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To cite this article: Brittany F. Whiting & Heather L. Price (2017) Practice narratives enhance children's memory reports, *Psychology, Crime & Law*, 23:8, 730-747, DOI: [10.1080/1068316X.2017.1324031](https://doi.org/10.1080/1068316X.2017.1324031)

To link to this article: <http://dx.doi.org/10.1080/1068316X.2017.1324031>



Accepted author version posted online: 02 May 2017.
Published online: 05 May 2017.



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Practice narratives enhance children's memory reports

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ABSTRACT

Practicing recall of a non-target event prior to discussing substantive issues is a relatively new recommendation for interviews with child victims and witnesses. Despite evidence of the effectiveness of these practice narratives in obtaining detailed reports from children, specific recommendations about the duration and content of these interviews have yet to be systematically investigated. In the present study, 176 children aged 6–10 years watched a magic show and then participated in an interview that began with a practice narrative, with varying length (2 or 5 minutes) and topics (unique or commonplace), or no practice narrative. Conducting a practice narrative of any kind was beneficial to children's subsequent recall of accurate details over no practice narrative. Benefits to children's accurate recall were observed with as little as 2 minutes of practice and practice narratives were particularly beneficial if a unique, rather than commonplace, experience was targeted for practice recall. The present results confirm previous field research and laboratory findings indicating that the substantive phase of the interview is enhanced by conducting a practice narrative and extends the benefits of practice narratives to even a very brief practice narrative.

ARTICLE HISTORY

Received 27 January 2017

Accepted 22 March 2017

KEYWORDS

Interviewing; children; practice narratives; investigative; memory reports

Investigative interviews with children often provide the only real insight into what has occurred when there is suspicion that a child may be the victim of abuse or witness to a crime (Lamb, Sternberg, & Esplin, 1998). Thus, it is crucial that children are given the best opportunity to provide accurate information to investigators. Over the last few decades, there have been many improvements to the way in which evidence is elicited from children, including a substantive focus on improving investigative interviewing techniques (Bull, 2010; Lamb et al., 1998). A focused outcome of this work has been the development of several interviewing protocols aimed at helping investigators obtain uncontaminated accounts of forensically relevant information from children (e.g. Cognitive Interview, Narrative Elaboration; see Goodman & Melinder, 2007 for a review; Saywitz & Snyder, 1996). The most well-researched protocol was developed by researchers from the National Institute of Child Health and Human Development (NICHD; e.g. Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007). The NICHD protocol is a phased process that encourages interviewers to rely on open-ended prompts in which children can

freely report information in their own way (e.g. 'Tell me everything that happened from the beginning to the end'; Lamb, La Rooy, Malloy, & Katz, 2011). The protocol involves several structured interviewing phases including a rapport-building phase that involves two sections: an open-ended discussion in which children are encouraged to discuss personally relevant information (e.g. activities enjoyed) and a second section in which children recount a recent experience in detail. This latter section is commonly referred to as a practice narrative.

A practice narrative is a short discussion about a recently experienced neutral or positive event that is unrelated to the forensically relevant issue (see Roberts, Brubacher, Powell, & Price, 2011 for a review). Conducting a practice narrative prior to discussing substantive issues is recommended as a way to enhance rapport and to provide a child with an opportunity to practice reporting events in a free-recall manner (i.e. reporting everything they can remember without the use of leading or closed-ended questions). Ideally, a practice narrative will help train the child to describe events that they have experienced in detail with minimal prompting from the interviewer (Roberts et al., 2011). Evidence supporting the inclusion of a practice narrative has been clear. The use of open-ended questions during the pre-substantive phases of the interview has been explored in both field and laboratory studies and is linked to increased detail in children's reports as well as increased accuracy of reports (Anderson, Anderson, & Gilgun, 2014; Hershkowitz, 2009; Price, Roberts, & Collins, 2013; Roberts, Lamb, & Sternberg, 2004; Sternberg et al., 1997).

The practice narrative recommendation does not come without limitations, however. For instance, there have been concerns about extending the length of the pre-substantive phases of the interview (Davies, Westcott, & Horan, 2000; Hershkowitz, 2009), and the impact this may have on the interview as a whole. Brown and colleagues' (Brown et al., 2013) recent laboratory study, however, found that children who received open-ended practice narratives were more efficient in their responses in the substantive phase. These children took less time to provide the same level of detail as children who received closed-ended practice.

Further, interviewers often struggle with how exactly to conduct a practice narrative. Researchers have recently begun exploring various aspects of the practice narrative to develop specific recommendations. Brubacher, Roberts, and Powell (2011) examined the carryover benefits (to the substantive phase) of an interviewer using strategic language during the practice narrative. In their study, interviewers either conducted a generic practice narrative (e.g. 'Tell me what *happens* when ...') or an episodic practice narrative (e.g. 'Tell me what *happened* when ...') with children who had experienced either one or four activity sessions. The practice was followed by an open-ended interview about one of the activity sessions the children had participated in. Brubacher *et al.* found that, compared to children in the generic practice narrative condition, children in the episodic practice narrative condition used more episodic language in the substantive phase. Episodic language is often considered desirable in a forensic context because in many jurisdictions, recall of a particular instance may be legally required (e.g. *R. v. B.(G.)*, 1990). Similar benefits were observed by Brown et al. (2013) who found experimental evidence that open-ended practice narratives, compared to more closed practice, contributed to a larger number of details reported by children in response to open-ended prompts in the substantive phase of an interview (but not an overall increase in details). This finding suggests that

children do indeed practice response formats in the early part of the interview and that a practice narrative can be helpful for encouraging the use of a desirable response style throughout the entire interview.

Interviewers have also reported challenges in assessing how long the practice narrative should be and what topic should be discussed (Roberts et al., 2011). Researchers are not yet able to answer these questions with empirical data. To address interviewers' concerns and make recommendations about how to optimize children's interview performance by conducting a practice narrative, the key components of a practice narrative must continue to be explored experimentally. The issue of practice narrative length is raised often by practitioners because many express worry that a lengthy practice narrative may be an improper use of the investigator's time and potentially fatiguing for the child (Roberts et al., 2011). Conversely, too short of a practice narrative may not have the desired effect. In both field evaluations (Price et al., 2013; Sternberg et al., 1997) and experimental settings (Brown et al., 2013; Roberts et al., 2004), the length of time the interviewer spends in the practice narrative phase of the interview has been allowed to occur naturally and was measured after the fact. Thus, at this time, researchers are not yet able to offer specific empirically based suggestions on how much time to spend on practice.

Interviewers are also concerned with choosing an appropriate topic for the practice narrative. A general recommendation has been to ask about a past notable event, such as a recent birthday party or holiday (Roberts et al., 2011). However, these events are not always recent enough for the child to provide sufficient detail. If such a practice narrative topic is unavailable, the NICHD Protocol recommends having the child describe yesterday's events in detail (Lamb et al., 2007). If the child is unable to describe what he or she did yesterday, it is recommended that the child describe the events of the current day from the moment of waking to the time of the interview (Lamb et al., 2011). It is unclear whether discussing commonplace events, such as what the child did yesterday, will have the same benefits as discussing a unique occurrence, given the lack of match between the type of memory accessed during practice recall (general) and substantive phase recall (specific). There are even concerns that having a child discuss a commonplace event in a generic manner during a practice narrative might negatively impact the child's report(s) during the substantive phase of the interview (Brubacher et al., 2011). There is no empirical research aimed at determining which topic areas (unique events vs. commonplace events) are best suited for discussion during a practice narrative with a child. In particular, it is important to clarify the usefulness of the NICHD's second-best recommendation to discuss potentially routine events (i.e. yesterday) to the overall interview.

The present study

In this study, we explored the influence of both the nature of the practice narrative topic (unique or commonplace event) and the practice narrative length on children's reports. A *more desirable overall interview* was defined as one in which the child was more informative (provided a larger volume of information) and more accurate (provided a larger volume of accurate details). We hypothesized that conducting any type of practice narrative (rather than none), conducting a practice narrative that was longer (5 minutes) rather

than shorter (2 minutes), and discussing a unique rather than commonplace topic during the practice narrative would result in more desirable overall interviews.

Method

Children were pseudo-randomly assigned by age to one of five possible experimental conditions in a 2 (topic: unique event vs. commonplace event) x 2 (length: 2 minutes vs. 5 minutes) between-subjects design in addition to a control condition (no practice narrative). For control children, no practice narrative preceded the interview ($n = 36$). For other children, the length of the practice narrative was monitored by the interviewer and was either approximately 2-minute long ($n = 75$) or approximately 5-minute long ($n = 65$). During the practice narrative phase, children were asked about a unique event (e.g. a recent birthday party; $n = 72$) or about a commonplace event (e.g. last night's activities; $n = 68$). Children's reports of accurate details during the substantive phase, accurate details in response to the first prompt, and accurate responses during the structured questions phase were the dependent variables of interest.

Participants

One hundred and eighty-seven children (53 females) between the ages of 6 and 10 years ($M = 8.30$, $SD = 1.20$) were recruited from a science camp and took part in a magic show in small groups (15–20 children). Children with parental consent were invited to participate in the interviews one to two days after the magic show. Three children with parental consent declined during the verbal assent process. One additional child was an extreme outlier¹ in terms of the total number of details provided in the substantive phase and was excluded from analyses. A further seven interviews were excluded because the interviewer was unable to engage the child in the assigned practice narrative condition (six of these children had difficulty generating an appropriate topic, the other child had difficulty focusing during this phase), resulting in a final sample of 176 children (see Table 1 for demographic data).

Play session

Children participated in a scripted 20-minute science magic show led by a trained research assistant. The magic show consisted of 25 unique details, which were used to assess the accuracy of the child's report. For example, the magician wore a wizard's hat (i.e. pointed hat with stars on it) while performing different magic tricks. The magician said the name of each trick three times and demonstrated to the children how to perform

Table 1. Demographic data distribution across conditions.

		<i>N</i>	Mean Age (<i>SD</i>)	Males
No practice		36	8.17 (1.18)	27
Unique Topic	2 minutes	40	8.30 (1.20)	26
	5 minutes	32	8.66 (0.97)	24
Common Topic	2 minutes	35	8.31 (1.28)	26
	5 minutes	33	8.12 (1.29)	20

the magic trick. The magician's attire, the name of the tricks, as well as the details from the magic tricks served as the verifiable details. Additionally, near the end of the magic show, a male confederate was invited by the magician to assist with a magic trick. While the magician's back was turned, the male confederate left the room with the magician's wand in his back pocket.²

Interviewer training

Interviewers were trained to follow the NICHD Interviewing Protocol (Lamb et al., 2007) for both the practice narrative and substantive phases of the interviews. Nine female research assistants took part in a three-hour training session one week prior to interviewing the children. This training session included a step-by-step breakdown of the protocol as well as practical application of the methods. Interviewers were taught to rely on open-ended prompts and to refrain from asking yes/no, option posing, or suggestive questions throughout the interview. Previous research suggests that post-training refresher courses and providing feedback in between interviews is important for interviewer adherence (Powell, Fisher, & Hughes-Scholes, 2008; Price & Roberts, 2011). Therefore, throughout data collection the interviewers received both verbal and written feedback on their interviews.

Interviews

Children were interviewed either one or two days following the magic show. All interviews began with a basic introduction and rapport building as outlined in Lamb et al. (2007; 2011). The interviewer always began by introducing herself and reviewing the ground rules for interviews with children (i.e. the importance of telling the truth, using 'I don't know', and not guessing). After the child understood the ground rules, the interviewer attempted to build rapport with the child by asking the child to talk about what they like to do for fun or during their spare time. Children's responses to this question were followed-up with open-ended prompts (invitations, cued invitations, and directed narratives) and facilitators.

Depending on the experimental condition, the interviewer either conducted a practice narrative with the child (for 2 minutes or 5 minutes, about a unique or commonplace event), or moved directly to the substantive phase of the interview (control). In the unique event practice narrative condition, the interviewer attempted to identify a unique and memorable recent event as the topic of discussion (e.g. birthday party, family vacation). In the commonplace event condition, the interviewer attempted to have the child provide a full description of the preceding day's activities as the topic of discussion (e.g. everything that occurred the previous night). For all practice narratives, interviewers were instructed to prompt for additional information with open-ended (invitations, cued invitations, and directed narratives) and facilitators only.

After completing the practice narrative, the interviewer introduced the substantive topic. The interviewer said that she heard that a magician came to the summer camp and that she was interested in knowing all about what happened while the magician was there. The interviewer then asked a series of open-ended prompts and used facilitators (e.g. 'hm', 'uh huh') to obtain details from the child about the magic show. Once the

child appeared to have exhausted the free-recall narrative, the interviewer proceeded to the structured questions. The structured questions phase comprised eight scripted questions and was administered in the same way across all participants. The last four questions in this phase were repeated up to five times to get a full description of each of the tricks the child remembered (e.g. 'What happened in the first trick?', 'What happened in the second trick?'). These structured questions were designed to be as open-ended as possible. This phase was included in the study as an additional standard measure of the children's accuracy across conditions. Once the interviewer completed the list of structured questions, she thanked the child for helping her to understand what happened and gave the child a small prize.

Practice narrative length

The interviewer was responsible for timing the length of the practice narrative. Practice narratives did not always have a clear start or end point. For example, some children took longer than others to identify an appropriate topic and some children continued to discuss the details of the event even after the interviewer attempted to transition to the substantive phase. Interviewers were instructed not to end the practice narrative abruptly if the child was in the middle of a narrative, as this would have been counterproductive to the aim of the practice narrative. Instead, the interviewer was instructed to wait until a natural stopping point closest to the child's condition (2 or 5 minutes) and then move on to discuss the substantive issue. Many interviewers reported that it was difficult to keep track of time while simultaneously attempting to conduct a proper practice narrative. For these reasons, the length of the practice narratives within each condition was somewhat variable.

To assess length, the practice narrative was determined to begin with the first prompt or transition to the practice narrative topic (e.g. 'Now I want to talk about something fun or exciting that has happened to you lately.') and end once the interviewer transitioned to the substantive phase of the interview (e.g. 'Now I want to talk about the magician that came the other day.'). For the short practice narrative condition (i.e. 2 minutes) the time of the practice narrative ranged from 1:00 to 3:30, with an average time of 2:19 (SD = 0:27). For the long practice narrative condition (i.e. 5 minutes) the time of the practice narrative ranged from 3:22 to 8:28, with an average time of 4:57 (SD = 0:55). Despite attempting to control the length of time the interviewer and the child spent discussing the practice narrative, some of the *short* practice narratives ($n = 5$) and some of the *long* practice narratives ($n = 12$) overlapped in duration (i.e. were between 3:00 and 3:59). These cases were not excluded from further analysis because we were most interested in the applied implications of providing direction to interviewers about how long the practice narrative should be. Further, the results did not change based on whether or not these cases were included.

Practice narrative topic

In the unique event practice narrative, children identified many different events to discuss. The most common topic that was discussed in the unique event practice narrative topic condition was a past trip or vacation (e.g. Disneyland, camping; 36%). Other topics

were: memorable summer camp activities (e.g. dissecting a starfish; 15%), celebrations or parties (e.g. birthday party, wedding 15%), acquiring a new toy (8%), and sporting events (e.g. scoring a goal; 8%). Several topics discussed (11%) were completely distinct and not easily categorized (e.g. breaking a piñata).

In the commonplace event practice narrative, children either discussed the events that took place the previous evening or that morning (80%) or they discussed routine activities they engage in (e.g. what they *normally* do in the evening; 20%). The goal of the commonplace event practice narrative topic condition was to have the child provide a full description of the events that occurred the previous evening or a full description of the events that occurred during the morning prior to arriving at the summer camp. However, during coding of the data it became apparent that the conversation sometimes switched to discussing routine evening and/or routine morning events. Given this, further analyses of the language used by the interviewer and by the child were conducted for this condition and are discussed in the results section.

Coding

Interviews were coded for interviewer utterance types, interviewer language, child language, and child accuracy (as per Lamb et al., 1996; Schneider, Price, Roberts, & Hedrick, 2011). Interrater reliability was obtained on 30 randomly selected interviews. Cohen's Kappa was acceptable for all categories: interviewer prompts (.90), interviewer language (.81), child language (.84), substantive accurate details (.81), and structured accurate details (.86).

Interviewer utterances

For each exchange between child and interviewer, the interviewer's utterance was coded. If the interviewer posed multiple prompts within one turn (i.e. before the child responded), only the final prompt was coded because children typically respond to the most recent prompt (Katz & Hershkowitz, 2012). All interviewer utterances were categorized as either *open-ended prompts*, which allow for a free-recall response with minimal direction (e.g. 'Tell me everything that happened while the magician was here') or *closed-ended prompts* which typically can be answered with one or two words and focus on particular details (e.g. 'What colour was the magicians hat?'). Consistent with interviewer training goals, a large proportion of the interviewers' prompts were open-ended in the practice narrative phase of the interview ($M = .80$, $SD = .22$) and in the substantive phase of the interview ($M = .83$, $SD = .20$).

Interviewer language

All interviewer utterances were also categorized as either episodic or generic. The interviewer's utterance was considered *episodic* if the prompt or question was about a specific event or aspect of the event (e.g. 'Tell me everything that happened when you were in Disneyland.' or 'Tell me more about the first trick the magician did.'). The interviewer's utterance was considered *generic* if the prompt or question was vague, asked about general routines or the general nature of events (e.g. 'What do you usually do after you get home from summer camp?'). The total numbers of episodic and generic utterances posed by the interviewer were calculated separately for the practice narrative and the

substantive phase of the interview. In the substantive phase of the interview almost all interviewer prompts were episodic ($M = .997$, $SD = .02$). Due to the lack of variability, analyses were not conducted on interviewer language use in the substantive phase.

Accuracy

The magic show was highly scripted to allow for accuracy assessment. Accuracy was calculated in two ways for each child: (1) the total number of accurate details provided in the substantive phase (excluding the structured question responses), and (2) an accuracy score determined in the structured question phase. A *detail* was defined as any complete subject, object, verb, preposition, adjective, or any other grammatical structure that provided information (see Lamb et al., 1996; Sternberg et al., 1996). To be counted as a detail, the word(s) had to provide meaning or clarity and be consistent with what actually occurred during the event. Unclear statements, repeated information, or stylistic patterns of speech (e.g. 'like'), or inaccurate information were not coded. Similar to Roberts et al. (2004), each of the details provided by the child was coded as either *accurate* (the detail was reported correctly), *inaccurate* (the detail was misrepresented), or *unknown* (the detail could not be verified). For example, the statement 'she showed us three tricks, and Jimmy yelled out abracadabra' would be coded as four accurate details (*she*, *showed*, *us*, and *tricks*), one inaccurate detail for *three* (because there were actually five tricks), and three unknown details for *Jimmy*, *yelled_out*, *abracadabra* (because this was outside the script and could not be confirmed). From this, the total number of accurate details provided by the child throughout the substantive phase, and the number of accurate details the child provided in response to the first interviewer prompt in the substantive phase were calculated. Finally, the child was also given an accuracy score in response to the 10 scripted questions in the structured questions phase of the interview. For this, 25 critical details were identified, each of which counted as one point. Half points on critical details were granted in some situations. For example, if the child said, 'The trick was called Laundry something', 0.5 points was awarded for the trick's name (i.e. *Dirty Laundry*).

Child language

Each detail provided by children was categorized as episodic or generic. A detail was considered *episodic* if the response contained information about a particular event or aspects of a particular event (e.g. 'We saw Mickey Mouse on our first day in Disneyland' or 'For the first trick, she put a ketchup pack in a water bottle'). A detail was considered *generic* if the response contained information about general actions, routines, or background information about the child (e.g. 'I like playing hockey') or if the child used present tense or the impersonal 'you' to describe past events (e.g. 'What you do is you put the ketchup pack in the water bottle.'). The total numbers of episodic and generic details reported were calculated separately for the practice narrative and the substantive phase of the interview.

Results

The practice narrative phase of the interview is not analysed unless otherwise noted. Rather, we were interested in the effect of the practice narrative on children's responses in the substantive and structured questioning phases. For each comparison, we report analyses of the total number of accurate details reported by children ('substantive

accuracy'), the average number of accurate details in response to the first prompt, and children's accuracy score in the structured phase of the interview (out of a possible 25; 'structured accuracy'). We do not report analyses of the overall number of details reported because the vast majority of the details provided by the children were accurate (< 1% of all details were verifiably inaccurate) and thus, were essentially captured in the accurate details analyses. Initially, children's age was included in all analyses (6–8 years, 9–10 years). However, though main effects of age were observed, with a larger number of accurate details reported by older children, age did not interact with any of the independent variables, so for parsimony, age is not included in the analyses. Descriptive data for practice narrative conditions are in Table 2. Where *post hoc* tests are conducted, Tukey HSD was used. Finally, because of the unbalanced design ($2 \times 2 + 1$) and unequal cell sizes, we do not conduct factorial analyses.

Practice narrative length

Price et al. (2013) found that forensic interviews that contained a practice narrative were longer overall than interviews that did not contain a practice narrative. This pattern was also observed in the current study. Overall interview length (practice narrative + substantive phase) was shorter when children received no practice narrative ($M = 15:11$, $SD = 3:57$) than when they received a practice narrative ($M = 19:22$, $SD = 4:21$), $F(1, 175) = 27.38$, $p < .01$, $\eta_p^2 = .14$. There was also a significant difference in the length of the overall interviews that included a shorter practice narrative ($M = 18:18$, $SD = 4:29$) and longer practice narrative ($M = 20:36$, $SD = 3:51$), $F(1, 139) = 10.35$, $p < .01$, $\eta_p^2 = .07$. However, when only the substantive phase of the interview was explored, there was no difference in substantive phase length between interviews that did ($M = 15:50$, $SD = 4:00$) and did not ($M = 15:11$, $SD = 3:57$) include a practice narrative, $F(1, 175) = 0.73$, $p = .40$, $\eta_p^2 = .004$, nor was there a difference between interviews with a shorter ($M = 16:00$, $SD = 4:20$) or longer ($M = 15:39$, $SD = 3:38$) practice narrative, $F(1, 139) = 0.25$, $p = .62$, $\eta_p^2 = .002$.

The practice narrative length condition (5 and 2 minutes, no practice) was entered into a one-way analysis of variance (ANOVA). The total number of accurate details reported in the substantive phase did not differ by length, $F(2, 175) = 2.11$, $p = .13$, $\eta_p^2 = .02$; however, the number of accurate details in response to the initial prompt did, $F(2, 175) = 4.813$, $p = .01$, $\eta_p^2 = .05$. *Post hoc* tests indicated that children who practiced for 5 minutes ($M = 109.78$, $SD = 112.41$) and those who practiced for 2 minutes ($M = 92.68$, $SD = 84.94$) both reported more accurate details in response to the initial prompt than children with no practice ($M = 51.19$, $SD = 53.26$), $ps = .01$ and $.03$, respectively. There was no difference between short and long practice narratives, $p = .27$. The accuracy in the structured phase differed significantly by length, $F(2, 175) = 3.56$, $p = .03$, $\eta_p^2 = .04$. Children who received no practice provided fewer accurate responses ($M = 13.30$, $SD = 4.01$) than children in the 5-minute

Table 2. Mean (standard deviation) response types across practice narrative condition.

		Substantive accuracy	First response accurate details	Structured accuracy
No practice		171.34 (103.71)	51.13 (53.09)	13.44 (4.23)
Unique topic	2 minutes	220.72 (121.11)	105.41 (94.30)	15.21 (3.40)
	5 minutes	225.81 (117.88)	145.84 (130.14)	15.25 (3.07)
Common topic	2 minutes	204.59 (104.55)	87.22 (83.97)	15.18 (4.20)
	5 minutes	200.59 (113.51)	75.50 (80.59)	15.09 (4.28)

($M = 15.07$, $SD = 3.74$, $p = .03$) and 2-minute ($M = 15.30$, $SD = 3.83$, $p = .01$) practice conditions. The latter two conditions did not differ from one another, $p = .72$.

As discussed above, though we were primarily interested in the influence of a direction to interviewers about practice narrative length, we also noted that, in some cases, the 2- and 5-minute conditions overlapped. Thus, we conducted follow-up correlations on observed interviewer length and children's accuracy. There was a significant positive correlation between observed practice length and the total number of accurate details reported, $r = .17$, $p = .02$, and between observed practice length and the number of accurate details reported in response to the initial prompt, $r = .26$, $p = .001$.

Practice narrative topic

Practice narrative topic was entered into a one-way ANOVA (unique, commonplace, no practice). The total number of accurate details reported in the substantive phase did not differ significantly across practice narrative topic, $F(2, 175) = 2.33$, $p = .10$, $\eta_p^2 = .03$, but the number of accurate details in response to the initial prompt did, $F(2, 175) = 7.46$, $p = .001$, $\eta_p^2 = .08$. *Post hoc* tests indicated that more accurate details were reported in response to the initial prompt following unique event practice ($M = 119.14$, $SD = 110.93$) than no practice narrative ($M = 51.19$, $SD = 53.26$, $p < .001$), and commonplace events ($M = 81.01$, $SD = 79.96$, $p = .01$). There was no difference between commonplace events and no practice narratives ($p = .11$). The structured accuracy score also differed significantly across topics, $F(2, 175) = 3.50$, $p = .03$, $\eta_p^2 = .04$: Structured phase accuracy scores were higher for unique ($M = 15.24$, $SD = 3.32$) and commonplace ($M = 15.15$, $SD = 4.24$) events than for no practice narrative ($M = 13.30$, $SD = 4.05$), $p = .01$ and $.02$, respectively. The unique and commonplace topics did not differ from one another, $p = .90$.

Optimal practice narratives

It was hypothesized that the longer unique practice narrative would result in a more desirable or 'optimal' overall interview compared to the other three combinations of practice narrative conditions (i.e. a shorter-unique practice narrative, or a shorter commonplace practice narrative, or a longer commonplace practice narrative). To explore this, we conducted one-way ANOVAs comparing response accuracy across these four conditions. There were no differences in either substantive phase accuracy, $F(3, 139) = 0.38$, $p = .77$, $\eta_p^2 = .01$, or structured phase accuracy, $F(3, 139) = 0.10$, $p = .96$, $\eta_p^2 = .002$. However, the difference in accurate responses to the initial prompt differed significantly across conditions, $F(3, 139) = 3.40$, $p = .02$, $\eta_p^2 = .07$. The optimal (longer unique) practice narrative resulted in more accurate details in response to the initial prompt ($M = 145.84$, $SD = 130.14$) than all other conditions (long-commonplace: $M = 74.82$, $SD = 79.41$, $p < .01$; short-commonplace: $M = 86.86$, $SD = 81.18$, $p = .01$; short-unique: $M = 97.78$, $SD = 88.82$, $p = .04$). No other comparisons were significant, $ps > .30$ (Figure 1).

Practice narrative language: episodic vs. generic

Next, we were interested in the type of language used during the practice narrative. Interviewers' use of episodic language during the practice narrative ($M = .76$, $SD = .35$) was not

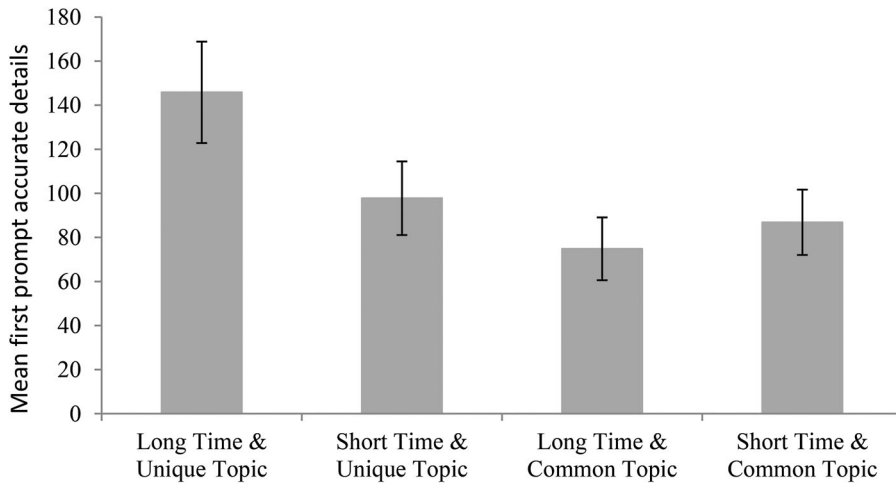


Figure 1. Accurate details (standard errors) in response to the initial prompt.

as consistent across groups as it was during the substantive phase. It was hypothesized that the commonplace practice narrative may encourage children's use of generic language in the practice narrative, which may then carry forward to similar language use during the substantive phase. Not surprisingly, there was a significant positive correlation, $r(140) = .61, p < .001$, between the type of language used by the interviewer and the type of language used by the child in the practice narrative phase of the interview: Practice narratives with a high proportion of episodic interviewer prompts also had a high proportion of episodic details provided by children.

There was a significant effect of practice narrative topic on interviewers' use of episodic language during the practice narrative, $F(1, 139) = 18.56, p < .001, \eta_p^2 = .12$. Interviewers used proportionately fewer episodic prompts in the commonplace condition ($M = .64, SD = .41$) than in the unique condition ($M = .88, SD = .23$). Likewise, there was a significant effect of practice narrative topic on children's use of episodic language during the practice narrative, $F(1, 139) = 7.45, p = .01, \eta_p^2 = .05$. Children used proportionately less episodic language in the commonplace condition ($M = .50, SD = .37$) than the unique condition ($M = .66, SD = .31$).

Next, the practice narrative phase of the interview was classified as either an episodic practice narrative, a generic practice narrative, or a mixed language practice narrative. A practice narrative was classified as an *episodic practice narrative* ($n = 72$) if at least 60% of interviewer's language and 60% of the child's language was episodic (Schneider et al., 2011). A practice narrative was *generic* ($n = 21$) if at least 60% of interviewer's language and 60% of the child's language was generic. If the practice narrative did not meet the criteria for either of these classifications, it was categorized as mixed language ($n = 48$). For the unique event practice narrative topic, 43 were categorized as episodic, 26 were mixed language, and 3 were generic. For the commonplace event practice narrative topic, 29 were episodic, 22 were mixed language, and 18 were generic. A chi-square test was performed to explore the relationship between the practice narrative condition (unique vs. commonplace) and the language used by the child and the interviewer during the practice narrative (episodic vs. mixed vs. generic). Children and interviewers

were more likely to use generic language during the practice narrative when discussing a commonplace event, compared to a unique event, $\chi^2(2, N = 140) = 7.21, p = .001$.

Discussion

Empirical support for the practice narrative has been steadily growing (e.g. Brown et al., 2013; Brubacher et al., 2011; Price et al., 2013), but specific recommendations, including the length of time to spend conducting the practice narrative and the types of topics to discuss during the practice narrative, had not been experimentally evaluated. The present results confirm previous field research and laboratory findings indicating that the substantive phase of the interview is enhanced by conducting a practice narrative and extends the benefits of practice narratives to even a very brief practice narrative.

Length of practice narratives

If engaging children in a practice narrative serves as an opportunity to practice remembering and reporting details informatively, then it seems likely that it would take some amount of time for the practice narrative to have an effect. The results of the current study imply that the content of the practice narrative may be more important than the duration. Interestingly, even children who only participated in a practice narrative for about 2 minutes experienced benefits of a practice narrative. Further, participating in a practice narrative that was planned to take place for a longer duration (5 minutes) did not significantly improve children's accuracy during the substantive phase over a shorter practice narrative. This indicates that conducting the practice narrative properly (i.e. using open-ended prompts) and discussing an appropriate topic (i.e. a unique and memorable event) may be more important to the success of the overall interview than the amount of time spent conducting the practice narrative.

There are concerns that conducting a lengthy practice narrative may be a waste of investigative resources, unnecessarily exhaust a child, and difficult to convince investigators to do, whereas not spending enough time conducting a practice narrative may not produce beneficial effects in the substantive phase. Determining when practice narratives become effective and when nothing more can be gained is important information for forensic investigators. With the current experimental design, there was a deliberately restricted range of times examined. Relatively short practice narrative times were assessed because it was anticipated that a recommendation to conduct a practice narrative longer than 5 minutes may appear too lengthy and undesirable for time-pressured interviewers. The findings from the current study suggest that it only takes approximately 2 minutes of practice to observe benefits. However, it is still unclear when exactly practice narratives become effective. Perhaps children are able to understand very quickly what is expected of them and would therefore only require extremely brief practice narratives (30 seconds – 1 minute). On the other hand, perhaps extending the practice narrative duration would produce even greater benefits than those observed here. Previous evidence indicated that there may be some disadvantages to spending a longer time in the pre-substantive phase: Davies et al. (2000) found recall of some types of details was lower in interviews that included longer rapport-building (>8 minutes) and Hershkowitz (2009) found that shorter, open-ended rapport was associated with more detailed child responses than longer.

However, Brown et al. (2013) recently reported that with all pre-substantive components considered, exceeding this 8-minute duration still produced benefits. None of these studies focused exclusively on the practice narrative, thus, there is still a need to determine the balance between practice narratives that are too short and those that are unnecessarily long.

Practice narratives topics

The NICHD Protocol recommends that the interviewer should identify a memorable event that the child has recently experienced, such as a birthday party, and prompt the discussion of this event during the practice narrative (Lamb et al., 2011). The suggested guideline is to obtain an *adequately detailed narrative* about the event. If the child is unable to provide an adequately detailed narrative, it is recommended that the interviewer invite the child to give a full narrative of everything the child did on the previous day. If the child is unable to do this, the interviewer should invite the child to provide a full narrative of everything the child did from the time he or she woke up that morning until the time the interview started. The current findings suggest that, in line with NICHD priorities, conducting the first recommended version of the practice narrative is more beneficial to the quantity of information gained in response to the initial prompt in the substantive phase than the other subsequent topic recommendations. Further, though not all comparisons differed significantly, where differences were observed, they were in favour of the unique event practice narrative over the commonplace practice narrative, and the overall pattern of the data was consistent with this conclusion.

Why was practicing a unique event more beneficial than practicing a commonplace event? This finding may be explained by the type of memory recall children practiced in the different topic conditions. For instance, when children are exposed to an event multiple times they quickly develop a script for that event (i.e. a general event representation of what typically occurs; Fivush, Hudson, & Nelson, 1984). Fivush (1984) found that once this script has been developed, children remember and report far more general event details about what usually occurs rather than incident-specific details about what occurred during one of the repeated instances of the event. On the other hand, children who have only experienced an event one time are likely to remember and report more specific details because they only have one event to reference (i.e. they have not formed a general representation of the event; Fivush et al., 1984). It is important to note that, in this study, children witnessed the magic show only once before they were interviewed. Therefore, there was a match between the kind of remembering and reporting practiced during the unique event topic condition and the kind of remembering and reporting required during the discussion of the substantive issue (i.e. the magic show). The unique event practice narrative condition may have been a superior type of practice, resulting in a more informative substantive phase, because of this match. Importantly, many children interviewed by investigative interviewers have experienced repeated abuse, and with the current data we cannot draw conclusions about the effectiveness of practice narrative topic for children reporting repeated abuse. This is a valuable avenue of future investigation.

In contrast to the unique event condition, children in the commonplace practice narrative condition were asked to discuss events that took place the previous evening or that

morning. Fivush (1984) found that children were able to remember and describe the general routine of an event they had experienced multiple times, but had difficulty remembering and describing specific details about what took place the previous day during the event. Given that the children were able to provide specific details when directly cued for the information, Fivush (1984) hypothesized that the question 'What happened yesterday?' may be uniquely difficult for young children. That is, *yesterday* may be too vague of a cue for young children because not only are they required to distinguish between yesterday's events and previous events but they must also determine the time-frame that is relevant (i.e. the timeframe of *yesterday* is dependent on when the question is asked). This may have been a barrier for children in the commonplace practice narrative topic, which contributed to some children discussing routine events rather than specific details about what occurred yesterday. In the current study, 20% of the children in the commonplace condition discussed what they usually do during the evening or in the morning. The children who described their routine, then, essentially practiced describing a general representation of events they had experienced numerous times. The children who described the previous evening or that morning practiced describing an instance of a script (i.e. what happened on one particular occurrence of an event that they have experienced regularly). Therefore, there was a mismatch between the type of remembering and reporting children practiced in the commonplace event topic condition (script or instance of a script) and the type of remembering and reporting that they were required to participate in during the substantive phase. This mismatch may help to explain why children did not benefit as much during the substantive phase from the commonplace practice narrative topic.

Brubacher et al. (2011) demonstrated that the language used during the practice narrative can influence the quality of the substantive phase. In the current study, interviewers and children were more likely to use generic language in the *practice narrative* phase of the interview when they were assigned to the commonplace practice narrative topic condition compared to when they were assigned to the unique practice narrative topic condition. Following from this, there was a tendency for children to report fewer accurate details in response to the initial prompt in the substantive phase when the practice narrative was conducted in a generic manner rather than an episodic manner. Although some children who practiced a commonplace event used episodic language to discuss what they had done the previous evening and/or that morning, the majority (57%) of the children used generic or mixed language to discuss the previous evening or routine activities. Perhaps prompting the child to discuss the previous evening or that morning acts as a gateway for the child to discuss their typical routine using generic language rather than discussing yesterday specifically. As discussed previously, if this is the case, then the child will likely engage in a more script-based memory retrieval (Fivush, 1984; Roberts & Powell, 2006) rather than the kind of memory retrieval and reporting that the practice narrative is designed to encourage (i.e. episodic free-recall; Roberts et al., 2011). In the current study, the commonplace event practice narrative may have been less beneficial to children's subsequent informativeness and accuracy because the children practiced generic rather than episodic memory retrieval and reporting in the pre-substantive phase. Although we were not able to tease apart the relative contributions of topic and language, the present findings imply that discussion of a commonplace topic encourages the use of generic language.

Limitations and directions for future research

There are some important limitations to the present work that provide solid directions for future investigation. Like Brown et al. (2013), the interviewers in the present study may have been too well-trained. That is, interviewers did not ask suggestive or option-posing questions during either the practice narrative or substantive phase, thus making it impossible for us to explore the impact of such questions on children's accuracy. Brown et al. (2013) were able to explore different styles of rapport and practice narratives (i.e. closed, open), but the effect of variability in these phases on what may naturally occur during the subsequent substantive phase (e.g. suggestive, highly directive questions), is crucial to explore. The issue of suggestive or other leading questions may be particularly important after a delay that is longer than that used in the present study. Increasing the delay and introducing a suggestibility manipulation both increase the challenge to children's memory and may also allow for a greater chance of observing possible 'costs' associated with practice narratives.

Furthermore, although our interest was in exploring the style of the practice narrative suggested by the NICHD guidelines to be able to draw firm conclusions on the effect of topic type, the specific topic for the practice narrative was not consistent across conditions. Naturally, unique topics tended to be of more unusual, and perhaps more memorable events, while commonplace topics tended to be of more routine events that occurred closer in time to recall. The same practice narrative topic, conducted with either episodic or generic language would allow for a clean experimental comparison.

Finally, though large between-subjects effects were found, it is likely that the differences between individual children are substantive. More reticent children, for example, may benefit from additional time in practice, while more conversational children may require less. Further, as with all laboratory analog work, there are likely to be differences in the nature of the to-be-remembered events. Children recalling a fun magic show may experience different, and likely fewer, barriers to discussing the event than children in forensic interviews. It is therefore possible, for example, that children in the field may require additional time in order to benefit from practice narratives.

Conclusion

The present findings highlight the benefits of a properly conducted practice narrative prior to discussing substantive issue(s) with a child. Importantly, the current study demonstrates benefits to the substantive phase of the interview with as little as 2 minutes of practice. Finally, given that the unique practice narrative resulted in the most informative and accurate initial response from children, interviewers should continue to prioritize identification of a unique and memorable event to discuss during the practice narrative.

Notes

1. This child provided 627 details in the substantive phase, which was the most details of any child and 131 details more than the total number of details provided by the second most informative child within the same condition. The average number of total details across all conditions was 211.80 (SD = 120.45). Using Tukey's (1977) liberal boxplot method, this participant is considered an outlier with respect to the overall group. Using Hoaglin and

Iglewicz's (1987) more conservative approach, this participant is considered an outlier within their own group, but falls just below the upper limit of the overall group.

2. The confederate removing the magic wand served as the main event for another experiment in which the children were asked to identify the confederate in a photo line-up.

Acknowledgements

The authors thank the EYES Science Camp at the University of Regina, Natalie Therrien, Ryan Fitzgerald, Caitlin Hunter, Nikolina Vracar, Sarah Sangster, Rachelle Jeworski, Kirsten Gullickson, Cori Carey, Sarah Reiser, Jill Price, Kelcie Novak, and Megan Adams Lebell.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This research was supported by a Social Sciences and Humanities Research Council Joseph-Armand Bombardier CGS grant to the first author and a Natural Sciences and Engineering Research Council of Canada Discovery Grant to the second author.

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Appendix 1. Structured Questions (Accuracy Score)

#	Question	Answer (possible score)				
1	Was the magician a boy or a girl?	<i>Girl</i> (1)				
2	What was the magician wearing?	<i>Hat</i> (1) <i>Cape</i> (1)				
3	Did the magician use any magic tools?	<i>Wand</i> (1)				
4	How many magic tricks did the magician show you?	<i>Five</i> (1)				
5	Did the magician have a name for the first (second, third, etc.) trick?	Trick 1 'No Gravity Ketchup' (1)	Trick 2 'Liquid Magazine' (1)	Trick 3 'Dirty Laundry' (1)	Trick 4 'Cutting in Two' (1)	Trick 5 'Ring Escape' (1)
6	What happened in the first trick?	<i>floating ketchup</i> (1)	<i>disappearing water</i> (1)	<i>instantly clean tissues</i> (1)	<i>uncut string</i> (1)	<i>impossible removal of rings</i> (1)
7	What did the magician use to do the first trick?	<i>water bottle, water, ketchup pack</i> (1)	<i>magazine, water, plastic bag</i> (1)	<i>clean tissues, dirty tissues, paper bags</i> (1)	<i>straw, string, scissors</i> (1)	<i>string, rings, towel</i> (1)
8	What was the secret to the first trick?	<i>squeezing bottle</i> (1)	<i>poured into hidden plastic bag</i> (1)	<i>clean napkins hidden in bottom bag</i> (1)	<i>slice straw to make safe-spot for string</i> (1)	<i>specially tied knot</i> (1)

Notes:

- (1) Questions 5–8 were repeated five times (to obtain a full description of each of the five tricks).
- (2) Interviewers avoided bringing up details that the child had not previously mentioned.