G Model JARMAC-18; No. of Pages 6

ARTICLE IN PRESS

Journal of Applied Research in Memory and Cognition xxx (2012) xxx-xxx

ELSEVIER

Contents lists available at SciVerse ScienceDirect

Journal of Applied Research in Memory and Cognition

journal homepage: www.elsevier.com/locate/jarmac



The quality of children's allegations of abuse in investigative interviews containing practice narratives

Heather L. Price a,*, Kim P. Roberts b, Andrea Collins a

- ^a University of Regina, Canada
- ^b Wilfrid Laurier University, Canada

ARTICLE INFO

Article history:
Received 13 July 2011
Received in revised form 2 March 2012
Accepted 4 March 2012
Available online xxx

Keywords: Children Investigative interview Practice narrative Field study

ABSTRACT

To enhance the accuracy and completeness of children's testimony, recommendations have included implementing a practice narrative, during which children are prepared for their role as informative witnesses before discussing the allegations. In the present study, we aimed to systematically examine interviewer behaviour and the informativeness of children's testimony in a field setting. As predicted, interviewers posed fewer prompts, proportionally more open-ended prompts, and children provided proportionally more details in response to open-ended prompts in the substantive phase when preceded by a practice narrative than when no practice narrative was conducted. The relationship was enhanced when the practice narratives were conducted as recommended vs those that were conducted in a less open-ended manner. Together with experimental studies showing clear benefits of practice narratives on children's reports, these results underscore the value of a simple practice narrative as a means of enhancing the reliability of children's testimony.

© 2012 Society of Applied Research in Memory and Cognition. Published by Elsevier Inc. All rights reserved.

1. Introduction

Statements made by child victims and witnesses about their alleged experiences are often crucial in determining the outcomes of criminal investigations. As the only available sources of information in many cases, accurate and informative accounts of events from children are of paramount importance to investigators, prosecutors, defense attorneys, judges, and the children's families. Recognition of the unique challenge of obtaining reliable testimony from children has fostered considerable research concerning the most desirable interview techniques for eliciting quality information from young witnesses and victims. The findings generated from such research efforts have helped to establish a number of internationally accepted recommendations regarding the manner in which investigative interviews with children should be conducted (e.g., Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007; Poole & Lamb, 1998). One such recommendation is to include a practice narrative, a targeted discussion about a non-allegation related issue, prior to introducing substantive issues (see Roberts, Brubacher, Powell, & Price, 2011, for an overview). Despite clear benefits in controlled experiments on the quality and accuracy of children's reports (e.g., Brubacher, Roberts, & Powell, 2011) field

data are lacking; thus we sought to investigate exactly how these practice narratives are implemented by practitioners in the field.

1.1. Obtaining informative reports in the field

A consistent challenge for investigative interviewers is obtaining sufficiently informative narrative reports from child victims and witnesses. That is, children often spontaneously report a relatively small amount of information in response to requests for free recall of event details. The best way to elicit accurate and complete narrative recall from children is to use open-ended prompts in which the child is encouraged to report from his or her memory with little guidance from the interviewer (e.g., Lamb, Sternberg, Orbach, Esplin, Stewart, & Mitchell, 2003; Orbach & Lamb, 2000; Orbach, Hershkowitz, Lamb, Sternberg, Esplin, & Horowitz, 2000). Consensus regarding the superiority of open-ended prompts has been supported by scientific research in both field and laboratory contexts: Open-ended prompts tend to elicit reports that are more detailed and accurate than information retrieved using closed-ended strategies (e.g., Goodman & Aman, 1990; Peterson & Biggs, 1997). It is presumed that open-ended prompts tap free recall memory, allowing children to give spontaneous accounts of their experiences without relying on external cues. Closed-ended prompts, conversely, rely more heavily on recognition memory processes, and often involve having children provide specific information in response to options posed by investigators, thus limiting

2211-3681/\$ – see front matter © 2012 Society of Applied Research in Memory and Cognition. Published by Elsevier Inc. All rights reserved. doi:10.1016/j.jarmac.2012.03.001

Please cite this article in press as: Price, H. L., et al. The quality of children's allegations of abuse in investigative interviews containing practice narratives. *Journal of Applied Research in Memory and Cognition* (2012), doi:10.1016/j.jarmac.2012.03.001

Corresponding author. Tel.: +1 306 585 4297.
E-mail address: heather.price@uregina.ca (H.L. Price).

H.L. Price et al. / Journal of Applied Research in Memory and Cognition xxx (2012) xxx-xxx

the completeness and accuracy of reports (e.g., Dale, Loftus, & Rathbun, 1978; Oates & Shrimpton, 1991).

Training interviewers to rely on open-ended prompts has been difficult. A common observation in the training literature is that interviewers appreciate the utility of open-ended prompts and other empirically based recommendations, but are frequently unable to translate this appreciation to actual practice (e.g., Aldridge & Cameron, 1999). With the present data, we explored a recommendation aimed at increasing the informativeness and quality of children's responses – the implementation of a practice narrative.

1.2. Practice narratives

Several studies show how the quality of witness–interviewer interactions in the pre-substantive phase (before allegations are discussed) is related to the quality of information gleaned in the substantive phase. For example, Sternberg et al. (1997) trained interviewers in the field to conduct rapport building with openended (e.g., *Tell me about your dog*) or more directive prompts (e.g., *What is your dog's name? What colour is she?*). Children who practiced responding to open-ended prompts provided more than twice as many details and words in response to the first substantive prompt as children in the directive rapport-building condition, and continued to provide significantly more detailed information throughout the rest of the interview. Interestingly, these positive effects on informativeness were observed even when interviewers themselves did not change their natural unscripted behaviour during the substantive phase.

Hershkowitz (2009) conducted a detailed psycholinguistic study of 71 investigative interviews using the NICHD protocol with alleged victims of child sexual abuse to explore the influence of rapport-building styles on children's reports. As defined by Hershkowitz, rapport-building included both traditional rapportbuilding (i.e., a getting acquainted phase) and a practice narrative about a recently experienced event. Consistent with the above discussed research, with shorter and more open-ended rapportbuilding sessions, children reported more forensically relevant details. The Sternberg et al. (1997) and Hershkowitz (2009) studies are important field demonstrations of the utility of open-ended rapport building techniques early in the interview. However, the focus of these studies was on rapport building alone (open-ended conversation to initiate comfort; Sternberg et al.) or rapport building combined with a practice narrative about a specific past event. Thus, we do not know whether practice recall per se (and therefore increased dependence on recall strategies) is associated with improved quality of reports in the substantive phase of interviews.

Of course, in field studies, it is not possible to determine the accuracy of a child's statement. Thus, Roberts, Lamb, and Sternberg (2004) attempted to replicate the Sternberg et al. (1997) study under controlled conditions. The researchers assigned children aged 3-9 years to an open- or closed-ended rapport-building phase following participation in a staged event. The children assigned to the open-ended rapport-building condition provided more accurate reports of the staged event than children in the closed-ended condition. Further, the most compelling demonstration of the utility of practice narratives was completed recently in an analog study. Brubacher et al. (2011) trained interviewers to conduct deliberate practice narratives using episodic ("what happened?") or generic language ("what happens?") after children had participated in a staged event. When interviewers used episodic language, 93% of children's utterances were episodic, compared with 19% of episodic utterances when interviewers used generic language. This pattern of recall continued when children recalled a target event. Episodic details are, of course, needed to investigate specific allegations and

are thus in many ways the most desirable details that can be elicited from children.

The above findings provide support for using practice narratives as a method of eliciting additional narrative detail from children in forensic interviews and the data are certainly compelling that benefits will be observed. However, the advantages observed in the laboratory, under stress-free and consequence-free conditions (for both interviewer and child), may simply not apply to a context in which children may not be motivated to provide substantial amounts of information. Thus, it is critical that we systematically observe how deliberately conducted practice narratives are implemented in field interviews. Because of the clear advantages observed in the laboratory, it is not ethical to withhold conducting a practice narrative from a subset of interviewers. Therefore, in the present study, all interviewers were instructed to conduct a practice narrative.

1.3. The present study

Though there are informative data from experimental analog studies, there has not yet been a comparison of interviews with and without practice narratives that occur naturally in the field. We also sought to explore the differences between interviews with practice narratives of a high quality (i.e., those that primarily relied upon open-ended prompts) and those that failed to follow expert endorsed recommendations. It was anticipated that the substantive phases of interviews that were preceded by practice narratives, and especially those conducted in accord with recommendations, would include fewer interviewer prompts (because children would be talking more), proportionally more open-ended prompts, elicit more detail from children, and elicit more detail from children using open-ended prompts than interviews that were not preceded by a practice narrative.

2. Method

2.1. Sample

One hundred and six forensic interviews conducted by 12 experienced investigators (police officers n = 2; child protection workers n = 10) were included in this study. The manager of four teams in the child protective agency and police unit in a large Canadian city gave open invitations to staff to participate in a joint training initiative. The sample of interviews examined were part of an extensive training program, consistent with the principles of the NICHD protocol (e.g., Lamb et al., 2007), with an emphasis on open-ended prompts throughout all interview phases (see Price & Roberts, 2011). As part of the training sessions, participants were taught how to conduct a practice narrative prior to introducing the substantive phase of the interview. Interviewers were directed to select a unique, recent experience the child had (e.g., soccer game, recent trip), and practice desirable retrieval strategies (i.e., open-ended prompts) to assist the child in recalling the event.

Presence vs absence of practice narratives. Knowing that the practice phase can have reliable, positive effects on reports in the substantive phase, we could not ethically assign interviewers to practice and no practice control conditions. We were more interested in seeing how interviewers in the field used practice narratives, and the extent to which they were useful with informants who may not be motivated to disclose. Yet, despite the recommendation during training to conduct practice narratives prior to introducing all substantive phases, this often did not occur in the investigative interviews we studied. This allowed us to compare the presence (n = 38) vs absence (n = 70) of practice narratives (see Table 1 for characteristics of interviews with and without a

ARTICLE IN PRESS

H.L. Price et al. / Journal of Applied Research in Memory and Cognition xxx (2012) xxx-xxx

Table 1 Interview characteristics for interviews with and without a practice narrative.

		No practice narrative $(n = 70)$	Practice narrative ($n = 38$)
Age		M = 10.21; $SD = 2.62$	M = 9.99; $SD = 3.62$
Gender	Male	38 (57%)	13 (35%)
	Female	29 (43%)	24 (65%)
Frequency	No allegation	25 (36%)	17 (45%)
	Single allegation	19 (27%)	8 (21%)
	Repeated allegation	26 (37%)	13 (34%)
Nature of allegation	Hitting/violence	36 (80%)	19 (90%)
	Sex assault	9 (20%)	2 (10%)
Accused relationship	Dad	15 (39%)	5 (24%)
	Mom	4 (11%)	6 (29%)
	Mom and dad	10 (26%)	4 (19%)
	Acquaintance/relative	4 (11%)	4 (19%)
	Sibling	2 (5%)	0 (0%)
	Stepfather/mom's boyfriend	1 (3%)	2 (10%)
	Stranger	3 (8%)	0 (0%)

Note. Not all categories sum to the total interviews due to missing data or lack of an allegation.

practice narrative). A practice narrative was defined as a structured discussion of a non-allegation related target event (e.g., birthday, recent fun activity) prior to introducing a substantive issue. Interviews that included a practice narrative were significantly longer (M = 31.67 min, SD = 12.38) than interviews without a practice narrative (M = 22.40 min, SD = 11.47), F(1, 88) = 13.06, p = .001, $\eta^2 = .13$.

Desirable vs less desirable practice narratives. After comparing interviews in which there was and was not a practice interview, we also explored the quality of the 38 interviews that contained a practice phase. Practice narratives that were considered desirable (n=16) were compared to those considered less desirable (n=22)using a 'majority rule'. Desirable practice narratives were defined as those in which a minimum of 60% of prompts was open-ended (actual minimum was 65%; M = 79%). All other interviews containing a practice narrative were considered 'less desirable' (i.e., open-ended prompts were in the minority in these interviews, M = 37%). Interviews that did not include a practice narrative were obviously omitted from this portion of the study. Interviews that included a desirable practice narrative were not significantly longer $(M = 34.96 \,\mathrm{min}, SD = 14.39)$ than interviews with a less desirable practice narrative (M = 29.48 min, SD = 10.65), F(1,34) = 1.68, p = .21, $\eta^2 = .05$.

2.2. Coding

Both the practice narrative and the substantive portion (discussing the allegation/s) of all interviews were coded for (a) interviewer utterance types and (b) child details. Trained coders initially classified interviewer utterances as belonging to one of several categories used in previous research (e.g., Price & Roberts, 2011) and are listed in Table 2. Intercoder agreement for categorizing interviewer utterance was at least 90% for each category.

(a) Interviewer utterances. For the present analyses, all interviewer utterances were classified into two broad categories: openended and closed-ended. Open-ended utterances included all

utterances requesting narrative responses and paraphrases (i.e., those utterances that had previously been identified as an invitation, invitation-occurrence, cued invitation, paraphrase, or directed narrative). Closed-ended utterances, in turn, consisted of directed specific, option-posing, yes/no, and suggestive interviewer utterances. Following coding, the total number of open-ended utterances and the total number of closed-ended utterances were tabulated for the practice narrative and substantive phases of each interview.

(b) Child reports. Details reported by children in response to each interviewer utterance were also coded. Details referred to a word or words that were a complete subject ("I", "you", "she"), object ("ball", "shirt"), verb ("put on" is one detail), adjective ("white", "hard"), other grammatical structure that provided information (e.g., "my"), or any other information containing words. Words used only as a speech style (e.g., "like", "umm") were excluded from word counts. This style of coding is used extensively to represent children's responses (e.g., Lamb, Sternberg, & Esplin, 2000; Roberts et al., 2004; Sternberg, Lamb, Hershkowitz, Esplin, Redlich, & Sunshine, 1996). Intercoder agreement for the child details was at least 90% for each category.

3. Results

3.1. Presence vs absence of practice narratives

Interviewer prompts. The type of interviewer prompts used (open vs closed) in the substantive section of interviews containing a practice phase were compared to those without practice narratives. As anticipated, in interviews that contained a practice narrative, interviewers posed a larger proportion of open-ended prompts (M=.49, SD=.24) than when practice narratives were absent (M=.27, SD=.12), F(1,107)=37.29, p<.01, η ²=.26. Next, as expected, overall more prompts (open+closed) were posed in the substantive phase in interviews without a practice narrative

 Table 2

 Interviewer prompt coding categories and examples

interviewer prompt coding categories and examples.			
Open-ended prompts	Closed-ended prompts		
Invitation – Tell me what happened.	Yes/no – Did you go home right away?		
Invitation-occurrence – Tell me about the first time.	Option-posing – Were you inside or outside?		
Cued invitation – You said you play together. Tell me about playing together.	Suggestive - You walked away immediately, didn't you?		
Directed narrative – Tell me about how things are at home.	Directed specific - What was he wearing?		
Paraphrase – You mentioned that you felt sad.			
Facilitator – Okay, hmmm. ^a			

^a Facilitative utterances were considered neutral and details reported in response to each facilitator were thus subsumed with the prior utterance.

Please cite this article in press as: Price, H. L., et al. The quality of children's allegations of abuse in investigative interviews containing practice narratives. *Journal of Applied Research in Memory and Cognition* (2012), doi:10.1016/j.jarmac.2012.03.001

H.L. Price et al. / Journal of Applied Research in Memory and Cognition xxx (2012) xxx-xxx

(M=83.16, SD=54.18) than interviews with a practice narrative (M=55.63, SD=36.90), F(1,107)=7.82, p<.01, $\eta^2=.07$. Thus, in interviews without a practice narrative, there was an average of 83 prompts per interview vs 56 when the interview included a practice phase.

Child details. Proportionally more details reported by children in the substantive phase were in response to open-ended prompts when a practice narrative was present (M=.64, SD=.24) than when there was no practice narrative (M=.42, SD=.18), F(1,106)=29.12, p<.01, η^2 =.22; a difference of 22%. Further, more details were reported per prompt in interviews that contained a practice narrative (M=42.72, SD=79.22) than those that did not (M=12.04, SD=11.09), F(1,106)=10.07, p=.002, η^2 =.09. The average raw number of details recalled in practice and no-practice interviews was 947.81 (SD=548.54) and 905.39 (SD=711.42), respectively, F(1,90)=0.28, p=.60, η^2 =.003; this difference was not significant.

3.2. Desirable vs less desirable practice narratives¹

Next, we examined the quality of the practice narrative by classifying this phase as conducted in a desirable (i.e., 60% or more of the prompts were open-ended, indicating a greater reliance on open- than closed-ended questions, n = 16) or less desirable way (n = 22).

Interviewer prompts. As anticipated, the proportion of openended prompts posed by interviewers in the substantive phase was significantly higher in interviews in which more desirable practice narratives were conducted (M=.65, SD=.23) than in those that implemented less desirable practice narratives (M=.37, SD=.17), F(1,37)=9.73, p<.01, η ²=.25. Also, as anticipated, significantly more prompts were posed in the substantive phase by interviewers conducting less desirable practice narratives (M=70.05, SD=37.10) than those conducting more desirable practice narratives (M=35.81, SD=26.61), F(1,37)=4.18, p<.05, η ²=.12.

Child details. When more desirable practice narratives were present, proportionally more of the details provided by children were in response to open-ended prompts in the substantive phase (M=.80, SD=.19) than when less desirable practice narratives were utilized (M = .52, SD = .21), F(1, 37) = 7.68, p < .01, $\eta^2 = .20$. Finally, more details were reported per prompt when a desirable practice narrative was conducted (M = 78.39, SD = 113.64)than following a less desirable practice narrative (M=16.78, SD = 12.57), F(1,37) = 6.42, p = .02, $\eta^2 = .15$. Indeed, the advantage in mean number of details is almost five times as large in those interviews conducted with a practice interview than those conducted without a practice interview. The average raw number of details recalled in desirable and less desirable practice interviews was 1000.38 (SD = 597.26) and 907.76 (SD = 519.79), respectively, F(1,29) = 0.03, p = .86, $\eta^2 = .001$; this difference was not significant.

4. Discussion

In the present study, we examined interviewer behaviour and the informativeness of children's reports of alleged abuse in field interviews with and without practice narratives. The results demonstrate a clear association between implementing a practice narrative and the quality of investigative interviews in terms of a greater proportion of, respectively, open-ended prompts asked by interviewers, details reported by children in response to open-ended prompts (vs closed), and the average number of details reported in response to each prompt, accompanied by a reduction in the overall number of prompts posed by interviewers. These associations proved to be even more notable when practice narratives were conducted predominantly in accord with research based recommendations.

Why might providing the opportunity for practice be associated with better interviewer behaviour and more informative child responses? It is clear that children's narrative style is interdependent with the conversational styles of their adult partners (e.g., Fivush & Shukat, 1995; Fivush, Haden, & Reese, 2006; Hedrick, Haden, & Ornstein, 2009). Thus, when prompts are posed in an open manner, responses are more likely to be narrative. It may also be the case that conversational style is accommodated such that children who have practiced responding in a particular way continue responding in such a way throughout the remainder of the conversation (e.g., interruptions: Hannah & Murachver, 1999). With the practice narrative establishing a desired conversational pattern, it appears as though children may simply become accustomed to this pattern and continue it throughout the substantive phase.

The raw mean number of details reported showed little overall difference between interviews with and without practice narratives. Focusing on the raw number of details reported, however, masks three clear benefits seen in interviews containing practice narratives. First, fewer questions were asked after a practice narrative was implemented meaning that the risk of interviewer suggestion and contamination of testimony was decreased. Indeed, significantly more suggestive questions were posed in interviews without a practice narrative than those with a practice narrative $[F(1, 106) = 8.53, p = .004, \eta^2 = .08; (M = .03 and M = .01,$ respectively)]. Second, children were able to spontaneously report more information in response to open-ended prompts (22% more), and third, this information is likely to be more accurate and reliable. A similar pattern of results was seen when desirable compared to less desirable practice narratives were conducted. That is, there was no difference in the overall raw number of details reported, but children reported almost five times as much information per prompt when the practice narrative was more open-ended vs closed in style. This latter comparison is perhaps the more important one as it indicates that interviewers who train their witnesses to respond to open-ended prompts (in the practice phase) are also more effective at eliciting responses and, interestingly, require less effort to obtain the same amount of detail. Previous research has indicated that children's reports to open-ended prompts are more likely to be accurate than details reported to closed-ended prompts (Lamb et al., 2003) and so an increase in the overall reliability of children's testimony alone is well worth the effort of conducting a practice narra-

Due to both ethical limitations and the field observation aims of this study, we focused on the natural use of practice narratives in actual field investigations, instead of a controlled laboratory study with staged events. Thus, we are not able to deduce if the practice narrative itself *led* to improvements in interviewer behaviour and children's reports. It may be that well-conducted practice narratives were carried out by interviewers who also excelled in other aspects of the interview or were otherwise more motivated. To address this, we examined a sub-sample of only the interviewers who had conducted at least one practice narrative during the course of the study. First, of those interviewers

Please cite this article in press as: Price, H. L., et al. The quality of children's allegations of abuse in investigative interviews containing practice narratives. *Journal of Applied Research in Memory and Cognition* (2012), doi:10.1016/j.jarmac.2012.03.001

¹ Although it would have been preferable to conduct analyses directly comparing those interviews involving no practice narrative, desirable practice narratives, and less desirable practice narratives, the distribution of interviews across those conditions were so unequal (i.e., 70, 16, and 22, respectively) that analyses would have not been reliable. Thus, we elected to conduct the overall analyses of presence versus absence, followed by the more refined analyses involving desirable and less desirable interviews.

5

who did conduct practice narratives, they most often chose not to during their interviews (7 of 8 interviewers who ever conducted a practice narrative, chose not to do so more often than they chose to conduct one), suggesting that interviewers and practice condition were not confounded. Next, when we selected only the interviews conducted by interviewers who had done a practice narrative at least once and performed the same analyses as those reported in the results section, we found the same pattern reported above. In combination with the findings from controlled laboratory studies (Brubacher et al., 2011; Roberts et al., 2004), we argue that the benefits of practice narratives observed here are not likely to be due simply to individual differences in motivation or quality of the interviewers. Nonetheless, it remains possible that a third, less interesting, variable may be at work. For example, interviews conducted with a practice narrative were longer than interviews without a practice narrative. Thus, it is possible that interviewers who did not conduct a practice narrative were under greater time pressure to obtain children's testimony than those who elected to conduct a practice narrative. This was not, however, something mentioned by interviewers during our extensive weekly training discussions (ongoing for approximately 6 months) and we consider it unlikely to be responsible for the observed

If implementing a practice narrative, and particularly an openended practice narrative, is beneficial to the substantive portion of the interview, it is clear that an important next step is to determine how to encourage more interviewers to conduct practice narratives. In the present study, only 35% of the interviews contained a practice narrative even though all interviewers had been explicitly trained to do so, and most interviewers did this at least once. Anecdotally, interviewers reported challenges in finding an appropriate topic for discussion. The present data should go a long way in convincing interviewers about the benefit of the additional effort required to conduct a practice narrative in actual forensic interviews. However, it may also be of use to provide a "cheat sheet" of topics for possible discussion to ease interviewers' anxiety about finding an appropriate topic and the resulting potentially hasty transition to discussion of the substantive issue

Despite the optimistic picture painted by the present data, there are several avenues of further investigation that may help to clarify the utility of practice narratives in the field. Most obviously, it is critical to determine the influence of practice narratives conducted both desirably and not desirably (as was the case in the present study) on the accuracy of children's reports. With forensic investigations, this is most often simply not possible. Thus, additional experimental examinations, in addition to the Roberts et al. (2004) and Brubacher et al. (2011) studies, are required. Future investigations should also explore the minimum requirements for practice narratives to be advantageous in the substantive phase and, conversely, how great the advantage when practice narratives are of a desirable nature. To increase use of practice narratives, it would also be informative to learn why interviewers may or may not choose to conduct them.

5. Conclusion

The present findings evince a clear association between conducting a simple, practice narrative prior to introducing substantive issues in investigative interviews with children and the quality of the subsequent interview. An open-ended practice narrative is in keeping with international recommendations on child investigative interviewing. Further, such a procedure crosses linguistic and jurisdictional differences regionally and internationally. Given the

observed benefits of interviews with a practice phase, it is recommended that investigative interviews of children begin with an opportunity for child witnesses and interviewers to engage in an open-ended discussion about a recent event prior to questioning about alleged offenses.

Acknowledgements

The authors would like to sincerely thank the interviewers who took part in the training and the parents and children who permitted their interviews to be used in the study. The authors also thank Brian Mainland, Leanne Best, Nicole Phythian, Nicole Davis, Val Vorstenbosch, Lisa Gravel, Nicole Keir, Taryn Moss, Adrian Pasquarella, Alexis Rischke, Ashley McNight, Ashley Graham, Allison Cox, Erica Campbell, and Danielle Peters for their assistance with transcribing and coding. This research was supported by a Premier's Research Excellence Award to Kim Roberts.

References

- Aldridge, J., & Cameron, S. (1999). Interviewing child witnesses: Questioning techniques and the role of training. Applied Developmental Science, 3, 136–147.
- Brubacher, S. P., Roberts, K. P., & Powell, M. B. (2011). Effects of practicing episodic versus scripted recall on children's subsequent narratives of a repeated event. *Psychology, Public Policy & Law*, 2, 286–314.
- Dale, P. S., Loftus, E. F., & Rathbun, L. (1978). The influence of the form of the question on the eyewitness testimony of preschool children. *Journal of Psycholinguistic Research*, 74, 269–277.
- Fivush, R., Haden, C. A., & Reese, E. (2006). Elaborating on elaborations: Role of maternal reminiscing style in cognitive and socioemotional development. *Child Development*, 77, 1568–1588.
- Fivush, R., & Shukat, J. R. (1995). Content, consistency, and coherence of early auto-biographical recall. In M. S. Zaragoza, J. R. Graham, G. C. N. Hall, R. Hirschman, & Y. S. Ben-Porath (Eds.), Memory and testimony in the child witness (pp. 5–23). Thousand Oaks, CA: Sage.
- Goodman, G. S., & Aman, C. (1990). Children's use of anatomically detailed dolls to recount an event. *Child Development*, *61*, 1859–1871.
- Hannah, A., & Murachver, T. (1999). Gender and conversational style as predictors of conversational behaviour. *Journal of Language and Social Psychology*, 18, 153–174.
- Hedrick, A. H., Haden, C. A., & Ornstein, P. A. (2009). Elaborative talk during and after an event: Conversational style influences children's memory reports. *Journal of Cognition and Development*. 10. 188–209.
- Hershkowitz, I. (2009). Socioemotional factors in child sexual abuse investigations. Child Maltreatment, 14, 172–181.
- Lamb, M. E., Orbach, Y., Hershkowitz, I., Esplin, P. W., & Horowitz, D. (2007). A structured forensic interview protocol improves the quality and informativeness of investigative interviews with children: A review of research using the NICHD Investigative Interview Protocol. Child Abuse & Neglect, 31, 1201–1231.
- Lamb, M. E., Sternberg, K. J., & Esplin, P. W. (2000). Effects of age and delay on the amount of information provided by alleged sexual abuse victims in investigative interviews. *Child Development*, 71, 1586–1596.
- Lamb, M. E., Sternberg, K. J., Orbach, Y., Esplin, P. W., Stewart, H., & Mitchell, S. (2003). Age differences in young children's responses to open-ended invitations in the course of forensic interviews. *Journal of Consulting and Clinical Psychology*, 71, 926–934.
- Oates, K., & Shrimpton, S. (1991). Children's memories for stressful and non-stressful events. *Medical Science and Law*, 31, 4–10.
- Orbach, Y., Hershkowitz, I., Lamb, M. E., Sternberg, K. J., Esplin, P. W., & Horowitz, D. (2000). Assessing the value of structured protocols for forensic interviews of alleged child abuse victims. *Child Abuse & Neglect*, 24, 733–752.
- Orbach, Y., & Lamb, M. E. (2000). Enhancing children's narratives in investigative interviews. *Child Abuse & Neglect*, 24, 1631–1648.
- Peterson, C., & Biggs, M. (1997). Interviewing children about trauma: Problems with specific questions. *Journal of Traumatic Stress*, 10, 279–290.
- Poole, D. A., & Lamb, M. E. (1998). Investigative interviews of children: A guide for helping professionals. Washington, DC: American Psychological Association.
- Price, H. L., & Roberts, K. P. (2011). The effects of an intensive training and feed-back program for investigative interviewers of children. Canadian Journal of Behavioural Science, 43, 235–244.
- Roberts, K. P., Brubacher, S. P., Powell, M. B., & Price, H. L. (2011). Practice narratives. In M. E. Lamb, D. La Rooy, C. Katz, & L. Malloy (Eds.), *Children's testimony: A hand-book of psychological research and forensic practice* (pp. 129–145). Chichester, UK: Wiley-Blackwell.

G Model JARMAC-18; No. of Pages 6

ARTICLE IN PRESS

H.L. Price et al. / Journal of Applied Research in Memory and Cognition xxx (2012) xxx-xxx

Roberts, K. P., Lamb, M. E., & Sternberg, K. J. (2004). The effects of rapport-building style on children's reports of a staged event. *Applied Cognitive Psychology*, 18, 189–202.

Sternberg, K. J., Lamb, M. E., Hershkowitz, I., Esplin, P. W., Redlich, A., & Sunshine, N. (1996). The relation between investigative utterance types and the

informativeness of child witnesses. Journal of Applied Developmental Psychology, 17,439-451.

Sternberg, K. J., Lamb, M. E., Hershkowitz, I., Yudilevitch, L., Orbach, Y., Esplin, P. W., & Hovav, M. (1997). Effects of introductory style on children's abilities to describe experiences of sexual abuse. *Child Abuse & Neglect*, *21*, 1133–1146.

Please cite this article in press as: Price, H. L., et al. The quality of children's allegations of abuse in investigative interviews containing practice narratives. *Journal of Applied Research in Memory and Cognition* (2012), doi:10.1016/j.jarmac.2012.03.001

6