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101. Elaborations and denials in children's responses to yes-no any/some questions in forensic interviews.

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Elaborations and Denials in Children's Responses to Yes–No Any/Some Questions in Forensic Interviews

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Abstract

This study examined 379 4- to 12-year-old children's answers to any/some and other yes–no questions in forensic interviews about sexual abuse ($N = 10{,}041$). Yes–no questions that include the terms any/some (e.g., "Did he say anything?") often implicitly ask for elaboration when the answer is yes ("What did he say?"). However, children may give unelaborated responses to yes–no questions, fail to recognize implicit requests, and falsely respond "no." As predicted, children gave more wh- elaborations in response to any/some questions than other yes–no questions, but younger children elaborated less often than older children. Also as predicted, children responded "no" more often to any/some questions than to other yes–no questions, and more often to "any" than to "some" questions. "No" responses were also more common when children were asked potentially vague anything/something questions and else/other/different questions. The results highlight the potential risks of asking children any/some questions.

Keywords

child witnesses, forensic interviews, child abuse

Despite best practice recommendations emphasizing the importance of using primarily open-ended questions when interviewing children about sexual abuse, closed-ended questions such as yes–no questions are used frequently in forensic interviews (Korkman et al., 2006; 2008; Verkampt et al., 2019). Before the adoption of protocols emphasizing the need to rely on open-ended questions, interviewers relied on yes–no questions in eliciting details of suspected abuse (Warren et al., 1996). Although the National Institute of Child Health and Human Development (NICHD) structured protocol cautions against excessive reliance on yes-no questions, Lamb et al. (2018) found that 12–35% of the questions asked in protocol interviews were option-posing, which are predominantly yes–no questions. Furthermore, the use of closed-ended questions is still the norm in court trials, with multiple studies finding that yes–no questions constitute over one third of attorneys' utterances (Andrews & Lamb, 2016; Klemfuss et al., 2014; Stolzenberg & Lyon, 2014; Stolzenberg et al., 2020).

One drawback of closed-ended questions is that they tend to elicit fewer details per response than open-ended questions (Andrews & Lamb, 2016; Hershkowitz et al., 2006). Children exhibit *formal reticence*, whereby they provide minimally sufficient responses to questions based on question type (Stolzenberg & Lyon, 2017). Because yes–no questions can be answered by a simple "yes" or "no," children frequently provide single-word responses without further elaboration (Korkman et al., 2006; Stolzenberg & Lyon, 2014; 2020). This tendency declines with age (Verkampt et al., 2019). The reasons for children's formal reticence are not entirely clear. In part, it may be attributable to children's general tendency to provide less information, which occurs even when they are asked open-ended questions (Lamb et al., 2003). Another possible reason is that children fail to recognize that yes–no questions often imply a wh- question. For example, "Was anyone there?" is formally a yes–no question, but implies the question "Who was there?" Children providing a minimally sufficient response to the yes–no question would simply respond "yes" even if they were capable of responding to the corresponding wh- question. Furthermore, the use of yes–no

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questions with the terms "any" and "some," also known as "polarity items," also carries the risk of false "no" responses (Henderson et al., 2023; Heritage et al., 2007; Sullivan et al., 2022). This study investigated elaborations and denials in 4- to 12-year-old children's responses to yes–no any/some and other yes–no questions. In what follows, we review factors underlying children's failure to elaborate and the risk of false denials in response to yes–no any/some questions.

Implied Requests for Wh-Information in Yes–No Questions

Although ordinary yes–no questions can be felicitously answered by a simple "yes" or "no," there are several subtypes of yes–no questions that seek further elaboration when answered in the affirmative (Kiefer, 1980; Yadugiri, 1986), such as indirect speech acts prefaced by "Do you know" (e.g., "Do you know *where* my sister went?"). Indirect speech acts directly ask whether respondents possess information about the topic in question while indirectly requesting them to provide the information (Clark, 1979). One of the primary rules of effective communication identified by Grice (1975) is the Maxim of Quantity: "Make your contribution as informative as is required (for the current purposes of the exchange)" (p. 45). The Maxim of Quantity suggests that affirmative responses to indirect questions are adequate only if they also answer the embedded question. When the embedded question is a wh-question, a simple "yes" response fails to fulfil the indirect request for further information.

Research shows that underinformative "yes" responses to indirect questions are common among younger children in forensic interviews (Walker & Hunt, 1998; Garcia et al., 2022; Hughes-Scholes & Powell, 2013), court trials (Evans et al., 2017) and analogue research (Evans et al., 2014), suggesting a lack of awareness of the pragmatic implications of indirect questions. In an analysis of attorney-child interactions in court, Evans et al. (2017) found that 26% of 4- to 9-year-old children's responses to "Do you know/remember" questions with an embedded wh-word were unelaborated "yes" responses. Underinformative responses were most common in the youngest age group: 40% of the 4- to 5-year-olds gave unelaborated "yes" responses, compared to 24% of the 8- to 9-year-olds. Examining the effect of minor changes in the wording of transition prompts in forensic interviews, Hughes-Scholes and Powell (2013) and Garcia et al. (2022) found a significant decrease in the proportion of informative responses when children were asked indirect "Do you know" questions rather than wh-questions about the reason for their interview. Uninformative responses often led interviewers to use suggestive techniques in their subsequent questioning (Hughes-Scholes & Powell, 2013).

Although the embedded question is clearly signified by a wh- word in indirect questions, the implied question may be harder to recognize in yes–no questions with the polarity items "any" and "some," which we will refer to as yes-no polarity questions. The question "Was anyone at home?" implies "Who was at home?" when the answer is affirmative, though unlike the corresponding "Do you know who was at home?," the "any" question does not explicitly use the word "who." Questioning 6- to 11-year-old maltreated children about innocuous events, Henderson et al., 2023 found that younger children frequently provided unelaborated "yes" responses to yes–no questions with the term "any." Underinformative responses were most common among the youngest children: 38% of responses provided by 6-year-olds, compared to 11% of 11-year-olds' responses.

Potential False Denials in Response to Any/Some Questions

In addition to children's difficulty with recognizing the implicit wh- question in yes–no polarity questions, the use of the term "any" has also been associated with an increase in "no" responses (Henderson et al., 2023; Heritage et al., 2007). Linguists distinguish between positive and negative polarity items, with the positive polarity item "some" appearing primarily in positive contexts (e.g., "I have some money") and the negative polarity item "any" used primarily in sentences expressing denial (e.g., "I don't have any money") (Giannakidou 2017). Heritage et al. (2007) compared adult patients' responses to the questions "Is there *something* else you want to address in your visit today?" and "Is there *anything* else you want to address in your visit today?" at the end of a medical appointment. Whereas 90% of patients with an additional concern responded affirmatively when asked about "something else," only 53% did so when asked about "anything else," suggesting that "any" communicated "an expectation for a 'no' response" (p. 1432). Similarly, Henderson et al., 2023 found that yes–no questions using the term "any" increased denials. Children gave negative responses to 28% of the yes-no "any" questions (e.g., "Did you see anything?"), whereas the corresponding wh- question (e.g., "What did you see?") elicited a negative response (e.g., "nothing") only 11% of the time. Younger children were more likely to respond negatively, though their tendency to do so was not affected by question-type.

Although changing "any" to "some" largely solved the problem in Heritage and colleagues' study (2007), questions with "some" may still be problematic because of vagueness, particularly when they are asked of children. Examining attorney-child interactions in court, Sullivan et al. (2022) found that miscommunications frequently involved attorneys' use of yes–no any/some questions: children initially answered "no" and then subsequently answered more specific questions in ways that contradicted their initial denial.

Sullivan et al. (2022) suggest that both "some" and "any" questions are often vague, making it difficult for children to search their memory for specific details.

Vagueness may be exacerbated when interviewers ask yes-no questions with the words "anything" or "something" (e.g., "did you see anything?"), which we will refer to as anything/something questions. The word "thing" can "refer to almost any category of concepts," including objects, actions, and events (Fronek, 1982: p. 636). Furthermore, the use of "else" and related words ("other" and "different") may also increase "no" responding because they require the child to monitor their previous responses in order to identify possibly novel details. That is, if asked "did anything *else* happen?" the child must recognize both that "else" refers to everything they previously said, and that the interviewer is asking for content that has *not* been previously mentioned. We will refer to these questions as else/other/different questions. In the literature, they have been referred to as comparative reference markers expressing difference (Yap & Celce-Murcia, 2000) and as switch-polarity anaphora (Fretheim, 2007).

The Present Study

Yes–no questions with the terms "any" and "some" may be difficult for children due to the implicit request for elaboration and a potential "no" bias. This study investigated 4- to 12-year-old children's responses to yes-no questions in forensic interviews by assessing the rate of elaborations and denials in response to yes-no "any" questions, "some" questions, and questions without a polarity item. In addition, we also considered whether yes-no anything/something questions and else/other/different questions were related to elaboration and denial.

We hypothesized that 1) yes-no any/some questions would elicit more wh- elaborations in affirmative responses than yes–no questions without a polarity item, but that 2) younger children would provide fewer wh- elaborations to all types of yes–no questions. We also expected that 3) there would be an interaction between children's age and question type in that the age difference in elaboration rates would be larger for any/some questions than for other yes–no questions. We hypothesized that 4) "any" questions would elicit more denials than "some" questions and non-polarity yes–no questions and that 5) younger children would display a stronger "no" bias in response to "any" questions than older children. Finally, we expected that denials would be increased by the use of 6) anything/something questions and 7) else/other/different questions.

Method

Sample

We examined transcripts of 379 forensic interviews with children aged 4–12 years ($M = 7.45$, $SD = 2.62$) alleging sexual abuse. The interviews were conducted between 2004 and 2013 at five Child Advocacy Centers in California. Most of the interviewers received California Forensic Interview Training, which provides interviewers with the 10-Step Protocol (Lyon, 2014), a revision of the original NICHD Protocol. The majority of the children in the sample were girls (75%). Transcripts were excluded if the interview was conducted in Spanish. The interviews were anonymized and transcribed for training purposes with the consent of the child's legal guardian. The use of the transcripts for research purposes was approved as exempt by the University of Southern California Institutional Review Board.

Coding

All yes–no questions were extracted from a larger data file coded for question type in prior research. Compound questions (e.g., "Did he touch you? Where was his hand?"), facilitators (e.g., "Really?" "Yeah?") and questions echoing the child's previous response were excluded, because it could not be determined whether the interviewer intended to ask a yes–no question and whether the child was responding to a yes–no question. Indirect yes–no questions with an embedded wh-word (e.g., "Do you know where he went?"/"Did he tell you what to say?") were also excluded, because they explicitly mentioned the wh- word, and because how children answer "Do you know/remember" questions has been explored in prior work (Evans et al., 2017; Garcia et al., 2022). Interviewers' questions were machine coded for the presence of the polarity items "any" and "some" on their own or in compound words. The results of the machine coding were checked by a human coder to remove "any" and "some" words that did not constitute polarity questions (e.g., "What if we showed you some pictures, would you be able to point them out?"). Questions with polarity items were also machine coded for the use of "anything" or "something" (anything/something questions) and for the use of "else," "other," or "different" (else/other/different questions). Human coders categorized children's responses as affirmations or denials or other response types (e.g., "I don't know," off-topic). Affirmative responses were coded as wh- elaborated (e.g., Q: "Was anyone there?" A: "Yes, my mom and my brother.") or non-elaborated (e.g., Q: "Did he do anything that night?" A: "Yes.") based on whether they provided information that would answer a wh-question.

Interrater Reliability

A random selection of 20% of the question-answer pairs across 20% of transcripts were independently re-coded. Cohen's κ was used to assess agreement between coders. Agreement was high regarding the classification of children's responses (K = .96, SE = .01, 95% CI [.94, .98]) and whether or not responses contained wh- elaboration (K = .88, SE = .02, 95% CI [.85, .91]). Reliability assessment was not required for machine-calculated variables.

Analysis Plan

Descriptive statistics were calculated to examine the frequency of polarity items in interviewers' questions and the proportion of affirmations, denials and wh- elaborations in children's answers. Analyses were conducted using binomial general linearized mixed effects models (GLMMs). GLMMs combine the properties of linear mixed models (which incorporate random effects) and generalized linear models (which handle non-normal data) and are preferable to traditional analysis of variance (ANOVA) models because they have fewer assumptions, handle binary response variables, and maximize power while simultaneously estimating between-subject variance (Bates et al., 2015). Fixed effects included children's age (continuous); polarity type ("any," "some," "non-polarity"); the use of "anything" or "something" (anything/something present or absent); the use of "else," "other," or "different" (else/other/different present or absent); and interactions between these variables. Dependent variables included the presence of wh- elaborations and the presence of denials in children's responses. A by-subject random effect for child was included to control for differences in the individual response characteristics of each child.

Analyses were performed using the glmer function in the R package lme4 with the bobyqa optimizer (Bates et al., 2015) and model fitting was computed using the anova function in the R stats package (R Core Team, 2013). Pairwise comparisons with Tukey HSD and estimated marginal means were computed using the emmeans function in the R package emmeans (Lenth, 2020). The results from the best-fit models are reported alongside the unstandardized fixed effects estimates (B), standard errors of the estimates (SE) and estimates of statistical significance (Z and p values). Odds ratios (OR) are reported for post-hoc pairwise comparisons.

Results

Overall, interviewers asked 11,319 yes–no questions. Responses that could not be coded as affirmative or negative were excluded from analyses, including failures to respond (2%; $n = 228$), requests for clarification (2%; $n = 183$), "I don't know/remember" responses (2%; $n = 196$), and off-topic responses (6%; $n = 682$). A small number of questions included both "any" and "some" ($n = 25$), and these were also excluded from analyses. The final sample of yes–no questions analyzed for the present study was $N = 10,005$. Children gave an affirmative response to 52% ($n = 5,186$) of questions and a denial in response to the remaining 48% ($n = 4,819$). Forty percent ($n = 3,892$) of the questions were yes-no polarity questions (73% "any"; $n = 2,907$; 27% "some"; $n = 985$). Among questions with a polarity item, 45% ($n = 1,756$) were anything/something questions (69% "any"; $n = 1,219$; 31% "some"; $n = 537$), and 36% ($n = 1,392$) were else/other/different questions (86% "any"; $n = 1,193$; 14% "some"; $n = 199$). Fifteen percent ($n = 756$)

of affirmative responses and 0.9% ($n = 45$) of denials included wh- elaborations. Wh-elaborated "no" responses were considered anomalies, potentially resulting from poorly phrased questions or misunderstandings, and were not analyzed further due to their low frequency. Table 1 summarizes the proportion of unelaborated "yes," wh-elaborated "yes" and "no" responses by question category. Table 2 displays all GLMM results.

Wh- Elaboration in Affirmative Responses

To test the hypotheses that any/some questions would elicit more wh- elaborations than other yes–no questions, that younger children would elaborate less to yes–no questions than older children, and that there would be an interaction between children's age and polarity type, analyses examined the frequency of wh- elaborations in children's affirmative responses ($n = 5,186$) in relation to age and polarity type. The best fit model included children's age, polarity type ("any," "some," "non-polarity") and an interaction between the two. Controlling for the random effect of child (Variance = .53, $SD = .73$), there was a main effect of age, with older children providing more wh- elaborations than younger children, $B = .13$, $SE = .04$, $Z = 3.11$, $p = .002$. As predicted, there were main effects of polarity type in that questions with the terms "any" (61%, $B = 3.81$, $SE = .44$, $Z = 8.74$, $p < .001$) and "some" (29%, $B = 3.68$, $SE = .52$, $Z = 7.12$, $p < .001$) elicited more wh-elaborations in affirmative responses than non-polarity questions (2%). Post-hoc analyses comparing estimated marginal means showed that the odds of a wh- elaboration were 3.85 times higher for "any" questions than "some" questions ($SE = .04$, $Z = 8.89$, $p < .001$). There was also a significant interaction between age and polarity type ($B = .09$, $SE = .05$, $Z = 2.05$, $p = .04$). Wh- elaboration rates increased with age in response to "any" questions, but not "some" questions or other yes-no questions. As a result, the oldest children showed the largest difference in elaboration between "any" and "some" questions (Figure 1).

We also conducted exploratory analyses to determine if the use of anything/something or else/other/different questions was related to wh- elaboration. We analyzed the frequency of wh- elaborations in polarity questions with affirmative responses, excluding yes-no questions without polarity items ($n = 1,282$). The best fit model included children's age, polarity type, anything/something (present, absent) and else/other/different (present, absent), without interactions. Controlling for the random effect of child (Variance = .68, $SD = .83$), there was a main effect of age ($B = .16$, $SE = .04$, $Z = 4.72$, $p < .001$) and polarity type ($B = 1.21$, $SE = .17$, $Z = 7.33$, $p < .001$), as in the previous model. Anything/something questions led to more wh- elaborations (55%) than other polarity questions (46%, $B = .35$, $SE = .14$, $Z = 2.47$, $p = .01$), and else/other/different questions led to more wh- elaborations (64%) than other polarity questions (36%, $B = 1.12$, $SE = .16$, $Z = 7.19$, $p < .001$).

Table 1. The proportion of unelaborated "yes," elaborated "yes" and "no" responses by question category.

	"Any" questions (n = 2,907)	"Some" questions (n = 985)	Non-polarity questions (n = 6,113)
Unelaborated yes	12% (n = 348)	29% (n = 284)	62% (n = 3,798)
Elaborated yes	18% (n = 527)	12% (n = 123)	2% (n = 106)
No	70% (n = 2,032)	59% (n = 578)	36% (n = 2,209)

Table 2. Summary of analyses.

GLMM1: Wh- Elaborations in Relation to age and Polarity Type					
Random effect	Child	Variance = .53	SD = .73		
Fixed effects	Age	B = .13	SE = .04	Z = 3.11	p < .002*
	"Any" – non-polarity	B = 3.81	SE = .44	Z = 8.74	p < .001*
	"Some" – non-polarity	B = 3.68	SE = .52	Z = 7.12	p < .001*
	Polarity X age	B = .09	SE = .05	Z = 2.05	p = .04*
Post-hoc comparison	"Any" – "some"	OR = .26	SE = .04	Z = 8.89	p < .001*

GLMM2: Wh- elaborations in relation to age, polarity type, anything/something questions, and else/other/different questions					
Random effect	Child	Variance = .68	SD = .83		
Fixed effects	Age	B = .16	SE = .04	Z = 4.72	p < .001*
	"Any" – "some"	B = 1.21	SE = .17	Z = 7.33	p < .001*
	anything/something	B = .35	SE = .14	Z = 2.47	p = .01*
	Else/other/different	B = 1.12	SE = .16	Z = 7.19	p < .001*

GLMM3: "No" responses in relation to age and polarity type					
Random effect	Child	Variance = .17	SD = .41		
Fixed effects	Age	B = .002	SE = .01	Z = .15	p = .88
	"Any" – non-polarity	B = 1.48	SE = .05	Z = 28.33	p < .001*
	"Some" – non-polarity	B = .92	SE = .07	Z = 13.51	p < .001*
Post-hoc comparison	"Any" – "some"	OR = .57	SE = .05	Z = 6.79	p < .001*

GLMM4: "No" responses in relation to age, polarity type, anything/something questions, and else/other/different questions					
Random effect	Child	Variance = .27	SD = .52		
Fixed effects	Age	B = .004	SE = .02	Z = .19	p = .85
	"Any" – "some"	B = .58	SE = .09	Z = 6.42	p < .001*
	anything/something	B = .25	SE = .07	Z = 3.40	p < .001*
	Else/other/different	B = .21	SE = .08	Z = 3.40	p < .001*

Note. * denotes significance at p < .05.

"No" Responses to Polarity Questions

We next tested the hypotheses that "any" questions would elicit higher rates of denial than "some" questions and other yes–no questions, and that younger children would display a stronger "no" bias in response to "any" questions than older children. Analyses examined the frequency of "no" responses to yes-no questions (n = 10,005) in relation to age and polarity type. The best fit model included children's age and polarity type ("any," "some," non-polarity), without an interaction. Controlling for the random effect of child (Variance = .17, SD = .41), there was no significant effect of age, but there were significant main effects of polarity type in that questions with "any" (71%, B = 1.48, SE = .05, Z = 28.33, p < .001) and questions

with "some" (58%, B = .92, SE = .07, Z = 12.51, p < .001) elicited a higher rate of "no" responses than non-polarity yes–no questions (36%). Post-hoc analyses comparing estimated marginal means showed that the odds of a "no" response were 1.75 times higher for "any" questions than "some" questions (SE = .05, Z = 6.79, p < .001).

Finally, we tested the hypotheses that denials would be increased by the use of anything/something and else/other/different questions. We analyzed the frequency of "no" responses to polarity questions (n = 3,892), excluding yes-no questions without polarity items. The best fit model included children's age, polarity type ("any," "some"), anything/something questions (present, absent), and else/other/different questions (present, absent), without interactions. Controlling for
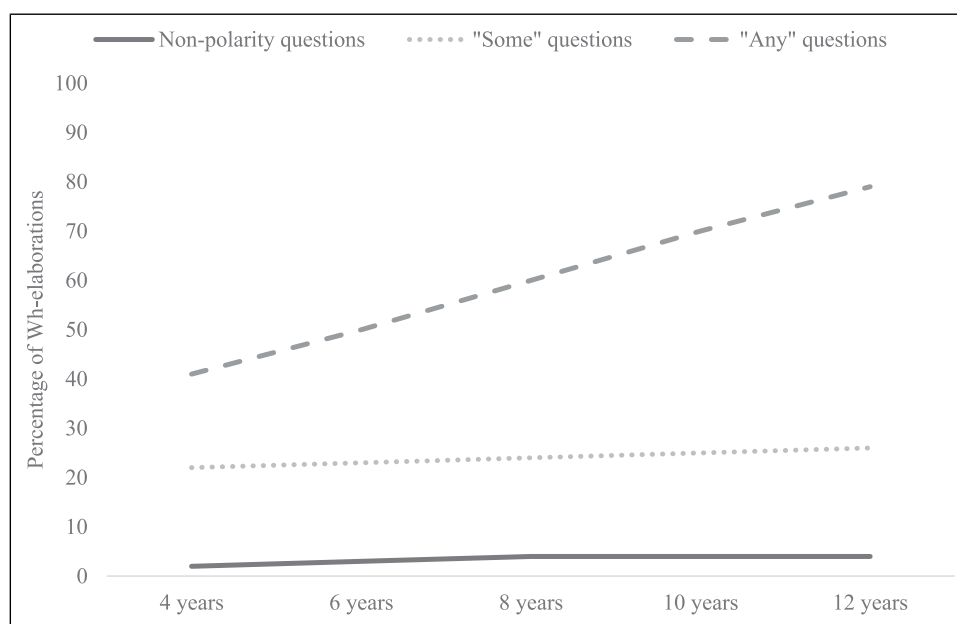
Figure 1. Rates of elaboration in response to yes–no "any," "some," and non-polarity questions across age.

the random effect of child (Variance = .27, SD = .52), there was no significant main effect of age, and a significant main effect of polarity type (B = .58, SE = .09, Z = 6.42, p < .001), consistent with the prior model. Anything/something questions led to more denials (69%) than other polarity questions (63%, B = .25, SE = .07, Z = 3.40, p < .001). Similarly, else/other/different questions elicited more "no" responses (69%) than other polarity questions (64%, B = .21, SE = .08, Z = 2.71, p = .007).

Discussion

Yes–no questions with the polarity items "any" and "some" often implicitly ask a wh- question when answered affirmatively. For example, when one asks "Did he say anything?" one implies "What did he say?" when the answer is "yes." This study examined wh- elaborations and denials in 4- to 12-year-old children's responses to yes–no questions in forensic interviews. Examining yes–no questions with the polarity items "any" and "some," which we call polarity questions, and comparing them to yes–no questions without polarity items, we assessed the extent to which children answered "yes" or "no," and when they answered "yes," whether they elaborated with information that would answer an implied wh- question. Several of our hypotheses were confirmed. Children elaborated more frequently when answering "yes" to polarity questions than other yes–no questions. "Any" questions led to more denials than "some" questions, and "some" questions led to more denials than yes–no questions without polarity items. Finally, yes–no polarity questions that asked about anything/something or used the terms else/other/different also led to more denials than other yes-no polarity questions.

There were also a number of unexpected findings. With respect to wh- elaborated "yes" responses, questions with "any" elicited more wh- elaborations than questions with "some," and anything/something and else/other/different questions elicited more wh- elaborations than other any/some questions. These results paralleled the findings with respect to "no" responses. That is, question types associated with higher rates of "no" responding were also associated with higher rates of wh- elaborated "yes" responding. With respect to age differences, the only age effect was that older children were more likely to give wh- elaborated "yes" responses to "any" questions than younger children. Wh- elaborations in response to "some" and non-polarity questions were infrequent across age. Furthermore, higher rates of denial in response to "any" questions also failed to vary with age. In what follows, we discuss the significance of the findings, suggest possible reasons for the unexpected findings, and outline future research questions.

Do Children Elaborate in Response to Yes-No Any/Some Questions?

Consistent with the theory of formal reticence (Stolzenberg & Lyon, 2017), which argues that younger children will provide minimally sufficient responses given the form of the question, and thus give unelaborated "yes" and "no" responses to yes–no questions, the youngest children usually failed to elaborate on their "yes" responses. Our results suggest that one explanation for reticence is that younger children are less likely to recognize and respond to the implied wh- question in yes–no "any" questions. The rate of elaboration to "any" questions almost doubled from 40% of responses by 4-year-olds to close

to 80% of responses by 12-year-olds. This finding is consistent with prior research finding that younger children are more likely than older children to give underinformative "yes" responses to yes–no questions that imply a wh- question. This prior research includes lab and observational work analyzing "Do you know/remember" wh- questions (Evans et al., 2014; 2017; Garcia et al., 2022), and lab research examining yes–no "any" questions (Henderson et al., 2023).

The results revealed previously unexplored differences in wh- elaboration rates between yes–no "any" and "some" questions. When they answered "yes," children elaborated in response to approximately 60% of "any" questions compared to 30% of "some" questions, and the elaboration rate in response to "some" questions did not vary with age. We were surprised and puzzled by these findings, because our intuition is that "some" questions imply wh- questions in the same fashion as "any" questions (compare "Did he say anything?" to "Did he say something?"). We identified one factor that contributed to differences in wh- elaboration rates between "any" and "some" questions: else/other/different questions elicited higher rates of elaboration, and they were disproportionately likely to be asked as "any" questions (e.g., "Did anything else happen?"). However, this factor cannot by itself explain the magnitude of the difference in elaboration rates between "any" and "some" questions, and future work should explore the reasons why "some" questions elicit lower rates of elaboration than "any" questions, and determine whether elaboration increases at some point in development.

Are Polarity Questions Associated With a "no" Bias?

In previous research, yes–no questions with polarity items were found to be frequent sources of miscommunication in court exchanges between children and attorneys (Sullivan et al., 2022), as they frequently elicited "no" responses that were contradicted by children's subsequent responses. We found that yes–no questions with the negative polarity item "any" led to more denials than questions with the positive polarity item "some," consistent with Heritage and colleagues' (2007) work with adults. However, "some" questions also elicited more denial than yes–no questions without polarity items, suggesting that the negative context associated with use of the term "any" cannot fully account for the "no" bias associated with polarity questions. Our findings lend support to the theory proposed by Sullivan et al. (2022) that the vagueness of polarity items may contribute to false denials, and this is bolstered by our finding that "no" responses were most frequent in response to potentially vague anything/something questions and else/other/different questions.

Intriguingly, we found that all of the factors that increased elaboration rates – using "any" rather than "some," asking anything/something questions, and asking else/other/different questions – were also associated with an increase in denials. We suspect that this may be due to the

cognitive effort required in answering implicit wh- questions. In order to correctly answer "yes," one must generate the content responsive to the implicit wh- question. If one fails to generate any information, then the answer is "no." If the content is more difficult to generate, or if the question suggests a "no" response, one is more likely to simply respond "no," but if one expends the additional effort and successfully generates information, that information is readily available for an elaborative response. Hence, "yes" responses will be less common, but more likely to be elaborative.

Limitations and Future Research

We could not establish whether interviewers were in fact implying wh- questions when asking yes–no any/some questions, or whether they were asking simple yes–no questions. Future work could examine how interviewers followed up when children gave unelaborated "yes" responses, both to determine what information interviewers were attempting to obtain, and to assess the extent to which underinformative answering leads to the omission of forensically relevant details from children's accounts. Replicating the present study using transcripts of children's courtroom testimony would also provide valuable insight. Research suggests that prosecutors elicit more elaborated responses than defense attorneys (Klemfuss et al., 2014; Stolzenberg et al., 2020), but this may not be true when they ask "any" questions of younger witnesses who fail to understand implied questions. Although anything/something and else/other/different questions were associated with statistically significant differences in elaboration and denial rates, those differences were sometimes modest. Research should further explore the impact of these variables on children's responses in forensic and experimental contexts. Future research should also examine child characteristics that may affect children's elaborations and response biases, including race and ethnicity, socioeconomic status and first language.

Using data from forensic interviews ensured that our findings are directly applicable to the field but prevented us from determining the accuracy of children's responses. Elevated rates of denial in response to "any" and "some" yes–no questions appear indicative of a "no" bias associated with polarity questions, but alternative explanations of this finding are possible. For instance, interviewers may be more likely to use polarity items when asking screening questions about low-likelihood events and details, such that higher rates of denial in response to polarity questions could reflect interviewers' questioning tendencies rather than a response bias on the children's part. Future work could explore the timing and content of yes–no any/some questions in order to tease apart these possibilities. Furthermore, analogue research can systematically compare yes–no any/some questions and measure response biases and elaborations. For example, yes–no "any" questions may elicit higher rates of false "no" responses than

yes–no "some" questions, but they may also elicit lower rates of false "yes" responses. In other words, yes–no "some" questions may be suggestive, and only knowing ground truth can definitively resolve this question.

Implications for Practice

Interviewers should be alert to the possibility that children will give unelaborated "yes" responses to yes–no questions that implicitly ask a wh- question because they fail to recognize the implicit question, and not because they are reluctant to elaborate or incapable of answering wh- questions. Recognizing this problem can help practitioners avoid asking a series of yes–no questions, and increase the frequency of "pairing," a technique recommended by Lamb et al. (2018) in which "yes" responses to yes–no questions are followed up with open-ended questions. This is easier said than done, however, as forensic interviewers do not routinely pair closed-ended questions with open prompts (Korkman et al., 2006; Wolfman et al., 2016).

When used appropriately, "pairing" ensures that children's unelaborated affirmations are explored further, but it does not overcome the problem of potentially false "no" responses. Following denials with an open-ended request for elaboration would potentially confuse children and appear suggestive. Clarifying potentially vague yes–no polarity questions with more specific inquiries leads to inconsistencies. As Sullivan et al.'s (2022) research demonstrates, apparently false denials in response to polarity questions led to self-contradictions in children's narratives, which can then be used to undermine their credibility in court (Szojka et al., 2017).

Based on Heritage et al.'s (2007) findings, interviewers may believe that "some" is a preferable alternative to "any" due to the term's use in positive rather than negative contexts. However, "some" questions were only half as effective as "any" questions in eliciting elaborations in children's affirmative responses. Furthermore, although "some" questions led to fewer denials than "any" questions, they still elicited more frequent "no" responses than other yes–no questions. As noted above, future research is needed in order to better understand the potential utility of yes–no "some" questions with children.

In many cases, interviewers can substitute yes–no polarity questions with wh- questions asking for elaboration of a child's prior report. For example, rather than asking "Did you see anything?" an interviewer could ask "What did you see?" Similarly, rather than asking "Was anyone else there?" an interviewer could ask "Tell me everyone who was there." Henderson et al., 2023 demonstrated the effectiveness of asking wh-questions after a series of broad open-ended requests for recall. Children were half as likely to respond with denials, and provided new details twice as frequently, compared to their responses to corresponding "any" yes–no questions.

Wh- questions may be suggestive, however, insofar as they presuppose information. "What did you see?" presupposes that the child saw something. Henderson et al., 2023 argue that interviewers can safely ask what they call generic suppositional wh- questions about perceptions (seeing and hearing), conversations, and actions, based on the finding that children's responses to wh- questions about these subjects are comparably accurate to requests for free recall (Brown & Pipe, 2003; Poole & Lindsay, 1995; Stolzenberg et al., 2018). The questions should be worded so that they can be easily answerable without acceptance of the presupposition (e.g., the child can answer "nothing"). They should be generic, rather than specific, such that an affirmative response to the corresponding yes–no version of the question would not endorse an undisclosed substantive detail about abuse. For example, asking "What came out of his penis?" would be excessively specific, because a "yes" response to "Did something come out of his penis?" would be a substantive detail. Asking generic questions (such as "What did you see?") reduces the danger that children who have an affirmation bias will provide false substantive details of abuse.

Conclusion

Yes–no any/some questions often implicitly ask a wh- question, and they elicited more elaborations from children than other yes–no questions. Interviewers may prefer these questions because of their higher rates of elaboration. However, younger children are less likely to elaborate in response to yes–no "any" questions than older children and may fail to recognize the implicit question. Furthermore, yes–no "any" questions are associated with more "no" responses than yes–no "some" questions, which in turn elicit more "no" responses than other yes–no questions. "No" responses were even more common in response to potentially vague yes–no anything/something questions and else/other/different questions. Coupled with prior experimental (Henderson et al., 2023; Heritage et al., 2007) and observational work identifying problems with yes–no polarity questions (Sullivan et al., 2022), these results suggest that interviewers should avoid yes–no questions with "any" or "some" whenever possible in order to minimize underinformative responses and false denials.

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