Effects of Interviewer Familiarity and Supportiveness on Children's Recall Across Repeated Interviews

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Abstract

Child witnesses often describe their experiences across multiple interviews. In the current study, we explored whether young witnesses would be more forthcoming with a familiar interviewer and whether any effects of interviewer familiarity would depend on the relationship established in the initial interview. Children (N = 160, 5 to 9 years) participated in a science event that involved six transgressions. Across two interviews, they spoke with the same trained university student interviewer or different interviewers, and these interviewers engaged in either supportive or neutral behaviors. There were no effects of support in the first interview, or on total details reported in either interview. The children reported more transgressions to supportive interviewers in the second interview, even during open-ended prompting, and they less often omitted transgressions they had reported in the first interview. Confabulations were infrequent. There were no condition differences in the total number of confabulations reported across interviews, but these errors occurred more often in the second interview in the supportive condition. We conclude that interviewer support may play a greater role than familiarity in facilitating children's testimony.

Keywords: repeated interviewing, interviewer support, interviewer familiarity, children, free recall

Public Significance Statement: This study found that children reported more of the transgressions committed by an adult, and added a few more confabulations, when interviewers used a supportive interviewing style at a second interview. Supportive interviewing increased transgression reports even during open-ended prompting and promoted consistency across interviews. Overall, interviewer demeanor may play a greater role than familiarity in encouraging children to talk.

Effects of Interviewer Familiarity and Supportiveness on Children's Recall Across Repeated Interviews

Children who are alleged victims or witnesses of crimes often participate in multiple interviews about the matters under investigation (e.g., Malloy, Lyon, & Quas, 2007). Concerns about repeated interviews have focused on the emotional toll on children (Connell, 2009), the potential for misleading influences to contaminate their testimonies between interviews (Ceci & Bruck, 1995), and the negative and cumulative effects of poor questioning on the reliability of their accounts (Cronch, Viljoen, & Hansen, 2006; Leichtman & Ceci, 1995). As the quality of investigative interviews gradually improved, however, researchers and practitioners began to recognize the benefits of repeated interviews when professionals follow practice guidelines (Faller, Cordisco-Steele, & Nelson-Gardell, 2010; Goodman & Quas, 2008; La Rooy, Katz, Malloy, & Lamb, 2010). Today, training programs that include instruction on conducting repeated interviews recommend many of the best practices originally developed for single-session interviews (Newlin et al., 2015), including interview recording, favoring open-ended prompts, and avoiding suggestive and leading questions (see Lytle, Dickinson, & Poole, 2019).

There are several potential benefits to interviewing children on more than one occasion. Some child victims may be reluctant to share their experiences due to fears about the consequences of disclosing (Malloy, Brubacher, & Lamb, 2011), whereas others who provided incomplete and unconvincing accounts may benefit from another opportunity to discuss their experiences (McElvaney, 2015). Regardless of the reason for additional interviews, under non-suggestive conditions repeated attempts at retrieval can strengthen memory traces, thereby preserving memories that children may be asked to retrieve weeks or even years later (Fivush, Sales, Goldberg, Bahrick, & Parker, 2004; Pipe, Sutherland, Webster, Jones, & La Rooy, 2004).

Repeated retrieval also fosters reminiscence, which is the recall of new information in a subsequent interview (La Rooy et al., 2010).

Despite mounting evidence that repeated interviews can benefit children's testimony, there is insufficient research to guide interview plans. The current study addressed a frequently-posed question from professionals who have integrated repeated interviews into their investigative repertoire: Should agencies and advocacy centers use the same interviewer or a different interviewer across sessions? On the one hand, the same interviewer provides additional opportunities to strengthen children's trust by building greater rapport (La Rooy et al., 2010). If developing a relationship with a particular interviewer is key to increasing disclosures, then consistent interviewers should be beneficial. On the other hand, children might report more information over time simply due to reminiscence or because personal stories become easier to share. If this is the case, then the identity of the second interviewer could be irrelevant. Still another possibility is that the level of interviewer support enhances or attenuates any potential benefits of interviewer familiarity. It is possible, for example, that the emotional benefits from a familiar interviewer are greater when interviewers act supportively; alternatively, it may not matter who does the questioning as long as interviewers display supportive behaviors.

Understanding the relationship between interviewer familiarity, interviewer supportiveness, and children's testimony has important implications for jurisdictions that conduct repeated interviews because scheduling the same interviewer across sessions poses substantial logistical and financial challenges (e.g., children are sometimes interviewed by different agencies, there is significant workforce turnover in the child protection field). However, if interviewer familiarity does not yield clear benefits, agencies can forego the assignment of specific interviewers to individual cases and focus on supportive interviewing strategies.

Unfortunately, existing evidence on the benefits of familiar and supportive interviewers lacks the consensus needed to identify the optimal conditions for multiple interviews.

Interviewer Familiarity

The few studies that systematically manipulated interviewer identity showed mixed results. Having a familiar interviewer for a second interview did not impact the number of event details that one sample of 5-year-olds, 7-year-olds, and adults freely recalled, but there were some limited benefits during recognition questions: 7-year-olds who had experienced an unbiased first interview, and adults who had experienced a misleading first interview, showed higher correct recognition rates in the familiar condition (Bjorklund et al., 2000). In another repeated-interview study, 5-year-olds provided fewer correct details to a familiar interviewer during free recall. However, familiarity benefitted the 3-year-olds by increasing accuracy during direct questioning, and both age groups were more accurate in the face of misleading questions when talking with a familiar interviewer (Quas & Schaaf, 2002). These findings suggest that familiarity may not benefit free recall but sometimes helps children resist the social pressures inherent in more directive questioning.

Children's parents served as the familiar interviewers in a few studies. For example, Fivush, Hamond, Harsch, Singer, and Wolf (1991) assigned 2-year-old children (30 to 35 months) to one of three conditions that consisted of two interviews conducted six weeks apart: both by the children’s mothers, both by a stranger (a female researcher), or a first interview by the mother followed by another by a stranger. Children reported the most information when interviewed twice by the stranger and the least when interviewed twice by their mothers. But the authors noted that mothers, who also had experienced the events in question and were thus not naïve, asked more specific questions than did the researcher interviewer. Most relevant to the

current study, children were more consistent in the same-interviewer conditions and reported a greater number of new details to an unfamiliar second interviewer. Using a similar design, Jackson and Crockenberg (1998) compared single interviews conducted by parents or strangers (another child's parent) who delivered either misleading or non-misleading questions to 4-year old female children. In general, the children were less likely to correct unfamiliar interviewers and provided more information to familiar parent interviewers. Unfortunately, despite the use of standardized questions, parents asked their children for more elaboration than did strangers. These findings illustrate that research contrasting parent versus non-parent interviewers is informative but limited in its ability to address the effects of interviewer familiarity because parents have effects on children's reporting tendencies that go beyond simply being familiar (Lawson, Rodriguez-Steen, & London, 2018).

It is likely that the effects of interviewer familiarity depend on age-related cognitive changes, such as children's capacity to reason about what others are thinking (Carpendale & Lewis, 2004). Because interviews are social interactions, questioning by the same interviewer may prompt a socially aware interviewee to provide new information and leave out information that has already been reported (thereby producing greater report consistency across unfamiliar interviewers). Between the ages of 3.5 and 5.5 years, typically developing children begin to make a distinction between knowledgeable and naïve interviewers (Welch-Ross, 1999), and these conditions can be likened to familiar versus unfamiliar interviewers. Whether shifts occur in children's reactions to a familiar interviewer around 5 years is unclear, however, due the rarity of familiarity studies that included older children.

In sum, the effects of interviewer familiarity on children's testimony are unclear. Past studies used a wide range of research designs, conclusions were inconsistent, and interviewer

identity was sometimes confounded with the types of questions asked (e.g., Fivush et al., 1991) or the inherent familiarity of the interviewer (e.g., comparing mother with stranger interviewers, e.g., Goodman, Sharma, Thomas, & Considine, 1995; Jackson & Crockenberg, 1998).

Interviewer Support

Interviewer support refers to various content-neutral strategies that help children feel safe and cared for during interviews, including smiling, nodding, making frequent eye contact, using the child's name, and adopting a relaxed and open posture (see Bottoms, Quas, & Davis, 2007, for review). In contrast to interviewer familiarity, the effects of interviewer support on children's testimony are more conclusive, though gaps remain (Saywitz, Wells, Larson, & Hobbs, 2019). Overall, lab-based research has found that children interviewed by supportive adults are more accurate when faced with suggestive and nonsuggestive specific questions (Almerigogna, Ost, Bull, & Akehurst, 2007; Bottoms et al., 2007; but see Imhoff & Baker-Ward, 1999). However, whether supportiveness would drive differences in reporting of accurate information in non-leading interviews is largely untested because the free recall phases in prior experimental studies were short, usually including between one to three prompts (e.g., Carter, Bottoms, & Levine, 1996; Davis & Bottoms, 2002; Quas & Lench, 2007; Quas, Wallin, Pappini, Lench, & Scullin, 2005).

In field studies of interviews with alleged victims, high levels of support have been associated with richer and more forensically-relevant accounts, less reluctance (e.g., Hershkowitz, 2009; Hershkowitz, Lamb, Katz, & Malloy, 2015; Hershkowitz, Orbach, Lamb, Sternberg, & Horowitz, 2006), and more rapid disclosure (Ahern, Hershkowitz, Lamb, & Blasbalg, & Karni-Visel, 2018). Although experimental paradigms have included stressful or negatively-valenced events, no studies directly testing interviewer supportiveness have asked

children to conceal adult wrongdoing; therefore, the impact of supportive interviewing on disclosures, under conditions where ground truth is available, is unknown. Given that supportive interviewing reduces anxiety/arousal (Davis & Bottoms, 2002; Quas, Bauer, & Boyce, 2004; Quas & Lench, 2007), it is reasonable to predict that supportive interviewers would obtain more complete disclosures than would neutral or non-supportive interviewers.

The Current Study

To advance practice guidelines for multiple interviews, we manipulated the familiarity of the interviewer and the level of interviewer support across two interviews with extended free recall phases. The effects of familiarity and support on disclosure reports individually are unclear, and studies have not explored the joint influence of these interview characteristics. In order to assess children's reports of adult wrongdoing, the to-be-remembered event contained six transgressions that formed a rich, cohesive sequence in which each transmission relied on commission of the previous one.

We centered our predictions on children's reports of transgressions, rather than total event details, due to the relatively unique open-ended nature of our interviews and because effects in free recall data have typically been weak. We predicted that familiarity and supportiveness would both lead to increased reporting of transgressions at the second interview, presumably by decreasing children's anxiety about disclosing. We further expected that children interviewed by a familiar, supportive interviewer would disclose more transgressions from the target event than children interviewed in the other condition combinations.

Method

Participants

The university's human research ethics committee and the local school board granted

approval for the research, with principals providing organizational consent from each school. Schools received $50 AUD for every classroom with participating children.

The children attended four elementary schools in a large Australian city. Parents signed informed consent forms, and children assented to participation. Among 194 children who returned signed consent forms, 160 fully participated. The remaining 34 children either missed part of the event session (n = 1), interview 1 (and thus were never interviewed, n = 20), or interview 2 (n = 8); had language difficulties that precluded participating in the interview (n = 3); participated in a nonrecorded interview (n = 1); or were erroneously interviewed in both support conditions (n = 1). The final sample ranged from 5.19 to 9.55 years of age (mean age = 7.24 years (SD = 1.20 years). (See Table 1 for the age and gender composition of each condition combination.)

Materials and Procedure

Event. The children experienced an adaptation of the Mr. Science—Germ Detective event (Dickinson & Poole, 2017). Female research assistants collected pairs of children from their classrooms and escorted them to the "science room." Prior to meeting Mr. Science, the assistant verbally alerted the children to two rules for the session and directed their attention to a sign with images that depicted the rules. The rules were that Mr. Science should not touch the children's skin, purportedly to prevent germ transmission, and that no one should interact with equipment covered by a sheet. The children then met Mr. Science and began the session.

Over a 20-minute period, Mr. Science engaged the children in three main activities: learning about germ travel, learning about germ transfer, and proper hand washing. Interspersed between these activities, Mr. Science attempted to engage the children in six transgressions, each incrementally related to the previous one. For example, immediately after the germ travel

activity, Mr. Science said, “I really want to know what is under that sheet. Do you want to know?” Regardless of children’s responses, Mr. Science said, “Let’s just take a tiny little peek,” and removed the sheet to reveal a closed cabinet, exclaiming, “It looks like it must have such fun things inside! But we’re not supposed to open it.” They then left the sheet off the cabinet and returned to the second activity. The six transgressions the children actively or passively (by watching Mr. Science) participated in were (1) removing the sheet; (2) opening the cabinet to find the Top Secret Science Experiment box; (3) opening the box to remove the Energy Stick™ and instructions; (4) holding hands with Mr. Science in order to form a circle (thereby completing a circuit); (5) activation of the Energy Stick™, which caused flashing lights and intriguing noises; and (6) hiding evidence by washing their hands after touching each other’s skin “in order to remove germs.” (The Energy Stick™ [www.stevespanglerscience.com] is a demonstration of electricity conduction). Mr. Science made up to two explicit attempts to incite children to hold his hands, but some children refused (42 refused, 104 complied, and the behavior of 14 children was unknown due to poor video angle). Known hand-holders were distributed similarly across conditions, with 25 in the unfamiliar and neutral condition, 25 in the familiar and neutral condition, 26 assigned to the unfamiliar and supportive condition, and 28 assigned to the familiar and supportive condition. When children refused to hold Mr. Science’s hand, he showed them how to make it work by themselves. In some cases, one child of the pair held hands with Mr. Science while the other child watched. Four pairs of children (eight children) refused to touch the stick, so Mr. Science activated it alone.

After the hand-washing activity, Mr. Science returned all transgression-related materials to their original location and asked the children not to tell the people he works with at the university about the transgressions. For ethical reasons, Mr. Science did not ask the children to keep the

secret from other people (e.g., parents, teachers). (See section SI.A of the online supplementary material for the event script.)

Interviews. Children's first interview took place 3 to 4 days after the event (M = 3.40, SD = .49), the second interview was held 3 to 5 days after the first (M = 4.08, SD = .89), and all second interviews occurred within 6 to 8 days of the event (M = 7.31, SD = .68). The female interviewers were seven undergraduate students and one graduate student, randomly assigned to children and interview conditions, who interviewed in all conditions.

Both interviews commenced with ground rules (Brubacher, Poole, & Dickinson, 2015) and a brief practice narrative (Roberts, Brubacher, Powell, & Price, 2011), after which interviewers introduced the topic by saying, "I work at the university, and I heard that somebody else from the university came to play Germ Detective with you a little while ago. Did you play Germ Detective?" After children said "yes" (all did), interviewers prompted them to "Tell me everything that happened that day at Germ Detective."

Interview 1 consisted of a free recall phase only (predominately open-ended questions such as "What else happened" and "Tell me more about [predisclosed detail]"). Interviewers questioned children until probing in this manner yielded no further information (i.e., children claimed to have reported all they could remember).

In Interview 2, after free recall was exhausted, interviewers asked children up to six additional focused questions about Mr. Science and wrongdoing. The first prompt was, "Tell me all about Mr. Science," followed by questions about whether someone had done something wrong during the event, what the rules were, whether rules had been broken, and finally—if the children had not identified the two rules—direct questions about the rules (e.g., "Was there a no touching rule?"). Interviewers could ask two follow-up questions (i.e., "Tell me more about…")

per focused question.

Interview manipulations. We assigned children pseudorandomly to familiarity and support conditions (i.e., with restrictions to maintain balance across ages and genders). Depending on the child's familiarity condition, the interviewer was the same or different from the first to the second interview. Interviewers conducting second interviews did not review what children had said in the first.

Interviewers displayed supportiveness using elements from previous research (Saywitz et al., 2019). The high support condition included encouragement for effort, using the child's name, forward lean, open body posture, and frequent eye contact and smiles. In the neutral support condition, interviewers tried to avoid these behaviors by maintaining a kind but cool, professional, and distanced air. Aside from these manipulations, interviewers strived to conduct sessions as similarly as possible (i.e., number and type of questions asked). Periodically during data collection, the first author viewed interviews at random to verify continued adherence to interview conditions. Further, a study on nonverbal behavior assessed differences in levels of expressivity, attention, and mutual coordination in a sub-sample of the children's first interviews (n = 123; Johnston, Brubacher, Powell, & Fuller-Tyszkiewicz, 2019). For that study, two blind research assistants coded the sub-sample of interview videos with sound muted to minimize verbal clues to condition. At six pre-selected time points during the interview, interviewers' nonverbal behavior (averaged across measures of expressivity, attention, and mutual coordination) differed across supportive and neutral conditions, suggesting that interviewers behaved according to their assigned interview condition.

Interviewers did not give children a reason for the second interview unless children complained or otherwise indicated that they had been interviewed previously. In such cases, the

second interviewer told the child that there had been problems with the recording of the first interview. As in Quas and Schaaf (2002), children very rarely referred to their prior interview: Just five did so (3% of the sample), equally distributed across support condition but all in the familiar interviewer condition.

Coding

Research assistants and a professional transcriber transcribed the interviews. Coders recorded the number and types of questions interviewers used to ensure that interviewers had properly conducted the free recall phases. Indeed, these phases were predominantly open-ended in both interviews (M_1 = 92%, SD_1 = 11%, M_2 = 95%, SD_2 = 9%).

Next, two student assistants read a random subset of children's transcripts and compared these to the event script to identify potential target details. These tended to involve people, activities, and objects, and yielded 62 possible target details. Two different assistants, blind to the children's conditions, then coded interview transcripts for mention of the target details and each of the six transgressions. To be counted as a transgression, children had to be clear that the activity had happened: Coders did not count a transgression when children said that Mr. Science wanted to do something but without reporting that he actually had (e.g., "He wanted to look inside the box but we told him no"). There was one exception: Whenever children reported that Mr. Science tried to coax them to break rules, this was counted as a transgression even if the children did not describe a completed rule break (e.g. "He tried to hold our hands" or "He said it would be ok to just take a peek under the sheet"). We considered these transgression reports because they documented explicit attempts to break one of the rules. In forensic interviews, attempted but not executed transgressions may nevertheless be of corroborative value (e.g., if a child reports that a suspect tried to share pornographic materials).

Transgression reports included explicit disclosures (e.g., “He told us to put our hands on [the energy stick] to light it up, so we did”) and implicit disclosures (e.g., “I saw the flashing lights and sounds”). In other words, sometimes children’s guilty knowledge indicated a transgression had taken place even though they did not report it outright as a transgression. Such information would nonetheless be relevant in a forensic interview.

Coded confabulations included any mention of something that did not happen during the activity, excluding minor detail errors (e.g., saying that the purple glitter was blue). Most of the children’s confabulations pertained to activities they might do in school but did not do during the science activity (e.g., “We had a snack,” “We played ‘What time is it Mr. Wolf?’”) or extrapolations of the germ detective activity (e.g., “We had to make the light glow, which was *his son’s science project*,” “We looked for germs *everywhere around the school*”).

Reliability

Three teams coded the data. The first team, previously trained on an unrelated interview set, coded a random sample of 33% of interviews for number of interviewer prompts and question type. The intraclass correlation (ICC) for the number of interviewer prompts was .99. Cohen's kappa for categorizing question types ranged from .82–1.00. The second team, trained with a random sample of ten transcripts, coded target details (maximum = 62 per interview). A random selection of 20% of the remaining interviews provided double-coded data for computations of Cohen’s kappas (whether each detail was mentioned or not); range = .66 – 1.00. A third team double-coded 100% of transcripts for confabulations and agreed on all identifications. The first team also double-coded all transcripts for transgression reports. Cohen's kappas for spotting individual transgressions in Interviews 1 and 2 were all greater than .94; ICCs for derived variables (total transgression reports in Interview 1 and the dependent variables

listed in Table 2) were greater than .93.

Results

Unless other otherwise noted, we used a generalized linear mixed model procedure for factorial analyses (Poisson distribution with a log link function for count variables) and report Type III tests of fixed effects. Means describing main effects of familiarity and support are unweighted.

Preliminary Analyses

See sections SI.B and SI.C of the online supplementary material for details about preliminary analyses. Interview conditions were well-balanced for children's ages, the percentages of females versus males, the number of days between the event and interviews, and the number of prompts interviewers delivered during open-ended questioning (see Table 1). We compared mean ages across conditions with a 2 (familiarity: unfamiliar vs. familiar) by 2 (support: neutral vs. supportive) factorial analysis; all *p*s > .54. The sample was 48% female, and there were no significant gender disparities across levels of the familiarity or support conditions, Fisher's exact tests, *p*s > .53.

Interview 1 occurred 3 or 4 days after the event (*M* = 3.39 days), with similar delays across levels of the familiarity and support conditions (see Table 1), Fisher's exact tests, *p*s > .41. Interview 2 occurred 3 to 5 days later (*M* = 4.08). There were no significant condition differences for this delay or the delay between the event and Interview 2 (6 to 8 days, *M* = 7.31), Mann-Whitney U tests, *p*s > .42.

Interviewers delivered varying numbers of prompts during open-ended prompting, ranging from 5 to 35 prompts in Interview 1 (*M* = 13.64, *SD* = 4.02) and from 3 to 21 prompts in Interview 2 (*M* = 11.29, *SD* = 3.00). Analyses of prompt number within each interview did not

find significant main effects of age or interactions involving age, even with the 3-way interaction omitted from the models, *p*s > .10. Thus, interviewers tailored prompting for individual children but offered similar opportunities to respond across ages and experimental conditions. Perhaps because interviewers tended to prompt more when children were not very informative, a greater number of prompts was associated with fewer, rather than more, event details. However, relationships between the number of prompts and event details were not significant (Interview 1, $r = -0.15$, $p = .07$; Interview 2, $r = -.08$, $p = .35$), and this was true even with age controlled (*p*s = .18 and .84, respectively).

We analyzed the amount of event information reported during free recall in Interviews 1 and 2 with a series of 2 (familiarity: unfamiliar vs. familiar) by 2 (support: neutral vs. supportive) factorial analysis after first including age to explore for interactions involving age. Age was a continuous variable in these analyses, which we conducted with and without the 3-way interaction. As expected, older children reported more details than the younger children did in Interview 1, $F(1, 153) = 81.67$, $p < .001$, and in Interview 2, $F(1, 153) = 47.23$, $p < .001$ (negative binomial distribution). Age was not significantly associated with the number of transgression reports in Interview 1, when prompting was only open-ended, $F(1, 153) = 3.61$, $p = .06$, and there was also a nonsignificant trend for older children to report significantly more transgressions in Interview 2, $F(1, 153) = 3.78$, $p = .05$. Because there were no significant interactions involving age, and age was balanced across conditions, we omitted age from subsequent analyses.

Event Reports

Interview 1. The major purpose of Interview 1, which included only open-ended prompts, was to allow us to manipulate interviewer familiarity in Interview 2. Although all

interviewers were unfamiliar to the children initially, we included the familiarity condition in 2 (familiarity: unfamiliar vs. familiar) by 2 (support: neutral vs. supportive) analyses of Interview 1 performance to confirm that performance was initially comparable across children who later experienced an unfamiliar versus familiar interviewer.

Perhaps due to the short delay between the event and Interview 1, there were no significant effects of familiarity or support in Interview 1. On average, children assigned to the unfamiliar versus familiar conditions averaged 19.94 and 21.04 details, respectively (*SD*s = 6.98, 7.24), $F(1, 156) = 2.33$, $p = .13$, estimated incidence rate ratio (IRR) = 1.05, 95% CI [0.98, 1.13]. They reported 20.63 details to neutral interviewers versus 20.35 details to supportive interviewers (*SD*s = 7.47, 6.78), $F(1, 156) = 0.14$, $p = .71$, IRR = 0.99, 95% CI [0.92, 1.06]. The interaction of familiarity and support was not significant, $F(1, 156) = 0.08$, $p = .78$.

Reports of Mr. Science's transgressions were also similar across conditions. On average, the children mentioned 3.65 transgressions to unfamiliar versus 4.02 to familiar interviewers (*SD*s = 1.62, 1.65), $F(1, 156) = 1.47$, $p = .23$, ICC = 1.10, 95% CI [0.94, 1.29); they reported 3.78 transgressions to neutral interviewers versus 3.89 to supportive interviewers (*SD*s = 1.59, 1.70), $F(1, 156) = 0.11$, $p = .74$, ICC = 1.03, 95% CI [0.88, 1.21]. The interaction of familiarity and support was not significant, $F(1, 156) = 0.02$, $p = .88$.

Only 9 children (6% of the sample, all males) confabulated in interview 1, and each of these children offered only one confabulation: 6 in the neutral condition and 3 in the supportive condition, Fisher's exact test, $p = .32$.

Interview 2. As in Interview 1, condition assignment had no significant impact on the number of target event details children reported during open-ended prompting (negative binomial distribution). On average, children assigned to the unfamiliar versus familiar conditions

averaged 19.98 versus 19.21 details, respectively (*SD*s = 7.73, 8.95), $F(1, 156) = 0.27$, $p = .60$, IRR = 0.96, 95% CI [0.82, 1.12). They reported 18.80 details to neutral interviewers versus 20.40 to supportive interviewers (*SD*s = 8.42, 8.18, $F(1, 156) = 1.12$, $p = .29$, IRR = 1.09, 95% CI [0.93, 1.27). The interaction of familiarity and support was not significant, $F(1, 156) = 0.14$, $p = .71$.

Table 2 (rightmost column) presents the mean number of transgressions reported during open-ended and focused prompting in Interview 2. Contrary to expectation, interviewer familiarity did not significantly impact transgression reports in the second interview, $F(1, 156) = 0.86$, $p = .36$, IRR = 0.93, 95% CI [0.78, 1.09), nor did interviewer familiarity interact with support, $F(1, 156) = 0.83$, $p = .36$. As predicted, however, supportive interviewing did encourage reports of Mr. Science's transgressions, $F(1, 156) = 4.19$, $p = .04$, IRR = 1.19, 95% CI [1.01, 1.40]. On average, children who were neutrally interviewed reported 3.34 transgressions in Interview 2 (*SD* = 1.37), whereas supportively interviewed children reported 3.95 (*SD* = 1.62). Supportive interviewing did not eliminate reluctance to report transgressions, however: 9% of children in the neutral condition reported no or only 1 transgression in Interview 2, compared to 12% in the supportive condition. Rather, this interviewing style mostly increased transgression reports among children who were already disclosing. For example, the percentages of children in the neutral condition who reported 4, 5, and 6 disclosures were 26%, 18%, and 4%, respectively, but these percentages shifted to 32%, 23%, and 17% in the supportive condition.

There was a benefit of supportive interviewing even before interviewers delivered focused questions. Children who were neutrally interviewed reported 2.94 transgressions during open-ended prompting in Interview 2 (*SD* = 1.55), whereas supportively interviewed children reported 3.68 (*SD* = 1.76), $F(1, 156) = 6.94$, $p = .009$, IRR = 1.26, 95% CI [1.06, 1.50]. By

contrast, there was no significant benefit or detriment from a familiar interviewer prior to focused questioning, $F(1, 156) = 1.96$, $p = .16$, IRR = 0.88, 95% CI [0.74, 1.05], and no significant interaction between support and familiarity, $F(1, 156) = 2.58$, $p = .11$.

But supportive interviewing did have a cost. Only 1 (male) child in the neutral condition offered a confabulation (1% of the sample), compared to 8 children in the supportive condition (10% of the sample, 2 males and 6 females), Fisher's exact test, $p = .034$. All of these children mentioned only a single confabulation, however. None of these nine children had confabulated in Interview 1, and difference in confabulations across Interviews 1 and 2 (7 in the neutral condition vs. 11 in the supportive condition) was not significant, $p = .46$. Confabulations were not related to interviewer familiarity in Interview 2, $p = .74$.

Although there were few confabulations in the current study, a single confabulation can have serious consequences in a forensic interview. As such, we conducted post hoc coding of the types of confabulations across the two interviews. There were three types of confabulations: made-up information about Mr. Science ($n = 4$, 2 in each condition; e.g., “I think his name is Nathan or something”), intrusions of typical children’s activities into the event ($n = 5$, 3 in the neutral and 2 in the supportive condition; e.g., “We got to play tiggy [tag] and hide and seek”), and expansions on the germ theme ($n = 9$, 2 in the neutral and 7 in the supportive condition; e.g., “We looked for germs all around the school” when they only searched in the classroom). The type of error was not significantly associated with support condition, Freeman-Halton extension of Fisher's exact test, $p = .38$.

Consistency Across Interviews

Fine-grained analyses explored how familiarity and support influenced the consistency of transgression reports across Interviews 1 and 2. Table 2 parses transgression reports into reports

mentioned only in Interview 1, reports mentioned only in Interview 2 (reminiscence), and reports mentioned in both interviews (repeated reports). Because there were no significant interactions of familiarity and supportiveness in factorial analyses of these variables, we report only main effects. (See section SI.D of the online supplementary material for details.)

Supportively interviewed children were less likely than neutrally interviewed children to describe a transgression only in Interview 1, indicating that supportive interviewing helped children maintain consistency by reducing the tendency to omit information they had already discussed, $F(1, 156) = 4.40$, $p = .04$, IRR = 0.69, 95% CI [0.49, 0.98]. There was a nonsignificant trend for supportive interviewing to increase reminiscence (new disclosures in Interview 2), $F(1, 156) = 3.58$, $p = .06$, IRR = 1.50, 95% CI [0.98, 2.29]. The number of disclosures reported in both interviews did not differ significantly across support conditions, $F(1, 156) = 2.32$, $p = .13$, IRR = 1.15, 95% CI [0.96, 1.38].

Interviewer familiarity did not significantly influence the number of reports that appeared only in Interview 1, $F(1, 156) = 2.85$, $p = .09$, IRR = 1.34, 95% CI [0.95, 1.89], or the number of repeated reports, $F(1, 156) = 0.19$, $p = .66$, IRR = 1.04, 95% CI [0.87, 1.25]. The children were less likely to report new transgressions to a familiar interviewer in Interview 2, however, $F(1, 156) = 9.40$, $p = .003$, IRR = 0.52, 95% CI [0.34, 0.79]. To recap, supportive interviewing increased consistency by reducing the number of transgressions reported only in Interview 1, whereas unfamiliar interviewers increased new reports (reminiscence) in Interview 2.

Discussion

This study examined the impact of interviewer familiarity and supportiveness on the quality of children's reports across multiple interviews characterized by a predominantly open-ended questioning style. Contrary to our prediction, familiar interviewers did not elicit more

transgressions in Interview 2 than unfamiliar interviewers did. Also, familiar interviewers elicited fewer new reports, perhaps because their presence cued the previous conversation. Supportive behaviors, however, encouraged transgression reports among children interviewed a second time. Notably, there was a facilitative effect of interviewer support even before interviewers asked focused questions, suggesting that support may reduce the need for specific questions to elicit additional disclosures from children. We also found that supportive interviewing encouraged consistency: Compared to children interviewed neutrally, children questioned by a supportive interviewer were less likely to omit a previously reported transgression from their second interview. This outcome is relevant to professionals who prepare children to repeat their accounts in court (Saywitz, Goodman, & Lyon, 2002).

It is unclear what phenomenon drove the increase in transgression reports when children experienced supportive interviewing in Interview 2. This advantage could be due to more extensive memory searching, which fosters retrieval of previously-reported as well as new event components, a reduction in motivational barriers to disclosing (i.e., reluctance), or both mechanisms. If supportive interviewing at the second interview solely affected reminiscence, however, one would expect to observe an overall increase in new target event details (e.g., La Rooy, Pipe, & Murray, 2005) instead of a concentrated effect on transgression reports. Much of the supportiveness literature suggests that non-contingent support should decrease barriers to reporting of sensitive information (Bottoms et al., 2007) but, until now, no experimental paradigm containing documented adult transgressions had tested this.

A recent systematic review and meta-analysis also concluded that there are generally few effects of interviewer support in free recall phases. There was some evidence, however, that supportiveness effects would be stronger at longer delays, with particularly anxious children, and

when contrasted against explicitly unsupportive behaviors like disapproval, frustration, and contradiction (Saywitz et al., 2019). By using neutral rather than non-supportive interviewers in the current study, and avoiding specific and suggestive questions, we stacked the deck against finding any effects of supportiveness. But this design was purposeful: We argue that our manipulation has higher ecologically validity than prior research in this area, thereby making the findings more generalizable to the practitioners whose questions motivated this work. This is because today's interviewers are usually aware of the negative influences of poor questions on children's reports, and few interviewers are likely to be overtly unsupportive (as evidenced by low rates of nonsupportive behaviours observed in field studies; Lewy, Cyr, & Dion, 2015; Hershkowitz et al., 2006).

The benefit of interviewer support did come at a cost: In the second interview, supportive interviewers elicited more confabulations than did neutral interviewers. Because confabulations often arose in free recall, it is difficult to situate this finding in the experimental literature on supportiveness effects, which has typically included very brief free recall phases. We speculate that when a friendly person interviewed children about the science activities for the second time (with no adverse consequences arising from anything they said in the first interview), comfort and sociability increased for some children. This is consistent with the finding that 3- to 7-year olds who were temperamentally more sociable produced higher levels of inaccurate details when interviewed by forensic interviewers about a magic show, compared to less sociable peers (Gilstrap & Papierno, 2004). Alternatively, this could be an unstable finding because there was not a significant effect of supportiveness on the number of confabulations elicited across interviews. Future research is needed to assess the stability of—and underlying contributors to—elevated confabulation rates in Interview 2.

Limitations and Future Directions

Several limitations of our study design should be considered when interpreting these results. First, although children's narratives suggested that they took the transgression rules seriously, it is likely that they were less reluctant to disclose than are typical children in abuse investigations. Indeed, only 12 children in our sample (8%; six per supportiveness condition) disclosed no transgressions in Interview 1, with 5 (3%) failing to disclose at the second. As such, it was unsurprising that the effect of interview support in the present study was primarily restricted to children who were already disclosing. Relatedly, we do not know the extent to which children may have discussed the event (or interviews) with others. This limitation is typical of analogue memory studies with children participating in schools. Due to decreased reluctance and possible cross talk, children in the present study may have disclosed adult wrongdoing at a higher rate than would children in forensic interviews, but we anticipate that the pattern of behavior across conditions would be similar. We also maintained experimental control by using trained university students as interviewers, and they were required to follow protocols that did not permit the discretion typically afforded professional interviewers. Therefore, our findings should be replicated with forensic interviewers.

Finally, we did not ask the children about their perceptions of the interviewers. Although a coded selection of interview videos suggested that interviewers behaved in accordance with condition assignments, whether children perceived interviewers to be supportive or neutral is unknown, and some manipulations of interviewer support, such as an open versus closed body posture, may not be salient to children (Almerigogna, Ost, Akehurst, & Fluck, 2008). Further, because interviews were relatively short, some children in the familiar interviewer condition may not have recognized that the same person was interviewing them. This situation, if it occurred

often enough, would have masked effects of a familiar interviewer, which might benefit children in actual investigations who are especially reluctant to disclose. To our knowledge, none of the experimental research testing interviewer support or familiarity has included a final set of questions prompting children for perceptions of their interviewers, but we suggest these queries be included.

Conclusion

In sum, results from this study add to existing findings that supportive interviewing can facilitate children's reports, especially when combined with a second opportunity for retrieval under optimal interviewing conditions. These findings are good news for agencies who wish (or need) to conduct repeated interviews with the same interviewer, although case features and investigative needs should ultimately drive decisions about who conducts a repeated interview.

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Table 1

Preliminary Analyses: Mean Age, Percentage Females, Mean Number of Days From the Event to Interviews, and Mean Number of Prompts Delivered During Open-Ended Prompting, by Condition

Interview Condition	Age (years)	Percentage female	Delay between event and Interview 1 (days)	Delay between Interview 1 and 2 (days)	Number of prompts (Interview 1)	Number of prompts (Interview 2)
Neutral						
Unfamiliar	7.17 (1.17)	43	3.36 (.48)	4.14 (.81)	13.95 (5.13)	11.67 (3.36)
Familiar	7.36 (1.28)	47	3.36 (.49)	4.14 (.93)	13.28 (2.86)	10.81 (2.35)
Supportive						
Unfamiliar	7.21 (1.19)	49	3.37 (.49)	4.07 (.86)	14.23 (3.87)	11.12 (2.82)
Familiar	7.25 (1.21)	51	3.49 (.51)	3.97 (.99)	13.00 (3.77)	11.51 (3.34)

Note. Standard deviations are in parentheses.

Table 2

Consistency of Transgression Reports Across Interviews (Mean Number of Reports, With Standard Deviations in Parentheses)

Interview condition	Only Interview 1	Only Interview 2	Interviews 1 and 2	Total Interview 2
Neutral				
Unfamiliar	0.88 (1.09)	0.86 (0.93)	2.74 (1.45)	3.60 (1.45)
Familiar	1.17 (0.88)	0.31 (0.79)	2.78 (1.44)	3.08 (1.23)
Overall	1.02 (1.00)	0.58 (0.90)	2.76 (1.43)	3.34 (1.37)
Supportive				
Unfamiliar	0.60 (0.73)	0.88 (0.85)	3.07 (1.53)	3.95 (1.53)
Familiar	0.82 (1.07)	0.67 (1.15)	3.28 (1.89)	3.95 (1.75)
Overall	0.71 (0.91)	0.78 (1.01)	3.18 (1.71)	3.95 (1.62)