Drawing, Play-Dough, and Koosh Balls: The Use of Comfort Tools with Children in Forensic
and Clinical Interviews

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Abstract

During forensic and clinical interviews, children are often required to discuss difficult topics that may elicit feelings of shame, embarrassment, or reluctance. It is the clinician's or forensic interviewer's task to obtain detailed and accurate reports from these children, with many employing the use of comfort tools (e.g. drawing, play-dough, koosh balls) to put children at ease (Hill & Brown, 2017; Poole & Dickinson, 2014). The purpose of this study was to investigate whether three commonly used comfort tools influence children's reports of a self-selected, emotionally laden event. Ninety-two children aged between 5 and 7 years old were asked to discuss a time when they got into trouble, and a time when they were happy. Some children were questioned without any comfort tools; the remainder were given one of the following: drawing materials, play-dough, or a koosh ball to interact with during the interview. Comfort tools had no impact on the amount of information reported by children. They also had no influence on whether children provided more episodic information (which may be especially relevant in forensic interviews), or evaluative information (which may be more relevant in clinical contexts). Providing comfort tools did not influence children's ratings of either their interview experience, or the emotional intensity of the events they described. The interviewer asked more questions of children interviewed with drawing materials than those interviewed without comfort tools. The findings raise questions about the efficacy of comfort tools in interviews with children about past events, although more research is needed to establish an evidence-base to guide practitioners in different settings.

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Introduction

“When a forensic expert [or clinical psychologist] meets with a young child to conduct an interview, the expert often experiences a silent, embarrassed and perhaps shameful child who does not recount a word about the event in question” (Goodman & Melinder, 2007, p. 10). Children who are interviewed in forensic and clinical settings are often asked to discuss difficult topics. This can lead to these children to feel unsure, unwilling, or distressed. It is the interviewer’s task to manage these responses in order to elicit rich and detailed accounts. This thesis will examine one of the strategies employed by many forensic interviewers and clinicians to assist children in their reporting: comfort tools, which is the practice of giving children tools, such as drawing materials, play dough, or koosh balls to engage with during the interview.

Children’s Reports in Clinical and Forensic Settings

Children’s reports of maltreatment and other emotionally laden events are critical in both clinical and forensic settings. The value of obtaining children’s reports in clinical settings is generally agreed upon (Macleod et al., 2017) and recommended in assessment guidelines (e.g. National Institute of Health and Care Excellence [NICE], 2018). Children’s reports inform the clinician about the nature of the child’s experience, and how they have interpreted and evaluated the experience internally (Wesson & Salmon, 2001). This information, along with that gathered from other sources is tied together to create a formulation of the current issues, which then provide the basis of treatment plans (Macleod et al., 2017).

Children’s reports of maltreatment in forensic settings is also of critical importance. Child maltreatment has long-lasting and far-reaching effects on individuals and society (e.g. Felitti et al., 1998; Fergusson, McLeod, & Horwood, 2013; Jaffee, 2017; Nikulina, Widom,

& Czaja, 2011; Vasilevski & Tucker, 2016), and is a frequent problem in New Zealand. Between June 2016 and June 2017, 14,802 cases of substantiated abuse were documented in New Zealand (Oranga Tamariki, 2017). However, many child maltreatment cases are never reported or remain unsubstantiated, and so these rates may underestimate the prevalence of maltreatment (Cronch, Viljoen, & Hansen, 2006; Wolfman, Brown, & Jose, 2016b). In many of these child maltreatment cases, children are the only source of information about what occurred. Their testimony makes a critical contribution to decisions about proceeding with an investigation and laying of charges (Lamb & Brown, 2006; Lamb, Hershkowitz, Orbach, & Esplin, 2008; Salmon, Pipe, Malloy, & Mackay, 2012). Obtaining detailed and accurate reports from children regarding specific event details is essential, both to ensure the child is safe, and to avoid wrongful conviction (Brown & Lamb, 2015). Therefore, the way in which victims of reported abuse cases are interviewed is of great importance.

Given the significant contribution of children's reports in both clinical and forensic settings, it is important to understand and mitigate the barriers to reporting. As it is often the interviewers task to mitigate these barriers, the strategies they employ should be investigated, including the use of comfort tools and whether they assist children's reporting or provide an additional barrier.

Barriers/Challenges to Children's Reporting

Obtaining rich, accurate, and complete reports from children can be a difficult task. There are many barriers which can impede the gathering of detailed reports. These barriers include developmental limitations such as retrieval of target information from memory, communication abilities including vocabulary and narrative coherence, as well as the barrier of the unique social and emotional context of the forensic and clinical interview.

Language and communication. Children's reports of maltreatment are influenced by their developing language and communication abilities. These include the child's vocabulary, their ability to construct a coherent narrative, and the ability to recognise and respond to the limited knowledge of their conversational partner (Lamb & Brown, 2006). A child's vocabulary grows rapidly and is highly dependent on the systems surrounding them, including book reading and conversations between themselves and their parents (Rowe, 2012; Salmon & Reese, 2016). While they grow rapidly, children's vocabularies are far more limited than adults, with adults often overestimating children's communication capacities (Zajac & Brown, 2018). This overestimation can lead to misunderstandings (Zajac & Brown, 2018). For example, research has shown that children younger than ages 8 to 10 years old will often incorrectly use and believe they understand words that have a specific meaning in a given context (e.g. "court is a place to play basketball," Saywitz, Jaenicke, & Camparo, 1990; Saywitz, Lyon, & Goodman, 2011). Additionally, and particularly relevant when questioning children about emotionally charged experiences, the ability to label and communicate internal states is also gradually developing (Pasupathi & Wainryb, 2010; Wellman, Cross, & Watson, 2001). A child's ability to verbally express emotional experiences, as well as their evaluations of others motivations, intentions, and beliefs are also highly influenced by parent-child conversations (e.g. Salmon & Conroy, 2009; Salmon & O'Kearney, 2014; Salmon & Reese, 2015).

In addition to applying their limited vocabulary, maltreatment interviews require children to construct and present a coherent narrative. Children's ability to do so is also highly dependent on their age, and the systems surrounding them. Research suggests that 3.5 years old is the earliest age at which typically developing children are able to present a relatively coherent narrative (e.g. Fivush, Haden, & Adam, 1995). It is not until 12 years old, however, that children are able to construct a rich personal narrative based on their own

unique perspective (Pasupathi & Wainryb, 2010). Children whose parents elaborate on their reports of past experiences (i.e. elaborative reminiscing) are better able to communicate a structured, detailed, and emotive narrative (Salmon & Reese, 2015, 2016). Unfortunately, children who experience maltreatment are less likely to be exposed to this reminiscing style that supports their development (Salmon & Reese, 2016). Therefore, children presenting in forensic and clinical contexts may require assistance from the interviewer as they may not have the skills necessary to construct memories into the coherent narratives required of them (Pipe & Salmon, 2009; Salmon & Conroy, 2009).

Presenting a coherent and complete narrative also involves understanding and monitoring the limited knowledge of their naïve conversational partner (Lamb & Brown, 2006; Zajac & Brown, 2018). Children often provide insufficient detail as they are still developing the meta-linguistic capacities necessary to understand what the listener already knows and what they would like to know. Children must monitor the success of their communication and make modifications to ensure their partner has understood correctly (Lamb & Brown, 2006; Wellman et al., 2001). When applying strategies to assist children's communication, interviewer's must select evidence based techniques to avoid placing further demands on children's developing conversational abilities.

Children's narratives become more elaborate and complex over time (Fivush et al., 1995; Pasupathi & Wainryb, 2010). Between the ages of 5 to 7 years old, children's language and cognitive abilities are generally becoming well developed (Berk, 2006), although they continue to require assistance and guidance from their adult conversational partner in unfamiliar interview contexts. The introduction of comfort tools during interviews may provide this assistance by reducing the social and emotional demands of the interview (Butler, Gross, & Hayne, 1995), allowing children to focus on the production of a coherent and detailed narrative.

Memory of the target event. Children's memory and recollection of the target event can also be a barrier to an effective interview. Memory is comprised of multiple interacting systems that work together to encode, store, recall, and reconstruct information (Goodman & Melinder, 2007; Quas & Fivush, 2009). These independent memory systems are complex and develop at different developmental stages. Contributing to the development of these systems are internal factors such as age and temperament, which interact with parenting styles and broader system factors, including the social and cultural environment (Salmon & Conroy, 2009). While a full discussion of children's memory is beyond the scope of this report, factors of particular relevance to clinical and forensic interviews will be briefly discussed.

Episodic memory is the memory for specific events and appears in children between three and four years old (Perner & Ruffman, 1995; Scarf, Gross, Colombo, & Hayne, 2013; Tulving, 2002). It is important in the forensic context as it is drawn on when individuals retrieve event specific information from their personal memories, such as the what, where, and when (Goodman & Melinder, 2007). This information (as is the nature of all memory) is not always accurate, as it is not an exact replica of what has been experienced (Quas & Fivush, 2009). Information is encoded and stored in memory, and must then be reconstructed during recall (Quas & Fivush, 2009). The amount and accuracy of these episodic reconstructions relate to many factors, including delay and age. Longer delays between the target event and interview have been found to yield less information (e.g. Brown, Lewis, & Lamb, 2015; Tizzard-Drover & Peterson, 2004). Younger children also recall significantly less information, and are more highly susceptible to suggestive influence (Ceci & Bruck, 1993; Goodman & Melinder, 2007).

Reconstruction of episodic memories is also connected to executive functioning, which is used to request retrieval of a specific memory while inhibiting other, closely related memories (Quas & Fivush, 2009). *Source monitoring* is the ability to identify the source of a

particular memory (Johnson, Hashtroudi, & Lindsay, 1993). Flawed or incorrect source monitoring can lead children to incorporate incorrect details into their event narratives, such as information they have heard from others, seen, or imagined (Lamb & Brown, 2006). Additionally, children who have experienced multiple similar events, such as long term maltreatment, may have great difficulty differentiating events as they rely on a general representation of what typically happened (Zajac & Brown, 2018).

Episodic memories are built on to include evaluative details about the experienced event (Fivush & Zaman, 2013). These additional evaluative and subjective details are highly relevant to clinical interviews as they may include what the child thought and felt, as well as their interpretation of others' actions (Pasupathi & Wainryb, 2010). The capacity for this specific kind of memory is dependent on the child's ability to label emotions and thought to be underdeveloped prior to the age of 5 years old (Bauer, 2015). Additionally, children's ability to label their own and others emotions is linked to their ability to regulate their emotions (Denham et al., 2003). Maltreated children may have greater difficulty labelling and regulating their emotional states. Rather than the elaborative conversations necessary for emotional labelling and processing, maltreated children are more likely to experience silence at individual, familial, and societal levels (Fivush, 2010; Salmon & Reese, 2015). These children may require additional support from the clinician or interviewer as they may therefore have greater difficulty recalling and describing evaluative details when they are asked to provide them.

Comfort tools may assist children's recollection of episodic and evaluative details by extending the duration of the interview, allowing children more time to self-cue, retrieve, and recall more information. Alternatively, the addition of comfort tools alongside questioning may place excessive cognitive demands on the child and therefore hinder their reporting. Evaluations of comfort tools are necessary as there is currently very little empirical evidence

to guide practitioners in knowing whether and when they might assist, or, conversely, negatively impact children's reporting.

The unique social and emotional interview context. Forensic and clinical interview contexts are unique environments which pose additional barriers to obtaining rich and accurate reports. Forensic and clinical interviews often require individuals to talk about subjects that may be sensitive, embarrassing, or traumatic. Forensic interviews may also have far-reaching consequences, as they are undertaken for a particular legal purpose. These may include: to determine credibility, assessment of living arrangements, and potentially provide the foundation of criminal charges (Goodman-Brown, Edelstein, Goodman, Jones, & Gordon, 2003; Lamb & Brown, 2006). An awareness of these effects can negatively affect children's reporting as they may become preoccupied or fear the consequences of their disclosure, such as family disruption or possible repercussions (Hershkowitz, Horowitz, & Lamb, 2005; Lamb & Brown, 2006). Many of these effects also apply to the clinical setting where children also act as informants of their experiences. Children are often asked by clinicians to discuss thoughts, feelings, behaviours, and situations that may not be discussed in their home environment. For example, parents in more conflictual families are less likely to discuss feelings with their children (Dunn & Brown, 1994). When rare discussions of past conflict occur, they are also more invalidating of their children's feelings and responses (McDonald, Jouriles, Rosenfield, & Leahy, 2012). Children from these conflictual families are more likely to present in clinical services (as parent-child relationships are highly associated with children's psychological and behavioural adjustment; Lamb, 2012). A lack of positive experience disclosing their feelings, along with the disclosure of sensitive or avoided topics to an unfamiliar adult in a formal setting may cause negative feelings, such as shame, guilt, embarrassment, fear, and worries of family disruption (Goodman-Brown et al., 2003; Lamb & Brown, 2006).

The difficult nature of the subjects discussed in both clinical and forensic settings can leave a child feeling shy or unwilling to elaborate on both episodic and evaluative details (Lamb & Brown, 2006). It is therefore the task of the interviewer or clinician to create an environment which encourages children to discuss topics that are not typically sanctioned in everyday conversations (Lamb, Brown, Hershkowitz, Orbach, & Esplin, 2018). As children are likely to perform at their best when they are comfortable (Lamb & Brown, 2006), comfort tools may assist reporting. They may also offer children a more enjoyable experience of the interview process through facilitating the creation of a comfortable, supportive atmosphere.

Overcoming the Barriers to Children's Reporting

Regardless of the numerous barriers posed in gathering accurate and detailed reports from vulnerable children, it is largely recognised that children as young as 5 years old can be informative in both clinical and forensic settings (Goodman, 2006; Ialongo, Edelsohn, & Kellam, 2001). The level of detail, accuracy, and coherence of children's reports is largely determined by the way in which this information is obtained, specifically the behaviour and questioning style of the adult interviewer (Brown & Lamb, 2015; Lamb & Brown, 2006; Saywitz et al., 2011).

Recognising the impact of cognitive and social influences on children's testimony, and the challenges faced by interviewers in conducting developmentally appropriate interviews (Goodman, 2006; Poole & Lamb, 1998), several research teams have developed versions of structured interview protocols. These include the Developmental Narrative Elaboration Interview (Saywitz & Camparo, 2013) and the National Institute of Child Health and Human Development's (NICHD) Investigative Interview protocol (Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007; Orbach et al., 2000). Common components include the use of open-ended prompts to encourage narrative responses, developmentally

appropriate word choice and grammatical construction, and clearly discussing the roles of those involved, the purpose of the interview, and its rules (Lamb et al., 2007; Poole & Lamb, 1998; Saywitz et al., 2011).

In New Zealand the investigation of child maltreatment is the responsibility of two independent services: The New Zealand Police Force and Oranga Tamariki. Social workers and police officers from each agency complete the same training prior to becoming specialist child witness interviewers (Westera, Zajac, & Brown, 2015). Interviews must be completed in accordance with the Specialist Child Witness Interviewing (SCWI) Model, which is closely modelled on the NICHD Investigative Interview protocol (Westera et al., 2015; Wolfman, Brown, & Jose, 2016a).

In this study, we used a protocol modelled on the NICHD Investigative Interview protocol (Brown et al., 2013; Lamb et al., 2018) which is consistent with guidelines for forensic interviewers in New Zealand (Westera et al., 2015; Wolfman et al., 2016a). Additionally, this protocol is similar to the funnel interviewing approach commonly used in clinical settings (e.g. Rhodes & Dadds, 2011). This approach suggests opening new topics with broad, open-ended, general questions, before slowly moving to hypothesis driven, closed-ended questions to elicit details. It is also similar to other maltreatment specific clinical assessment guidelines which state that information gathering should take place in a non-leading way, with ample use of active listening and open-questions (NICE, 2018). The SCWI model, as well as other international models, also provide guidelines for using interview aids with children, including body diagrams, sketch plans, koosh balls, play-dough, and drawing materials (New Zealand Police and Child Youth and Family, 2015). Given the impact of the interviewing approach on children's responding, any additional tools need to be evaluated within the context of best-practice interviewing to ensure ecological validity.

Interview Aids

Recent research has demonstrated the common use of interview aids in New Zealand. Of 31 specialist child witness interviewers, Hill and Brown (2017) found that the majority currently use interview aids in their practice. Similarly, of 98 forensic sexual abuse interviews with children aged 6 to 16 years old, Wolfman, Brown, and Jose (2018) found that 62% included at least one aid. Interview aids have also been found to be employed for a variety of purposes, including supporting recall (e.g. dolls, sketch plans, body diagrams; Wolfman et al., 2018), or to provide a more comfortable environment for the child. The practice of drawing is used for either purpose of these purposes.

The practice of *directed drawing* is common in both forensic and clinical settings (Bekhit, Thomas, & Jolley, 2005; Hill & Brown, 2017; Wolfman et al., 2018; Woolford, Patterson, Macleod, Hobbs, & Hayne, 2015). Directed drawing (or the “draw and talk” procedure) is the practice of asking children to both talk, and draw pictures specifically about their experiences. The practice of drawing about an event is believed to foster retrieval by providing cues to elicit further detail (Hill & Brown, 2017; Poole, Bruck, & Pipe, 2011). Directed drawing has received much research attention and has been found to assist children’s reports of entertaining (e.g. Butler et al., 1995; Gross & Hayne, 1999), and neutral staged events (e.g. Gross, Hayne, & Drury, 2009), and emotionally laden experiences (e.g. Macleod, Gross, & Hayne, 2013; Wesson & Salmon, 2001), including in cases of abuse (e.g. Katz & Hershkowitz, 2010). Although, this is not always the case as drawing has been found to increase errors (e.g. Bruck, Melnyk, & Ceci, 2000; Macleod, Gross, & Hayne, 2016). The helpfulness of directive drawing has been proposed as dependant on factors such as the type of event and whether it is easy to draw, the level of distress associated with the event, and the type of questioning used (Lamb et al., 2018; Macleod et al., 2016). Specifically, directed drawing may assist children when they are offered minimal verbal prompting, but the use of

an elaborative questioning style, such as that outlined in the NICHD, may overshadow these effects by providing verbal prompts to facilitate recall (e.g. Salmon et al., 2012).

While the majority of interview aid research has focussed on the accuracy and amount of information reported by children as a measure of their effectiveness, research examining the use of aids for other purposes, such as minimising emotional distress, or facilitating rapport and engagement, is scarce (Lamb et al., 2018; Poole & Dickinson, 2014). Rather than directly offering retrieval cues, which can be achieved with the use of elaborative questioning (e.g. Salmon et al., 2012), interview aids may assist children in narrating highly distressing events by offering an external focus of attention (Lamb et al., 2018).

Comfort tools: help or hindrance? The interview aids described above are often the focus of questioning. For example, directing questions towards what the children have drawn in pictures and sketch plans (i.e. “tell me about what/who is in your picture” “what are the people doing in your picture?”) or using the aids as a non-verbal form of communication (e.g. use of dolls and body diagrams, “point to where...”). They are therefore argued to facilitate recall by directly offering children retrieval cues. In contrast, comfort tools are argued to facilitate recall by putting children at ease and establishing rapport (Hill & Brown, 2017; Poole & Dickinson, 2014).

Rapport building is an essential part of forensic and clinical interviews (Saywitz, Larson, Hobbs, & Wells, 2015; Saywitz, Wells, Larson, & Hobbs, 2016). Developing rapport and establishing a comfortable environment may assist in decreasing anxiety and discomfort in reserved children. It may also assist in self-disclosure through signalling to the child that the interviewer is interested in their story (Hershkowitz, Lamb, Katz, & Malloy, 2015; Wolfman et al., 2016b). Rapport building and a supportive interviewing style have also been found to help children resist misleading suggestions, increase free recall, and provide more

details (Bottoms, Quas, & Davis, 2007; Hershkowitz et al., 2007; Saywitz et al., 2016).

Unfortunately, there is surprisingly little evidence regarding ways to effectively establish and maintain rapport and engagement during children's interviews (Saywitz et al., 2015).

Comfort tools may offer a means of facilitating the creation of a comfortable and supportive environment through decreasing pressure and providing a focus other than the interviewer's questions (Lamb et al., 2018). However, rapport building is also incorporated into the NICHD pre-substantive phase, and has been shown to be directly associated with the amount and quality of information reported (e.g. Hershkowitz et al., 2015; Teoh & Lamb, 2010). It is unclear whether comfort tools offer further rapport above that which might be established with verbal techniques alone.

Alternatively, comfort tools may assist children's reports by supporting them to regulate their emotions. Tactile self-soothing is a form of emotional regulation (Gross, 1998) and comfort tools may offer children a sensory distraction which supports them to regulate their emotions as they discuss difficult topics.

On the other hand, the use of comfort tools may be detrimental to children's reports. The attention required to interact with a comfort tool while also responding to the interviewer's questions may place too many demands on children's social and cognitive capacities (Poole & Dickinson, 2014). Multitasking typically depletes cognitive resources, with the cost of completing dual tasks observed in children's and adult's cognitive task performances (e.g. Anderson, Bucks, Bayliss, & Della Sala, 2011). Additionally, attentional deployment, including distraction and concentration on both internal and external stimuli, is also an emotion regulatory process observed in children (Gross, 1998; Stifter & Moyer, 1991). Children may use comfort tools as a diversionary tactic, focussing their attention or diverting the conversation to their tool rather than experiencing difficult emotions or

answering difficult questions (Poole & Dickinson, 2014). For example, dolls have been found to be associated with ambiguous enactments and play (Thierry, Lamb, Orbach, & Pipe, 2005). Therefore, the attentional demands associated with comfort tools, particularly when offered during the discussion of emotionally laden events, may draw children's cognitive resources away from the interviewer and their questions. While this may improve the child's experience of the interview process, it may hinder recollection and narrative construction.

Poole and Dickinson (2014) examined comfort drawing – the practice of offering children drawing materials to interact with during an interview – to assess whether it helped or hindered children's reports of an emotionally neutral, staged event which took place one or two years earlier. Comfort drawing was found to have no effect on reports. The 5 to 12-year-old children successfully divided their attention between drawing and answering questions by drawing in spurts, in which they would start and stop drawing to listen to, and answer, questions. However, the highly emotionally charged nature and potential consequences of topics discussed in forensic and clinical interview contexts brings into question whether these results are generalizable. The effectiveness and safety of comfort tools should therefore be assessed using topics that generate feelings comparable to those experiences in interview contexts. Additionally, comfort drawing is not the only comfort tool used by interviewers. Koosh balls and play-dough are also commonly used (Hill & Brown, 2017) but, to our knowledge, have not been examined in research to date. These tools should also be tested, and may be found to offer tactile self-soothing without the attentional requirements associated with drawing.

The Current Study

The current study expands upon the existing literature by examining: 1) whether three commonly used comfort tools in New Zealand (non-directed drawing, koosh ball, play-

dough) assist children in offering more information in comparison to being questioned verbally about a personal emotionally laden event, 2) whether the attentional demands of the comfort tool act as a distraction and influence reporting of relevant information, 3) whether tools increase information that is episodic or evaluative in nature (i.e. forensically or clinically relevant), 4) whether comfort tools provide children with a more enjoyable interview experience, 5) whether comfort tools have an effect on the emotional intensity of children's events after disclosure, offering insight into potential cognition and social/emotional mechanisms which underlie reporting differences, and 6) whether comfort tools influence the interviewer's behaviour in terms of the types of questions they ask.

When interviewed in clinical and forensic settings, children are required to talk about experiences that may be sensitive, embarrassing, or traumatic. To manage ethical obligations and increase similarity to these settings, children were asked to nominate a time when they were in trouble. Children were also asked to discuss a time when they were happy, providing a positively-valenced, control event. Additionally, rather than following a highly scripted and highly controlled interview approach used in the majority of interview aid research paradigms, ecological validity was increased with the use of a research-based version of the NICHD Investigative Interview protocol (Brown et al., 2013; Lamb et al., 2018). The use of this protocol provided a child centred, flexible interview which is guided by general rules comparable to those of the SCWI model in New Zealand (Wolfman et al., 2016a). Using this protocol therefore allowed us to determine whether the addition of comfort tools offers anything more than what can be achieved with best-practice verbal interviewing techniques.

Hypotheses. Research evaluating the efficacy of comfort tools is very limited; therefore, the following hypotheses are tentative and based on the various areas of literature reviewed above. By reducing the emotional and social demands of the interview, we expected children who were provided with drawing materials, play-dough, or a koosh ball to provide

more information compared to those who were just questioned verbally. We examined, but made no predictions about, whether the potentially distracting nature of the comfort tools would increase irrelevant information reported. We also examined whether tools would facilitate the disclosure of more clinically relevant evaluative details, or more forensically relevant episodic details, but made no predictions about this. By facilitating rapport and engagement, we hypothesised that children provided with a comfort tool would rate their interview experience more highly than those without. By offering a distraction and a means of tactile self-soothing, comfort tools may assist children in regulating their emotional arousal. We therefore predicted a greater decrease in emotional intensity ratings after describing the events from children provided with comfort tools. We also examined the proportions of questions comprising the interviews. While some evidence suggests interview aids affect the proportions and number of questions asked during interviews (e.g. Patterson & Hayne, 2011; Salmon et al., 2012; Wolfman et al., 2016a) we made no predictions of whether this would be the case for comfort tools as they were not used for specifically directing children's recall.

Methods

Design

An experimental design was implemented for the current study. To investigate the usefulness of interview aids to assist the reporting of both positive and negative events, interview conditions were manipulated between subjects, with four levels: control (talking only), drawing, play-dough, and koosh ball. The within subjects' factor: emotional valence of the event, was kept constant with children first asked to describe an event where they were in trouble, and then an event where they were happy.

The current study was granted ethical approval by the School of Psychology Human Ethics Committee, under delegated authority of the Victoria University of Wellington Human Ethics Committee (reference 25543).

Participants

Prior to participant recruitment, a power analysis was conducted using G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007). This analysis determined that a total sample size of 72 participants would be sufficient to have 80% power to detect a medium effect size when employing $p < .05$ criteria of statistical significance.

Schools in the Wellington region were contacted by telephone and presented with details of the study. A detailed outline of the study was then sent (Appendix A) to interested schools and a meeting was organised. Two primary schools (decile nine and ten) provided their consent to host the study. Information and consent forms were sent home with children in the target age range. Parental consent was gained for 96 children, 66 in school A and 30 in school B. Children's verbal assent was also obtained at the beginning of the interview. Of the 96 children with parental consent, two did not provide verbal assent and therefore did not begin the interview. A further two children could not think of a time that they were in trouble

and decided to end the interview. The final sample was therefore comprised of 92 children aged between 5 and 7 years old ($M = 6.51$ years, $SD = .74$ years), 37 males and 55 females. There were 21 children in the *control* condition ($M = 6.46$ years, $SD = .80$ years), 25 in the *draw* condition ($M = 6.56$ years, $SD = .73$ years), 23 in the *play-dough* condition ($M = 6.57$ years, $SD = .74$ years), and 23 in the *koosh ball* condition ($M = 6.44$ years, $SD = .74$ years).

Materials

Comfort tools. Children were randomly assigned to one of the four experimental conditions whilst keeping gender and age approximately equivalent. The children in the control condition received no comfort tool. The drawing materials used in the draw condition were white blank A4 paper, and coloured pencils and crayons. Yellow, orange, or blue play-dough was provided to children in the play-dough condition. A koosh ball was provided to children assigned to the koosh ball condition. Figure 1 provides photographs of each tool.

Figure 1. Photographs of the comfort tools: drawing materials, play-dough, and a koosh ball

Emotional intensity. A Feeling Thermometer (developed by Stallard, 2002) was presented to the children both prior to, and following the conclusion of each narrative. These were used to determine the strength of the child's emotional experience and if the emotional intensity changed following disclosure. Each scale was identical (refer to Figure 2) depicting

a thermometer numbered with 1 at the bottom through to 10 at the top. Labels were attached to some of numbers: 1 = very weak, 4 = weak, 7 = fairly strong, 10 = very strong.

Figure 2. The feeling thermometer adapted from *Think Good, Feel Good: A Cognitive Behavioural Therapy Workbook for Children and Young People* (Stallard, 2002, pp. 134) used by children to indicate the emotional intensity of each event, both prior to and following disclosure.

Interview experience. To determine the child's experienced ease of narrative disclosure and the overall interview experience, three Likert scales, each depicting five cartoon faces were presented to the child. Following each narrative, the child was presented with a Likert scale (Figure 3) and asked "how easy was it to talk about the time you were in trouble/happy?". Under the cartoon faces were labels: really tough, tough, not easy or tough, easy, and really easy. At the conclusion of the interview, the child was presented with the overall experience Likert scale (Figure 4) and asked "how was your time talking today?", with the cartoon faces labelled: really bad, bad, not good or bad, good, and really good.

Figure 3. Likert scale presented to children following narrative disclosure

Figure 4. Likert scale presented to children at the conclusion of the interview

Interview Procedure

A version of the standard NICHD Investigative Interviewing Protocol (Orbach et al., 2000) which has been modified for experimental use (Brown et al., 2013) was used to interview each child. Interviews lasted an average of 19.83 minutes ($SD = 5.15$), and did not significantly differ between condition ($F(3,88) = 1.13, p = .341, \eta p^2 = .037$). All interviews were conducted by the same interviewer following a scripted protocol (Appendix B). The interview consisted of four phases: (1) the pre-substantive phase, (2) substantive phase – talking about a time when you were in trouble, (3) substantive phase – talking about a time when you were happy, (4) closure.

Pre-substantive phase: The interviewer began by introducing herself and gaining assent from the child. A set of ground rules were then established by the interviewer, including establishing and practicing the difference between true and false statements, saying ‘I don’t know’, ‘I don’t understand’, or ‘I can’t remember’ as required, and correcting the interviewer if she said something incorrect. Children in the control condition continued through the interview protocol, while drawing materials, play-dough, or a koosh ball were given to children in those conditions before continuing. The interviewer then asked the child to tell her everything that had happened that morning, with follow-up questions encouraging children to offer as many details as possible. This gave children practice with the format of the following phases, and provided an opportunity to practice ground rules.

Substantive phase – trouble: After asking children to remember a time when they were in trouble (‘can you think of a time when you were in trouble?’), an emotional intensity scale was presented to determine the strength of the child’s feelings regarding the event. The child was then asked to recall all the details they could remember from the event (‘tell me everything you can remember from the time you were in trouble, from the beginning to the end’). The interviewer prompted the child to give more information using open-ended questions (e.g. ‘what happened next?’ ‘What else can you remember?’). Approximately three encouragers were given until the child could not remember anything else. Following free-recall, the interviewer followed up on key details reported by the child using cued invitation prompts (e.g. ‘you mentioned... tell me some more about that?’) to encourage elaborative reporting. When the child reported that they could not remember anything else, another emotional intensity scale was presented to determine any changes in the strength of their feelings. A Likert scale was also presented to determine the difficulty/ease of the child’s reporting.

Substantive phase – happy: The substantive phase was then repeated, this time asking about a time the child was happy (‘can you think of a time you were happy?’).

Closure phase: Children were thanked and asked whether they had anything else to report about the times they were in trouble or happy. The overall experience Likert scale was presented to determine how the child found their interview experience. Children were then thanked and given a small piece of stationery (e.g. a pencil or eraser) for their involvement.

Verbal Interview Coding

The interviews were video recorded with verbally reported information then transcribed verbatim. All transcribed material within the substantive – trouble and substantive – happy phases was coded according to a coding scheme constructed specifically for this

research (Appendix C). Information provided by children was initially coded as relevant or irrelevant. Relevant information was further coded as episodic or evaluative information. Questions asked by the interviewer were coded as interview-relevant, and then further coded as open, following, cued, focussed, or closed/option-posing questions (see Table 1 for definitions and examples of interviewer questions). Prior to analyses, open, following, and cued questions were collapsed to create child-centred invitations.

The author and a trained reliability coder independently coded 30 transcripts (27.6% of the sample). Inter-rater reliability was calculated using Cohen's kappa which indicated high agreement, $\kappa = 0.87$, $p < 0.001$. The author and reliability coder then independently coded 31 transcripts. Following the independent coding of 15 transcripts, the author and reliability coder came together to check and maintain agreement.

Table 1

Definitions and examples of interviewer questions

Interviewer questions	Definitions	Examples
Open	Questions or statements that prompt children to talk about things not previously discussed	"Tell me everything you can remember about that time you were in trouble"
Following	Questions or statements that encourage the child to continue narrative production	"What happened next?" "And then what happened?"
Cued	Questions or statements that include details disclosed by the child as cues to prompt free-recall	"You mentioned ... tell me everything about that" "Can you tell me some more about the ..."

Focussed	Questions or statements that focus the child's attention on certain aspects and request specific information,	<p>“What day/time was that?”</p> <p>“Where were you when that happened?”</p>
Closed or option-posing	Questions or statements that require a yes/no response from the child or offers the child an option of two or more responses	<p>“Were you with your mum?”</p> <p>“After that you kicked the ball?”</p> <p>“Was that at home or at school?”</p>

Results

Preliminary Analyses

Prior to examining the influence of comfort tools on information reported (total, relevance, episodic, and evaluative), children's experiences, and questions asked by the interviewer, Kolmogorov-Smirnov tests of normality were conducted. Significant outliers were recoded using the winsorizing method (as outlined by Field, 2013) and analyses were performed on both raw and winsorized data. As no differences were found, and under the assumption that Analysis of Variance (ANOVA) is robust to violations of normality (Schmider, Ziegler, Danay, Beyer, & Bühner, 2010), raw data was used in the following analyses.

Information Provided by Children

Total amount of information reported

The total amount of information was calculated for both the trouble event and the happy event as the sum of relevant and irrelevant information for each event type. A repeated measures ANOVA was run with total amount of information (i.e. information provided about the trouble event vs happy event) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. Results of the ANOVA revealed no significant effect of event type ($F(1,88) = 0.18, p = .671, \eta^2 = .002$) or of condition ($F(3,88) = 1.56, p = .205, \eta^2 = .050$). No interaction was found between event and condition ($F(3,88) = .08, p = .973, \eta^2 = .003$). These results indicate that children reported the same amount of information, irrespective of whether they had a comfort tool or whether discussing happy or trouble events. As these results may obscure differences in the type of information children were providing, we next looked at whether the type of information differed according to event.

Amount of relevant information

A repeated measures ANOVA was run with relevant information (i.e. relevant information provided about the trouble event vs happy event) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. Results of the ANOVA revealed a significant effect of event ($F(1,88) = 6.67, p = .011, \eta^2 = .070$), but no effect of condition ($F(3,88) = 0.99, p = .401, \eta^2 = .033$), or interaction ($F(3,88) = 0.09, p = .968, \eta^2 = .003$). Children provided less relevant information about the trouble event in comparison to the happy event irrespective of how they were interviewed, suggesting that comfort tools were not distracting children (refer to Table 2 for the descriptive statistics of information reported by children). Unsurprisingly, the reverse pattern was true for irrelevant information ($F(1,88) = 15.00, p = <.001, \eta^2 = .146$), with children providing more irrelevant details about their nominated trouble event irrespective of

condition ($F(3,88) = 2.36, p = .077, \eta p^2 = .074$), and no interaction ($F(3,88) = .22, p = .884, \eta p^2 = .007$).

Amount of episodic and evaluative information

To determine whether the relevant information provided for each event was episodic or evaluative in nature, further analyses were conducted. A repeated measures ANOVA was run with episodic information (i.e. episodic information provided about the trouble event vs happy event) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. Results of the ANOVA revealed a significant effect of event ($F(1,88) = 7.45, p = .008, \eta p^2 = .078$), but no effect of condition ($F(3,88) = 1.02, p = .386, \eta p^2 = .034$), or interaction ($F(3,88) = .07, p = .978, \eta p^2 = .002$). Children disclosed more episodic details about the happy event compared to the trouble event irrespective of how they were interviewed (refer to Table 2).

A repeated measures ANOVA was then run with evaluative information (i.e. evaluative information provided about the trouble event vs happy event) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. Overall, children provided very little evaluative information, irrespective of condition or event type (refer to Table 2 for the descriptive statistics of information reported by children). No significant effect was found for event ($F(1,88) = .01, p = .921, \eta p^2 = .000$), condition ($F(3,88) = .39, p = .761, \eta p^2 = .013$), or interaction ($F(3,88) = .38, p = .765, \eta p^2 = .013$).

Table 2

The amount of information provided by children

Information reported		Control <i>M (SD)</i>	Draw <i>M (SD)</i>	Play-Dough <i>M (SD)</i>	Koosh Ball <i>M (SD)</i>	Total <i>M (SD)</i>
Total information	Trouble	52.05 (26.54)	67.12 (25.07)	57.87 (24.08)	66.30 (38.69)	61.16 (29.34)
	Happy	50.86 (31.29)	68.69 (35.31)	59.91 (29.12)	69.39 (51.12)	62.60 (37.90)
Relevant information	Trouble	29.81 (15.94)	37.72 (17.49)	35.13 (16.73)	38.74 (28.85)	35.52 (20.42)
	Happy	34.05 (22.19)	45.32 (25.51)	41.39 (22.91)	45.35 (38.99)	41.77 (28.19)
Irrelevant information	Trouble	22.24 (12.53)	29.40 (12.88)	22.74 (9.12)	27.57 (12.68)	25.64 (12.12)
	Happy	16.81 (11.67)	23.36 (14.45)	18.52 (9.81)	24.04 (14.92)	20.83 (13.09)
Episodic information	Trouble	26.38 (13.64)	33.80 (15.70)	31.96 (15.38)	35.00 (27.21)	31.95 (18.78)
	Happy	31.29 (19.24)	41.44 (23.49)	37.70 (32.78)	41.22 (34.67)	38.13 (25.47)
Evaluative information	Trouble	3.43 (3.89)	3.92 (2.74)	3.22 (3.53)	3.74 (3.45)	3.59 (3.36)
	Happy	2.76 (3.35)	3.88 (3.96)	3.70 (2.64)	4.13 (4.82)	3.64 (3.76)

Ratings of Ease of Disclosure and Overall Interview Experience

We next considered whether providing a comfort tool influenced children's ease of disclosure and overall interview experience. These analyses used the Likert scale ratings of ease of talking, and overall experience of the interview (refer to Table 3 for descriptive statistics). A repeated measures ANOVA was run with ease of talking about the trouble event vs happy event as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. A significant effect of event was found ($F(1,88) = 19.62, p < .001, \eta^2 = .182$) and no effect of condition ($F(3,88) = .31, p = .819, \eta^2 = .010$), or interaction ($F(3,88) = .28, p = .841, \eta^2 = .009$). These results indicate that, irrespective of how they were interviewed, children found talking about their nominated happy event easier than their trouble event.

To determine any differences in overall interview experience, a univariate ANOVA was conducted on the ratings of the overall experience of the interview with condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. No significant effect of condition was found ($F(3,88) = .50, p = .683, \eta^2 = .017$), indicating that children's experience of the overall interviews were comparable, irrespective of the comfort tools provided for them.

Table 3

Children's ratings of ease of reporting and overall experience of the interview. The Likert scale ranged from 1 to 5, 1 indicating difficulty and 5 indicating ease.

Children's experience ratings		Control <i>M (SD)</i>	Draw <i>M (SD)</i>	Play- Dough <i>M (SD)</i>	Koosh Ball <i>M (SD)</i>	Total <i>M (SD)</i>
Ease of reporting	Trouble	3.52 (1.40)	3.48 (1.26)	3.52 (1.04)	3.52 (1.04)	3.51 (1.17)

Happy	4.19 (1.12)	4.36 (.91)	4.48 (.73)	4.09 (1.20)	4.28 (1.00)
Overall experience	4.43 (.75)	4.32 (.63)	4.52 (.51)	4.48 (.51)	4.43 (.60)

Ratings of Emotional Intensity

Children rated the emotional intensity of their nominated happy and trouble events both before and after disclosure. A comparison of the emotional intensity rated before disclosure was analysed using a repeated measures ANOVA with event emotional intensity (i.e. emotional intensity of trouble event vs happy event rated prior to disclosure) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. A significant effect of event was found ($F(1,88) = 40.96, p < .001, \eta^2 = .318$) and no effect of condition ($F(3,88) = .55, p = .647, \eta^2 = .019$) or interaction ($F(3,88) = 1.01, p = .39, \eta^2 = .033$). Children rated their feelings towards their nominated trouble event as less intense in comparison to their nominated happy event, irrespective of how they were interviewed (refer to Table 4 for the means and standard deviations of children's emotional intensity ratings).

A comparison of the emotional intensity ratings following disclosure was also analysed. A repeated measures ANOVA with event emotional intensity (i.e. emotional intensity rating post disclosure of trouble event vs happy event) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. Similarly, a significant effect of event was found ($F(1,88) = 44.76, p < .001, \eta^2 = .337$) and no effect of condition ($F(3,88) = .92, p = .436, \eta^2 = .030$) or interaction ($F(3,88) = 1.36, p = .262, \eta^2 = .044$). Children continued to rate their feelings towards their nominated happy event as stronger than their trouble event irrespective of how they were interviewed (refer to Table 4).

The change in emotional intensity was calculated by subtracting post-disclosure ratings from pre-disclosure ratings for each event. A repeated measures ANOVA was then run with change in emotional intensity (i.e. change in emotional intensity ratings: trouble event vs happy event) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. No significant effects were found for event ($F(1,88) = .07, p = .798, \eta^2 = .001$), condition ($F(3,88) = 1.61, p = .192, \eta^2 = .052$), or interaction ($F(3,88) = .1.25, p = .301, \eta^2 = .040$) with children's ratings of emotional intensity comparably decreasing, regardless of event or how they were interviewed (refer to Table 4).

Table 4

Children's rating of the emotional intensity of their nominated events, and a comparison of pre- and post-disclosure ratings. The feeling thermometer presented to children ranged from 1 to 10, with higher scores indicating greater emotional intensity

Children's Ratings of Emotional Intensity		Control <i>M (SD)</i>	Draw <i>M (SD)</i>	Play- Dough <i>M (SD)</i>	Koosh Ball <i>M (SD)</i>	Total <i>M (SD)</i>
Prior to disclosure	Trouble	6.05 (3.40)	6.08 (3.45)	4.70 (3.17)	4.74 (3.14)	5.39 (3.31)
	Happy	8.24 (2.57)	8.08 (2.99)	8.26 (2.77)	8.43 (2.76)	8.25 (2.74)
Following disclosure	Trouble	4.67 (3.38)	4.80 (2.90)	4.52 (3.04)	5.61 (2.92)	4.90 (3.04)
	Happy	6.57 (3.08)	7.88 (2.47)	8.43 (2.33)	7.61 (3.03)	7.65 (2.77)
Change in emotional intensity (before – after)	Trouble	1.38 (5.12)	1.28 (4.93)	.17 (3.30)	-.87 (2.94)	.49 (4.21)
	Happy	1.67 (2.11)	.20 (3.54)	-.17 (3.60)	.83 (3.33)	.60 (3.25)

Questions Asked by the Interviewer

Total amount of questions asked

To determine whether the amount of questions asked differed according to event type and comfort tools, a repeated measures ANOVA was run with number of questions (i.e. questioned asked during the trouble vs happy events) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. A significant effect of event was found ($F(1,88) = 41.08, p < .001, \eta^2 = .318$) with significantly more questions asked during the trouble event (refer to Table 5). A significant effect of condition was also found ($F(3,88) = 2.94, p = .037, \eta^2 = .091$). Post hoc Tukey HSD tests revealed that children in the draw condition were asked significantly more questions than those in the control condition ($p = .042$), indicating some comfort tools may have an influence on interviewers questioning.

Table 5

Total number of all questions asked during each substantive phase of the interview.

Event	Control <i>M (SD)</i>	Draw <i>M (SD)</i>	Play-Dough <i>M (SD)</i>	Koosh Ball <i>M (SD)</i>	Total <i>M (SD)</i>
Trouble	12.52 (3.75)	15.88 (5.05)	16.22 (5.68)	15.13 (3.67)	15.01 (4.78)
Happy	9.33 (3.69)	12.44 (5.10)	11.13 (3.68)	12.52 (6.96)	11.42 (5.15)

Proportions of questions asked

Questions asked during the substantive – trouble and substantive – happy phases were converted into proportions according to question type (child centred invitations (including open, following, and cued questions), focussed questions, and closed or option-posing questions within trouble and happy events). A repeated measures ANOVA was run with proportions of questions asked for each event as the within-subject variable, and condition

(i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. A significant interaction between event and question type was found ($F(2,176) = 11.00, p < .001, \eta^2 = .112$). To unpack this interaction, the same analyses were run separately for each type of event.

A repeated measures ANOVA was run with proportions of questions asked during the trouble event (i.e. proportion of child centred invitations vs focussed questions vs closed/option-posing questions) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. A significant effect of question type was found ($F(2,176) = 184.36, p < .001, \eta^2 = .677$) and no effect of condition ($F(3,88) = 1.18, p = .324, \eta^2 = .039$). For the trouble event the highest number of questions asked were closed/option-posing (51%), followed by invitations (41%), followed by focussed (8%). Paired samples *t*-tests revealed significant differences between child centred invitations and focussed questions ($t(91) = 16.58, p > .001$), child centred invitations and closed/option-posing questions ($t(91) = 2.96, p = .004$), and between closed/option-posing and focussed questions ($t(91) = -22.08, p < .001$).

The same process was repeated for proportions of questions asked during the happy event. A repeated measures ANOVA was run with proportions of questions asked during the happy event (i.e. child centred invitations vs focussed questions vs closed/option-posing questions) as the within-subject variable, and condition (i.e. control vs draw vs play-dough vs koosh ball) as the between subject variable. A significant effect of question type was found ($F(2,176) = 225.38, p < .001, \eta^2 = .721$) and no effect of condition ($F(3,88) = 1.93, p = .130, \eta^2 = .062$). Comparable to the trouble event, the highest number of questions asked during the happy event were closed/option-posing (59%), followed by invitations (38%), followed by focussed (4%). Paired samples *t*-tests once again revealed significant differences between child centred invitations and focussed questions ($t(91) = 17.08, p < .001$), child centred

invitations and closed/option-posing questions ($t(91) = 6.01, p < .001$), and between closed/option-posing and focussed questions ($t(91) = -28.26, p < .001$).

While the relative size of the proportions differed between events (refer to Table 6), these results indicate that within each event (trouble and happy,) questioning followed the same pattern of approximately half recall and half recognition. The majority of questions asked were closed/option-posing questions, followed by child centred invitations, and a minimal number of focussed. This indicates that the style of interviewing was consistent across events.

Table 6

Proportions of interview questions asked in the current research, and in comparison to an evaluation of forensic interviews conducted in New Zealand.

Wolfman, Brown, and Jose (2016a) questioning categories were collapsed as follows: invitations and cued invitations were included within child centred invitations, direct questions were included as focussed questions, and option-posing and suggestive questions were included as closed/option-posing questions.

Interviewer questions		Control <i>M (SD)</i>	Draw <i>M (SD)</i>	Play-Dough <i>M (SD)</i>	Koosh Ball <i>M (SD)</i>	Total <i>M (SD)</i>	Wolfman et al. (2016a) <i>M</i>
Child centred invitations	Trouble	.44 (.14)	.38 (.15)	.40 (.11)	.43 (.16)	.41 (.15)	.22
	Happy	.35 (.12)	.39 (.19)	.41 (.19)	.36 (.18)	.38 (.17)	
Focussed questions	Trouble	.09 (.08)	.06 (.07)	.07 (.08)	.09 (.10)	.08 (.08)	.57
	Happy	.05 (.06)	.03 (.05)	.03 (.05)	.05 (.07)	.04 (.06)	
Closed/option-posing questions	Trouble	.46 (.11)	.57 (.13)	.52 (.13)	.49 (.17)	.51 (.14)	.21
	Happy	.60 (.12)	.58 (.18)	.56 (.20)	.60 (.16)	.59 (.17)	

Discussion

The purpose of the current study was to evaluate whether providing children with a range of comfort tools influenced how they talked, and experienced talking, about emotional events. In particular, we were interested in differences between episodic information, which is likely most relevant in forensic contexts, and evaluative information, which is likely most relevant in the clinical context.

Did Comfort Tools Influence the Amount and Type of Information Provided by Children?

Some studies have shown that interview aids, such as drawing, have increased the amount of information provided by children (e.g. Gross & Hayne, 1999; Gross et al., 2009; Patterson & Hayne, 2011; Woolford et al., 2015). Researchers have interpreted these findings as support for the tools acting as retrieval support for children, allowing them to generate their own retrieval cues to access for further information. Our results do not replicate these findings however, as we found no difference in the overall number of details children reported. Our findings may reflect differences in the questioning protocol adopted or the nature of the events selected by children to describe, as we discuss below.

Some researchers (e.g. Butler et al., 1995; Patterson & Hayne, 2011) have suggested that one mechanism by which tools may facilitate children's reporting of information is that they prolong the interview, therefore allowing children more time to search and retrieve relevant information. We found, however, that interviews did not differ in duration, which would suggest that tools may not consistently offer this benefit to children.

The use of comfort tools is often thought to facilitate engagement by reducing social demands or offering a means of tactile self-soothing, therefore supporting children to provide more relevant details of the target event (Butler et al., 1995; Driessnack, 2005; Hill & Brown,

2017; Katz & Hershkowitz, 2010; Patterson & Hayne, 2011). Our findings do not appear to support this claim, as we found that children with comfort tools did not provide any more relevant details than those without. Conversely, some researchers have also considered the potential harm of comfort tools (e.g. Poole & Dickinson, 2014), as the distraction of tools may draw children's attention from interviewer's questions. Consistent with Poole and Dickinson (2014) findings which focussed on comfort drawing, comfort tools were found to have no negative effects on children's reports in the current study. The level of irrelevant information remained consistent with the varying attentional demands of the tools (i.e. drawing vs play-dough vs koosh ball). This suggests that while we observed no benefits, we have also found that comfort tools did not compromise children's participation. However, because the children nominated their own events to describe, we could not assess whether comfort tools had any impact on accuracy. Some researchers have shown that tools, specifically drawing, may encourage confabulation in children's reports (e.g. Macleod et al., 2016).

While the comfort tools did not influence the amount of relevant information reported by children, we did see a difference in meaningful information reported for each event. Children provided less relevant and more irrelevant details when discussing a time when they were in trouble in comparison to discussing a happy event. This increase in non-event related responses (e.g. unrelated information, repetitions, empty language such as "I don't know" "I forgot" "I don't remember" etc.) may suggest children's unwillingness to discuss these kind of events. This finding appears to be consistent with findings indicating youths' trauma narratives are associated with more disorganised (including repetitions, Salmond et al., 2011) and briefer reports (e.g. Simon, Feiring, & Kobielski McElroy, 2010). This may provide some support for the paradigm generating feelings potentially comparable to those experienced by children during clinical and forensic interviews. Alternatively, children may

have nominated trouble events where less happened. This selection may have therefore led to briefer reports and repetitions rather than more information when asked follow-up questions. Children may have had less information available to recall and report in comparison to the richness of their nominated happy events

As comfort tools are used in both forensic and clinical settings (e.g. Hill & Brown, 2017; Poole & Dickinson, 2014) we evaluated the content of the relevant information provided by children to shed light on whether they facilitate information of particular relevance to these settings. While a lack of empirical evidence limited the formation of hypotheses, we found that comfort tools did not influence the amount of either episodic or evaluative details provided. This lack of difference may reflect the interview protocol used in the current study.

The adapted NICHD protocol (Brown et al., 2013; Lamb et al., 2018) used for the current study relies on the information provided in a child's free recall to then provide the basis for cued invitations. Free recall typically does not capture what children are capable of describing. Following free recall, if asked, children will provide more information within various categories, including settings, actions, participants, and conversations (e.g. Brown & Pipe, 2003; Dorado & Saywitz, 2001; Jack, Martyn, & Zajac, 2015; Saywitz & Snyder, 1996). In forensic interviews children are likely to be asked to provide further episodic details. For example, child maltreatment interviewers must obtain specific information such as place, time, and contextual details to provide the basis of prosecution (Guadagno, Powell, & Wright, 2006). Within clinical settings children may also be prompted to discuss evaluative details (Woolford et al., 2015), to identify thoughts, feelings, and behaviours that may be maintaining emotional and behavioural problems (Carr, 2016). If not asked to provide specific episodic or evaluative detail, children may not recognise that they should include these details in their spontaneous descriptions. While children were given ample opportunity

to provide elaborative reports, the current interview protocol did not explicitly ask for episodic or evaluative content, we therefore cannot determine whether comfort tools facilitate children's reports of this detail in forensic and clinical contexts.

While comfort tools did not influence the amount of episodic or evaluative details provided by children, it was found that children provided very little evaluative information across both trouble and happy events. This overall lack of evaluative information may be due to children self-nominating events that were not particularly rich in these details. Rather than selecting events that included strong emotional or evaluative content, they may have selected events may have been easy to talk about with an unfamiliar person. This may also indicate that evaluative detail is particularly susceptible to omission if it is not directly questioned and may be consistent with maltreated children's omission or underreporting of sensitive details of their experience (e.g. Leander, Granhag, & Christianson, 2005). Alternatively, and consistent with its lack of inclusion in both positively- and negatively-valenced events, a lack of evaluative detail may be normative for this age group. The inclusion of this interpretive content gradually increases from children until 12 years old, and is typically rare with young children (Pasupathi & Wainryb, 2010).

An alternative protocol which may have further assisted children's reporting is the NICHD Investigative Interview Revised which includes more of a focus on the socio-emotional aspects of interviewing children, including establishing rapport, and responding to motivational and engagement problems (Baugerud & Johnson, 2017). The NICHD Investigative Interview Revised places an importance on raising children's trust and cooperation within the forensic interviewing environment, supporting them to disclose difficult information (Baugerud & Johnson, 2017). Therefore, had we used this more recent version of the NICHD Investigative Interview protocol we may have seen greater amounts of evaluative information reported.

Did Comfort Tools Influence Children's Ease of Disclosure and Overall Interview Experience?

What children are able to report is only one aspect of the dynamic of the interview. The current study also investigated how children *experienced* disclosing emotional events. Researchers and practitioners have suggested that comfort tools help with rapport and creating a comforting experience (e.g. Driessnack, 2005; Gross & Hayne, 1999; Gross, 1998; Hill & Brown, 2017; Katz & Hershkowitz, 2010). We therefore hypothesised that providing children with drawing materials or other comfort tools might offer them a more enjoyable experience. However, in contrast we found that comfort tools did not influence children's ratings of their overall experience, nor the ease of narrative disclosure for each type of event. Children rated their overall experience positively, and both trouble and happy narratives as easy to disclose, regardless of whether they were given a comfort tool. Two possible explanations may account for our findings: On the one hand, children may not have found the experience difficult. While children rated disclosure of the trouble event as more difficult, which provides some validity for the approach, both events were rated as easy, suggesting that children were selecting events that were easy to recall and talk about. There may have therefore been little need for the tools to ameliorate any emotional discomfort. On the other hand, children may have been sensitive to the interviewer's expectations, and therefore over-reported their experience to create a positive impression (Crandall, Crandall, & Katkovsky, 1965). Children are sensitive to the authoritative state of adults, they are eager to please, comply, and cooperate with adults (for review of child suggestibility see Ceci & Bruck, 1993). In the current study children were asked to rate their experience by, and in the presence of, the interviewer, which may have influenced their response.

Did Comfort Tools Influence How Children Rated the Emotional Intensity of their Nominated Events?

While they did not influence the experiences or information provided by children, comfort tools may assist children in regulating their emotional arousal during disclosure by offering a means of tactile self-soothing (Gross, 1998). We therefore asked children to rate the emotional intensity of their selected events, both before and after disclosure. We expected to see greater changes (reductions) in ratings from the beginning to the end of the interview when children were interviewed with comfort tools. However, this was not the case. Children's emotional intensity ratings decreased to a similar extent irrespective of comfort tools. Therefore, within this context, comfort tools do not appear to be moderating children's emotional states. All children rated the emotional intensity lower following disclosure. This observed reduction may indicate that the simple act of talking about emotionally laden events may help children to place their experiences in context and regulate their emotional state (Pennebaker, 2000; Zech & Rimé, 2005). Additionally, children consistently rated their feelings towards their happy event as more intense. This appears to support the explanation that children were selecting their least emotionally intense trouble event to discuss, and therefore may have had less information to report.

Did Comfort Tools Influence the Interviewer's Questioning?

Forensic and clinical interview contexts can be viewed as a conversational partnership between the child and the interviewer. While interviewers commonly advocate for the use of interview aids to assist children's reporting (e.g. Bekhit et al., 2005; Hill & Brown, 2017; Wolfman et al., 2016a), there is some evidence that the use of aids also influence the questioning style of the adult partner (e.g. Patterson & Hayne, 2011; Salmon et al., 2012). We therefore examined whether interviews were comprised differently when tools used. Firstly, we saw that more questions were asked during the interview about a time the children were in trouble. This increase in questioning may reflect an attempt to manage the increase in irrelevant information provided by children during the reporting of their trouble event,

bringing them back on task. Alternatively, or additionally, as children were providing less event relevant information, the interviewer may have been attempting to elicit more details of the nominated trouble event.

Secondly, we also saw signs of different interviewing in conjunction with one of the tools. Specifically, more questions were asked when children were given the opportunity to draw, relative to when they were only questioned verbally. Non-directive drawing has been found to lead children's reporting astray, specifically resulting in more fantastical errors (Macleod et al., 2016). This increase in questioning may therefore reflect attempts to redirect children to relevant details. While the current study could not assess for accuracy, we did not observe any significant differences in relevant and irrelevant details across comfort tools. A lack of increase in irrelevant details provided by drawing children therefore indicates confabulation is unlikely to account for the differences in questioning. Questioning children specifically about their drawings, or limiting children's immersion in their drawings so they therefore respond to questions may provide alternative explanations to this increase in questioning.

Interview aids have also been found to influence the proportion of questions asked by the interviewer. Salmon et al. (2012) found the proportion of direct questions increased, and open invitations decreased, when using dolls and body diagrams, whereas Patterson and Hayne (2011) found the opposite effect, with the number of open questions increasing when children were asked to draw and tell about an event. These disparate results may be due to the interview protocols used. Salmon et al. (2012) assessed interview aids in conjunction with an NICHD protocol. This may indicate that interview aids negatively impact questioning with used with best-practice protocols. While the current study also used a version of the NICHD protocol, it did not replicate either of these findings. The proportion of questions were found to be consistent across comfort tools and events. This may reflect the differing nature of

comfort tools. Unlike other interview aids, such as dolls, diagrams, and directive drawing, children's interactions with comfort tools are not the focus of any direct questioning (e.g. "tell me about what you're drawing" "what are the people in your drawing doing" etc.). They are simply engaged or played with during the interview, rather than directly used to clarify or obtain additional information from children. Comfort tools are not directly referenced and therefore may not directly influence the proportions of questions used.

While the proportions of questions indicate interviewing consistency across both events and comfort tools, they do not mirror the proportions we see in forensic interviews. In the current study, the majority of questions were closed/option-posing, followed by invitations, followed by focussed. In contrast, Wolfman et al. (2016a) evaluated the conduct of forensic interviews in New Zealand, and coding differences notwithstanding, found that the majority of questions were focussed, followed by invitations, followed by closed or option-posing (refer to Table 6 for a direct comparison). Given that more invitations were asked in the current study than that recorded by Wolfman et al. (2016a), the contribution of the comfort tools may have been diminished. Question type has a large impact on the amount, accuracy, and organisation of children's reports (Lamb et al., 2018). Broad open invitations are more likely to elicit detailed and accurate information (Brown et al., 2013; Korkman, Santtila, & Sandnabba, 2006), and more forensically important details (Phillips, Oxburgh, Gavin, & Myklebust, 2012) than focussed questions. In contrast, recognition based questions (i.e. closed, focussed, and option-posing) elicit shorter responses and increased errors (Brown et al., 2013; Korkman et al., 2006). It is therefore possible that if asking, for example, fewer closed questions, we may have seen more impact of the comfort tools. Unfortunately, we do not have any data on the questioning or composition of clinical interviews, and therefore cannot draw a comparison.

Limitations

Forensic interviewing for alleged maltreatment has two goals: to obtain rich, detailed reports, and to minimise any false details given in these reports (Wolfman et al., 2018). A limitation of the current study was the inability to determine the accuracy of the children's reports. Adopting a paradigm which allowed children to self-select events allowed for an increase in the emotional nature of reports, thereby allowing comparisons to be drawn to the feelings potentially experienced by children interviewed in clinical and forensic settings. However, this choice also meant we were unable to determine accuracy (including potential confabulation; Gross, Hayne, & Poole, 2006; Macleod et al., 2016). Some children also selected events which occurred a few days before the interview, while others selected events which occurred years previously. Recall delays have significant effects on the information reported (e.g. Salmon & Pipe, 2000; Tizzard-Drover & Peterson, 2004), and unfortunately was not controlled for in the current study. These self-selection constraints therefore limit conclusions regarding the influence of comfort tools on the quality of children's reports.

An additional limitation of self-selection is this allowed children to nominate their least emotionally arousing and most informationally constrained trouble event. Children's selection of more easily discussed events appears to be supported by their ease of reporting and emotional intensity ratings, and the increase in irrelevant details reported. Children in forensic and (to a certain extent) clinical settings, do not have this option. Accordingly, the main limitation of this study is its generalisability. The children in the current study were motivated, engaged, interviewed in a familiar setting, for a short duration of time. Conversely, children in forensic and clinical settings may be questioned in an unfamiliar setting for an extended period of time, regarding highly emotionally arousing events (Brown & Lamb, 2019; Lamb & Brown, 2006). In cases of maltreatment, children may be the sole sources of information, making their contribution critical and the consequences significant (Lamb & Brown, 2006; Salmon et al., 2012). As well as providing the basis for criminal

proceedings, the child may fear negative consequences to themselves or their offender, such as punishment or abandonment (Goodman-Brown et al., 2003). In comparison to the significant consequences in clinical and forensic settings, the consequences of disclosure in this study were minimal.

The narrative abilities of the children in the current sample are also likely to exceed those within forensic settings. Children's narrative abilities are highly dependent on their conversations held at the individual, family, and societal levels; particularly narratives regarding negative experiences (Salmon & Reese, 2015). The schools which consented to hosting the current study were decile nine and ten. These decile measures provide a reflection of the school's student community, with decile ten indicating factors such as the children are from higher income families, have less household crowding, and parents who have obtained higher educations (Ministry of Education, 2018). Parents were also required to give consent for their children to discuss a time they were in trouble, which usually involved children discussing their parents' behavioural management strategies. These factors may have led to the inadvertent selection of children who are more likely to have the conversations associated with narrative abilities. In comparison to non-maltreated children, maltreated children are less likely to have conversations with their parents about negative experiences, are more likely to have limited language skills, and have greater difficulty understanding others thoughts and emotions (Cicchetti & Ng, 2014; Fivush, 2010). Within clinical settings there is also high overlap between language difficulties or delays and significant emotional and behavioural problems (Benner, Nelson, & Epstein, 2002; Salmon, O'Kearney, Reese, & Fortune, 2016). Maltreated children are also more likely to have greater difficulty regulating their emotional responses, and may be motivated to remain silent in an attempt to avoid the emotions triggered by their memories (Cicchetti & Toth, 2005; Salmon & Bryant, 2002). These language, narrative construction, and emotional regulation differences, therefore bring into

question whether comfort tools may assist and support children in forensic and clinical settings in a way that cannot be captured by the current research.

Future Research

The current literature on the use and efficacy of comfort tools in forensic and clinical settings is very limited, with the current study highlighting the difficulties of replicating interview conditions from real world settings within an experimental paradigm (Brown & Lamb, 2019). Therefore, future research should partner with practitioners and interviewers in both clinical and forensic settings to investigate comfort tools more directly. This would allow for a systematic evaluation of whether comfort tools influence the nature of information provided by children, in addition to further factors that may indicate discomfort such as length of utterances, off topic comments, or other signs of reluctance. It may also allow for a wider age-range of children, and an opportunity to assess the disclosure of evaluative details when questioned directly in the clinical context.

Despite the current study adopting a strong interview protocol drawn from evidence-based guidelines (Lamb et al., 2018) higher than desirable levels of closed questions were used. On close inspection of the closed questions used in the current study, it was found that they were often echoes or summaries of what the child reported. Which many researchers often code as facilitative utterances rather than question types (e.g. Gross et al., 2009; Patterson & Hayne, 2011). Additionally, many of these closed questions were also intended as invitations but were preceded by "can you..." (e.g. "*can you* tell me more about...") which children sometimes interpreted as a yes/no question. This highlights the complexity of interviewing children in a predominantly open-ended way and demonstrates how difficult it is for interviewing practice to be maintained (e.g. Wolfman et al., 2016a). Adherence to best-practice interviewing protocols might be further compromised by the introduction of tools by

making interviewers less vigilant about their approach to questioning, or by encouraging responses that need clarification. Investigation within the contexts that these tools are being applied would also allow for further assessment of how they are influencing interviewer behaviour. Additionally, anecdotally as the interviewer in the current study, I recognised feeling differently towards interviews with comfort tools in comparison to those that were tell-only. I felt a preference towards interviews with comfort tools as I perceived a sense of relaxation or relief in children when I handed them the tool. These perceptions of what interviewers believe is being experienced by the child should be evaluated. They may offer some explanation of what encourages interviewers' use of comfort tools and the beliefs regarding their efficacy (Hill & Brown, 2017).

While the current study limited analysis to the substantive phases of the interview, future research should extend this to include the pre-substantive phase. Questioning within this early phase of the interview has been found to subsequently influence both interviewer questioning and children's responses (Brown et al., 2013; Sternberg et al., 1997). Wolfman et al. (2018) noted that interview aids are typically introduced during these early phases, and theorised that they influence the rapport building and narrative practice within the pre-substantive phase. This may also be the case for comfort tools and should be investigated. For example, an early introduction of comfort tools may lead the interviewer to feel more comfortable or perceive children as feeling comfortable and therefore reduce rapport building during the pre-substantive phase.

Conclusion

Overall, the current study adds to the scarce literature on the use of comfort tools. Non-directive drawing, play-dough, and koosh balls were found to have no effect on children's reports of emotionally laden events, or their experience of the interview process.

The results replicate those by Poole and Dickinson (2014), with the addition of two other commonly used comfort tools and using self-nominated events that may elicit more emotion. These findings would suggest that in this context, with motivated and engaged 5 to 7-year-old children and talking about events that were self-nominated, the use of comfort tools do not facilitate or hinder reporting. Considering broader implications of these findings, we remain tentative. It is possible that comfort tools assist reports of children within forensic and clinical settings, potentially serving a self-soothing function, that could not be captured in experimental research. Future studies will need to bridge this gap between the laboratory and the field, assessing comfort tools function and effects (for both the child and the interviewers/clinicians) within the contexts that they are applied.

References

- Anderson, M., Bucks, R., Bayliss, D., & Della Sala, S. (2011). Effect of age on dual-task performance in children and adults. *Memory & Cognition*, 39(7), 1241-1252. doi: 10.3758/s13421-011-0099-7
- Bauer, P. J. (2015). Development of episodic and autobiographical memory: The importance of remembering forgetting. *Developmental Review*, 38, 146-166. doi: 10.1016/j.dr.2015.07.011
- Baugerud, G. A., & Johnson, M. S. (2017). The NICHD Protocol: Guide to follow recommended investigative interview practices at the Barnahus? In: Johansson S., Stefansen K., Bakketeig E., Kaldal A. (Eds.) *Collaborating against child abuse* (pp 121-143). Cham, CH: Palgrave Macmillan. doi: 10.1007/978-3-319-58388-4_6
- Bekhit, N. S., Thomas, G. V., & Jolley, R. P. (2005). The use of drawing for psychological assessment in Britain: Survey findings. *Psychology and Psychotherapy: Theory, Research and Practice*, 78(2), 205-217. doi: 10.1348/147608305X26044
- Benner, G. J., Nelson, J. R., & Epstein, M. H. (2002). Language skills of children with EBD: A literature review. *Journal of Emotional and Behavioral Disorders*, 10(1), 43-56. doi: 10.1177/106342660201000105
- Berk, L. E. (2006). *Child development* (7th ed.). Boston, MA: Pearson Education.
- Bottoms, B. L., Quas, J. A., & Davis, S. L. (2007). The influence of the interviewer-provided social support on children's suggestibility, memory, and disclosures. In M.-E. Pipe, M. Lamb, Y. Orbach, & A.-C. Cederborg (Eds.), *Child sexual abuse: Disclosure, delay, and denial* (pp. 135-157). New York, NY: Routledge.

- Brown, D., & Pipe, M. E. (2003). Variations on a technique: Enhancing children's recall using narrative elaboration training. *Applied Cognitive Psychology, 17*(4), 377-399. doi: 10.1002/acp.876
- Brown, D. A., & Lamb, M. E. (2015). Can children be useful witnesses? It depends how they are questioned. *Child Development Perspectives, 9*(4), 250-255. doi: 10.1111/cdep.12142
- Brown, D. A., & Lamb, M. E. (2019). Forks in the road, routes chosen, and journeys that beckon: A selective review of scholarship on children's testimony. *Applied Cognitive Psychology*. Advance online publication. doi: 10.1002/acp.3511
- Brown, D. A., Lamb, M. E., Lewis, C., Pipe, M.-E., Orbach, Y., & Wolfman, M. (2013). The NICHD Investigative Interview Protocol: An analogue study. *Journal of Experimental Psychology: Applied, 19*(4), 367-382. doi: 10.1037/a0035143
- Brown, D. A., Lewis, C. N., & Lamb, M. E. (2015). Preserving the past: An early interview improves delayed event memory in children with intellectual disabilities. *Child Development, 86*(4), 1031-1047. doi: 10.1111/cdev.12364
- Bruck, M., Melnyk, L., & Ceci, S. J. (2000). Draw it again Sam: The effect of drawing on children's suggestibility and source monitoring ability. *Journal of Experimental Child Psychology, 77*(3), 169-196. doi: 10.1006/jecp.1999.2560
- Butler, S., Gross, J., & Hayne, H. (1995). The effect of drawing on memory performance in young children. *Developmental Psychology, 31*(4), 597-608. doi: 10.1037/0012-1649.31.4.597
- Carr, A. (2016). *The handbook of child and adolescent clinical psychology: A contextual approach* (3rd ed.). New York, NY: Routledge

- Ceci, S. J., & Bruck, M. (1993). Suggestibility of the child witness: A historical review and synthesis. *Psychological Bulletin*, 113(3), 403-439. doi: 10.1037/0033-2909.113.3.403
- Cicchetti, D., & Ng, R. (2014). Emotional development in maltreated children. In K. H. Lagattuta (Ed.), *Children and emotion* (Vol. 26, pp. 29-41): Karger Publishers. doi: 10.1159/000354349
- Cicchetti, D., & Toth, S. L. (2005). Child maltreatment. *Annual Review of Clinical Psychology*, 1, 409-438. doi: 10.1146/annurev.clinpsy.1.102803.144029
- Crandall, V. C., Crandall, V. J., & Katkovsky, W. (1965). A children's social desirability questionnaire. *Journal of Consulting Psychology*, 29(1), 27-36. doi: 10.1037/h0020966
- Cronch, L. E., Viljoen, J. L., & Hansen, D. J. (2006). Forensic interviewing in child sexual abuse cases: Current techniques and future directions. *Aggression and Violent Behavior*, 11(3), 195-207. doi: 10.1016/j.avb.2005.07.009
- Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development*, 74(1), 238-256. doi: 10.1111/1467-8624.00533
- Dorado, J. S., & Saywitz, K. J. (2001). Interviewing preschoolers from low-and middle-SES communities: A test of the Narrative Elaboration Recall Improvement technique. *Journal of Clinical Child Psychology*, 30(4), 568-580. doi: 10.1207/S15374424JCCP3004_12

- Driessnack, M. (2005). Children's drawings as facilitators of communication: A meta-analysis. *Journal of Pediatric Nursing*, 20(6), 415-423. doi: 10.1016/j.pedn.2005.03.011
- Dunn, J., & Brown, J. (1994). Affect expression in the family, children's understanding of emotions, and their interactions with others. *Merrill-Palmer Quarterly*, 40(1), 120-137.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191. doi: 10.3758/BF03193146
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14(4), 245-258. doi: 10.1016/S0749-3797(98)00017-8
- Fergusson, D. M., McLeod, G. F., & Horwood, L. J. (2013). Childhood sexual abuse and adult developmental outcomes: Findings from a 30-year longitudinal study in New Zealand. *Child Abuse & Neglect*, 37(9), 664-674. doi: 10.1016/j.chiabu.2013.03.013
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. London, UK: Sage.
- Fivush, R. (2010). Speaking silence: The social construction of silence in autobiographical and cultural narratives. *Memory*, 18(2), 88-98. doi: 10.1080/09658210903029404
- Fivush, R., Haden, C., & Adam, S. (1995). Structure and coherence of preschoolers' personal narratives over time: Implications for childhood amnesia. *Journal of Experimental Child Psychology*, 60(1), 32-56. doi: 10.1006/jecp.1995.1030

- Fivush, R., & Zaman, W. (2013). Gender, subjective perspective, and autobiographical consciousness. In P. J. Bauer & R. Fivush (Eds.), *The Wiley handbook on the development of children's memory* (Vol. 1, pp. 586-604). Chichester, UK: John Wiley & Sons. doi: 10.1002/9781118597705.ch25
- Goodman-Brown, T. B., Edelstein, R. S., Goodman, G. S., Jones, D. P. H., & Gordon, D. S. (2003). Why children tell: a model of children's disclosure of sexual abuse. *Child Abuse & Neglect*, 27(5), 525-540. doi: 10.1016/S0145-2134(03)00037-1
- Goodman, G. S. (2006). Children's eyewitness memory: A modern history and contemporary commentary. *Journal of Social Issues*, 62(4), 811-832. doi: 10.1111/j.1540-4560.2006.00488.x
- Goodman, G. S., & Melinder, A. (2007). Child witness research and forensic interviews of young children: A review. *Legal and Criminological Psychology*, 12(1), 1-19. doi: 10.1348/135532506X156620
- Gross, J., & Hayne, H. (1999). Drawing facilitates children's verbal reports after long delays. *Journal of Experimental Psychology: Applied*, 5(3), 265-283. doi: 10.1037/1076-898X.5.3.265
- Gross, J., Hayne, H., & Drury, T. (2009). Drawing facilitates children's reports of factual and narrative information: implications for educational contexts. *Applied Cognitive Psychology*, 23(7), 953-971. doi: 10.1002/acp.1518
- Gross, J., Hayne, H., & Poole, A. (2006). The use of drawing in interviews with children: A potential pitfall. In J. R. Marrow (Ed.), *Focus on child psychology research* (pp. 119-144). New York, NY: Nova Publishers.

Gross, J. J. (1998). The Emerging Field of Emotion Regulation: An Integrative Review.

Review of General Psychology, 2(3), 271-299. doi: 10.1037/1089-2680.2.3.271

Guadagno, B. L., Powell, M. B., & Wright, R. (2006). Police officers' and legal professionals' perceptions regarding how children are, and should be, questioned about repeated abuse. *Psychiatry, Psychology and Law*, 13(2), 251-260. doi: 10.1375/pplt.13.2.251

Hershkowitz, I., Horowitz, D., & Lamb, M. E. (2005). Trends in children's disclosure of abuse in Israel: A national study. *Child Abuse & Neglect*, 29(11), 1203-1214. doi: 10.1016/j.chiabu.2005.04.008

Hershkowitz, I., Lamb, M., Katz, C., & Malloy, L. (2015). Does enhanced rapport-building alter the dynamics of investigative interviews with suspected victims of intra-familial abuse? *The Official Journal of the Society for Police and Criminal Psychology*, 30(1), 6-14. doi: 10.1007/s11896-013-9136-8

Hershkowitz, I., Orbach, Y., Sternberg, K. J., Pipe, M.-E., Lamb, M. E., & Horowitz, D. (2007). Suspected victims of abuse who do not make allegations: An analysis of their interactions with forensic interviewers. In M.-E. Pipe, M. E. Lamb, Y. Orbach, & A.-C. Cederborg (Eds.), *Child sexual abuse: Disclosure, delay, and denial* (pp. 97-113). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Hill, A., & Brown, D. (2017). *Dolls, Diagrams and Drawings: Interviewers' Perspectives on Visual Aids in Child Witness Interviews* (Masters thesis). Victoria University of Wellington, New Zealand

Ialongo, N. S., Edelsohn, G., & Kellam, S. G. (2001). A further look at the prognostic power of young children's reports of depressed mood and feelings. *Child Development*, 72(3), 736-747. doi: 10.1111/1467-8624.00312

- Jack, F., Martyn, E., & Zajac, R. (2015). Getting the Picture: Effects of sketch plans and photographs on children's, adolescents' and adults' eyewitness recall. *Applied Cognitive Psychology*, 29(5), 723-734. doi: 10.1002/acp.3156
- Jaffee, S. R. (2017). Child Maltreatment and Risk for Psychopathology in Childhood and Adulthood. *Annu. Rev. Clin. Psychol.*, 13(1), 525-551. doi: 10.1146/annurev-clinpsy-032816-045005
- Johnson, M. K., Hashtroudi, S., & Lindsay, D. S. (1993). Source monitoring. *Psychological Bulletin*, 114(1), 3-28. doi: 10.1037/0033-2909.114.1.3
- Katz, C., & Hershkowitz, I. (2010). The effects of drawing on children's accounts of sexual abuse. *Child Maltreatment*, 15(2), 171-179. doi: 10.1177/1077559509351742
- Korkman, J., Santtila, P., & Sandnabba, N. K. (2006). Dynamics of verbal interaction between interviewer and child in interviews with alleged victims of child sexual abuse. *Scandinavian Journal of Psychology*, 47(2), 109-119. doi: 10.1111/j.1467-9450.2006.00498.x
- Lamb, M. E. (2012). Mothers, fathers, families, and circumstances: Factors affecting children's adjustment. *Applied Developmental Science*, 16(2), 98-111. doi: 10.1080/10888691.2012.667344
- Lamb, M. E., & Brown, D. A. (2006). Conversational apprentices: Helping children become competent informants about their own experiences. *British Journal of Developmental Psychology*, 24(1), 215-234. doi: 10.1348/026151005X57657
- Lamb, M. E., Brown, D. A., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2018). *Tell me what happened: Questioning children about abuse* (2nd Edition). Chichester, UK: John Wiley & Sons. doi: 10.1002/9781118881248

- Lamb, M. E., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2008). *Tell me what happened: Structured investigative interviews of child victims and witnesses*. Chichester, UK: John Wiley & Sons. doi: 10.1002/9780470773291
- Lamb, M. E., Orbach, Y., Hershkowitz, I., Esplin, P. W., & Horowitz, D. (2007). A structured forensic interview protocol improves the quality and informativeness of investigative interviews with children: A review of research using the NICHD Investigative Interview Protocol. *Child Abuse & Neglect*, 31(11-12), 1201-1231. doi: 10.1016/j.chiabu.2007.03.021
- Leander, L., Granhag, P. A., & Christianson, S. Å. (2005). Children exposed to obscene phone calls: What they remember and tell. *Child Abuse & Neglect*, 29(8), 871-888. doi: 10.1016/j.chiabu.2004.12.012
- Macleod, E., Gross, J., & Hayne, H. (2013). The clinical and forensic value of information that children report while drawing. *Applied Cognitive Psychology*, 27(5), 564-573. doi: 10.1002/acp.2936
- Macleod, E., Gross, J., & Hayne, H. (2016). Drawing conclusions: The effect of instructions on children's confabulation and fantasy errors. *Memory*, 24(1), 21-31. doi: 10.1080/09658211.2014.982656
- Macleod, E., Woolford, J., Hobbs, L., Gross, J., Hayne, H., & Patterson, T. (2017). Interviews with children about their mental health problems: The congruence and validity of information that children report. *Clinical Child Psychology and Psychiatry*, 22(2), 229-244. doi: 10.1177/1359104516653642
- McDonald, R., Jouriles, E. N., Rosenfield, D., & Leahy, M. M. (2012). Children's questions about interparent conflict and violence: What's a mother to say? *Journal of Family Psychology*, 26(1), 95-104. doi: 10.1037/a0026122

Ministry of Education. (2018). *School deciles*. Retrieved from

<https://www.education.govt.nz/school/running-a-school/resourcing/operational-funding/school-decile-ratings>

National Institute of Health and Care Excellence. (2018). *Child abuse and neglect overview*.

Retrieved from <https://pathways.nice.org.uk/pathways/child-abuse-and-neglect>

New Zealand Police and Child Youth and Family. (2015). *Specialist Child Witness Interview*

Model. (Interviewer guidelines). Wellington: Author.

Nikulina, V., Widom, C. S., & Czaja, S. (2011). The role of childhood neglect and childhood poverty in predicting mental health, academic achievement and crime in adulthood.

American Journal of Community Psychology, 48(3-4), 309-321. doi: 10.1007/s10464-010-9385-y

Oranga Tamariki. (2017). *Findings*. Retrieved from <http://www.msd.govt.nz/about-msd-and-our-work/publications-resources/statistics/cyf/findings.html>

Orbach, Y., Hershkowitz, I., Lamb, M. E., Sternberg, K. J., Esplin, P. W., & Horowitz, D.

(2000). Assessing the value of structured protocols for forensic interviews of alleged child abuse victims. *Child Abuse & Neglect*, 24(6), 733-752. doi: 10.1016/S0145-2134(00)00137-X

Pasupathi, M., & Wainryb, C. (2010). On telling the whole story: Facts and interpretations in autobiographical memory narratives from childhood through midadolescence.

Developmental Psychology, 46(3), 735-746. doi: 10.1037/a0018897

Patterson, T., & Hayne, H. (2011). Does drawing facilitate older children's reports of emotionally laden events? *Applied Cognitive Psychology*, 25(1), 119-126. doi:

10.1002/acp.1650

- Pennebaker, J. W. (2000). The effects of traumatic disclosure on physical and mental health: the values of writing and talking about upsetting events. In J. M. Violanti, D. Paton, & C. Dunning (Eds.), *Posttraumatic stress intervention: Challenges, issues, and perspectives* (pp. 97-114). Springfield, IL: Charles C Thomas Publisher.
- Perner, J., & Ruffman, T. (1995). Episodic memory and autonoetic consciousness: developmental evidence and a theory of childhood amnesia. *Journal of Experimental Child Psychology*, 59(3), 516-548. doi: 10.1006/jecp.1995.1024
- Phillips, E., Oxburgh, G., Gavin, A., & Myklebust, T. (2012). Investigative interviews with victims of child sexual abuse: The relationship between question type and investigation relevant information. *Journal of Police and Criminal Psychology*, 27(1), 45-54. doi: 10.1007/s11896-011-9093-z
- Pipe, M.-E., & Salmon, K. (2009). Dolls, drawing, body diagrams and other props: A role in investigative interviews? In K. Kuehnle & M. Connell (Eds.), *The evaluation of child sexual abuse allegations: A comprehensive guide to assessment and testimony* (pp. 365-395). Hoboken, NJ: John Wiley & Sons.
- Poole, D. A., Bruck, M., & Pipe, M.-E. (2011). Forensic interviewing aids: Do props help children answer questions about touching? *Current Directions in Psychological Science*, 20(1), 11-15. doi: 10.1177/0963721410388804
- Poole, D. A., & Dickinson, J. J. (2014). Comfort drawing during investigative interviews: Evidence of the safety of a popular practice. *Child abuse & neglect*, 38(2), 192-201. doi: 10.1016/j.chiabu.2013.04.012
- Poole, D. A., & Lamb, M. E. (1998). *Investigative interviews of children: A guide for helping professionals*. Washington, DC: American Psychological Association. doi: 10.1037/10301-000

- Quas, J. A., & Fivush, R. (2009). *Emotion and memory in development: biological, cognitive, and social considerations*. New York, NY: Oxford University Press. doi: 10.1093/acprof:oso/9780195326932.001.0001
- Rhodes, T. E., & Dadds, M. R. (2011). Assessment of conduct problems using an integrated, process-oriented approach. In R. Murrihy, A. Kidman, & T. Ollendick (Eds.), *Clinical handbook of assessing and treating conduct problems in youth* (pp. 77-113). New York, NY: Springer. doi: 10.1007/978-1-4419-6297-3_4
- Rowe, M. L. (2012). A longitudinal investigation of the role of quantity and quality of child-directed speech in vocabulary development. *Child Development*, 83(5), 1762-1774. doi: 10.1111/j.1467-8624.2012.01805.x
- Salmon, K., & Bryant, R. A. (2002). Posttraumatic stress disorder in children: The influence of developmental factors. *Clinical Psychology Review*, 22(2), 163-188. doi: 10.1016/S0272-7358(01)00086-1
- Salmon, K., & Conroy, R. (2009). Commentary: Emotion and memory, clinical and forensic implications. In J. Quas & R. Fivush (Eds.), *Emotion and Memory in Development: Biological, Cognitive, and Social Considerations* (pp.393-413). New York, NY: Oxford University Press. doi: 10.1093/acprof:oso/9780195326932.003.0016
- Salmon, K., & O’Kearney, R. (2014). Emotional memory, psychopathology, and wellbeing. In P. Bauer & F. R (Eds.), *Wiley Handbook on the Development of Children’s Memory* (pp. 743-773). Chichester, UK: John Wiley & Sons.
- Salmon, K., O’Kearney, R., Reese, E., & Fortune, C.-A. (2016). The role of language skill in child psychopathology: implications for intervention in the early years. *Clinical Child and Family Psychology Review*, 19(4), 352-367. doi: 10.1007/s10567-016-0214-1

- Salmon, K., Pipe, M.-E., Malloy, A., & Mackay, K. (2012). Do non-verbal aids increase the effectiveness of "best practice" verbal interview techniques? An experimental study. *Applied Cognitive Psychology*, 26(3), 370-380. doi: 10.1002/acp.1835
- Salmon, K., & Pipe, M.-E. (2000). Recalling an event one year later: The impact of props, drawing and a prior interview. *Applied Cognitive Psychology*, 14(2), 184-220. doi: 10.1002/(SICI)1099-0720(200003/04)14:2<99::AID-ACP639>3.0.CO;2-5
- Salmon, K., & Reese, E. (2015). Talking (or not talking) about the past: The influence of parent-child conversation about negative experiences on children's memories. *Applied Cognitive Psychology*, 29(6), 791-801. doi: 10.1002/acp.3186
- Salmon, K., & Reese, E. (2016). The benefits of reminiscing with young children. *Current Directions in Psychological Science*, 25(4), 233-238. doi:10.1177/0963721416655100
- Salmond, C. H., Meiser-Stedman, R., Glucksman, E., Thompson, P., Dalgleish, T., & Smith, P. (2011). The nature of trauma memories in acute stress disorder in children and adolescents. *Journal of Child Psychology and Psychiatry*, 52(5), 560-570. doi: 10.1111/j.1469-7610.2010.02340.x
- Saywitz, K. J., Jaenicke, C., & Camparo, L. (1990). Children's knowledge of legal terminology. *Law and Human Behavior*, 14(6), 523-535. doi: 10.1007/BF01044879
- Saywitz, K. J., Lyon, T., & Goodman, G. (2011). Interviewing children. In J. Myers (Ed.), *The APSAC handbook on child maltreatment* (3rd ed., pp. 337-360). Newbury Park, CA: Sage.
- Saywitz, K. J., & Camparo, L. B. (2013). *Evidence-based child forensic interviewing: The developmental narrative elaboration interview*. New York, NY: Oxford University Press. doi: 10.1093/med:psych/9780199730896.001.0001

- Saywitz, K. J., Larson, R. P., Hobbs, S. D., & Wells, C. R. (2015). Developing rapport with children in forensic interviews: Systematic review of experimental research. *Behavioral Sciences & the Law*, 33(4), 372-389. doi: 10.1002/bsl.2186
- Saywitz, K. J., & Snyder, L. (1996). Narrative elaboration: Test of a new procedure for interviewing children. *Journal of Consulting and Clinical Psychology*, 64(6), 1347-1357. doi: 10.1037/0022-006X.64.6.1347
- Saywitz, K. J., Wells, C. R., Larson, R. P., & Hobbs, S. D. (2016). Effects of interviewer support on children's memory and suggestibility: Systematic review and meta-analyses of experimental research. *Trauma, Violence, & Abuse*, 20(1), 22-39 doi: 10.1177/1524838016683457
- Scarf, D., Gross, J., Colombo, M., & Hayne, H. (2013). To have and to hold: Episodic memory in 3-and 4-year-old children. *Developmental Psychobiology*, 55(2), 125-132. doi: 10.1002/dev.21004
- Schmider, E., Ziegler, M., Danay, E., Beyer, L., & Bühner, M. (2010). Is it really robust? Reinvestigating the robustness of ANOVA against violations of the normal distribution assumption. *Methodology*, 6(4), 147-151. doi: 10.1027/1614-2241/a000016
- Simon, V. A., Feiring, C., & Kobielski McElroy, S. (2010). Making meaning of traumatic events: Youths' strategies for processing childhood sexual abuse are associated with psychosocial adjustment. *Child Maltreatment*, 15(3), 229-241. doi: 10.1177/1077559510370365
- Stallard, P. (2002). *Think good - feel good: A cognitive behaviour therapy workbook for children and young people*. Chichester, UK: Wiley.

- Sternberg, K. J., Lamb, M. E., Hershkowitz, I., Yudilevitch, L., Orbach, Y., Esplin, P. W., & Hovav, M. (1997). Effects of introductory style on children's abilities to describe experiences of sexual abuse. *Child Abuse & Neglect*, 21(11), 1133-1146. doi: 10.1016/S0145-2134(97)00071-9
- Stifter, C. A., & Moyer, D. (1991). The regulation of positive affect: Gaze aversion activity during mother-infant interaction. *Infant Behavior and Development*, 14(1), 111-123. doi: 10.1016/0163-6383(91)90058-Z
- Teoh, Y.-S., & Lamb, M. E. (2010). Preparing children for investigative interviews: Rapport-building, instruction, and evaluation. *Applied Developmental Science*, 14(3), 154-163. doi: 10.1080/10888691.2010.494463
- Thierry, K. L., Lamb, M. E., Orbach, Y., & Pipe, M.-E. (2005). Developmental differences in the function and use of anatomical dolls during interviews with alleged sexual abuse victims. *Journal of Consulting and Clinical Psychology*, 73(6), 1125-1134. doi: 10.1037/0022-006X.73.6.1125
- Tizzard-Drover, T., & Peterson, C. (2004). The influence of an early interview on long-term recall: A comparative analysis. *Applied Cognitive Psychology*, 18(6), 727-743. doi: 10.1002/acp.1028
- Tulving, E. (2002). Episodic memory: From mind to brain. *Annual Review of Psychology*, 53(1), 1-25. doi: 10.1146/annurev.psych.53.100901.135114
- Vasilevski, V., & Tucker, A. (2016). Wide-ranging cognitive deficits in adolescents following early life maltreatment. *Neuropsychology*, 30(2), 239-246. doi: 10.1037/neu0000215

- Wellman, H. M., Cross, D., & Watson, J. (2001). Meta-Analysis of Theory-of-Mind Development: The Truth about False Belief. *Child Development*, 72(3), 655-684. doi: 10.1111/1467-8624.00304
- Wesson, M., & Salmon, K. (2001). Drawing and showing: helping children to report emotionally laden events. *Applied Cognitive Psychology*, 15(3), 301-319. doi: 10.1002/acp.706
- Westera, N., Zajac, R., & Brown, D. (2015). Witness interviewing practices in New Zealand. In D. Walsh, G. Oxburgh, A. Redlich, & T. Myklebust (Eds.), *International developments and practices in investigative interviewing and interrogation*. Abingdon, OX: Routledge.
- Wolfman, M., Brown, D., & Jose, P. (2016a). Taking stock: Evaluating the conduct of forensic interviews with children in New Zealand. *Psychology, Crime & Law*, 22(6), 581-598. doi: 10.1080/1068316X.2016.1168426
- Wolfman, M., Brown, D., & Jose, P. (2016b). *Understanding and addressing challenges faced by forensic interviewers in their work with children*. (Doctoral Dissertation), Victoria University of Wellington, New Zealand
- Wolfman, M., Brown, D., & Jose, P. (2018). The use of visual aids in forensic interviews with children. *Journal of Applied Research in Memory and Cognition*, 7(4), 587-596. doi: 10.1016/j.jarmac.2018.06.004
- Woolford, J., Patterson, T., Macleod, E., Hobbs, L., & Hayne, H. (2015). Drawing helps children to talk about their presenting problems during a mental health assessment. *Clinical Child Psychology and Psychiatry*, 20(1), 68-83. doi: 10.1177/1359104513496261

Zajac, R., & Brown, D. A. (2018). Conducting successful memory interviews with children.

Child & Adolescent Social Work Journal, 35(3), 297-308. doi: 10.1007/s10560-017-0527-z

Zech, E., & Rimé, B. (2005). Is talking about an emotional experience helpful? Effects on emotional recovery and perceived benefits. *Clinical Psychology & Psychotherapy*,

12(4), 270-287. doi: 10.1002/cpp.460

Appendices

Appendix A Information Letter for Schools

Dear Principal and Staff

Thank you very much for considering our request to involve some of your students in our research. We would like to outline the practical aspects of running the study, and what we would need from the school, should you be able to help us to recruit participants. The study is being conducted under the direction of Dr. Deirdre Brown, a Senior Lecturer in Clinical and Forensic Psychology. The study will be conducted by Anica Bura, who is a Masters student in the School of Psychology. The study has been approved by the School of Psychology Human Ethics Committee under delegated authority of Victoria University of Wellington's Human Ethics Committee (ethics application #25543).

- ❑ The main goal of our study is to investigate whether the use of interview aids assists children in disclosing information about personal emotional experiences.
- ❑ We would like to include children who are 5-7 years of age.

Consent

We will bring pamphlets describing the study to school for children to take home to their parents, asking for their consent to include their child. We would ask that children return these forms to their teacher, and we will visit the school regularly to collect them. Reminder letters will be sent to parents to give them a second chance to return their forms. Only children with parental consent will be included in the study. Assent will also be sought from each child before they start the activity, even though parent consent has already been provided.

Interview Session:

The researcher will visit the school and ask each child to give details about a time when they were happy and a time when they were scared. Some of these children will be given an interview aid while they are talking, either a koosh ball, some play doh, or drawing materials. This session will take between 20-30 minutes.

Because talking about an event can affect memory, we ask that minimal discussion and details are given to the children prior to their interviews.

In practical terms, to stage the study we would require the following:

- ❑ We would like a copy of class lists so that we can address the letters to children's parents or caregivers. These lists will be destroyed once we have completed all of the sessions at your school.
- ❑ We ask that teachers send the information pamphlets for parents' home with the children.
- ❑ We would like the children to return the consent forms to their teachers, and we will visit the school to collect them prior to beginning the study.
- ❑ We will need one private space, where the researcher can conduct the interview session. We are happy to move to different rooms throughout the day if they are needed for activities.
- ❑ The length of time we spend in your school will depend on how many children have parental consent. We estimate that we will complete the interview session with 16-20 children per week.
- ❑ Each participating classroom will also receive a voucher of \$1.30 for each participating child for a local retailer, to purchase class resources.

At the conclusion of the study, a summary of the findings will be available on Dr. Brown's laboratory website: <http://applieddevelopmentallab.com/>

If you have any further questions about the study, you are welcome to contact Anica Bura, ph (04) 463 5233 ext 8496, email: anica.bura@vuw.ac.nz

We would like to thank you for taking the time to consider this study. We look forward to working with you.

Yours sincerely,

Anica Bura

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Appendix B Interview Protocol Script

I am going to record our talk today and take some notes, so I can remember what you say later on.

[Record the following on the tape before you begin]

The date is _____, the time is _____. This is participant number _____.

Section 1: Truth/Lies and Rules of Interview

Hi, my name is _____ and I am here today to talk with you about some experiences you've had. You don't have to talk to me and if you want to stop at any stage you can, just let me know. Are you happy to stay and talk with me today?

[Continue only if the child provides verbal assent]

Before we begin, I'd like to let you know that you won't get into trouble and I won't talk to your parents or your teachers about what you say here, except if I'm worried about you or someone else's safety.

Part of my job is to talk to children about things that have happened to them. I meet with lots of children so that they can tell me the truth about things that have happened to them. So, before we begin, I want to make sure that you understand how important it is to tell the truth.

If I say my shoes are pink is that true or not true?

[Wait for an answer, then say:]

That would not be true, because my shoes are really [blue/black/etc.]. And if I say I am sitting down now, would that be true or not true?

[Wait for an answer.]

It would be true, because you can see I am really sitting down.

I see that you understand what telling the truth means. It is very important that you only tell me the truth today.

When we talk today you should only tell me about things that are really true, that really happened.

[Pause]

If you don't understand something, you can just say "I don't understand".

So, if I ask you, "How old is the scattercase?" what would you say?

[Wait for an answer.]

[If the child says, 'I don't understand', say:]

Right. You don't understand, because that question doesn't make sense, does it?

[If the child offers a GUESS, say:]

No, you don't understand because that question doesn't make sense. When you don't understand, don't guess – say that you don't understand.

[Pause]

If I don't understand what you say, I'll ask you to explain.

[Pause]

If you have forgotten or don't know the answer to something, you don't have to guess, just say, "I don't know", or "I don't remember".

[Pause]

So, if I ask you, 'What is my dog's name?' what would you say?

[Wait for an answer.]

[If the child says, 'I don't know', say:]

Right. You don't know, do you?

[If the child offers a GUESS, say:]

No, you don't know because you don't know me. When you don't know the answer, don't guess – say that you don't know, or that you don't remember.

[Pause]

And if I say things that are wrong, you should correct me.

[Pause]

So if I said that you are a 2-year-old girl *[when interviewing a 5-year-old boy, etc.]* what would you say?

[If the child denies and does not correct you, say:]

Why did you say no? What is the right thing?

[Wait for an answer.]

That's right. Now you know you should tell me if I make a mistake or say something that is not right, and tell me what the right thing is.

[Pause.]

So if I said you were standing up, what would you say?

[Wait for an answer.]

OK.

So while we are talking today, you should only say stuff that is true and that really happened, and you can say 'I don't understand' or 'I don't know' or 'I don't remember', you don't have to guess, and it's okay for you to tell me if I make a mistake.

Okay?

Section 2: Introduction to Interview Aid

2a) Nothing – *Move onto next section*

2b) Drawing

Here are some paper and coloured pencils [*point to drawing materials*] you can use them while we chat if you like

2c) Koosh ball

Here is a koosh ball [*hand child the koosh-ball*], you can play with it while we chat if you like

2d) Play-doh

Here is some play-doh [*hand child the play-doh*], you can play with it while we chat if you like

Section 3: Rapport Building (Practice)

Now, I want to get to know you better.

Tell me about all the things that you've done today, from [the time you woke up/morning break/lunch time] until the time you came here and met me.

[*Wait for child's answer*]

Tell me more about [what you did this morning/what you did at morning break/what you did at lunch time]

[*Wait for child's answer*] [*Note: use this prompt as often as needed throughout this section*]

You said [some activity or portion of the event mentioned by the child], then what happened?

[*Wait for child's answer*] [*Note: use this prompt as often as needed throughout this section*]

What was the very next thing that happened after [some activity or portion of the event mentioned by the child]?

[*Wait for child's answer*]

You told me you [activity mentioned by child]. Tell me everything about that.

[*Wait for child's answer*] [*Note: use this prompt as often as needed throughout this section*]

Section 4: Free recall about a time they were in trouble

Now that I know you a little better, let me tell you why I've come to talk to you today.

I would like to hear about a time when you were in trouble, and a time you were happy, let's start with a time you were in trouble.

Can you think of a time when you were in trouble?

[Wait for child's answer]

[If the child cannot think of a time:]

Have a really big think, sometimes when kids get in trouble, teachers or mums or dads can tell them off

Can you think of a time when you were in trouble?

[Wait for child's answer]

[When the child can think of a time:]

Using this scale *[point to PRE-feelings thermometer]*, tell me how strong your feelings are about the time you got into trouble?

[Wait for child's answer]

Tell me everything you can remember from when you got in trouble – from the beginning to the end.

Use three appropriate encourages – write down the main points of the child's story

[Wait for child's answer]

Tell me other things you can remember about that time.

[Wait for child's answer]

Tell me some more things about the time.

[Wait for child's answer]

Have another big think, and tell me anything else you can remember about the time you got in trouble, even the little things.

Keep going with these open prompts until the child does not remember anything else

SUMMARY: Provide a summary of what the child has said (not too long) and ask – Is there anything else you can remember about the time you got in trouble?

Section 5: Follow-Up Questions - Trouble

Follow up key details reported by the child and encourage elaborative reporting for each detail – trying to obtain information about what happened. Try to be systematic with this, focussing on one piece of information and details associated with it until the child indicate s/he can recall no more.

Repeat what the child has said, using his/her own words – use some/all of the following prompt:

Thank you, I'm really interested in hearing more about that – I'm going to ask you some more questions now to find out more

Tell me about the very first thing that happened.

And then what happened? / What was the very next thing that happened after [something or event mentioned by child]? *[You can use this prompt several times until you have an overview of the incident]*

OK, so you mentioned [something mentioned by child], tell me everything you remember about that. *[You can use this prompt many times]*

Think back to that time and tell me everything that happened from [some preceding event mentioned by the child] until [event as described by child]

Tell me more about [something or event mentioned by child] *[You can use this prompt many times]*

Tell me anything else that you can remember about [something or event mentioned by child]

You said something about [something the child said], tell me everything about that *[Use as many of these as you need to clarify what the student said]*

Thank you, using this scale *[point to POST-feelings thermometer]*, tell me how strong your feelings are NOW about the time you were in trouble?

[Wait for child's answer]

How easy was it to talk about the time you were in trouble? *[point to first evaluation scale]*

[Wait for child's answer]

Section 6: Free recall about a time they were happy

Now I would like to hear about a time when you were happy

Can you think of a time when you were happy?

[Wait for child's answer]

[If the child cannot think of a time:]

Have a really big think, there are many things that can make people happy

Can you think of a time when you were happy?

[Wait for child's answer]

[When the child can think of a time:]

Using this scale *[point to PRE-feelings thermometer]*, tell me how strong your feelings are about the time you were happy

[Wait for child's answer]

Tell me everything you can remember from when you were happy – from the beginning to the end.

Use three appropriate encourages – write down the main points of the child's story

[Wait for child's answer]

Tell me other things you can remember about that time.

[Wait for child's answer]

Tell me some more things about the time.

[Wait for child's answer]

Have another big think, and tell me anything else you can remember about the time you happy, even the little things.

Keep going with these open prompts until the child does not remember anything else

SUMMARY: Provide a summary of what the child has said (not too long) and ask – Is there anything else you can remember about the time you were happy?

Section 7: Follow-Up Questions - Happy

Follow up key details reported by the child and encourage elaborative reporting for each detail – trying to obtain information about what happened. Try to be systematic with this, focussing on one piece of information and details associated with it until the child indicate s/he can recall no more.

Repeat what the child has said, using his/her own words – use some/all of the following prompt:

Thank you, I'm really interested in hearing more about that – I'm going to ask you some more questions now to find out more

Tell me about the very first thing that happened.

And then what happened? / What was the very next thing that happened after [something or event mentioned by child]? *[You can use this prompt several times until you have an overview of the incident]*

OK, so you mentioned [something mentioned by child], tell me everything you remember about that. *[You can use this prompt many times]*

Think back to that time and tell me everything that happened from [some preceding event mentioned by the child] until [event as described by child]

Tell me more about [something or event mentioned by child] *[You can use this prompt many times]*

Tell me anything else that you can remember about [something or event mentioned by child]

You said something about [something the child said], tell me everything about that *[Use as many of these as you need to clarify what the student said]*

Thank you, using this scale *[point to POST-feelings thermometer]*, tell me how strong your feelings are NOW about the time you were happy?

[Wait for child's answer]

How easy was it to talk about the time you were happy? *[point to second evaluation scale]*

[Wait for child's answer]

Section 8: Closing

You have told me lots of things today, and I want to thank you for helping me.

Is there anything else you think I should know about the times you were in trouble or happy?

[Wait for an answer.]

Are there any questions you want to ask me?

[Wait for an answer.]

Before you head back to class, could you please rate your time with me today *[point to evaluation scale]*

How was your time talking to me today? *[point to third evaluation scale]*

Appendix C Coding Scheme

Code	Definition	Example
CI Child Irrelevant information	Responses that are not directly related or are unimportant to understanding the nominated event	Any non-event talk Elaborations that go onto non-event talk Empty language, e.g. <i>I forgot, I don't remember, I don't know, and that's all I can remember</i> Umms, ahhs False starts Repetitions
CR Child Relevant information	Unique responses that are directly related to and assist in understanding the nominated event	<i>(I took) (my brothers) (train) and (mum) (was cross with me)</i>
CEp Child Episodic information	Relevant descriptions involving event specific, external information about what happened during the event	E.g. information regarding – People <i>My brother, my mum</i> Actions <i>Took, kicked, went, saw</i> Places <i>The park, mall, neighbours</i> Objects <i>The ball, shoes, train</i> Time <i>In the morning</i>
CEv Child Evaluative information	Relevant descriptions involving information about the child's subjective internal experience or mindreading others thoughts, feelings, experiences	E.g. information regarding Emotions of self and others <i>I was sad/sorry/happy etc.</i> <i>She was cross</i> Sensations <i>It hurt/felt funny/tickled etc.</i> Thoughts <i>It was cool</i> <i>She thought ...</i>
IR Interviewer Relevant questions	Any questions directed towards the child after they have nominated a target event	

	Not including any supportive statements or utterances	
IOp Interviewer Open questions	Asks the child to talk about something they have not yet spoken about	<i>Can you tell me everything you can remember about that time?</i> <i>What else happened?</i>
IFol Interviewer Following questions	Asks the child to continue with narrative production	<i>What happened next?</i> <i>And then what happened?</i>
ICu Interviewer Cued questions	Includes something that the child has mentioned, asking them to expand openly with uncontaminated incident specific information	<i>You mentioned ... tell me everything about that?</i> <i>Can you tell me some more about the ...?</i>
IFoc Interviewer Focussed questions	Asks the child to elicit specific information about the event	<i>What day/time was that?</i> <i>Where were you when that happened?</i>
ICI Interviewer closed questions/option-posing	Asking a question that requires a yes or no response, or offering the child a forced choice	<i>Were you with your mum?</i> <i>So then you kicked the ball?</i> <i>Was that at home or at school?</i>

Rules

- People
 - “I” is not regarded as episodic information (i.e. people) – people include any person present other than the child narrating the event
 - “I saw” “I said” etc. are given one action code, and no people code
 - Code the first instance of any individual mentioned
 - Code “we” as “I” (i.e. no credit) unless it gets ‘upgraded’ by identifying someone specific and then the second rule applies
- Individual and Objects/Places
 - If an object/place is mentioned that involves a person’s name or is labelled as being owned by them – this is only to be coded once as the individual is not ‘present’ during the event
 - i.e. mum’s earrings

<ul style="list-style-type: none"> • Closed question responses <ul style="list-style-type: none"> ○ If a closed question elicits new information, code the “yes” or “no” for what it is referring to <ul style="list-style-type: none"> ▪ E.g. “was this in the day time?” – “yes” = coded as episodic (time)
<ul style="list-style-type: none"> • Children clarifying interviewer’s questions <ul style="list-style-type: none"> ○ Do not code <ul style="list-style-type: none"> ▪ E.g. “do you mean...?” “huh?”
<ul style="list-style-type: none"> • Cued questions worded as closed questions, e.g. “can you tell me some more about...” <ul style="list-style-type: none"> ○ Code based on the child’s response – reflecting their understanding of the questions <ul style="list-style-type: none"> ▪ No response = closed ▪ Yes/no = closed ▪ Elaboration = cued ○ Same rule does not apply for other types of questions
<ul style="list-style-type: none"> • Questions ending with “or?” <ul style="list-style-type: none"> ○ Coded as a closed question