Do Prosecutors use Interview Instructions or Build Rapport with Child Witnesses?

Elizabeth C. Ahern[1], Stacia N. Stolzenberg[2], Thomas D. Lyon[3]

University of Cambridge[1]

Arizona State University[2]

University of Southern California[3]

Author's Note

Abstract

This study examined the quality of interview instructions and rapport-building provided by prosecutors to 168 5- to 12-year-old children testifying in child sexual abuse cases, preceding explicit questions about abuse allegations. Prosecutors failed to effectively administer key interview instructions, build rapport, or rely on open-ended narrative producing prompts during this early stage of questioning. Moreover, prosecutors often directed children's attention to the defendant early in the testimony. The productivity of different types of wh- questions varied, with what/how questions focusing on actions being particularly productive. The lack of instructions, poor quality rapport-building, and closed-ended questioning suggest that children may not be adequately prepared during trial to provide lengthy and reliable reports to their full ability.

Keywords: rapport-building, interviewing children, criminal trials, child sexual abuse

Do Prosecutors Use Interview Instructions or Build Rapport with Child Witnesses?

Child interviewers have long been encouraged to utilize interview instructions (Enos, Conrath, & Byer, 1986) and rapport-building (Conerly, 1986; Faller, 1988), and both are important components of interview guidelines (APSAC guidelines, 2012; Home Office, 2007 [Achieving Best Evidence]; Lamb et al., 2008 [NICHD protocol]; Lyon, 2005 [adaptation of the NICHD protocol]). The most-often recommended instructions teach children that they should feel comfortable giving "don't know" answers and letting the interviewer know when they do not understand a question. Rapport-building, designed to put children at ease and facilitate children's productivity, typically entails asking children questions about neutral or positive aspects of themselves, their family, and their experiences.

Instructions and rapport-building are potentially useful tools when prosecutors question children in court. Although a substantial amount of research has examined how child victims are questioned at trial, it has focused on ratings of attorneys' "supportiveness," and on the age appropriateness, complexity, and suggestiveness of their questions (e.g., Evans, Lee, & Lyon, 2009; Flin, Boon, Knox, & Bull, 1992; Goodman et al., 1992; Zajac, Gross, & Hayne, 2003). Typically, defense attorneys are judged to perform less well in these regards than prosecutors (Cashmore & DeHaas, 1992; Davies & Seymour, 1998; Goodman et al., 1992; Hanna, Davies, Crothers, & Henderson, 2012; Zajac et al., 2003). However, to argue for a defendant's innocence, defense attorneys must discredit allegations against the accused, and cross-examination of the child is a means of doing so. Under the rules of evidence, leading questions are routinely permitted in cross-examination (Federal Rules of Evidence Rule 611, 2014). Hence, what defense attorneys do in court could be portrayed as an integral component of their job.

Indeed, defense attorneys freely acknowledge that their motivation is to undermine child victims' ability to produce a competent report (Leippe, Brigham, Cousins, & Romanczyk, 1989).

Prosecutors do not necessarily utilize more helpful questioning techniques than defense attorneys; one study that systematically assessed the syntactic complexity of questions found no differences between prosecutors and defense attorneys (Evans, Lee, & Lyon, 2009). Recently, prosecutors' behavior in questioning child witnesses has been found wanting in other respects, in studies examining the age-appropriateness of their questions attempting to establish children's competency to take the oath (Evans & Lyon, 2012), and their elicitation of abuse characteristics that may help jurors understand the dynamics of sexual molestation (Stolzenberg & Lyon, 2014). An important unanswered question is what prosecutors ask before they move to the topic of abuse. Do they give instructions? Do they attempt to build rapport before introducing the topic of the abuse? And, if they do give instructions and build rapport, do they do so in the most productive manner? This study asked those questions.

In what follows, we briefly review the research on giving instructions and building rapport. With respect to instructions, we highlight the importance of feedback, and with respect to rapport-building, we highlight the importance of avoiding the topic of abuse and the value of asking open-ended questions. We then discuss how instructions and rapport-building are likely to be used in court, and introduce a potentially useful distinction among question-types that can assess productivity in a finer grained manner than prior research.

Interview Instructions

Children are often hesitant to give "I don't know" answers (Memon & Vartoukian, 1996; Poole & Lindsay, 2001). Instructing children to utilize "I don't know" can reduce errors (Gee, Gregory, & Pipe, 1999; Saywitz & Moan-Hardie, 1994). To make the instruction effective,

however, it is not enough to merely tell the child that "don't know" responses are acceptable

(Memon & Vartoukian, 1996; Moston, 1987; Peterson & Grant, 2001). Rather, children should

be given examples and feedback. That is, the interviewer should ask the child a question that the

child must not know the answer to, and then reinforce the child for answering "I don't

know." Furthermore, interviewers should reinforce giving an answer when one does know, so

children do not overuse the "I don't know" response (Gee et al., 1999; Saywitz & Moan-Hardie,

1994). Similarly, providing children practice with flagging incomprehensible questions increases

the likelihood that children will object when they do not understand a question (Peters & Nunez,

1998; Saywitz, Snyder, & Nathanson, 1999).

Rapport-Building

The primary functions of rapport-building are to secure a supportive environment and

maximize the children's comfort and competence in recalling past events (Lamb et al., 2008;

Powell & Thomson, 1994). Commentators recommend that interviewers question children about

their hobbies, likes and preferences (Sanders, Schwartz, & Mohay, 1985), and these suggestions

have been incorporated into interview guidelines (e.g., APSAC, 2012). Of course, rapport-

building should precede questions about the alleged abuse and approximately five minutes of

rapport-building time appears to be sufficient (Hershkowitz, 2009). It would also seem sensible

to avoid references to the defendant during rapport-building, particularly those that require the

child to look at the defendant, as child witnesses have reported that their greatest fear of

testifying was facing the defendant in court (Goodman et al., 1992).

The NICHD protocol recommends that interviewers use "invitations" and "cued

invitations" to maximize children's productivity. Invitations and cued invitations are recall-based

prompts. Invitations "do not constrain children's response to a particular category of information,

and include questions such as 'Tell me everything that happened'" (Brown et al, 2013, p. 369).

Cued-invitations use children's previous statements during the interview as prompts for further

information, "either to elicit additional detail (e.g., 'you said he gave you a special cuddle, tell

me more about the special cuddle'), or to request additional information about the sequencing of

events mentioned by the child (e.g., 'tell me what happened right before/after the special

cuddle…')" (Brown et al., 2013, p. 369). Rapport-building that asks children to narrate a recent

non-abusive event, emphasizes the use of invitations and cued invitations, and avoids the use of

yes-no and forced-choice questions, has been shown to increase the productivity of children's

abuse reports in the field (Hershkowitz, 2009; Sternberg et al., 1997), to increase the accuracy of

children's reports in laboratory research (Roberts et al., 2004), and to increase the productivity of

invitations and cued invitations about the target event in laboratory research (Brown et al., 2013).

How Instructions and Rapport-Building Could be Used in Court

The recommendations that interviewers utilize interview instructions and open-ended

rapport-building are based on the goal of maximizing the amount of information that children

produce while minimizing errors. The same goals will apply when prosecutors present child

witnesses in court. Of course, legal rules that apply in court may not apply to interviews, and this

might affect the way in which instructions and rapport-building occur in court. For example, to

assess children's competency to testify, most courts in the United States first question children

about their understanding of the truth and lies and the importance of telling the truth (Lyon,

2011). Hence, one would expect to see questions about children's competency in the early stages

of the direct examination.

Rapport-building can be legally justified in several ways. First, asking children

preliminary questions about recent non-abusive events can help fulfil trial courts' obligation to

protect child witnesses against "undue embarrassment" (Cal. Evid. Code Section 765, 2014). Although there is little specific case law on the subject, at least one appellate court has approved of rapport-building questions designed to help the child witness "feel comfortable on the stand, before delving into the sexual conduct at issue in the case" (State v. Hanna, 2003, p. 2). In *Hanna* the court approved a "series of questions concerning whether [the child witness] had pets, what kind of dog she had, what she liked to do in her spare time, who she played softball for, what kind of music she liked, what kind of subjects she liked in school, and what kind of food she preferred" (id.). Second, rapport-building questions can help establish children's ability to recall and report experienced events, another element of testimonial competency in many jurisdictions (Lyon, 2011).

Although there are no clear legal impediments to the use of invitations and cued-invitations, they are likely rare in preliminary questioning of children. First, invitations and cued invitations are uncommon in forensic interviews unless interviewers have been specially trained (Sternberg et al., 2001). Indeed, prosecutors at trial ask very few invitations when they question children about the details of sexual abuse (Andrews, Lamb, & Lyon, 2015). Prosecutors might use a few "What happened?" or "What happened next?" questions, which would qualify as invitations or as cued invitations, but it is unlikely that a prosecutor would use a cued invitation simply to elicit additional information (using the form "Tell me more about…") for two reasons. First, a popular (albeit mistaken) belief among attorneys is that it is clearly objectionable to ask questions that "call for a narrative" (Lyon, 2013), which could deter them from asking children to "Tell me more" about topics the child has mentioned. Second, prosecutors are likely to structure their direct examination quite carefully, based on a child's prior disclosures, and in their opening argument (before the child testified), they will tell the jury what they expect the child

will say. As a result, they are likely to avoid invitations in eliciting the child's abuse report. One might nevertheless anticipate the use of invitations during rapport-building, since by definition the child is not discussing abuse during this phase of the questioning. Furthermore, it may be possible for prosecutors to maximize children's productivity without moving to highly specific questions.

Distinguishing Among the Productivity of Different Types of Wh- Questions

Even if invitations are rare, differences in productivity may nevertheless emerge when comparing other question types. Researchers examining the NICHD protocol also distinguish between directive questions and option-posing questions. Directive questions are largely Wh-questions (who, what, when, where, why, how), and elicit recall memory about specific aspects of the child's report. Option-posing questions include yes-no and forced-choice questions, and elicit recognition memory (Brown et al., 2013). Wh- questions tend to be preferable to yes-no and forced-choice questions, both because they are less likely to elicit inaccuracies, and because they are less likely to lead to miscommunication between the interviewer and the child (Lyon, 2014).

It may also be profitable to distinguish among different types of Wh- questions, most of which would be called "directives" in the NICHD scheme. Some researchers have distinguished between Wh- questions that focus on specific contextual information (e.g., "What did he wear?"), Wh- questions that focus on actions or events (e.g., "How did you get hurt?") and those that ask for a reason or cause (e.g., "Why?" "What made him leave?") (Peterson & McCabe, 1992; Price & Roberts, 2011). Researchers examining NICHD protocol interviews have found that cued invitations that reference actions (as opposed to appearances or locations) elicit the

most details (Lamb et al., 2003). More specific Wh- questions that focus on actions and causes might also be more productive than specific Wh- questions focusing on other details.

Indeed, we suspected that there may be a number of important differences in productivity among the Wh- questions. We classified questions by the Wh- question word (who, where, when, which, why, what, how), and further distinguished among different kinds of "what" and "how" questions (what/how). With respect to what/how questions, we distinguished between those that asked for action-focused descriptions of unfolding processes or events (e.g., "What did he do with his hands?"), which we term "dynamic," and those that asked for non-action descriptions (e.g., contextual information such as location, time, or objects) ("What color was his shirt?"), which we term "static." We suspected that what/how dynamic questions would be more productive than what/how static questions. We also suspected that "why" questions might be more productive than most other Wh- questions insofar as "why" asks for an explanation or cause whereas most other Wh- questions (who, where, when, and which) request specific information that can often be supplied with a single word or short phrase.

Current Study

The purpose of the present study was to evaluate how prosecutors question children in criminal trials of alleged child sexual abuse, focusing on prosecutors' administration of interview instructions and rapport-building with children and children's responsiveness. We hypothesized that prosecutors would sometimes instruct children that "I don't know" and "I don't understand" answers were appropriate, but that prosecutors would not provide examples with feedback. We hypothesized that prosecutors would ask some rapport-building questions before introducing the topic of abuse, but that their questions would be predominantly less productive questions.

Method

Transcript Selection

Pursuant to the California Public Records Act (California Government Code 6250, 2014), we obtained information on all felony sexual abuse charges under Sect. 288 of the California Penal code (sexual abuse of a child under 14 years of age) filed in Los Angeles County from January 2, 1997 to November 20, 2001 ($N = 3{,}622$). Nine percent of the cases went to trial ($N = 309$) (additional information about the study population can be found in Stolzenberg & Lyon, 2014). We obtained transcripts for 235 of the 309 cases, which included nearly all of the acquittals and mistrials (95% or 53/56) and 71% (182/253) of convictions. For the purposes of the present investigation, we examined all 168 cases in which child witnesses under 13 testified regarding allegations of sexual abuse. Eighteen percent of these cases resulted in acquittal, 4% in mistrial, and 78% in conviction. The trials involved 68 different prosecutors and 88 different defense attorneys. The child witnesses ranged in age from 5 to 12 years of age ($M = 9.51$, $SD = 1.89$), and the number of child witnesses ranged from 1 to 7 ($M = 2.57$, $SD = 1.59$) per case. Sixty-six percent of suspects were charged with multiple instances of abuse and 22% were charged with force. The defendant was a stranger to the child 10% of the time, a biological parent 8% of the time, a stepparent 21% of the time, or another person the child knew (e.g., relative, neighbor, or child care provider) 61% of the time. On average, there was a delay of 8 months ($SD = 4$ months) between the filing of charges and the child's testimony.

Coding

All of the prosecutors' prompts directed toward the child were coded from the time the child was introduced as a witness until the first direct question about abuse. Questions about

abuse included references to genitalia, something bad happening with the defendant, or the child being sexually abused. The different types of prompts are described in Table 1.

Instructions and competency. If more than one instruction or competency topic occurred within a single prompt, each instruction or competency topic was dually coded. Instructions and competency related questions were sometimes administered by the judge and sometimes by the prosecutor; we did not distinguish between the two.

Rapport/pre-abuse. We initially planned to end coding when prosecutors deliberately transitioned questioning from neutral or rapport-related topics to the allegation in question. However, prosecutors often asked indirectly about the allegation, which could be categorized as either rapport or pre-abuse. For example, prosecutors would ask children where they went to school at a particular time (presumably as a means to establish the date of the allegation) but then ask about the children's favorite subject. Therefore, we elected to code all questions until one could unmistakably say that the prosecutor was attempting to elicit an abuse report (or until the child clearly acknowledged abuse). If more than one rapport or pre-abuse topic occurred within a single prompt, a hierarchical rule was followed to ensure that the topic most representative of rapport-building was selected. For example, if the child was asked about his/her feelings at court along with her age, the prompt would be coded as an inquiry into the child's feelings.

Defendant references. Every prompt was coded for whether it referenced the defendant. If a prompt referenced the defendant, it was further coded for whether it required the child to look at the defendant (usually to identify him), whether it explicitly mentioned the child's past interactions with the defendant, and whether it only mentioned the defendant without referencing the child.

Question Type. Every prompt was coded for question-type. First, we distinguished among "Tell me more" invitations, wh-, forced-choice and yes-no prompts (Table 2). Second, wh- prompts were further coded as why, where, what, who, which, how, and when questions (Table 3). Third, "what" and "how" (what/how) questions were further classified (Table 4). Dynamic what/how questions (questions that ask for action-focused descriptions of unfolding processes or events) usually included the word "happen" (which refers to a sequence of events that take place over time), "do" (which refers to actions) or asked the child to elaborate on a more specific kind of action or process (so, instead of "do," the questions asks about the action of "touching" or "pulling" specifically). Static what/how questions asked for non-action-related descriptions, usually contextual information such as location, time, or objects (e.g., "What color was his shirt?"). Causality what/how questions asked for a cause or "why." Evaluation what/how questions asked the child to make an evaluation about judgments, emotions, thoughts or physical sensations. Ambiguous what/how questions technically asked for dynamic content (e.g., saying) but pragmatically asked about an end-product or label (e.g., what was said). Unclear what/how questions included vague references (e.g., "What about?").

Children's responses. We used word count as a measure of children's productivity. Word count has been found to correlate well with number of details (Poole & Dickinson 2000; Thoresen, Lonnum, Melinder, & Magnussen, 2009), and is particularly appropriate in the current context to assess the extent to which various types of prompts elicited longer responses from children.

Reliability

Two research assistants, blind to study hypotheses, independently coded 20% of the transcripts for each variable. They achieved Kappas above .80 for all variables.

Results

Children received an average of 48.23 (*SD* = 33.77) prompts before being asked an abuse question and an average of 25.98 (*SD* = 22.64) prompts before being asked about the defendant. In 86% of cases, the children were asked at least one question about the defendant before being asked about abuse, including direct requests for the child to identify the defendant (Table 1). Preliminary analyses revealed no significant effects due to child age, gender, or ethnicity, and as such, these factors are not considered further.

Instructions and Competency

The number of questions asked about different topics, and the percentages of cases in which those topics were mentioned, are in Table 1. The most common instructions included requiring the child to answer out loud and explaining the roles of legal professionals. Only 2 of the 35 "I don't know" instructions asked children to demonstrate their understanding (e.g., "If you don't remember, what are you going to tell me?", "If I said to you Jennifer, what do you think I had for dinner before your eighth birthday, what would you say?"). None of the children were given feedback so that they would not excessively respond "I don't know" or "I don't understand." Competency questions were almost exclusively about children's comprehension of the difference between a truth and a lie. Three children were asked to demonstrate knowledge of prepositions (e.g., "over" and "under").

Rapport/Pre-abuse Topics

To focus on the rapport-building nature of the transcripts, the following analyses and tables were limited to questions preceding the first direct inquiry into abuse that did not reference the defendant and were not coded as instructions or competency. As noted in Table 1, just over half of children were asked at least one question about their likes or preferences, as well as their

birthdays. Virtually all children were asked for demographic information and about circumstances of the abuse.

Types and Productivity of Questions

The prevalence of question type and mean number of words children produced are presented in Table 2. An ANOVA was conducted, with question type entered as the between subject variable ("Tell me more" invitations, wh-, forced-choice, yes-no), and the number of words children produced in response to each prompt as the dependent variable. A significant main effect emerged for question type, $F(3, 4951) = 75.51$, $p < .001$, $\eta_p^2 = 2\ .04$. To test our predictions, the mean number of words children produced in response to "Tell me more" invitations was compared to the other question types. A trend emerged for "Tell me more" invitations eliciting higher word counts, $t(5088) = 1.9$, $d = -1.05$, CI [-10.33, .15].[1] In addition, wh- prompts elicited higher word counts from children than yes-no prompts, $t(4702) = 1.96$, $p < .001$, $d = -.42$, CI [-2.21, -1.69].

The prevalence of wh- question type and mean number of words children provided in response are presented in Table 3. An ANOVA was conducted, with wh- question type entered as the between subject variable (why, where, what, who, how, which, when) and the number of words children produced in response to each prompt as the dependent variable. A main effect emerged for wh- question type, $F(6, 2204) = 7.80$, $p < .001$, $\eta_p^2 = .02$. In line with our predictions, why prompts were more productive than other wh- question types, $t(2013) = 3.85$, $d = -.60$, CI [-5.02, -1.64], $p < .001$.

The prevalence of what/how questions and the length of children's responses are shown in Table 4. To examine the effects of various what/how question types, an ANOVA was conducted with what/how question type entered as the between subject variable (dynamic,

---

[1] All confidence intervals reported relate to mean differences.

causality, evaluative, ambiguous, static) and the number of words children produced in response to each prompt as the dependent variable. A significant main effect emerged for what/how question type, F (4, 1371) = 34.90, $p < .001$, $\eta_p^2 = .09$. Children produced more words to dynamic than static what/how questions, t (1174) = 10.07, $p < .001$, $d = -.64$, CI [4.17, 6.19].

To explore productivity differences among rapport/pre-abuse topics, an ANOVA was conducted with rapport /pre-abuse topic (demographic information, likes/hobbies, birthday/holiday, feelings/comfort, pre-abuse) entered as the between subject variable and the number of words produced in response to each topic as the dependent variable. A main effect due to topic emerged, F (4, 5085) = 17.72, $p < .001$, $\eta_p^2 = .01$. Follow-up t-tests revealed that children produced higher word counts to likes/hobbies ($M = 3.62$, $SD = 7.52$) and pre-abuse ($M = 3.43$, $SD = 5.50$) topics than demographic information ($M = 2.49$, $SD = 3.31$), t (2531) = 4.53, $p < .001$, $d = -.19$, CI [-1.62, -.64], t (4384) = 6.87, $p < .001$, $d = .21$, CI [1.21, .67], birthdays/holidays ($M = 1.93$, $SD = 1.73$), t (569) = 3.63, $p < .001$, $d = .31$, CI [.77, 2.61], t (2422) = 4.48, $p < .001$, $d = -.37$, CI [-2.16, -.84], and comfort/feelings ($M = 1.99$, $SD = 1.87$), t (429) = 2.48, $p = .01$, $d = .30$, CI [.34, 2.94], t (2282) = 3.02, $p = .003$, $d = .35$, CI [-2.38, -.51].

Because of the productivity differences among different question-types, we examined the types of questions associated with the different rapport-building topics. Although children were often asked about their likes or preferences, 54% of these questions were yes-no. Most what/how questions about likes and preferences were static (64%). Virtually every what/how birthday or holiday question asked for static (96%; e.g., "When is your birthday?") rather than dynamic (4%; "What happened on your birthday?") information.

Discussion

This is the first study to examine prosecutors' initial questioning of children in court, before abuse is mentioned. We examined whether prosecutors followed recommendations for the use of interview instructions, rapport-building and open-ended questions. We found that although instructions were common, don't know and don't understand instructions were rare, and were virtually never administered with appropriate feedback. Although rapport building was common, the questions tended to be closed-ended. Moreover, the defendant was mentioned in virtually all cases, and children were often asked to identify the defendant. Consistent with our predictions, dynamic what/how questions that focused on actions elicited higher word counts from children than static what/how questions that focused on non-actions. The lack of instructions, poor quality rapport-building, and closed-ended questioning suggest that child witnesses are underperforming.

Instructions

Children were only very rarely given "don't know" or "don't understand" instructions. Even when they were, they were rarely given with feedback, which appears to be essential for efficacy. This is not too surprising, as unless investigative interviewers are specially trained, they are similarly unlikely to give such instructions (Sternberg, Lamb, Davies, & Westcott, 2001; Sternberg, Lamb, Orbach, Esplin, & Mitchell, 2001; Warren, Woodall, Hunt, & Perry, 1996). The fact that children were given instructions of some sort in half of the cases suggests that prosecutors and judges are capable of giving instructions and might not anticipate any legal impediments to doing so. Moreover, it suggests that they understood the importance of reminding the children of the rules of testifying, even if the children might have been instructed at some prior point in time. Rather, the lack of "don't know" and "don't understand" instructions

suggests that prosecutors and judges do not recognize the utility of teaching children these instructions.

Rapport-Building

In most cases, children were asked at least one question about their likes, hobbies, birthday, or another holiday. Hence, prosecutors intuited that these topics were appropriate fodder for preliminary questioning. Furthermore, the prosecutors did not appear to be deterred from asking these questions on the grounds that they might be legally objectionable. Indeed, defense attorneys raised objections to preliminary questions in only 1% of the cases ($n = 2$). However, these questions typically took up a very small proportion of preliminary questioning, and they were asked in an unproductive manner, either by yes-no or by what/how static questions. We never observed the kind of rapport-building in which interviewers ask children to narrate an event using invitations and open-ended questions, an approach that has been proven to increase the productivity of children's abuse reports in forensic interviews (Sternberg et al., 1997). The lack of effective rapport-building is also not very surprising; prior research has similarly found that without special training, interviewers fail to ask open-ended questions or ask children to narrate events during rapport building (Sternberg et al., 2001). For example, in one study even interviewers specially trained to elicit a practice narrative did so in only 36% of the interviews (and did so using predominantly open-ended questions in only 16% of the interviews) (Price, Roberts, & Collins, 2013).

Instead, the most common rapport-building strategy was to ask factual questions (e.g., "What grade are you in?") and questions about circumstances surrounding the abuse, which were predominantly what/how static and yes-no questions. Furthermore, prosecutors mentioned the defendant during the preliminary questioning, often asking children to point out the defendant.

This last finding was rather surprising, given the attention paid in legal circles to the potential

traumatic effects of forcing children to face the accused in court (e.g., Maryland v. Craig, 1990).

There is no legal requirement that the defendant be mentioned early in the testimony; indeed, a

potentially useful strategy for decreasing children's stress during testifying would be to instruct

the child to focus on the prosecutor during questioning, and not ask for identification until the

end of the direct examination.

Question Type

As we expected, prosecutors virtually never asked the "Tell me more" invitations that are

recommended in the NICHD protocol (e.g., "You said you went to a party. Tell me more about

that"). Prosecutors occasionally asked what/how dynamic questions, the most open-ended of

which would be classified as invitations or cued invitations under the NICHD scheme (e.g.,

"What happened"), but these were also quite uncommon. Instead, over 80% of prosecutors'

what/how questions were static. These findings are consistent with research on prosecutors'

questions about abuse itself, with very small percentages of invitations (Andrews, Lamb, &

Lyon, 2015).

In accordance with our predictions, what/how dynamic questions were significantly more

productive than what/how static questions; indeed, they elicited on average almost three times as

many words. These findings are consistent with research demonstrating that invitations focusing

on actions elicit greater amounts of information from children than prompts focusing on specific

contextual information (Lamb et al., 2003). What/how causality and what/how ambiguous

questions also appeared to be quite productive, although these question types were not asked

often enough by prosecutors to be statistically analyzed. The average productivity of what/how

causality questions (e.g., "What made you scared?") was consistent with the finding that why

questions were particularly productive wh- questions ("Why were you scared?"). It seems likely

that in addition to eliciting more details from children, these types of questions will also elicit

more cogent narratives (e.g., temporal terms linking events) (Peterson & McCabe, 1992).

Moreover, interviewers who wish to avoid the potential accusatory tone of why questions could

alternatively ask for such information using what/how questions ("Why did you go there?" vs.

"What made you go there?"). Ambiguous questions refer to activities that can be answered either

by reference to actions or a product. We suspected that these questions might be less productive,

and thus separated them from what/how dynamic questions, but their possible greater

productivity suggests that this concern was unwarranted, and that they could be grouped with

what/how dynamic questions in future research. What/how evaluative questions (e.g., "How did

you feel?") appeared particularly unproductive, which is consistent with research finding that

these sorts of questions elicit responsive yet brief answers (e.g., "bad") (Ahern & Lyon, 2014).

They may nevertheless lead to productive information if paired with a question about causality

("How did it make you feel bad?") or a cued invitation ("Tell me more about feeling

bad.") (Ahern & Lyon, 2014).

Implications for practice

The results clearly suggest that prosecutors might improve child witness performance by

administering don't know and don't understand instructions with feedback and rapport-building

with invitations, cued invitations, and what/how dynamic questions. Prosecutors might be

resistant to instructions and rapport building on the grounds that these are investigative methods,

whereas the purpose at trial is to elicit the same story the child has disclosed previously.

However, instructions are designed to increase accuracy and reduce confusion, and narrative

practice rapport building is designed to make children comfortable answering questions and to

enable the trier of fact to hear children in their own words. These goals are as important at trial as during the investigation.

One of the apparent benefits of narrative practice during the rapport building phase is that the child's responses to open-ended questions are more productive when describing the allegation (Sternberg et al., 1997) and this might alarm prosecutors who fear that children will provide new and inconsistent information at trial. However, this assumes that open-ended questions are more likely to elicit inconsistencies than closed-ended questions. This is a dubious proposition; in one recent examination of contradictions by child witnesses at trial, invitations were no more likely to elicit contradictions than yes/no and forced-choice questions (Andrews, Lamb, & Lyon, 2015).

Limitations and Concluding Thoughts

Several limitations should be noted. Although our results clearly indicate that certain types of questions are more productive, in particular what/how dynamic questions, we cannot say whether the additional information is accurate. It is important to note, however, that experimental work supports the notion that children's memory for actions tends to be superior to their memory for descriptions (the sorts of information elicited by what-how static questions), and that wh-questions are less likely to elicit errors than yes/no questions (Peterson et al., 1999).

We were unable to measure the extent to which children received trial preparation before testifying, and prosecutors might argue that such preparation obviates the need for instructions and narrative-practice rapport building. However, this argument raises several problems. First, the research supporting the use of instructions and open-ended rapport building utilized these procedures immediately before eliciting the child's report; it would be surprising if children were able to retain the information and the response habits from pre-trial to trial, particularly given the

stresses of courtroom testimony. Second, it seems highly unlikely that pre-trial preparation was done effectively, because it would be strange if prosecutors practiced instructions with feedback and asked open-ended questions before trial but then failed to do so at trial.

In the present sample, all of the trials occurred in the late 1990s in one county. It is possible that the results are not representative, or that prosecutors' questions have improved over time. However, Los Angeles County is the largest county in the United States. Further, in the 5-year period covered by this study, 3,622 cases of felony child sexual abuse were charged. The county is also highly diverse, both socioeconomically and ethnically, and the courts are located in 11 different branches throughout the county. Furthermore, the prosecutors were surely well-aware of the dangers of poor questioning. Los Angeles County was the jurisdiction in which the McMartin daycare molestation case was tried; one of the first and most highly publicized sexual abuse cases in which the suggestiveness of interviewing was highlighted (Cheit, 2014). More recent research has found that prosecutors continue to rely on closed-ended prompts (Zajac & Cannan, 2009). Furthermore, the legal literature has not uniformly embraced the utility of interview instructions; two recent articles have argued against instructions (Anderson et al., 2010; Russell, 2006; but see Anderson, 2012 [Cornerhouse]).

Finally, our analyses examined prosecutor questions and children's responses at the question level. We proceeded in this fashion, rather than treating question types as repeated measures, because of the infrequency with which children were asked invitations or what-how dynamic questions. As a result, we cannot say for sure whether the productivity differences we observed are clearly attributable to the types of questions, or whether they might be attributable to differences among children (or, for that matter, among cases, since many cases involved multiple children). For example, it might be that attorneys selectively ask invitations and what-

how questions of children who are more talkative. Fortunately, there is clear experimental

support for the superior productivity of invitations (Brown et al. 2013); future experimental work

should examine the relative productivity of different types of wh- questions. Furthermore, our

failure to find age differences in children's performance could also be attributable to the small

percentage of highly productive questions. These questions may be most likely to reveal age

effects, since they capitalize on older children's superior free recall skills.

  The findings suggest that children's cognitive and emotional needs may be overlooked in

criminal court, arguing for changes in the training and supervision of legal professionals

responsible for questioning child witnesses. Future work is critical to enhancing our

understanding of children's performance as witnesses and the means through which we can

foster both their comfort in the courtroom and their ability to provide more complete and reliable

reports.

References

Ahern, E. C., & Lyon, T. D. (2013). Facilitating maltreated children's use of emotional language.

    Journal of Forensic Social Work, 3, 176-203. doi:10.1080/1936928X.2013.854124

American Professional Society on the Abuse of Children, APSAC, (2012). Practice guidelines:

    Investigative interviewing in cases of alleged child abuse. http:// www.apsac.org/

Anderson, J.N. (2012). Update: Recent changes to the cornerhouse forensic interview protocol.

    National Center for Prosecution of Child Abuse, 4, 1-3.

Anderson, J., Ellefson, J., Lashley, J., Miller, A. L., Olinger, S., Russell, A., Stauffer, J., &

    Weigman, J. (2010). The cornerhouse forensic interview protocol: RATAC. *Journal of*

    Practical and Clinical Law, 12, 193-331.

Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015). Question types, responsiveness, and self

    contradictions when prosecutors and defence attorneys question alleged victims of sexual

    abuse. *Applied Cognitive Psychology, 29*, 253-261. doi:10.1002/acp.3103

Brown, D. A., Lamb, M. E., Lewis, C., Pipe, M. E., Orbach, Y., & Wolfman, M. (2013). The

    NICHD Investigative Interview Protocol: An analogue study. *Journal of Experimental*

    Psychology: Applied, *19*, 367-382. doi:10.1037/a0035143

Cal. Ev. Code § 765 (West, Westlaw through 2014 Sess.).

Cal. Penal Code § 288 (West, Westlaw through 2014 Sess.).

Cal. Penal Code § 6250 (West, Westlaw through 2014 Sess.).

Cashmore, J., & De Haas, N. (1992). *The use of closed-circuit television for child witnesses in*

    the ACT (Vol. 1). Australia: Australian Law Reform Commission.

Cheit, R.E. (20014). *The witch hunt narrative: Politics, psychology, and the sexual abuse of*

    children. Oxford: Oxford University Press.

Conerly, S. (1986). Assessment of suspected child sexual abuse. In K. MacFarlane & J.

   Waterman (Eds), *Sexual abuse of young children: Evaluation and treatment* (pp. 30-51).

   New York: Guilford Press.

Cordon, I. M., Saetermoe, C. L., & Goodman, G. S. (2005). Facilitating children's accurate

   responses: Conversational rules and interview style. *Applied Cognitive Psychology, 19*,

   249-266. doi:10.1002/acp.1090

Davies, E., & Seymour, F. W. (1998). Questioning child complainants of sexual abuse: Analysis

   of criminal court transcripts in New Zealand. *Psychiatry, Psychology and Law, 5*, 47-61.

   doi:10.1080/13218719809524919

Endres, J., Poggenpohl, C., & Erben, C. (1999). Repetitions, warnings and video: Cognitive and

   motivational components in preschool children's suggestibility. *Legal and*

   Criminological Psychology, 4, 129-146. doi: 10.1348/135532599167725

Enos, W. F., Cross, T. B., & Byer, J. C. (1986). Forensic evaluation of the sexually abused child.

   Pediatrics, 78, 385-398. Retrieved from:

   http://pediatrics.aappublications.org/content/78/3/385.short

Evans, A. D., Lee, K., & Lyon, T. D. (2009). Complex questions asked by defense lawyers but

   not prosecutors predicts convictions in child abuse trials. *Law and Human Behavior*, *33*,

   258-264. doi:10.1007/s10979-008-9148-6

Evans, A. D., & Lyon, T. D. (2012). Assessing children's competency to take the oath in court:

   The influence of question type on children's accuracy. *Law and Human Behavior, 36*,

   195-205. doi: 10.1037/h0093957

Failer, K. C. (1988). Child sexual abuse: An interdisciplinary manual for diagnosis, case

   management, and treatment. New York: Columbia University Press.

Fed. Ev. Code § 611 (West, Westlaw through 2014 Sess.).

Flin, R., Boon, J., Knox, A., & Bull, R., (1992) The effects of a five-month delay on children's

and adults' eyewitness memory. *British Journal of Psychology, 83*, 323-336.

doi:10.111/j.2044-8295.1992.tb.02444.x

Geddie, L., Fradin, S., & Beer, J. (2000). Child characteristics which impact accuracy of recall

and suggestibility in preschoolers: Is age the best predictor? *Child Abuse & Neglect, 24*,

223-235. doi: 10.1016/S0145-2134(99)00133-7

Gee, S., Gregory, M., & Pipe, M. E. (1999). 'What colour is your pet dinosaur?' The impact of

pre-interview training and question type on children's answers. *Legal and Criminological*

Psychology, 4, 111-128. doi: 10.1348/135532599167716

Goodman, G. S., Taub, E., Jones, D. H., England, P., Port, L. K., Rudy, L., & Prado, L. (1992).

Testifying in criminal court: Emotional effects on child sexual assault victims.

Monographs of the Society for Research in Child Development, 57, 1-142.

doi:10.1111/1540-5834.ep12319887

Hanna, D. K., Davies, E., Crothers, C., & Henderson, E. (2012). Questioning child witnesses in

New Zealand's criminal justice system: Is cross-examination fair? *Psychiatry,*

Psychology and Law, *19*, 530-546. doi:10.1080/13218719.2011.615813

Hershkowitz, I. (2009). Socioemotional factors in child sexaul abuse investigations. *Child*

Maltreatment, 14, 172-181. doi:10.1177/1077559508326224

Leippe, M. R., Brigham, J. C., Cousins, C., & Romanczyk, A. (1989). The opinions and practices

of criminal attorneys regarding child eyewitnesses: A survey. In *Perspectives on children's testimony* (pp. 100-130). Springer New York. doi: 10.1007/978-1-4613-8832-6_6

Lyon, T. D. (2005). Ten step investigative interview. Los Angeles, CA: Author.

Lyon, T. D. (2011). Assessing the competency of child witnesses: Best practices informed by psychology and law. In M.E. Lamb, D. La Rooy, L.C. Malloy, & C. Katz (Eds), *Children's Testimony: A Handbook of Psychological Research and Forensic Practice* (pp. 69-85). Sussex, UK: Wiley-Blackwell.

Lyon, T. D. (2013). Child witnesses and imagination: Lying, hypothetical reasoning, and referential ambiguity. In M. Taylor (Ed.), *The Oxford Handbook of the Development of Imagination.* (pp. 126-136). New York: Oxford.

Lyon, T. D. (2014). Interviewing children. *Annual Review of Law and Social Science.*

Maryland v Craig 1990.

Memon, A., & Vartoukian, R. (1996). The effects of repeated questioning on young children's eyewitness testimony. *British Journal of Psychology, 87*, 403-415. doi: 10.1111/j.2044-8295.1996.tb02598.x

Moston, S. (1987). The suggestibility of children in interview studies. *First Language, 7*, 67-78.

Peters, W. W., & Nunez, N. (1999). Complex language and comprehension monitoring: Teaching child witnesses to recognize linguistic confusion. *Journal of Applied Psychology, 84*, 661-669. doi: 10.1177/014272378700701904

Peterson, C., Dowden, C., & Tobin, J. (1999). Interviewing preschoolers: Comparisons of yes/no and wh- questions. *Law & Human Behavior, 23,* 539-555.

Peterson, C., & Grant, M. (2001). Forced-choice: Are forensic interviewers asking the right

questions? *Canadian Journal of Behavioural Science, 33*, 118-127.

Peterson, C. & McCabe, A. (1992). Parental styles of narrative elicitation: Effect on children's

    narrative structure and content. *First Language, 12,* 299-321.

Poole, D.A., & Dickinson, J.J. (2000). Efficient coding of eyewitness narratives: A

    comparison of syntactic unit and word count procedures. *Behavior research Methods,*

    32, 537-545.

Poole, D. A., & Lindsay, D. S. (2001). Children's eyewitness reports after exposure to

    misinformation from parents. *Journal of Experimental Psychology: Applied, 7,* 27-50.

    doi: 10.1037/1076-898X.7.1.27

Powell, M. B., & Thomson, D. M. (1994). Children's eyewitness-memory research: Implications

    for practice. *Families in Society*, *75*, 204-216. Retrieved from:

    http://psycnet.apa.org/psycinfo/1994-35678-001

Price, H. L., & Roberts, K. P. (2011). The effects of an intensive training and feedback program

    on police and social workers' investigative interviews of children. *Canadian Journal of*

    Behavioral Science, 43, 235 – 244. doi:10.1037/a0022541

Price, H. L., Roberts, K. P., & Collins, A. (2013). The quality of children's allegations of abuse

    in investigative interviews containing practice narratives. *Journal of Applied Research in*

    Memory and Cognition, 2, 1 – 6. doi:10.1016/j.jarmac.2012.03.001

Roberts, K. P., Lamb, M. E., & Sternberg, K. J. (2004). The effects of rapport-building style on

    children's reports of a staged event. *Applied Cognitive Psychology, 18*, 189-202.

    doi:10.1002/acp.957

Russell, A. (2006). Best practices in child forensic interviews: Interview instructions and truth-

    lie discussions. Hamline Hournal of Public Law & Policy, 28, 99-130.

Sanders, M., Schwarz, S., & Mohay, H. (1985). Interviewing child victims: Guidelines for

    criminal justice personnel. Department of Psychiatry, University of Queensland,

    Brisbane, Queensland, Australia.

Saywitz, K. J., & Moan-Hardie, S. (1994). Reducing the potential for distortion of childhood

    memories. *Consciousness and Cognition, 3*, 408-425. doi: 10.1006/ccog.1994.1023

Saywitz, K. J., Snyder, L., & Nathanson, R. (1999). Facilitating the communicative competence

    of the child witness. *Applied Developmental Science, 3*, 58-68. doi:

    10.1207/s1532480xads0301_7

State v. Hanna, 2003 WL 22843592 (Ohio App. 5 Dist. 2003). State v. Brewer, 549 P.2d 188

    (Az. App. 1976).

Sternberg, K. J. & Lamb, M. E. (1997). Effects of introductory style on children's abilities to

    describe experiences of sexaul abuse. *Child Abuse & Neglect, 21*, 1133-1146.

    doi:10.1016/S0145-2134(97)00071-9

Sternberg, K. J., Lamb, M. E., Davies, G. M., & Westcott, H. L. (2001). The memorandum of

    good practice: Theory versus application. *Child Abuse & Neglect, 25,* 669-681.

    doi:10.1016/S0145-2134(01)00232-0

Sternberg, K. J., Lamb, M. E., Orbach, Y., Esplin, P. W., & Mitchell, S. (2011). Use of a

    structured investigative protocol enhances young children's responses to free-recall

    prompts in the course of forensic interviews. *Journal of Applied Psychology, 86*, 997 –

    1005. doi:10.1037/0021-9010.86.5.997

Stolzenberg, S. N. & Lyon, T. D. (2014). How attorneys question children about the dynamics of

    sexual abuse and disclosure in criminal trials. *Psychology, Public Policy, and Law*. *20,*

    19-30. doi:10.1037/a0035000

Tabachnick, B. G., & Fidell, L. S. (2012). *Using Multivariate Statistics* (6th ed.). Upper Saddle

    River, NH: Pearson Education.

Thoresen, C., Lonnum, K., Melinder, A., & Magnussen, S. (2009). Forensic interviews with

    children in CSA cases: A large-sample study of Norwegian police interviews. *Applied

    Cognitive Psychology, 23,* 999-1011. DOI: 10.1002/acp.1534

Warren, A., Hulse-Trotter, K., & Tubbs, E. C. (1991). Inducing resistance to suggestibility in

    children. *Law and Human Behavior, 15*, 273-285. doi: 10.1007/BF01061713

Warren, A. R., Woodall, C. E., Hunt, J. S., & Perry, N. W. (1996). "It sounds good in theory,

    but…":Investigative interviewers follow guidelines based on memory research? *Child

    Maltreatment, 1*, 231-245. doi:10.1177/1077559596001003006

Zajac, R., & Cannan, P. (2009). Cross-examination of sexual assault complainants: A

    developmental comparison. *Psychiatry, Psychology and Law 16*, 36-54.

    doi:10.1080/13218710802620448

Zajac, R., Gross, J., & Hayne, H. (2003). Asked and answered: Questioning children in the

    courtroom. *Psychiatry, Psychology and Law*, *10,* 199-209.

    doi:10.1375/pplt.2003.10.1.199

Table 1

Topics of prompts before the first abuse question

	Examples	# Questions		% Cases
Instructions		*M*	*(SD)*	
Don't know	If you don't know just say "I don't know" or "I don't remember."	.20	(.68)	11
Don't understand	Don't answer a question if you don't understand it, all right?	.21	(.52)	17
Speak out loud	You have to answer out loud.	.71	(1.24)	37
Court roles	I'm [judge name] and I'm in charge of the courtroom.	.40	(1.33)	20
Take a break	If you need a break, just let us know.	.14	(.39)	12
Other	You can speak in Spanish if you want.	.14	(.49)	11
Total		1.79	(3.07)	50
Competency				
Truth lie competency	Which is good, truth or lie?	4.57	(6.56)	64
Body parts/touching	When I say private part, do you understand what I mean?	.25	(1.64)	4
Total		4.82	(6.79)	64
Rapport/Pre-abuse				
Likes/hobbies	Do you like fourth grade?	1.77	(3.14)	55
Birthday/holiday	When is your birthday?	1.63	(1.95)	72
Feelings/comfort	Are you okay there?	.79	(1.73)	37
Demographic information	Where do you go to school?	13.30	(11.73)	97
Abuse circumstances	Where did you go in July?	12.83	(15.82)	93
Total		28.70	(24.20)	100
Defendant				
Identification of defendant	Could you point to where Luis is sitting?	2.11	(1.68)	73
Interaction with defendant	Where did you go with Luis?	3.20	(3.95)	60
Other Facts about defendant	Where does Luis live?	6.03	(6.32)	79
Total		11.34	(9.08)	86

Note. A single turn could contain more than one instruction, but otherwise the number of questions is synonymous with the number of turns. Two percent of cases constituted "other" competency questions (e.g., "What is this a picture of?") ($M = .07$, $SD = .56$). Subtotals for the percentage of cases reflect whether any of the content categories were mentioned.

Table 2

Types and productivity of questions asked during the rapport/pre-abuse questioning

	# Questions		% Questions Asked	# Words in Child Response	
	M	*(SD)*		*M*	*(SD)*
Tell me more invitations	.02	(.13)	0.06	8.00	(5.00)
Wh-	11.99	(9.39)	43	3.97	(5.56)
Forced-choice	1.45	(2.06)	4	3.42	(3.59)
Yes-no	16.01	(14.41)	51	2.02	(3.57)
Not a question	.70	(1.22)	2	4.06	(6.19)
Other	.13	(.43)	.3	2.23	(2.19)
Total	30.30	(24.50)		2.89	(4.59)

Table 3

Types and productivity of Wh- questions asked during the rapport/pre-abuse topic questioning

	# Questions		% Questions Asked	# Words in Child Response	
	M	*(SD)*		*M*	*(SD)*
Why	.25	.61	1	7.24	(5.70)
Where	1.46	2.01	10	5.17	(4.98)
What	4.96	4.44	38	4.14	(6.83)
Who	1.86	2.20	13	4.01	(3.86)
When	.58	.75	6	3.39	(4.21)
How	2.71	1.98	29	2.91	(4.26)
Which	.17	.46	1	2.72	(2.07)
Total	11.99	9.39		3.97	(5.56)

Table 4

Types and productivity of What/how questions asked during the rapport/pre-abuse topic questioning

	Definition	Example	# Questions		% What/how Questions	# Words in Child Response	
			M	*(SD)*		*M*	*(SD)*
Static	States or contexts	How old are you?	6.16	(4.82)	81	2.93	(4.72)
Dynamic	Actions	What did you do?	.82	(1.83)	8	8.11	(10.38)
Causality	Causes/explanations	What makes you think that they went inside?	.15	(.42)	2	8.08	(9.47)
Ambiguous	Activities (making, seeing, writing, saying) for which a response could describe either actions or the end-product.	What did you make?	.21	(.62)	2	8.23	(7.79)
Evaluation	Judgments, emotions, thoughts or physical sensations	What did you think?	.25	(.51)	6	1.76	(2.39)
Unclear	Question referent unclear	What about that?	.07	(.27)	1	4.73	(7.85)
Total			7.67	(5.84)		3.70	(6.08)