

“Is It Hard to Remember?” Attorneys’ Questions About Children’s Memory in Child Sexual Abuse Trials

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The accuracy of children’s memory, and the way they recall their memories, affects the perceived credibility of their reports. Defense attorneys may be motivated to attack the credibility of children’s reports by suggesting their memory of events is flawed, inaccurate, or influenced, while prosecutors may try to enhance children’s credibility by highlighting the accuracy of their reports. In the current study, we explored if, and how, attorneys address memory concerns in child sexual abuse trials. Using a qualitative content analysis of 134 transcripts of children testifying about alleged child sexual abuse, we assessed the frequency and content of attorneys’ questions explicitly asking about memory. The memory questions we identified suggested a range of attorney motives, including to refresh children’s recollections in court, highlight accuracy of (prior) reports, and imply lying or suggestive influence. We also found differences in the types of memory questions prosecutors and defense attorneys asked, supporting that prosecutors and defense attorneys likely have different motives for asking children about memory.

Keywords: children’s memory, child sexual abuse, criminal trial testimonies, attorney questioning

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Over the past century, cognitive and developmental researchers have devoted enormous resources to understanding how children recall, report, and remember experienced events (Gathercole, 1998; Schneider & Ornstein, 2015). Such processes have been the focus of attention in psychological research where decision makers are often concerned about how well children can remember and report experienced victimization (Goodman et al., 2010). In cases where children report alleged child sexual abuse (CSA), their reports are often central to the case because of a variety of factors, including a lack of external or physical evidence beyond the child’s report, few witnesses, and delays between alleged events and disclosure (Berliner & Barbieri, 1984; McElvaney, 2015). As such, jurors must assess the credibility of the child’s report in CSA trials, and a large part of their credibility assessment depends on the child’s memory for what they are reporting. It is probable, therefore, that prosecutors and defense attorneys dedicate considerable time during criminal trial testimony to questioning children about their memory—the strength of it, what they can recall, their certainty, and the source of what they are recalling.

While much is known about how children remember and report events, researchers have yet to examine how attorneys question children about their memory in these criminal cases. We addressed this gap by examining a sample of criminal trial testimonies. Our analyses centered on three research questions:

Research Question 1: How frequently do prosecutors and defense attorneys ask explicitly about children’s memory?

Research Question 2: What do these memory questions “look like” (e.g., the content of memory questions)?

Research Question 3: Do prosecutors and defense attorneys differ in the types of memory questions they pose to children?

Children’s Memory and CSA

Background research on children’s memory and cognition is expansive, from research examining short-term retrieval (Gathercole, 1999), to understanding the formation of autobiographical memory

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formal analysis, methodology, visualization, writing—original draft, and writing—review and editing. Colleen E. Sullivan served in a supporting role for formal analysis, writing—original draft, and writing—review and editing. Rachel Bowman served in a supporting role for formal analysis and writing—review and editing. Stacia N. Stolzenberg served in a supporting role for conceptualization, data curation, methodology, supervision, writing—original draft, and writing—review and editing.

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(Fivush, 2011), to assessing the development of metamemory (Schneider, 2015). While these bodies of work are informative and foundational for understanding how children remember and report experienced events, a specific line of cognitive developmental research has focused exclusively on how children remember and report alleged maltreatment. Here, researchers study how victimization is unique in that recalling such events is distinct from recalling other kinds of autobiographical memories.

First, in studies that compare maltreated to nonmaltreated samples, researchers find that children who are maltreated tend to show cognitive, socioemotional, and behavioral deficits when compared to nonmaltreated samples (Cowell et al., 2015; Jaffee & Maikovich-Fong, 2011). While this often looks like delays in development more broadly, for cognitive development, this can look like deficits in cognitive processes affecting both short- and long-term retrieval, as well as executive functioning (Cowell et al., 2015; Goodman et al., 2010). Practically speaking, this might mean that older maltreated children look younger than nonmaltreated, same-aged peers in domains such as verbal ability and executive functioning. In the context of criminal trials, it might mean that child witnesses will struggle to respond to questioning and recall their prior victimization, and it is unclear whether attorneys are sensitive to these factors in their questioning.

Second, children who are testifying in court are often experiencing stress (Goodman et al., 1992; Goodman-Delahunty et al., 2017; Zajac et al., 2012). Researchers studying cognitive development find clear negative effects of high stress on memory quality (Howe et al., 2008; Quas & Fivush, 2009). In CSA trials, children must testify about alleged victimization—autobiographical memories that likely have a negative valence. While children experience sexual abuse differently depending on the extent or the type of penetration, the relationship to the perpetrator, and the duration/repetition of abuse, abuse memories are potentially traumatic, and children may struggle during encoding and retrieval of the abuse event. Furthermore, the courtroom environment itself is stressful, placing additional demands on children's retrieval abilities (Goodman et al., 1991; Nathanson & Saywitz, 2003; Zajac et al., 2012). Therefore, as attorneys question children about their alleged victimization in court, children may be challenged to recall specific details, and attorneys may then ask them about the quality of their memory.

Finally, as researchers find language delays in children who are maltreated, children testifying may misunderstand or struggle to adequately answer questions about their memories. Maltreated children tend to have delays in language production, comprehension, and increased suggestibility (Baugerud et al., 2016; Lum et al., 2015; Noll et al., 2010), meaning they might perform worse than nonmaltreated children in response to complicated questioning about autobiographical experiences (Goodman et al., 2010; Saywitz et al., 1991). This is particularly relevant in the context of criminal trials, where attorneys are attuned to potential influences on children's reports and tend to question children about their prior conversations about the abuse event (St. George et al., 2022; Stolzenberg & Lyon, 2014). As such, child witnesses who testify about alleged abuse are likely to receive many questions about their allegations as well as the process of making those allegations (e.g., disclosures), and they may struggle to understand what is being asked of them and how to best respond. This, compounded with their cognitive deficits and heightened vulnerability to the courtroom questions themselves, may cause children difficulty when they are questioned about their memories of abuse and prior disclosures.

The potential for misunderstanding may be further exacerbated by the linguistic structure of attorneys' questions. Attorneys may presume a higher level of cognitive ability than children have, particularly maltreated children, resulting in questioning that results in unelaborated, inaccurate, or nonsensical responses (Stolzenberg & Lyon, 2014). Sullivan et al. (2022), for example, documented sources of misunderstanding in testimonies of children describing the abuse interaction. Among other issues, children commonly misinterpreted the level of detail attorneys tried to solicit. Similarly, research indicates that adults may understand that a yes or no question is intended to solicit a detailed response, whereas children tend to simply respond with "yes" or "no" (Stolzenberg et al., 2017, 2020). Furthermore, and of particular import to our study, when asked a double-barreled question, children respond to the first part. So, if a child is asked "Do you remember how old you were when the abuse started?" they may respond "yes" or "no" to the "Do you remember" part of the question, leaving the substantive part about age unanswered (Evans et al., 2017; Stolzenberg et al., 2020). Attorneys may respond to apparent miscommunications or unelaborated responses by asking children more directly about their memory, including the source, strength, and quality of memories.

One way to think about this is by understanding the cognitive concept of metamemory, which is one's ability to have knowledge and control of one's memory (Flavell, 1971; Flavell & Wellman, 1975). In some ways, one might argue that all of children's testimony is a recollection of their memory; nearly all questions focus on the content of what children can recall. However, our study was not interested in all questions but instead questions that explicitly asked about memory-related concerns. In many of the questions of interest in the current study, attorneys not only ask children to report what they remember but also to reflect on the source, strength, or quality of their recalled memories. This is in essence, metamemory. While the current study was not exclusive to metamemory questions—we explored the full range of memory-related concerns raised in attorney questioning—it is important to know that there is little research on metamemory in the context of child interviewing.

In addition, little is known about how attorneys question child witnesses about their memory in CSA trial testimony. Even so, we anticipated that attorneys would be very likely to ask children about different factors related to their memory (e.g., strength and quality) and would ask explicitly about it in ways that might reference prior consistent or inconsistent statements made in earlier interviews. For example, attorneys are allowed to refresh the recollection of witnesses during direct- or cross-examination by reminding them of prior statements (e.g., the attorney reads the prior statement allowed, entering it into evidence; Saltzburg, 2010). We also anticipated that prosecutors and defense attorneys' varied goals would manifest in raising different memory-related concerns during different phases of testimony. For example, perhaps questioning related to metamemory emerges most frequently on redirect as prosecutors attempt to assess the overall quality of children's memories after the content of those memories was established and attacked in direct and cross-examinations, respectively.

Attorney Questioning Practices in Criminal Cases of Alleged CSA

When looking at what attorneys tend to focus their questioning on in criminal trials of alleged sexual abuse, children tend to receive many questions about the plausibility of their reports, the consistency of their reports, and whether their reports have been

suggestively influenced (Denne et al., 2020; St. George et al., 2022; St. George, Denne, & Stolzenberg, 2024). While not explicitly examined until now, underlying all of these areas is likely how children remember, and talk about remembering, what they are reporting. For example, in one study examining how attorneys question children about suggestive influence, researchers found that the average child was asked about five prior disclosure recipients (Stolzenberg & Lyon, 2014), and that many of these questions focused on source and destination memory, including who said what to whom and under what conditions. Attorneys did so as a method to establish or undermine the truthfulness of children's reports. Yet, this study did not look broadly at all the kinds of memory questions that are asked of children testifying.

Both prosecution and defense may anticipate memory problems with children and anticipate that weaker, more inconsistent memory will raise credibility concerns among jurors. On the one hand, jurors may expect that children's recollection of traumatic events will be detailed and consistent over time (Cashmore & Trimboli, 2006; Goodman-Delahunty et al., 2017). On the other hand, they may be suspicious that children's reports are the result of false or repressed memories (Jones et al., 2021). These misunderstandings may be exacerbated by the counterintuitive characteristics of CSA, disclosure, and trial dynamics. For example, if jurors expect that children report abuse immediately, then they may be suspicious of delayed disclosures (Cromer & Goldsmith, 2010; Denne et al., 2023; Miller et al., 2022; Stettler, 2023; St. George et al., 2020). Anticipating these concerns, prosecutors may ask children questions to clarify which details they do or do not remember and why, as well as why their reports are inconsistent. Prosecutors also may ask questions that allow children to vouch for their memory quality at different disclosure points (e.g., "Was your memory better when you talked to police?"). Defense attorneys, by contrast, may ask about memory to insinuate larger credibility issues (e.g., suggestive influence), such as by emphasizing that the child does not remember the abuse at all or highlighting inconsistencies in their reports over time. Defense attorneys may also ask about influences on children's memory, or question how they can remember, to suggest the child was coached (St. George et al., 2022).

Current Study

Researchers have examined how children recall experienced events, as well as the uniqueness of recalling maltreatment. Researchers also have examined how children are questioned in court during testimony, as well as jury expectations and perceptions of children's reports. However, researchers have yet to look at how attorneys question children about their memories at trial as a specific focus of examination. In the current study, we wanted to know if attorneys address memory concerns in CSA trials, what these questions look like, and what kinds of memory-related concerns are most frequently raised. We were particularly interested in whether prosecutors and defense attorneys would ask about different topics. We also explored if they questioned children about different topics during different phases of testimony (e.g., direct vs. redirect examination). We hypothesized that questions raising concerns about memory would be common. We also expected differences in what prosecutors and defense attorneys would ask about, but we did not make a priori predictions about these content differences; we needed to assess the kinds of memory-related concerns attorneys raised before we could speculate about which topics attorneys would focus on.

This study is important because concerns about memory accuracy could influence the overall assessments of children's credibility, thereby influencing jury verdicts. Whether or not attorneys address memory concerns, and how, is important for understanding how memory concerns influence outcomes in real CSA trials. It is also important for developing and implementing case processing practices (e.g., number of pretrial interviews with the child and with whom, recording of interviews) and courtroom procedures (e.g., admissibility of recorded interviews, permissible questioning topics; and duration of testimony) that promote memory accuracy and minimize concerns about suggestive influence and false reporting.

Method

Transparency and Openness

The collection of data used in the current study was approved by Arizona State University's Institutional Review Board. This study's design was not preregistered. Data used for quantitative analyses and the associated do file have been made publicly available at the Open Science Framework and can be accessed as the additional online materials (<https://osf.io/cqgse/>; St. George, Sullivan, & Stolzenberg, 2024). Complete transcripts have not been shared, given their sensitive nature. We share our detailed coding guide and supplemental analyses examining the distribution of questioning categories over phases of testimony (e.g., direct and cross).

The Sample

In collaboration with the Maricopa County Attorney's Office, we obtained a sample of 398 victims represented across 252 cases of CSA occurring between January 2005 and December 2015 in Maricopa County. The County Attorney's Office provided a list of all eligible cases. Cases were deemed 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 sexual abuse (A.R.S.13-1404). We contacted and paid court reporters to share transcripts of cases; 73 court reporters were contacted and 47 responded (64% response rate). We received 214 complete victim testimonies across 142 cases (some cases included multiple victims); the remaining court reporters were nonresponsive. Of these 214 testimonies, 134 were minors at testimony (across 101 cases; $M_{\text{victim per case}} = 1.33$, $SD_{\text{victim per case}} = 0.65$), whereas the remaining transcripts involved adults testifying about alleged victimization during their childhood.

For the purposes of the present investigation, we examined the 134 testimonies of children alleging CSA: All the children in the sample were the alleged victim(s) in the trials. The children ranged in age from 5 to 17 years old ($M = 12.48$, $SD = 3.34$) and only 10% of our sample involved male victims.¹ About a third of the children

¹ The prevalence of CSA is hard to measure due to under reporting, particularly among male victims. The Rape Abuse and Incest National Network (2024), which collects and synthesizes research from multiple reputable sources, such as the NCVS, reports that, in the United States, one in nine girls and one in 20 boys under the age of 18 experience sexual abuse or assault. Using data from the National Incidence-Based Reporting System (NIBRS) from 1991 to 1996, Snyder (2000) reported that 18% of juvenile sexual assault victims were male, and that the proportion of male victims increases as victim age decreased. Using data from the NIBRS from 2022 and the Law Enforcement Agency Reported Crime Analysis Tool (2022), we were able to calculate that 14% of sex crimes against victims aged 17 and under involved males.

were White; 26% were Latinx/Hispanic; 15% were Black, Asian, or Native; and 25% were of unknown race or ethnicity. 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, and neighbors) 29% of the time, and a stranger 5% of the time. Forty-five percent of the defendants were White; 40% were Latinx/Hispanic; 13% were Black, Asian, or Native; and 2% were of unknown race or ethnicity. 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 (e.g., fondling and exhibitionism). Fifty-five percent of children alleged more than one incident of abuse. Ninety percent of cases resulted in a conviction of at least one charge.²

In the current study, we were interested in prosecutors' and defense attorneys' questions about children's memory, so we excluded the testimonies of five children who were cross-examined by the defendant. We selected the line of questioning as the best unit of analysis, rather than the question-answer pair because the memory-related concerns attorneys raised were not always clear from a single question-answer pair. Assessing lines of questioning allowed us to examine the context of attorneys' questions, making them easier to understand and code. Two coders organized the remaining 129 testimonies into lines of questioning. We defined a line of questioning as a sequence of question-answer pairs that surround a specific topic or develop a particular line of reasoning or argument.

For example, first line of questioning:

- Q: Now when your dad was a good dad, did you used to go visit with him? Did you go see him?
 A: Yes.
 Q: And how many times did you see him when he was a good dad?
 A: Seven.

Second line of questioning:

- Q: Seven times? And was your sister with you, too, when he was a good dad?
 A: Yes.

Two coders independently read each transcript to identify lines of questioning; then they discussed and resolved discrepancies. They identified 18,146 unique lines of questioning asked across the 129 testimonies. Children were asked between eight and 480 lines of questioning, with an average of 141 ($SD = 89$) lines of questioning per child. Prosecutors asked 65% of all lines of questioning ($n = 11,798$; $M = 91$, $SD = 62$), while defense attorneys asked the remaining 35% ($n = 6,348$; $M = 49$, $SD = 38$).³ Eighty-eight percent ($n = 10,331$) of prosecutors' questioning was asked during direct examination, while 12% ($n = 1,467$) was asked on redirect. Ninety-six percent ($n = 6,076$) of defense questioning was asked during cross-examination, with the remaining 4% ($n = 272$) asked on recross.

Qualitative Content Analysis

Next, two coders independently examined each line of questioning for references to memory. Coding occurred in stages. First, the primary coder examined a small subset of transcripts (~10) to identify

questioning that raised a memory-related concern. Possible examples were collected and examined to determine preliminary inclusion and exclusion criteria. Specifically, we wanted to include questions about the child's memory or cognitive capacity for remembering (e.g., meta-memory), like their ability to remember over time. We also wanted to include questions about what the child did and did not remember, what they forgot, and influences on memories, including refreshing recollections in court. At this stage, two members of the study team discussed the examples and established inclusion and exclusion rules for identifying memory-related questioning (e.g., exclude if reference to memory is only a "Do you remember..." lead in phrase; include if asks child to review a transcript; see the [online supplemental materials](#) for specific inclusion and exclusion criteria).

Second, one coder used word search to flag every line of questioning related to memory, remembering, and refreshing memory. Search terms included: Memory, Remember, Recall, Recollect, Remind, Refresh, Go over, Practice, Review, Memorize, Rehearse, Forget, Forgot, Know, Knew, Everything, Hazy, Clear, Fuzzy, Foggy, Exact, Specific, Read, Show you, Look over, Look at, Examine, Exhibit, Interview, Transcript, Video, Photo, Picture, and Tape. These terms were identified in the first stage as potentially related to memory. This stage was intentionally overly inclusive and flagged many more lines of questioning than were retained in the final sample.

Third, two coders independently examined each of the flagged lines of questioning to determine if it actually raised a memory-related concern, according to inclusion and exclusion criteria. We excluded, for example, lines of questioning that were flagged for containing the phrase "Do you remember" without any other reference to memory, remembering, forgetting, or influence. We included, however, lines of questioning with the phrase "you don't remember" as this phrase insinuates forgetting. Discrepancies were identified and discussed, and the coding guide was refined until coders reliably ($K > .80$) identified 1,383 lines of questioning that raised a memory-related concern. Moving forward, we refer to these lines of questioning as "memory lines of questioning" or "memory questions."⁴

Fourth, the primary coder reviewed the memory lines of questioning to identify themes using an inductive approach. They identified

² We expect that our sample overrepresented the conviction rate, as the court reporters would already have had the transcript prepared for the appeal process.

³ The data used in this study were collected by Stacia Stolzenberg and her research lab at Arizona State University in order to assess the relationship between the linguistic structure of attorneys' questions and children's responsiveness. The organization of question-answer pairs into lines of questioning was conducted by several members of the research lab interested in examining the content of attorneys' questions, including questioning related to plausibility and suggestive influences. Memory was not one of the topics of interest among the lines of questioning coders.

⁴ To be included in the sample, the line of questioning had to reference memory in some way specified in the inclusion/exclusion rules. However, the actual topic of the line of questioning did not have to be about memory. For example, questions like "you don't remember telling him that?" or "you don't remember what hand he used?" would be flagged and coded as forgetting, even though the full line of questioning might include several question answer pairs focused on abuse mechanics or what the child disclosed. As another example, an attorney may have asked a series of questions about the location of abuse, to which the child may have responded, "I don't know." This line of questioning about location would be flagged as memory questioning if one of the questions in the sequence asked about refreshing (e.g., "Would it help you remember to see a picture?") or memory over time (e.g., "Is it kinda hard to remember where everything happened?").

five primary themes and several subthemes: forgetting; influences on the child's memory including refreshing in court; memory quality; how the child could remember; and memory degradation. See Table 1 for definitions and examples of themes and subthemes. The primary coder then developed a comprehensive coding guide with detailed descriptions and examples of each theme (see the online supplemental materials).

Fifth, the primary coder trained a second coder to categorize memory lines of questioning using the coding guide. The coders then independently coded all memory lines of questioning, evaluating reliability periodically. Throughout this process, the coders met several times to discuss discrepancies and refine the coding guide until they reliably coded all categories ($K > .80$). Once reliable, the coders met to discuss remaining discrepancies and mutually agreed on a final code.

Analyses and Presentation of Findings

Below, we present the findings from our content analysis. First, we summarize the ways attorneys asked about memory, listing the themes identified and their frequency in the sample. Second, in order of most common to least common, we present examples of memory questioning, qualitatively describing each theme and subtheme and highlighting how these questions may establish or attack credibility. Third, we explored if prosecutors and defense attorneys used memory questioning differently—if they asked different types of memory questions—and if memory questioning came up with regularity in different parts of testimony (e.g., direct examination and recross examination). Specifically, we used two-tailed difference of means t tests to assess differences in the proportion of different themes across attorney type (Table 2); all tests for significance were based on a critical value of α at .05. Finally, the proportion of memory questions across phases of testimony are described, and we described additional examples of memory questioning to highlight attorney differences.

Findings

Overall, 7.7% ($n = 1,383$) of all attorneys' lines of questioning referred to memory, and attorneys asked at least one memory line of questioning to 95% ($n = 122$) of children testifying ($M = 11$, $SD = 10$). See Table 1 for questioning categories, definitions and examples, and frequencies in the full sample. Questions about forgetting ($n = 503$) and influences on memories ($n = 494$) were the most common, each representing 36% of the memory lines of questioning identified. Additionally, 17% ($n = 238$) of memory lines of questioning asked about the quality of children's memories, 11% ($n = 155$) asked how or why the child was able to remember, 11% ($n = 147$) asked about memory degradation, and 8% ($n = 105$) asked other miscellaneous lines of questioning about memory, such as if the child disliked remembering. Defense attorneys dedicated more of their questioning to memory than prosecutors ($n_{\text{defense}} = 549$, 9.0% vs. $n_{\text{prosecutor}} = 834$, 7.0%), and this difference was statistically significant, $t(128) = -2.07$, 95% confidence interval (CI) $[-3.98, -0.09]$, $p = .040$, $d = -.25$, 95% CI $[-0.50, -0.01]$. We also found statistically significant differences across attorney type in the proportion of questioning about several memory categories (see Table 2). Furthermore, while prosecutors posed most (78%, $n = 648$) of their memory questioning on direct

examination, they posed 22% ($n = 186$) on redirect compared to just 12% of all their questioning. Meanwhile, the proportion of defense attorneys' memory questioning posed on cross-examination ($n = 531$, 97%) and recross examination ($n = 18$, 3%) was more similar to the distribution of all their questions (see Supplemental Table in the online supplemental materials). Attorneys also differed somewhat in how they questioned children about different memory-related concerns, and there was some evidence that they raised different memory-related concerns during different phases of testimony. These findings suggest some variation in how attorneys use questions about memory to establish or attack credibility. We describe these findings below.

Content of Memory Questioning

Forgetting

Lines of questioning about forgetting represented 36% of all memory questioning and attorneys asked 83% of children ($n = 108$) at least one line of questioning related to forgetting. These "forgot" lines of questioning asked if, or highlighted that, the child did not know, did not remember, or forgot some aspect of the abuse incident, disclosure process, or prior statements. For example, in the following line of questioning, the prosecutor asked a 15-year-old girl alleging abuse by her grandfather about the day she reported the incident to the police:

Attorney: The day that you called the police, do you remember if your grandfather called you later that day?
 Child: No.
 Attorney: You don't remember or you don't know?
 Child: He didn't call that day.
 Attorney: When's the last time you talked to your grandfather?
 Child: That day like when we were in [city] and when he grabbed me at my house.
 Attorney: Do you remember your grandfather calling you and your mom to apologize? [Objection/Overruled].
 Child: Yes.
 Attorney: Tell me about that?
 Child: Well, we were with the detective and him, I don't know what they said. That they said we had to talk to him. My mom talked to him. Then he talked to me. He said sorry.

In the above line of questioning, the prosecutor explicitly asked if the child forgot about a phone call with the defendant, but was able to establish, through questioning, that the call did occur.

Many (26%, $n = 129$) "forgot" lines of questioning were neutral or benign, such as echoing the child's statement that they did not remember (e.g., Prosecutor to 7-year-old girl: "Q: Can you tell me about a time you remember going over to your uncle's house? A: I don't remember. Q: You don't remember?"). The remaining 74% ($n = 376$) of "forgot" lines of questioning were potentially more damaging, though interpreting the attorneys' intentions without hearing their tone of voice or witnessing their demeanor is challenging. Some lines of questioning subtly, or perhaps inadvertently, asked about the child forgetting (e.g., Prosecutor to 7-year-old girl: "Q: Do you remember, were you at your house or your [Tia's] house or someplace else? A: No. Q: You don't remember?").

Table 1*Definitions, Examples, and Frequencies of Questioning Categories*

Questioning category	Definition (example)	All lines of questioning, <i>n</i> (%)	Children, <i>n</i> (%)	Lines of questioning asked per child, <i>M</i> (<i>SD</i>)
Forgot	Questioning states or suggests the child forgot, does not remember, or can't remember what happened. Includes questions that ask why the child forgot, does not remember, or can't remember. It includes echoes of child's responses saying they don't remember, can't remember, or don't know. ("Q: Now we talked a little bit about when it happened. You said that it happened before the sleep over. Did you tell the detective it was like one or two months before the sleep over? A: I don't remember. Q: So sitting here today you don't remember or you don't remember what you told the detective?")	503 (2.8)	108 (83.7)	3.9 (4.3)
Forgot—explicit	Questioning in which the attorney explicitly asks if the child forgot, does not remember, cannot remember, or does not know. Relevant phrase is not an echo or near echo of child's response but elicits new information related to forgetting. ("Q: You don't know anymore? A: No. Q: Do you forget? A: (Nodded). Q: Did it happen a long time ago? A: Yeah. Q: And so you don't remember? A: No.")	376 (2.1)	99 (76.7)	2.9 (3.2)
Forgot—neutral	Forgot line of questioning in which attorney uses the phrase forgot, don't remember, can't remember, or don't know, but in a neutral way, such as an echo (exact repeat of the child's response), near echo (close but not exact match), or statement before moving on to a new question. The only reference to forgetting in the line of questioning is the neutral echo, near echo, or statement. ("Q: Okay. How long was your nana home from work when Amber told her? A: I don't remember. Q: You don't remember. But was it after your nana came home from work?")	129 (0.7)	61 (47.3)	1.0 (1.7)
Influences on memory	Questions about people, things, or experiences that may have influenced the child's memory of the abuse or memory for prior statements, including people influencing the child, practicing or reviewing testimony, refreshing the child's memory in court; sources of the child's memories; and other factors that may have affected what the child remembers or their ability to remember. ("Q: Now, Tori, what I'm gonna do is put exhibit 7 up on the Elmo here. Can you see that? A: Yes. Q: I know it's far away. Where was this picture taken? A: In the two-story house. Q: And which room was that picture taken in? A: in the kitchen. Q: Now, before we broke yesterday—before we broke yesterday, you described the clothing that you were wearing on that particular day. A: Yes. Q: Is this the clothing that you described? A: Yes.")	494 (2.7)	81 (62.8)	3.8 (6.0)
Refreshing	Questioning about refreshing the child's memory in court, such as by reviewing a transcript or recording of the child's prior statements or some other type of evidence presented in the case. Includes actively refreshing the child's memory, and questions about having been refreshed. ("Q: Did reading the transcript help refresh your memory about other things that happened during that first incident?")	390 (2.1)	65 (50.4)	3.0 (5.6)
Transcript	Refreshing using transcript of prior statements, such as an interview with the police. ("Q: Did reading a transcript of your interview help you remember this incident?")	127 (0.7)	31 (24.0)	1.0 (2.6)
Video/audio	Refreshing using audio or video recording of prior statements, such as interview with the police. ("Q: So, he [the prosecutor] was using that CD to refresh your recollection of specific facts that you couldn't remember yesterday, right?")	38 (0.2)	16 (12.4)	0.3 (1.1)
Other evidence	Refreshing using evidence other than the child's prior statements, such as a photograph of the abuse location, a drawing made during disclosure, or other physical evidence, like clothing. ("Q: Do you remember where in the closet you found that camera? A: I don't remember. Q: If I were to show you, if you were to see a picture of the closet, would that refresh your recollection? A: Yes. Q: I'm showing the witness what has been marked as state's exhibit 1. Do you recognize this area? A: Yes.")	226 (1.2)	42 (32.6)	1.8 (4.2)
Influences of people	Questioning about other people helping the child remember what happened or to remember prior statements. Does not include questions about a transcript or video "helping" the child remember or "refreshing" their memory. ("Q: And then you talked to your mom about remembering certain things? A: Yes. Q: Did your mom help you remember certain things? A: Yeah. Q: What did she help you remember?")	29 (0.2)	19 (14.7)	0.2 (0.6)

(table continues)

Table 1 (continued)

Questioning category	Definition (example)	All lines of questioning, <i>n</i> (%)	Children, <i>n</i> (%)	Lines of questioning asked per child, <i>M</i> (<i>SD</i>)
Sources of memory	Questioning about the source of the child's memory; questioning that implies the child only remembers the abuse or what they said previously because they watched a video or were told what happened. Includes questioning about "refreshing" the child's memory or others "helping the child remember" when the question suggests the child only remembers because of the video/transcript/what they were told, not the original event or what they said previously. ("Q: And do you remember talking to this lady about Defendant? A: Yes. Q: Now, do you remember because you really remember or do you remember because you watched the video last week?")	19 (0.1)	13 (10.1)	0.1 (0.5)
Other influences	Other influences on what or how the child remembers, other than people influencing their memories, sources of memories, or refreshing in court. Includes refreshing not in court/before trial began, overhearing conversations, etc. ("Q: Have you gone over any documents at all before today? I know I asked you earlier about the police reports. I think you told me you have never looked at any police reports; correct? A: Yes. Q: Did you ever look at it before today? Did you ever look at the exhibit that was handed to you the transcript of that call that you had with your uncle? A: Yes. Q: When did you look at that? A: Yesterday. Q: Any time before that? A: No.")	64 (0.4)	36 (27.9)	0.5 (1.0)
Quality	Questioning about the clarity, completeness, and accuracy of the child's memories, including remembering some details better than others. ("Q: Now I want to talk about this rope. You got interviewed by Detective Burch several times, right, three, four times? A: Yes. A: Now, when you were talking with him, you were trying to be helpful? A: Yes. Q: Right? You were trying to do your best? A: Yes. Q: Okay. Trying to give as much detail as possible? A: Yes.")	238 (1.3)	88 (68.2)	1.8 (2.0)
Clarity	Questioning assessing the accuracy, clarity, specificity, or exactness of the child's memory; questioning describing the child's memory being "clear," "hazy," or "fuzzy"; questioning assessing if the child's memory is clear, or unclear; questioning assessing how well the child remembers, or how clearly they remember. Does not include questioning comparing the quality or clarity of memory for different details or specifics (see "Memory for details"). ("Q: Your memory about other things that happened back in 2008, 2009 is still pretty hazy, right?")	127 (0.7)	61 (47.3)	1.0 (1.5)
Completeness	Questioning assessing the completeness of the child's memory of events, description of events, or disclosure; if child disclosed "everything" they remembered; questioning meant to assess if child's description of what happened is complete; if they describe all the details that they remember. ("Q: Back when you talked to Detective Sanchez, could you remember everything that happened pretty well?")	43 (0.2)	31 (24.0)	0.3 (0.7)
Best memory	Questioning assessing if what the child is testifying about is based on the "best" or most accurate memory. ("Q: So do you think that you told us then to the best of your memory today? Q: Have you tried to remember as best you can?")	39 (0.2)	27 (20.9)	0.3 (0.6)
Memory for details	Questioning that assesses the level of detail that the child remembers or compares the child's memory for different details or different incidents. ("Q: So you say pretty much the big issues you remember fine? A: Yeah. Q: But other issues, kind of hazy? A: Yeah.")	31 (0.2)	22 (17.1)	0.2 (0.6)
How/why can remember	Questioning about how or why the child remembers or how/why the child is able to remember. ("Q: Can you specifically remember the defendant punishing your sister more than you? A: Yes. Q: How can you remember that?")	155 (0.9)	66 (51.2)	1.2 (1.9)
Degradation	Questioning assessing quality of or changes in memory over time, including difficulty remembering or memory being better or worse at different points in time. ("Q: Now, you would agree with me—well, let me ask you this: do you think your memory gets better with time or no? A: No. Q: Is it fair to say that back when this happened in January of 2015 your memory of things were better than they are now? A: Yes.")	147 (0.8)	78 (60.5)	1.1 (1.3)
Memory over time	Questioning assessing the child's ability to remember at different points in time, including comparisons between child's memory now (at trial) versus at disclosure (e.g., police interview) or if they remember the details better "today" than a few years ago. ("Q: And was your memory better when you talked to that lady than it is today?")	99 (0.5)	66 (51.2)	0.8 (1.0)

(table continues)

Table 1 (continued)

Questioning category	Definition (example)	All lines of questioning, <i>n</i> (%)	Children, <i>n</i> (%)	Lines of questioning asked per child, <i>M</i> (<i>SD</i>)
Difficulty	Questioning about difficulty remembering in general or difficulty remembering specific details. Questioning may include phrases with "hard," "difficulty," "struggle," and "challenging" when referring to remembering. Does not include questions comparing the child's ability to remember certain details to their memory for other details, or remembering some things "better" than others (see "Memory for Details"). ("Q: And would you say that it's hard—is it hard for you to keep track of all the dates and days when things happened?")	50 (0.3)	34 (26.4)	0.4 (0.8)
Miscellaneous memory questioning	Other memory related questioning, such as the child not wanting to remember or wanting to forget; if accuracy of memory is related to trauma or severity of abuse; general memory ability; and others	105 (0.6)	57 (44.2)	0.8 (1.5)
Do not like remembering	Questioning asking if, or suggesting that, the child does not like to remember, does not want to remember, or has tried to forget what happened. Includes questioning asking why the child does not like to remember, does not want to remember, or tries to forget. ("Q: And have you tried forgetting what's gone on?")	22 (0.1)	17 (13.2)	0.2 (0.5)
General memory ability	Questioning asking about the child's memory in general or ability to remember in general rather than memory related to case details. ("Q: You've got a pretty decent memory, correct?")	11 (0.1)	7 (5.4)	0.1 (0.4)
Accuracy—trauma	Questioning relates the child's ability to remember, or the accuracy of their memories, to the severity or harmfulness of abuse or trauma A: ("Q: You would remember something like that if it had been inappropriate, am I correct?")	9 (0.0)	9 (7.0)	0.1 (0.3)
Other miscellaneous memory questioning	Miscellaneous questions about memory not otherwise categorized. Lines of questioning that include statements similar to question categories. ("Q: All right. Now, you know why it's important that you're getting asked questions today; don't you? A: Yeah. Q: Yeah. Because we're like doing this trial, and when we're doing the trial, we kind of—we kind of need you to remember things as best you can. Okay? A: okay. Q: All right. And the good thing is if you do remember, that's okay, and if you don't remember, that's okay too. There's only answering the questions. If I say anything that you don't understand or that you don't like or you think I'm being mean, just let me know. Okay? I don't want to be mean. If I'm mean to you, they're not going to like me, so I want them to like me. But I do have to ask you questions about Alejandro and the things that we're here talking about. Okay? A: Okay. Q: All right. I know it's hard. It's not the sort of thing you wake up in the morning and say, I want to get in front of a whole bunch of people I don't know and tell them about some things that I think happened. I understand that. Okay? A: Okay.")	68 (0.4)	42 (32.6)	0.5 (1.1)
All memory questioning	Any line of questioning about memory, remembering, forgetting, and influence on memories. Search terms included memory-related words (Memory, Remember, Recall, Recollect, Remind, Refresh, Go over, Practice, Review, Memorize, Rehearse, Forget, Forgot, Know, Knew, Everything, Hazy, Clear, Fuzzy, Foggy, Read, Show you, Look over, Look at, Examine, Exhibit, Interview, Transcript, Video, Photo, Picture, and Tape); flagged lines were checked to confirm question was about memory.	1,383 (7.6)	122 (94.6)	10.7 (10.0)

Note. Q = question; A = answer.

Other lines of questioning used "you don't remember" or similar phrases in questions aimed at clarification, especially when children failed to offer any information.

For example, prosecutor to 7-year-old girl:

Attorney: ... Now, do you remember talking to a lady that talked to you about what happened to you and you were on videotape?

Child: No.

Attorney: ... Do you remember going to the police?

Child: No.

Attorney: No. You don't remember talking to a lady whose name was [Name]?

Similarly, attorneys used "forgot" lines of questioning to clarify what the child forgot (e.g., prosecutor to 6-year-old girl: "Q: ... When you told them the things that happened—well what don't you remember?") or what the child meant by a "no" or "I don't remember" response (e.g., defense to 7-year-old girl: "Q: Do you remember whether or not you told [Detective] that your sister had talked to you about bad things? A: No. Q: No, you don't remember, or no, your sister never said that?").⁵

Other lines of questioning, however, more explicitly asked about or stated that the child forgot some aspect of the abuse incident or prior

⁵ The examples in the paragraph were asked to five different children.

Table 2*Mean Proportions of Lines of Questioning Asked by Attorneys and Tests for Difference Across Attorney Type*

Questioning category	Prosecutor		Defense		Difference of means two-tailed <i>t</i> tests across attorney type (<i>df</i> = 128)				All questioning (both attorneys)	
	<i>N</i>	<i>M</i> , % (<i>SD</i>)	<i>N</i>	<i>M</i> , % (<i>SD</i>)	<i>M</i> _{difference} (<i>SE</i>)	95% CI [lower, upper]	<i>t</i>	<i>p</i>	<i>N</i>	<i>M</i> , % (<i>SD</i>)
Forgot	232	2.09 (2.73)	271	4.69 (7.39)	-2.60 (0.66)	[-3.91, -1.30]	-3.94	.000	503	2.92 (2.86)
Forgot—explicit	169	1.55 (2.32)	207	3.74 (6.80)	-2.20 (0.60)	[-3.37, -1.02]	-3.69	.000	376	2.21 (2.45)
Forgot—neutral	65	0.56 (1.19)	64	0.95 (2.32)	-0.39 (0.22)	[-0.83, 0.05]	-1.77	.080	129	0.72 (1.13)
Influences on memory	286	2.30 (3.55)	208	3.35 (7.06)	-1.05 (0.67)	[-2.38, 0.27]	-1.57	.118	494	2.56 (3.38)
Refreshing	247	1.77 (2.98)	143	2.27 (6.42)	-0.50 (0.60)	[-1.68, 0.69]	-0.83	.408	390	1.84 (2.75)
Transcript	66	0.49 (1.57)	61	1.39 (6.01)	-0.89 (0.53)	[-1.94, 0.15]	-1.69	.094	127	0.67 (1.84)
Video/audio	18	0.24 (1.10)	20	0.42 (2.02)	-0.18 (0.16)	[-0.49, 0.13]	-1.15	.250	38	0.30 (1.18)
Other evidence	164	1.06 (2.44)	62	0.47 (1.39)	0.59 (0.20)	[0.19, 1.00]	2.89	.005	226	0.87 (1.87)
Influences of people	4	0.04 (0.20)	25	0.46 (1.81)	-0.42 (0.16)	[-0.74, -0.11]	-2.63	.010	29	0.17 (0.54)
Sources of memory	10	0.07 (0.31)	9	0.16 (0.82)	-0.10 (0.08)	[-0.25, 0.06]	-1.22	.223	19	0.10 (0.36)
Other influences	29	0.46 (1.88)	351	0.52 (1.46)	-0.06 (0.17)	[-0.41, 0.28]	-0.37	.715	64	0.49 (1.57)
Quality	169	1.50 (1.92)	69	1.37 (3.99)	0.13 (0.37)	[-0.60, 0.86]	0.35	.724	238	1.39 (1.65)
Clarity	82	0.66 (1.29)	45	0.79 (2.21)	-0.12 (0.20)	[-0.53, 0.28]	-0.61	.543	127	0.69 (1.11)
Completeness	35	0.34 (0.84)	8	0.15 (0.72)	0.19 (0.10)	[0.00, 0.38]	1.97	.051	43	0.28 (0.64)
Best memory	34	0.36 (0.94)	5	0.17 (1.61)	0.18 (0.17)	[-0.15, 0.51]	1.10	.272	39	0.26 (0.65)
Memory for details	20	0.18 (0.63)	11	0.25 (1.21)	-0.07 (0.09)	[-0.25, 0.11]	-0.77	.443	31	0.19 (0.65)
How/why can remember	121	0.84 (1.20)	34	0.54 (1.50)	0.30 (0.17)	[0.03, 0.64]	1.82	.072	155	0.77 (0.98)
Degradation	110	1.04 (1.35)	37	0.48 (1.27)	0.56 (0.16)	[0.24, 0.88]	3.45	.001	147	0.92 (1.16)
Memory over time	74	0.74 (1.19)	25	0.31 (1.03)	0.43 (0.13)	[0.16, 0.71]	3.13	.002	99	0.64 (1.01)
Difficulty	37	0.30 (0.62)	13	0.19 (0.82)	0.11 (0.09)	[-0.06, 0.29]	1.27	.206	50	0.29 (0.59)
Miscellaneous memory questioning	67	0.51 (1.10)	38	0.86 (2.71)	-0.35 (0.25)	[-0.84, 0.15]	-1.37	.172	105	0.59 (0.98)
Do not like remembering	21	0.16 (0.51)	1	0.01 (0.09)	0.15 (0.05)	[0.06, 0.24]	3.34	.001	22	0.12 (0.40)
General memory ability	5	0.03 (0.21)	6	0.11 (0.55)	-0.08 (0.04)	[-0.16, 0.01]	-1.84	.069	11	0.07 (0.33)
Accuracy—trauma	4	0.03 (0.18)	5	0.11 (0.66)	-0.08 (0.06)	[-0.20, 0.04]	-1.27	.206	9	0.07 (0.32)
Other miscellaneous memory questioning	40	0.31 (0.91)	28	0.66 (2.59)	-0.35 (0.24)	[-0.83, 0.13]	-1.46	.148	68	0.36 (0.74)
All memory questioning	834	6.97 (5.22)	549	9.00 (10.15)	-2.04 (0.98)	[-3.98, -0.09]	-2.07	.040	1,383	7.68 (5.07)
All questioninga	11,798	67.05 (16.48)	6,348	32.95 (16.48)	34.11 (2.90)	[28.36, 39.85]	11.75	.000	18,146	100.00

Note. Statistically significant effects are in bold font. CI = confidence interval. ^a“All questioning” refers to all lines of questioning asked by prosecutors and defense attorneys and is used as the denominator when assessing percent of all questioning by category.

statements. For example, the defense asked the following line of questioning to a 13-year-old girl alleging repeated abuse by her stepfather:

Attorney: So we were talking about the first incident that you talked about with the detective about the first incident that you said that had occurred. And you I believe were saying you didn't remember when you said it had occurred; is that correct?

Child: Right, the time.

Attorney: You don't remember that it was on spring break?

Child: No.

In this line of questioning, the defense attorney's questioning, and the child's responses, confirm that the child did not remember when one abuse incident occurred.

Defense attorneys asked more “forgot” lines of questioning than prosecutors ($n_{\text{defense}} = 271$, $n_{\text{prosecutor}} = 232$), and a larger proportion of all their questioning (nearly 5%) asked about forgetting compared to prosecutors (about 2%), $t(128) = -3.94$, 95% CI [-3.81, -1.30], $p = .000$, $d = -.47$, 95% CI [-0.71, -0.22]. This difference was driven by explicit “forgot” lines of questioning. While prosecutors and defense attorneys were equally likely to ask neutral “forgot” questioning, $t(128) = -1.77$, 95% CI [-0.83, 0.05], $p = .080$, $d = -.21$, 95% CI [-0.46, 0.03], defense attorneys were more likely than prosecutors to ask explicit “forgot” questioning, $t(128) = -3.69$, 95% CI [-3.37, -1.02], $p = .000$, $d = -.43$,

95% CI [-0.68, -0.18]. The greater use of “forgot” lines of questioning by defense attorneys compared to prosecutors suggests that they use these lines strategically to attack the credibility of children's testimony. For example, defense attorneys questioned children about forgetting certain details of the abuse, like the timeline or severity, as in the following line of questioning posed to a 16-year-old girl alleging repeated abuse by her father:

Attorney: So the last time was 15, the first time you think was—or you believe was ten?

Child: Yeah.

Attorney: Could it have been 11?

Child: I don't remember. I don't know.

Attorney: Well, because you don't remember the age, there's a possibility you could have been 12?

Child: I don't know.

Attorney: You don't know. So you're not sure about your ages then, basically, is what you're saying, correct?

Child: I guess, yeah.

Here, the defense attorney explicitly highlights that the child does not remember how old she was when the abuse began. Such questioning may generate reasonable doubt about certain elements of the charged offenses, like if the abuse involved penetration versus touching over the clothes, or, as revealed in the example, if the

child was under 12 years old at the time abuse started. While not discrediting the allegations entirely, such questioning may be important for conviction on certain charges or aggravating factors that may later affect sentencing.

Other defense questioning explicitly linked forgetting to lying about abuse entirely, as in the following posed to a 10-year-old girl alleging repeated abuse by her grandfather: "Attorney: Okay. And you don't remember when that happened? Child: I don't remember when it was. Attorney: Is that because it didn't happen? Child: It did."

Here, the defense attorney explicitly frames the child's forgetfulness as evidence that she lied.

While prosecutors also asked a substantial number of "forgot" lines of questioning, including very explicit questions about forgetting, their questioning tended to frame forgetting as normal or expected rather than evidence of lying. For example, in a case involving a 9-year-old girl who alleged abuse by a family friend, the prosecutor posed the following lines of questioning after the child struggled to describe the touching:

Attorney: When [Defendant] touched you, were you sitting up or standing or laying down or something else?
 Child: I don't know anymore.
 Attorney: You don't know anymore?
 Child: No.
 Attorney: Do you forget?
 Child: (Nodded).
 Attorney: Is that a yes?
 Child: Yeah.
 Attorney: Did it happen a long time ago?
 Child: Yeah.
 Attorney: And so you don't remember?
 Child: No.

In this line of questioning, the prosecutor frames the child's forgetfulness not as lying but as natural memory degradation over time.⁶

Prosecutors asked twice as many explicit "forgot" lines of questioning on redirect ($n = 40$, 24%) as might be expected based on the distribution of all prosecutors' questions (12%; see [Supplemental Table in the online supplemental materials](#)). Prosecutors may use explicit "forgot" questioning on redirect to explain memory lapses or inconsistencies that defense attorneys highlighted on cross-examination while also affirming that the alleged abuse occurred. For example, a prosecutor asked the following line of questioning to an 8-year-old girl alleging repeated abuse by a grandfather figure:

Attorney: You said before that there was a time when Poopa touched your private under the clothes with his hands. And I asked you if it happened just one time or if it happened more than one time and you said it happened more than one time. And then I asked you if you could tell me about another time you remember and you said you didn't remember. Do you remember another time Poopa touched your private with his hands?
 Child: No.
 Attorney: How do you know it happened more than once then if you can't remember another time?

Child: Because I've been at his house like a lot of times so I just don't remember it.

Here, the prosecutor's questioning affirms that the abuse happened more than once, even though the child cannot describe a second incident in detail.

Influence on Memories

Thirty-six percent of attorneys' memory questioning asked about influences on children's memories, and attorneys asked 63% ($n = 81$) of children at least one line of questioning about influence. Seventy-nine percent ($n = 390$) of the influence lines of questioning focused on refreshing the child's memory while in court, such as with a transcript of prior statements ($n = 127$), audio or video recording of prior statements ($n = 38$), or some other piece of evidence, like a photograph ($n = 226$). For example, in the following lines of questioning posed to an 11-year-old girl alleging abuse by her aunt's roommate, the defense attorney refreshed the child's memory using a transcript of the interview with the detective, and in doing so, revealed an inconsistency in the child's statements:

Attorney: All right. Let's talk a little bit about what happens on Monday. On Monday do you think that [Defendant] followed you to the bathroom? Do you remember that?
 Child: No.
 Attorney: You don't think that he did that? [Child], I'm going to show you—now...This is an interview that you did with [Detective], okay, and I just want you to read this to yourself and I'm going to see if this helps maybe you remember some things, okay?
 ...
 Attorney: And I have this all highlighted here, but it starts on line 12, and this is line 12, okay, if you could read that. Just go ahead and read it to yourself. You done?
 Child: Yes.
 Attorney: Okay. I'm not going to ask you what [Detective] asked you, but do you remember now that you told her that it was on Monday that you went to the bathroom and [Defendant] followed you?
 Child: Yes.
 Attorney: And that's what you remember, it was on Monday?
 Child: Yes.
 Attorney: Okay, and did you tell her that you went to the bathroom and he lifted up your shirt? Is that right?
 Child: Yes.
 Attorney: And, again, you think that was on Monday, right?
 Child: Yes.
 Attorney: Okay, and then did you also—when you were describing this, at some point did you become confused and say that it wasn't really in the bathroom?
 Child: Yes.

This testimony reveals that the child initially did not remember specifics about the alleged incident, like when and where the abuse

⁶ This line of questioning was also coded as memory degradation due to the last two question-answer pairs.

occurred. Refreshing the child's memory with a transcript of her police interview allowed the defense to highlight the child's forgetfulness, reveal inconsistencies in statements, and suggest that the child was "confused" during a prior disclosure, all of which may have undermined the child's credibility.

Additionally, attorneys asked 29 lines of questioning to 19 children about the influence of other people on their memories. These lines of questioning, most of which were asked by defense attorneys ($n = 25$), suggested the child could have been coached or otherwise influenced about what to say.

For example, defense to 11-year-old girl:

Attorney: Did you go over what you were going to be talking about in court today?
 Child: I don't remember.
 Attorney: Did she ask you what you were going to say?
 Child: I don't remember.
 Attorney: Did she tell you what you were going to say?
 Child: I don't remember.

Attorneys also asked about the sources of children's memories ($n = 19$), such as to clarify if the child actually remembered the abuse or disclosure or if they only remembered after reading the transcript or to differentiate between what the child remembered and what someone else may have told them.

For example, prosecutor to 12-year-old girl:

Attorney: Okay. When you testified today, are you talking about things that you saw?
 Child: Yes.
 Attorney: You, yourself?
 Child: Yes.
 Attorney: Okay. Because it sounds like you know what the other girls saw too?
 Child: Somewhat.
 Attorney: Okay. So have you been able to separate in your mind what you know from everybody else versus what's in your own head?
 Child: Yes.
 Attorney: And the stuff that you told us today is the stuff in your own head?
 Child: Yes.

Finally, attorneys asked 64 lines of questioning about other influences on the child's memories or ability to remember, like practicing or memorizing their testimony, reviewing evidence before the trial began, or other influences, like overhearing others' conversations (e.g., defense to 14-year-old girl: "Q: And you haven't reviewed any of your interviews prior to trial in preparation for trial?").

Prosecutors and defense attorneys were equally likely to ask about influences on memories. Two sample t tests indicated that prosecutors and defense attorneys dedicated a similar proportion of all their questioning to refreshing the child's memory, sources of memories, and other influences (see Table 2). However, within the refreshing category, prosecutors asked more lines of questioning about refreshing with evidence other than the child's prior statements, $t(128) = -2.89$, 95% CI [0.19, 1.00], $p = .005$, $d = .30$, 95% CI [0.05, 0.54]. Prosecutors may have more access to, or familiarity with, evidence of various types compared to defense attorneys, and they may

present this evidence to alleged victims in court to help them testify. Refreshing children with other evidence may also allow prosecutors to enter this evidence into the record. Additionally, defense attorneys were more likely than prosecutors to ask about people's influence on children's memory, $t(128) = -2.63$, 95% CI [-0.74, -0.11], $p = .010$, $d = -.33$, 95% CI [-0.57, -0.08], asking 86% of these lines of questioning. This makes sense, as defense attorneys are motivated to discredit alleged victims by suggesting their testimony is false, coached, or otherwise influenced.

The distribution of influence questioning across testimony phases suggests that much of prosecutors' influence questioning was reactive. Twenty-nine percent of prosecutors refreshing with transcripts and 22% of refreshing with video/audio occurred on redirect (compared to the expected 12% of all questioning), which suggests that prosecutors may use refreshing on redirect as a means to establish children's credibility after defense attorneys' attacks. Similarly, 50% (two of four) of prosecutors' questions about influences of people were on redirect, suggesting that these questions react to defense attorneys' subtle accusations of coaching.

Memory Quality

Seventeen percent of attorneys' memory lines of questioning ($n = 238$) asked about the quality of children's memories, and attorneys asked 68% of children ($n = 88$) at least one line of questioning about memory quality. Attorneys asked 127 lines of questioning to assess how clear, precise, or accurate the child's memories were (e.g., prosecutor to 17-year-old girl: "Do you remember everything that happened that night crystal clear like it happened last night?"). Attorneys also asked 43 lines of questioning assessing the completeness of the child's memory of the abuse or if they disclosed everything they remembered (e.g., prosecutor to 12-year-old girl: "And today, are you telling us everything that you can remember?"). Similarly, attorneys asked 39 lines of questioning assessing if the child shared their "best" memories (e.g., prosecutor to 11-year-old girl: "Are all of your answers based on your best memory of what happened?"). Finally, attorneys asked 31 lines of questioning assessing the level of detail or specificity of children's memories or comparing memory for different details or incidents.

For example, defense to 14-year-old girl:

Attorney: And you told him where he did it; right?
 Child: I don't know if I told her where he done it.
 Attorney: You didn't say it happened in the living room or, I mean, in the family room?
 Child: I don't remember if I told her that.
 Attorney: Okay. But you can remember all the other details; right?
 Child: Yes.
 Attorney: Okay. But you can't remember what room it happened in?
 Attorney: I know what room it happened in. I just don't know if I told her what room it had happened in.

Only about 1.4% of all attorney questioning asked about memory quality, and there was no difference across attorney type in the proportion of questioning dedicated to this topic, suggesting that neither prosecutors nor defense attorneys prioritized this strategy, $t(128) = 0.35$, 95% CI [-0.60, 0.68], $p = .724$, $d = .04$, 95% CI [-0.20,

0.29]. However, prosecutors dedicated a larger proportion of their questioning to assess the completeness of children's memories (0.34%) compared to defense attorneys (0.15%), and this difference was statistically significant, $t(128) = 1.97$, 95% CI [-0.00, 0.38], $p = .051$, $d = .24$, 95% CI [-0.00, 0.49]. Furthermore, prosecutors asked more quality questions than defense attorneys, asking 71% of all quality questioning, 81% of completeness questioning, and 87% of "best memory" questioning. Interestingly, a substantial proportion of prosecutors' questioning about memory quality occurred on redirect: 33% of all quality questioning, 28% of clarity questioning, 37% of completeness questioning, 41% of best memory questioning, and 40% of details questioning was posed on redirect (compared to the 12% of all prosecutors questioning and 22% of all memory questioning). This pattern suggests that prosecutors may use lines of questioning about memory quality to rehabilitate children's credibility after defense attorneys' cross-examinations. For example, after a challenging cross-examination of a 10-year-old girl alleging abuse by her neighbor in which the defense attorney asked nine "forgot" lines of questioning, among other topics, the prosecutor asked the following lines of questioning on redirect:

- Attorney: Okay. Back when you talked to [Detective], could you remember everything that happened pretty well?
- ...
- Child: I remember some of it.
- Attorney: You remembered some of it?
- Child: Yes.
- Attorney: Okay. And, when you're talking to us now, do you remember things better or not as good? Do you understand my question?
- Child: No.
- Attorney: Okay. When you talked to this woman here, [Detective], you said that you remembered some things; is that right?
- Child: Yes.
- Attorney: Can you remember now all of those same things?
- Child: No.
- Attorney: Okay. When you talked to this woman here, [Detective], did you tell her things that were true?
- Child: Can you say that again?
- Attorney: When you spoke with [Detective] back in the room where your mom took you after this happened, the things that you told [Detective], were those things true?
- Child: Yes.
- Attorney: When you talked to [Detective], did you try to tell her everything that you could remember?
- Child: Yes.

This exchange shows the prosecutor trying to establish the completeness and clarity of the child's memory when they first disclosed to the police, given their challenges in recalling abuse details during cross-examination.

How/Why the Child Remembers

Eleven percent ($n = 155$) of attorneys' memory questioning asked how or why the child knew, or was able to remember, the abuse details or what they had disclosed. Attorneys asked 51% ($n = 66$)

of children at least one line of questioning about how/why they remembered.

For example, prosecutor to 15-year-old girl:

- Attorney: And you said it was your father, the defendant. How did you know it was the defendant?
- Child: Because his voice when he called my name.
- Attorney: Was there anything else that led you to believe that it was him? Because you said you didn't see him.

Prosecutors dedicated a larger proportion of their questioning to this topic than defense attorneys (0.84% compared to 0.54%); however, this difference was not statistically significant, $t(128) = 1.82$, 95% CI [-0.03, 0.64], $p = .072$, $d = .22$, 95% CI [-0.02, 0.47]. Eighty-six percent of prosecutors' questioning occurred on direct examination. This questioning often revolved around knowledge or memory of other people's actions or states of mind, like how the child knew their mother confronted the defendant or that the defendant was drunk at the time of the incident (e.g., prosecutor to 13-year-old girl: "Q: Now, is there a chance that he could have just bumped your leg and your thigh as he was moving the stick gear? A: No. Q: How do you know that?"). Other questioning asked how the child could remember specific details, such as clothing, time of day, or the physical location where the abuse occurred (e.g., prosecutor to 13-year-old boy: "Q: Do you remember exactly what you were wearing that day? A: No. Q: But you remember that you were wearing shorts vs. wearing pants? A: Yeah. Q: How do you remember that?"). To the extent that some details children share may appear speculative, or that jurors may be suspicious of memories for certain details, prosecutors may use this questioning to help children explain themselves.

Memory Degradation

Eleven percent ($n = 147$) of attorneys' memory questioning assessed memory degradation, and attorneys asked 60% ($n = 78$) of children at least one line of questioning about memory degradation. Degradation questioning asked about changes in memory over time or evaluated the quality of memories at multiple time points. Questions typically included phrases like "hard to remember"—which implies memory is not as good as it once was—or "remember better when," which compares memory at one time point to memory at a different time point. Degradation questioning differed from "forgot" questioning, which asked about the child not remembering at all or forgetting rather than change in memory over time. Two-thirds ($n = 99$) of degradation questioning assessed the child's ability to remember at different time points, typically comparing their memory of the abuse at trial to a prior disclosure (e.g., prosecutor to 10-year-old girl: "Did your memory about the things that your dad had done to you, do you think it was better back then when you talked to [Detective] or now?"). Additionally, attorneys asked 50 lines of questioning about difficulty remembering.

For example, prosecutor to 11-year-old girl:

- Attorney: As you sit here today, is it hard to remember dates?
- Child: Yes.
- Attorney: Do you remember dates that don't even relate to what happened here? Is it hard to remember how many times you have been to the zoo or when was the first time you have been to the zoo? Can you do that?
- Child: No.

Prosecutors were more likely than defense attorneys to ask questions about memory degradation, $t(128) = 3.45$, 95% CI [0.24, 0.88], $p = .001$, $d = .42$, 95% CI [0.18, 0.67], posing 75% of degradation questioning. This difference was driven by prosecutors' greater use of memory over time questioning compared to defense attorneys, $t(128) = 3.13$, 95% CI [0.16, 0.71], $p = .002$, $d = .39$, 95% CI [0.14, 0.64]. A close examination of the transcripts revealed that prosecutors commonly questioned children about degradation after they struggled to respond to other questioning or if they indicated forgetting. For example, during the direct examination of an 8-year-old girl alleging abuse by a man who lived with her grandmother, one prosecutor asked the following lines of questioning:

- Attorney: Okay. Tell me everything you remember about that one time.
 Child: Like it was in bed. I don't remember about if I was awake or sleeping.
 Attorney: Okay.
 Child: I think I was sleeping. I don't remember about if I was awake or sleeping.
 Attorney: Okay.
 Child: And maybe he touched me, I think.
 Attorney: Do you think or do you remember?
 Child: I don't remember yet still.
 Attorney: Okay. When you talked to the lady, did you remember things better back then or now?
 Child: Back then I remember.
 Attorney: Was that closer to the last time you saw [Defendant] back then, or is now closer to the last time you saw [Defendant]?
 Child: Back then closer when I saw him.

In this line of questioning, the prosecutor confirms that the child remembered better at the time of her police interview after she struggled to recall the details of the abuse incident. Prosecutors may use this type of questioning to bolster the credibility of children's original disclosures, especially if they struggle to describe abuse at trial or if their testimony introduces inconsistencies. Similarly, they may use questioning about memory difficulty to suggest that difficulty remembering specific abuse and contextual details is normal and expected or otherwise contest credibility concerns raised during cross-examination. By contrast, defense attorneys used degradation questioning somewhat differently, such as subtly suggesting the child struggled to remember memorized narratives, as if they were coached.

For example, defense to 11-year-old girl:

- Attorney: Because I know it's been a long time since everything has happened, and it's probably hard to remember everything, huh?
 Child: Yeah.
 Attorney: So you kind of wanted to go over everything that you had said before it kind of came back into your mind; right?
 Child: Uh-huh.

Interestingly, nearly 30% of prosecutors' degradation questioning, and specifically, 41% of their questioning about memory

difficulty, was posed during redirect. For example, during redirect, the prosecutor posed the following line of questioning to a 10-year-old girl alleging repeated abuse by her father:

- Attorney: Is it hard to remember about your dad touching your colita because you made it up?
 Child: No.
 Attorney: Why is it hard to remember?
 Child: Because I try to push it out of my, like block everything.

As the example shows, prosecutors may use questioning about memory degradation, particularly memory difficulty, to contest defense attorneys' questioning on cross-examination that may link forgetfulness or inconsistencies to lying.

Miscellaneous Memory Questioning

Finally, attorneys asked 105 lines of questioning (8% of all memory questioning) about various topics to 44% of the children ($n = 57$). Specifically, attorneys asked 22 lines of questioning suggesting the child did not like remembering or tried to forget what happened (e.g., prosecutor to 11-year-old girl: "Q: Let's talk about the next time that you remember that something happened to you that you talked to [Detective] about. Okay? Are these things that you don't like to remember? A: Yeah. Q: You don't think about them every day, do you? A: No. Q: You try to put them out of your mind?"); 11 lines of questioning about their general memory ability, rather than memory for specific abuse-related details (e.g., prosecutor to 17-year-old girl: "Q: Okay. Do you have trouble sometimes pinpointing when things happened? A: Yes, ma'am. Q: Do you do it intentionally? A: No. No, ma'am. Q: Just not the best with the memory sometimes?"); and nine lines of questioning associating the child's ability to remember or the accuracy of their memories, with the severity of abuse or trauma (e.g., prosecutor to 11-year-old girl: "Q: So, is it even harder for you to remember bad things that happened to you?"). Of the final 68 lines of questioning not otherwise categorized, many contained statements with similar phrasing as other memory questioning categories, such as encouraging the child to do their best or to tell everything they remembered, agreeing that remembering is hard or telling the child it was okay if they did not remember (e.g., prosecutor to 11-year-old girl: "Q: ... Do you remember you were interviewed by [Detective] on April 7th or April 13th, 2007? Does that sound about right? I'm sure you don't remember the exact date, but does that sound about right?").⁷

There were no differences between prosecutors' and defense attorneys' use of miscellaneous memory questioning, with one exception. Prosecutors were more likely than defense attorneys to ask if the child did not like remembering or tried to forget, $t(128) = 3.34$, 95% CI [0.06, 0.24], $p = .001$, $d = .42$, 95% CI [0.17, 0.66], asking 21 of the 22 lines of questioning in this category. Prosecutors may use these questions to offer support and empathy toward children struggling to describe traumatic experiences. Furthermore, the distribution of miscellaneous memory questioning across phases of testimony suggests this questioning often reacts to cross-examination, as a larger proportion of miscellaneous

⁷ The examples in this paragraph were asked to different children.

questioning categories occurred on redirect than might be expected based on all prosecutors' questions (see [Supplemental Table in the online supplemental materials](#) for distribution).

Discussion

The successful prosecution of alleged CSA often hinges on the victims' testimony of the experienced abuse and how accurately, completely, and consistently children communicate their memories. Despite ample research assessing children's autobiographical memory (Fivush, 2011), including how maltreatment affects memory processes (Cowell et al., 2015; Jaffee & Maikovich-Fong, 2011), little research has assessed how attorneys question children about memory in CSA trials. In the current study, we examined how attorneys questioned children alleging CSA about their memory, including the frequency and content of attorneys' questions about memory, and differences between prosecutors and defense attorneys in the memory questioning they posed. We found that attorneys commonly questioned children about memory, asking nearly every child (95%) about this. We also found important differences between prosecutors' and defense attorneys' questioning, suggesting that attorneys use questions about memory strategically to establish or attack, respectively, children's credibility. Below, we contextualize these findings and discuss implications for CSA trials.

Memory Questioning as Trial Strategy

Forgetting

Although we made no a priori predictions about what memory questioning would look like, we were not surprised that questions about forgetting and influence on memories were the most common. Both prosecutors and defense attorneys may be motivated to explore these topics though for different reasons. Prosecutors may ask questions about what the child has forgotten to establish the level of detail they remember. They may, for example, clarify that the child does not remember the specific day of the week abuse occurred, but they do remember it happened in the summer or a particular year. Indeed, questioning children about the timing of abuse, and what children can recall, is a common and legally relevant practice in such cases, and one that is quite challenging developmentally (Lyon & Saywitz, 2006; McWilliams et al., 2019). By contrast, defense attorneys may emphasize forgetting as a means to discredit the child's reports. We found lines of questioning about forgetting from defense attorneys who explicitly suggested the child could not remember because the abuse never happened or aligned forgetting with suggestive influences, like forgetting what they were told to say.

Questions about forgetting ranged from very subtle to explicit. Some questions were not intended to emphasize forgetting at all, instead performing a linguistic function like echoing the child's statements or clarifying their responses. Prosecutors and defense attorneys were equally likely to ask these neutral questions. Some questions provided context to solicit more detail from children offering unelaborated responses, akin to trying to solve grain size issues whereby children did not provide the right level of detail; attorneys then needed to clarify the scope of their question (see Sullivan et al., 2022 for a description of grain size issues in CSA cases). Rather than establishing or attacking credibility, attorneys may be responding to children's reluctance or cognitive development, both of which may result in unelaborated responses. The need to clarify may also be because of

attorneys' frequent use of "Do you remember" as a lead in their questions, which can confuse children, particularly young children, who may respond to the "Do you remember" portion of the question rather than the substantive part that follows (Evans et al., 2017; Stolzenberg et al., 2020). By contrast, other lines of questioning explicitly emphasized that the child forgot details about the abuse or prior disclosures, and defense attorneys were much more likely than prosecutors to ask explicitly about forgetting. Questioning about forgetting, therefore, appears to be an important strategy for defense attorneys.

Influences on Memory

Both prosecutors and defense attorneys commonly asked about influences on children's memories. The majority of these questions focused on refreshing children's memory using prior statements or other evidence (e.g., refreshing recollection). Both prosecutors and defense attorneys were equally likely to ask about refreshing children's memory, which may be an important strategy for both attorneys, but again, for different reasons. Prosecutors may refresh children's memory to strengthen their testimony, especially if they indicated forgetting elements they described in prior disclosures. Indeed, a trial tactics guideline written for prosecutors suggests that refreshing recollections can be a productive strategy for witnesses who have little experience testifying and are nervous about doing so—something likely to be true for child witnesses (Saltzburg, 2010). On the other hand, defense attorneys may use questioning about refreshing with prior statements to show inconsistencies in reports and frame these inconsistencies as evidence the child lied, forgot, or was influenced by others.

We found that prosecutors were more likely than defense attorneys to ask about refreshing using evidence other than prior statements, and this may be because of the nature of criminal trials. Prosecutors must collect and review evidence against the defendant in court, through the testimony of witnesses. This process may increase prosecutors' familiarity with all evidence in the case, beyond the child's prior statements, and they may be more prepared to use it to refresh witnesses' memory. Importantly, there is limited research on the effects of refreshing recollections on memory in general, let alone with children. We found only one public access dissertation with data collected in England, whereby the researcher found "no measurable effect on recall accuracy and cross-examination performance under optimal recall conditions" (Ainsworth, 2015, p. 3). Given the questions we saw in our sample of trial testimonies, more work is needed on how attorneys refresh children's memory, and whether it is productive.

We also found that defense attorneys were much more likely than prosecutors to ask about other people's influence on children's memories. As found in prior work (St. George et al., 2022), questions like "Did your mom help you remember?" indirectly imply that the child was coached or told what to say. Such subtle questioning may be difficult for children to understand and resist (Wylie et al., 2022, 2023). Furthermore, subtly implying that children's memories were influenced by other people may exploit jury expectations about the nature and extent of children's suggestibility or false reports (Cossins, 2008; Quas et al., 2005). Therefore, while questioning about the influence of people on children's memories was uncommon—just 29 questions asked to 19 children—it may be a strategy for defense attorneys to undermine children's credibility. Furthermore, such questions are likely to elicit inaccurate information from children.

Quality of Memory and Memory Degradation

Although attorneys asked fewer lines of questioning about memory quality and degradation compared to forgetting and influence, questioning on these topics still emerged with regularity in our sample. Attorneys asked 80% of children at least one line of questioning about memory quality or degradation. Addressing these topics, which essentially ask children to comment on their metamemory, makes sense given children are often testifying after long delays about events they previously reported. For example, *Stolzenberg and Lyon (2014)* found that there was an average 8-month delay between when charges were filed and when children testified, which does not account for delays between forensic interviews and filing charges or the delays that children often experience before they make initial disclosures (*McElvaney, 2015*).

In addition, some researchers find that jurors hold misconceptions about children's ability to remember or describe abuse, expecting them to recall specific details and finding it concerning when children cannot do so (*Cashmore & Trimboli, 2006; Goodman-Delahunty et al., 2017*). Unsurprisingly, it is not just jurors who might desire consistent and detailed reports but attorneys as well; researchers find that the consistency of a child's report is a major factor in whether a plea deal will be negotiated, meaning that prosecutors are less likely to take a case to trial if the child is inconsistent (and more likely to negotiate a plea deal), likely for fear that jurors will find children's inconsistencies discrediting (*Fessinger et al., 2024*). However, inconsistencies, self-contradictions, and gaps in reported information are normal features of human memory and not a reflection of memory accuracy or honesty (*Goodman-Delahunty et al., 2017*). There are many legitimate reasons why children might have inconsistencies in their reports. Factors related to children's age, as well as the kinds of questions they are asked, can influence what kind of information they will report and whether it will be consistent across time (*Brubacher et al., 2019; Fivush & Shukat, 1995; Peterson et al., 2001*). The trial setting itself also may impact their ability to remember or articulate what they remember, given the stress that children experience during testimony (*Goodman et al., 1992; Goodman-Delahunty et al., 2017; Howe et al., 2008; Quas & Fivush, 2009; Zajac et al., 2012*), further motivating prosecutors and defense attorneys to explore these topics, though for different reasons.

Prosecutors and defense attorneys were equally likely to ask about the quality of children's memories, including their clarity, "best memory," and details, though prosecutors dedicated more of their questioning to completeness than defense attorneys. However, prosecutors were more likely than defense attorneys to ask about memory degradation, and specifically memory over time. Importantly, prosecutors' questioning about memory quality and degradation seemed poised to counteract misconceptions about perfect recall or defense attorneys' suggestion that poor memory indicated lying or suggestive influence. Indeed, a substantial portion of prosecutors' questioning on these topics occurred during redirect (e.g., after cross-examinations), suggesting that prosecutors used questioning about metamemory to reestablish children's credibility after defense attorneys' attacks. Prosecutors may use questioning related to metamemory to highlight that some memory degradation is normal or that imperfect or hazy memories of abuse are still evidence that abuse occurred, which is consistent with decades of memory research on the differential survival rates of various kinds of memories (e.g., see *Brainerd & Reyna's 2004* review on fuzzy-trace theory and memory

development). Furthermore, questioning about memory over time, particularly highlighting that memories at the time of the disclosure were better than at trial, allows prosecutors to emphasize the veracity and accuracy of children's prior accounts, which can be supported by other evidence.

Defense attorneys' questioning that suggests children have a hard time remembering or that their memories are unclear or incomplete may try to exploit jury misconceptions that children's memories of abuse are perfect and immune to degradation. As noted above, memory for specific details varies over time, by person, and is affected by the nature of the experienced event and how it was perceived and encoded at the time of occurrence (*Goodman et al., 2010*). Defense attorney questioning about the quality of memories, difficulty remembering, and forgetting may elicit credibility concerns among the jury, some of which may be misguided.

Limitations, Future Directions, and Conclusion

We found that questions about memory posed to alleged victims in CSA trials were common. Given the regularity of memory questioning, and the notable differences between prosecutor and defense attorneys in the memory topics raised, we suspect that attorneys use these questions strategically to influence jurors' assessments of credibility. However, without talking to attorneys directly, we are unable to confirm true intentions. Furthermore, some questions included in our sample may not be about memory at all: some questions may be a function of normal conversation or linguistic style (e.g., "You don't remember?" echoes). Likewise, some refreshing questioning may have been used not to refresh the child's memory but to enter evidence into the record. Researchers could conduct direct observations of CSA trials in order to assess attorney tone and demeanor. In addition, interviewing attorneys about their strategies at trial, including the specific topic areas they address and how, could provide further clarification about their motives.

We also were unable to assess the effect of memory questioning on jury perceptions of credibility or their verdicts. Scholars assessing perceptions in mock CSA trials have identified several dimensions of credibility, including suggestive influence and honesty, believability and plausibility, and consistency (*Castelli et al., 2005; Fraser et al., 2023; Voogt et al., 2021*). The memory questioning we identified addressed many of these components, so we expect that memory questioning should influence jurors' perceptions. Indeed, 90% of the cases in our study resulted in a conviction on at least one charged offense, which suggests, on the one hand, that prosecutors effectively established children's credibility. On the other hand, defense attorneys' strategies appear to have been less effective. Nevertheless, it is possible that the strategies used more commonly by defense attorneys—namely questions about forgetting and influence—appeared with more regularity in cases resulting in acquittal. Future studies of mock trials could examine the effects of different memory questioning categories on credibility assessments, including on overall credibility and on specific dimensions. Future research also could assess the effect of memory questioning on jury verdicts, which was outside the scope of the current study.

In addition, our analyses focused on categorizing the questioning posed by attorneys. We did not systematically attend to how children responded to questions or how their responses might have influenced attorneys' questions. Undoubtedly, children's responses do influence attorneys. Notably, many of the neutral forgot questioning

echoed children's responses of "I don't remember." Other questioning, such as asking if it is hard to remember or the level of detail the child remembers, may likewise respond to children's apparent struggle to recall details. Testimony is in many ways a conversation, with attorneys' lines of questioning developing in response to children's answers. However, we did not systematically examine this process, focusing instead on the content of attorneys' questions. In the future, researchers should attend to children's responses and how these may have influenced the questions they were asked.

Finally, our sample was limited to one jurisdiction—albeit, a large one—whose demographic characteristics of victims, offenders, attorneys, juries, urbanization, and politics, and procedural guidelines may differ from other jurisdictions. Attorneys in other jurisdictions, therefore, may use different strategies in court. Additionally, attorneys' strategies could have changed since the trials in our sample were conducted (2005 through 2015). Researchers should collect current samples of CSA testimony, across a variety of jurisdictions that vary in characteristics. Researchers should also examine if questioning varies by case characteristics, such as frequency and duration of abuse, and child characteristics, particularly age, as memory for events, and related memory concerns, likely depend on these factors.

Implications for Policy and Practice

We found that memory questioning emerged with regularity in CSA trials, meaning that this is an important area of concern when establishing or attacking children's credibility in these cases. Attorneys, therefore, should prepare to bolster their narrative frames of the case that may be undermined by their counterparts' memory questioning. First, given defense attorneys seem to use questioning about forgetting and memory degradation to suggest children's reports are untrue, prosecutors may consider introducing expert testimony about memory, and how abuse or trauma can affect memory encoding and retrieval. Experts also could testify about the level of detail children can be expected to recall, or how memory gaps, lapses, and inconsistencies are normal (Goodman-Delahunty et al., 2017). Doing so could mitigate or debunk jury misconceptions about memory processes that defense attorneys' memory questioning may exploit. For example, some jurors may believe that memory for abuse should be consistent, clear, and detailed (Cashmore & Trimboli, 2006; Goodman-Delahunty et al., 2017). Expert testimony may be particularly helpful in trials with young children, or in cases involving long delays between abuse, disclosure, and trial, as these factors may contribute to more misconceptions or concerns about memory. Furthermore, a large-scale report recommending best practices for criminal justice practitioners responding to CSA suggests that "[c]onducting multiple interviews ... with short gaps between each interview, can aid memory" (Goodman-Delahunty et al., 2017, p. 4). Expert testimony could affirm that multiple interviews improve memory, thereby mitigating concerns about inconsistencies or suggestions from defense attorneys that more interviews raise suspicion about suggestive influences.

Second, given the regularity with which both prosecutors and defense attorneys refreshed children's recollections in court, documentation of prior statements during CSA investigations is essential and should be standardized and rigorous. Prosecutors can offer prior statements as evidence of the crime when children struggle to recount these details in court. Furthermore, defense attorneys can use questioning about forgetting and refreshing to highlight inconsistencies in the child's reports, which may generate credibility concerns among jurors

who are skeptical of inconsistencies. Documenting prior statements, therefore, likely benefits the adversarial process as a whole. We recommend that police departments and district attorney's offices standardize procedures for collecting children's reports of abuse—such as using a consistent modality (e.g., video recording) and documenting every interaction in which reports may be made—to ensure the quality and accessibility of prior statements. We acknowledge that doing so is tricky, given the complexities when children are interviewed repeatedly (Brubacher et al., 2014, 2019), as well as the difficulty in asking children about specific prior statements (Lyon & Stolzenberg, 2014). However, it is clear from our analyses that prior statements play an important role in both prosecution and defense questioning strategies.

Finally, while we recognize that questioning children about honesty and suggestive influence may be an important strategy for defense attorneys (Denne et al., 2020), defense attorneys could highlight gaps in memory or forgetfulness about specific details without insinuating the child lied or was influenced. As we noted in our findings, questioning children about their age at the first incident, or if penetration occurred, could raise reasonable doubt concerns about certain elements of charged offenses. Even if the prosecutor is able to establish beyond a reasonable doubt that abuse occurred, defense attorneys' memory questioning about these details could still influence jury verdicts or sentencing in consequential ways. Questioning about a lack of memory for relevant offense elements, therefore, can make CSA trials fairer: it can reduce defense attorneys' reliance on jury biases or misconceptions about children's suggestibility and memory abilities, while also forcing prosecutors to present stronger cases with more evidence that corroborates these defining elements. In addition, this means that practically, researchers should work with prosecutors and judges when conducting trainings to ensure that developmentally inappropriate questions are objected to formally. Doing so could help to facilitate accurate testimony from children about their memories without undue influence or confusion. This is important because prosecutors rarely object during cross-examination, even when it seems wise to do so (Andrews et al., 2015; Andrews & Lamb, 2017).

In conclusion, we found that nearly every child testifying about alleged CSA was asked about their memory, and in most cases, they were asked many questions across a variety of memory topics. Memory questioning reflected a range of possible motives, including to refresh children's recollections in court, highlight accuracy of (prior) reports, and imply lying or suggestive influence. We also found attorney differences in the types of memory questions asked, which underscores that prosecutors and defense attorneys likely have different motives for asking children about memory. Memory questioning, therefore, appears to be an important strategy for both prosecutors and defense attorneys in CSA trials. Researchers should continue to study this topic to determine realistic expectations about what children can recall, best practices for asking children about memory in court, and the influence of memory questioning on jury verdicts.

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