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The Effects of Implicit Encouragement and the Putative Confession on Children's Memory Reports

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Abstract

The current study tested the effects of two interview techniques on children's report productivity and accuracy following exposure to suggestion: implicit encouragement (backchanneling, use of children's names) and the putative confession (telling children that a suspect "told me everything that happened and wants you to tell the truth"). One hundred and forty-three, 3–8-year-old children participated in a classroom event. One week later, they took part in a highly suggestive conversation about the event and then a mock forensic interview in which the two techniques were experimentally manipulated. Greater use of implicit encouragement led to increases, with age, in children's narrative productivity. Neither technique improved or reduced children's accuracy. No increases in errors about previously suggested information were evident when children received either technique. Implications for the use of these techniques in child forensic interviews are discussed.

Keywords

forensic interview; children; memory; implicit encouragement; putative confession; suggestibility

Children are routinely called upon in a range of environments—at home, in school, in their communities, and even in legal settings—to talk about events that they experienced or witnessed. In legal contexts, these events may be emotionally charged, as in instances of maltreatment or witnessing violence, and the information children report may have significant consequences for children, families, and the pursuit of justice. It is therefore

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imperative that children are questioned in a manner that maximizes the completeness and accuracy of their reports.

During the past several decades, a large and highly influential body of work has emerged testing the effects of different question forms on children's response tendencies (Brubacher, Powell, & Roberts, 2014; Poole, 2016). Results have demonstrated the harmful effects of closed-ended and suggestive questions and the superiority of free-recall prompts in minimizing commission errors and encouraging accurate responding. A recurring challenge with free-recall prompts, however, is that children's responses are often insufficient, and fewer studies have addressed how children's recall reports can be enhanced without compromising accuracy, particularly in situations in which children have already been exposed to suggestion. In the present study, we systematically tested the effects of two techniques—implicit encouragement (back-channel utterances such as "uh-huh" and "oh ok" and children's names) and the putative confession (telling children that a suspect "told me everything that happened and wants you to tell the truth")—on children's report completeness and accuracy. Specifically, we examined whether the two techniques directly and interactively, and in conjunction with age, influenced children's memory reports of a prior school event, particularly under conditions that involved previous exposure to high levels of suggestion about positive and negative details of the event.

Implicit Encouragement

We use the phrase implicit encouragement to refer to linguistic and paralinguistic behaviors used by interactional partners in dyadic exchanges that implicitly communicate interest in the partner's contribution. Implicit encouragement is distinguished from explicit encouragement, in which interest is communicated directly (e.g., "you are telling very well"). Behaviors of primary interest here include back-channel utterances and vocatives. Back-channel utterances are brief, often non-lexical expressions (e.g., uh-huh, mm-hmm) that implicitly communicate to a conversational partner that a listener is paying attention, interested, and would like the speaker to continue (Duncan, 1975; Peterson et al., 1999). Also referred to as "response tokens" (Gardner, 2001; McCarthy, 2003) or "facilitators" (Hershkowitz, 2002), back-channel utterances are prevalent in everyday conversations and have been found to be beneficial in a range of contexts, including interpersonal communication, education, and linguistics (Duncan, 1975; Krauss, Garlock, Bricker, & McMahon, 1977; Myers & Macnaghten, 1999; Roger & Schumacher, 1983; Tolins & Tree, 2014; Wannaruk, 1997). For instance, in classrooms, children produce longer responses when teachers include back-channel utterances that acknowledge what children said (e.g., oh really, uh-huh) than when teachers ask follow-up, yes/no or wh-questions to request further details (Dillon, 1985). Also, children provide more elaborate narratives in conversations with parents who include a higher number of back-channel utterances (Peterson, Jesso, & McCabe, 1999). Finally, the use of back-channel utterances with high-risk populations (e.g., learning disabled, low-income) improves basic language and narrative competence (Miller, Lechner, & Rugs, 1985; Peterson et al., 1999).

Vocatives, another linguistic technique explored in the present study, refer to words or phrases that are "recognized as having a social function of expressing participant

relationships along with that of summoning or attention-getting" (McCarthy & O'Keeffe, 2003, p. 155). One of the most common vocatives in dyadic interactions is the use of a conversational partner's name. Theoretically, vocatives, especially name use, may enhance children's productivity and accuracy by increasing children's feelings of familiarity with an interviewer, thereby providing elements of support (Poole, Brubacher, & Dickinson, 2015), and by eliciting children's attention, thereby keeping children engaged and on task.

Observational research of children questioned about sexual and physical abuse provides some evidence that implicit encouragement increases children's productivity. Back-channel utterances have been associated with children providing a greater amount of abuse-relevant details in forensic interviews, particularly when paired with recall questions (Hershkowitz, 2002; Lamb, Hershkowitz, Sternberg, Boat, & Everson, 1996). Hershkowitz (2009) coded a host of interviewer behaviors in forensic interviews with suspected victims as being indicative of interviewer-provided support. Included in these behaviors was an interviewer's use of the child's name. Greater support was associated with increases in the amount of information that 7–9-year-olds produced in their recall reports about abuse. Of interest, similar benefits were not found among younger (e.g., 4–6-year-old) children.

Although these results are promising, several important questions remain about the precise effects of implicit encouragement on children's reporting. First, one should be careful in distinguishing between implicit and explicit encouragement. Hershkowitz's (2009) definition of interviewer-provided support included not only name use but also "neutral reinforcements" (e.g., "You are doing just fine/you are telling very well/you really help me understand"). Although Hershkowitz (2009) was careful to exclude reinforcement of specific content (e.g., "Good that you ran away in time"), neutral reinforcements also might be construed as suggestive, and in any event should be separately analyzed.

A second question concerns whether age differences exist in the effects of implicit encouragement. As mentioned, Hershkowitz found that support was more beneficial to older than younger children. This perhaps resulted from older children's more developed linguistic abilities, meta-awareness, and theory-of-mind capacity, which may have helped them recognize that interviewers were implicitly asking for further details (Ardila & Rosselli, 1994; Elbro, 1996; Fowler, 1991; Rochat, 2003; See Flavell, 2004). On the other hand, implicit encouragement might actually be of greater benefit to younger children (e.g., 3–5-year-olds), who need more support in staying focused and engaging in memory and reporting tasks (Fivush & Hamond, 1990; Hudson, 1990; Mandler, 1990). Developmental differences in the potential effects of implicit encouragement need to be tested directly.

A third question concerns that of causality. Specifically, in correlational and field research, which has at times directly coded for implicit encouragement, it is often unclear whether back-channel utterances or other encouragements increase children's productivity or whether productive children elicit more encouragements from conversational partners. Hints relevant to the former interpretation stem from experimental investigations of the effects of interviewer-provided social support on children's memory and suggestibility. In these studies, implicit encouragement was neither coded nor mentioned, although high support behaviors may well have included greater provision of back-channeling, for instance, in the

form of nods of encouragement while children were speaking. The provision of support did not consistently increase productivity, but it did consistently enhance accuracy, most often by decreasing errors and suggestibility (see Bottoms, Quas, & Davis, 2007; Saywitz, Goodman, & Lyon, 2002, for reviews). By systematically varying implicit encouragement specifically, the question of directionality can be addressed directly.

A fourth and related question concerns whether implicit encouragement affects the accuracy of the information children provide. In field investigations, within which positive associations between implicit encouragement and productivity have been noted, accuracy is unknown. Thus, the increase in productivity could be coming at a cost. Perhaps, for instance, back-channeling encourages children to produce more information even when they cannot remember additional details, leading to increased errors, especially when children have been exposed to suggested details. On the other hand, back-channeling may increase accuracy by helping children to focus on an interviewer's questions. Back-channeling and the use of children's names also may act as general support, which as mentioned, reduces children's errors (Davis & Bottoms, 2002; Milojevich & Quas, 2016; Saywitz et al., 2002). Overall, the question of whether implicit encouragement increases productivity without compromising accuracy needs to be directly tested.

Putative Confession

A second technique that could affect children's productivity and accuracy is the 'Putative Confession' (PC), a recently developed "truth induction" strategy designed to help children overcome fears of disclosing negative events or information (Lyon et al., 2014; Quas, Stolzenberg, & Lyon, 2018; Rush, Stolzenberg, Quas, & Lyon, 2015; Stolzenberg, McWilliams, & Lyon, 2016). The putative confession involves an interviewer informing a child that a known suspect "told me everything that happened and he wants you to tell the truth" (Lyon et al., 2014, pp. 1756). Because the putative confession does not explicitly suggest what happened, it is not overtly suggestive. Evidence indicates that its inclusion at the start of an interview increases children's willingness to disclose transgressions in which the children were implicated, with no increase in false reports if no transgression occurred (Lyon et al., 2014; Rush et al., 2015; Stolzenberg et al., 2016).

The putative confession's effects on productivity and accuracy of children's reports in highly suggestive settings have only begun to be examined, and have yet to be explored in situations in which children have already produced substantial errors. Rush et al. (2015), for example, examined the effects of the putative confession instructions on children's false claims of a transgression in the context of parent suggestion. Specifically, children played with an adult during which a toy either broke or did not break. Shortly afterward, they talked with their parent about what happened, during which parents asked suggestive questions about breakage. Next, children took part in a mock forensic interview that began with or without the putative confession instructions. When no toy broke, children were highly resistant to suggestions that the toys had in fact broken, when questioned by their parents and the interviewer. Moreover, and of relevance, the putative confession instructions did not increase false reports of breakage, and decreased children's false reports of toy play generally. When toys did break, children in the putative confession condition were 1.6 times

more likely than children who received no additional instructions to disclose that breakage in free recall.

This study, while informative, only examined the effects of the putative confession on children's tendency to acquiesce shortly after the alleged transgression occurred. In addition, although children had been exposed to false suggestions from their parents, the children had not actually been induced to err—in fact, only one child accepted her parent's suggestions and falsely claimed that a toy broke. The results, therefore, do not provide insight into whether the putative confession affects children's false reports following longer delays and when children have actually been misled via much stronger suggestive manipulations.

Perhaps children who lack a strong memory trace for an event infer that, if the perpetrator has *told everything* and now wants the child to tell the truth, this includes suggested information. Such a possibility could be especially true for younger children (e.g., 3–5-years old), who have difficulty with source monitoring (Poole & Lindsay, 2002a), although younger children also may be relatively immune from such errors if they fail to make the potentially complex inference that "he told everything" includes suggested details. To determine more precisely whether the putative confession leads to such errors, it is necessary to create a situation in which children across a wide age range provide false reports of an event at high rates. Then interviewers need to administer either the putative confession (PC) instruction or no PC instructions to determine the effects of the putative confession on children's productivity and accuracy, including about false suggested details.

Study Overview and Hypotheses

In the current study, 3–8-year-olds took part in a classroom event led by a confederate that included positive and negative components. After approximately one week, children participated in a highly suggestive conversation about the event during which an adult induced a majority of the children to agree to multiple false details about what happened. Then children participated in a mock forensic interview conducted by a new interviewer. Children were randomly assigned to an implicit encouragement condition (high vs. low implicit encouragement) and instruction condition (putative confession instruction vs. no putative confession instruction). The mock forensic interview included free-recall prompts and option-posing questions. Of interest was how implicit encouragement and the putative confession, directly and interactively, and in conjunction with children's age, affected children's productivity and accuracy.

Several predictions were advanced. First with regard to productivity, we expected greater use of implicit encouragement to increase the amount of detail children provided in free recall, given the engaging and supportive qualities of this technique and the open-ended nature of free-recall questions. We further expected that this effect would be stronger in younger (e.g., 3–5-year-old) than older (e.g., 6–8-year-old) children, given that the former often need more assistance focusing and staying on task when narrating, and implicit encouragement may specifically provide this type of support. Second, we anticipated a similar benefit of the putative confession on children's productivity, given that studies have revealed benefits of the instruction on children's disclosures of transgressions (Lyon et al., 2014; Quas et al.,

2018; Rush et al., 2015; Stolzenberg et al., 2016), which may translate into a greater willingness to disclose details (positive and negative) about a prior event.

And third, we expected an interaction between implicit encouragement and the putative confession. Together, the two techniques should have the greatest effect on children's attention, engagement, and willingness to disclose details of the prior event. Having both implicit support and potential ease of mind in reporting positive and negative details may help children feel more comfortable and simultaneously less reticent about reporting accurate details from the prior event, potentially producing benefits over and above each independent technique.

Our predictions regarding accuracy were more tentative. We anticipated that, among children who tended toward the younger ages in our sample (e.g., 3–5-year-olds), the putative confession may reduce accuracy, given these children's difficulty with source monitoring and hence risk of re-reporting details from the suggestive conversation in subsequent reports (Ceci, Huffman, Smith, & Loftus, 1994; Drummey & Newcombe, 2002). With age, however, we expected these potential source-related errors to diminish. We did not expect implicit encouragement to compromise accuracy in either free-recall or direct questioning.

Method

Participants

One hundred and forty-three, 3–8-year-old children (M_{age} = 5.08 years, 72 males) served as participants (approximately equally distributed across age and gender; see Table 1 for age breakdown by condition). This age range captures a developmental period in which there are substantial changes in children's susceptibility to suggestion (Ceci & Bruck, 1995; Saywitz, Lyon, & Goodman, 2017), as well as children's memory, source-monitoring, and reporting abilities (Hubbard, Saykaly, Lee, Lindsay, Bala, & Talwar, 2016; Lindsay, Johnson, & Kwon, 1991; Malloy, Johnson, & Goodman, 2013). The sample was ethnically diverse: 38% Asian American; 34.9% Non-Hispanic White; 7.8% Hispanic/Latino; 17.1% Multi-Racial; and 2.2% other. Because data were collected at preschools and in after-school programs, information on family socioeconomic status was not collected. However, programs served diverse communities, some located near a university campus, some in predominantly low-income areas, and some in majority Spanish-speaking neighborhoods.

Procedure

Directors of preschools and after-school programs provided approval to recruit families and carry out the study. Parents provided written consent and children provided verbal assent prior to participation.

Session 1: Staged baker event—Children observed a 15-minute classroom demonstration in small groups (M =18). A male or female confederate (hereinafter referred to as male) visited the class and led the demonstration, which involved showing the children how to make cookies for a friend's birthday (Kulkofsky & Klemfuss, 2008). While making the cookies, he described each action and listed them all in numerical order on a large recipe board. To increase children's engagement, he asked scripted questions throughout and had

children directly participate by adding an ingredient. When he added the last ingredient (salt), an unexpected negative event occurred. The lid fell off the saltshaker, causing all of the salt to spill in and ruin the batter. The confederate appeared sad, explaining that the cookies were ruined and that he would not be able to finish. He threw the batter into a nearby trashcan, cleaned up, and left.

Session 2: Interview—After a one-week delay (M = 8.27 days, SD = 1.25, range = 6–11), children individually took part in the suggestive conversation and mock forensic interview in a quiet location at their school. Each of these was conducted by an unfamiliar female research assistant who was blind to the study's hypotheses. Neither research assistant had been present at the baker event.

Suggestive conversation: The suggestive conversation took place first. The research assistant engaged the child in a conversation about the baking activity during which she asked children a series of option-posing questions. A majority of the questions asked about false details, some positive or playful (e.g., an action involving giving, cheering, or tapping) and some negative (e.g., an action involving stealing, screaming, or hitting). The interview was framed as a game in order to increase acquiescence, with children being selectively reinforced based on their responses to the questions (cf. Garven, Wood, & Malpass, 2000). For instance, when children acquiesced, they received positive reinforcement (e.g., "That's right! You're doing great!"). When children did not agree or said "I don't know," they received negative feedback (e.g., "Are you sure? Listen again and tell me"). The negative feedback was given up to two times after the initial question was asked, each time in a manner that implied that children should acquiesce to the suggestion. This selective reinforcement strategy created a highly suggestive interview context and induced very high rates of acquiescence on the part of children (see Cleveland, Quas, & Lyon, 2016). Specifically, children answered on average only 10% of the questions correctly the final time they were asked. As such, a sufficient number of children had erred, allowing us to test the influence of implicit encouragement and the putative confession on children's accuracy in the subsequent forensic interview. At the end of the conversation, the first research assistant thanked children for their help and left.

Mock forensic interview: The second unfamiliar research assistant entered, introduced herself, and administered a standardized working memory measure to orient children to answering questions and to familiarize herself with the children. She then administered the mock forensic interview, which included free-recall and option-posing questions. The free-recall portion began with the following: "Tell me everything that happened when Mr. Baker came to visit." Subsequent prompts included, "It's really important that I know what happened when Mr. Baker came. Tell me everything that happened," with scripted follow-up open-ended invitations asking for additional details about information children had already reported (e.g., "You said [last event mentioned]—what happened next?"; You said, [action of child or Baker], tell me more about that."). The follow-up invitations were asked until children indicated that they were done (Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007; Orbach & Lamb, 2000).

Next, children were asked 14 option-posing questions. Five asked about true details, which actually occurred and nine asked about false details, which had not occurred but had been mentioned in the suggestive conversation. When children responded 'yes' to an option-posing question, the interviewer asked a follow-up question to obtain additional detail so that the response could be coded for accuracy. For example, a child who responded 'yes' when asked "Did you get to put something in the batter for Mr. Baker?" was then asked, "What did you put in?" (to which the correct answer would be chocolate chips). At the end of the session, children were fully debriefed and returned to their classrooms.

Interview manipulations: Two key manipulations were included in the mock forensic interview. The first was the implicit encouragement manipulation (high vs. low). In the high implicit encouragement condition, back-channels and children's names were embedded at prescribed times throughout the interview. For free recall, the interviewer used the child's name every third recall prompt and followed each child response with one back-channel utterance (e.g., uh-hmm), pausing after the last one until the child said he or she did not remember anything else. For the option-posing questions, the child's name was used before every third question, and back-channels were included every other time the child elaborated on a yes or no answer. In the low implicit encouragement condition, interviewers were instructed to avoid use of implicit encouragement, although interviewers still used back-channel utterances infrequently given their natural occurrence in conversation.

The second manipulation involved whether children received the putative confession (PC) or no PC (i.e., neutral) instructions. The putative confession instructions were as follows: "Now I'm going to ask you questions about the time Mr. Baker came to the class. He works for me. I talked with him, and he told me all about his visit to your class. He told me who was here and everything that happened. He wants you to tell the truth. I am going to write down what you say and check to make sure that Mr. Baker did a good job." The no PC instruction condition statements read as follows: "Now I'm going to ask you questions about the time Mr. Baker came to the class. He works for me. I need to find out everything you remember about his visit so I can write it all down and check to make sure that the Baker did a good job." The putative confession or no PC instruction statements were first delivered at the start of the interview, just before the free-recall questions were asked. They were delivered a second time at the start of the option-posing questions.

Coding

Classroom events were videotaped, and the suggestive conversations and interviews were audiotaped. Children's responses were coded for productivity and accuracy, and interviewers' use of implicit encouragement was coded to verify the manipulation. Reliability, across all variables, was established on between 11–17% of the sample, including children across age and conditions. Coding discrepancies were discussed and the researchers evenly divided the remainder of the interviews for scoring (see below for reliability statistics).

Children's free-recall narratives were coded in two phases. First, a team of two researchers identified each piece of unique information about the event, or "unit of information,"

including subjects, verbs, adjectives, and nouns provided by children (Alexander et al., 2002; Poole & Lindsay, 1995; Quas & Schaaf, 2002). Correlations among coders' scores on 17% of the sample ranged from .79 - 1.00 (M = .96). A separate team, blind to study hypotheses, then coded each piece of unique information, or unit, as correct, incorrect, or non-definitive (ambiguous, evaluative, unscoreable). Proportion agreement for recall accuracy on 16% of the sample was .98. Thirteen children responded 'I don't know' to the recall prompts. These children received 0 units in each of the categories, and are not included in the accuracy analyses. Children rarely provided non-definitive information.

From the coded recall data, two dependent measures were calculated. Total productivity was comprised of the sum of the number of correct, incorrect, and non-definitive details provided by children in response to the free recall prompts. Although the mean number of non-definitive details was somewhat low (M_{units} = 1.84), they were nonetheless included in children's total productivity scores. These details, although unverifiable, still concern the event itself and hence are relevant to how productive children were. Proportion accuracy scores were calculated as the amount of correct information children provided out of the total verifiable information reported (both correct and incorrect). The latter scores provide an index of the accuracy of the information children provided.

Children's responses to the option-posing questions were coded as one of the following: correct, incorrect, don't know, or non-definitive (e.g., request for clarification, unscoreable). Kappas for option-posing accuracy across three trained researchers, blind to study hypotheses, on 11% of the sample ranged from .84 - .87 (M = .86). Proportion response types were calculated by dividing the number of each response type by the total number of option-posing questions asked. Don't know responses constituted .03 of children's total responses, and non-definitive responses constituted .04 of total responses. Neither is considered further. In addition, the correlation between the proportion correct and incorrect scores was - .84, $p < .001$. Thus, analyses only focus on children's proportion correct responses. Finally, to control for potential response biases (e.g., yeah-saying, see Garven, Wood, Malpass, & Shaw, 1998), additional proportion scores were calculated. One reflected correct responses to questions to which "yes" was the correct answer, and one reflected correct responses to questions to which "no" was the correct answer. Option-posing results when the latter two proportion scores were substituted for the overall proportion correct score did not differ. Thus, neither the yeah nor nay saying question response type proportion scores are considered further.

Finally, the number of back-channel utterances and vocatives used in free-recall were counted as a manipulation check. Back-channels included um-hmm, uh-huh, ok, and yes. They were counted if they were stated by the interviewer at any point, regardless of whether they were preceded or followed by a narrative statement by children.

Results

Preliminary Analyses

Child gender was evenly distributed across child age and condition and was unrelated to children's free recall productivity, $t(141) = -.50$, $p = .617$, and accuracy, $t(128) = .95$, $p = .$

344, and to children's proportion correct responses to the option-posing questions, $t(141) = -.56$, $p = .580$. Delay between sessions did not differ across conditions, $F(3, 139) = 1.20$, $p = .312$, and was unrelated to children's recall productivity, $r(143) = -.035$, $p = .676$. Likewise, delay was unrelated to the proportion of correct responses children provided to the option-posing questions, $r(143) = -.132$, $p = .116$. Delay, however, was related to accuracy in free-recall, $r(130) = -.20$, $p = .026$, such that longer delays were associated with children providing proportionally less accurate information about the Baking event. Accordingly, delay was included as a covariate in analyses of children's recall accuracy.

A t-test comparing the frequency of implicit encouragement use (back-channeling and names) between the high and low conditions was conducted. Mean usage (sum of back-channels and names) was 17.03 in the high implicit encouragement condition and 7.51 in the low encouragement condition, $t = 3.98$, $p < .001$. Thus, the interviewers generally followed instructions with regard to the implicit encouragement manipulation.

Effects of Implicit Encouragement and the Putative Confession

Analyses of covariance (ANCOVAs) tested the effects of implicit encouragement and the putative confession, in conjunction with age as a continuous covariate, on children's reports. We initially considered children's overall productivity, that is, simply how much children said about the baking event (i.e., the sum of correct, incorrect, and non-definitive details provided) in free recall. We then analyzed the accuracy of this information, that is, the proportion of correct details out of the total amount of correct and incorrect information provided in free-recall. Finally, we examined the proportion of correct responses children provided to the option-posing questions.

Children's recall performance—Children's overall productivity scores were subjected to a 2 Implicit Encouragement (High vs. Low Implicit Encouragement) × 2 Instruction Condition (Putative Confession vs. No PC) ANCOVA, with age (in months) entered continuously and all two way interactions entered: Implicit Encouragement × Instruction Condition, Implicit Encouragement × Age, and Instruction Condition × Age. A significant main effect of Age emerged, $F(1, 136) = 9.12$, $p = .003$, partial $\eta^2 = .06$, but was subsumed by an Implicit Encouragement × Age interaction, $F(1, 136) = 4.15$, $p = .044$, partial $\eta^2 = .03$. Children's total productivity increased with age, as might be expected. However, these age trends varied by implicit encouragement. According to age-productivity regressions in each of the implicit encouragement conditions, productivity increased with age in the high implicit encouragement condition, $B = .37$, $p = .001$, but not in the low implicit encouragement condition, $B = .11$, $p = .37$ (see Figure 1). There were no effects of the Putative Confession alone, $F(1,136) = .00$, $p = .991$, nor its interaction with implicit encouragement, $F(1,136) = 1.87$, $p = .173$, or age, $F(1,136) = .003$, $p = .960$, on productivity.

Of importance, improving children's productivity is beneficial only to the extent that accuracy is not compromised. To examine accuracy in free-recall, the proportion of correct information children provided was entered into a 2 Implicit Encouragement × 2 Instruction Condition ANCOVA. Age was again entered continuously, as was delay. Finally, the 2-way interactions were considered. A significant effect of Age, $F(1, 122) = 7.92$, $p = .006$, partial

η^2 = .06, emerged. Not surprisingly, with age, children's proportion of correct information significantly increased, B = .26, p = .003. The techniques, when used alone or in conjunction, neither improved nor compromised children's accuracy in free-recall, Fs < 2.96, ps > .09.

In a final analysis of children's recall performance, we explored the extent to which children incorporated false details from the suggestive conversation into their later narratives, and of importance, whether these false details varied as a function of interview technique. We reviewed all incorrect details provided and identified within those, details that had been previously suggested. Children reported between 1–31 suggested details. The 31 units, though, was an outlier, provided by one child. The range for the rest of the sample was 1–12, and of those children who provided suggested details, the mean was 5.08. Eighty-two percent of children did not incorporate any prior suggestions into their recall narratives. No significant differences emerged across interview conditions, Fs (1, 138) < 1.54, ps > .22, or across age, F (1,138) = .36, p = .55, in children's incorporation of suggested details from the prior interview into their recall reports.

To summarize children's recall performance, implicit encouragement became increasingly beneficial for productivity as children got older. Moreover, this increase in the amount of detail provided did not come at a cost of accuracy. Nor did the putative confession instruction's inclusion affect accuracy. Instead, very few children incorporated previously suggested details into their narrative reports, and children's inclusion of suggested details was not affected by implicit encouragement or the putative confession.

Children's option-posing question performance—For the option-posing questions, we entered children's proportion correct responses into a 2 Implicit Encouragement × 2 Instruction condition ANCOVA, with age and the two-way interactions also entered. A significant main effect of Age, F (1,132) = 9.40, p = .003, partial η^2 = .07, revealed that children's proportion accuracy increased with age, r (139) = .25, p = .003. In contrast to our tentative hypothesis regarding negative effects of the putative confession at younger ages on accuracy, no effects emerged involving implicit encouragement or the putative confession, directly or in conjunction with each other or child age, on children's option-posing question responses, Fs (1, 132) < .98, ps > .32. Thus, there were no significant differences in children's option-posing accuracy across conditions.

Discussion

In the current study, we systematically examined the role of two potentially valuable interview techniques—implicit encouragement and the putative confession—on the productivity and accuracy of children's reports. Of primary interest was how the techniques affected children's free-recall reports, directly and in conjunction with age, following a suggestive conversation in which a majority of children had acquiesced to the false suggestions.

Turning first to implicit encouragement, benefits emerged on children's productivity, as expected, although with an important qualification. Implicit encouragement was effective at

increasing productivity, with this being true primarily as children got older. We had hypothesized that implicit encouragement would be more beneficial among children who fell in the younger ages (e.g., 3–5-year-olds; Case, Kurland, & Goldberg, 1982; Welsh, Pennington, & Groisser, 1991), and were somewhat surprised that the opposite trend emerged. However, our results are consistent with Herskhowitz's (2009) findings that the supportive techniques were more beneficial for the older rather than younger children in her sample. Perhaps, even though the younger children (e.g., 3–5-year-olds) may have been in greater need of strategies to focus their attention and reporting (Fivush & Hamond, 1990; Hudson, 1990; Mandler, 1990; Oakhill & Cain, 2004), implicit encouragement did not provide sufficient concrete structure or scaffolding to address these needs. With age, however, children's linguistic skills become more developed (Elbro, 1996; Fowler, 1991; See Walley, 1993) which may have increasingly helped, at a basic level, children's recognition of the implicit encouragement itself.

Also with age, children gradually develop greater meta-awareness (awareness of the self in relation to others; Ardila & Rosselli, 1994; Rochat, 2003), which may have helped them know to modify their behavior (i.e., provide more information) in response to the interviewer's behaviors. And finally, with age, children's greater ability to take on the interviewer's point of view (theory-of-mind; Flavell, 2004) may have contributed to their recognition that the interviewer was requesting more information via the subtle "uh-hmms" and "oh ok's," and name use comments embedded in the interaction. Future research that tests these specific mechanisms (i.e., linguistic skills, meta-awareness, and theory-of-mind) in relation to implicit encouragement will advance understanding of why this technique's benefits were dependent upon age. Future work might also test the different forms of implicit encouragement, separating for example, back-channeling from name use, in case one rather than another is more effective in enhancing reporting at specific ages.

With regard to accuracy, neither implicit encouragement nor the putative confession instructions compromised accuracy, as compared to conditions in which neither of these strategies was used. Thus, in this sense, the strategies did not have negative effects, to speak, even though we had speculated that perhaps the putative confession might decrease accuracy among the younger (e.g., 3–5-year-old) children. Our findings suggest that the putative confession did not have the adverse effects on children's source monitoring that we tentatively expected. Furthermore, given the benefits of implicit encouragement on children's productivity, at least with age, it is especially noteworthy that, as hypothesized, this technique did not compromise accuracy. Future work should examine whether other benefits of the strategies (e.g., increasing children's comfort or trust in interviewers) are evident and hence support their inclusion under some conditions.

Second, the use of implicit encouragement and the putative confession were not linked to any increases in children's errors for previously suggested information, a particularly significant finding given that a large majority (upwards of 90% across some ages) of the children had acquiesced to multiple false suggestions only a short time before the actual interview (Cleveland et al., 2016). Prior work has similarly found that the putative confession specifically does not appear to increase false reporting, although in the prior work, children had been exposed to but did not acquiesce to the false suggestions. In light of

findings from prior work, perhaps the lack of suggestive errors is not surprising. On the other hand, in the present study, children had just erred, and had done so at surprisingly high rates. They nonetheless did not draw inferences across the interviews and assume that the false details to which they had acquiesced from the initial interview should be repeated to a new interviewer, even when given explicit instructions and encouragement to say more. And third, the techniques did not lead to evident response bias, such as "yeah-saying" tendencies whereby children were blindly agreeing with the interviewer's questions.

Accordingly, our work suggests that implicit encouragement and the putative confession do not directly contribute to children's suggestibility, even in the presence of prior overt suggestion. Of note, we did not include a control group of children who had never been exposed to the suggestions and examine how the techniques influenced their subsequent reporting. However, had we adopted this design, it would have inhibited our ability to test, in a more stringent manner than in previous work, how the techniques specifically affected children's accuracy *after* they had been exposed to and accepted, to a substantial degree, false suggestions. Also, we conducted the suggestive conversation and the forensic interview on the same day, although both took place a week after the original event, and hence some forgetting had occurred. Had we exposed children to suggestion immediately following the event and then conducted the mock forensic interview after a delay, perhaps children, particularly at the youngest ages, would have experienced more difficulty with source monitoring and incorporated more of the suggested details into their subsequent reports, a possibility yet to be examined in studies involving exposure to highly suggestive questioning tactics (e.g., Garven et al., 1998), but one worth exploring in the future.

We did not expect implicit encouragement to help or hurt children's accuracy for the option-posing questions. We speculated that perhaps the putative confession would increase suggestive errors, including to the option-posing questions, with young children (e.g., 3–5-year-olds), given the suggestive nature of some of the questions and given the source monitoring difficulties common among younger children. However, our predictions regarding adverse effects of the putative confession were not supported. Neither technique improved or compromised children's accuracy for option-posing questions. Instead, standard age-related changes emerged showing that children's accuracy for the option-posing questions increased with age (Ceci & Bruck, 1995; Poole & Lindsay, 1998; Poole & Lindsay, 2002b).

In terms of practical significance, one important cautionary note concerns ethical issues regarding the use of the strategies, particularly the putative confession, which involves telling children that a suspect has disclosed "everything that happened" and wants the child to "tell the truth." These statements would be misleading in cases in which the suspect had not in fact confessed and could affect children's trust in adults or authority figures. One way to address these concerns would be to ask the suspect if he has told "everything that happened" and wants the child to "tell the truth," regardless of what the suspect has or has not already reported. One might also reserve use of the putative confession for situations in which other corroborating evidence exists and the child has failed to disclose in response to initial questioning.

Another cautionary note concerns the study's ecological validity. Although positive and negative components were included in the classroom event and negative details such as hitting, stealing, and screaming, were suggested to children, the classroom event was generally non-stressful and the primary negative component involved salt spilling and ruining the baker's and children's cookies. Unlike previous research examining the putative confession, children were not asked to keep the event a secret. Future research including a more stressful event and a more powerful or secretive transgression—which may lead children to be more reluctant to talk about the event—may contribute further insight into the effects of these techniques designed to address children's reluctance.

Overall, our study highlights the value of considering multiple memory-based outcomes when investigating the effects of novel interviewing strategies. We focused on productivity and accuracy, given the possibility that both implicit encouragement and the putative confession's effects may have varied between these outcomes. Other interview protocols, such as the Cognitive Interview and Narrative Elaboration Technique, rely on retrieval procedures (e.g., mentally reconstructing the environment and personal context of an incident) to improve the amount of detail adults and children provide about prior experiences (Camparo, Wagner, & Saywitz, 2001; Dorado & Saywitz, 2001; Memon, Meissner, & Fraser, 2010). Investigations of these procedures, like ours, have considered not only effects on productivity, but also accuracy. Before techniques can be recommended for use in real-world interviews with children, the ways in which they do—and do not—affect specific components of eyewitness accounts need to be fully vetted. The benefits we observed, at least as children aged, in terms of implicit encouragement enhancing productivity without compromising accuracy, are promising, given that children's free-recall reports are often limited, and other efforts proposed to probe for further information can quickly become suggestive.

The benefits of the putative confession, on the other hand, have emerged in prior studies focusing on children's decision about whether to disclose transgressions. When children are demonstrably reluctant to disclose, the putative confession has been found to increase the likelihood of disclosure. Here, we failed to identify either positive or negative effects from the use of the putative confession in a context in which disclosure had not been discouraged, but in which highly suggestive questioning had occurred. It is possible that still more suggestive techniques might interact with the putative confession in such a way as to undermine the accuracy of children's disclosures. For example, after longer delays, repeated interviews, and greater suggestion, the putative confession might increase the likelihood of false disclosures, particularly if the child developed false memories of wrongdoing. Through continued investigation, the benefits and potential costs of the putative confession—and hence its practicability in real-world interviews—will be uncovered.

To conclude, in contexts in which children are questioned after a delay (i.e., approximately one week), even if they have been exposed to a highly suggestive interview, utilizing implicit encouragement, such as back-channeling and name use, may be a valuable technique to increase the amount of information provided in free recall, particularly as children move from the preschool to school-age years. As of yet, these techniques do not appear to compromise accuracy even when memory may have faded and children have been exposed

to a highly suggestive conversation. Overall, given the relative ease with which implicit encouragement can be systematically included in forensic interviews, and given its common natural occurrence in dyadic interactions, implicit encouragement might be a particularly useful linguistic strategy for increasing comprehensiveness without tainting children's reports. Implicit encouragement and the putative confession should continue to be studied, independently and together, in laboratory and real-world interview settings. Doing so will help identify the best methods of increasing children's complete and accurate reporting, thereby improving the pursuit of justice when children's reports are critical to the progression and outcome of a case.

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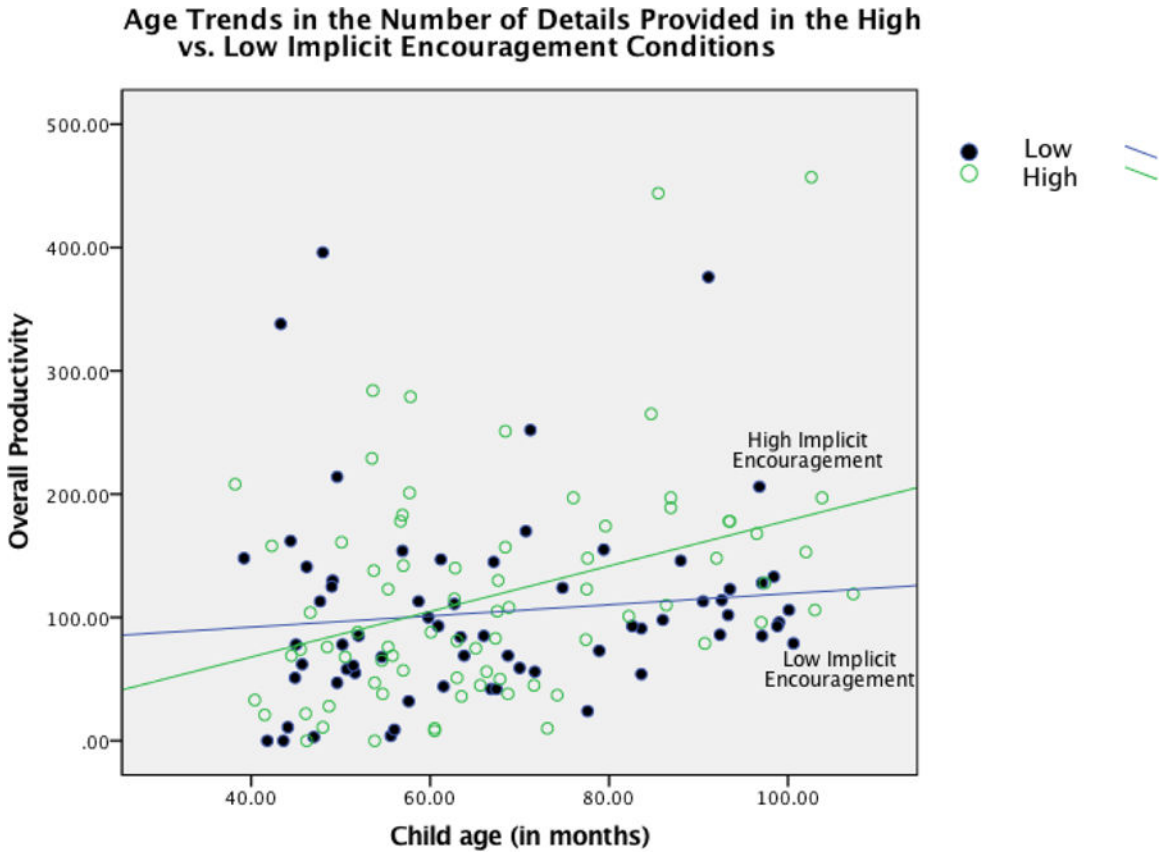

Figure 1.

Children's overall productivity as a function of age (in months; approximately 3–8 years) and condition (High vs. Low Implicit Encouragement). Overall productivity refers to correct, incorrect, and non-definitive (ambiguous, evaluative, unscoreable) details provided about the classroom event.

Table 1

Sample Distribution by Age and Condition.

	Condition				
Child Age	**Low Implicit Encouragement /No PC**	**High Implicit Encouragement**	**Putative Confession**	**High Implicit Encouragement & Putative Confession**	**Total**
3	8	4	5	6	23
4	8	10	9	11	38
5	6	7	8	13	34
6	1	4	6	4	15
7	3	3	6	6	18
8	3	2	4	6	15
Total	29	30	38	46	143