, closed-ended questions can be necessary to elicit information that children are reluctant to disclose (Ahern, Stolzenberg, McWilliams, & Lyon, 2016; Quas, Stolzenberg & Lyon, 2018; Stolzenberg et al., 2017a). Yet, some questions are more concerning; researchers agree that linguistically suggestive closed-ended questions that communicate the
expected response are very likely to produce problematic responses (e.g. “He touched you, didn’t he?”). Previously, researchers have commonly distinguished between suggestive closed-ended questions and non-suggestive closed-ended questions, ignoring the potential for variation between different kinds of closed-ended questions. While defense attorneys are allowed to be leading, and may want children’s narratives to be confusing, the same is not true for prosecuting attorneys, who want to establish the child’s report as credible and convincing (Pennington & Hastie, 1992). As such, it would be expected that defense attorneys would ask more problematic questions, and prosecutors would aim to ask fewer, trying to encourage reliable, accurate information from child witnesses. Surprisingly though, little research assesses how attorneys may facilitate or hinder children’s productivity and accuracy by asking different kinds of closed-ended questions in court in the United States, or how this varies by the age of the child testifying.

The Current Project

No research to date has systematically examined all potential assessments of children’s credibility, let alone how such questions are phrased, or how children respond. In addition, there is limited research to understand how children are questioned in the United States about alleged sexual abuse. The present investigation accomplished the above, and by doing so, provides concrete recommendations for more effectively eliciting information about credibility in-court while remaining sensitive to the developmental vulnerabilities of children.

Method

All ethics protocols were approved by Arizona State University’s Institutional Review Board. Working with the Maricopa County Attorneys’ Office, we obtained information on all victims who testified in cases of alleged child sexual abuse in Maricopa County from January of 2005 to December, 2015 ($N = 398$ victims across 252 cases). Cases were eligible if they involved
at least a single charge of: Sexual Conduct with a Minor (A.R.S. 13-1405), Child Molestation (A. R. S. 13-1410), or Sex Abuse (A. R. S. 13-1404). We contacted and paid court reporters to share transcripts of completed cases; 73 court reporters were contacted and 47 responded (64% response rate). We received 214 complete victim’s testimonies across 142 cases (some cases included multiple victims); the remaining court reporters were non-responsive. Of these 214 testimonies, 134 were minors at testimony (across 101 cases; $M_{\text{victim per case}} = 1.33$, $SD_{\text{victim per case}} = .65$), whereas the remaining transcripts involved young adults testifying about alleged victimization during their childhood. For the purposes of the project, we examined the 134 testimonies involving minors, including any child who testified at the age of 17 years or younger.

The children who testified ranged in age from 5 to 17 years old\(^1\) ($M = 12.48$, $SD = 3.34$) and only 10% of our sample involved male victims. Defendants (99% male) were the child’s parent or caregiver 40% of the time, another family member 26% of the time, a family friend or other familiar adult (e.g. coaches, babysitters, neighbors) 29% of the time, and a stranger 5% of the time. Children alleged penetration or attempted intercourse in 34% of cases, oral copulation or genital contact in an additional 14% of cases, and less severe abuse in 52% of cases (fondling, exhibitionism, exposure to pornography). Fifty-six percent of children alleged repeated abuse, meaning that they delayed their disclosure after an initial sexual encounter. Ninety percent of cases resulted in a conviction of at least one charge of sex crimes against a child.

Coding

All question and answer pairs were systematically coded for: the linguistic form of the question type, the linguistic form of the child’s subsequent response type, the number of words

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\(^1\) The sample did not contain any preschoolers (3-4-year-olds). This is because there were no younger children in this age range who testified, suggesting that the cases with the youngest children are unlikely to go to trial.
spoken in the question and answer, and the credibility content (honesty or suggestive influence, plausibility, consistency; productivity was assessed by the linguistic form and number of words).

**Credibility coding.** Table 1 presents qualitative examples of questioning by each area of credibility. Coding for credibility was not mutually-exclusive; any given question-answer pair could be coded as assessing multiple areas of credibility simultaneously.

Table 1.

**Qualitative Examples of Attorney Type Questioning by Each Area of Credibility**

<table>
<thead>
<tr>
<th></th>
<th>Prosecution</th>
<th>Defense</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Suggestibility/Honesty</strong></td>
<td>“Okay is that the truth about what actually happened that time?”</td>
<td>“And did you talk to your mommy before coming to court today, and did she tell you anything about anything to say or anything like that?”</td>
</tr>
<tr>
<td>What others have said to the child about reporting, the child's honesty, and the child's disclosure process</td>
<td>“Were you trying to be truthful with the detective?”</td>
<td>“Which version is the accurate version, the one that you told the officer or the one that you told the detective?”</td>
</tr>
<tr>
<td><strong>Plausibility</strong></td>
<td>“Was there ever a time where he touched your private parts?”</td>
<td>“Would you scream and yell?”</td>
</tr>
<tr>
<td>Situational details, how the defendant has engaged the child, the mechanics of abuse, and the child’s subjective reaction to abuse</td>
<td>“Did you try to...stop him from taking off your pants and your underwear?”</td>
<td>“You couldn’t be sure could you that you were actually touching a penis, could you?”</td>
</tr>
<tr>
<td><strong>Consistency</strong></td>
<td>“So is it your testimony today that you lied to the detective?”</td>
<td>“But you remember telling a police officer about this?”</td>
</tr>
<tr>
<td>Attorneys asking about the child making the same statement as before or a different statement than before</td>
<td>“So that's different than your testimony to Mr. X earlier?”</td>
<td>“Then why did you tell the jury you remembered how you got there and now you are telling the jury you don't remember?”</td>
</tr>
</tbody>
</table>
Suggestibility and honesty. We coded suggestibility/honesty as any question-answer pair addressing suggestive influences or child honesty, including what others had said to the child about reporting (e.g., “When the police came out to your nana's house, did your aunt tell you what to say to the police?”), the child’s honesty (e.g., “Did you guys all make this up because you were mad at him?”), as well as discussions about the child’s disclosure process (e.g., “He was kind of pushing you to say something to your mom [about the allegation], right?”). This category included any question about the disclosure process or the child's honesty in disclosing. Inherently, this meant that we included questions that overtly asked about suggestive influence (e.g., "Did your mom tell you what to say?") and subtle questions (e.g., "Did your mom practice with you before coming to court today?"). We included questions about the disclosure process because these are points at which children's reports can be influenced.

Plausibility. Plausibility was coded as any question-answer pair addressing abuse allegations (before and after the abuse), including attempts to establish situational details such as the presence of witnesses or location (e.g., “What room were you in?”), discussing how the defendant engaged the child in abuse including grooming and seduction behaviors (e.g., “Did he offer you any presents or say, you know, don’t tell anyone about this?”), the mechanics of abuse or how the abuse occurred physically (e.g., “…Now you testified that you didn't actually see if his penis was exposed on this particular incident?”), and questions about the child's subjective reactions to the abuse (e.g., “Well, tell me, I mean, so you were upset, right?”)

Consistency. Consistency was defined as questioning something the child said previously – either pretrial (e.g., police interviews or forensic interviews) or earlier in testimony. This category addressed questions about both consistency, where attorneys ask about the child making the same statement as before (e.g., “You can tell me if I am wrong, but I think that at one time
you said that your dad had put his finger in -- I think you said privates"), and inconsistency, 
where a child is making a different statement from before (e.g., “When he asked you how you 
got there, you told the jury you got there because your mom brought you. Now you are telling us 
you don't remember how you got there; is that correct?”). Consistency questions frequently 
overlapped with plausibility and suggestibility/honesty questions; content coding was not 
mutually-exclusive.

Linguistic coding for productivity assessment. Question type was identified as either 
non-substantive (either an incomplete question, or irrelevant to the child’s testimony: e.g. 
procedural requests for the child to sit or verbally relay their answer, or questions by the attorney 
to the judge) or substantive (a completely stated question relevant to the child’s testimony).

Substantive questions were coded for their linguistic form across four main categories: 1) 
invitations (truly open prompts requesting the child’s narrative; e.g. “Tell me everything that 
happened when X.” or “What happened next?”), 2) Wh- questions not categorized as invitations 
(who, what, where, when, why, and how requests; e.g. “How did you feel when X happened?”), 
or 3) closed-ended questions (questions that require only an assent, a dissent, or the selection of a 
proffered response from their question stem; e.g. “Did you say ‘no?’”).

Closed-ended questions were further coded for their specific form, including: 1) yes/no 
questions (could be answered with a yes or a no; “Did it hurt?”), 2) forced-choice (can be 
answered with a proffered option presented in the stem; “Were your clothes on or off?”), 3) 
declarative (a yes/no question phrased as a statement; “And then you went into the room?”), 4) 
indirect yes/no questions, or those that contain indirect speech acts such as “do you know” “do 
you remember” (yes/no questions that are preceded by an indirect speech act; “Do you know if it 
was day or night?”), 5) tag questions (a statement tagged on the end of the yes/no questions; “He
took your clothes off, didn’t he?”), and 6) negative term questions (a yes/no question beginning
with a negative term; “Didn’t he tell you to be quiet?”).

As done by previous researchers (Klemfuss et al., 2014; Stolzenberg & Lyon, 2014), both
tag and negative term questions were categorized into a specific kind of closed-ended questions:
linguistically suggestive closed-ended questions. These two question types represent a particular
kind of closed-ended question that is presumed, based on linguistic form alone, to be more
leading and problematic. They are henceforth referred to as suggestive questions.

All questions were coded for whether they were echoes of a child’s prior statements. For
example, if the attorney was repeating what the child had recently stated, in an attempt to clarify
what the child had just said, ensure accurate interviewer understanding, or as a means to
facilitate elaboration (e.g. “What did you say?” “I told him to go away.” “You told him to go
away?”), it was coded as an echo.

Response type was identified as either non-substantive or substantive. Non-substantive
responses did not provide relevant or responsive information, and as such, included responses
that were seeking clarification, expressing misunderstanding, or expressing a lack of knowledge
(e.g. “I don’t know”). Substantive responses were categorized as either unelaborative (not
providing details beyond assenting, dissenting, or selecting a proffered response) or elaborative
(providing an open response); the average unelaborative response contained only one word ($SD
= .82$) whereas the average elaborative response contained 11 words ($SD = 15.89$). More details
about linguistic productivity coding can be found in Stolzenberg and colleagues (in press).

**Age.** For analyses, victim age was re-coded into three groups: 5-10-year-olds ($n = 40$),
11-14-year-olds ($n = 47$), and 15-17-year-olds ($n = 47$). In addition to creating similarly sized
groups for comparison, this also allowed for meaningful comparisons.
jurisdiction, statutes often specify aggravating factors for felony distinctions and sentencing decisions if the victim is 14 years or younger. Furthermore, the age categories allow for comparisons between the youngest children, those who are either pre-teenagers or young-teenagers, and those who are older teenagers.

Reliability

To assess reliability, coders blind to study hypotheses were trained on the coding guide, and one was selected as the gold standard coder. All coders independently coded 20% of the entire sample (a random selection of eligible transcripts which included coding of all question-answer pairs within each selected transcript), and their codes were compared to that of the gold standard. The reliability of all variables had a minimum value of $\kappa = .80$, meaning there was a high level agreement across different coders.

Results

The results are organized by first assessing areas of credibility, and then examining the linguistic form of questions and answers. Across the 134 trial testimonies, there were 54,275 substantive questions asked by either the prosecution ($n = 33,746$) or defense ($n = 20,529$). For all results, we examined proportion scores – we examined the proportion of attorneys’ questions and the proportion of children’s responses. Preliminary analyses revealed no effects of victim gender, case outcome, relationship between the victim and perpetrator, abuse severity, frequency of abuse, or the number of victims per case, on proportion analyses, and as such, these are not considered. All below analyses, unless otherwise specified, utilized repeated-measures ANOVAs with questioner entered as a repeated-measure (prosecution versus defense), and age entered as a between-subjects factor (5-10-year-olds, 11-14-year-olds, 15-17-year-olds). Bonferroni’s
corrections were used throughout to control for multiple comparisons, to control for error in interpreting significant results when running multiple comparisons.

Credibility

Overwhelmingly, the questions attorneys used assessed at least one of the three areas of credibility ($M = .89$, $SD = .11$). Figure 1 displays the proportion of questions, by attorney, that inquired about each area of credibility.

![Figure 1](image.png)

Figure 1. The proportion of prosecution and defense questions about suggestibility and honesty, plausibility, and consistency.

To assess whether attorneys differed in what they focused on, and whether they varied their questioning by child’s age, we conducted a repeated-measures ANOVA (see Table 2) on the proportion they asked about each category of credibility (repeated-measures: proportion of suggestibility/honesty, plausibility, and consistency), by questioner (repeated-measures: prosecution versus defense), with age entered as a between-subjects factor (5-10-year-olds, 11-14-year-olds, 15-17-year-olds). There were significant main effects of questioner, credibility...
area, and age. These main effects were subsumed by a significant two-way interaction of questioner by age, and a significant two-way interaction of questioner by credibility area.

**Table 2.**

ANOVA Results for the Proportion of Prosecutor and Defense Attorney Questioning by Each Area of Credibility and Child Age Group

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>p</th>
<th>ηp²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Group</strong> (5-10-year-olds, 11-14-year-olds, 15-17-year-olds)</td>
<td>3.46</td>
<td>.034</td>
<td>.053</td>
</tr>
<tr>
<td><strong>Questioner</strong> (Prosecution vs. Defense)</td>
<td>12.67</td>
<td>&lt;.001</td>
<td>.093</td>
</tr>
<tr>
<td><strong>Credibility Area</strong> (Plausibility, Suggestibility, Consistency)</td>
<td>433.52</td>
<td>&lt;.001</td>
<td>.779</td>
</tr>
<tr>
<td><strong>Age * Questioner</strong></td>
<td>4.11</td>
<td>.019</td>
<td>.063</td>
</tr>
<tr>
<td><strong>Age * Credibility Area</strong></td>
<td>0.65</td>
<td></td>
<td>.011</td>
</tr>
<tr>
<td><strong>Questioner*Credibility Area</strong></td>
<td>45.21</td>
<td>&lt;.001</td>
<td>.269</td>
</tr>
<tr>
<td><em><em>Age <em>Questioner</em></em> <em>Credibility Area</em></em></td>
<td>0.84</td>
<td>ns</td>
<td>.014</td>
</tr>
</tbody>
</table>

To assess the two-way interaction of questioner by age group, independent-samples t-tests were conducted; while defense attorneys did not vary the proportion of credibility challenging questions by child age, the prosecutors did. Prosecutors asked the fewest credibility questions of the 5-10-year-olds ($M = .82, SD = .14$), compared to both the 11-14-year-olds ($M = .91, SD = .09$), $t (85) = 3.50, p = .001, 95\%$ CI for the mean [.04, .13], and 15-17-year-olds ($M = .87, SD = .09$), $t (85) = 2.02, p = .047, 95\%$ CI [.01, .10].
To assess the two-way interaction of questioner by credibility area, we conducted paired-samples t-tests on the proportion of attorney questions by each area of credibility separately.

While the prosecutors focused more on plausibility than did the defense, \( t(125) = 5.88, p < .001, 95\% \text{ CI } [.08, .16] \), they focused less on suggestibility or honesty, \( t(125) = -5.83, p < .001, 95\% \text{ CI } [-.14, -.07] \), and consistency, \( t(125) = -8.01, p < .001, 95\% \text{ CI } [-.11, -.06] \) (see Figure 1).

Overall though, a higher proportion of defense attorneys’ substantive questions focused on areas of credibility (\( M = .94, SD = .09 \)) than did prosecutors (\( M = .88, SD = .10 \)), \( t(125) = 7.55, p < .001, 95\% \text{ CI } [.05, .08] \). Five- to 10-year-olds (\( M = .84, SD = .13 \)) received fewer credibility questions than did either 11-14-year-olds (\( M = .92, SD = .08 \)), \( t(85) = -3.44, p = .001, 95\% \text{ CI } [-.12, -.03] \), or 15-17-year-olds, \( t(85) = -1.99, p = .050, 95\% \text{ CI } [-.10, -.01] \). Consistency questions were by far the most frequent (\( M = .82, SD = .14 \)), occurring more often than plausibility questions (\( M = .46, SD = .15 \)), \( t(133) = 18.45, p < .001, 95\% \text{ CI } [.32, .40] \), or suggestibility questions, \( t(133) = 36.94, p < .001, 95\% \text{ CI } [.58, .65] \). Plausibility questions (\( M = .46, SD = .15 \)) were also more common than were suggestibility/honesty questions (\( M = .21, SD = .11 \)), \( t(133) = 13.46, p < .001, 95\% \text{ CI } [.22, .29] \).

More results are presented in Denne and colleagues (in press).

### Linguistic Form of Questions and Responses

The proportion of attorneys’ questions, by question type, is presented in Figure 2.
Generally, invitations (e.g. “Tell me everything that happened.”) were rare, representing only 1% of attorneys’ questions. Wh- questions were more common, representing 24% of all questions. Here, the prosecutors were almost three times as likely to ask wh- question than were the defense. Closed-ended questions were by far the most common, representing 67% of all questions, proportionally, and commonly used by both prosecutors and defense attorneys. Linguistically suggestive questions represented only 8% of all questions, proportionally, but here the defense attorneys were over four times as likely to ask such questions as the prosecutors.

As closed-ended questions were the most common, we were interested in exploring the differences in questioning and response patterns among the different types of closed-ended questions: yes/no, forced-choice, declarative, and indirect yes/no questions. In particular, we were interested in whether declarative or indirect yes/no questions would differ from yes/no and forced-choice questions, as declarative and indirect yes/no questions have rarely been examined.

*Figure 3* represents the proportion of attorneys’ questions by closed-ended question type.
Figure 3. The proportion of yes/no, forced-choice, declarative, and indirect yes/no questions by prosecuting and defense attorneys.

To assess closed-ended questioning patterns, we conducted a repeated-measures ANOVA on the proportion of these four subtypes. There was a main effect of question type, $F(3, 396) = 301.33, p < .001, \eta^2 = .71$. Examining pairwise comparisons, yes/no questions ($M = .31, SD = .06$) occurred more often than any other closed-ended question type, declarative questions ($M = .21, SD = .09$) occurred more often than forced-choice ($M = .04, SD = .02$) or indirect yes/no questions ($M = .11, SD = .05$), and indirect yes/no questions occurred more often than forced-choice questions.

This was subsumed by a two-way interactions of question type by questioner, $F(3, 369) = 47.72, p < .001, \eta^2 = .28$. While the prosecution was more likely to ask yes/no questions ($M = .32, SD = .07$) than the defense ($M = .28, SD = .13$), the defense was more likely to ask declarative questions ($M = .31, SD = .16$) than the prosecution ($M = .17, SD = .08$).
There was also a two-way interaction of question type by age, $F(6, 369) = 4.41, p < .001, \eta^2 = .07$. The youngest children (5-10-year-olds) were asked more yes/no questions ($M = .33, SD = .07$) and fewer declarative questions ($M = .20, SD = .08$), when compared to the 11-14-year-olds ($M_{yes/no} = .29, SD = .06; M_{declarative} = .27, SD = .09$) or 15-17-year-olds ($M_{yes/no} = .29, SD = .06; M_{declarative} = .25, SD = .09$).

Furthermore, the two-way interactions were subsumed by a three-way interaction of question type by questioner by age, $F(6, 369) = 3.03, p = .007, \eta^2 = .05$; see Figure 4. This was driven by differences in the yes/no and declarative questioning patterns, by attorney, by age of the child questioned. While prosecutors didn’t vary their rates of yes/no questions by age of the child, defense did -- asking the youngest children the most yes/no questions. Contrastingly, both attorneys asked the youngest children the fewest declarative questions.
Figure 4. A three-way interaction of question-type by questioner by age group. Prosecutors and defense attorneys differed in the proportion with which they asked children yes/no questions; prosecutors did not vary how often they asked yes/no questions by age, whereas the defense asked the youngest children the most yes/no questions. Furthermore, prosecutors and defense attorneys both asked the youngest children the fewest declarative questions.
**Response Patterns.** Children’s responses were dependent upon the kind of question asked. When asked an invitation, children provided an elaborative response 90% of the time (the remaining responses were non-substantive, such as requests for clarifications or “I don’t know” responses). Similarly, to wh- questions, children provided elaborative responses 92% of the time (otherwise non-substantive responses). However, in response to closed-ended questions, children provided elaborative responses only 26% of the time, instead providing unelaborative responses 68% of the time, and non-substantive responses only 6% of the time. In response to suggestive questions, children provided unelaborative responses 82% of the time, providing elaborative responses only 13% of the time and non-substantive requests for clarification or acknowledgements of not knowing or understanding, 5% of the time.

Given the frequency of closed-ended questions, and our interest in better categorizing these questions and children’s responses to them, we conducted a repeated-measures ANOVA on the proportion of the three response types (repeated: non-substantive, unelaborative, elaborative), by the four subtypes of closed-ended questions. There was a main effect of response type, $F(2, 196) = 491.89, p < .001, \eta^2 = .83$. Examining pairwise comparisons, unelaborative responses occurred more often ($M = .52, SD = .10$) than elaborative ($M = .42, SD = .10$) or non-substantive responses ($M = .06, SD = .05$), and elaborative responses occurred more often than did non-substantive responses.

This effect was subsumed by a two-way interaction of response type by question type, $F(6, 588) = 70.85, p < .001, \eta^2 = .42$. Children provided the most unelaborative responses to declarative questions ($M = .78, SD = .14$), compared to yes/no ($M = .69, SD = .14$), forced-choice ($M = .57, SD = .23$), or indirect yes/no questions ($M = .47, SD = .17$). Furthermore, children provided the most non-substantive responses to indirect yes/no questions ($M = .09, SD = .08$).
compared to yes/no \((M = .07, SD = .06)\), forced-choice \((M = .06, SD = .12)\), or declarative questions \((M = .04, SD = .08)\).

In addition, there was a two-way interaction of response type by questioner, \(F(2, 196) = 7.39, p = .001, \eta^2 = .07\). While children provided similar rates of elaborative responses to both attorneys \((M_{\text{prosecution}} = .32, SD_{\text{prosecution}} = .10; M_{\text{defense}} = .32, SD_{\text{defense}} = .15)\), they provided more non-substantive responses to the defense \((M_{\text{prosecution}} = .04, SD_{\text{prosecution}} = .03; M_{\text{defense}} = .08, SD_{\text{defense}} = .06)\), and more unelaborative responses to the prosecution \((M_{\text{prosecution}} = .64, SD_{\text{prosecution}} = .10; M_{\text{defense}} = .60, SD_{\text{defense}} = .16)\).

All of these effects were subsumed by a three-way interaction of response type by question type by questioner, \(F(6, 588) = 7.25, p < .001, \eta^2 = .07\); see Figure 5. This was driven by how children responded to indirect yes/no questions; children provided more elaborative responses to indirect yes/no questions asked by the prosecution, whereas they provided proportionally more unelaborative responses to indirect yes/no questions asked by the defense.
Figure 5. A three-way interaction of response type by speaker by question type. Children provided proportionally more elaborative responses to prosecutors asking indirect yes/no questions, whereas they provided proportionally more unelaborative responses to indirect yes/no questions from the defense.

Questions as Echoes of Children’s Prior Statements

As a final assessment, we examined the pattern of echoing a child’s prior statement, as a means to either clarify what the child said or encourage elaboration. As a reminder, echoing was
coded for all questions. We intentionally compared declarative to all other question types, as we were particularly interested in whether this would happen more often for declarative questions. By conducting a paired-samples t-test, we observed that the proportion with which questions were echoes occurred more often to declarative questions ($M = .09, SD = .11$) than to non-declarative questions ($M = .03, SD = .04$), $t(132) = 7.16, p < .001, 95\% \text{ CI} [.04, .07]$. However, echoing was rare, occurring on average to only 4\% of questions ($SD = .05$). Furthermore, attorneys very rarely echoed children’s prior responses in their non-declarative questions (invitations 1\%, wh- questions 3\%, yes/no questions 3\%, forced-choice questions 5\%, indirect yes/no questions 3\%, tag questions 2\%, negative term questions 2\%).

As declarative questions were more likely to be echoing children’s statements, we were interested in assessing whether echoed declarative questions might elicit a higher proportion of elaborative responses than non-echoed declarative questions, suggesting that such questioning practices either facilitated children’s narratives or helped to clarify what had been stated. To do so, we conducted a repeated-measures ANOVA on the proportion of responses that were elaborative by whether those questions were echoed (repeated: echoed or not), and who asked the question, with age entered as a between-subjects factor. There were no effects.

More analyses regarding the linguistic form of questions and responses can be found in Stolzenberg and colleagues (2020).

**Discussion of Findings**

We explored attorneys’ questioning of children in CSA cases to examine how attorneys are establishing and attacking child credibility, and whether these questioning practices differ to accommodate the developmental needs of children. In doing so, we assessed how attorneys
approach credibility in three areas (suggestibility and honestly, plausibility, and consistency), as well as the linguistic form of attorneys’ questions and children’s responses.

**Credibility Assessments**

All three areas of credibility were commonly asked about. However, consistency seemed to be embedded in nearly all questions in some capacity, representing 79% of prosecutor questions and 89% of defense questions. This is aligned with previous research suggesting that in courtroom investigations of CSA, attorneys are likely to repeat previously asked questions, asking children to re-respond to information already stated (Andrews et al., 2015). As children have disclosed many times prior to courtroom proceedings (Malloy et al., 2007), it is sensible that attorneys would need to clarify what has been said before, and whether it is consistent or inconsistent with what the child is now reporting. Yet, the proportion with which their questioning focused on prior statements was surprisingly high. In addition, given that consistency questions were so much more likely to occur than suggestibility or plausibility questions, this may mean that consistency issues take longer to resolve when trying to establish and attack children’s credibility. This could possibly be the result of the questioning process itself, as both defense and prosecution attorneys tend to use repetitive and suggestive questioning which generates more contradictions from children (Andrews et al., 2015). Indeed, as evidenced by the qualitative examples included in Table 1, many of the plausibility and consistency questions are highly suggestive in themselves. It is possible that these questions elicit contradictions from children which attorneys then address.

Furthermore, we uncovered differences in attorneys’ practices. Prosecutors devoted more time to establishing plausibility than did the defense, at the expense of addressing suggestibility/honesty and consistency to which the defense gave proportionally more attention.
This is likely because prosecutors are more motivated to establish details that build a strong case for the victim, given that the coherence of their victim’s narrative is central to convincing the jury that abuse is credible (Pennington & Hastie, 1992). These findings suggest prosecutors may be missing an opportunity to establish children as honest and uninfluenced.

Finally, we examined developmental differences in credibility questions. Here, attorney questioning did reflect some level of developmental sensitivity. Prosecutors asked the fewest credibility questions of the youngest children, while defense attorneys did not differ in the proportion of credibility questions by the age of the child. These findings suggest prosecutors are more sensitive to developmental differences.

**Linguistic Form of Questions and Responses**

The minority of questions could be considered open, accounting for only 25% of questioning. Furthermore, from our data, children only elaborate if given the opportunity through open-prompts. While children provided elaborative responses over 90% of the time to open-ended questions, they provided elaborative responses to closed-ended questions 26% of the time and to linguistically suggestive closed-ended questions (tag and negative term) only 13% of the time. As open-ended questions accounted for only a fourth of attorneys’ questions, the majority of children’s responses were unelaborative.

Closed-ended questions accounted for three-out-of-four attorney questions, further justifying assessing how closed-ended questions may differ from one another. In distinguishing among closed-ended questions, we examined declarative and indirect yes/no questions, as well as how children’s responses varied according to these forms of questions. We found that declarative questions were common, representing 21% of overall questions. We also found that indirect yes/no questions were common, describing 11% of all questions asked.
We were the first to examine how children respond to declarative and indirect yes/no questions, in comparison to other closed-ended question types (yes/no and forced-choice). We observed evidence that both of these questions may be more problematic when compared to traditional yes/no or forced-choice questions: children provided the most unelaborative and fewest elaborative responses to declarative questions, and the most non-substantive responses to indirect yes/no questions, when compared to forced-choice and traditional yes/no questions. Providing a non-substantive response likely signifies that children are struggling with the asked question (by either requesting clarification, expressing misunderstanding, or stating a lack of knowledge). Providing unelaborated assents or dissents can also be problematic, as researchers have demonstrated that children are likely to provide incomplete responses to closed-ended questions in laboratory settings where the ground truth is known (Stolzenberg, McWilliams & Lyon, 2017b).

We found echoing, or using the child’s previous words to facilitate asking the next question, to be quite rare in our sample, comprising only 4% of questions on average, and fewer than 10% of declarative questions. As such, declarative questions were nearly always statements that were posed as a question, and not a request for clarification or elaboration.

Given children’s response patterns to both declarative questions and yes/no questions in the current study, children may struggle with them more compared to other forms of closed-ended questions. While there has been prior work on indirect yes/no questions (Evans, Stolzenberg, Lee, & Lyon, 2014), we know of no experimental work assessing how children respond to declarative questions in the laboratory, similar to what one might find in criminal settings. This is a clear avenue for future research – to assess how children respond to declarative
questions, particularly while varying the intent of the speaker (to either clarify a prior statement, encourage elaboration, or potentially mislead).

**Attorney Differences.** While prosecutors did ask more open-ended questions than did the defense, two-thirds of their questions were closed-ended. Prosecutors may shy away from asking open-ended questions because they want to maintain control of their witness (Myers, 1986), and because the legal system places great value on expediency. As has been observed in the laboratory, an effective strategy for attorneys may be the use of pairing closed-ended with open directives afterwards (Stolzenberg et al., 2017a). For example, an attorney who is concerned about maintaining control of their witness, and processing through the child’s narrative efficiently, might begin by narrowing the testimony to the point of interest (e.g. “Did he tell you to keep it a secret?”) and then ask the child to elaborate in their own words by asking a focused, yet still open, prompt (e.g. “What did he say?”). Such practices might facilitate the need of the prosecutor to direct the testimony, while also providing children the best opportunity to provide accurate accounts. We recommend this as an avenue for future research to examine.

**Developmental Sensitivity.** There were few differences in questioning, or response patterns based on the age of the child victim. However, attorneys did vary the proportion with which they asked declarative questions by age, asking the fewest declarative questions to the youngest children. This may signify that on some level, attorneys recognize potential problems with declarative questions, particularly given the rate with which defense attorneys utilized these questions (approximately a third of their total questions). Yet, even when attorneys did use declarative questions to echo children’s previous words, this did not influence elaboration; children did not provide more elaborative responses to echoed declaratives compared to non-echoed declaratives. This may signify that children will respond to declarative statements with
high rates of assenting, regardless of the intent of the question. Our findings suggest that attorneys are asking children questions which may be developmentally inappropriate both linguistically (Brenan & Brennan, 1988; Zajac & Cannan, 2009) and, as our research suggests, in content. This lack of developmental sensitivity alone may be undermining the child's credibility and the accuracy of children’s report.

A clear limitation of the present data is that it does not address the ground truth, or what really occurred, limiting the confidence with which we can assess how questioning practices may undermine children’s ability to provide accurate reports. More laboratory research is needed to validate certain observations in terms of children’s accuracy.

**Implications**

First, there are implications for future research. Researchers should consider interviewing attorneys in similar cases, to assess both how they learn to interview children, and what their aim to do when questioning children in court. Such data could clarify attorney intentions and methods, potentially illuminating discrepancies (between what they believe works well and what actually works). In addition, future research can continue to examine mock jurors’ perceptions of similar cases, to determine how specific factors (such as a child’s recalling inconsistent details) may influence children’s credibility. Finally, researchers can continue to examine children’s responses to various question types in the laboratory, to work alongside practitioners to develop effective questioning techniques that work for the legal system. For example, examining how children respond to declarative questions in the laboratory would help clarify whether these questions are, indeed, problematic for children.

Second, there are practical implications for children’s involvement in legal cases. Ideally, as has been done in other countries, children’s involvement in pre-trial interviews, such as early
recorded forensic interviews, would suffice for their primary involvement in reporting during criminal investigations. However, this is unrealistic given the confrontation clause in the United States Constitution. In addition, when children must testify, it would be ideal to ask them to narrate their abuse using primarily open-ended questions. However, such a recommendation is impractical for legal settings, where expediency is valued and attorneys are focused on controlling the narrative of witnesses, especially given that children have previously disclosed repeatedly, and attorneys know much about the child’s narrative before trial. As such, closed-ended questions, and questions about credibility, are likely to occur with regularity when children testify in the United States.

However, the present study indicates that not all closed-ended questions are created equal; both declarative and indirect yes/no questions produce response patterns more comparable with tag (e.g. “He hit you, right?”) and negative term questions (e.g. “Didn’t he hit you?”). As such, we recommend that attorneys limit the use of these questions, instead asking focused wh-questions (e.g. “Where on your body did he hit you?”) when truly open questions (e.g. “What happened next?”) are inappropriate or inspecific. When attorneys must ask closed-ended questions, we recommend they stick to simple yes/no questions, and pair them with open follow-up questions (e.g. “Did he hit you?” “Yes” “What happened next?”).

In addition, the current findings indicate that issues of consistency, or inconsistency, dominate in courtroom investigations of CSA, whereas issues of suggestive influence, honesty, and plausibility receive significantly less attention. Here, we recommend that attorneys systematically inquire about children’s motives for delaying disclosure, disclosing, and what others have said to children about disclosing, but do so using non-suggestive questioning (e.g. “What did he say about X?”). In addition, when attorneys must elicit descriptions of abuse and
are concerned about plausibility, they should again aim to ask open questions, focused wh-
questions, or if necessary, non-leading yes/no questions. More laboratory work can investigate
the best methods for eliciting particular or specific details from children (e.g. body placement).

Furthermore, according to the kinds of credibility questions observed, children may not
be developmentally mature enough to answer the questions asked of them - a tactic that may in
itself be undermining credibility. Attorneys should aim to ask questions as simply as possible,
avoiding unnecessary words, phrases, and concepts. In addition, children should be encouraged
to express misunderstanding and lack of knowledge, as well as correct attorneys when they
misspeak (although we must acknowledge that children, especially young children, may still be
reluctant, or too cognitively taxed, to do these things in a courtroom context).

Researchers should work alongside prosecuting attorneys to develop effective training
methods, as little is known about how attorneys learn how to question children in these cases.
From our data, there is a clear need to educate attorneys and courts alike about children’s
inconsistencies in relaying their accounts of child sexual abuse – what is expected, what is
reasonable, and what is problematic. Such training must be developed in collaboration with
attorneys who have practical experience of litigation in this field. While the present project is
only the first step in this important line of work, a continuation of this line of research can help to
better establish courtroom techniques that can minimize children’s errors while best facilitating
the necessary involvement of children in legal settings. Doing so can create more intentional
practices when children must be questioned in trials. Furthermore, doing so can contribute to a
greater societal value of achieving a fair trial – one which can allow the jury to hear the child’s
evidence and weigh it appropriately. The ultimate goal should be to give the defendant the
protections to which they are constitutionally entitled while simultaneously protecting child
victims and witnesses; a balance that can be difficult to achieve.

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