A Systematic Examination of Actor and Trainee Interviewer Behaviour during Joint Investigative Interviewing Training

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Abstract

This study is the first systematic examination of trainee interviewer and actor behaviour during Joint Investigative Interviewing Training (JIIT) simulations across two training sites in Scotland. As expected, interviewers were poor at adhering to best practice interview guidelines in the pre-substantive and closure phases of the interviews. Although invitations were used within the range of best practice, they were not used more often and did not elicit more allegation-related details than directive questions. Critically, actors' responses to invitations were *less* informative than their responses to all other question types. Furthermore, large differences were observed between the two training sites in the number of questions asked and amount of information elicited by interviewers. Our results show that (1) trainee interviewers are not utilising simulations to practice all required interviewing skills, (2) adult actors are not reinforcing interviewers' use of invitations as intended, and (3) trainee interviewers are not being afforded the same opportunities to practice their skills due to variation in resources across Scotland. We recommend improvements to the JIIT programme to address these concerns.

Child abuse represents an important societal issue (e.g Binder et al. 2008; Cicchetti & Toth 2005; Clark et al. 2010; Holt et al. 2008; Kessler et al. 2010; Pollak et al. 2010;

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Widom et al. 2007). Based on decades of psychological research, developmentally appropriate interview protocols have been designed to elicit accurate accounts of children's experiences during investigative interviews, such as the ABE (Achieving Best Evidence; Ministry of Justice 2022), MOGP (Memorandum of Good Practice; Home Office 1992), NICHD Protocol (National Institute of Child Health and Human Development; Lamb et al. 2007a, 2008), and the Scottish Executive Guidelines (Scottish Executive 2003, 2011). These guidelines converge on a similar overall structure; a rapport-building phase to engage children, explain the interview procedure and deliver the 'ground rules', a practice interview about a neutral event to familiarise children with responding to invitations (Narrative Elaboration Training), a substantive phase to elicit a narrative account of the events in the children's own words, and a closure phase to discuss neutral topics before ending the interview.

An important component of high-quality investigative interviews is that accounts of alleged abuse are obtained using invitations. Invitations facilitate free-recall memory, require children to conduct a memory search, and allow them to use their own words to describe their experiences (e.g., 'Tell me everything that happened', Lamb et al. 2008). When

interviewers request information from children using invitations, they elicit longer and more detailed responses than when they ask directive, option-posing and suggestive questions (Brown and Lamb 2009; Cyr et al. 2006; Lamb et al. 2003, 2007a, 2009, Sternberg et al. 1996, 1999, 2001b). Importantly, information elicited from invitations is more accurate than information elicited from focussed questions (Lamb & Fauchier 2001; Lamb et al. 2007b; Orbach and Lamb 2001; Orbach et al. 2012) and is also judged as more credible by fact-finders (Hershkowitz et al. 1997). Best-practice guidelines encourage interviewers to delay asking focussed questions until children have given an exhaustive account in response to invitations as focussed questions (e.g., 'Which finger did he touch you with?', 'Was that over or under your clothes?') can potentially contaminate accounts (Lamb et al. 2008; Orbach and Lamb 2001; Scottish Executive 2003, 2011).

A series of validation studies of the NICHD Child Interviewing Protocol has generated a benchmark for the conduct of high-quality investigative interviews (Cyr et al. 2006; Lamb et al. 2009; Orbach et al. 2000; Sternberg et al. 2001a). In this research, interviewers trained in the NICHD Protocol used between 30 and 48% invitations when questioning children. In turn, children provided between 47 and 63% of their overall allegation-related details in response to these prompts.

The first guidelines for interviewing children in Scotland were published in 2003 (Scottish Executive 2003), influenced in part by the NICHD protocol, as well as by research on children's memory and suggestibility (Bruck et al. 1995; Eisen et al. 2002; Graffam Walker 1999; Poole and Lamb 1998; Westcott et al. 2002; White et al. 1997). Subsequently, the Scottish Government developed a standardised child interviewer training course (Joint Investigative Interviewing Training, hereafter JIIT) in collaboration with the Association of Chief Police Officers in Scotland, the Association of Directors of Social Work, the Scottish Children's Reporters Administration, the Crown Office, and the Procurator Fiscal Service. Although interviewers are trained locally, and course structure varies between jurisdictions, each course is expected to be designed and delivered in accordance with the content and framework set out in the National Curriculum (Scottish Executive 2007).

Joint Investigative Interviewing Training in Scotland

One of the most important components of investigative interviewers' training is practicing interviewing skills in a controlled environment where feedback can be provided. Trainees may be given the opportunity to practice their interviewing skills on fellow trainees, on children recalling a neutral event

(Warren et al. 1999) or on adult actors playing the role of abused children (Freeman & Morris 1999; Powell et al. 2008; Yi et al. 2016). Using adult actors has many benefits. For example, interviewers have the opportunity to practice obtaining specific abuse-related details from an interviewee unknown to them, creating a more realistic training experience. Research shows that poor practices transfer from questioning adult actors to interviews with real children (Powell et al. 2010), suggesting that practice interviews with adult actors provide an opportunity to identify problematic interviewer practices at an early stage. Furthermore, Powell et al. (2008) found that trainee interviewers who practiced their interviewing skills with adult actors used more invitations in a post-training mock interview than trainees who had practiced with fellow trainees.

JIIT courses routinely use adult actors to role-play abused children during the practical (mock interview) component of the training course. However, while the adult actors in Powell et al.'s study (2008) received extensive training, JIIT actors are currently hired without specialist knowledge or awareness of child cognition and investigative interviewing and do not receive any formal practice or training in authentic responding during role-play interviews. As the quality of JIIT courses has not yet been examined via quantitative research, there is little information about whether non-specialist adult actors are reinforcing interviewers' use of invitations as they are intended to do. Goetzold (2015) examined the quality of role-play interviews conducted with adult actors during a JIIT refresher course. She claimed that trainees relied more on focussed questions than invitations and that she had 'concerns' about 18 of the 21 interviews examined. However, the study relied on qualitative methods and did not categorise or quantify the question types and prompts used.

Research on the quality of field interviews conducted in Scotland by JIIT-trained interviewers is also limited. In an analysis of 37 interviews conducted between 2003 and 2011 with children aged 4–13 years, La Rooy et al. (2012) demonstrated that only 8% of interviewer questions consisted of invitations. In a follow-up study examining 19 interviews from 2012 following new guidelines (Scottish Executive 2011), the percentage of invitations improved (15%) but still fell short of best-practice (La Rooy et al. 2013). Furthermore, in contrast to best practice guidelines, interviewers inconsistently communicated ground rules and did not conduct Narrative Elaboration Training (La Rooy et al. 2012; 2013). These results may reflect interviewers' lack of belief in the utility of invitations and Narrative Elaborating Training, according to a survey of interviewers in Scotland (La Rooy et al. 2011).

Together, these findings would suggest that interviewers in Scotland are not being trained to an appropriate standard to be able to conduct high-quality interviews with children.

However, these limited analyses conducted on field samples relied on data from transcripts that were examined for an expert opinion, and thus, may reflect a lower interview quality than is typical of national practice. Indeed, prior work is limited by (1) small sample sizes, (2) the wide timespan of the recorded interviews versus recent developments in national guidelines, and (3) a lack of information about the interviewers' background/training.

The Present Study

Based on the limitations of prior work, this study aimed to systematically evaluate the quality of JIIT by examining the first interviews that trainee interviewers conducted post-training in a role-play simulation with an adult actor playing the role of a child. We examined whether trainee interviewers adhered to all elements of best practice identified by national guidelines. Specifically, we assessed whether trainees delivered the 'ground rules' and conducted Narrative Elaboration Training in the pre-substantive phase, whether the proportion of invitations from all questions was within the range of best practice, whether trainees delayed focussed prompts (directive and option-posing questions) during the substantive phase, and whether they communicated the 'closure principles' during the closing phase of the interview.

Based on research showing interviewers' lack of adherence to best practice guidelines, we hypothesised that interviewers would use ground rules and Narrative Elaboration Training practice in the introductory phase infrequently, use similar proportions of invitations and focussed questions (directives, option-posing), introduce focussed questions early on in the substantive phase, and communicate closure principles infrequently during the closure phase. As the use of suggestive questions is not recommended, we expected interviewers would use invitations, directives, and option-posing questions to a greater extent than suggestive questions.

Given concerns about the authenticity of adult actors to respond like children would and reinforce best practice lines of questioning, this study presents a novel empirical examination of the responses of adult actors who play the role of children during JIIT. We examined whether actors reinforced best practice by providing informative and rich responses across the interviews and whether they selectively reinforced invitations by providing their first allegation-related detail in response to an invitation and providing more details on average in response to invitations in comparison to all other question types.

Given the lack of training, we hypothesised that, unlike real children, actors would not selectively reinforce interviewers' use of invitations by providing more detailed or informative responses to invitations than to focussed questions. Instead, we anticipated that there would be no significant differences in how informative or how detailed actors' responses would be to invitations, directive, option-posing and suggestive questions. As summaries and non-substantive questions are not requests for new allegation-related details, we expected that fewer details would result from these questions than from invitations, directive, option-posing and suggestive questions. Given that guidelines instruct that the substantive phase should begin with an invitation, we anticipated that actors would be more likely to provide their first allegation-related detail in response to an invitation rather than to a directive, option-posing, or suggestive question.

The nature of training is inconsistent across Scotland. Therefore, collecting data from two police forces provided a novel opportunity to compare the training experience across different sites in Scotland. As there has been no previous examination of interviewer training in Scotland, the analyses examining differences between forces were exploratory in nature.

Methods

Participants

Data were collected from five JIIT courses run between 2009 and 2011. Forty-two child protection workers voluntarily took part while undergoing JIIT, and provided written informed consent at the beginning of the course. We examined two police jurisdictions in Scotland (Force One: $N = 22$; Force Two: $N = 20$, 17 participants across forces were male), with forces comprising both police officers ($N = 17$) and social workers ($N = 25$). All adult actors (Force One: three females; Force Two: one male and one female) were professionally qualified actors hired to play the role of a child in JIIT courses, with each force hiring actors from separate acting companies.

The Investigative Interviewer Training Programme

Each interviewer was provided with a copy of '*Guidance on Interviewing Child Witnesses in Scotland*' (Scottish Executive 2003) at the start of their 5-day training programme. Over the course of their training, interviewers were trained on issues related to child abuse, child development, memory and suggestibility, and how to conduct best practice interviews. Before the start of a role-play session, interviewers were provided with scenarios of child abuse and were given half an hour to plan their interview, with scenarios adapted (by the trainers) from real cases within their jurisdiction. Interviewers were provided with the name and age of their 'child interviewee', information about their family background, the allegation, and how it became known. Actors

were given additional information including the type of abuse that had occurred, the number of prior incidents of abuse, and the child's willingness to disclose the abuse. The different interview phases and question types were not explained to the actors and they were not given instructions about how to respond but could discuss questions about their character or role with trainers prior to the interviews.

Scottish Executive (2003) guidelines require that forensic interviews be conducted both by a social worker and by a police officer. Here, one interviewer takes the lead role and asks questions while the other keeps a verbatim handwritten record of what is said by the lead interviewer and the child. During training, Force One had access to Video Recorded Interviewing (VRI) equipment and trainees at this site did not conduct their mock interviews the way they would be expected to in the field (i.e., conducting the interview in pairs). Instead, they were given half an hour to complete an interview, from introduction to closure, which they conducted alone while video recorded for evaluation. Force One used four different scenarios of child abuse (three different scenarios in 2009 and the same scenario in 2011 and 2012). All scenarios described females ranging from 5 to 10 years old, with three alleging sexual abuse and one having witnessed domestic abuse all by a single perpetrator. One scenario specified that the child had been instructed to keep the abuse secret.

Force Two conducted their training in pairs consisting of one police officer and one social worker as they would in the field. Trainees participated in two interviews over a two-day period and had the opportunity to act as the lead interviewer in one interview and to scribe in the other. Interviews were audio recorded for the purpose of this study. On day one, four scenarios were used including children aged between 5 and 13 years of age, two alleging sexual and two alleging physical abuse, with all children willing to talk and aware of the reason for their interview. On the morning of day one, each pair of interviewers were given 15 minutes to conduct the pre-substantive phase of the interview, after which they took a break to discuss their performance with colleagues who viewed the interview from another room (via video link), in order to gain peer feedback. Trainees then returned in the afternoon and had 20 minutes to finish the interview. At the end of the day, interviewers received group feedback from the trainers and actors.

On the second day, trainee dyads swapped lead interviewer and scribe roles and were given 45 min (without a break) to conduct an entire interview. The scenarios on this day were complex (e.g., involving children who did not know why they were there, were unwilling to disclose information, or would deliberately mislead the interviewers, and cases involving multiple perpetrators/locations). At the end of the day, interviewers were provided with feedback from the trainers and actors.

Interview Coding

Coding Interviewer Behaviour

First, the quality of the pre-substantive phase of the interview was analysed using a checklist (developed by the first author based on recommendations in the Scottish Executive Guidelines, 2003. See Table 1). Twelve ground rules: '*Listen*', '*Knowledge*', '*Don't know*', '*Don't remember*', '*Don't guess*', '*Don't know demonstration*', '*Don't understand*', '*Don't understand demonstration*', '*Correct me*', '*Correct me demonstration*' '*Repeated questions*' and '*Truth*' were scored as either present (rule communicated) or absent (rule not communicated). Next, a practice interview (Narrative Elaboration Training) was scored as either present or absent. To be scored present, the interviewer must have attempted to elicit information about an experienced event unrelated to the abuse scenario (e.g., 'Tell me about this morning at school'). To comply with Scottish Executive Guidelines (2003), interviewers should use invitations during the practice phase in order to provide 'narrative elaboration practice' for the interviewee. Therefore, practice interviews were then also coded according to whether or not interviewers followed this rule. Practice interviews were scored 'open' (NET Open) when the interviewer asked a minimum of three invitations in a row to elicit a narrative account (e.g., 'Tell me what happened from when you arrived at school this morning until you left to come here'). Practice interviews were scored as 'closed' (NET closed), if the interviewer questioned the actor about the event using focussed questions prior to asking three invitations (e.g., asking 'What time did you get to school?' if the interviewee said they went to school).

Then, each prompt in the substantive phase of the interviews (where the allegation or reason for the interview was discussed) was categorised as an invitation (open prompt), directive question, option-posing question, suggestive question, facilitator, summary, non-substantive utterance or introductory comment, according to the definitions set out in Lamb et al. (1996). Introductory comments were not included in any of the analyses, as these are remarks that relate to procedural aspects of the interview. Facilitators were not analysed as a separate question category, but were coded in the same category as the preceding question. As it is best practice to delay the use of focussed prompts until as late as possible in the interview, the number of questions asked before the first directive question and before the first option-posing utterance were calculated, as were the number of details elicited from actors prior to being asked directive and option-posing questions.

Finally, the quality of the closure phase of the interview was assessed using a best-practice checklist (developed by the first author based on Scottish Executive Guidelines,

Table 1 Coding checklist for the pre-substantive phase of the interview (ground rules and NET)

Code	Guideline	Example
Listen	The interviewer is there mainly to listen. This is the child's chance to do most of the talking	'I am here mainly to listen and this is your chance to do most of the talking'
Knowledge	The interviewer was not present at the event(s) and therefore needs the child's help to understand what happened	'I don't know what happened, I wasn't there, so I'll need you to help me understand everything.'
Don't know	If the interviewer asks a question that the child does not know the answer to, it is okay for the child to say 'I don't know.'	'I might ask some questions that you don't know the answers to. That's OK. Just tell me you don't know.'
Don't know demonstration	Interviewers should not just ask whether the child understands the rule but check by using an example	'If I say, 'What day is my birthday?' you should say…'
Don't remember	If the interviewer asks a question that the child does not remember the answer to, it is okay for the child to say 'I don't remember'	'If you don't remember the answer to something, it's OK to say, 'I don't remember'.'
Don't guess	The child should not try to guess the answers	'This isn't like school, you shouldn't try to guess the answer, just tell me you don't know.'
Don't understand	If the interviewer asks a question that the child finds too difficult or unclear, the child should let the interviewer know so they can rephrase it or approach the subject in a different way	'I might ask you some questions today which you don't understand, if I do, I want you to say, 'I don't understand'. Then I can try to put it another way.'
Don't understand demonstration	Interviewers should not just ask whether the child understands the rule but check by using an example	'So, if I say, 'How many wegs are in a wug?' you should say…'
Correct me	If the interviewer makes a mistake, or says something that is not true, it is okay for the child to correct the interviewer	'If I make a mistake, or get something wrong, I want you to tell me.'
Correct me demonstration	Interviewers should not just ask whether the child understands the rule but check by using an example	'For example, if I said that you are a 2-year-old girl (when interviewing a 5-year-old boy, etc.), what would you say?'
Repeated questions	Sometimes the interviewer will ask the child the same question again. This does not mean that the child gave the wrong answer the first time, it is just to help me remember what has been said	'I might ask you the same question more than once today. That doesn't mean that you gave the wrong answer the first time. It's just to help me remember what has been said.'
Truth	The child should always tell the truth	'I want you to tell me the truth. What you saw with your own eyes, what you heard with your own ears, smelled with your own nose, and tasted with your own mouth. Will you do that?'
Narrative Elaboration Training (NET)	The topic for the practice interview should be a neutral, personally experienced event e.g. the child's school, hobbies, a birthday, or a holiday	'Not long ago, we celebrated an event called _____ (e.g. Christmas). Tell me how you celebrated (the event)'
Open (NET)	The interviewer should ask the child to describe the event from beginning to end using pen prompts to set the form of the substantive phase of the interview	'Think about [the event]. I would like you to tell me everything that happened, from when you got up that morning right through until when you went to bed that night.'

Table 2 Coding checklist for the closure phase of the interview (closure principles)

Code	Definition	Example
Summarise	The lead interviewer should summarise (using the child's language as much as possible) the important evidential points in the child's statement, confirming that those aspects have been understood correctly	*'So dad hit you on your legs and bottom with the belt last night and this is the only time he has done this, have I understood that right?'*
Interviewee questions	The child should be asked if they have any questions they want answered, or something else which they wish to add	*'Are there any questions you want to ask me?'*
Next	The child should be informed of what, if anything, will happen next, e.g., the likelihood of a further interview	*'We might ask you to come and speak to us again.'*
Contact	The child and/or their guardian should be provided with a contact name and number from the police or social work	*'If you want to talk to me again, you can call me at this phone number.'* (Hand the child a card with your name and phone number.)
Thanks	Interviewers should thank the child for their time and effort – not for their disclosure – and show that they have taken the child's account seriously	*'You have told me lots of things today, and I want to thank you for helping me.'*
Neutral closure	Children should be given time to compose themselves. The main aim of closure is that the child leaves the interview in a positive frame of mind, not distressed. Neutral topics, such as those covered in the rapport phase, can be discussed	*'What are you going to do today after you leave here?'* (Talk to the child for a couple of minutes about a neutral topic.)

2003. See Table 2). Six closure principles: *'Summarise'*, *'Interviewee questions'*, *'Next'*, *'Contact'*, *'Thanks'* and *'Neutral closure'* were scored as either present or absent in each interview.

Coding actor responses. Each response provided by the actor in the substantive phase of the interview was scored as either 'informative' or 'uninformative' depending on their responsiveness (Table 3, see Lamb et al. 1996). To examine whether actors were responding realistically and encouraging interviewers to adhere to best practice guidelines (i.e., providing more detailed responses to invitations than other question types), actor responses were scored for the number of substantive (allegation-related) details that they contained. A detail was defined as the smallest unit for analysing information provided in the interviewee's account that consisted of any information related to the incident. Details include naming, identifying, or describing individual(s), object(s), event(s), place(s), action(s), emotion(s), thought(s), sensation(s) of the alleged incident as well as any of their features (e.g., appearance, location, time, duration, temporal order, sound, smell, and texture).

The question type that elicited the first detail from actors in each interview was also noted.

Coder Training and Interrater Reliability

The first author coded all transcripts and a reliability coder coded a random subset (20%) of transcripts, with all disagreements resolved through discussion until a consensus was reached (La Rooy and Lamb 2011). Prior to these discussions, reliability between raters was high for coding question types ($K = 0.78$), and agreement was good for coding details contained in actors' responses ($K = 0.74$) and whether the response was informative or uninformative ($K = 0.69$).

Results

Preliminary Analyses

In general, trainees from Force Two posed fewer questions ($M = 27.05$, $SE = 3.78$) than trainees from Force One

Table 3 Coding scheme for informative versus uninformative actor responses from during the substantive phase of the interview

Code	Definition
Informative response	
	Verbal or nonverbal responses that either relate to the content of the interviewer's previous utterance or that are unrelated to the interviewer's utterance but provide incident-related information
Uninformative response	
	Verbal or nonverbal responses that did not provide incident-related information including requests for clarification, digressions, 'don't know'/'don't remember' responses, asking questions, providing no answer at all and resistance, denial or expressing unwillingness to provide information

($M = 47.23$, $SE = 3.68$; $t(40) = 3.82$; $p < 0.001$, $d = 1.18$). In turn, the responses from actors at Force Two contained fewer words ($M = 206.75$, $SE = 30.71$) and fewer details ($M = 51.75$, $SE = 10.87$) than responses from actors at Force One ($M_{words} = 490.14$, $SE = 43.52$; $t(40) = 5.22$; $p < 0.001$, $d = 1.61$. $M_{details} = 159.23$, $SE = 10.65$; $t(40) = 7.05$; $p < 0.001$, $d = 2.18$). Results from the main tests are reported in full below. The full results of pairwise comparisons are reported in the Supplementary materials.

Did trainees communicate the introductory and closure principles?

When comparing trainees across sessions, Force One and two differed in the use of the rules 'Don't know' (Force One = 23%, Force Two = 60%, $X^2(1) = 6.04$; $p = 0.014$, OR = 5.10), 'Don't understand' (Force One = 27%, Force Two = 65%, $X^2(1) = 6.02$; $p = 0.014$, OR = 4.95), 'Truth' (Force One = 27%, Force Two = 65%, $X^2(1) = 6.02$; $p = 0.014$, OR = 4.95) and 'Narrative Elaboration Training' (Force One = 55%, Force Two = 20%, $X^2(1) = 5.30$; $p = 0.021$, OR = 4.80). Use of all other rules did not differ between forces (all $X^2 < 2.64$ all $p > 0.10$). Although the use of 'Don't know demonstration' (Force One = 5%, Force Two = 35%, $X^2(1) = 6.30$; $p = 0.012$) and 'Don't remember' (Force One = 9%, Force Two = 35%, $X^2(1) = 4.18$; $p = 0.041$) differed between forces, expected frequencies were below the minimum of five (Field, 2009), so this data was not analysed separately by training force. Further binomial tests, collapsed across training force, revealed that all remaining rules were used significantly *less* than would be expected by chance (i.e., 0.50, all $p < 0.01$), except for 'listen' (summarized in Table 4).

When comparing the use of the closure principles in Force One and two, forces differed in the use of the rules 'Actor questions' (Force One = 13.6%, Force Two = 55.0%, $X^2(1) = 8.07$; $p < 0.01$, OR = 7.74), 'Contact' (Force One = 4.5%, Force Two = 60%, $X^2(1) = 15.07$; $p < 0.001$, OR = 31.50) and 'Thanks' (Force One = 27.3%, Force Two = 85.0%, $X^2(1) = 14.09$; $p < 0.001$, OR = 15.11). Although the rules 'Next' (Force One = 4.5%, Force Two = 30%, $X^2(1) = 4.89$; $p = 0.027$) and 'Summary' (Force One = 36.4%, Force Two = 5%, $X^2(1) = 6.12$; $p = 0.013$) differed by training force, expected frequencies fell below the minimum value of five. Separate binomial tests, collapsed across training force, revealed that trainees used the remaining three rules significantly *less* than would be expected by chance (see Table 4).

How did trainees elicit allegation-related information?

A mixed-design ANOVA was conducted on the outcome variable *proportion of total utterances by interviewer*, with

Table 4 Presence of ground rules across forces, at pre-substantive and closure phases of the interview

Rule	Percentage of times used (SD)	Binomial test result
Pre-substantive phase		
Listen	48 (.51)	$p = .88$
Knowledge	24 (.43)	$p < .01$
Don't know demonstration	19 (.40)	$p < .001$
Don't understand demonstration	02 (.15)	$p < .001$
Correct me	19 (.40)	$p < .001$
Correct me demonstration	07 (.26)	$p < .001$
Repeated questions	12 (.33)	$p < .001$
Don't remember	21 (.42)	$p < .001$
Don't guess	17 (.38)	$p < .001$
NET Open	19 (.40)	$p < .001$
Closure phase		
Next	17 (.38)	$p < .001$
Neutral	31 (.47)	$p = .021$
Summary	21 (.42)	$p < .001$

the within subjects' factor *question type* (invitation, directive, option-posing, suggestive, non-substantive, and summary) and the between-subjects factor *training force* (Force One, Force Two). Mauchley's test indicated that the assumption of sphericity was violated for question type, $\chi^2(14) = 183.36$, $p < 0.001$. Consequently, a Greenhouse–Geisser correction was applied ($\varepsilon = 0.58$). Analyses revealed the main effects of *question type* ($F(2.75, 110.07) = 78.63$; $p < 0.001$, $np^2 = 0.66$) and *training force* ($F(1,40) = 17.28$; $p < 0.001$, $np^2 = 0.30$). There was no significant interaction between *training force* and *question type* ($F(2.75, 110.07) = 1.42$; $p = 0.24$, $np^2 = 0.03$). The mean proportion of each question type, collapsed across training force, is presented in Table 5. Pairwise comparisons using the Bonferroni adjustment (adjusted alpha levels $p < 0.003$) for multiple comparisons revealed that both invitations and directives were used more frequently than all other question types. Option-posing questions were used more frequently than suggestive questions, non-substantive utterances, and summaries. Suggestive questions were used more frequently than non-substantive utterances and summaries. There was no significant difference between the frequency of non-substantive utterances and summaries.

Next, we examined the first use of focussed prompts (directives and option-posing questions) in both forces. A mixed-design ANOVA was conducted on the outcome variable number of prompts uttered by interviewers prior to introducing focussed questions, with *training force* as the between subjects factor (Force One, Force Two) and *focussed question type* as the within-subjects factor (option-posing, directive). The analysis revealed a main effect of

Table 5 Use of different question types as a proportion of total interviewer utterances and proportion of total details/words elicited from the actor in the substantive phase of the interview. All (adjusted) means are collapsed across training forces

Question type	Use of question M [95%CI]	Proportion of details elicited from actor M [95%CI]	Proportion of total words elicited from actor M [95%CI]
Invitation	.34 [.30, .39]	.41 [.34, .48]	.42 [.37, .48]
Directive	.32 [.28, .35]	.28 [.23, .33]	.34 [.29, .39]
Option-posing	.22 [.18, .25]	.16 [.11, .22]	.11 [.08, .14]
Suggestive	.11 [.08, .14]	.12 [.07, .17]	.10 [.06, .14]
Non-substantive	.01 [.001, .01]	.01 [.002, .02]	.01 [.002, .02]
Summary	.01 [.01, .02]	.02 [.01, .04]	.01 [.004, .02]

focussed question type ($F(1,40)=6.15$; $p=0.017$, $np^2=0.13$) that was not qualified by an interaction with *training force* ($F(1,40)=0.32$; $p=0.58$). No main effect of *training force* ($F(1,40)=0.14$; $p=0.71$) was observed. Inspection of the means revealed that, across forces, trainees introduced directives after fewer utterances ($M=4.21$, $SE=0.46$) than they introduced option-posing questions ($M=6.19$, $SE=0.72$). Finally, we examined the proportion of details elicited from the actor before the use of focussed prompts. A mixed-design ANOVA, with the between-subjects factor *training force* (Force One, Force Two) and the within-subjects factor focussed *question type* (option-posing, directive) revealed no main effect of *focussed question type* ($F(1,40)=1.42$; $p=0.24$) or interaction between *focussed question type* and *training force* ($F(1,40)=0.54$; $p=0.47$). A main effect of *training force* ($F(1,40)=11.09$; $p<0.01$, $np^2=0.22$) was observed. Inspection of the means revealed that Force One elicited a greater proportion of details from actors before introducing focussed questions ($M=23.86$, $SE=4.21$), than did Force Two ($M=8.13$, $SE=1.76$).

Were actors informative during the substantive phase of the interviews?

As the correlations between the proportions of words and details were either moderate or large (invitations, $r(40)=0.86$, $p<0.001$, directives $r(40)=0.43$, $p=0.005$, option-posing questions $r(40)=0.38$, $p=0.01$. suggestive questions $r(40)=0.89$, $p<0.001$, non-substantive utterances $r(40)=0.91$, $p<0.001$, summaries $r(40)=0.87$, $p<0.001$), as was the case in previous research with real children (Sternberg et al. 1996), it was decided to focus solely on details elicited from actors from herein. Participants who were not asked at least one of each question type pertaining to the analyses were excluded (19 were excluded from the richness of actor response analysis, and seven were excluded from the informativeness of actor response analysis).

A mixed-design ANOVA was conducted on the outcome variable proportion of total details provided by actor, with the within subjects' factor *question type* (invitation, directive, option-posing, suggestive, non-substantive, and summary) and the between-subjects factor *training force* (Force One, Force Two). Mauchley's test indicated that the assumption of sphericity was violated for question type, $\chi2(14)=126.89$, $p<0.001$. Consequently, a Greenhouse–Geisser correction was applied ($\varepsilon=0.56$). As the total proportion of questions was equal across forces, the main effect of force was not applicable to this analysis. The ANOVA revealed a main effect of question type ($F(2.78,111.33)=35.44$; $p<0.001$, $np^2=0.47$) that was not qualified by an interaction with training force ($F(2.78,111.33)=1.36$; $p=0.26$, $np^2=0.03$). Pairwise comparisons using the Bonferroni adjustment (adjusted alpha levels $p<0.003$) for multiple comparisons revealed that invitations elicited more details from actors than any other question type, except directives. Directives were more productive than suggestions, non-substantive questions, and summaries. Finally, both option-posing questions and suggestions elicited more details than non-substantive questions and summaries. There were no other significant differences.

Were actors responsive to invitations?

Descriptive statistics showed that across the four substantive question types (invitations, directives, option-posing, suggestive) the first detail was elicited from invitations 72.7% of the time in Force One (Directives=4.5%, Option-posing=9.1%, Suggestive=13.6%) and 50% of the time in Force Two (Directives=10%, Option-posing=25%, Suggestive=10%). The first detail was never elicited by summaries or non-substantive questions. To verify if invitations elicited the first detail more often than the other question types, a value of '1' was assigned to each transcript where an invitation elicited the first detail and '0' if another question type elicited the first detail. Comparing actors from both forces revealed no association between the training force and the tendency for an invitation to elicit the first detail from an actor (Force One=72.7%, Force Two=52.6%, $X^2(1)=1.78$; $p=0.18$). A follow-up binomial test (i.e., collapsed across training force) revealed that invitations did not elicit the first detail at levels greater than chance ($X^2(1)=2.38$, $p=0.12$).

How rich were the average actor responses?

Figure 1 presents the mean number of details provided per response by actors according to interviewer question type, collapsed across forces. A mixed-design ANOVA was conducted on the outcome variable average number of details per response, with the within subjects' factor *question type* (invitation, directive, option-posing, suggestive) and the between subjects' factor *training force* (Force One, Force Two). Mauchley's test indicated that the assumption of sphericity was violated for question type, $\chi^2(5) = 27.80$, $p < 0.001$, consequently, a Greenhouse–Geisser correction was applied ($\varepsilon = 0.70$). Analyses revealed a main effect of *question type* ($F(2.09, 83.42) = 5.94$; $p = 0.003$, $np^2 = 0.13$) and a main effect of *training force* ($F(1,40) = 12.39$; $p = 0.001$, $np^2 = 0.24$). There was no interaction between *question type* and *training force* ($F(2.09, 83.42) = 2.30$; $p = 0.12$, $np^2 = 0.05$). Inspection of the means revealed that, across question types, Force One elicited more details per response from actors ($M = 3.79$, $SE = 0.34$) than Force Two ($M = 1.81$, $SE = 0.36$). Pairwise comparisons using the Bonferroni adjustment (adjusted alpha levels $p < 0.008$) for multiple comparisons revealed that both invitations and directives revealed a higher number of average details per response than option-posing questions. There were no other significant differences.
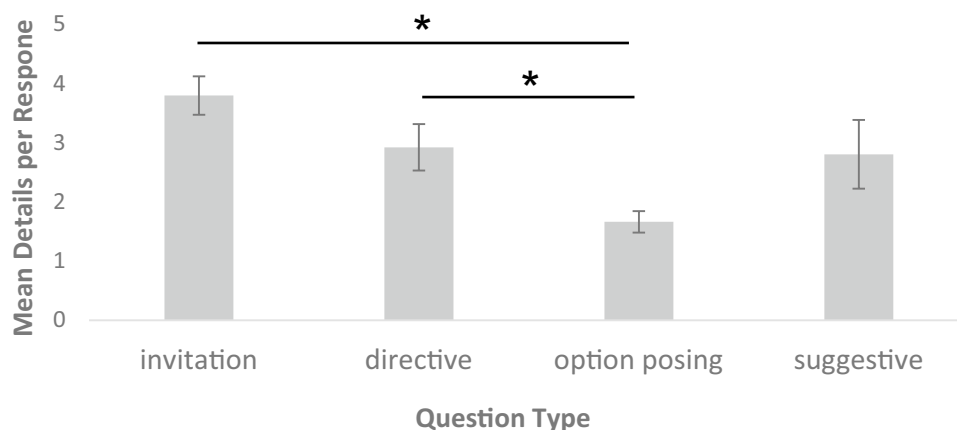
Were actors informative?

Figure 2 presents the mean proportion of informative responses by actors according to the interviewer question type. A mixed-design ANOVA was conducted on the outcome variable proportion of informative responses provided by the actor, with the within subjects factor question type (invitation, directive, option-posing, suggestive) and the between subjects factor training force (Force One, Force Two). Mauchley's test indicated that the assumption of sphericity was violated for question type, $\chi^2(5) = 12.96$, $p = 0.02$, consequently, a Greenhouse–Geisser correction was applied ($\varepsilon = 0.77$). This analysis revealed a main effect of question type ($F(2.32, 76.41) = 6.81$; $p < 0.001$, $np^2 = 0.17$) that was not qualified by an interaction with training force ($F(2.32, 76.41) = 2.43$; $p = 0.09$). There was no main effect of training force ($F(1,33) = 1.83$; $p = 0.19$). Pairwise comparisons using the Bonferroni adjustment (adjusted alpha levels $p < 0.008$) for multiple comparisons revealed that invitations led to a lower proportion of informative responses than option-posing and suggestive questions. There were no other significant differences.

Discussion

Interviewer Behaviour

The first systematic analysis of both actor and interviewer behaviour during JIIT revealed several novel findings. Consistent with our expectations based on practice observed in field research in Scotland, most of the preparatory principles in the pre-substantive phase of the interview were communicated at a frequency less than chance. As we expected, three of the six closure principles were also communicated at a frequency less than chance during the closure phase. Although the rate at which Narrative Elaboration Training practice interviews were *attempted* was above chance, the rate at which they were appropriately conducted (i.e., 'open') was not. This opportunity to examine the pre-substantive phase more closely may explain why Narrative Elaboration Training practice was never observed in field studies (La Rooy et al 2012, 2013). Narrative Elaboration Training according to the Scottish Executive Guidelines (2011) should focus on a neutral topic and use invitations to elicit details. If field studies use this criterion to score a Narrative Elaboration Training practice as present, inappropriate attempts at a narrative elaboration practice would fail to meet the inclusion criteria. Alternatively, it is possible that

Fig. 1 Mean number of details provided per response by actors according to interviewer question type. All error bars show ± 1SEM (* indicates significant difference)

Fig. 2 Mean proportion of informative responses by actors according to interviewer question type. All error bars show ± 1SEM (* indicates significant difference)
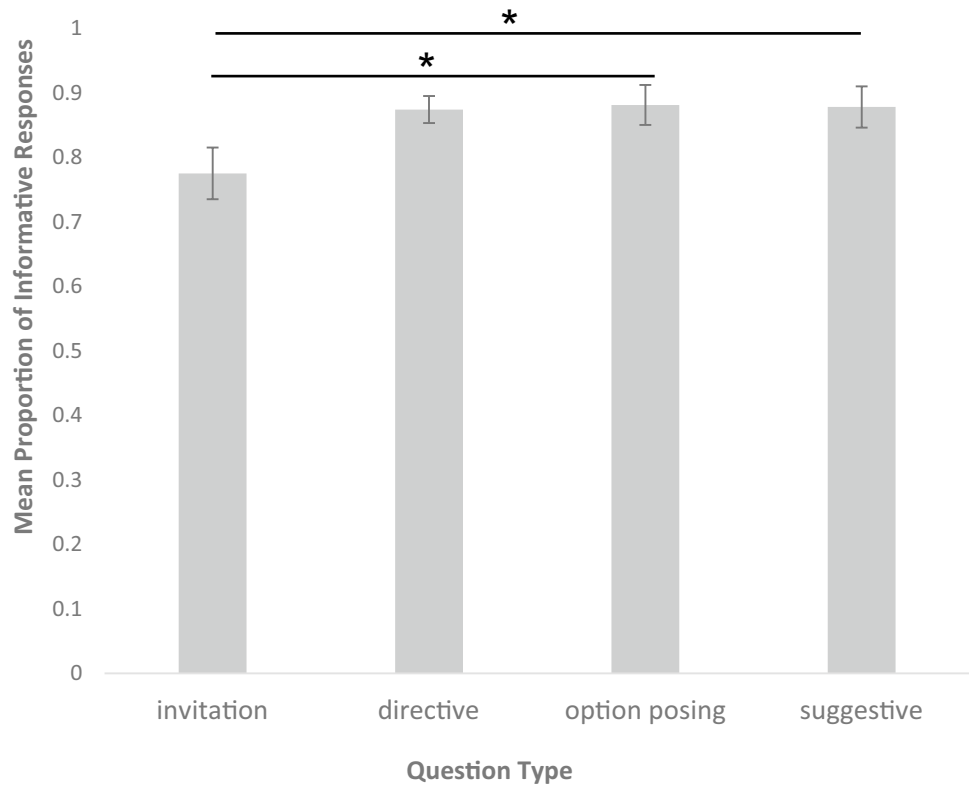
interviewers make an effort to conduct practice interviews during training, but discontinue doing so when they are in the field. Collectively, these analyses demonstrate that even during training, when interviewers are fully immersed in the intensive learning process and receive feedback from their trainers, adherence to best practice at the pre-substantive and closure phases of the interviews was poor. Interviewers' lack of adherence to interviewing guidelines is concerning because communicating ground rules, practicing Narrative Elaboration Training, and appropriately closing the interview are important features of forensic interviews with children (Hershkowitz 2009; Krackow and Lynn 2010; Price et al. 2013; Sternberg et al. 1997; Teoh & Lamb 2010), and this role play is the only practice interviewers have before they conduct field interviews. In line with our findings, surveys suggest that interviewers in Scotland believe that the practice interview is either 'not very effective' or 'not at all effective' and 87% report that they never or rarely conduct one (La Rooy et al. 2011).

Some areas of good practice were observed. Contrary to our prediction, the proportion of invitations used by trainee interviewers during the substantive phrase of the interviews (34%) was in the range of best practice (Cyr et al. 2006; Lamb et al. 2009; Orbach et al. 2000; Sternberg et al. 2001a). This is a stark contrast to the proportions of invitations found in samples of field interviews in Scotland (8% and 15%), where directives comprised the greatest proportion of questions (La Rooy et al. 2012, 2013). Although both invitations and directives were used to a greater extent than all other question types in this study, unfortunately, invitations were not used more frequently than directive questions. This shows that during training, trainee interviewers were able to use invitations and prioritise them over riskier (option-posing and suggestive) questions, however, they did not appear sensitive to invitations' superiority over directive questions in eliciting more accurate and more detailed narratives from children (Brown et al. 2013). The high proportion of directives is consistent with survey research demonstrating that all of the interviewer respondents in Scotland deemed directive questions to be 'quite', 'very', or 'always effective' in eliciting information (La Rooy et al. 2011). Although earlier introduction of directive versus option-posing questions suggested an awareness of the hierarchy of question types, the introduction of option-posing questions after 6.19 utterances on average was comparable to a sample of low-quality interviews (6.3 utterances; Sternberg et al. 2001b). Asking suggestive questions should be avoided, and our expectation that interviewers would use invitations, directives, and option-posing questions to a greater extent than suggestive questions was confirmed.

Actor Behaviour

Instead of enhancing interviewers' learning and skill-set as they are hired to do, adult actors exhibited some behaviours that were potentially counterproductive to the development and maintenance of best practice interview techniques. During the substantive phase of the interview, we anticipated that actors would be more likely to provide their first allegation-related detail in response to an invitation; however, invitations did not elicit the first allegation-related detail at levels greater than chance. As interviewers were instructed to open the substantive phase with an invitation, allegation-related responses would reinforce the use of this type of prompt. Instead, actors' reluctance to disclose allegation-related details in response to invitations often led interviewers to use more focussed or suggestive questions early on. In fact, actors provided fewer informative responses to invitations than to riskier option-posing and suggestive questions. This means actors were more likely to be 'difficult' or resistant when asked best practice invitations and were more likely to provide information when they were asked less desirable option-posing and suggestive questions.

Given the absence of training in question types and appropriate responding we did not expect actors' responses to invitations, directives, option-posing or suggestive questions to differ in overall number of details. In fact, invitations yielded more overall details from actors than any other question type, except directives, with actors providing an equivalent number of details about their allegation to invitations as to directive questions. This may not be surprising as invitations and directives were used with equal frequency and together comprised the majority of questions asked. Summaries and non-substantive questions elicited fewer details than invitations, directives, option-posing and suggestive questions, as expected. When the average number of details per response was examined, responses to both invitations and directives revealed a higher number of average details per response than option-posing questions. However, in contrast to field research (Sternberg et al. 2001b), there was no difference in the productivity of invitations and directives. Our findings suggest that in informative utterances during the substantive phase, actors naturally provide richer responses to invitations and directives than to option-posing questions, though this may be reflective of option-posing questions' tendency to invite shorter and less detailed responses rather than resulting from a strategy used by actors. Importantly, actors did not emphasise the superiority of invitations by providing more detailed responses to invitations than directive questions as real children do.

Training Site

Differences in interview practice were observed between the two training sites. The use of three introductory ground rules ('Don't know', Don't understand', 'Truth') and three closure principles ('Actor questions', 'Contact', 'Thanks') was higher in Force Two than in Force One. These findings may reflect an important difference in procedure between the forces with regards to the introductory phase of the interview. Force Two trainees leading the mock interview on day one were given 15 minutes to conduct the pre-substantive phase before taking a break for feedback, whereas Force One interviewers (and Force Two interviewers who conducted their interview on the second day of training) were not given this opportunity. Having been provided with a specific session to conduct the preparatory phase may have allowed interviewers to focus solely on this part of the interview without hurrying to begin the substantive phase. Furthermore, conducting a more complete pre-substantive phase may have reinforced the importance of all phases of the interview, leading Force Two interviewers to be more likely to communicate the closure principles as well.

Despite the opportunity to conduct the pre-substantive phase separately, fewer interviewers at Force Two conducted a Narrative Elaboration Training practice than at Force One. During the substantive phase, Force Two interviewers posed only 27 questions on average, in contrast to 47 questions asked by Force One trainees. In the same phase, responses from actors at Force Two contained less than half as many words and a third of the detail as responses from actors at Force One. Similar tendencies were observed for the number of details per response and the number of details elicited from actors prior to the introduction of focussed questions. There was no association between training force and actor informativeness or the tendency for an invitation to elicit the first detail from an actor, suggesting that actors across the two sites were responding similarly to the different question types.

Taken together, the observed contrasts between forces may reflect differences in the availability of resources. Recording joint investigative interviews with children was mandatory in Force One and so these trainees had access to VRI equipment. However, no such measures were in place at the time of data collection in Force Two, requiring interviewers to record the interview verbatim by hand. The slow pace from scribing provided fewer opportunities for trainees to ask questions and the resulting time pressure may have hurried Force Two trainees towards using focussed questions to probe for specific information. In line with interviewers' reported concerns about having to wait for scribes to 'catch up' in real interviews with child victims (La Rooy et al. 2011), actors may have also inhibited their responses in an effort to help the scribe keep up. Access to VRI may

have also ensured Force One interviewers felt they had the time to conduct a narrative elaboration practice.

Limitations and Future Research

This study is subject to several limitations. Due to restrictions on the number of training sessions the researchers could access, the study had a relatively low sample size, potentially resulting in a lack of sufficient power to detect interactions involving within-subject (e.g., question type) and between-subject (e.g., force) factors. However, the analysis of aggregate scores of many individually coded observations (i.e., speech acts) of a dynamic interaction within an authentic scenario (data from JIIT sessions) increased the reliability of within-subjects differences in the behaviour of both actor and interviewer, particularly in light of some of our findings converging with independent field data.

Our sample contained data from two police forces. Analysing data from both forces in the same sample maximised statistical power, but direct between-forces comparisons were limited by wide-ranging differences in materials, resources, and practices. Furthermore, the study may not be representative of the wider interviewer and actor populations used in training across Scotland. However, one benefit of our data sampling method was that trainee interviewers and actors were not aware at the time of their training that their interviews would be used for research purposes, allowing us to capture a genuine snapshot into how JIIT usually runs in Scotland without undue influence on interviewer or actor behaviour.

The present study did not include a follow-up of interviewers' subsequent performance in the field. Future research should aim to determine whether high proportions of best practice invitations occur due to an improvement in training since the field studies conducted by La Rooy et al. (2012; 2013) or whether the skills demonstrated in training dissipate over time (see Lamb et al. 2002).

Recommendations

Although JIIT courses are expected to rely on the same interview guidelines and follow a national standard, the use of some interview components varied across training sites. This concern was previously raised by the Scottish Courts and Tribunals Service which stated that 'There are differing approaches in different parts of the country' (see 'Evidence and Procedure Review- Next Steps', p. 23, Feb 2016). In particular, the scenarios used here for mock interviews varied greatly in their complexity and the interviewee's willingness to disclose information. This suggests that trainee interviewers in Scotland are not all afforded the same opportunity to develop their skills. Therefore, the

following recommendations are made based on the findings of this study:

1. Learning materials (e.g., interview scenarios), learning outcomes, facilities and resources (such as VRI) should be standardised on JIIT courses at a national level to ensure all trainee interviewers in Scotland are trained to the same standard.
2. Developing and implementing elements of training specifically focussed on helping interviewers better understand and formulate invitations could improve interviewers' utilisation of these prompts in comparison to directive questions.
3. Supporting interviewers during training to define and structure a Narrative Elaboration Training practice may improve the quality of the pre-substantive phase of their interviews.
4. Developing and implementing a bespoke training programme that trains adult actors to recognise the different types of questions and how to respond during interviews when they role-play abused children could preferentially reinforce elements of best practice.

Conclusion

Our findings demonstrate that trainee interviewers did not consistently communicate the interview principles or prepare the interviewees to provide narrative accounts of experienced events as they should do during the introductory phase of the interview. In interviews with real children, this could render invitations less effective when they are asked later on in the substantive phase of the interview. The substantive phases of the interviews were of a high quality, with invitations comprising the greatest proportion of questions. However, invitations were not used more often than directives. Focussed questions were introduced early and prior to the exhaustion of a free narrative account. It is encouraging that trainee interviewers are able to formulate invitations but it appears that they would benefit from more targeted support and practice in maintaining a line of invitations to elicit allegation-related details.

Actors provided the greatest proportion of allegation-related details in response to invitations and directives but did not appear to distinguish between the two. Some of actors' behaviour could be counterproductive to interviewers' use of invitations, namely providing more uninformative responses to invitations than to option-posing and suggestive questions. This suggests that actors would benefit from training in identifying question types and appropriate responding.

Large differences were also observed between training sites in how many questions were asked and how much information was elicited, potentially because of the inconsistent

availability of resources (i.e., VRI). Standardisation of learning materials (e.g., interview scenarios) and access to resources across courses is necessary to ensure trainee interviewers are afforded an equal opportunity to develop and practice their interviewing skills.

Data Availability The datasets analysed during the current study are not publicly available due to confidentiality but are available from the corresponding author on reasonable request.

Declarations

Ethical Statement All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

Conflict of Interest The authors declare no competing interests.

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