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Taking stock: evaluating the conduct of forensic interviews with children in New Zealand

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ABSTRACT

This study examined adherence to the New Zealand Specialist Child Witness Interviewing model in 93 interviews with children about sexual abuse allegations. Interviewers ($n = 27$) demonstrated good adherence to the scripted components of the model during the preparation stage of the interview. When investigating the abuse allegation, interviewers demonstrated a greater use of Direct ('Wh-') (57%), and Option-posing prompts (20%) than stipulated by the model and fewer broad open-ended prompts (22%). Very few suggestive questions were posed. In contrast to recommended practice, Direct and Option-posing prompts were not only asked frequently, but were introduced very early in the investigative phase of the interview. Training, supervision and feedback should focus on increasing the use of broad open-ended prompts and minimizing premature use of more focused prompts to promote best-practice interviews.

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Interviewing techniques play a crucial role in the amount and quality of children's report when investigating child maltreatment cases (Saywitz, Lyon, & Goodman, 2011). Despite a considerable body of research and a clear set of evidence-based guidelines on conducting forensic interviews, research shows interviewers struggle to adhere to these principles across a variety of countries and interviewing protocols (e.g. Korkman, Santtila, & Sandnabba, 2006; Luther, Snook, Barron, & Lamb, 2014; Powell & Hughes-Scholes, 2009). As such, there is a need to regularly evaluate the conduct of forensic interviews to inform training and supervision needs. The present study evaluates the conduct of forensic interviews with children about sexual abuse allegations in New Zealand. To the authors' knowledge, it is the first objective evaluation of child sexual abuse interviews conducted in New Zealand.

Evidence-based interviewing guidelines

A convergence of field and experimental studies has led to a consensus about best-practice interviewing techniques for investigating child abuse allegations. Specifically, before

questioning children about the abuse allegation, forensic interviewers are advised to establish the ground rules of the interviews (see Brubacher, Poole, & Dickinson, 2015 for a review), build rapport (see Hershkowitz, 2011 for a review), and provide an opportunity for children to practice recalling a recent neutral past event (see Roberts, Brubacher, Powell, & Price, 2011 for a review).

When investigating the alleged abuse, interviewers are advised to ask broad open-ended questions (e.g. 'Tell me everything about that') throughout an interview to elicit reliable information from child witnesses (American Professional Society on the Abuse of Children, 2012; Ministry of Justice, 2011; Orbach & Pipe, 2011). Numerous studies have demonstrated that open-ended prompts such as *Invitations* (e.g. 'Tell me everything you can remember about that') and *Cued-Invitations* (e.g. 'You told me that he took you to that special place. Tell me more about that special place') elicit more accurate and more detailed information (Brown et al., 2013), more details about person, action, location and temporal aspects of the event (Phillips, Oxburgh, Gavin, & Myklebust, 2012), and are less likely to elicit inconsistent statement such as self-contradictions (Lamb & Fauchier, 2001) compared to closed-ended prompts. Open-ended prompting also enhances the coherence of children's responses, and promotes narrative-based responding, which, in turn, may enhance a listener's ability to understand what the child is describing (Feltis, Powell, Snow, & Hughes-Scholes, 2010).

Direct or focused cued-recall questions that ask for specific details of the allegation ('Wh-' questions, e.g. 'When did this happen?') tend to elicit comparatively fewer details, and more errors (Brown et al., 2013) and inconsistent statements (Lamb & Fauchier, 2001) than *Invitations* and *Cued-Invitation*, and should therefore only be asked when more general prompts have not elicited required details. *Option-posing* prompts (e.g. 'Did this happen one time or more than one time?') elicit fewer details (Cederborg, Orbach, Sternberg, & Lamb, 2000; Korkman et al., 2006; Sternberg et al., 1996) and more errors and inconsistent statements (Lamb & Fauchier, 2001; Orbach & Lamb, 2001) than any of the aforementioned prompts. Their use should be minimized or delayed as long as possible. *Suggestive* questioning techniques (e.g. 'He touched you, didn't he?') should be eliminated as a robust body of evidence has established that such practices contaminate children's responses (Bruck & Ceci, 1999).

Adherence to evidence-based guidelines

Studies evaluating the quality of forensic interviews in a range of countries have been remarkably consistent in demonstrating how difficult it is for interviewers to adhere to evidence-based recommendations. For example, interviewers may omit important preparatory components in the early stages of setting up the interview (e.g. ground rules: Luther et al., 2014; Sternberg, Lamb, Davies, & Westcott, 2001; episodic recall practice: La Rooy, Lamb, & Memon, 2011; Luther et al., 2014). Deviations from recommended questioning approaches are also common, with Direct and Option-Posing prompts predominating in interviews in a range of countries such as Australia (Powell & Hughes-Scholes, 2009), Canada (Luther et al., 2014), Finland (Korkman et al., 2006), Norway (Thoresen, Lonnum, Melinder, Stridbeck, & Magnussen, 2006), Sweden (Cederborg et al., 2000), United Kingdom (Sternberg et al., 2001) and the United States (Warren, Woodall, Hunt, & Perry, 1996).

Interviewers' poor adherence to recommended guidelines has spurred the development of interviewing frameworks and protocols (e.g. American Professional Society on the Abuse of Children, 2012; Ministry of Justice, 2011; Orbach & Pipe, 2011). Such protocols assist interviewers in optimizing their use of desired interviewing strategies and minimizing risky question types. In New Zealand, the Specialist Child Witness Interviewing (SCWI) model follows the PEACE framework, which was developed in the UK to guide police in interviewing practice (Clarke & Milne, 2001). PEACE is a mnemonic which stands for the five recommended stages of an interview: Planning and Preparation (P), Engage and Explain (E), Account (A), Closure (C) and Evaluation of the interview (E) (Clarke & Milne, 2001). In the SCWI model, children's reports of their experiences (the Account phase) are elicited using a questioning approach closely modelled on the National Institute of Child Health and Human Development (NICHD) Investigative Interview protocol. The NICHD interview protocol is a well-validated interviewing protocol and is internationally recognized as the gold standard approach for interviewing children (Saywitz et al., 2011). Several studies have demonstrated improved interviewing performance when interviewers follow the NICHD interviewing protocol (see Lamb, Hershkowitz, Orbach, & Esplin, 2008, for a review).

Even when interviewers are trained in evidence-based protocols research shows that interviewers frequently have difficulty in adhering to them (Cyr, Dion, McDuff, & Trotier-Sylvain, 2012; Lamb, Sternberg, Orbach, Esplin, & Mitchell, 2002; Lamb, Sternberg, Orbach, et al., 2000). This lack of adherence may stem, at least in part, from interviewers' difficulties in accurately monitoring their practice (Wright & Powell, 2006). Thus it is important that interviewing practice is frequently and independently evaluated to provide both individualized feedback to interviewers on their practice, and to highlight common challenges for interviewers that can be addressed in training and professional development activities.

Factors associated with interviewing performance

A number of studies have investigated the role of child, allegation and interviewer characteristics in forensic interviewing performance. For example, younger children tend to be asked fewer questions (Sternberg et al., 2001) and more specific or suggestive prompts (see Table 1 for definitions of questions) than older children (Lamb, Sternberg, & Esplin, 2000; Sternberg et al., 2001; Thoresen et al., 2006; Warren et al., 1996).

Often children experience physical or sexual abuse more than one time (Connolly & Read, 2006); these children tend to recall more of what typically happens (script-based memories) than what happened during a particular instance (i.e. an episodic memory; Schneider, Price, Roberts, & Hedrick, 2011). Despite children's tendency to provide summarized accounts of multiple episodes of abuse, interviewers' questioning strategies do not appear to vary as a function of abuse frequency (Sternberg et al., 1996).

Children's relationship to the suspect may also influence interviewing performance. Lamb et al. (2008) found that interviewers asked fewer Invitations when the alleged perpetrator was a family member compared to non-family members. To our knowledge no studies have examined whether interviewing performance varies by the type of sexual abuse (e.g. penetration vs. non-penetration). Goodman, Bottoms, Rudy, Davis, and Schwartz-Kenney (2001) propose that maltreated children who experience more severe

Table 1. Definition of interviewer questions.

Interviewer questions	Definitions	Examples
Invitations	Questions or statements that prompt free-recall responses and do not focus the child on a particular category of information	'Tell me everything you can remember'
Cued-Invitation	Questions or statements that utilized details disclosed by the child as cues to prompt free-recall responses	'You told me that he took you to that special place. Tell me more about that special place'
Direct questions	Ask for specific information or details about the allegation from the child	'What were you wearing?'
Option-posing	(1) Questions that require a yes/no response (2) Questions that require a selection from options given by the interviewers (3) Focus the child's attention more narrowly on aspects of the account that the child did not previously mention but do not imply that a particular response is expected	'When did this happen?' (1) 'Did you see what he looked like?' (2) 'Did he touch you under or over your clothes?' (3) 'Did anyone see what happened?' [When the child had not disclosed about any other witnesses]
Suggestive	Statements or questions that communicated to the child what answer they should give or the interviewers assumed or introduced certain information that was not disclosed by the child	'He touched you didn't he?'

types of abuse may be more reticent, anxious or intimidated, and therefore they may perform more poorly in some aspects of the interview. Therefore, interviewers who vary their interviewing practice across different types of abuse allegations may be more successful in eliciting cooperation.

The professional background of interviewers does not appear to influence interviewing performance; Powell, Hughes-Scholes, Smith, and Sharman (2012) did not find significant differences between Australian police officers or social workers in their adherence to open-ended questioning in simulated interviews. The influence of experience on interviewing practice has not been consistently demonstrated in the research; in field studies no association has been found between experience and performance (La Rooy et al., 2011; Powell & Hughes-Scholes, 2009), whereas laboratory analogue studies have shown that interviewers with more experience in interviewing children are less likely to ask open-ended prompts in simulated interviews (Powell et al., 2012). Finally, the structure of the training programme may influence interviewing performance (e.g. Benson & Powell, 2015). However, our focus in the current study is to benchmark New Zealand interviewing practice, this is therefore not examined in the current study. In sum, interviewing performance does not consistently vary as a function of the child, interviewer or allegation characteristics, and one of the aims of the present study is to examine whether the same patterns are seen in a New Zealand sample.

The current study

Benchmarking interviewing practice is important for informing training needs of interviewers and identifying problematic practices that may compromise judicial outcomes when cases of maltreatment progress to court. The main aim of the present study was to examine forensic interviewing practice with child complainants of sexual abuse in New Zealand and factors (child, allegation and interviewer characteristics) that may influence interviewing practice. Specifically, our research examined: (1) the extent to which

interviewers adhered to scripted components of the SCWI interviewing model and (2) the types and frequency of prompts used by interviewers when investigating the alleged abuse. In line with the research cited previously, we expected that interviewers would not consistently adhere to the scripted components of the SCWI interviewing model, and that closed-ended (i.e. Option-posing prompts) and focused questions (i.e. Direct prompts) would be more frequently asked than broad open-ended prompts (i.e. Invitations and Cued-Invitations) when investigating the alleged abuse.

The second goal of the study was to examine whether child, allegation and interviewer characteristics would be associated with interviewing practice. We expected that interviewers would pose fewer questions and use more specific prompts (e.g. Direct and Option-Posing prompts) with younger compared to older children (Lamb, Sternberg, & Esplin, 2000; Sternberg et al., 2001; Thoresen et al., 2006; Warren et al., 1996).

We explored whether interviewing practice varied by children's relationship to the suspect (relative, known person and stranger), severity (penetration vs. non-penetration) and frequency of abuse (one vs. multiple episodes). We expected that interviews would be similarly constructed in investigations of single and multiple allegations (Sternberg et al., 1996). We predicted that interviewers would ask fewer Invitations when the alleged suspect was a family member compared to a non-family member (Lamb et al., 2008). No studies have examined the role of type of abuse (penetration vs. non-penetration) on interviewing practice and so no specific prediction was made.

Based on field studies (La Rooy et al., 2011; Powell & Hughes-Scholes, 2009), we expected that there would be no relationship between interviewing experience and the proportion of broad open-ended questions interviewers asked. In New Zealand, the investigation of child maltreatment is the joint responsibility of the police force and social service/child protection service (Westera, Zajac, & Brown, 2015). We were interested in whether professional affiliation was associated with types of interviewing practice. Although police and social worker interviewers have had different professional training prior to becoming specialist child witness interviewers (i.e. a focus on criminal investigation (police) vs. care and protection (social workers)), they all complete the same interviewing training. Therefore, in line with previous research (Powell et al., 2012), we expected that there would be no significant differences between the two professional groups in terms of proportions of different types of prompts posed to children. We also examined whether interviewing workload (full time vs. part time; number of interviews conducted per week), and location (metropolitan vs. rural centre) influenced interviewing practice. None of these interviewer characteristics have been examined in previous research and therefore no specific predictions were made.

Methods

Participants

Twenty-seven specialist child witness interviewers across New Zealand (33% of total population) consented to participate. The interviewer sample was fairly evenly distributed across professional discipline (44% social workers, 56% police officers), and geographical location (55.6% metropolitan centres, 44.4% rural centres). Just under half (44%) worked full time as specialist child interviewers. Interviewers averaged 5.2 years of experience

interviewing children (Min = 0.5, Max = 22, SD = 6.3 years) and reported conducting an average of 3.6 interviews per week (Min = 1, Max = 7, SD = 1.5 interviews).

The interviewers gained parental permission for 93 videotaped interviews with child witnesses to be included in the study. Ten interviewers (37%) conducted 1–2 interviews each, 10 interviewers (37%) conducted 3–4 interviews, 5 interviewers conducted 5–6 interviews (18.5%), 2 interviewers conducted 8–9 interviews (7.4%). Children in the interviews were between 6 and 16 years old ($M = 12.19$ years old, $SD = 3.16$ years old) and were interviewed between February 2012 and May 2013. The majority of the children interviewed were females (90.3%). Most of the children reported experiencing non-penetration sexual abuse (63%). More than half of the allegations pertained to one episode of abuse (53.3% vs. 46.7% multiple episodes) and most of the suspects were known but not related to the children (65.6% not related vs. 19.4% relatives vs. 15.1% strangers). Most of the suspects were males (97.8%).

Procedure

Coding of adherence to the scripted components of the SCWI Model

The key elements of the Specialist Child Witness Interviewing Model were coded separately for the three phases of: (1) Engage and Explain, (2) Account and (3) Closure (See Table 2 for the specific components of each phase).

Coding of interviewers' questions

Interviewers' questions throughout the entire Account phase were transcribed and coded by the first author. Interviewers' questions were coded using a modified version of the NICHD Investigative Interview Protocol coding scheme (Orbach et al., 2000). This coding scheme was adopted to ensure data were comparable to published international studies of similar interviewing protocols and utilized validated definitions of question

Table 2. Adherence to specific components of the SCWI model.

	Percentage
<i>Engage and explain phase</i>	
Introduction	
(1) Stated place, time and date of interview	100
(2) Stated that the interview is being monitored	78.4
(3) Introduced the monitor's name and role	100
(4) Asked the child to tell their name and age	100
(5) Interviewer introduced themselves by name	98.9
(6) Interviewer introduced their role	96.7
Discussed ground rules	100
Discussed and asked for a promise to tell the truth	100
Conducted rapport and free-narrative practice	98.9
<i>Account phase</i>	
Asked the child what they have come to talk about with an open-ended question	100
Transferred control to the child by explaining that s/he does not know what had happened	84.1
Reinstated ground rules	78.3
Asked the child to report everything they remember	80.5
<i>Closure phase</i>	
Offered the child opportunity to add any further information or to ask any questions	79.1
Introduced and discussed a neutral topic	93.4
Thanked the child for coming and talking to the interviewer	43.5
Stated the end time at the end of the interview	98.9

types. Questions were coded as either: Invitation, Cued-Invitation, Direct, Option-posing or Suggestive questions (see [Table 1](#) for definition of interviewer questions).

Reliability coding

All of the interviews were coded by the first author. Twenty-four (25.9%) interviews were also independently coded by two trained reliability coders who were specialist child interviewers (one each from Child, Youth and Family (CYF) and the New Zealand Police). Coders were trained on separate transcripts as well as interview DVDs until a minimum of 80% agreement was reached with the first author. Inter-rater reliability was calculated on coding of interviewers' utterances using Cohen's Kappa. Good agreement was achieved between the first author and the reliability coders, $\kappa = 0.73$, $p < .001$.

Results

This section is divided into 2 parts, examining: (1) the adherence to the scripted components of the SCWI interviewing model and (2) the question style used in the Account phase. In each part, we examine whether child, allegation and interviewer characteristics influenced the specific interviewing practice. Given that interviewers conducted multiple interviews, resulting in nested data, Generalized Estimating Equation (GEE) analysis was used to examine whether child, interviewer and allegation characteristics influenced (1) the adherence to the scripted components of the SCWI interviewing model, (2) the total number of questions and (3) the proportion of question types interviewers posed during the Account phase. GEEs provide a framework for analyzing grouped or nested data and can be applied to continuous, dichotomous (yes/no response) and nominal dependent variables (Zorn, 2001).

We conducted binary logistic models when examining the adherence to the scripted components of the model, and the proportion of questions interviewers posed during the Account phase. When examining the total number of questions interviewers posed, we conducted GEE analyses with linear models. For all models, we entered the following predictor variables as factors: (1) relationship of the child to the suspect (relatives, known person and stranger), (2) type of sexual abuse (penetration vs. non-penetration), (3) episodes of abuse (one episode vs. multiple episodes), (4) interviewing location (metropolitan vs. rural), (5) professional affiliations (police vs. CYF social workers) and (6) interviewing load (full time vs. part time). The following predictor variables were entered as co-variables: (7) age of interviewee, (8) average number of interviews conducted per week and (9) interviewing experience.

Adherence to the scripted components of the SCWI interviewing Model

Interviewers adhered to the scripted components in the Engage and Explain phase almost without exception (See [Table 2](#)). In the Account phase, in 84.1% of the interviews interviewers transferred control to the child by stating they did not know what happened, reinstated the ground rules with the child (78.3%) and asked the child to report everything in as much detail as possible (80.5%). In the Closure phase, most interviews contained a discussion of a neutral topic with children (93.4%) and stated the end time of the interview (98.9%). Just over three quarters of the interviews included an opportunity for the child to

add any information or to ask questions (79.1%). In less than half (43.5%) of the interviews, the interviewers thanked the child for coming and talking to them.

Next, we examined whether child, allegation and interviewer characteristics influenced adherence to scripted components of the SCWI model. We will ignore the Engage and Explain phase and stating the end time of the interviews in the Closure phase given uniform high adherence to these components. We conducted five analyses, and as a consequence we applied a Bonferroni adjustment and adopted a significance value of $p < .01$. We found that the number of interviews conducted per week was a statistically significant predictor of whether interviewers transferred control to the children (Wald $\chi^2(1) = 9.74, p = .002$). For each unit increase in the number of interviews conducted per week, the odds ratio of interviewers stating that they did not know what had happened to the child decreased by 0.34 (*CI* 95% 0.17,0.67). Interviewers who conducted more interviews per week were less likely to state that they did not know what had happened to the child (i.e. transferred control to the child). None of the other child, allegation and interviewer characteristics significantly predicted whether interviewers adhered to the other scripted components of the Account or the Closure phase.

Total and proportion of prompts in the account phase

Considerable variabilities in the total number of questions interviewers posed to children and the duration of Account phase were noted (see Table 3). In terms of types of questions, Direct questions were most frequently asked (57.1%), followed by Option-Posing prompts (20.5%), Cued-Invitations (12.6%), Invitations (9.4%) and Suggestive prompts (0.5%). As such, the most efficacious and evidence-based prompts were least likely to be used.

Did child, interviewer and allegation characteristics influence the total number of questions interviewers posed?

We found that children's age (Wald $\chi^2(1) = 6.73, p = .009$) and the type of abuse (Wald $\chi^2(1) = 10.16, p = .001$) were statistically significant predictors of the total number of

Table 3. Descriptive statistics for the number and proportion of interviewers' questions in the account phase.

	Number			Proportion		
	<i>M</i> (<i>SD</i>)	Min	Max	<i>M</i> (<i>SD</i>)	Min	Max
<i>Duration</i>	50.93 (23.12)	13.32	119.52			
<i>Interviewers' questions</i>						
Total	140.35 (70.31)	37	384			
Invitation	11.62 (6.06)	3	33	0.09 (0.05)	0.02	0.30
Cued-Invitation	17.41 (11.63)	0	55	0.13 (0.07)	0.00	0.34
Direct	81.04 (44.87)	12	248	0.57 (0.09)	0.32	0.80
Option-posing	28.95 (16.07)	5	88	0.20 (0.05)	0.06	0.34
Suggestive	0.68 (0.14)	0	5	0.01 (0.01)	0.00	0.06

questions posed to children during the Account phase. For each unit increase in the age of the child being interviewed, the odds ratio of interviewers asking more questions during the Account phase increased by 1.48 95% CI [1.10, 1.98]. Interviewers were significantly more likely to pose more questions to older children than younger children in the Account phase. Consistent with this result, correlation analyses indicated that age was positively associated with the length of the interview, $r(93) = .24, p = .023$. Interviewers also asked significantly more questions when investigating penetration type abuse ($M = 167.3, SD = 77.2$) compared to non-penetration type abuse ($M = 124.6, SD = 62$). None of the other child, allegation and interviewer characteristics significantly predicted the total number of questions posed during this phase.

Did child, interviewer and allegation characteristics influence the proportion of questions interviewers posed?

Given their low frequencies, suggestive questions were excluded from GEE analyses. We conducted four analyses, subsequently applied a Bonferroni adjustment and adopted a significance value of $p < .0125$. We found that interviewing location (Wald $\chi^2(1) = 7.30, p = .007$) and children's relationship to suspect (Wald $\chi^2(2) = 28.71, p < .001$) were statistically significant predictors of the proportion of Cued-Invitation questions posed to children during the Account phase. Interviewers in metropolitan interviewing sites ($M = 0.34, SD = 0.15$) were more likely to ask Cued-Invitation questions than interviewers in rural interviewing sites ($M = 0.19, SD = 0.15$). Furthermore, interviewers were more likely to ask Cued-Invitation questions to children when the alleged suspect was a relative ($M = 0.33, SD = 0.21$) compared to a stranger ($M = 0.25, SD = 0.12$), and when the alleged suspect was a known person ($M = 0.29, SD = 0.16$) compared to a stranger ($M = 0.25, SD = 0.12$). No significant difference in the proportion of Cued-Invitation questions when the alleged suspect was a relative ($M = 0.33, SD = 0.21$) compared to a known person ($M = 0.29, SD = 0.16$). None of the other interviewer, child and allegation characteristics significantly predicted the proportion of questions posed to children (see [Table 4](#)).

Distribution of prompts in the account phase

Given that we found Direct questions predominated and a higher-than-ideal proportion of Option-Posing questions occurred, we were interested in whether these occurred predominantly in the latter stages of the interview (as supported by many interviewing protocols, e.g. Orbach & Pipe, 2011). For example, interviewers may have predominantly used Invitations and Cued-Invitations in the initial stages of eliciting an account from children, and then turned to Direct and Option-Posing questions in the latter stages of the interview to elicit important, previously unreported details of the allegation or to clarify ambiguous statements. To do so we examined: (1) how early interviewers asked the first Direct and Option-Posing questions in the interview and (2) the distribution of questions throughout the Account phase.

First, we examined the number of questions interviewers asked before asking the first Direct and Option-Posing questions. On average, interviewers asked 3.9 questions (Min = 1, Max = 13, SD = 2.2 questions) before the first Direct question, or only 3% (Min = 0%, Max = 15%, SD = 3%) of the total number of questions in the Account phase. The mean number of questions before the interviewer posed the first Option-Posing question was 11.1 (Min = 1, Max = 47, SD = 9.51 questions), or 9% (Min = 1%, Max = 43%, SD = 9.9%) of the total

Table 4. Generalized Estimating Equation (GEE) analyses with binary logistic models to predict the proportion of questions interviewers posed during the account phase.

Outcome variable	Predictor variable	Wald Chi Square	Exp (B)	95% Confidence Interval for Exp (B)	Std. Error	Sig.
Invitation	Age of interviewee	2.79	1.00	0.99,1.00	0.001	0.09
	<i>Relationship of the child to the suspect</i>					
	Relatives vs. Stranger (Reference)	0.65	0.89	0.66,1.19	0.15	0.42
	Known person vs. Stranger (Reference)	0.15	0.95	0.71,1.25	0.14	0.70
	<i>Type of sexual abuse</i>					
	Penetration vs. Non-penetration (Reference)	1.95	0.88	0.73,1.06	0.09	0.16
	<i>Episode</i>					
	1 episode vs. multiple episodes (Reference)	0.13	1.03	0.86,1.24	0.09	0.72
	<i>Professional affiliation</i>					
	CYF vs. Police (Reference)	0.23	1.11	0.73,1.69	0.21	0.63
	<i>Load</i>					
	Full time vs. Part time (Reference)	1.08	0.81	0.54,1.20	0.20	0.30
	<i>Interviewing location</i>					
	Metropolitan vs. Rural (Reference)	0.15	0.95	0.73–1.24	0.14	0.70
Average number of interviews per week	0.75	1.07	0.91,1.26	0.08	0.39	
Interviewing experience	1.32	1.00	0.99,1.00	0.001	0.25	
Cued-Invitation	Age of interviewee	0.83	1.00	0.99,1.00	0.002	0.36
	<i>Relationship of the child to the suspect</i>					
	Relatives vs. Stranger (Reference)	7.63	0.70	0.55,0.90	0.13	0.01
	Known person vs. Stranger (Reference)	27.46	0.72	0.64,0.82	0.06	<0.001
	<i>Type of sexual abuse</i>					
	Penetration vs. Non-penetration (Reference)	0.93	0.89	0.72,1.12	0.11	0.33
	<i>Episode</i>					
	1 episode vs. multiple episodes (Reference)	0.24	1.06	0.85,1.31	0.11	0.62
	<i>Professional affiliation</i>					
	CYF vs. Police (Reference)	0.06	1.04	0.76,1.43	0.16	0.80
	<i>Load</i>					
	Full time vs. Part time (Reference)	0.69	0.89	0.68,0.17	0.14	0.41
	<i>Interviewing location</i>					
	Metropolitan vs. Rural (Reference)	7.29	1.64	1.14,2.34	0.18	0.01
Average number of interviews per week	0.92	0.92	0.77,1.09	0.09	0.34	
Interviewing experience	2.96	1.00	1.00,1.004	0.001	0.08	

(Continued)

Table 4. Continued.

Outcome variable	Predictor variable	Wald Chi Square	Exp (B)	95% Confidence Interval for Exp (B)	Std. Error	Sig.
Direct	Age of interviewee	0.28	1.00	0.99,1.00	0.001	0.60
	<i>Relationship of the child to the suspect</i>					
	Relatives vs. Stranger (Reference)	3.51	1.15	0.99,1.33	0.07	0.06
	Known person vs. Stranger (Reference)	4.57	1.14	1.01,1.28	0.06	0.03
	<i>Type of sexual abuse</i>					
	Penetration vs. Non-penetration (Reference)	5.62	1.15	1.02,1.29	0.06	0.02
	<i>Episode</i>					
	1 episode vs. multiple episodes (Reference)	0.58	1.06	0.91,1.24	0.08	0.45
	<i>Professional affiliation</i>					
	CYF vs. Police (Reference)	0.62	0.92	0.75,1.13	0.10	0.43
	<i>Load</i>					
	Full time vs. Part time (Reference)	0.12	0.96	0.79,1.18	0.10	0.73
	<i>Interviewing location</i>					
	Metropolitan vs. Rural (Reference)	0.15	0.96	0.81-,15	0.09	0.70
	Average number of interviews per week	1.17	1.06	0.95,1.19	0.06	0.28
Interviewing experience	2.12	0.99	0.99,1.00	0.001	0.14	
Option-posing	Age of interviewee	0.09	1.00	0.99,1.00	0.001	0.77
	<i>Relationship of the child to the suspect</i>					
	Relatives vs. Stranger (Reference)	1.80	1.18	0.93,1.50	0.12	0.18
	Known person vs. Stranger (Reference)	0.95	1.08	0.92,1.27	0.08	0.33
	<i>Type of sexual abuse</i>					
	Penetration vs. Non-penetration (Reference)	0.31	0.96	0.84,1.09	0.07	0.57
	<i>Episode</i>					
	1 episode vs. multiple episodes (Reference)	1.18	0.91	0.78,1.07	0.08	0.28
	<i>Professional affiliation</i>					
	CYF vs. Police (Reference)	0.53	1.07	0.90,1.26	0.09	0.47
	<i>Load</i>					
	Full time vs. Part time (Reference)	0.34	1.08	0.83,1.14	0.14	0.56
	<i>Interviewing location</i>					
	Metropolitan vs. Rural (Reference)	0.76	0.92	0.76,1.11	0.095	0.38
	Average number of interviews per week	1.98	0.93	0.85,1.03	0.05	0.16
Interviewing experience	3.85	0.99	0.99,1.00	0.001	0.05	

number of questions in the Account phase. Thus, it seems that in contrast to best-practice recommendations, interviewers were not working to elicit children's narratives with minimal input by relying on very open-ended prompts during the Account phase. That is, they were quick to employ both narrowly focussed direct questions, and even more focussed option-posing prompts.

Second, we divided each interview into two equal halves and conducted paired sample *t*-tests on the proportion of each type of prompt in the first-half compared to the second-half of each interview. Interviewers asked proportionally more Invitations in the first-half of

their interviews ($M = 0.10$, $SD = 0.06$) compared to the second-half ($M = 0.06$, $SD = 0.05$, $t(92) = 7.02$, $p < .001$). Similarly, interviewers asked more Cued-Invitations during the first-half ($M = 0.16$, $SD = 0.10$) compared to the second-half of their interviews ($M = 0.09$, $SD = 0.06$, $t(92) = 10.28$, $p < .001$). Conversely, we found a significant increase in the use of Option-Posing questions from the first-half ($M = 0.16$, $SD = 0.06$) to the second-half of interviews ($M = 0.26$, $SD = 0.09$, $t(92) = -9.67$, $p < .001$). No significant difference in the proportion of Direct prompts posed between the first ($M = 0.57$, $SD = 0.11$) and the second halves of the interviews was found ($M = 0.59$, $SD = 0.10$, $t(92) = -1.83$, $p = .071$). Thus Invitations and Cued-Invitations were utilized more often during early stages of Account phase, and less so during latter phase. Direct prompts were used consistently throughout the interview, as reflected in the overall high proportion of these prompts. Although Option-posing prompts were used more frequently in latter stages, they were also introduced very early in the Account phase. Thus, interviewers deviated from best-practice recommendations not only in terms of the proportion of questions asked but also in terms of when they were introduced and used during the interview.

Discussion

The current study evaluated the conduct of interviews investigating alleged sexual abuse with children between the ages of 6 and 16 years old in New Zealand, and factors that influenced interviewing practice. We examined two aspects of the interviews: adherence to the scripted components of the model, and total and proportion of question types used in the Account phase, which will be discussed, in turn, in the following section.

Adherence to the scripted components of the SCWI interviewing Model

During the Engage and Explain phase of the interview we observed high levels of adherence to the scripted components of the SCWI model. Interviewers also consistently discussed a neutral topic with children prior to ending the interview and stated the end time of the interview during the Closure phase. However, approximately one quarter of the interviews had at least one key feature from the *Account* phase omitted, despite these components being scripted and not reliant on the responsiveness of the child, or the nature of the allegation under investigation. Transferring control to the child (Mulder & Vrij, 1996) and reinstating the ground rules (Gee, Gregory, & Pipe, 1999; Saywitz & Moan-Hardie, 1994) are evidence-based instructions that emphasize the key contribution the child can make to the interview and are designed to increase the amount and accuracy of the information they will report about the allegation. Finally, although the majority of interviews included an opportunity for the child to add anything else they remembered or to ask any questions during the Closure phase, a quarter of the interviews did not provide this opportunity irrespective of the child's age.

We found that interviewers who conducted more interviews per week were less likely to state that they did not know what had happened to the child (i.e. transferred control to the child). Interviewers may forget to tell the child that they are naïve to the situation as typically adult-child conversations revolves around testing of children's knowledge (for a review see Lamb & Brown, 2006). Interviewers who are managing high interview workload may have less time to review their interviews and as such this may lead to habitual

omission of this practice (Tobias, 2009) particularly in the absence of regular feedback (Kluger & Denisi, 1996).

Total and proportion of prompts in the account phase

During the Account phase interviewers work to elicit potentially critical evidence needed for the investigation and prosecution of the case. Thus, this phase needs to be conducted appropriately to ensure that the reliability and credibility of the testimony elicited is maximized. Our assessment of this phase generally revealed departures from recommended practice, with the exception that suggestive questions were appropriately rare. The scarcity of suggestive questioning was encouraging given the large body of literature that demonstrates the detrimental effects of suggestive questioning on children's reliability and accuracy (for a review see Bruck & Ceci, 1999).

Consistent with evaluations of forensic interviews in other countries (e.g. La Rooy et al., 2011; Luther et al., 2014; Powell & Hughes-Scholes, 2009) and supporting our hypothesis, we observed an over-reliance on Direct questions (e.g. 'When did this happen?'). Although traditionally defined as open-ended, this type of prompt restricts the line of enquiry to a particular category of information determined by the interviewer. When children answer these questions their responses tend to be brief (Lamb et al., 1996) and not as accurate as answers elicited from broader open-ended prompts (e.g. 'Tell me everything you remember about that', Brown et al., 2013; Lamb & Fauchier, 2001). Since children provide less information to explore in the interview, the interviewer is put in the situation where he or she has to ask more questions. Direct questions do not, therefore, represent optimal child-directed interviewing practice.

We observed a relatively low proportion of Invitations and Cued-Invitations (whether considered separately or combined) relative to other types of prompts in the *Account* phase.

A significant amount of research has demonstrated the superiority of these prompts across a range of variables, including amount (e.g. Korkman et al., 2006), nature of information elicited (e.g. Phillips et al., 2012) and the narrative quality of children's account (e.g. Feltis et al., 2010). The analysis also indicated a higher-than-ideal proportion of Option-Posing prompts. Whilst some of these prompts are prescribed by the SCWI model to establish important information required by New Zealand Courts (e.g. 'Has anything else like this happened?' to establish range and frequency), scripted questions did not solely account for the number of prompts utilized. Numerous studies have demonstrated that Option-Posing prompts tend to increase the probability of error and inconsistency in children's testimony (Lamb & Fauchier, 2001; Orbach & Lamb, 2001) and thus should be used minimally in forensic interviews with children (Orbach & Pipe, 2011).

Direct and Option-Posing questions were not only asked frequently, but they were also introduced very early in the Account phase of the interview. This practice is a departure from the SCWI model and other best-practice recommendations which state that these questions should be asked after responses to broader open-ended prompts are exhausted (Orbach & Pipe, 2011). Furthermore, the use of Direct questions was the predominant questioning strategy used by interviewers irrespective of whether it was the early or latter stages of the interview. As the interview progressed, open-ended prompts (which were already the least likely to be employed) became even less frequent. In contrast, the use of Option-Posing questions became more prevalent as the interview progressed.

Our results indicate that interviewers were making limited use of broad open-ended prompting in general, a deviation from the SCWI model.

We found a number of child, allegation and interviewer characteristics that were associated with variations in interviewing practice. Consistent with previous research, older children were asked more questions in total than younger children about the abuse allegation (Sternberg et al., 2001), but, contrary to previous research, we did not find a significant difference in the proportion of questions asked to children of different ages (Lamb, Sternberg, & Esplin, 2000; Sternberg et al., 2001; Thoresen et al., 2006; Warren et al., 1996). Older children can typically sustain their attention for longer periods than younger children (Klemfuss & Ceci, 2009) and as such, this may have contributed to interviewers' tendency to ask more questions and conduct longer interviews with them. The inconsistency between our findings and previous research may be due, in part, to variations in samples; the youngest children in our sample were 6 years old, which is older than the youngest age in previous studies (Lamb, Sternberg, & Esplin, 2000; Sternberg et al., 2001). Age differences in the proportion of prompts posed to children may only apply to preschoolers in comparison to much older children. Preschoolers often provide brief answers in response to open-ended questions (Lamb, Sternberg, & Esplin, 2000; Sternberg et al., 1996), which may contribute to the higher proportion of specific prompts posed to them compared to older children.

Interviewers asked significantly more questions for penetration compared to non-penetration abuse. This finding is unsurprising, given that allegation of penetrative sexual abuse is more serious and likely requires more information to be obtained for evidential purposes. We also found that when the alleged suspect was a relative or a known person, interviewers asked significantly more Cued-Invitation questions than if the alleged suspect was a stranger. Research assessing prosecutors' evaluation of the utility of person descriptions as a function of offender familiarity have shown conflicting views about how much detail is expected. As such interviewers may seek to elicit very detailed descriptions of known offenders in the same way as they would with a more unfamiliar suspect (Burrows, Powell, & Anglim, 2013; Burrows & Powell, 2014). Children may provide better initial descriptions of the suspect if the suspect is a known person, which then may provide greater scope for the use of Cued-Invitations to prompt further recall. Therefore, the conjunction of prosecutor expectations of detailed descriptions of offenders irrespective of familiarity, the dual purpose of the interview as both informing subsequent investigations as well as serving as evidence-in-chief, and a richer initial description when the offender is familiar, may account for the increased use of such prompts.

Similar to previous literature (La Rooy et al., 2011; Powell & Hughes-Scholes, 2009), we found that interviewing experience did not predict the questioning approach utilized. We also found no significant difference between professional affiliations in terms of proportion of different types of prompts asked to children (Powell et al., 2012). The current study also evaluated other interviewing characteristics that have not been explored in previous studies, such as interviewing load (e.g. full time vs. part time and number of interviews conducted per week) and location. We found that interviewers in metropolitan interviewing sites were more likely to ask Cued-Invitation questions than those in rural interviewing sites. Geographical isolation has been identified as a key barrier to accessing supervision for forensic interviewers in New Zealand (Wolfman, Brown, & Jose, 2016). Regular supervision focused on interviewing practice has been shown to significantly contribute to adherence

to best-practice interviewing (Cyr et al., 2012; Lamb, Sternberg, Orbach, et al., 2000; Lamb et al., 2002). Thus, difficulty in accessing regular supervision for interviewers in rural sites (Wolfman, Brown, & Jose, 2016) may contribute to poorer adherence to the SCWI model compared to those in metropolitan interviewing sites where access to other interviewers or supervisors may be more readily available. This difference highlights the need to ensure consistency in supervision access across the country. This will require commitment from both an organizational and individual level. Whilst organizations play a key role in the provision of supervision opportunities, forensic interviewers also need to be proactive in accessing them.

In contrast to other domains where more time in a role leads to better performance, in forensic interviewing, more experience nor higher workload (frequency of interviewing) did not improve interviewing practice in terms of adherence to the SCWI model. The uniformity of interviewing practice across professional affiliation, interviewing frequency, and experience highlights the importance of frequent supervision and feedback on interviewing practice for all interviewers (Cyr et al., 2012; Lamb et al., 2002; Lamb, Sternberg, Orbach, et al., 2000). New Zealand Police and Child, Youth and Family have recently implemented a number of methods to increase supervision for forensic interviewers such as an accreditation system to monitor interviewing standards, e-learning professional development opportunities, and emphasizing practice-focused feedback in peer reviews. The recent changes were implemented to identify interviewers in need of support for improving practice, and improve consistency in interviewing throughout the country. It will be important that the impact of these developments on future practice is evaluated.

This study provides important insights into current interviewing practice with children in New Zealand. However, beyond a focus on the composition of an interview by question structure and adherence to scripted components of interviewing protocols, other aspects of interview quality should also be examined. The distribution of prompts throughout an interview is important; interviews may look identical in the proportion of prompt types used and yet be very different depending on when in the interview those prompts were used (e.g. open questioning used throughout the entirety of the interview vs. clustered primarily at the beginning). Furthermore, an interview is a reciprocal conversation, and we need to understand when different types of prompts are likely to be most useful, and conversely, when children may have difficulty responding to them. Children's non-responding may result in interviewers changing their questioning strategy (Gilstrap & Ceci, 2005).

The impact of how interviewers structure their questioning to optimize the coherence and relevance of children's accounts is also important as it may influence how children's testimony is perceived by prosecutors (Burrows & Powell, 2014), juries and judges. Research to date suggests the same kinds of questions that promote detailed and accurate responding also enhance the coherence of an account (Feltis et al., 2010). The decisions that interviewers make about when they have elicited sufficient details for both the investigation and the courtroom are an important area for continued research, given the impact that their decisions may have on the relevance of what is elicited.

Conclusion

Our findings provide important insights into current interviewing practice with children in New Zealand and some factors that influence interviewing practice. Although some areas

of strengths were identified, we have also noted many opportunities for improvement, especially in interviewers' questioning strategies when investigating the abuse allegation. Initial and additional training, supervision and feedback should focus on increasing the use of broad open-ended prompts (Invitations and Cued-Invitations) to promote best-practice interviews throughout the entire interview, and minimizing premature use of Direct and Option-posing questions. Improving the conduct of forensic interviews will improve the quality of evidence elicited from vulnerable witnesses.

Disclosure statement

No potential conflict of interest was reported by the authors.

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