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INVESTIGATIVE INTERVIEWING OF CHILDREN WITH INTELLECTUAL DISABILITIES

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for the degree of
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DEAKIN UNIVERSITY
CANDIDATE DECLARATION



I certify that the thesis entitled

“Investigative Interviewing of Children with Intellectual Disabilities”

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Abstract

This research was designed to examine two broad issues in relation to the investigative interviewing of children (aged 9 to 13 years) with mild and moderate intellectual disabilities. First, how do children with intellectual disabilities perform (relative to children matched for chronological and mental age) when recalling an event in response to various questions? Second, what question types and interview strategies do police officers and caregivers use to elicit accurate and detailed accounts about an event from children with intellectual disabilities? The rationale for exploring each of these issues was to determine possible ways of improving the elicitation of evidence from children with intellectual disabilities. While children with intellectual disabilities constitute a high proportion of all child victims of abuse (Conway, 1994; Goldman, 1994; Morse, et al., 1970), they rarely provide formal reports of abuse and of those incidents that are reported, few cases progress to court (Henry & Gudjonsson, 1999).

Study 1 used a standard interview protocol containing a variety of questions and an interview structure commonly used in investigative interviews. Specifically, the memory and suggestibility of eighty children with either a mild and moderate intellectual disability (M age = 10.85 years) was examined when recalling an innocuous event that was staged at their school. The children's performance was compared with that of two control groups; a group of mainstream children matched for mental age and a group of mainstream children matched for chronological age. Overall, this study showed that children with both mild and moderate intellectual disabilities *can* provide accurate and highly specific event-related information in response to questions recommended in best-practice guidelines. However, their recall

was less complete and less clear in response to free-narrative prompts and less accurate in response to specific questions when compared to both mainstream age-matched groups.

Study 2 provided an in-depth analysis of the types of questions and strategies used by twenty-eight police officers and caregivers when interviewing children with either mild or moderate intellectual disabilities (M age = 11.13 years) about a repeated event that was staged at their school. The results revealed that while the approach used by the police officers was generally consistent with best-practice recommendations (i.e., their interviews contained few leading, coercive or negative strategies), there were many ways in which their approach could be improved. This study also showed that the caregivers used a high proportion of direct and negative strategies to elicit information from their children. Even when caregivers used open-ended questions, their children provided less event-related information than they did to police interviewers. The results of both studies were discussed in relation to current 'best-practice' guidelines for interviewing children and recommendations were offered for improving the quality of field interviews with children who have intellectual disabilities.

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CHAPTER 1 – INTRODUCTION

Children with intellectual disabilities constitute a high proportion of all child victims of abuse when considering the base rate of intellectual disability in the general population (Conway, 1994; Goldman, 1994; Morse, Sahler, & Friedman, 1970). With regard to child sexual abuse, approximately 50% of girls and 30% of boys with an intellectual disability are victims of this abuse before the age of 18 years (Ericson, Perlman & Isaacs, 1994). These estimated rates are in stark contrast to those for mainstream samples (around 20% for girls and 9% for boys; Giardino, Finkel, Giardino, Seidl & Ludwig, 1992). Not only are people with intellectual disabilities vulnerable to the commonly-documented forms of abuse such as physical, sexual and emotional abuse, they also experience a high rate of neglect (Sullivan & Knutson, 1998; Goldman, 1994) and other less ‘acknowledged’ forms of abuse. These latter forms of abuse occur mainly through the adoption of aversive ‘behaviour management techniques’ by carers and educators. Such aversive techniques include, false imprisonment under the guise of time out, denial of food or finances, and inappropriate chemical restraint (Conway, 1994; Westcott & Cross, 1996; Williams, 1995).

Numerous explanations have been offered in the literature to explain why children with intellectual disabilities are more vulnerable to abuse. First, children with intellectual disabilities tend to have a high reliance on others for personal care, and are thereby exposed to numerous (potentially abusive) carers (Conway, 1994). Second, due to their limited cognitive capacity and dependence on adults for personal care, some children with intellectual disabilities have more difficulty than mainstream children in distinguishing between appropriate and inappropriate

physical contact (Goldman, 1994; Williams, 1995). Third, some children with intellectual disabilities suffer from significant language or communication problems that make it difficult for police to gain the necessary evidence to prosecute offenders of these crimes (Aldridge & Wood, 1998; Conway, 1994). Finally, children with an intellectual disability are more likely to live in urban regions (to attend appropriate health and education facilities) where crime is more common (Dent, 1992; Ramey, Campbell, & Finkelstein, 1984).

Despite the relatively high rate of abuse among children with intellectual disabilities, police rarely pursue such crimes involving these children. Even in countries which enforce the mandatory reporting of child abuse, an estimated three out of every four cases of sexual abuse involving children with intellectual disabilities are never reported to authorities (Sobsey & Varnhagen, 1989). Of those cases that are reported to police, most informants complain that the allegation had not been taken seriously (Clare, 2001). Further, of those alleged cases of abuse that finally reach the courts, a guilty verdict is rarely reached. Williams (1995) suggested that of every 100 offences committed, only three actually result in a court conviction due to 'insufficient evidence' or 'lack of credibility' of the child witness¹ (Henry and Gudjonsson, 1999). On the basis of these statistics, one could confidently argue that children with intellectual disabilities are being denied adequate access to the criminal justice system (Milne, 1999). This is a serious human rights issue. Regardless of their communication style, all persons have the right to report crimes, the right to be believed and the right to have the appropriate legal ramifications brought down upon those people who commit crimes against them (Lawrie, 1999; The Children Act Guidance and Regulations, 1991).

¹ In crimes such as abuse, witnesses often play a central role and serve as the base on which the investigation is formed (Berliner & Barbieri, 1984; Milne & Bull, 1999).

The under-representation of children with intellectual disabilities in the criminal justice system is a complex issue, and there are no doubt numerous contributing factors. First, within the Australian legal system (as well as that of other English speaking countries) a high standard of proof is usually required to convict a person of abuse and there are numerous restrictions on the way evidence is gathered and received (see S vs R, 1989). While a large number of reforms to judicial proceedings have been implemented for dealing with child victims/witnesses in general (e.g., closed-circuit television, videotaped evidence), these tend to focus on reducing potential stress of testifying rather than addressing the other barriers to communication experienced by children. Second, there is an abundance of literature to support that prejudices exist among investigative interviewers that lead them to underestimate the ability of individuals with intellectual disabilities to give credible and reliable evidence for the court. These prejudices include the widespread perception among police and the judiciary that children with intellectual disabilities are not competent witnesses (Aarons & Powell, in press; Brennan & Brennan, 1994; Clare, 2001), are not particularly vulnerable to abuse (Marchant & Page, 1992; Westcott, 1994), and are not as affected by abuse as mainstream children (Conway, 1994; Marchant, 1991).

A third factor likely to lead to the under-representation of children with intellectual disabilities in the criminal justice system is the effectiveness of questions asked in the investigative interview. Previous research has demonstrated that children with intellectual disabilities perform more poorly than mainstream children in memory interviews. Poorer performance is usually attributed to cognitive factors, (e.g., shorter attention span, poorer explicit memory process, Ericson, et al., 1994), social factors (e.g., poorer self confidence which can lead to increased willingness to

acquiesce to an interviewers' false suggestions, Heal & Siegelman, 1995) as well as factors related to the interviewer. For instance, one of the common criticisms of police (as well as lawyers) in recent years has been the frequent use of jargon and leading questions (Sternberg, Lamb, Davies & Westcott, 2001; Warren, Woodall, Hunt & Perry, 1996). While poor question styles are not confined to children with intellectual disabilities per se, these children are particularly vulnerable to poor interviewing practice because they often lack the verbal skills and confidence to withstand a direct and coercive questioning process and have difficulty understanding the full meaning or context of questions that are put to them (Brennan & Brennan, 1994; Ericson, et al., 1994; Home Office, 2000).

Given these concerns, several experts have made a concerted effort to provide clear recommendations about how to interview children, including children with intellectual disabilities (Brennan & Brennan, 1994; Bull, 1995; Marchant & Page, 1992; Milne, 1999; Wilson & Powell, 2001). For example, the revised Memorandum of Good Practice, hereby referred to as the Guidance² (Home Office, 2002) provides recommendations for how to interview vulnerable and intimidated witnesses (both adults and children) so as to maximise the quality of evidence in criminal proceedings. In addition to outlining a wide range of issues (such as preparation and planning, decisions about whether or not to conduct an interview and methods of recording the interview), the Guidance outlines how the interview should be structured and what specific questions should be used. The recommendations of this document (while addressing specific issues that need to be considered with children with intellectual disabilities) are similar to those of other prominent child interview protocols (e.g., the NICHD protocol, the Stepwise interview). That is, *all*

² The full title of the revised Memorandum of Good Practice is 'Achieving Best Evidence in Criminal Proceedings: Guidance for Vulnerable or Intimidated Witnesses, including Children'.

major protocols emphasise that the interviewer's questions need to be matched to the interviewee's communicative abilities, rapport needs to be established while making the process of the interview clear, suggestive/leading questions and other coercive practices should be avoided, and the interviewer needs to elicit an account of the event (where possible) in the interviewee's own words. Unfortunately, however, little research has examined the impact of these guidelines with regards to children with intellectual disabilities. First, little research has examined the *performance* of children with intellectual disabilities (relative to mainstream children) in response to the various recommended question types. Evaluation of the effectiveness of current 'best practice' guidelines is necessary for gaining a full understanding of the precise task that interviewers' face when interviewing children with intellectual disabilities and for fine-tuning recommendations for how to tailor an interview to their needs.

Second, little research has examined whether (and how) police actually *implement* these interviewing guidelines. While research has examined how police interviewers perceive the quality of their interviewing with children who have an intellectual disability (Aarons, Browne & Powell, 2003; Cahill, Grebler, Baker, & Tully, 1988), we know relatively little about what they actually do in practice. This is important because research using mainstream child samples has revealed discrepancies between *recommended* versus *actual* interviewing performance (Powell, 2002). Further, investigative interviewers frequently complain that recommended strategies are not practical and effective in eliciting evidence from children with intellectual disabilities (Aarons & Powell, in press). A careful observation of the strategies used by investigative interviewers may provide important information about how they attempt to overcome barriers to communication with children who have intellectual disabilities and may help to

develop better training programs. The current thesis aims to provide one (albeit small) attempt to address both these aspects.

Overall, the current thesis is structured as follows. Chapter 2 provides a brief overview of the barriers faced by children with intellectual disabilities when participating in investigative and evidentiary interviews. These barriers include factors related to the child, factors related to the interviewer as well as factors related to society and the legal system in general. Chapter 3 summarises the recommendations currently offered by experts for minimising the detrimental effect of these barriers. The guidelines for interviewing children (in general) are presented, along with a justification for why these guidelines are suitable for children with intellectual disabilities.

The remaining chapters of this thesis focus on providing an examination of the *nature* and *effectiveness* of strategies currently used to elicit information from children with intellectual disabilities. Specifically, two original studies are presented. Chapter 5 presents the first study, which examines the effectiveness of a wide range of questions that constitute ‘best practice’ guidelines. Specifically, the performance of children with mild and moderate intellectual disabilities was compared with the performance of two control groups (one matched for chronological age and the other matched for mental age). The aim of this study was to enhance our understanding of the effectiveness of current ‘best practice’ interviewing guidelines which may provide a basis for fine-tuning interviewing recommendations and for improving the quality of interviewer training in general. Before presenting this study, a critical review of the previous research is offered (Chapter 4) that examines the performance of children with intellectual disabilities (compared to mainstream children) when

recalling events. Importantly, this review provides the justification for the research procedures and goals of this thesis.

While Study 1 focused on the effectiveness of recommended interview techniques on children's performance, Study 2 (Chapter 6) examined the degree to which these recommended techniques are actually adopted in the field. In this second study, a group of twenty-eight police interviewers (especially trained in the investigative interviewing of children) were asked to elicit an account from a child with a mild or moderate intellectual disability about a staged event that occurred in the child's school. Specifically, the officers were asked to elicit as much accurate and detailed information as possible about the event using whatever techniques they felt appropriate. The type and frequency of the various questions and strategies used by these officers was examined along with those of another group of interviewers (i.e., caregivers). The questioning style of caregivers was examined because these persons have considerable experience in communicating with children with intellectual disabilities, and may provide useful ideas for improving the quality of police interviews. Further, an examination of the questioning style of caregivers provides insight into the types of adult-child verbal interaction that children with intellectual disabilities are used to. The final chapter of this thesis provides a discussion of the implications of the current findings for both researchers and investigative interviewers.

CHAPTER 2 – BARRIERS FACED BY CHILDREN WITH INTELLECTUAL DISABILITIES IN INVESTIGATIVE INTERVIEWS

As indicated in Chapter 1, children with intellectual disabilities are more likely to be victims of abuse compared to their mainstream peers, and yet there does not seem to be a fair and reliable system for the investigation of complaints made by them. Despite the high rate of abuse among children with an intellectual disability, these allegations of abuse are frequently not reported to authorities (Sobsey & Varnhagen, 1989) and if they do reach the courts, a guilty verdict is rarely reached (Williams, 1995). While the situation is complex and there are numerous factors contributing to this problem, the under-representation of children with intellectual disabilities in the criminal justice system is probably due in part to the higher number of barriers these children face in the investigative interview compared to their mainstream peers. These barriers increase the likelihood that information obtained from these children will be inaccurate, unreliable and/or not credible. The current chapter offers a brief summary of these barriers and their impact on the quality of evidence obtained from children with intellectual disabilities. Factors related to the child are discussed first, followed by factors related to the interviewer and factors related to the broader legal system and police organisation.

2.1 Child-Related Barriers to Communication

It is well established that children with intellectual disabilities have greater difficulty communicating with adults compared to mainstream children (Guralnick,

1998; McCollum & Hemmeter, 1997; Spiker, Boyce & Boyce, 2002). There are numerous potential reasons for this difficulty, some of which include cognitive and social factors related to the child. Descriptions of these barriers are briefly offered below.

2.1.1 *Cognitive Factors*

There are several broad areas of cognitive impairment associated with intellectual disabilities that impact on a person's ability to recall personal events in an investigative interview situation. First, children with intellectual disabilities often display deficits in receptive and expressive language skills. Receptive language includes the understanding of words and sentences either through listening or reading (Sattler, 2001). Expressive language is the ability to produce and express information in a verbal form that is meaningful to the intended listener (Conti-Ramsden, 1989). While the abilities of children with intellectual disabilities do generally relate to their mental age of functioning (Fowler, 1998), variability does exist within any group of mental age-matched children. This is due in part to the different aetiologies of intellectual disability. That is distinct linguistic profiles have been identified across different intellectual disabilities including, Down syndrome, Williams syndrome, autism, fragile X syndrome as well as other less common causes (Fowler, 1998). A difficulty in predicting the precise nature and degree of language deficits in any given child is also compounded by the fact that a deficit in one area of language development is not necessarily associated with deficits in other areas (Kerman & Sabsay, 1989). For example, a child may have normal receptive language skills compared to age-matched controls, yet have considerable difficulty communicating

in words. Obviously, deficits in receptive and expressive language create barriers to communication in an investigative interview. Poor receptive language skills affect children's ability to understand the questions asked of them, especially when long and complex questions are used (Cooke & Davies, 2001; Kebbell, Hatton, Johnson, & O'Kelly, 2001). Poor expressive language skills limit the likelihood that the child will be understood as well as the child's ability and willingness to challenge the interviewer when inaccurate or inappropriate questions are posed (Brennan & Brennan, 1994; Kerman & Sabsay, 1989).

Second, most children with intellectual disabilities display deficits in attention (Bergen & Mosley, 1994; Zeaman & House, 1963). Specifically, they have difficulty maintaining focus on relevant information (while screening out irrelevant information), searching for new information, comparing and contrasting dimensions of a visual image, shifting cognitive strategies flexibly to meet new task demands, and altering their physiological state to maximise attention to information. Typically, during attention-demanding tasks, individuals exhibit a deceleration of heart rate, which allows them to habituate to the environment and allow for better attention. However in some forms of intellectual disability (e.g., those not labelled under a specific sub-type), individuals exhibit heart rate acceleration, which disrupts their ability to attend to stimuli (Iarocci & Burack, 1998). The question is raised whether these limitations are due to specific deficits or due to a delay in development. In a review of previous studies, Iarocci and Burack found support for the notion of a developmental rather than difference approach to attention limitations in children with intellectual disabilities. That is, performance of children with intellectual disabilities is said to be directly associated with their mental age. This proposal is in contrast to that of previous research that found support for a difference theory

(Bergen & Mosley, 1994; Melnyk & Das, 1992). The explanation proposed by Iarocci and Burack for the discrepancy in findings was that previous research had utilised poor matches for children's developmental level and poor distinction between sub-types of intellectual disability.

In addition, research has revealed that some types of attention deficits are evident in children with intellectual disabilities when compared with chronological age-matched peers, while others are not. For example, studies have revealed equivalent ability across children with intellectual disabilities and chronological age-matched children in sustained attention (Crosby, 1972) and physiological responses associated with attention (Pilgrim, Miller & Cobb, 1969). However, with regards to children's ability to selectively attend to relevant information whilst filtering irrelevant information, distracters tend to divert the attention of children with intellectual disabilities more than their age-matched peers (Follini, Sitkowski & Stayton, 1969). While research has not yet provided a clear picture of the precise nature of children's attention deficits, it is clear that problems in selective attention would have an obvious effect on a child's ability to encode information about an event *and* to retrieve this information in a face-to-face interview session.

Third, a considerable amount of research has demonstrated that children with intellectual disabilities perform more poorly than age-matched controls on a wide range of memory tasks. These tests include recall of digits, symbols, words and events (Cromer, 1994; Henry & Gudjonsson, 1999; Michel, Gordon, Ornstein & Simpson, 2000) as well as more simple tasks such as pattern recognition (Serna, Wilkinson & McIlvane, 1998). The global nature of the memory problems has led some authors to propose that persons' with an intellectual disability should be categorised as having an 'everything deficit' (Detterman, 1979). However, the use of

multiple different measures in studies has yielded some differential, yet consistent results. One area that has received attention in recent years is that of dual memory processes, labelled implicit and explicit memory processes (Fyffe, 1996; Jacoby, 1991). Explicit memory involves conscious and intentional encoding and retrieval of information, for example, intentionally retrieving a list of items that need to be purchased at a shop (Roediger, 1990; Wyatt & Conners, 1998; Turnure, 1991). In contrast, implicit memory relies on less active memory strategies (Borkowski, Peck & Damberg, 1991; Turnure, 1991). For example, the act of following a familiar path home (when there is no conscious recollection of a previous episode of travel down the path) would rely primarily on implicit memory processes (Borkowski, et al., 1991; Turnure, 1991). Recent research has suggested that explicit memory processes (e.g., rehearsal, chunking, categorising of information) are the likely source of memory deficits in children with intellectual disabilities (Fyffe, 1996; Wyatt & Conners, 1998).

Evidence for poorer memory performance of children with intellectual disabilities being located in explicit memory tasks is found in studies that have incorporated valid and standardised measures of both explicit versus implicit memory tasks (Komatsu, Naito & Fuke, 1996; Perrig & Perrig, 1995; Takegata & Furutuka, 1993; Wyatt & Conners, 1998). The measures of implicit memory typically included either picture completion or word completion tasks (i.e., Snodgrass's Picture Fragment Completion Task, 1990). In these tasks participants are shown pictures or words and are subsequently shown partial replicas of those pictures or words that they are then required to complete. Measures of explicit memory involve having the children verbally recall a list of words or pictures previously seen. Although there is ongoing debate as to whether the problem with

explicit memory is due to a delay in the development of these strategies (Weiss, Weisz & Bromfield, 1986; Weisz, Yeates & Zigler, 1982; Fyffe, 1996) as opposed to an inability to use them at all per se (Milgrim, 1973), there is now general consensus that children with intellectual disabilities do have greater difficulties with explicit memory tasks compared to controls.

In relation to an investigative interview situation, deficits in explicit memory processes have obvious implications for both recall of information and children's acceptance (acquiescence or repetition) of misinformation provided by the interviewer (Loftus, 1979). The finding implies that the greatest differences in the amount of accurate information provided by the children with intellectual disabilities and age-matched controls would be in response open-ended questions which require the generation of information as opposed to the recognition of a familiar response (Henry & Gudjonsson, 1999; Perlman, Ericson, Esses, & Isaacs, 1994). In other words, children with intellectual disabilities would have greater reliance on external cues (Gudjonsson, 1992). One implication of a greater reliance on interviewer cues is that error rates would increase with the use of these questions particularly for children with intellectual disabilities. Specifically, limitations in explicit memory processes, or those processes that intentionally seek out stored information means that children with intellectual disabilities would have difficulty filtering out misleading information and therefore would be more susceptible to interviewer misinformation (Fyffe, 1996).

While the explicit versus implicit memory debate has located the source of memory deficits in both the encoding *and* retrieval stages of memory, other authors have proposed that problems in the initial encoding or acquisition of information are more significant for children with intellectual disabilities than that of retrieval.

Schultz (1982) suggested that people with intellectual disabilities have more difficulty in encoding semantic or conceptual information compared to their mainstream peers, though they would not differ from mainstream peers in shallow encoding (i.e., encoding of perceptual or surface features of objects only). Specifically, Schultz examined the time that participants with intellectual disabilities required to encode information on either shallow, deep or intermediary levels, in comparison to mainstream controls. His study revealed that participants with intellectual disabilities took significantly longer than controls to perform deeper encoding, though there were no differences on shallow or intermediary levels of encoding.

In summary, it is clear that children's intellectual disabilities have numerous cognitive deficits that would create barriers to communication when recalling events in an investigative interview. However, the precise nature and source of these impairments and the extent of any differences in performance between children with intellectual disabilities versus controls have not been well articulated in the literature to date. This is because most memory, language and attention tasks are highly complex and are dependent on a large number of extraneous and interrelated factors that are difficult to control in research designs (Baddeley, 1981, 1982).

2.1.2 *Social Factors*

The elicitation of accurate and reliable information from a child witness is dependent on social, as well as cognitive, mechanisms. Social mechanisms reflect motivational factors, the effect of authority and demand characteristics on children's reporting accuracy, and the level of confidence a witness has in his/her own abilities.

Support for the influence of social factors on children's memory, in general, has been demonstrated in studies that have revealed the eagerness of children (particularly young children and children with intellectual disabilities) to comply with adult interviewers' false suggestions (Ceci & Bruck, 1993; Henry & Gudjonsson, 1999). It seems that the greater the power differentiation between a child and an interviewer and the lower the child's confidence in his/her recall, the greater the likelihood that the child will provide false information that he/she thinks that the interviewer wants to hear (Ceci & Bruck, 1993). The reduced social status and lower confidence of children with intellectual disabilities compared to mainstream children may explain the higher rate of errors in the reports of these children when responding to misleading or suggestive questions. Indeed, research involving mainstream samples has demonstrated a negative relationship between self-esteem and suggestibility (Pipe & Salmon, 2002).

When one considers the social experiences of many children with intellectual disabilities, it is easy to understand why they might be more willing to rely on cues provided by an interviewer compared to their own memory and abilities. First, children and adults with intellectual disabilities are often regarded as having lower social status compared to mainstream populations in that their abilities and opinions about matters (even their reports of abuse) are more likely to be dismissed (Villamanta Legal Service, 1991; Williams, 1995; Westcott & Cross, 1996). Second, children with intellectual disabilities are more likely than mainstream children to reside in institutions or residential settings where normal social interactions are limited (Filla, Wolery & Anthony, 1999) and a high level of cooperative and compliant behaviour with caregivers is expected and rewarded (Perlman, Ericson, Esses & Isaacs, 1994; Marchant & Page, 1992; Westcott & Cross, 1996).

Third, parents of children with intellectual disabilities have been shown to be more direct and controlling conversational partners and less responsive to conversation initiated by the child compared to parents of mainstream children (Mahoney, 1988). For instance, Saetermoe, Farruggia and Lopez (1999) demonstrated that adolescents with disabilities were discouraged from initiating conversation with their parents and they were less likely to have meaningful conversations with their parents about issues that were relevant to them. This style of interaction could not be explained by cognitive limitations per se (i.e., impairment in the ability of children to articulate their thoughts and provide clear signals about the topics that interest them). The detrimental effect of this style of interaction on children's language development and confidence is profound (see Roberts, Bailey & Nychka, 1991; Tannock, Girolametto, & Siegel, 1992; Yoder & Davis, 1990). Finally, society often perceives people with intellectual disabilities as asexual, and as a result they are not always provided with the language to describe either private body parts or abusive activities (Westcott & Cross, 1996).

The impact of social as well as behavioural factors on children's memory and suggestibility is mediated in part by cognitive factors. For instance, children with intellectual disabilities demonstrate a greater incidence and severity of problematic temperaments and related behavioural problems (e.g., fear, anxiety, hyperactivity, shyness) (Gullone, Cummins & King, 1995; Mariage, & David, 2001; Ramirez, & Kratochwill, 1997). These factors potentially influence suggestibility either indirectly, by inhibiting memory processes, or more directly by inhibiting children's attentiveness, and thus reducing how much information is encoded and retained from events (Young, Powell, & Dudgeon, 2003). Inversely, low confidence in one's abilities or a greater desire to please an interviewer can increase suggestibility by

making witnesses less reliant on their own memories. Indeed, research has revealed a higher incidence of acquiescence and other response biases (the propensity for the interviewee to agree with a question independent of its content) among children with intellectual disabilities compared to mainstream samples even when knowledge about an event has been controlled for (Dattilo, Hoge, & Malley, 1996; Young, et al., 2003).

In summary, there are many factors that impact on the ability of children with intellectual disabilities to recall event-related information. Whilst social factors impact all interviewees recall ability, the limited and negative social interactions that children with intellectual disabilities experience in their everyday life makes them more susceptible to making errors when recalling events, particularly when coercive and leading questioning practices are used to probe their memories.

2.2 Factors Related to the Interviewer

Despite the influence of cognitive and social factors on the memory performance of children with intellectual disabilities, the quality and quantity of information obtained in any interview situation is largely a function of the skills of the interviewer and the interview context (Lamb, Sternberg, & Esplin, 1998; Wood & Garven, 2000; Yuille, Hunter, Joffe & Zaparniuk, 1993). Obviously, the interviewers' ability to build rapport with the child and the questioning strategies he/she uses plays a major role in determining the quality of evidence obtained. Leading, suggestive and coercive questioning practices increase error rates in all groups of witnesses (this issue is discussed in more detail in Chapter 3). However, other more subtle factors related to the interviewer can also have a negative effect on

the performance of children, particularly children with intellectual disabilities. Specifically, destructive prejudices and misconceptions about children with intellectual disabilities are widely held by interviewers, their organisations as well as broader society. These are discussed in the paragraphs that follow.

First, previous research suggests that investigative interviewers tend to underestimate the ability of children with intellectual disabilities to provide useful evidence (Brennan & Brennan 1994; Marchant & Page 1997; Westcott 1994; Milne & Bull, 1999; Sharp, 2001; c.f. Aarons, et al., 2003). This perception is often based on a lack of awareness on the part of investigators of the abilities of people with intellectual disabilities (Sharp, 2001). Further, interviewers tend to feel pessimistic about their own ability to elicit worthwhile information from children with intellectual disabilities (Aarons, et al., 2003). When the interviewee has an unusual method of communication, or even less extreme communication difficulties, it is not uncommon for the interviewer to feel extremely anxious about the interview process (Brennan & Brennan, 1994; Marchant & Page, 1997). One possible consequence of these prejudices/anxieties is that interviewers may feel they have to provide more cues and specific questions than are necessary in an interview. Such questions increase the rate of errors in children's reports and increase the likelihood that the child's evidence will not be admissible in court (see Chapter 3 for more detail). Another consequence of an underestimation of the child's ability to provide useful evidence is that the interviewer may choose not to pursue a report of abuse made by a child with an intellectual disability. These consequences have been openly acknowledged by police officers in qualitative studies (see Aarons, et al., 2003).

Where do interviewers' prejudices come from? They probably result in part from a lack of information, training, and experience in interviewing children with

intellectual disabilities (Aldridge & Wood 1998; Sharp, 2001; Westcott & Cross, 1996). A report based on investigative interviewers in the United Kingdom indicated that 80% of investigative interviewers had not received training specific to people with a disability (Dukes, 1997). Furthermore, Sharp noted that in the United Kingdom there is no “module within the national police training that deals specifically with people with LDs (learning disabilities) at present” (2001 p. 90). When training is conducted in relation to children with intellectual disabilities, it is often devoid of practice and critical feedback which is needed to develop feelings of competence (Brennan & Brennan 1994; Westcott & Davies, 1996).

Negative beliefs about the abilities of children with intellectual disabilities are not restricted to investigative interviewers; they are deeply embedded in society. For example, a commonly held myth about children with intellectual disabilities is that they are less impacted by abuse than mainstream samples (Marchant, 1991). Obviously professionals who hold this belief would be less aware of the potential risks of abuse to children with intellectual disabilities (Brown & Turk, 1994; Kennedy, 1992). A further commonly held myth is that children with intellectual disabilities are more inclined to make false allegations of abuse than mainstream children (Marchant, 1991). This belief impedes not only the willingness of investigators to pursue investigations involving children with intellectual disabilities, but also the willingness of members of society to report the abuse to authorities. This is because children typically disclose abuse to people close to them, such as teachers, parents or relations. When children have additional difficulties communicating (e.g., they rely on auxiliary forms of communication such as communication boards), the myths held by society can become exacerbated. That is, adults dictate the language on communication boards. If these adults perceive there is little risk of abuse to

children with intellectual disabilities, there would appear to be no reason to give these children access to the words required to report abuse (Westcott & Cross, 1996).

Even when the individual interviewer does have a positive and realistic view regarding the communicative abilities of children with an intellectual disability, organisational pressures limit the quality of evidence obtained from this vulnerable group (Aarons & Powell, in press). Such pressures include restrictions imposed on the time available to obtain useful evidence, financial limitations on the amount of 'refresher' training and practice in interviewing children with intellectual disabilities, and a lack of knowledge and training among workplace supervisors. One reason why organisations do not support high quality training and further education in how to interview children with an intellectual disability may be the lack of research available on this topic. Without access to research demonstrating the abilities of children with intellectual disabilities and the success of recommended techniques in interviewing these children, organisations have little justification for revising the level of professional development offered to staff.

2.3 Factors Related to the Legal System

The Australian judicial system (like that of most English-speaking countries) requires that defendants are provided with a fair and legitimate trial. To ensure this, strict rules surrounding the type of evidence required are imposed (Rush, 1997). This includes a high level of specificity or contextual details related to the offence. With regards to offences such as abuse, which by nature may have occurred on numerous occasions, children must identify at least two incidents of the abuse as well as specific temporal or contextual details, (i.e., when and where the incident occurred,

what the alleged perpetrator said or did, where other members of the child's family were at the time). Particularising an offence in this manner is an exceptionally difficult task for an adult or child of normal intellectual ability (Powell & McMeekan, 1998), let alone a child with an intellectual disability. Further, the extensive time delays of months (if not years) between the abuse and the actual court proceedings further impairs children's ability to remember the necessary details required for the successful prosecution of an offender.

2.4 Summary

Children with intellectual disabilities face numerous barriers when participating in investigative interviews. Some of these barriers are related to the child, including cognitive factors (e.g., language, attention and memory deficits) as well as social factors (e.g., reduced self-esteem and negative prior interactions). Other barriers of communication relate to the interviewer and include limited training in interviewing and myths about the inability of these children to provide accurate information. Overall, these barriers typically decrease the quality and quantity of information obtained from these children compared to mainstream samples and they decrease the interviewer's willingness to pursue investigations. While deficits in the children's language, attention and memory are difficult to overcome, experts suggest that their detrimental effect can be minimised if appropriate questioning strategies are used to elicit the children's evidence (Home Office, 2002; Marchant & Page, 1997; Milne, 1999). The following chapter briefly outlines the recommended questioning strategies that are designed to overcome barriers to communication when interviewing children with intellectual disabilities.

CHAPTER 3 – GUIDELINES FOR INTERVIEWING CHILDREN WITH INTELLECTUAL DISABILITIES

The communication barriers faced by children with intellectual disabilities make these children particularly vulnerable to providing unreliable or insufficient evidence about events (Aldridge & Wood, 1998; Conway, 1994). Investigative interviewers are required, therefore, to ensure that the methods, approach or language in the interview does not undermine the credibility of these children (Marchant & Page, 1992). While the needs and abilities of children with intellectual disabilities are different to those of mainstream children, guidelines for conducting investigative interviews of these children (i.e., those interviews where the purpose is to obtain relevant and accurate information about a person and/or event) are similar for all vulnerable witnesses. Indeed, there is broad international consensus regarding optimal interview protocols and practices, as all the prominent child investigative interview protocols adopted around the world (e.g., the Memorandum of Good Practice, the NICHD protocol, the Stepwise interview) consist of the same main phases and elements (see Poole & Lamb, 1998 for review). These phases include rapport building, gaining a free-narrative account from the child, using specific questions and closing the interview. The current chapter provides a brief description of how each of these components is implemented in the investigative interview and how the specific needs of children with intellectual disabilities can be addressed within them.

It is important to note that the following recommendations exclude particular reference to those children who have major physical (e.g., visual, auditory or speech) impairments. While many children with intellectual disabilities have multiple disabilities, it was beyond the scope of this thesis to examine the effect of questions

using augmentative and alternative communication methods (which are designed to replace or enhance the child's speech) or the use of interpreters (see Marchant & Page, 1992, Wilson & Powell, 2001 for more detail). The fact that discussion of these aspects was excluded from this thesis should not be taken to imply that they are not important considerations in interviews involving children with intellectual disabilities. (see Westcott & Cross, 1996).

3.1 Rapport Building Phase

The term 'rapport' is generally defined as a harmonious and understanding relationship between two people (Moore, 1996). In an investigative interview, it also refers to a relationship based on trust, which is important when the interviewee is expected to talk about aspects of his/her life that are embarrassing, secretive or traumatic (Wilson & Powell, 2001). Good interviewer-child rapport is considered so important in investigative interviews about abuse that most interview protocols list 'rapport-building' as an initial and discrete stage in the interview. In this phase, interviewees are encouraged to talk for a few minutes (or longer if required) about neutral, non-threatening or enjoyable aspects of their lives. Topics often include favourite sporting activities, television programs and school (Home Office, 1992). Encouraging children to talk about such experiences helps them to relax by establishing a non-threatening environment where the interviewer shows that (s)he has an interest in what the child has to say and the child feels confident to speak up (i.e., feels that he/she will be listened to and be understood). However, there are two additional benefits of the rapport-building phase. Each of these is discussed in turn.

3.1.1 *Nature of the Child-Interviewer Interaction*

An additional benefit of the 'rapport-building' phase is that it tells the child about the nature of the interaction that is expected throughout the interview. Specifically this interaction should be 'child-centered'. Being child-centered means allowing the child to do most of the talking and allowing the child's needs to be the main priority (Wilson & Powell, 2001). Such a style of interaction requires time for children to get used to because they do not often experience face-to-face interviews with adults in their daily lives or interviews where they get to do most of the talking. In particular, children with intellectual disabilities rarely engage in active conversation with adults (Westcott & Cross, 1996). When adults do show considerable interest in them, they sometimes assume they must have done something wrong (Mahoney, 1988; Roberts, et al., 1991; Tannock, et al., 1992).

Getting the child to feel comfortable doing most of the talking in the interview can take time because children often perceive adults as a source of information and instruction, not vice versa (Home Office, 2002). Further, children are socialised from an early age to co-operate with adults (i.e., 'good' behaviour is perceived by children to be behaviour that pleases the adult and will therefore be rewarded). In fact, the nature of the adult-child interaction in an investigative interview (where the adult does not know what happened and needs to understand the child's experience of it) is so alien to children that experts suggest that the rules of conversation (hereby referred to as 'groundrules') should be made explicit at the start of the interview.

What are the groundrules of an investigative interview? First, an interaction needs to be set up where the adult makes it clear that (s)he does not know about the child's situation and needs to learn this from the child. Instead of stating

preconceptions about the child and expecting the child to agree or disagree with these (e.g., “I bet you like to play footy”, “Do you like to go to the beach on Christmas day?”), the most effective interaction is where the interviewer offers few specific prompts for the child. For example, the interviewer could say during the rapport-building phase; “To get to know you better, I’d like to hear about things you like to do. Tell me something you like to do at school..... Tell me more about that”. This latter example is useful because it establishes an interaction where the interviewer has no (potentially inaccurate) preconceptions about what the child does like to do at school, and it is the child’s job to tell him/her. Such an interaction is vital for eliciting spontaneous and detailed information in the main part of the interview when the child is required to relate the details of an offence (Sternberg, et al., 2001).

Second, an interaction needs to be set up where the child feels (s)he can speak without feeling embarrassed or incompetent about his/her lack of knowledge and imperfect mastery of language. People with intellectual disabilities who are embarrassed about their abilities attempt to mask their incompetence by attempting to answer questions that they do not understand or know the answer to (Kernan & Sabsay, 1989). They do this by guessing a response, by acquiescing to yes/no questions, and by repeating words or phrases previously provided by the interviewer (Ceci & Bruck, 1993). Ways to discourage such response patterns include instructing the child to say ‘I don’t know’ or ‘I don’t understand’, and to use *any* words that they want when talking about an event. This includes slang, nicknames and even swear words (Bull, 1995; Ericson et al., 1994; Home Office, 2002; Powell & Thomson, in press).

Third, an interaction needs to be set up where the child understands the importance of providing as much detail as possible, without making anything up

(Lamb et al., 1998; Wilson & Powell, 2001). However, it needs to be kept in mind that providing detail is very demanding for a child, particularly when language skills and attention span are limited (Ericson, et a., 1994). Indeed, about twenty-minutes is the maximum amount of time that many children with an intellectual disability can concentrate (Home Office, 2002). This highlights the importance of the interviewer conducting the conversation at a relaxed pace, where long pauses are tolerated and where the child is free to respond without pressure. It also highlights the importance of watching for signs of tiredness and fatigue throughout the main interview and allowing the child to take breaks where needed. While signs of fatigue may vary among children with intellectual disabilities, common signs include; wriggling movements, restlessness or yawning (Wilson & Powell), difficulty remaining on the topic, repeating what the interviewer says, (echolalia; Kernan & Sabsay, 1989), deterioration in speech, refusing to answer further questions (Marchant & Page, 1992). If an interview is allowed to continue when the child is showing these signs, it is likely to be detrimental to both rapport and the quality of the evidence obtained (Home Office, 2002).

The above-mentioned rules of conversation need to be emphasised and encouraged in the rapport building stage, but they may also need to be explicitly stated immediately prior to conducting the main interview about the alleged offence. Further, for some groundrules to be effective it is also important to provide children with a concrete example of how to use that groundrule in the context of the interview. For example, in two separate studies conducted by Vrij and Winkel (1994) and Mulder and Vrij (1996), an instruction to say “I don’t know” was only effective in the latter study when the children were given practice in doing so. Table 2.1 provides a summary of the main groundrules discussed throughout this section as well as the reason these groundrules are important in the investigative interview.

Table 2.1: Some important groundrules in investigative interviews of children.

Groundrule	Elaboration
If I misunderstand something you say, or I say something that isn't true, please tell me.	It needs to be stressed to the child that the interviewer does not know what has happened and that if the interviewer says something that is wrong, the child has the right to correct him or her.
I was not there when it happened. So tell me <i>everything</i> you can remember.	Children often think that adults already know the answers to their questions. Further, they may not know what level of detail is required so it may be useful to explicitly state that they should report everything.
If you do not understand something I say, please tell me and I will try to say it using different words.	Sometimes a child will tell an interviewer that (s)he does not know the answer to a question, when in fact, (s)he does not understand the question.
It's OK to say 'I don't know' or 'I don't remember'.	Some children may be reluctant to use this response without explicit permission.
Tell me if you need to take a break and have a little rest.	Children often feel that the interviewer must dictate when the interview commences and stops.
Please do not guess or make anything up. Just tell me what you really remember. It's important to only talk about things that really happened.	This reminds the child of the importance of speaking the truth.

Adapted from Wilson & Powell (2001).

3.1.2 *Assessment of the Child's Abilities*

A second goal of the rapport-building phase is to provide the opportunity for the interviewer to assess the child's language abilities. This is particularly important with children who have an intellectual disability because their abilities are not likely to be predicted on the basis of age alone (Marchant & Page, 1992). Further, adult interviewers have a tendency to underestimate the performance of children with intellectual disabilities, especially when these children display physical mannerisms that are not as common among mainstream samples (e.g., rocking, not making eye contact, unusual vocalisations; Marchant & Page, 1992; Westcott & Cross, 1996). Whilst interviewers should use as many resources as possible to understand the child's communication style prior to the interview (Marchant & Page, 1992), it is also important that they perform their own assessment in the early stages of the interview. This is so that they can frame the questions about the alleged offence in a manner appropriate to the child (Poole & Lamb, 1998). The best way to understand how the child uses language is to get the child to talk as much as possible in the rapport building phase (see Poole & Lamb, 1998 for more detail).

3.2 Free-narrative Phase

After the rapport-building phase of the investigative interview, experts recommend that the interviewer shift the focus to the topic of concern (i.e., the alleged offence) and then elicit a free-narrative account of the offence in the child's own words (Home Office, 2002; Lamb, et al., 1998; Wilson & Powell, 2001). Establishing the topic of concern is usually done by providing an open-ended prompt

(i.e., “Tell me what you have come to talk about today”). However, if the child does not know the purpose of the interview, the interviewer may need to use a more specific line of questioning (see Powell & Cunningham, 2003). Once the to-be-recalled event is established, the interviewer then asks the child to recall as much as (s)he can remember about the event (e.g., “Tell me everything you can remember about... from the beginning to the end”) (Powell & Thomson, in press). When the child provides some information about the event, open-ended verbal prompts (e.g., “What else happened?”, “Tell me more about the part where...”) or non-verbal prompts (e.g., head nodding, uh huh, pauses) are used to encourage the child to keep talking (Powell & Thomson, in press). Although an extensive free-narrative account may be too demanding for some children who have extremely limited language skills (Ericson, et al., 1994), the interviewer should always start the interview with the presumption that the child is capable of providing this. More often than not, adult interviewers underestimate the abilities of children with intellectual disabilities to accurately relate events (Sharp, 2001).

The importance of the free-narrative approach is that it minimises the adult’s influence on the child’s account (Dent & Stephenson, 1979; Orbach & Lamb, 2001). When the adult interviewer uses specific questions, there is the potential risk that the child will attempt to respond with what (s)he thinks the interviewer wants to hear, rather than the truth per se (Ericson et al., 1994). Furthermore, once a child’s account is contaminated by specific interviewer questions, there is no sure way of removing the damaging effect on the evidence (Wilson & Powell, 2001). This reiterates the importance of the interviewer establishing good rapport with the child, and of having the patience to allow sufficient time for the child to respond using whatever language and time is necessary to express what occurred. Even when the child only provides a

sparse account (i.e., consisting of a few words), this may be helpful in providing an interviewer with a starting point of information to follow up on. Further, treating children as competent conversational partners gives them the confidence and motivation to do whatever they can to make themselves understood. As the following quote demonstrates, when adults under-estimate the abilities of children with intellectual disabilities, it has a marked impact on these children's self-esteem:

"When I am out shopping with my Mom and we meet an Auntie or an old friend they never ask me how I am, they always ask Mom. Most of the time I won't say anything, but sometimes I will sarcastically turn round and say 'fine thanks, how are you?' Then they give me a funny look as if to say, 'it speaks!'" (Westcott & Cross, 1996, p. 83).

It is true that children with intellectual disabilities often require more time than mainstream children to understand questions and to provide information about an event in a manner that is understood by the interviewer. This, however, does not mean that they need adults to speak *for* them (Tannock et al., 1992; Westcott & Cross, 1996). All children can communicate in some manner, and the role of interviewers is to determine *how* (not whether) the child communicates and *how* they can adapt to work around the child's disability. If the interviewer focuses on a child's deficits, rather than the ways that the child *can* communicate, the interview will be an anxiety-provoking experience for the child. The interview will also subsequently result in a self-fulfilling prophecy where the communication barriers will outweigh the resources available to children and interviewers to overcome them.

3.3 Questioning Phase

While the free-narrative phase provides the most accurate information from a child, it generally does not provide all the necessary information needed to

successfully prosecute an alleged child abuser (Poole & White, 1991; Steller & Boychuk, 1992). To elicit more specific offence-related information, there are a variety of additional questions that can be effectively used, provided they are used sparingly and only *after* a free-narrative account from the child has been exhausted. These questions (listed in order of preference) include; (i) open questions (e.g., “Tell me everything you can remember about what the man was wearing”), (ii) specific cued-recall questions (e.g., “What was the man wearing?”), and (iii) specific closed questions including yes/no questions (e.g., “Was the man wearing a red jumper?”) and forced choice questions (e.g., “Was the man wearing a red jumper a blue jumper or a green jumper?”). Note that open questions are the least detrimental of these options because they elicit the most detailed or elaborate response from the child. Closed questions (by definition) only elicit one or two word answers from the child.

The advantage of asking specific cued-recall and closed questions is they can tell the child *precisely* what information is required. The downside of using these questions, however, is that the number of errors usually increases because when specific information is requested, there is increased likelihood that the information requested is not available in the child’s memory store. When this is the case, the child could confuse the event with another event, or make up the information merely to please the interviewer (Ceci & Bruck, 1993). The risk of eliciting errors in response to specific questions is therefore amplified when the child’s memory of the event is weak or when the child has a strong desire to please the interviewer (Perlman et al., 1994; Pipe & Salmon, 2002; Sigelman, Budd, Spanhel, & Schoenrock, 1981).

Note that two other types of questions - ‘leading’ and ‘suggestive’ questions have not been recommended because the general consensus is that these questions should be avoided during the interview (Home Office, 2002; Lamb et al., 1998). A leading question is one that presumes the existence of facts that have not yet been established (e.g., stating the alleged offender’s name before the child had referred to

it) (Home Office, 1992)¹. Suggestive questions include those where the interviewer's tone of voice or phrasing indicates that a particular answer is desired (e.g., "Surely you don't eat at McDonalds, do you?") (Wilson & Powell, 2001). Because of their coercive nature and the high rates of errors associated with these questions, both leading and suggestive questions are generally not admissible in court (Home Office, 2002). This is especially the case when they are used to elicit information from the child that may be a source of contention in court (e.g., the offender's name or the act of abuse performed). Not only does a leading question impact upon the immediate response of the child, but it can also have repercussions for further information provided by the child as it promotes conversation around an aspect that may not have occurred (Stacey, 1999).

While open, specific cued-recall and closed questions can be used to elicit further information from the child in an interview (provided they are non-leading), there are measures that should be taken to minimise errors when using these questions. Where possible, the interviewer should use the least specific option available (i.e., open questions rather than closed questions) so that potential contamination is reduced. Other recommendations for minimising confusion include asking one question at a time, not repeating questions without specifying the reason, keeping the questions as short and simple as possible (i.e., avoiding passive, negative and multi-faceted questions, or questions that include complicated past tense verb phrases) and avoiding (where possible) the use of adult terminology relating to concepts of time and space. Examples of inappropriate and appropriate questions and

¹ Leading questions are difficult to distinguish from misleading questions. Leading questions request information about an item or event that did occur, as opposed to misleading questions that request information about an item or event that did not occur (Milne & Bull, 1999). However, in the field the interviewer cannot be sure about which type of leading question he/she is asking. This implies that neither are appropriate for use in an investigative interview.

a more extensive discussion of the recommendations outlined in this section are contained in the book by Walker (1999).

3.4 Closure Phase

The 'closure phase' (while often overlooked by interviewers) has several important functions in investigative interviews. First it is a time when the interviewer checks his/her understanding of the information elicited from the child (Wilson & Powell, 2001). While this is obviously done throughout the questioning phase as well, interviewers sometimes find it helpful to summarise what the child has said at the end of the interview (using the child's own words rather than the interviewer's) and to invite the child to correct for any misunderstandings while the summary is being read (Bull, 1995). To constantly check for misunderstandings throughout the questioning phase could be detrimental to rapport, as it can break the flow of conversation (Home Office, 2002). Further it can make the child feel that the interviewer is questioning the validity of the child's responses (Wilson & Powell, 2001).

Second, the closure phase is a time when the interviewer can debrief the child and carer. This includes thanking the child for his/her co-operation, answering any questions the child might have (e.g., interviewees are often concerned about what will happen next) and making the child feel positive about his/her role in the interview process (Tedesco & Schnell, 1987; Moston, 1992). This is important no matter how much information was provided by the child. To ensure that children leave the interview feeling relaxed and happy about their performance, the interviewer could return to discussion of the neutral or enjoyable topics that were talked about during the rapport-building phase (Home Office, 2002). Third, the closure phase provides the

opportunity for the interviewer to provide his/her contact details, should the child or the carer have further queries or information about the case at a later date (Wilson & Powell, 2001). Finally, the closure phase allows the interviewer to refer the child (if necessary) for appropriate counseling, therapy or other follow-up services, particularly if there is evidence of unresolved trauma about the event and/or the interview process.

3.5 Conclusion

Irrespective of the child's mental status and communication strengths and weaknesses, there is general consensus among experts regarding the phases and elements of the interview that elicit reliable and accurate accounts from children about events. The elicitation of useful evidence from any child depends in part on the interviewers' ability to use open-ended questions, to develop good rapport with the child, to be optimistic about the child's communication abilities, and to provide a clear description of the purpose and the ground-rules of the interview. Given the widespread acknowledgement among experts of the importance of these techniques, why then are cases of abuse involving children with intellectual disabilities being excluded from the courts? The paucity of prior research in this area excludes the provision of a clear answer to this question. However, there are two possible explanations related to the investigative interview that need to be considered. First, perhaps the guidelines listed above are not very effective in eliciting useful evidence from children with intellectual disabilities even though they offer the best approach currently available for mainstream children. Indeed, experts acknowledge that there is a paucity of empirical research on the effect of various questions with these samples, and that such research provides an important foundation for fine-tuning

guidelines in interviewing (Bull, 1995; Westcott, 1992). Second, perhaps the guidelines described in this chapter are effective, yet investigative interviewers are not implementing them for some reason. These two hypotheses provided the focus of the research presented in the remainder of this thesis.

CHAPTER 4 –THE EFFECT OF VARIOUS QUESTION TYPES ON THE RECALL OF CHILDREN WITH INTELLECTUAL DISABILITIES

As indicated in the earlier chapters, children with intellectual disabilities experience numerous barriers when being interviewed by police about events. These barriers make them particularly vulnerable to providing unreliable evidence when coercive and leading questioning styles are used to interview them. In response to this concern, experts have provided recommended guidelines to maximise the amount of accurate information obtained from children (Home Office, 2002). Given that the investigative interview process represents the first and arguably the most important point of contact with a child witness, one would assume that a high priority would be placed on examining the degree to which these recommendations overcome the barriers faced by children with intellectual disabilities. This has not been the case. Relatively little research has examined the effect of question types on the performance of children with intellectual disabilities compared to control groups when recalling events. Such research is important for understanding the precise task faced by interviewers when interviewing children with an intellectual disability and for fine-tuning recommendations for how to tailor an interview to suit the needs of children with intellectual disabilities. The current chapter presents a summary of the research that has been conducted to date on the performance of children and adolescents with intellectual disabilities when recalling events. An extensive search of the literature using ‘PsychInfo’ database revealed only seven studies related to this

issue¹. One additional study that was presented at a conference was obtained directly from the author. Each of the studies summarised included a variety of question types such as non-leading open-ended questions, specific cued-recall and closed questions as well as leading and suggestive questions (see Chapter 3 for definitions of these questions). Due to the very limited number of studies in this area, the review has been structured such that each study is discussed separately in turn. A detailed description (where possible) is initially offered of the events, samples, questions and results of each study. This is followed by a critical review of the designs and collated findings along with recommendations for how research in this area can be improved. Note that this review provided the basis for the research method and focus adopted in the subsequent two chapters of this thesis.

4.1 Pear & Wyatt, 1914

Pear and Wyatt (1914) published the first known study of the effect of various questions on the memory performance of children with intellectual disabilities. These authors examined the children's performance when recalling a staged event and compared this performance with that of a control group. The

¹ A study by Young, Powell, & Dudgeon (2003) was recently conducted that examines the suggestibility of children with intellectual disabilities compared to mainstream children. This study was not included in the review because it did not focus on the effect of questions on children's recall of an event per se. Rather, it examined whether age, IQ, communication ability, shyness and gender predict the suggestibility of children with intellectual disabilities and whether the relative influence of these factors on suggestibility differs between intellectually disabled and mainstream children. Participants included 75 children with mild and borderline intellectual disabilities and 83 mainstream children. All children were individually administered the Yield and Shift subscales of the Gudjonsson Suggestibility Scale (Form 2) as well as standardized measures of IQ, shyness and communication ability. The results provided preliminary evidence that age, IQ and communication ability influence the susceptibility of children with intellectual disabilities to misleading suggestions. Moreover, the influence of age and IQ on suggestibility was found to differ between the two samples. The implication of these findings were that they highlight the necessity for future research to examine individual differences in children with intellectual disabilities' suggestibility directly, rather than simply generalizing findings obtained with mainstream samples.

participants in the intellectual disability group included seventy-eight children aged 10 to 14 years who were recruited from special schools. Although they were labelled as 'mentally defective' the level of disability of these participants was not provided. Participants in the control group included sixty-five children aged 11 to 14 years who were recruited from mainstream schools. Neither the mean nor standard deviation of the children's age was provided for these groups.

Both groups of participants witnessed a 2 ½ minute event that was staged in their classroom. The event involved two affiliates (one male and one female) who entered the children's classrooms unexpectedly. The male affiliate then proceeded to talk to the children's teacher, showing her a number of objects that he was carrying in his bag. Some of these objects were merely removed from the bag and placed on the table, whereas others were made mention of to the teacher. The female affiliate was initially introduced to the teacher but she stood to one side during the event looking bored and rearranging some flowers she had with her. After all items had been removed from the bag, they were returned in the reverse order and the visitors said goodbye and left.

The children's memory of the event was assessed using two tasks. The first task, conducted the day after the event, involved the children providing a 'narrative' account of the event in written format. Specifically, the teacher asked the children to write an account of everything they saw from the time the lady and gentleman entered the room to the time they went out. The second task, which was completed immediately after the first task, and then again seven weeks later, involved the children writing responses to an 'interrogative' interview that included 150 predetermined questions that were read by the teacher. Thirty-six of the questions were framed in a suggestive manner. Though the type of questions used were not

specified, examples provided within the article indicated that at least some were specific cued-recall questions (e.g., “On which part of A’s face was the cut?”). Information recalled by the participants was assigned one point for each correct item of information and a similar value for each incorrect piece of information. Information recalled was divided into a number of separate categories including objects, colours, shapes, sizes, position, action, sequence and number. Range of information was determined by the total number of items recalled whether correct or incorrect and accuracy by the total number of correct items only. No statistical analyses were reported with regards to the level of difference between groups, however means and standard deviations were provided and the differences between the groups were discussed.

Pear and Wyatt found that on the narrative task, whilst the amount of correct information provided was considerably greater for the control group compared to the intellectual disability group, the proportion of accurate information provided by both groups was equivalent. Information provided by the participants generally consisted of salient (i.e., the most central and interesting) information from the event, including actions, items and positions. For the interrogative-type questions it was found that a third of the responses provided by the control group were incorrect, whereas half of the responses given by children with an intellectual disability were incorrect. The most errors were made in response to less salient aspects of the event, e.g. colours. There was relatively little difference in the number of these errors between the initial interview and the interview conducted after seven weeks.

Interestingly, the children in the intellectual disability group answered a greater number of the suggestive interrogative questions than did the control group. In addition, of the suggestive questions that each group responded to, the children

with intellectual disabilities were more inaccurate than the control groups. Pear and Wyatt concluded that children with intellectual disabilities were as accurate during narrative recall compared to the control group, but they provided less information and had more difficulty with particular types of information (i.e., details such as colour, size and sequence of information). In addition they were more incorrect in response to interrogative type questions.

4.2 Dent, 1986

Since the study by Pear and Wyatt (1914) no further work was published on the effect of question types on the recall of children with intellectual disabilities for over seventy years. Helen Dent was the first author to renew the investigation. Her first study was published in 1986. While this study did not use a 'normal intellect' comparison group, the performance of these children was able to be 'tentatively' cross-validated with a similar study she conducted in 1979 which used a sample of mainstream children who had similar chronological ages to the children in her 1986 study. Specifically, the 1986 study included twelve boys and eleven girls aged between 8 and 11 years (M age = 122 months²) with mild to moderate 'mental handicap'³ ($MIQ = 61.6$, $SD = 6.75$, range = 49-70).

The target event (which lasted approximately four minutes) was staged in the children's classroom. A male stranger entered the children's room unexpectedly and introduced himself as someone who worked at the local toy library. He then

² As the manner in which age is reported differs across studies (i.e., some studies report only M years and others M years and months) this thesis has reported all M age in months.

³ Although, Dent indicated that all the children had 'mild' disability, the IQ scores specified in the paper indicated that some of the children would now be diagnosed in the 'moderate' disability range (American Psychiatric Association, 1994 p. 40).

demonstrated a few of the toys, which he offered to loan the school. The following day, the children were randomly divided into three interview groups. One group of children was required to report everything they could remember about the event in their own words, with no verbal prompting (apart from the initial instruction) from the interviewer. The second group received a series of open questions (e.g., “What did the man look like?”). The third group received a series of specific questions (e.g., “What colour was the man’s hair?”). The time taken to conduct the interview, the specific prompts used, and the number of questions asked in the conditions was not noted, although it was stated that a single research assistant (who was blind to the design) conducted all interviews, which were held individually. The number of correct details each child recalled (out of a predetermined list of forty-six details) was noted as well as the number of errors reported. The number of correct details was totalled to determine the completeness of children’s recall, whilst accuracy was determined by dividing the number of correct details out of the total details provided (correct and incorrect). Descriptive information about the male visitor and his belongings versus general details about the event (e.g., what the man was doing) was coded separately.

The results revealed a significant difference between the groups for both the completeness and accuracy of children’s recall. Although Dent did not state precisely where the differences lay, the pattern of means (presented in the tables) indicated that the children who were asked the specific questions reported the most complete information whereas children in the free-narrative group recalled the least information. This was the case with regards to both general-event details as well as information about the man involved. With regards to the accuracy of the children’s reports, children who were given the open questions displayed the highest mean

performance whereas the participants who were given specific questions displayed the lowest mean performance. There was no difference found between the accuracy of information provided about the event as opposed to descriptions of the man for any of the question types.

Although Dent's (1986) study did not include a control group, she concluded (based on an 'eyeball' comparison of the means in her 1979 study) that children with intellectual disabilities do not make less reliable witnesses than mainstream children. However, she reported that the types of questions that are optimal for each group does differ. Specifically, she concluded that while 'free-narrative' prompts elicit the best balance between accurate and complete information from children with normal intellectual abilities, it is better to use a series of open-ended questions about various topics with children who have intellectual disabilities as this provided the best balance between complete information whilst limiting the amount of errors in children's reports.

4.3 Dent, 1992

In a second study, Dent (1992) directly compared the performance of 78 children (aged 8-12 years) (M age = 120 months) who had learning difficulties with that of two control groups. These control groups included a group of 102 children from mainstream schools (aged 9 to 10 years) and 65 adults (M age = 252 months) of average intellectual ability. The children with learning difficulties were identified as such by their teachers. The precise level of intellectual functioning of the children in this study was not measured.

The target event lasted four minutes and was staged in the children's classrooms. Specifically, two actors (a man and a woman) entered the classrooms and stated they had come to investigate the teachers' reactions to noise levels in the classroom. One actor asked permission to take the teacher's pulse, whilst the other actor walked around the room making an audio recording of the incident. The first actor removed a number of items (i.e., toys and biscuits) from her briefcase whilst looking for her stopwatch to take the teacher's pulse. After taking the teacher's pulse the two actors left, though they returned briefly to retrieve a book that they had mistakenly left in the classroom. As with Dent's (1986) study, the participants were divided into three groups for the interviews, which were conducted one week following the event. The first group was instructed to give a free-narrative account with minimal verbal encouragers. The second group was asked a series of 14 non-leading open-ended questions (e.g., "What did the man do while he was in your classroom?"). The third group was asked 72 non-leading closed questions that appeared to be all yes/no in nature, though this was not specifically stated (e.g., "Did the man give anything to your teacher?"). Dent noted that all questions were checked by a lawyer who confirmed that they would not normally be considered leading questions in a legal setting.

The number of correct details each child recalled (out of a predetermined list of 180 details) was noted as well as the number of incorrect details. As with Dent's first study, correct details recalled by the participants were totalled to determine the completeness of recall. Accuracy was based on the proportion of correct responses out of the total number of details provided by the child. In addition, the number of action versus descriptive details was coded separately. Information recalled by participants was also examined according to a checklist provided by a high-ranking

member of the West Yorkshire police force, in relation to which information from the event would be useful for a police interview.

Dent found no difference in performance across the three groups of participants for the accuracy of information reported in either the free-narrative or the open-ended questioning approaches. For the closed questions, both groups of child participants were found to provide less accurate information compared to the adult control group, however accuracy was equivalent in response to questions about the objects in the actor's bag and descriptive information. With regards to the completeness of the participants' responses, adults were found to provide more information in response to free-narrative and open-ended questions compared to both the child groups. However, in response to specific questions, children in the 'learning difficulty' group provided less information than the other two groups except in regard to objects that were in the actor's bag where no differences across the groups were revealed. Equivalent numbers of details were also provided across the three interview conditions about the female actor and for the male actor in response to open questions. Finally, scoring of information in accordance with the checklist provided by the police officer, revealed a similar pattern of results to the other forms of scoring. As with her previous study, Dent concluded that open-ended questions provided the best balance of completeness and accuracy for children with an intellectual disability. As misleading questions were not included in either of Dent's studies, the issue of suggestibility was not addressed.

4.4 Jens, Gordon & Shaddock, 1990

The ability of children with intellectual disabilities to monitor the source of information was examined in a study by Jens, Gordon and Shaddock (1990). Source monitoring ability has important implications for children's testimony because if

information that was experienced cannot be distinguished from information that was imagined, or information that was provided by an interviewer, then it is possible that details provided by a child may be false. Indeed, defence councils often suggest that in cases of child sexual abuse, the child has merely imagined or fantasized the details (McGough, 1994). Specifically the study by Jens et al. examined the ability of children with intellectual disabilities to discriminate between events they had performed versus events that they had imagined.

The participants included 24 children with intellectual disabilities (IQ score ranged = 47.0 to 76.5, mental age range = 53 to 103 months) and a control group of 30 children of normal intellectual ability (age range = 67 to 84 months). The average mental age of the two samples was matched as opposed to using a method that matches case by case. However, the standard deviation of mental age was not provided, therefore it was not determined whether the variation between groups was equivalent. The IQ scores for the children with intellectual disabilities was obtained from school records, however the precise tests from which these scores were derived were not specified.

The participants were required to perform ten activities and to merely imagine performing another ten activities (neither the order of these performed/imagined activities or whether they were counterbalanced was noted). Half of the participants performed/imagined the activities with an experimenter and half performed/imagined the activities on their own. The activities included putting on a hat, standing-up, sitting down, holding their hands up in the air, playing with a ball, walking like an elephant, crawling like a tiger, dancing in a circle and holding their nose and singing. Immediately following this task, the children were administered a series of standardised memory tests referred to as the McCarthy

Scales of Children's Abilities (1970) to determine the relationship between short-term memory and correct responses in the interview. Finally children were interviewed using a 'free-narrative' approach followed by specific, closed questions.

The child's free-narrative was obtained by asking a general open-ended prompt (e.g., "Tell me everything we/you did or imagined doing while we were together") followed by open-ended prompts ("What else did we/you do or imagine?"). Immediately following these questions, a series of specific questions were asked (one for each activity that was not recalled earlier) as well as four misleading specific questions. For these latter questions, the interviewer suggested that the child had performed or imagined an activity when this had not occurred. No definitions were provided of the types of specific and misleading questions asked, however the example provided was a specific closed question (e.g., "While you were with me, did you/we.....?"). Whenever children provided information about an activity in response to either an open-ended or specific probe the following question was posed; "Did we/you really do that, or did you imagine doing it?"⁴. Participant's responses were coded for correctness or errors by type of probe (open-ended versus specific) and whether the child altered his/her answer in response to the follow-up probe about whether the activity was performed or imagined. Children were also interviewed eight weeks later in the same manner as the initial interview.

Details provided by the children were coded as either correct or incorrect. Whilst not specified in the study, it appears that information was coded as correct and incorrect only on the basis of whether the child had correctly identified an activity as being performed/imagined, not for completeness of recall or whether the activity itself was correctly described. Incorrect details were grouped into three

⁴ Though not stated, it appears that these follow-up probes were asked regardless of whether the child stated that the activity was performed/imagined or not.

different categories; (a) whether information provided was initially correct but was altered in response to a follow-up probe, (b) initially incorrect but corrected in response to the follow-up probe, and (c) initially incorrect and remaining incorrect even in response to the follow-up probe.

Both children in the intellectual disability group and the control group provided more correct information in response to specific probes than open-ended probes. In response to specific probes about items performed, children in the normal intellect group provided a larger number of correct responses, though the proportion of all information that was correct was not reported. Whilst, not significant, the opposite trend was found in response to open ended probes, where children in the intellectual disability group reported more correct information about activities performed than the mainstream group. Jens et al. suggested that the slightly better performance of children in the intellectual disability group on open-ended probes may reflect both a lack of concern on their part about the accuracy of information reported and a need to provide a response rather than admit they do not know the answer. Children in both groups were found to recall more correct information in the initial interview and more information for items that were performed than imagined. No group differences were reported for responses to misleading questions about activities that were not performed or imagined. The study reported that whilst more correct information was provided in response to the specific probes, error rates also increased for these types of probes, although no analyses were performed on the number of errors made. Further these errors were often corrected with the follow-up probe. This may indicate that children did not understand the nature of the question in the first place; that is, that the question was trying to distinguish between whether items were performed or imagined. Finally, children's responses on the memory tests

of the McCarthy assessment tool were used to examine the relationship between short-term memory performance and correct responses to the interview questions. Results revealed no significant correlations.

4.5 Gordon, Jens, Hollings & Watson, 1994

Four years after their first study, Gordon, Jens and colleagues conducted another study comparing the source-monitoring ability of children with an intellectual disability versus mainstream children. The participants included 23 children (aged 8 to 13 years) with an intellectual disability (*M* mental age = 72 months) and 23 children (*M* age 74 months) of normal intellectual ability. The mental age of children in the intellectual disability group was determined by their performance on the Peabody Picture Vocabulary Test-Revised (PPVT-R; Dunn & Dunn, 1981)⁵. However, as neither the level of disability nor the range, mean or standard deviation of mental age was provided, it was not possible to determine the level of intellectual disability of these children.

All children participated in 24 activities in their classroom. Ten of these activities were performed, ten were imagined and the remaining four activities were performed but were then probed with misleading questions during the interview. The activities were similar to the previous study (Jens, Gordon & Shaddock, 1990) and involved children walking like animals, moving around the room, making faces, holding hands, and other similar actions. Immediately following the activities, the children were administered the PPVT-R and then were individually interviewed about the activities. An additional interview was conducted six weeks later.

⁵ The PPVT-R is not ideal for assessing children's mental age as it tests children's receptive language skills, rather than overall cognitive performance.

The interview was similar in structure to the previous study and began by eliciting a free-narrative account from the child (i.e., “Tell me everything we did or imagined doing while we were together”) followed by minimal encouragers (e.g., “What else did we do or imagine?”). A series of specific questions were then asked. These included non-leading, closed questions (one for each activity that the child had not previously talked about, e.g., “While you were with me did we clap hands together?”). Further, 12 misleading questions were asked. Eight of the misleading questions were about activities that did not occur, four of which were suggestively phrased, whilst four were phrased in a neutral manner. The remaining four questions were about activities that actually occurred, but were negatively phrased to suggest they had not. When information about an activity was provided, either in response to an open-ended or specific probe, a follow-up probe was asked about whether the activity had been performed or imagined (e.g., “Did we really hold hands or did you just imagine it?”).

Children’s responses to each question type were assigned to one of the following categories; (a) correct for both the initial and follow-up probe, (b) initially correct, but incorrect at follow-up, (c) initially incorrect, but correct at follow-up, and (d) initially incorrect and also incorrect at follow-up. As with Jens et al’s study, it appears that only information about whether the activity was performed or imagined was coded. The results revealed that irrespective of question type, all children provided more information and more correct information for activities performed. No significant differences were found between the groups on the number of correct details given in free-narrative, however the performance of both groups was noted as being near floor. For the non-leading specific questions, children of normal intellectual ability provided a larger number of correct responses than

children with an intellectual disability (at both retention intervals). This difference was reported as significant, however, at an alpha level of $p < 0.09$. No differences between the groups were reported on the number of errors made.

Children's responses to the misleading questions were examined across participant group, retention level and question type. Results revealed that although children in the mainstream group provided more correct responses to misleading questions than the intellectual disability group, the decline in their performance was greater over time, resulting in no differences between the participant groups at the delayed interview. Finally, the types of errors children reported in response to the different types of misleading questions were examined. Whilst some interesting patterns were found in the type of errors made in response to different misleading questions, no differences were reported between the participant groups.

4.6 Milne & Bull, 1998

In a study presented at the American Psychology and Law Conference held in Los Angeles in 1998, Rebecca Milne and Ray Bull examined the relative effectiveness of two interview protocols on the recall of 7 to 11 year old children with 'mild learning disabilities'. The performance of the children with intellectual disabilities was compared with the performance of children aged 8 to 9 years who attended mainstream schools. Note that because this study was presented at a conference, and does not appear to have been published since this time, relatively little detail is provided regarding the questions and samples.

The children were required to view a video clip of a magic show. The following day, children were interviewed using either the Cognitive Interview or a

structured interview. Whilst both interview approaches were similar (i.e. included rapport building, explaining ground rules, free-narrative, specific questioning, a second retrieval stage and closure), the Cognitive Interview incorporated some additional elements. These included, (a) a groundrule instruction which specified the importance of being complete, (b) 'context' reinstatement, (c) activation and probing of the image, and (d) reverse order recall in the second retrieval stage⁶. The interviews also tested suggestibility by including a predetermined list of misleading (i.e., directing child to incorrect response) and leading (i.e., directing child to correct response) questions that were presented either before or after the interviews. The children's responses were scored as either correct, incorrect (e.g., the child saying that a person in the video clip wore a blue jumper when the jumper was actually red) or confabulations (e.g., child reported something which did not occur in the video clip). Accuracy ratios of correct to incorrect information were examined as well the amount of correct information recalled by children.

The findings of this study indicated that children in the intellectual disability group reported significantly less correct information than the mainstream group irrespective of the type of response measured. However, the mainstream group (because they reported more information per se) reported significantly more incorrect details. As such, accuracy was equivalent across the two participant groups, although the Cognitive Interview elicited a greater amount of information (correct as well as incorrect details). In response to the misleading questions, the children with intellectual disabilities falsely acquiesced to more misleading questions than the control group, even after controlling for the total amount of correct information

⁶ Information regarding these interviews was taken from an earlier study conducted by the same authors (1995). As these two studies appeared quite similar in nature, with the exception that the earlier study did not include a control group, only the latter of the two studies has been reviewed.

recalled. This suggested that the higher rate of suggestibility for this group cannot be attributed to weaker initial memory. Finally, there was a tendency for the Cognitive Interview to increase the level of resistance to misleading questions however only when misleading questions were presented after the Cognitive Interview.

4.7 Henry & Gudjonsson, 1999

A recent study by Henry and Gudjonsson (1999) was the first study to include both mental and chronological age-matched control groups. The advantage of including two control groups is that it provides better cross-validation of findings across studies and helps to determine whether mental age is a better predictor of memory performance than chronological age for children with intellectual disabilities. The study included 28 children aged 11 to 12 years (M age = 140 months, SD = 6.60 months) with 'mental retardation'. One-third of these children had a moderate intellectual disability whereas two-thirds had a mild intellectual disability (M overall mental age = 84 months, although the SD and age range was not provided). In addition, the study included 40 children of normal intellectual ability, 19 of whom were matched for chronological age (11-12 years, M = 137 months, SD = 3.60 months) and 21 of whom were matched for mental age (M age = 86 months, SD = 4.75 months). Mental age was determined for all children on the basis of four subtests of the Wechsler Intelligence Scale for Children – III (Similarities, Vocabulary, Block Design and Picture Completion). That is, each individual group's mean raw score on each subtest was converted into a test age equivalent score from a table provided in the WISC-III manual, and an average 'mean age' was calculated

across the four subtests. The precise method by which the groups were matched, however, was not specified.

All participants were interviewed about a live event (of approximately four minutes duration) that was administered in their regular classroom. The event consisted of a female actor talking to the children about what school was like 100 years ago. The presentation included a demonstration (using several objects taken from the actor's briefcase) of how people used to write on a chalkboard. During her demonstration, the actor accidentally dropped a piece of chalk, and prior to leaving the classroom she almost forgot to take a pink cloth with her (this cloth had been used in the demonstration). A male actor accompanied the female but did not communicate with the children. His task was to videotape the presentation.

The day after the staged event, all the participants were interviewed using a variety of different question types. First, the children's free-narrative account of the event was elicited, using an initial instruction (i.e., children were required to say what happened when 'those people came into your classroom yesterday') which was followed by two further minimal prompts (i.e., "Anything else you can remember?" and "Can you remember anything else?"). Next, children were asked four open-ended or general questions about what the actors looked like and what they did (e.g., "What did the lady look like?"). Following this, 12 further specific cued-recall questions (defined as 'open-ended specific' questions) were asked (e.g., "What was the lady's name?"). Half of these questions were non-leading and half were misleading (i.e., they asked about information that was not present in the event). Finally, the children were asked 12 closed questions (e.g., "The chalk fell on the floor didn't it?"), half of which were non-leading and half were misleading. Non-leading questions were asked in a block, before the misleading questions. All

questions were asked irrespective of the child's previous response. The day after the interviews, all children were administered the four subtests of the Wechsler Intelligence Scale for Children – III. Finally, children were also administered the Gudjonsson Suggestibility Scale-2 (GSS-2) which is a standardised measure of children's level of suggestibility (see Gudjonsson, 1987).

Information recalled by participants across all question types was scored as either correct or incorrect. For the free-narrative and open-ended questions every correct piece of information provided by a child was given one point (e.g., the lady (1) came into the classroom (1)). The cued-recall and closed yes/no questions were both coded as either correct or incorrect as typically both these questions required only one word responses (this differed for one of the cued-recall questions which required three points of information and therefore was scored three points). Information was then totalled for amount of correct information and accuracy (proportion of accurate to total information recalled).

On free-narrative, children in the chronological age-matched control group recalled significantly more pieces of correct information than children in the mental age-matched control group. Children in the intellectual disability group did not differ significantly from either control group. For all other question types (except misleading yes/no questions) no significant differences were found in the amount of correct details recalled across any of the participant groups. For the misleading yes/no questions, the chronological age-matched control group acquiesced to fewer misleading questions than both the intellectual disability group and the mental age-matched control group, however, no significant differences were found between the mental age-matched and the intellectual disability group. An analysis of covariance (using free-narrative as a covariate) showed that the higher level of suggestibility in

both the experimental and mental age-matched control group could not be explained by a difference in initial memory performance. Analyses were also performed on the responses to the Gudjonsson Suggestibility Scale-2, which revealed significant differences in children's level of suggestibility. These differences indicated that children in the chronological age-matched control group were less suggestible than the other two groups, yet the intellectual disability and mental age-matched group did not differ from each other.

4.8 Michel, Gordon, Ornstein & Simpson, 2000

Michel, Gordon, Ornstein and Simpson (2000) conducted the final, and most recent, study on the topic of interviewing children with intellectual disabilities about events. The study included 20 children with an intellectual disability, 20 children matched for chronological age and 19 children matched for mental age. The children in the intellectual disability group were those labelled as 'educably mentally handicapped' by the school system although it was not indicated precisely how this label was determined. These children were aged 9 years, 5 months to 14 years, 1 month (M age = 139 months) and their mental age range (obtained through the Peabody Picture Vocabulary Test – Revised)⁷ was 5 years, 0 months to 8 years, 5 months (M mental age = 79 months). No other scores of intellectual functioning were provided, and level of intellectual disability was not reported. Children in the chronological age-matched control group were aged 9 years, 4 months to 13 years, 11 months (M age = 139 months). Children in the mental age-matched control group were aged 4 years, 8 months to 8 years, 10 months (M age = 75 months). Note that

⁷ The PPVT-R was administered individually to each child prior to the health check.

the two control groups in this study also received the Peabody Picture Vocabulary Test – Revised, so that it could be confirmed that the control groups were performing at approximately average levels.

This study was different to the other studies reviewed in this chapter in the sense the child participated in a number of interrelated activities, which centred around a central, meaningful theme (i.e., a simulated health check). The simulated health check, which was conducted at a university setting, involved 15 components that resemble a routine check up. These components included a trained research assistant taking the child's blood pressure, measuring the child's height and weight, checking hair, eyes, ears, nose, mouth etc. As children may have experienced previous health checks, an unexpected feature (i.e., taking the child's picture with an instant camera) was also included which enabled the researchers to ascertain whether the children were remembering the current health check, or other previous visits to the doctor. Though it was not stated, it is presumed that these health checks were administered individually to children.

Children's memory of the event was tested individually immediately after the health check and again, six weeks later (the same interviewer conducted each interview). A standard interview protocol was used, beginning with an open-ended 'free-narrative' prompt (i.e., "Tell me what happened during your health check") followed by a series of specific questions (e.g., "Did the woman check any parts of your face?") about components of the health check that had not been reported. The questions incorporated non-leading as well as leading questions (presented in a counterbalanced order) about features that did not occur during the health check. Half of the leading questions were phrased in a neutral manner (e.g., "Did the woman check your private parts?") and half were phrased in a more suggestive

manner (e.g., “The woman checked your private parts didn’t she?”). Although it was not specified, it appeared from the examples provided that all the specific questions were closed, yes/no questions. However, following each feature mentioned by the child in response to a specific question, the interviewer asked an open-ended question (e.g., “Tell me how she did that”) which required them to elaborate on their response. If the children could not elaborate, they were then asked a further yes/no question, (e.g., “Did she shine a light in your eyes?”).

The number of correct features recalled about the health check was calculated separately for the ‘free-narrative’, non-leading and misleading specific questions (presumably next to a pre-determined list of features that had occurred in the event). The responses to the questions seeking further elaboration were coded as (a) ‘0’ where no elaboration was provided, (b) ‘1’ where incomplete elaboration was provided, and (c) ‘2’ where complete elaboration was provided. Errors in children’s recall were referred to as ‘intrusions’ and coded in two ways. First as a ‘feature intrusion’ when a child falsely stated that a feature had occurred and second as an ‘elaboration intrusion’ when incorrect elaborative detail was provided about a feature that did occur.

The results indicated that the proportion of correct information recalled was equivalent across all three participant groups. In response to open-ended questions, however, participants in the chronological age-matched control group recalled significantly more correct information than the other two groups. The amount and proportion of correct information recalled by all three groups was found to decline over the six-week delay, although the deterioration was not reported to differ between groups. With regards to the amount of correct elaborative information provided by participants, it was found that in both the initial and delayed interview,

children in the intellectual disability group recalled significantly less elaborative information than their chronological age-matched controls. In comparison to the mental age-matched control group, children in the intellectual disability group were found to recall significantly less information at the initial interview only. No differences were reported between the two control groups. Overall, the number of 'feature intrusions' and 'elaboration intrusions' was near floor and did not differ between groups.

Finally, the researchers used a series of stepwise regressions to examine the contribution of mental age to children's memory performance. The results of these analyses indicated that mental age was a strong predictor of both children's open-ended recall and correct denials in response to misleading questions. Mental age was also found to predict the degree of elaboration, though to a lesser extent. The researchers conducted a second series of regression analyses including children's chronological age as well, however this was only useful in predicting the amount of children's elaborations at the delayed interview.

4.9 Summary and Critical Review of the Previous Studies

The eight studies described in this chapter demonstrated that children with intellectual disabilities can provide forensically relevant and accurate information about events. However, the studies revealed mixed findings regarding whether (and the degree to which) differences in performance occurred between the intellectual disability and control groups. Overall, these studies revealed that children with intellectual disabilities provide less complete and less accurate accounts compared to chronological age-matched groups. This has typically been found for all questions

except for free-narrative responses where accuracy for all groups is near ceiling. However, the findings are mixed with regards to whether and in relation to what questions, children with intellectual disabilities perform lower than mental age-matched groups. While theories predict that deficits in performance would be expected when using chronological but not mental age-matched peers, this has not always been the case. Of the four previous studies that have included mental age-matched control groups, two reported that on specific questions, the amount of accurate information recalled by children with intellectual disabilities was significantly lower than that of children matched for mental age (Jens et al., 1990; Gordon et al., 1994). However, the other two studies found no difference in the amount of accurate information reported in response to specific questions across intellectual disability groups and their mental age-matched controls (Henry & Gudjonsson, 1999; Michel et al., 2000).

Given the variability in the nature of past research designs, it is difficult to speculate about the precise conditions in which differences between the participant groups occur. While some would argue (based on research with mainstream children) that differences between the participant groups would be minimised when children are active participants, rather than mere observers of an event (see Section 4.9.1), this did not appear to be supported. Among the three studies that involved children's active participation in the event, two (i.e., Jens et al., 1990; Gordon et al., 1994) reported significant differences between the participant groups on the number of correct responses to specific questions (even differences between the children with intellectual disabilities and their mental age-matched control groups). In addition, no obvious pattern was revealed with regards to the relationship between participant group and question type. Some studies revealed differences between the intellectual

disability versus control groups in the amount of correct information recalled in free-narrative (Michel et al., 2000; Pear & Wyatt, 1914) as well as the number of accurate responses to closed questions (Dent, 1992; Gordon, 1994; Pear & Wyatt, 1914).

Other studies, however, reported no differences between the participant groups for open questions (Dent, 1992) or specific questions (Henry & Gudjonsson, 1999; Michel et al., 2000). The only consistent pattern was found in relation to children's suggestibility. Of the six studies that included misleading questions, the children with intellectual disabilities were always more likely to acquiesce to misleading questions than children matched for chronological age (Henry & Gudjonsson, 1999; Michel et al., 2000; Milne & Bull, 1998; Pear & Wyatt, 1914). However, no differences in performance were found between the intellectual disability and mental age-matched groups (Gordon et al., 1994; Henry & Gudjonsson, 1999; Jens et al., 1990; Michel et al., 2000).

The inconsistent patterns of results across the studies is confusing and may be due in part to the different designs used, including variations in the questions, the events, the time delays and the nature of the samples. When studies vary in their designs, it is difficult to cross-validate research findings and to speculate about the conditions in which children with intellectual disabilities perform more poorly than their age-matched controls. In some cases, studies did not provide clear descriptions of the procedures and samples. The following section discusses the limitations of the previous studies and discusses why careful selection of the events, delays, samples and question types is so important in research involving children with intellectual disabilities.

4.9.1 *Event Used*

All but one of the studies (i.e., Milne & Bull, 1998) relied on live events that were staged in the child's classroom or in a university setting. However, only three of the studies that used live events chose an event where the child was an active participant in the activities. In the remaining studies, the children were merely observers. Events that involve observation (as opposed to participation) are less easily encoded (Baker-Ward, Hess & Flannagan, 1990; Rudy & Goodman, 1991) and are more likely to disadvantage children with intellectual disabilities because these children are more distractible (i.e., less attentive during the event) than mainstream children and have a higher incidence of visual or auditory impairments. Events that involve observation rather than participation would also be considered to have less ecological validity because children usually testify about acts of abuse that were perpetrated against them (Goodman, Rudy, Bottoms, & Aman, 1990).

4.9.2 *The Retention Interval*

The delay between the event and the interview is an important consideration when cross-validating research findings. One of the most robust findings of research in human memory is that memory declines over time (Baddeley, 1990) and in investigative interviews, children may be interviewed weeks or many months after the crime was first perpetrated (Brainerd, Reyna, Howe & Kingma, 1990). While numerous studies did include interviews held after long delays (i.e., several weeks) (Gordon et al., 1994; Jens et al., 1990; Michel et al., 2000; Pear & Wyatt, 1914), these all included an initial interview held immediately after the event or the next

day. For instance, four of the studies (Gordon et al., 1994; Jens et al., 1990; Michel et al., 2000; Pear & Wyatt, 1914), examined participant's performance at an initial (immediate or next day) interview and then after a delay of six to eight weeks.

Overall, the inclusion of the delayed interviews produced few interesting effects.

When deterioration in performance occurred (which was not always the case), this deterioration did not typically interact with participant group. The only exception to this was for the study by Gordon et al. (1994). They found that whilst the mental age-matched control group recalled significantly more at the short delay (for specific questions only), the deterioration in their recall was greater over time such that there was no difference in performance between the participant groups at the final interview.

There are several important advantages for including immediate and delayed interviews in a within-subjects design. From a theoretical perspective, they allow differences in initial memory to be controlled for. Further, they reduce the need for large participant samples, which are difficult to obtain using participants with intellectual disabilities (due to the low incidence of intellectual disability within the general population). However, it needs to be acknowledged that including numerous delays in a within-subjects design does not provide a pure measure of retention interval per se. An interview conducted immediately or soon after an event consolidates memory of the event (see Powell & Thomson, 1997), and this may minimise differences in the decline of children's performance over time and across the participant groups.

4.9.3 *Samples Used*

A condition of studies being included in this review was that they incorporated a sample of children who had intellectual disabilities. Whilst it is presumed that the labels were contingent on the outcome of standardised measures of intellectual functioning, this was not always specified in the studies. Rather, some studies based their diagnosis of intellectual disability on recommendations from teachers (Dent, 1992) or labels provided in mainstream schools (Milne & Bull, 1998). Without the use of clear, transparent and standardised measures for labeling intellectual disability and without clear specification of the number of participants who have physical deficits as well, it is questionable the degree to which the experimental groups provide a measure of intellectual disability (if at all). Related to this issue, only one of the studies (i.e., Henry & Gudjonsson, 1999) stated that they had included children with moderate as well as mild intellectual disabilities. While Henry & Gudjonsson's (1999) study should be commended for including children with more severe intellectual deficits, it did not actually differentiate between the results of children with mild versus moderate disabilities. This seems to defeat the purpose of including different sub-groups of intellectual disability.

4.9.4 *Questions Asked*

One of the strengths of the studies reviewed is that they all tried to equate the structure of the interviews with that of recommended investigative interviewing approaches (i.e. where the interviewer elicits a free-narrative account from the child followed by more specific questions). However, the studies seemed to include few (if

any) minimal encouragers in their free-narrative phase of the interview. In other words, the children's narrative of the event was elicited in most part using broad open-ended questions. This procedure stands in contrast to that of current 'best-practice guidelines' which recommend the use (where possible) of minimal encouragers over open-ended questions (Lamb et al., 1998; Poole & Lamb, 1998). Further in the studies by Jens et al. (1990) and Gordon et al. (1994) the children's free-narrative accounts were frequently interrupted to allow for clarification of the nature of the activities recalled (i.e., whether they were experienced or imagined). This constant interruption and the heavy reliance on interviewer questioning in the free-narrative phase of the interview would have discouraged children from providing elaborate responses (Sternberg, Lamb, Hershkowitz, Yudillevitch, Orbach, Esplin, & Hovav, 1997). This would be particularly relevant to children with intellectual disabilities who require more time to provide their responses, and are more easily distracted (Bergen & Mosley, 1994).

A further problem related to the questions is that some of the studies utilised interviews where a standard list of questions were asked, irrespective of whether the child had recalled the event detail during an earlier phase of the interview (Henry & Gudjonsson, 1999; Pear & Wyatt, 1914). Not making questioning contingent on information previously recalled may create a greater disadvantage for children with intellectual disabilities than mainstream children. First, when information is requested that was already provided, the child may interpret this to mean that the initial response was incorrect and therefore a change in response is desired (Poole & White, 1991). Previous research has established that children with intellectual disabilities are more likely to change their responses to pressure from the interviewer than mainstream children (Young, et al., 2003). Second, interviews become very

long when there are numerous questions. This is particularly the case for children with intellectual disabilities who take a longer time to respond. Lengthy interviews was a problem in other studies as well. For example, Dent (1992) employed a design where one group of participants with intellectual disabilities was required to answer 72 specific questions in a single interview. Several studies administered the event, standardised tests of intelligence and the interview during the one session (Gordon et al., 1994, Michel et al., 2000). While it is acknowledged that conducting multiple separate sessions with individual children is extremely time consuming and costly for researchers, it is a particularly important consideration when attempting to obtain genuine measures of children's performance. Third, even though some researchers claimed to use non-leading questions (Dent, 1992, Gordon et al., 1994, Henry & Gudjonsson, 1999, Michel et al., 2000), this may not be strictly correct. While all the studies used specific questions, none specifically noted whether these questions were only asked when children had previously reported the item being referred to in the question. This is a problem because a question could be considered leading merely because it raises information not previously mentioned by the child.

An additional potential limitation of previous studies relates to the lack of reported counterbalancing when asking specific forced choice questions (e.g., Jens et al., 1990; Gordon et al., 1994). Research has revealed that mainstream children generally have a tendency to choose the first option or last option provided in a forced choice question (Milne, Clare, & Bull, 2002). Hence the lack of counterbalancing of items in Jens et al. (1990) and Gordon et al.'s (1994) studies may have influenced their findings.

A final limitation of previous studies is that some of the studies did not provide clear definitions of the types of questions they used. For example, Dent used a question type in her two studies that she labelled 'specific'. Whilst in her first study

this referred to specific cued-recall questions, in the second study it appeared to refer to specific closed questions. Other studies did not provide clear explanations or examples of the types of questions used (e.g., Jens et al., 1990; Pear & Wyatt, 1914). In the study by Henry and Gudjonsson (1999) the term ‘open-ended specific’ questions was used to define questions that probed highly specific information (e.g., “What was the lady’s name?”). Providing a clear definition of the questions used is obviously important for drawing comparisons across the results of studies.

4.10 Summary

While it is established that children with intellectual disabilities typically perform more poorly than their chronological age-matched controls, and on some occasions perform more poorly than their mental age-matched controls, the conditions under which this occurs has not been clearly demonstrated. One of the aims of future research should be to ascertain the conditions in which children with intellectual disabilities perform more poorly than mental and chronological age-matched controls. This will depend on careful selection of the type of event, samples, questions and retention intervals used. In order to produce findings that are generalisable to forensic interviewing situations, the conditions should be sensitive to the attention limitations of children with intellectual disabilities and should aim to equate as closely as possible the recommended interview guidelines. In order to cross-validate research findings, clear specification of the procedures and labels is required.

CHAPTER 5 – THE EFFECT OF INTELLECTUAL DISABILITY ON CHILDREN’S RECALL OF AN EVENT ACROSS DIFFERENT QUESTION TYPES (STUDY 1)

The current study examined the ability of children with mild and moderate intellectual disabilities to recall an event across a variety of different question types commonly used by investigative interviewers. The aim of this investigation was to better understand the effect of various questions on the evidence obtained from these children, relative to their mainstream peers. This knowledge, in turn, may explain why the evidence of children with intellectual disabilities is often excluded from the courts and how current recommendations for interviewing this group can be improved. As indicated in Chapter 1, children with intellectual disabilities constitute a high proportion of all child victims of abuse (Conway, 1994; Goldman, 1994; Morse, et al., 1970), however, offenders who commit these crimes are rarely successfully prosecuted (Williams, 1995).

The importance of the current study is heightened by the scarcity of prior research conducted in this area. An extensive review of the literature (Chapter 4) elicited only eight studies that examined the performance of children with intellectual disabilities when recalling events that they had witnessed or experienced (Dent, 1986; Dent, 1992; Gordon, et al., 1994; Henry & Gudjonsson, 1999; Jens et al., 1990; Michel, et al., 2000; Milne & Bull, 1998; Pear & Wyatt, 1914). Overall, these studies revealed that children with intellectual disabilities typically provide less complete and less accurate accounts compared to chronological age-matched groups. However, the findings were mixed with regards to whether and in relation to what questions, children with intellectual disabilities perform lower than mental and

chronological age-matched peers. As indicated in Chapter 4, it would be premature to speculate about when deficits in performance occur. First, the number of studies performed to date is small and the detail provided in relation to the questioning procedures and the samples is too limited to draw meaningful comparisons across the studies. Second, among those studies that did provide detailed descriptions of the designs, there was considerable variation in the nature of the events, the samples and the question types. When studies vary considerably in design it is difficult to speculate about the conditions under which deficits in performance are found for children with intellectual disabilities compared to controls.

Third, many of the studies used small sample sizes, inappropriate matching techniques (i.e., matched for mean age but not variability in age across participant groups) and research procedures that would have underestimated the performance of the children. Common design limitations include the use of brief (e.g., 4-minute) events that do not involve the participation of the child, lengthy testing procedures (incorporating large numbers of direct questions), and the absence of appropriate verbal prompts to elicit a comprehensive free-narrative account from the child. While it is true that all participants experienced the same procedures, and the focus of the studies was on *relative* performance across participant groups, it could be argued that procedures that do not actively engage the child pose a greater disadvantage for children with intellectual disabilities. This is because children with intellectual disabilities have limited concentration spans (Bergen & Mosley, 1994; Iarocci & Burack, 1998; Zeaman & House, 1963).

The aim of the current study was to examine further the memory performance of children with intellectual disabilities while addressing some of the above-mentioned limitations in the previous research designs. Eighty children aged 9 to 12

years with an intellectual disability participated in a 30-minute magic show that was conducted at their school and involved 21 target items. This show was staged by a female research assistant whose role was to perform a number of tricks, which required the assistance of the child participants. Three days after the magic show, the children received a biasing interview (administered by the researcher) that provided seven false and seven true details about the magic show. The day after the biasing interview, the researcher conducted a second interview, which was designed to elicit as many of the 21 target details as possible. The structure of this interview was consistent with current 'best-practice' guidelines in interviewing. That is, the interviewer began by eliciting an account of the event in the child's own words. The questioning then became progressively more specific such that a series of open, specific cued-recall, and then forced-choice questions were asked to elicit target items that were not previously provided by the child. That is, if the child provided one of the 21 predefined details in response to an open-ended question, then no further prompting about that detail was conducted. The performance of children with intellectual disabilities was compared to that of two control groups; one matched for mental age and the other matched for chronological age.

The design employed in this study differed from the designs of most previous studies in several ways. First, the event was engaging for all participant groups and involved a wide array of items (actions, objects, and verbalisations) that centered around a single theme (performing tricks). One of the concerns of previous studies is that the events had not been very relevant or interesting, and the children had not been active participants (i.e., many involved observing a brief demonstration in their classroom). Hence, the design of these previous studies would have reduced the likelihood that items would have been encoded. Second, a relatively large sample

size was used, and the performance of children with both mild *and* moderate disabilities was measured and defined according to *standardised* criteria. Further, the groups were matched in accordance with both group mean age *and* variability of age. While this procedure made the data collection period a lot more labour intensive than previous studies, it potentially enhanced the relevance, usefulness and reliability of the findings.

Third, a suggestibility paradigm was used that included a separate biasing interview as opposed to a large number of highly leading questions throughout the main interview. This enhanced the generalisability of the findings; that is, while children may receive highly suggestive questioning during an investigation about abuse, this typically does not occur in the audio- or video-taped investigative interview because this sort of questioning is not usually admissible in court. Further, it allowed the examination of a wide range of errors (i.e., false information previously offered by the interviewer as well as false details generated by the child).

Finally, the children's responses were coded in accordance with several distinct qualities that represent useful and reliable evidential interviews. Witnesses need to recall specific event details and the relevant points or contextual details that need to be elicited are usually dictated by the requirements of the interviewer rather than the child (see Wilson & Powell, 2001). Without this requirement (referred to as particularisation), the accused person's capacity to respond to the allegations would be seriously eroded (see S vs R, 1989). In addition to being complete and reliable, evidence, needs to be accurate, clear and elicited using minimal cues or prompts from the interviewer. Most eyewitness memory studies to date have merely measured the number and accuracy of specific details reported in response to different question types. A consideration of the clarity and specificity of the

questioning required to elicit the reports is also an important consideration for researchers. Clear reports that are elicited with minimal prompting from the interviewer (irrespective of accuracy) are more likely to be credible and admissible in court.

Overall, it was expected that the children with both mild and moderate intellectual disabilities would recall less detailed (i.e., contextual) information compared to their chronological age-matched peers, and the interviewers would require more specific prompts to elicit the target details from these children. Further, it was expected that children with intellectual disabilities would be less accurate compared to their chronological age-matched peers except for information provided during free-narrative. Research has already established that information provided in free-narrative is usually highly accurate (irrespective of mental or chronological age) and this finding has been supported in several previous studies involving children with intellectual disabilities (e.g., Dent, 1992; Gordon et al., 1994; Henry & Gudjonsson, 1999; Jens et al., 1990; Michel, et al., 2000; Pear & Wyatt, 1914). When comparing the performance of children with intellectual disabilities to their mental age-matched peers, no deficits in performance were expected. This was because theories of memory and language suggest that children with intellectual disabilities perform at their mental age (Fowler, 1998; Fyffe, 1996; Iarocci & Burack, 1998; Weisz, Yeates & Zigler, 1982; Zigler, 1982), and because the interactive nature of the event would ensure that *all* children had good opportunity to encode the event information.

Method

Design

Participants included 80 children aged 9 to 12 years with a mild or moderate intellectual disability, 53 mainstream children matched for mental age and 62 mainstream children matched for chronological age. All children participated in a 30-minute magic show, which was staged at their school and included 21 specific target items. The first interview (held three days after the magic show) was designed to provide false and true biasing information about these 21 items. The second interview, held the following day, was designed to elicit the 21 target details using the least number of specific prompts possible. That is, the interviewer attempted to elicit as much of the information as possible in the child's own words followed by the use of specific cued and forced-choice questions (where needed) to elicit target details that had not been provided by the child earlier. The design employed was a 3 (participant group; intellectual disability, mental age-matched, chronological age-matched) x 2 (level of disability; mild, moderate) with both factors manipulated between-subjects.

Participants

'Intellectual disability' Groups

Children with intellectual disabilities were recruited through letters to parents distributed at seven special schools¹ except in two cases where children

¹ In Australia, the term 'special schools' typically refers to schools for children with mild intellectual disabilities. Children with moderate intellectual disabilities generally attend separate educational institutions to children with mild intellectual disabilities, due to the higher incidence of multiple disabilities among these children. Prior to the commencement of this study however, teachers noted that this was not a rigid guideline and some children who attend special schools fall into the moderate intellectual disability range.

attended specialised integration programs in mainstream schools. All children with parental consent were invited to participate. It was made clear to each child that participation was voluntary and that they were free to withdraw their consent at any point in the study (either verbally or non-verbally), in which case any information gained would be disregarded. Note that none of the participants had any major visual or auditory impairments. Upon recruitment, the participants were then assigned to either a 'mild' or 'moderate' impairment category based on their Intelligence Quotient (IQ) score which was obtained from the Wechsler Abbreviated Scales of Intelligence (WASI; The Psychological Corporation, 1999) and the criteria for mental retardation outlined in the Diagnostic and Statistical Manual – IV (American Psychiatric Association, 1994 p. 40)².

Although the Wechsler Intelligence Scale for Children – III (WISC-III) is a more thorough assessment of children's level of cognitive functioning, the WASI was administered for several reasons. First, the test is a valid, yet brief test of cognitive functioning which consists of two subtests of the WISC-III (Vocabulary and Matrix Reasoning) that have been found to correlate most highly with the Full Scale IQ score of the WISC-III (Wechsler, 1991). Second, although the WASI does not allow an in-depth examination of performance across a variety of subtests, it produces a Full Scale IQ score which is all that was required in this study. Third, use of the WASI minimises problems associated with re-testing (e.g., practice effects; Sattler, 2001) because some children in the special schools may have completed the WISC-III within the previous 12 months. Use of the WASI would not

² The DSM-IV specifies that children with an IQ level between 50 and 70 have mild mental retardation, and children with an IQ level between 35 and 55 have moderate mental retardation. As there is an overlap between mild and moderate levels of mental retardation, children with an IQ score of 56 or above have been classified as having a mild intellectual disability and children with an IQ score of 55 and below have been classified as having moderate intellectual disability (as per Henry & Gudjonsson, 1999).

invalidate the results because it uses different items to the equivalent subtests in the WISC-III.

Children in this study with a mild level of intellectual disability consisted of 58 children (40 males, 18 females) who were aged from 9 to 12 years (M age = 132.57 months; SD = 13.85 months, range = 108 months to 155 months) and had an IQ score between 56 and 75 (M IQ = 62.88; SD = 4.76; range = 56 to 75). Note that 12 of these participants had a WASI- IQ score between 71 and 75, which actually places them in the borderline range. However, as they were attending a special school (and thereby would have previously been assessed as performing in the mild intellectual disability range), they were included in the study. One possible reason why these children may now be scoring above the cut-off score of 70 is because the school had been catering well to the child's particular needs. Indeed, the programs in these schools target important social aspects (e.g., improving the children's confidence and self-esteem). These factors play a major role in improving performance on IQ tests (Evans, 1998).

Children with a moderate level of intellectual disability consisted of 12 males and 10 females aged 9-12 years (M = 144.45 months; SD = 8.69 months, range = 127 to 155 months). These children all had a WASI - IQ score no greater than 55. Unfortunately, the precise IQ scores for this group could not be determined because the WASI does not provide scores below 55. However, for the purposes of this study, the benefits of using the WASI (see above) were considered to outweigh the disadvantages of not being able to measure the precise degree of moderate disability of this group.

Control Groups

Participants in both the mild and moderate intellectual disability groups were assigned two control groups. The children for the control groups were recruited through letters to parents distributed at four mainstream schools. All children with parental consent were placed in a pool of ‘potential participants’ ($N = 138$) provided their performance on the WASI (which was administered specifically for this research) revealed an IQ score in the average or higher range. Control groups were matched using a method recommended by Kantowitz, Roediger and Elmes (2001) that involved equating each participant group on both mean age and standard deviation (in months). Initially, participants’ ages in months were matched on a case-by-case basis. When no more control children of precisely the same age in months were available, then participants were randomly added to the control groups until the means and standard deviations of the control groups matched that of the intellectual disability group.

The mental age of the participants in the intellectual disability group was based on test age-equivalent scores of their raw scores (before standardisation by age) on the WASI (e.g., a raw score of 14-15 on the vocabulary subtest was equivalent to a test age of 6.2 years)³. As a test age equivalent score is given for each individual subtest, participants were assigned two test age equivalent scores, which were then averaged to determine the participant’s mental age. The mean mental age of participants in the mild intellectual disability group was 82.78 months ($SD = 9.92$ months, range = 75 to 112 months). As indicated earlier, the variance and range in mental age for the moderate intellectual disability group could not be determined using the WASI because the minimum level of mental age determined using this test is 74 months.

³ These test-age equivalent scores are provided in Table A.7 of the WASI manual.

For the participants with a mild intellectual disability, their chronological age-matched control group consisted of 27 males and 21 females ($M = 128.94$ months; $SD = 12.71$ months, range = 108 to 151 months) and their mental age-matched group consisted of 16 males and 18 females ($M = 82.54$ months; $SD = 10.20$ months; range = 69 to 112 months). For the participants with moderate intellectual disability, their chronological age-matched control group consisted of 6 males and 8 females ($M = 139.00$ months; $SD = 11.03$ months, range = 118 to 160 months) and their mental age-matched group consisted of 6 males and 13 females ($M = 73.50$ months; $SD = 1.38$ months, range = 72 to 76 months). Table 5.1 summarizes the mean chronological and mental age for the intellectual disability group and the chronological ages for each of the control groups. The table also provides the intelligence quotient scores for all participants.

Table 5.1: Mean age of the participants in months and participants' IQ scores

	N	Chronological age	Mental age	Intelligence Quotient
Mild				
ID	58	132.40 (13.85)	82.78 (9.92)	62.88 (4.76)
MA	34		82.54 (10.20)	104.53 (13.70)
CA	48	128.94 (12.71)		105.40 (12.41)
Moderate				
ID	22	144.45 (8.69)	=/ < 74.00	=/ < 55
MA	19		73.50 (1.38)	98.00 (9.30)
CA	14	139.00 (11.03)		108.64 (13.66)

Note. Mental age for mainstream children is the same as their chronological age. IQ scores were obtained from the WASI, which does not differentiate between children of moderate disability. Mean IQ for the control groups was calculated on a proportion of the entire sample (i.e., 77% of participants for the mental age-matched group and 87% for the chronological age-matched group).

A series of independent samples t-tests were conducted to ascertain that the control groups were in fact an equivalent chronological or mental age-match to the intellectual disability groups. Separate t tests were conducted for the mild and moderate intellectual disability groups. In all four analyses, mean age was not found to significantly differ across the groups (t 's = .11 to 1.70).

Materials

The event consisted of 21 target items that were administered in the same temporal order for each class. These items were divided into three groups (seven items in each group), whereby each group included an equal number of actions, objects or verbalisations. Seven of the items were correctly biased (referred to as true-biased items) in the initial biasing interview. Seven of the items were falsely described (referred to as false-biased items) in the biasing interview, and the remaining seven items were not mentioned at all (referred to as not-biased items) in the biasing interview. However, to control for item effects, the precise group of items that were assigned to these categories varied among the children such that each item in the event served equally often as a true-biased, false-biased, and not-biased item. In addition, the precise instantiation or exemplar that represented the item and/or the suggestion was counterbalanced such that there were two versions of the show (Version A and Version B). Half of the children in each participant group experienced Version A items, while half of the children experienced Version B items. When suggesting false details about the event, Version A exemplars were chosen for those participants who experienced Version B details in the event and Version B exemplars were chosen for those participants who experienced Version A details in the event. The full set of items and exemplars is presented in Table 5.2.

Table 5.2: The target items and the two versions of exemplars that made up the magic show

No	Item	Version A	Version B
1	Magician's name	Trina	Katie
2	Child's response to tricks	clapping hands	stomping feet
3	Method of dressing in cape	step into	over head
4	Reason for becoming a magician	father was a magician	received magic set for birthday
5	Koala's name	Boo	Pop
6	What the friend did to keep the koala awake	sneezing	coughing
7	Warm-up activity	wiggle fingers	touching toes
8	Utensil to choose helper	crayon	texta
9	Helper's name	child A	child B
10	Magic words	abracadabra	hey presto
11	Magician's favourite lollipop	banana	strawberry
12	What magician got from shop/bag	rock	sock
13	What magician had to do to make the wand work	tap wand x 3	tap wand x 1
14	Type of drink that appeared	orange juice	coke
15	What magician used to protect the floor during the drink trick	raincoat	garbage bag
16	Why the magician's box needed cleaning	under bed	left in car
17	What the magician gave to the children	lip gloss	face spray
18	Type of stickers the magician gave the children	dinosaurs	balls
19	Where the children put the stickers	chest	hand
20	Action required to turn power off	hop on spot	turn twice
21	Consequence of not turning the power off	teacher might turn into a frog	teacher might turn into a mouse

Procedure

The Event

All children participated in a 30-minute magic show that was performed by a visiting magician. The event was performed in a room at the child's school (not the regular classroom). All children in each class participated in the event⁴. In the special schools, children attended the show in groups of 10 to 20 children, whereas for the mainstream schools, children attended the show in groups of 20 to 30 children. Teachers were asked not to talk with the children about the event or to inform them that they would later be interviewed about the event. No person other than the child's teacher, the magician and the children were present in the room during the show.

A female research assistant, (who was blind to the aims and hypotheses of this research) performed all the shows. As noted above, she performed one of two versions of the magic show, which were equally assigned across all of the participant groups. At the beginning of the event the magician explained that she wanted to conduct a magic show for younger children, but wanted to seek the participants' advice as to whether her tricks were 'okay' for young children. She explained that she needed the participants to show her (either by clapping their hands or stomping their feet), whether the magic tricks she was using would be appropriate for either preps (5-6 years olds) or kindergarten children (4-5 year olds). This varied depending on the age of the participants, in that mainstream children who were in prep-grades were told 'kindergarten children', whereas the older children in either the intellectual disability groups or chronological age-matched groups were told 'prep children'. The

⁴ Although it was only necessary to administer the event to children who were given parental consent to partake in the interview, all children were permitted to attend the show. This was because children who were excluded from the show may be distressed about their exclusion. Further the teacher's presence during this event would have made it awkward to arrange alternate activities.

purpose of providing this rationale is that it encouraged active participation and ensured that the event was developmentally appropriate for all the children in the study. Indeed, all of the children seemed to enjoy the show and were pleased to offer their opinion about the quality of the tricks. If this rationale had not been provided, there was a risk that the older mainstream children would have criticised the script and tricks as being too basic or obvious for their age range. If this were so, it could have reduced their willingness to participate in the show.

Once the rationale for the magic show had been established, the magician got dressed into a full magician's outfit, including a hat, cape and gloves. When she was putting on her hat the magician found her koala puppet sleeping there. Her puppet came out to speak to the children and told them that he was too tired to stay awake because his friend Mrs Kangaroo had kept him awake all night. After the koala went back to sleep the magician asked the children to perform a warm-up activity to ensure that they were wide awake and alert for the show. The magician then chose a helper to assist her with the tricks and proceeded to perform three different tricks for the children.

Prior to the first trick the magician asked the children to say a magic word for her to help make the tricks work. The first trick involved the magician making several lollipops disappear, however the trick did not work properly because the magician had supposedly forgot to use her magic wand. The magician then asked the children to remind her to tap her wand a specific number of times to make the magic tricks work (they practiced this "tapping" with their hands on their legs). In the remaining two tricks the magician made a drink for herself and then a surprise for the children. At the end of the show the magician gave all children a sticker (which she asked them to put somewhere on their bodies) and told them that she had to turn the

magic off, otherwise she might do something unintentional such as turn the children's teacher into an animal. Note that all the above-mentioned tricks used equipment that had been purchased from a professional magician's shop. For a full script of the magic show, see Appendix A.

Interviews

All children individually attended two interviews, which were held in an isolated room at the child's school (not the room where the activities took place). One person (the author) conducted all the interviews and used a standard list of questions and prompts for each child. The first interview took approximately five minutes to complete and was held three days after the magic show. The second interview took approximately fifteen minutes to complete and was held the day after the first interview. In each interview the interviewer had an exact copy of the poster the magician used in the magic show. This was used to help orientate the children to the event.

The Biasing Interview

The purpose of this interview was to suggest details that may have occurred in the event. After an initial rapport-building period where the interviewer introduced herself and asked the child about what (s)he had been doing in class previously, the interviewer said;

"I heard that a magician came to your school and did a magic show the other day. I heard that she had a poster like this one with 'magic show' written on it. Do you remember the magic show?"⁵ I heard the magician did

⁵ Note that all the participants acknowledged the magic show had occurred.

some tricks, but I wasn't there that day and I don't know what happened. So I need to ask you some questions about what the magician did the day she came to your school. "

A series of 14 questions were then asked, each referring to a different item presented in Table 5.2. For seven of the questions, a false detail was presupposed to have occurred in the event in accordance with the counterbalancing procedure outlined earlier. These items are referred to as false-biased items. For the remaining questions (true-biased items), a true suggestion was provided. For example, if the magician made orange juice appear during the magic show, a corresponding false suggestion would be "I heard the magician did a trick where she made a glass of coke appear. Where did the drink of coke come from?" A corresponding true suggestion would be "I heard the magician did a trick where she made a drink of orange juice appear. Where did the drink of orange juice come from?" Questions of this nature have successfully been used in other research to show reliable suggestibility effects (e.g., Powell, Roberts, Ceci & Hembrooke, 1999). See Appendix B for a full list of these questions.

Memory interview

The second interview took place the day after the biasing interview and was conducted by the same person who administered the biasing interview. The interviewer began by saying;

"Hi [child's name]. You may remember that my name is Sarah and I spoke to you yesterday about the magic show. Do you remember talking to me about the magic show? Well I really messed up because I accidentally taped over all of your

answers. So I need to ask you again about the magic show. This time the questions might be a bit different, so just do your best to tell me what you can remember."⁶

The aim of this interview was to elicit as many of the 21 items and their specific exemplars in Table 5.2, using the broadest or least specific questions possible. Initially, minimal encouragers and open-ended questions were used. If these were not successful in eliciting the target details, more specific questions were asked, although (consistent with 'best-practice' guidelines) open-ended questioning was exhausted before moving on to more specific questions.

Each interview commenced with a free-narrative phase in which participants were encouraged to report everything they could remember about the magic show in their own words. The free-narrative phase involved two parts. First, minimal encouragers were used (e.g., 'uh huh', 'mmm', pauses, head nodding) as well as open-ended questions (e.g., "What happened next?", "What happened then?") to elicit as many of the activities that occurred in the event as possible. Second, once it was clear that the child could not recall more⁷, a series of broad open-ended questions designed to elicit more depth of information about aspects of the event previously mentioned by the child were asked (e.g., "Tell me everything you can remember about the magician"). To provide consistency across children, no more than eight possible open-ended questions were used in this phase and the phrasing of these questions was the same for each child. These questions related to the magician,

⁶ Note that no groundrules were offered which emphasised the importance of reporting everything, and not guessing or making things up. This is because the effectiveness of simple groundrule instructions has not been established with children with intellectual disabilities. Further, given that many police omit these groundrules in their interviews (Warren et al., 1996), it was important to obtain a baseline measure of children's suggestibility without these.

⁷ The free-narrative phase of the interview was considered finished once children informed the interviewer on two separate occasions that they could not recall any further information about the event. In some instances, children's extended silence or other non-verbal responses made it obvious that they could provide no further information.

the Koala, what the children had to do to help the magician, what the magician had to do to make the magic tricks work, the lollipop trick, the box trick, what the magician made for the children, and what the magician did at the end of the magic show. These latter open-ended questions were followed up with further minimal encouragers as described above.

For each target item that was not recalled during the free-narrative phase of the interview, the interviewer asked one specific cued-recall question (e.g., “You said the magician came to your school to do a magic show. What was the magician’s name?”, “I heard the magician made a drink appear in a box. What type of drink did the magician make?”). Consistent with best-practice guidelines (Home Office, 2002), these questions were asked only after the free-narrative phase was exhausted. However, it is important to note that for a small proportion of the items, the questions would be considered leading because the information being requested had not been established earlier in the interview. For example, the question “What type of drink did the magician make in the box?” was leading in the small proportion of cases where the child had not previously mentioned that the magician made a drink. For the purpose of this investigation, specific questions were asked irrespective of whether the child had mentioned the broader aspect of the event (e.g., the drink). This was because the focus of the interview was on specific target items and the broader category of information (e.g., drink) had to be assumed to elicit the more specific category of information (e.g., the type of drink). Further, from an experimental perspective, the data could easily be analysed with the leading questions removed, hence qualifications in interpretation (where necessary) could be made in relation to analyses that revealed different patterns of results depending on whether the leading questions were included.

If, in response to each specific cued-recall question, the child did not recall the required information, a forced-choice question was immediately asked which contained three possible alternatives (e.g., “Was the magician’s favourite lollipop banana, orange or raspberry?” “Was the magician’s name Trina, Katie or Sophie?”). For the seven items that had been falsely biased, the options included the correct detail, the false-biased detail and a new-false detail. For the remaining items, the options included a correct response and two new-false responses. If a feasible verbal response was still not provided, then participants were immediately provided with the opportunity to provide a non-verbal response by pointing or head-nodding in response to actions demonstrated or various symbolic representations of the items that were displayed on cards (e.g., three coloured cards represented different flavoured lollipops, various actions performed by the interviewer represented various responses to tricks). For both sets of forced-choice questions, the order in which the correct, false and new options were presented was fully counterbalanced. If a feasible answer was not provided following the non-verbal forced-choice question, no further questions were asked (For a full list of all possible questions asked see Appendix C). In three cases, a break was offered prior to these forced-choice questions because the interview had run into the child’s recess time. In no other cases did a child request a break, show obvious signs of tiredness, or appear stressed in the interview.

To keep track of what the child had previously recalled, the interviewer jotted down brief notes throughout the interview (as most investigative interviewers do). The interviewer informed the children that because she had lost all the answers last time, she wanted to make sure they were on paper as well as tape. Note that while the

interviewer knew the range of possible items, she was blind as to the particular item set that each child received and the items that had been true-, false-, and not- biased.

Test of Intellectual Functioning

Between one and two weeks following the second interview all of the participants with an intellectual disability and 83% of participants in the control groups were administered the Wechsler Abbreviated Scales of Intelligence (WASI; The Psychological Corporation, 1999). The assessment was conducted by the interviewer and took between 10 and 15 minutes to complete. The interviewer introduced the activity to children in the following manner⁸;

“Hi, my name is Sarah and I spoke to you a couple of weeks ago about the magic show that you saw. Do you remember talking to me? Well today I need you to help me with something really different that has nothing to do with the magic show. I have two different activities for you to do. In the first activity I’m going to ask you to tell me what some words mean and in the second we’re going to look at some pictures, that are like puzzles.”

Coding

Interviews were audio-taped and transcribed verbatim for coding. Responses to the first interview were not coded as the purpose of this interview was merely to present biasing information to the child. For the main interview, the responses during the free-narrative phase (including minimal encouragers and open-ended questions), and to the specific cued-recall and forced-choice questions were coded separately.

⁸ It should be noted that this introduction also complied with the standardised instructions set out in the WASI manual.

Only information related to the event was coded, and only the first time it was reported by the child (number of repetitions was not noted).

Responses to each question during the free-narrative phase and in response to the specific cued-recall and forced-choice questions were coded as correct or incorrect. Incorrect responses during the free-narrative phase and in response to the specific cued questions were divided into one of the following three categories; (i) *False suggestions*, when the false item that was suggested by the interviewer in the biasing interview was reported by the child, (ii) *External intrusion errors*, when an entirely new false item that had not occurred and had not been suggested was reported (e.g., “The magician made a drink of cordial appear”), and (iii) *Confusions*, when a detail regarding another part of the activities was reported (e.g., “We had to touch our toes to turn the magic powers off”). For the forced-choice questions, there was one additional response category which included *New responses* (i.e., when the response given by the child was a new option provided by the interviewer in the forced-choice question).

Responses during the free-narrative phase were also coded according to whether a specific item was described in context or not. The contextual detail associated with each item is presented in the far left column of Table 5.2. For example, in relation to Item 12 (Version A), if the child merely referred to a ‘rock’ being in the show, this was not credited as being in context unless the child specifically mentioned that the magician made the rock appear in the bag, or made it come from the shop.

Finally, for each of the 21 target items recalled (irrespective of whether they were described accurately), a ‘distance score’ was calculated which represented where in the sequence of questions the detail was provided (i.e., free-narrative part 1,

free-narrative part 2, specific cued-recall questions, verbal forced-choice questions or non-verbal forced-choice questions). For instance, if the child recalled the detail during the free-narrative phase (part 1; minimal encouragers, “What happened then/next?”), (s)he was given a score of 1. If the child recalled the detail in response to the non-verbal forced-choice questions, (s)he was given a score of 5. All the transcripts were coded first by the author. A person who was not otherwise involved in the study, then coded 15% of the transcripts (representing a cross-section from all the conditions). Inter-coder agreement was at least 96% for all categories.

Results

Given the number of analyses that were conducted in this study, an alpha level of .01 was used for all the main statistical tests. All the analyses reported in this paper were initially performed with types of item bias (false-biased, true-biased and not-biased) included as a within-subjects factor. Only a few significant effects were found involving item bias, all of which were not germane to the main analyses. Therefore, the results are reported collapsed over this factor. The only exception to this was for the comparison of the different types of errors reported across the participant groups. Errors were examined only for false-biased items because the number of errors for the other categories was very low (particularly for the chronological age-matched groups) and because the reporting of interviewer suggestions could only be made for these items. In other words these were the only items for which the full range of errors could be compared.

Preliminary Analyses

Each of the dependent variables (by both participant group and level of intellectual disability) was screened for accuracy of data entry, missing variables and assumptions of normality including outliers, normality and linearity. The minimum and maximum descriptives indicated that no out of range data entries had been made and no missing data was identified for any dependent variable. Boxplots and extreme cases revealed a small number of univariate outliers. The 5% Trimmed Mean indicated that these outliers had little impact on the remaining distribution. Further removal and re-running of analyses when these outliers were removed did not impact on the findings. As a result these cases were retained in the analyses as they were seen to fit with the target population. Data was examined for the presence of multivariate outliers using Mahalanobis' Distance. At $p < .001$, no multivariate outliers were identified.

Skewness and Kurtosis was calculated for each dependent variable. The highest level of skewness found was $\beta = 2.67$ and the highest level of kurtosis was $\beta = 5.05$. Linearity between pairs of dependent variables was also assessed as relationships between variables that are not linear reduce the power of statistical test (Tabacknick & Fidell, 1996). As the highest correlation between any dependent variables was 0.43, the assumption of linearity was not violated (Tabacknick & Fidell, 1996). Levene's test of equality of error variances was violated on a small number of occasions, however no transformations were made. This was because violation of such assumptions is not unusual in studies of this nature. Further, with larger sample sizes violation of this assumption only minimally affects the validity of the analyses (Weinberg & Abramowitz, 2002).

Completeness of recall

Completeness of recall was coded in several different ways. The first column of Table 5.3 represents the mean number of target items referred to by the children irrespective of whether the item was correctly described. For example, Item 14 refers to the drink that appeared in the magician's box. (To be awarded a score for this item, the child needed to refer to the type of drink that appeared irrespective of whether it was correct). As shown in this table, the interview was effective in eliciting these target details. Even in the moderate disability group, there was a ceiling effect such that the mean number of items recalled was 20 out of a possible 21.

Table 5.3: Completeness of children's recall

	N	Mean number of target items recalled / 21	Mean number of items correctly recalled	Mean mode of where children responded in interview
Mild				
ID	58	20.98 (0.13)	14.40 (4.53)	3.05 (0.69)
MA	34	20.97 (0.17)	18.71 (1.70)	2.71 (0.72)
CA	48	21.00 (0.00)	18.58 (1.85)	2.00 (1.01)
Moderate				
ID	22	20.36 (2.56)	12.86 (4.05)	3.50 (0.96)
MA	19	20.95 (0.23)	17.47 (2.27)	2.95 (0.23)
CA	14	21.00 (0.00)	18.36 (2.41)	1.71 (0.99)

Note: Standard deviations are in parentheses. ID = intellectual disability group, MA = mental age-matched participants, CA = chronological age-matched participants.

The second way in which completeness was measured was the mean number of target items *correctly* reported. These scores are represented in the second column of Table 5.3. Note that they do not differentiate where in the interview a target item was reported. A 3 (participant group: intellectual disability, mental age-matched, chronological age-matched) x 2 (level of disability: mild, moderate) analysis of variance (ANOVA) was performed on these scores with both factors manipulated between-subjects. The results revealed one finding; a main effect for participant group, $F(2, 189) = 39.69, p < .01$. Post hoc analyses (Tukey) showed that children in the intellectual disability group reported a smaller number of correct responses than children in the two control groups (M difference compared to mental age = $-4.29, p < .01$, M difference compared to chronological age = $-4.56, p < .01$). The number of correct responses reported by the mental age-matched and chronological age-matched groups were not significantly different (M difference = $0.27, p = .90$).

The third way in which completeness was measured was in relation to the type of question required to elicit the target details. A distance score was awarded for each target item recalled, which indicated where in the interview the specific target item was reported by the child (i.e., free-narrative part 1 = 1, cued-recall = 3, non-verbal forced choice = 5). For each child, a modal score was determined such that a higher modal score indicated a less complete account of the event during the earlier phases of the interview. The third column of Table 5.3 presents the mean of these mode 'distance scores' which were subjected to a 3 (participant group) x 2 (level of intellectual disability) ANOVA (with both factors manipulated between-subjects). Results revealed one finding; a main effect of participant group, $F(2, 189) = 39.61, p < .01$. Post hoc analyses (Tukey) showed that children in the intellectual disability group required greater specificity of questioning than children in the mental age-

matched and chronological age-matched control groups (M difference compared to mental age = 0.38, $p = .02$, M difference compared to chronological age = 1.24, $p < .01$). Also the mental age matched control group required greater specificity of questioning than the chronological age-matched group (M difference = 0.86, $p = .01$).

Accuracy of recall

Table 5.4 presents the mean proportion of target items reported accurately. Accuracy measures were obtained by dividing the number of items correctly reported by the total number of items reported (correct and incorrect). These proportion scores were calculated separately for each question type. Separate 3 (participant group) \times 2 (level of disability) ANOVAs were conducted on each of these three sets of proportion scores. Note that children who did not report any target items in response to a question type were excluded from the analysis involving that question type.

For the free-narrative phase of the interview, the results revealed no effects, F 's = 1.65 to 3.95. For the specific cued-recall questions, one effect was revealed; a main effect of participant group, $F(2, 188) = 19.48$, $p < .01$. Post hoc analyses (Tukey) revealed that children in the intellectual disability group provided a smaller proportion of accurate responses compared to both the mental age-matched and chronological age-matched control groups (M difference compared to mental age = -0.21, $p < .01$, M difference compared to chronological age-matched group = -0.19, $p < .01$). The proportion of accurate responses reported by the mental age-matched and chronological age-matched groups were not significantly different (M difference = 0.02, $p = .86$). These results for the specific cued-recall questions, however, should be considered cautiously because the main effect of participant group was no longer evident when leading questions (i.e., those where the child had not previously

mentioned that aspect of the interview) were removed from the analysis, $F(2, 176) = 3.45, p > .01$. (Intellectual disability group: $M = 0.67, SD = 0.33$; Mental age-matched control group: $M = 0.81, SD = 0.21$; Chronological age-matched control group: $M = 0.79, SD = 0.30$).

Table 5.4: Mean proportion of accurate responses, by question type

	N	Free Narrative	N	Specific cued-recall	N	Forced- choice
Mild						
ID	49	.88 (.22)	57	.64 (.25)	53	.69 (.26)
MA	34	.94 (.10)	34	.86 (.13)	27	.79 (.34)
CA	48	.95 (.07)	48	.82 (.16)	32	.84 (.33)
Moderate						
ID	17	.83 (.27)	22	.61 (.24)	21	.58 (.22)
MA	19	.85 (.27)	19	.80 (.15)	16	.80 (.24)
CA	14	.90 (.10)	14	.82 (.19)	13	.92 (.20)

Note: Standard deviations are in parentheses. ID = intellectual disability group, MA = mental age-matched participants, CA = chronological age-matched participants.

For the forced-choice questions, a main effect of participant group was found, $F(2, 156) = 9.68, p < .01$. Post hoc examination of the main effect (Tukey) revealed that the children in the intellectual disability group were less accurate than both the mental age-matched and chronological age-matched control groups (M difference

compared to mental age = -0.14, $p = 0.03$, M difference compared to chronological age = -.21, $p < .01$). The proportion of accurate responses to forced-choice questions did not differ for the two control groups (M difference = 0.07, $p = .47$).

Nature of the errors

The nature of errors reported by the children was examined only for the seven items where the interviewer had made false suggestions in the biasing interview. The reason for focusing errors in response to these items (as opposed to the true-biased and not-biased items) was that a variety of errors could be reported (i.e., interviewer suggestions, details external to the event, as well as confusions of details from within the event). Further, this group of items contained the largest number of errors for all participant groups. Indeed, for the chronological age-matched group, the number of errors reported in relation to true-biased and not-biased items was very low (less than one error per child), hence it was difficult to make meaningful comparisons across all groups for these items.

Table 5.5 presents the proportion of errors made across the participant groups (for free-recall and specific cued-recall questions) in relation to the seven false-biased items. The proportion scores were determined by dividing the number of errors in each category out of the total number of error responses. Separate one-way ANOVAs for participant group were performed on the proportion of all errors that were interviewer false suggestions and external intrusions.

For the interviewer suggestions, results revealed a main effect of participant group, $F(2, 115) = 8.24$, $p < .01$. Post hoc examination (Tukey) revealed that children in the intellectual disability group reported a smaller proportion of false interviewer suggestions than children in both the mental age- and chronological age-

matched groups (M difference from mental age-matched = -0.23 , $p = .04$, M difference from chronological age-matched = -0.33 , $p < .01$). Interestingly when the analysis was repeated on the *number* of interviewer suggestions reported, rather than the proportions, there was no significant difference between the groups $F(2, 189) = .181$, $p = .83$ ($ID = 0.82$, $MA = 0.93$, $CA = 1.10$). No difference in performance was found between the chronological age-matched and the mental age-matched participant groups (M difference = 0.10 , $p = .62$) on the proportion of interviewer suggestions reported by the child in the main interview.

Table 5.5: Mean proportion of error responses across free-narrative and specific cued-recall questions

	N	False interviewer suggestion	External intrusion	Child confusion
Mild				
ID	48	.45 (.41)	.55 (.41)	.00 (.00)
MA	18	.55 (.48)	.45 (.48)	.00 (.00)
CA	23	.72 (.39)	.28 (.39)	.00 (.00)
Moderate				
ID	14	.34 (.37)	.66 (.37)	.00 (.00)
MA	10	.83 (.27)	.13 (.22)	.04 (.11)
CA	8	.81 (.37)	.19 (.37)	.00 (.00)

Note: Standard deviations are in parentheses. ID = intellectual disability group, MA = mental age-matched participants, CA = chronological age-matched participants.

For the external intrusion errors, a main effect of participant group was also revealed, $F(2, 115) = 8.68, p < .01$. However, in this case, children in the intellectual disability group reported a larger proportion of these errors than children matched for mental age (M difference = 0.24, $p = .03$) and chronological age (M difference = 0.33, $p < .01$). Further, no differences were found between the age-matched participant groups (M difference = .09, $p = .69$). For the main analyses there was no main effect or interaction involving disability level, F 's = 1.37 to 2.32.

For the forced-choice questions, the number of errors reported by children from the mental and chronological age-matched groups was too low to make any meaningful statistical comparisons (less than one error per child). However, it was observed that the majority (i.e., approximately 60%) of errors for these questions (irrespective of participant group) was the selection of the interviewer false suggestion.

Clarity of the child's report

Children's free-narrative reports were examined for the proportion of specific items that were described in context. For example, for Item 14 (the drink item) to be described in context, the child needed to mention that the magician made the item appear. If the child merely said "She had a drink of coke" or "There was juice", the child was not credited for recalling the drink in context. Table 5.6 presents the mean proportion of all target items that were described in context across the participant groups and disability levels. A 3 (participant group) x 2 (level of intellectual disability) ANOVA was performed on these scores. The results revealed a main effect of participant group, $F(2, 180) = 37.55, p < .01$. Participants in the intellectual disability group reported a smaller proportion of specific information in context than

both the mental age-matched (M difference = -0.14, $p < .01$) and chronological age-matched (M difference = -0.35, $p < .01$) control groups. In addition, the mental age-matched group provided a smaller proportion of items in context than the chronological age-matched group (M difference = 0.21, $p < .01$).

Table 5.6: Mean proportion of specific item information reported in context in free-narrative

	N	Specific in full context
Mild		
ID	51	.33 (.29)
MA	34	.50 (.20)
CA	48	.63 (.18)
Moderate		
ID	20	.23 (.27)
MA	19	.34 (.20)
CA	14	.72 (.10)

Note: Standard deviations are in parentheses. ID = intellectual disability group, MA = mental age-matched participants, CA = chronological age-matched participants.

Discussion

The previous literature suggests that children with intellectual disabilities do not have a voice within the criminal justice system (Villamanta Legal Service, 1991).

They are typically discouraged from speaking out about their personal experiences and opinions (Williams, 1995; Westcott & Cross, 1996) and they are viewed as unreliable witnesses (Aarons & Powell, in press). The results of this study clearly demonstrated that children with intellectual disabilities are not unreliable witnesses. *All* the children (even those with moderate intellectual disabilities) were able to provide accurate information about the event; information that in a forensic context could potentially lead to corroborative evidence. Indeed, by the end of the cued-recall question phase of the interview, feasible answers were given about more than half of the target items, irrespective of the participant group. Further, despite the inclusion of a number of discrete activities, it was rare for the children to confuse various aspects of the event. The broader relevance of these findings to the field of investigative interviewing cannot be overestimated. The interview in this study was highly challenging. The event had a relatively complex structure, the target (memory) items were all highly specific in nature and the children had received an earlier interview which had included a relatively large number of misleading details.

While children with intellectual disabilities can obviously provide reliable evidence for the courts, the elicitation of this evidence using standard ‘best-practice’ questioning procedures is much more challenging than for mainstream children. Deficits in performance associated with intellectual disability were revealed in relation to every major performance measure. Overall, the children with intellectual disabilities (both mild and moderate groups) provided less *complete* and *clear* narrative accounts of the event and less *accurate* responses to specific questions compared to both mental age-matched and chronological age-matched peers. Further, they required more specific questioning by the interviewer to elicit the target details. The greater difficulty experienced by children with intellectual disabilities in

generating event details in this study is consistent with other research that has demonstrated expressive and receptive language deficits among these children (Fowler, 1998). It is also consistent with research that has revealed deficits in explicit memory processes among persons with intellectual disabilities (e.g., rehearsal, chunking, categorising of information; Fyffe, 1996; Wyatt & Conners, 1998).

The fact that performance of the children with intellectual disabilities on the above measures was consistently lower than that of both the chronological *and* mental age-matched children is interesting in light of the design features of this study. As indicated earlier, the children needed to recall specific event features (as is the case in investigative interviews). However, in contrast to some previous studies (i.e., Dent, 1992; Henry & Gudjonsson, 1999; Pear & Wyatt, 1994) the event was very engaging for all children (even those with attention difficulties), and the control groups were matched for both mean and variability of age⁹. Hence it could not be argued that the event or method of matching discriminated against the intellectual disability group.

Why then did the children with intellectual disabilities perform lower than their mental age-matched peers when theories of memory and language suggest that mental age would be a relatively good indicator of performance (Fowler, 1998; Fyffe, 1996; Iarocci & Burack, 1998; Weisz, Yeates & Zigler, 1982; Zigler, 1982)? The findings need to be considered in light of the fact that performance in an investigative style interview (i.e., where the child has to recall accurate and detailed information about an event) is not solely reliant on cognitive factors. It is well

⁹ It is possible that the current study did not find adequate mental age matched controls for the moderate intellectual disability group. This is because mental age for the intellectual disability group was calculated using the WASI which does not provide standardised scores below 55. However, this would not explain why the moderate group performed consistently lower than the mental age-matched group. The pattern of responses across the experimental and control groups was very similar to that of the mild disability groups.

established that social, motivational and emotional factors play a large part in determining the rate of children's errors (Ceci & Bruck, 1993; Dattilo, et al., 1996; Pipe & Salmon, 2002). Such factors include the desire to please an interviewer by co-operating and complying with requests for information, the desire to hide one's limitations and to appear a competent conversational partner (Brennan & Brennan, 1994; Kernan & Sabsay, 1989; Sigelman et al., 1981). Further, children's performance in an interview is also dictated by their prior experiences and perceptions of their own ability and the role of the interviewer (Cashmore, 2002; Mahoney, 1988; Saetermoe et al., 1999; Vrij and Winkel, 1994). For instance, if a child perceives adults to be a credible source of information and believes that adults should speak on behalf of children, there would be little motivation (and perceived need) for the child to relate everything (s)he knows to adults. Further, if a child is used to being asked highly specific questions in everyday life (questions that require only brief answers), then the child will perceive that short answers are usually all that are expected or required by adults (Sternberg, Lamb, Hershkowitz, Esplin, Redlich, & Sunshine, 1996).

Social and motivational factors would have been particularly relevant in this study given that the interviewer had a very confident and friendly manner. Further, she appeared to have a great deal of background knowledge about the event (which was displayed in the earlier biasing interview) and she was highly persistent in eliciting specific event-related material. While it could be argued that social, motivational and emotional factors would have impacted all children's responses, these factors could explain (at least in part) the poorer performance among the children with intellectual disabilities because the detrimental effect of these factors is heightened when the social status of the interviewer and interviewee is more

differentiated (see Ceci, Ross, & Toglia 1987; Leman & Duveen, 1996). Indeed, children with intellectual disabilities have a much lower status in society than mainstream children, and their experiences in society (and in the home) may reinforce the view that they are not competent conversational partners (Mahoney, 1988; Saetermoe et al., 1999). Further, the concentration limitations of children with intellectual disabilities, and the heightened demands of the interview on their language and memory would have increased their desire to mask their limitations and do whatever is needed to get the interview over with as quickly as possible.

In the current study, the greater detrimental effect of social demand characteristics on the responses of children with intellectual disabilities as opposed to mainstream children was demonstrated in several ways. First, anecdotally, it was noted that the children with intellectual disabilities appeared to be more anxious and self-conscious about their performance in the interview than the mainstream children. Further, they appeared to be more distracted by the new interview environment and were more concerned about its impact on their normal school routine. For example, some of the children with intellectual disabilities were concerned that the interview might interfere with their ability to eat lunch, even though lunchtime was a long time away and the interviewer made it clear they would be returned to their classroom in time. Mainstream children, in contrast, appeared to enjoy the fact that the interview provided a break from their normal routine. A heightened anxiety among children with intellectual disabilities in new situations with new people has been reported elsewhere in the literature as well (Westcott & Cross, 1996).

Second, children with intellectual disabilities often deferred to the interviewer as if she was the authority and knew everything. For example, they

frequently asked her questions throughout the interview such as “What do you think the magician’s name was?”, “How do you think she made the drink appear in the box?”, “Do you think it was ice-cream flavoured lip gloss?” While the younger mainstream children also asked the interviewer questions, the incidence did seem noticeably higher among the children with intellectual disabilities. This might explain why the children with intellectual disabilities were less likely to provide target details in context compared to mainstream children. As previous research with mainstream children has demonstrated, children provide less information to an interviewer they perceive as being knowledgeable about what occurred (Menig-Peterson 1975; Vrij & Winkel, 1994).

Third, the children with intellectual disabilities were less accurate than both control groups in response to specific cued-recall questions. However, the main effect of participant group was no longer evident when leading questions (i.e., those where the child had not previously mentioned that aspect of the event) were removed from the analysis. Further, for the free-narrative phase of the interview, accuracy was near ceiling for all children. The fact that a decline in accuracy associated with intellectual disability was only evident in relation to leading cued-recall and closed questions is consistent with other research that has shown a heightened suggestibility of children with intellectual disabilities (Henry & Gudjonsson, 1999; Michel et al, 2000; Milne & Bull, 1998; Young, et al., 2003). The more cues the interviewer provides, and/or the greater the demand for highly specific details, the more compelled the child is to provide a (potentially inaccurate) response.

While previous studies have demonstrated the heightened suggestibility of children with intellectual disabilities to misleading yes/no questions, this study demonstrated this problem using an interview that is more closely aligned with best-

practice guidelines. Despite that children had received biasing questions earlier, none of the questions in the main interview indicated the *specific* target item in the form of a yes/no question. Rather, children needed to generate the information themselves and if this was not fruitful, they were required to select a response from a variety of different options. One implication of the findings for interviewers is that omitting leading and closed questions (one of the main aims of police interviewers) in the recorded interview is clearly not enough to eliminate suggestibility effects.

Interviewers need to be mindful of the detrimental effect of ‘pressuring’ a child to respond and the child’s desire to please the adult. For instance, research has shown that groundrule instructions that emphasise the importance of not guessing or making things up can reduce suggestibility in young children due to social desirability effects (Sternberg, et al., 2001). This might also be the case with children with intellectual disabilities. Indeed, programs designed to build self-esteem and confidence have been shown to improve the performance of children with intellectual disabilities on academic tasks (Evans, 1998).

One additional and new result was revealed in relation to the children’s suggestibility. It was found that the children with intellectual disabilities were significantly *less* likely than the control groups to repeat the false-interviewer suggestions that they had heard the previous day. This is a new finding because no previous research using children with intellectual disabilities had investigated suggestibility effects using a separate biasing interview paradigm. The finding should be interpreted in light of the fact that repeating an interviewer suggestion requires the ability to encode and store the information and then retrieve it verbally at a later date. The poorer memory and receptive and expressive language skills of the children with intellectual disabilities may have reduced the likelihood that the

children remembered the interviewer suggestions (Fyffe, 1996). Instead, the majority of errors reported by children with intellectual disabilities tended to be ‘external intrusion’ errors (feasible details that did not occur in the event and were not suggested by the interviewer). Many of these errors were stereotypical responses (e.g., saying that the magician used a pencil to write the helper’s name when it was a texta) although (as with mainstream children) they sometimes reported bizarre, incredible responses as well (e.g., “the magician made all the children disappear”).

On the positive side, the finding that children with intellectual disabilities are less susceptible to false-interviewer suggestions implies that they may be less easily ‘coached’ or their memories may be less easily over-written by previous biasing interviews (Loftus, 1975) than mainstream children. Indeed they suggest that groundrule instructions (which target social, emotional and motivational factors) may provide greater advantages for children with intellectual disabilities compared to mainstream children. However, the findings also need to be considered in light of the fact that the children with intellectual disabilities reported more errors per se (i.e., the absolute number of interviewer suggestions was the same across the participants). Further, the study provided no clear basis for distinguishing between child- and interviewer-generated errors.

Overall, the findings of this study have three important implications for investigative interviewers. First, consistent with ‘best-practice guidelines’ (see Chapter 3), this study supports the use of a phased interview approach for all children, including those with mild and moderate intellectual disabilities. The effectiveness of a phased approach was demonstrated by the high level of accuracy among all participants during free-narrative relative to that in response to specific cued-recall and closed questions. Second, the findings highlight the importance of

further research into the role that social, emotional and motivational factors play in contributing to the poor quality of evidence often obtained from children with intellectual disabilities (Brennan & Brennan 1994; Marchant & Page 1997; Westcott 1994; Milne & Bull, 1999; Sharp, 2001). Finally, the findings highlight the importance of not underestimating the children's performance and of recognising that any information provided by the child (irrespective of whether it is described in context) could potentially lead to corroborative evidence. While each of these issues is relevant for all children, this study showed that they are particularly important when interviewing children with intellectual disabilities. In other words, improvement in each of these areas is essential if the poor quality of evidence obtained from children with intellectual disabilities (relative to mainstream children) is to be adequately addressed.

One important limitation of the current study that needs to be acknowledged, however, is that the findings do not provide any indication of the type of questioning that is occurring in the field. The interview did utilise a 'best-practice' approach. However, research shows that the use of free-narrative and open-ended prompts is a distinct weakness for police interviewers (Aldridge & Cameron, 1999; Sternberg, et al., 2001; Warren, et al., 1996). Research is therefore warranted that observes the types of strategies utilised by police officers when conducting interviews with children with intellectual disabilities. Such work would play a crucial role in shaping the aims, content and structure of police training programs as distinct from interview protocols per se.

CHAPTER 6 – AN EXAMINATION OF THE QUESTIONING STYLES OF POLICE OFFICERS AND CAREGIVERS WHEN INTERVIEWING CHILDREN WITH INTELLECTUAL DISABILITIES (STUDY 2)

As discussed throughout this thesis, the ability of children with intellectual disabilities to remember events is an important yet understudied area of child memory research. Children with intellectual disabilities constitute a high proportion of all child victims of abuse (Conway, 1994; Goldman, 1994; Morse, et al., 1970). However, cases of abuse involving children with intellectual disabilities rarely reach the courts (Williams, 1995). While cognitive, physical and language deficits obviously limit the ability of children with intellectual disabilities to provide clear accounts of abuse, these children must not be denied equal chance of legal redress or protection from abuse (Marchant & Page, 1992). As the previous study demonstrated, children with intellectual disabilities can provide highly specific details about an event using standard ‘best-practice’ interview techniques (see Chapter 5) even though the elicitation of these details is more challenging than that for mainstream children.

The fact that children with intellectual disabilities can provide reliable evidence about events highlights the importance of examining how children with intellectual disabilities are actually interviewed in the field. To date, while several experts have highlighted the difficulties of police work with children who have intellectual and multiple disabilities (e.g., Marchant & Page, 1992), no research has focused specifically on documenting how police officers question children with intellectual disabilities per se. A comprehensive profile of the nature of the

questioning style of qualified police interviewers would have two broad benefits. First, it would help to determine the degree to which officers adhere to 'best-practice' guidelines when interviewing children with intellectual disabilities. Second, an examination of how police officers question children with intellectual disabilities may help to understand the impact of social, emotional and motivational factors on the poor quality of evidence obtained from these children (Brennan & Brennan 1994; Marchant & Page 1997; Milne & Bull, 1999; Sharp, 2001; Westcott 1994). Children with intellectual disabilities typically demonstrate a heightened desire to please interviewers (Young, et al., 2003). Further, they tend to have a low perception of their own abilities (Zetlin & Turner, 1984) and they often have difficulty remaining focused on tasks and being understood when they speak verbally. A description of the strategies commonly used by police officers to overcome these barriers to effective communication may help in fine-tuning interviewer training guides. Indeed, few interview training guides address specific issues such as how to keep children who have difficulty concentrating on task, how to discourage guessing, and how to clarify misunderstood responses while making the child feel (s)he is a competent, credible and a valued informer. The provision of a supportive, child centred and stress free interview environment is just as important for eliciting detailed and accurate evidence than the nature of the questions asked (Home Office, 2002; Westcott & Cross, 1996, Wilson & Powell, 2001).

The current study addressed the above issues by examining the questioning style of twenty-eight police interviewers who were specifically qualified in the elicitation of accounts of abuse from children with intellectual disabilities. The officers were members of the Sexual Offence and Child Abuse (SOCA) Unit in Victoria (Australia) and the procedure involved a mock interview paradigm where

children were interviewed about an event that was staged in their classroom. These interviews were carried out in special schools for children with mild and moderate intellectual disabilities. The advantage of using a mock interview paradigm was that it could focus on the interviewers' questioning style while controlling for extraneous factors such as the nature of the event, the time delay and the developmental level of the child (Powell, 2002). Following the interview, all police were asked to answer a few questions, which measured their perception of the children's abilities as well as their own performance in the interview.

In addition, the current study examined the questioning style of one other group of persons who frequently interview children (albeit informally) in the field. This additional group consisted of the children's primary caregivers and like the police, they were asked to elicit a detailed and accurate account of the event from the children. It is important to note that inclusion of the caregiver group was not intended to examine the effectiveness of police training *per se*; caregivers' questioning has very different goals to that of investigative interviewers (i.e., it is not dictated by rules of evidence). However, the inclusion of the caregiver group was considered important for extending our understanding of the impact of social, emotional and motivational factors on the poor quality of evidence obtained from these children. As discussed in Chapter 2, children's perceptions and behaviour in an investigative interview (or in any form of adult-child interaction) is largely dictated by their experiences at home and school (O'Brien & Bi, 1995; Roberts, Bailey & Nychka, 1991).

Overall, three questions guided the evaluation of the interview styles of the two groups. First, how do the questioning styles of both the police participants and caregivers compare with current recommendations by experts in interviewing

children with intellectual disabilities. These guidelines specify the use of open-ended questions where possible and the avoidance of closed and leading or suggestive questions (see Chapter 3). However, research using mainstream children has shown that police interviewers tend to use a high proportion of specific leading questions, with few open-ended prompts¹ (Aldridge & Cameron, 1999; Davies, Westcott, & Horan, 2000; Fisher, Geiselman, & Raymond, 1987; Warren, et al., 1996). If this pattern of questioning is also evident in interviews of children with intellectual disabilities, it would explain (at least in part) the poor quality of evidence obtained from these children and would provide a strong rationale for boosting the quality of interviewer training. This is because the detrimental effect of specific questions on error rates is even greater for children with intellectual disabilities compared to mainstream children (Study 1).

Second, what other verbal strategies do police officers and caregivers use to overcome the children's difficulties in attending during the interview, or to clarify misunderstandings? Caregivers in particular have a lot of experience and knowledge about their children and it may be that an examination of their interviewing style could potentially generate new ideas about useful strategies that could be adopted by investigative interviewers in the field. Alternatively, if caregivers use a relatively large proportion of negative or highly coercive strategies, it would be useful to observe whether this has any adverse effects on the children's willingness to disclose information to them in response to open-ended invitations.

¹ The proportion of leading questions used by police when interviewing mainstream children has been found to be as high as 59% in some studies (Aldridge & Cameron, 1999), although rates are typically between 10% and 30% (Lamb, Sternberg, Orbach, Esplin & Mitchell, 2002; Orbach & Lamb, 2001; Sternberg et al, 2001; Warren, Woodall, Thomas, Nunno, Keeney, Larson, Stadfeld, 1999. With regard to the use of minimal encouragers and broad open-ended questions (referred to as free-narrative prompts), rates have been found to range from 2% to 15% (Aldridge & Cameron, 1999; Davies et al., 2000; Warren, Woodall, Hunt & Perry, 1996).

Third, how well do police interviewers follow up details provided by the child that were not described in context? Previous research has shown that police interviewers tend to underestimate the abilities of individuals with intellectual disabilities to relate events (Brennan & Brennan, 1994; Sharp, 2001). It may be that because children with intellectual disabilities provide less elaborate accounts during free-narrative compared to mainstream children, police officers may overlook the relevance of many important details which could potentially lead to corroborative evidence. Indeed, Study 1 showed that even though children with intellectual disabilities provide less complete and clear accounts in their own words, what they report is usually highly accurate.

Method

Design

Twenty-eight children aged 9 to 13 years with a mild or moderate intellectual disability participated in a series of four staged 30-minute events at their school. Children were then interviewed on separate occasions by two different interviewers. The child's primary caregiver conducted one interview and the other was conducted by a police officer who was authorised to conduct investigative/evidential interviews with children. Both interviewers were instructed to elicit an accurate and detailed account of the event in a manner that they would normally do in the home/field. Following the interview, each police interviewer completed a questionnaire designed to elicit his/her perception of the child and the effectiveness of the interview. The design employed was a 2 (interviewer; police officer or caregiver) x 2 (level of

intellectual disability; mild or moderate) with both factors manipulated between-subjects in all analyses, unless otherwise specified.

Participants

The child participants were recruited through letters to their caregivers that were distributed at six special schools around the Melbourne and Geelong metropolitan regions. These letters outlined the nature of the project and requested the participation of both the primary caregiver and the child. All children with full parental consent were invited to participate. It was made clear to each child that participation was voluntary and that they were free to withdraw their consent at any point in the study (either verbally or non-verbally), in which case any information gained would be disregarded. Note that none of the participants had any major visual or auditory impairments.

Upon recruitment, the participants were assigned to either a 'mild' or 'moderate' level of impairment category based on their Intelligence Quotient (IQ) score. These scores were obtained from the Wechsler Abbreviated Scales of Intelligence (WASI; Wechsler, 1999) and level of disability was based on the criteria for mental retardation outlined in the Diagnostic and Statistical Manual – IV (American Psychiatric Association, 1994, p. 40). Although the WASI produces a base IQ score of 55, it was necessary to use in this study given time limitations (i.e., administering the WISC-III would have taken between two and three hours per child as opposed to 15 minutes) and because many of these children would have completed the WISC-III before. Repeating the WISC-III within 12 months carries a high risk of falsely inflated scores due to practice effects (Sattler, 2001). The WASI was administered approximately three to four weeks following the event, once both

interviews had been completed. Thirteen of the children involved in this study had participated in the first study of this thesis (one year earlier) which also included assessment using the WASI. As a result, these children were not retested.

The 'mild intellectual disability' group included 12 males and 6 females aged 9 to 13 years (M age = 136.28 months; SD = 2.84 months; range = 119 to 162 months) who had an Intelligence Quotient score between 56 and 70 (M IQ = 65.78; SD = 1.24; range = 58 to 75)². Note that three of these participants had a WASI- IQ score between 71 and 75, which actually places them in the borderline range. However, as they were attending a special school (and thereby would have previously been assessed as performing in the mild intellectual disability range), they were included in the study. Children in the moderate intellectual disability group consisted of 7 males and 3 females aged 9 to 13 years (M age = 140.40 months; SD = 5.02 months; range = 118 to 159 months), with an Intelligence Quotient score of 55.

Eighteen female and 10 male police participants were recruited through letters sent via a senior member of the training team of the Sexual Offence and Child Abuse (SOCA) Unit. Whilst the majority of police officers were Senior Constables, four were Sergeants and two were Detective Sergeants³. All police officers had completed the Video and Audio Taped Evidence (VATE) course during their

² The DSM-IV specifies that children with an IQ level between 50 and 70 have mild mental retardation, and children with an IQ level between 35 and 55 have moderate mental retardation. As there is an overlap between mild and moderate levels of mental retardation, children with an IQ score of 56 or above were classified as having a mild intellectual disability and children with an IQ score of 55 and below were classified as having moderate intellectual disability (as per Henry & Gudjonsson, 1999).

³ The ranks of Victorian Police Officers (from lowest to highest seniority) are Reservist, Constable, Senior Constable, Detective Senior Constable, Sergeant, Detective Sergeant, Senior Sergeant, Detective Senior Sergeant, Inspector, Detective Inspector, Chief Inspector*, Detective Chief Inspector*, Superintendent, Detective Superintendent, Chief Superintendent*, Detective Chief Superintendent*, Commander, Assistant Commissioner, Deputy Commissioner, Chief Commissioner. Those ranks marked by an asterisk are still recognised but are being phased out by the Victorian Police Force through attrition.

policing careers. This course authorises them to conduct the videotaped interviewing of witnesses under Victorian legislation. The course is of 2-weeks duration and includes practice and critical feedback in interviewing children (including a whole day on interviewing people with intellectual and physical disabilities). While the interviews conducted for this work were independently viewed by one of the trainers in the SOCA unit (for the purpose of giving critical feedback), participation in the study was voluntary. A range of primary caregivers partook in the study, including biological parents, grandparents, adoptive parents and foster parents. In the majority of cases (i.e., 75%) the caregiver was the child's biological mother, and biological fathers conducted three interviews.

Procedure

The Event

All children participated in a 30-minute event, referred to as the 'Deakin Activities'. An assistant administered the event on four separate occasions (twice a week for two weeks) at the child's school. On the first occurrence, the assistant said "I've called it the Deakin Activities because some people at a place called Deakin University helped me to get all the things ready for what we are going to do today". There were two reasons for using a repeated event. First, in many trials in which children are asked to testify, the matter involves a repeated offence (e.g., acts of sexual or physical abuse that occurred on numerous occasions). Second, the event has been used in numerous previous studies (e.g., Powell, Roberts, Ceci & Hembrooke, 1999; Powell, Roberts & Thomson, 2000; Roberts & Powell, 2002) and therefore the scripts and materials were readily available.

Each occurrence of the event consisted of 17 target items that were administered in the same temporal order and were centred around six main activities: meeting a koala, listening to a story, doing a puzzle, having a rest, receiving a surprise, and getting refreshed. The items represented various kinds of information (e.g., verbalisations, actions, objects, persons) and were repeated in different ways across the occurrences. Specifically, five of the items were identical across the occurrences, five of the items had two instantiations or exemplars across the series (one that occurred once and one that occurred three times), and seven of the items had a new instantiation in each occurrence across the series. Table 6.1 provides a full list of the items and the possible exemplars. However, the particular instantiations that each child experienced varied among each participant group. Only the teacher and research assistant were present in the room during the activities. The teacher was instructed not to talk with the children about the activities outside the event or to inform them that they would later be interviewed about the event (for an example of the script from the Deakin Activities see Appendix D).

Interviews

An attempt was made to fully counterbalance the order in which children were interviewed (either by police or caregivers). However, due to restrictions in the caregivers' schedules only a third of the interviews were conducted by the caregiver first instead of the expected 50%. Because order of interview was not fully counterbalanced, it was included as an independent variable in all analyses.

Table 6.1: Specific items in the Deakin Activities event

Item	Specific Instantiations				
1	Children sat on a __	Cardboard	rubber mat	garbage bag	white sheet
2	The leader wore a __ cloak	Red	yellow	White	Blue
3	The koala's name was __	Boo	Kip	Pop	Stan
4	The __ kept the koala awake all night	Kangaroo	Goanna	kookaburra	Dingo
5	The children had to __ to warm-up	Run	wiggle fingers	touch toes	Jump
6	The story came from the __	Cupboard	leader wrote	Posted	Library
7	The story was about __	Police	sea creature	Easter	Supercat
8	__ held up the pictures for the story	Child A	Child B	Child C	Child D
9	Leader used __ to choose the helper's name.	Pencil	Crayon	Chalk	Texta
10	Jigsaw was of a __	Clown in a car	Clown eating	Clown balancing	Clown
11	Children thought about __ when they rested	with flat tyre	cakes	eggs on a feather	Clown walking on a tightrope
12	Children had to rest their __	Beach	Kites	Birds	Juggling ball
13	Children got refreshed/woke up with __	Legs	Nose	Stomach	Rain
14	Leader gave us a __ sticker	A baby wipe	A paper fan	handcream	Arms
15	Leader kept the stickers in a __	Rocket	Dinosaur	Apple	face spray
16	Leader was going to __ after the activities	Box	Purse	envelope	Flag
17	We had to wear a __ badge	to movie	Walk a dog	visit friend in hospital	ball
		Leaves and bark	Ribbon	Fluffy Green	going on holiday
					Jelly Beans

Police Interviews. Within two weeks after the final occurrence of the event, the police officers attended the children's school to interview them about the event. Each officer conducted one interview (each with a different child) of up to 17 minutes duration. In only two interviews was the full 17 minutes not used. On one occasion the child requested to go back to their classroom after 5 minutes, as she felt that she had recalled all that she could remember about the event, and on the other occasion the officer felt that questioning was exhausted after 12 minutes. These interviews were held individually in an isolated room in the school (not the room where the event took place). The children were fully briefed by a research assistant both prior to and subsequent to the interviews. It was made very clear during the initial briefing session that the children were not in any trouble; the purpose of the task was merely to give police officers practice in talking to children.

The interviewers were told that a lady called 'Sarah' went to the child's school to do one or more performances of an activity called the 'Deakin Activities' and their task was to elicit as accurate and detailed an account of the event as possible, using whatever techniques they would normally use to interview a child with an intellectual disability in the field. In each interview, a research assistant knocked on the door of the interview room 15 minutes after the interview began. This was to provide the interviewer with the opportunity to spend the last two minutes in closing the interview. To minimise the length of the interview, police were informed that they were not required to conduct a competency test with the child⁴ and that the first two minutes were allotted to rapport building.

Caregiver interviews. All interviews conducted by the caregivers were completed within four weeks after the final occurrence of the event. The caregivers were told that the

⁴ Police in the field are required to conduct a competency test with children prior to commencing an interview. This involves assessing the child's understanding of truth and lies and is used to clarify the whether the child can provide truthful testimony. It's usefulness, however, is a source of considerable controversy (see Bala, Lee, Lindsay, & Talwar in press).

aim of the interviews was to examine the ways that caregivers elicit information from children with intellectual disabilities. They had the option of conducting the interview at the child's school or the home and all except four caregivers chose to conduct the interview at their home. When the research assistant greeted the child she said "I'm here because I need to find out about the Deakin Activities that you did at your school. [Child's name for caregiver] is going to help me find out about the Deakin Activities by asking you some questions about it. I'm going to tape the answers. Is that okay?" All interviews were conducted in the presence of a research assistant who recorded the interview. Like the police interviewers, the caregivers were told that a lady called 'Sarah' went to the child's school to do an event called the 'Deakin Activities' and their task was to elicit as accurate and detailed an account of the event as possible, using whatever techniques they would normally use. Caregivers had a maximum of 15 minutes allocated to conduct the interview but were given the option of stopping earlier if they felt they had elicited all possible information prior to that time. Most caregivers concluded the interview earlier (the average time length of these interviews was eight minutes).

Police Questionnaire

Following the police interviews, all officers were asked to complete a short questionnaire where they provided a single response to a series of three questions that included forced-choice options. First, the officers were asked "What degree of intellectual disability do you believe the child had?". Possible responses for this question were: 1 = no intellectual disability, 2 = borderline intellectual disability, 3 = mild intellectual disability, 4 = moderate intellectual disability and 5 = severe intellectual disability. Second, the officers were asked "How much do you feel that the child's communication difficulties interfered with their ability to communicate their knowledge about the interview subject matter?" (responses ranged from 1 = no

interference to 5 = total interference). Third, the officers were asked “How appropriate were the questions you asked in relation to the child’s level of development?” (responses ranged from 1 = poor to 5 = excellent).

Coding

Interviews were audiotaped and transcribed verbatim for coding. With regard to the questions asked by the interviewers, these were assigned to one of the following mutually exclusive categories (definitions are in accordance with Wilson & Powell, 2001):

- (i) Free-narrative prompts referred to broad open-ended questions or minimal encouragers designed to keep the child talking about the event (refer to Chapter 3).
- (ii) Specific cued-recall questions referred to questions that focused the child on specific aspects of the event, but did not restrict the range of possible responses (e.g., “What book did you read in the Deakin Activities?”; “What was the lady wearing?”)
- (iii) Specific closed questions referred to questions that focused the child on specific information but limited the response to yes or no or asked the child to choose between various options (e.g., “Was the book about animals?”, “Was it morning, noon or night?”)

It was also noted whether any of the above mentioned questions were leading. Leading questions were defined as any question that implied the desired answer or presumed the existence of facts that had not yet been established (e.g., “Did the lady read you a story?” or “What happened after the story?” when the child had not mentioned a story previously). Any question that was unrelated to the Deakin Activities was not coded.

Next, it was noted that the police interviewers and caregivers used a number of different verbal strategies that did not directly request event details *per se* but whose purpose was to (a) keep the child on task, (b) explain the procedure of the interview or rules of conversation (i.e., ‘ground-rules’), or (c) clarify information that was previously mentioned by the child. A wide variety of different strategies were used to achieve these three aims, which are described in Table 6.2. Note that some of the strategies in each of the above categories could be considered as inadmissible by the courts because they reprimanded, challenged or doubted the child’s initial response. These strategies were coded separately and are hereby referred to as ‘negative’ strategies. These negative strategies are marked with an asterisk in Table 6.2.

With regard to the children’s responses, these were merely coded as (i) related to the event, (ii) not related to the event, and (iii) no response. Also, for any specific target item mentioned by the children, it was noted whether the item was described in context. The contextual detail associated with each item is presented in the far left column of Table 6.1. For example, Item 3 refers to the koala puppet’s name, though his name may have changed across the different occurrences of the event. If the child merely mentioned one of these names but did not specify that the name belonged to the koala and/or the puppet, the child was not credited with recalling the item in context.

All the transcripts were coded first by one coder. A person who was not otherwise involved in the study then coded 15% of the transcripts, representing a cross-section from all the conditions. Inter-coder agreement was at least 90% for each of the categories (interviewer questions, strategies used and children’s responses).

Table 6.2: Types of strategies used by interviewers to keep the child on task, explain the rules of the interview, or clarify information.

Keep the child on task

- Gaining the child's attention (e.g., "Sean, are you ready to answer some questions?")
- Positive feedback about the process of the interview (e.g., "You're doing a great job of sitting still and thinking about my questions")
- Restating the focus of the interview (e.g., "I need to know some more about what happened in the Deakin Activities")
- Instructing the child to try to concentrate (e.g., "Have a little think and see if there's more you can remember about the Deakin Activities")
- Telling the child there is more to tell (e.g., "I know that there is more to tell about the Deakin Activities")*
- Bribery (e.g., "If you remember one more thing I'll buy you a Coke afterwards")*
- Criticising the child when the child does not provide a response (e.g., "Hurry up, we don't have all day")*
- Repeating the question when the child does not answer
- Repeating the question when the child does provide an answer, but the answer is assumed to be irrelevant *

Explain the procedure or rules of conversation (i.e., 'ground-rules')

- Informing the child that it is acceptable to say 'I don't know'
- Providing an explanation for a repeated question (e.g., "I didn't understand what you said just then, I need you tell me again, what...?")
- Instructing the child to inform the interviewer if the interviewer was wrong or (s)he misunderstood the child (e.g., "If I say something wrong, or don't understand you, you just tell me")
- Reminding the child of the rationale for the interview, and the need for as much detail as possible (e.g., "I wasn't there when the Deakin Activities happened, so I need you to tell me everything you can remember")

Clarify information previously mentioned by the child.

- Asking if the child is sure about his/her response (e.g., "Are you sure the story wasn't about rockets and spaceships?")*
 - Disputing what the child says (e.g., "I think you're tricking me, Sarah wouldn't have had just one puzzle for all the children")*
 - Ask child to demonstrate or show what (s)he meant (e.g., "Can you show me with your hands how you used the face spray")
 - Repeat the child's response in the form of a question (without disbelieving the child)
 - Asking the child to clarify something that was said (e.g., "I'm sorry I didn't understand that, the lady wore a red what?")
-

Note: Negative strategies are marked with an asterisk.

Results

The alpha level for all analyses was .05. As the number of interviewers in each interviewer category who were assigned to the first interview was not counterbalanced (i.e., police officers conducted the initial interview for two out of every three children in this study) the effect of interviewer order was initially included in all preliminary analyses. There was only one finding; a main effect of order on the proportion of all questions that were free-narrative prompts (i.e., open-ended questions or minimal encouragers), $F(1, 48) = 6.10, p < .05$. This revealed that interviewers who conducted the second interview (both police and caregivers) ($M = 0.24, SD = 0.21$) used more free-narrative prompts than interviewers who conducted the initial interviews ($M = 0.23, SD = 0.12$). Because there were no other main effects, and because order of interviewer was not found to interact with interviewer type or level of disability for any dependent measure, the subsequent analyses are reported collapsed over this factor.

Preliminary Analyses

Each of the dependent variables (by both type of interviewer and level of disability) was screened for accuracy of data entry, missing variables, outliers as well as normality and linearity. The minimum and maximum descriptives showed that there were no out of range data entries and no missing data. Variables were examined for the presence of both univariate and multivariate outliers. Boxplots and extreme cases revealed three univariate outliers. The 5% Trimmed Mean indicated that these outliers were having little impact on the remaining distribution. Further removal of these outliers had no impact upon the results, therefore these cases were retained in

the analyses. Data was examined for the presence of multivariate outliers using Mahalanobis' Distance. At the $p < .001$, no multivariate outliers were identified.

Skewness and Kurtosis was calculated for each dependent variable. The highest level of skewness found was $\beta = 1.13$ and highest level of kurtosis was $\beta = 1.15$. Linearity between pairs of dependent variables was assessed using bivariate correlations. The highest correlation found between dependent variables was 0.60, indicating that the assumption of linearity had not been violated (Tabacknick & Fidell, 1996). Levene's test of equality of error variances was violated on a small number of occasions, however no transformations were made. This was because violation of such assumptions is not unusual in studies of this nature.

Questions used by police and caregivers

Table 6.3 presents the mean total number of questions asked across each interviewer and disability type. Table 6.3 also presents the mean proportion of these questions that were free-narrative prompts, cued-recall and closed questions. Note that although approximately one in three questions asked by the police was designed to elicit a narrative description in the child's own words, many of these were broad open-ended questions (e.g., "Tell me everything you can remember about ____") rather than minimal encouragers. This was particularly the case for the children with moderate intellectual disabilities (72% open-ended questions vs. 28% minimal encouragers) rather than the children with mild intellectual disabilities (59% vs. 41%).

A series of 2 (interviewer: police vs. caregiver) x 2 (level of disability: mild vs. moderate) analyses of variances (ANOVAs) were conducted on each of the dependent measures presented in this table. Main effects of interviewer were found

for total questions, $F(1, 52) = 9.56, p < .01$, the proportion of free-narrative prompts, $F(1, 52) = 25.80, p < .01$, and the proportion of closed questions, $F(1, 52) = 19.27, p < .01$. Police interviewers asked significantly more questions ($M = 84.29, SD = 30.19$) than the caregivers ($M = 53.29, SD = 33.44$). Further, police officers had a tendency to use more free-narrative prompts (M proportion = 0.33, $SD = 0.16$) and fewer closed questions (M proportion = 0.34, $SD = 0.13$) than caregivers (M free-narrative = 0.14, $SD = 0.11$; M closed = 0.52; $SD = 0.14$). There were no main effects or interactions involving level of disability across any question type, F 's = 0.03 to 2.69.

Table 6.3: Mean total questions asked and mean proportion of the various questions asked about the 'Deakin Activity' event

	N	Total questions	Proportion free-narrative prompts	Proportion of cued-recall questions	Proportion of closed questions
Police					
Mild	18	88.67 (29.23)	0.31 (0.11)	0.36 (0.11)	0.34 (0.11)
Moderate	10	76.40 (31.83)	0.35 (0.23)	0.30 (0.14)	0.35 (0.15)
Caregiver					
Mild	18	48.89 (28.65)	0.15 (0.13)	0.32 (0.12)	0.53 (0.13)
Moderate	10	61.20 (41.18)	0.12 (0.09)	0.38 (0.14)	0.50 (0.17)

Note: Standard deviations appear in parentheses.

Finally, an analysis was conducted on the proportion of the total questions asked by police and caregiver interviewers that were leading (irrespective of question type). Results revealed a main effect of interviewer type, $F(1,52) = 30.99, p < .01$, with caregivers using a greater proportion of leading questions ($M = 0.17, SD = 0.15$) than police officers ($M = 0.02, SD = 0.02$).

Strategies used to keep the child on task

Table 6.4 presents the mean number of negative and other strategies used by police officers and caregivers in the interviews to keep the child on task. Separate 2 (interviewer type) x 2 (level of disability) ANOVAs were conducted on each of these responses.

Table 6.4: Mean number of strategies used to keep the child on task

	N	Negative	Other
Police			
Mild	18	0.72 (0.83)	3.33 (2.63)
Moderate	10	0.80 (0.79)	2.00 (1.63)
Caregiver			
Mild	18	1.44 (1.72)	2.00 (2.66)
Moderate	10	4.30 (3.50)	4.40 (3.95)

Note: Standard deviations appear in parentheses.

Results revealed a main effect of interviewer type, $F(1, 52) = 16.76, p < .01$ on the mean number of negative strategies used by interviewers to keep the child on

task. Overall, caregivers ($M = 2.46$, $SD = 2.81$) used a greater number of negative strategies than police ($M = 0.75$, $SD = 0.80$). A main effect of level of disability was also found, $F(1, 52) = 8.09$, $p < .01$, which was moderated by an interaction between level of disability and interviewer type, $F(1, 52) = 7.26$, $p < .01$. To examine this interaction, the effect of disability level was analysed separately for each interviewer type. For the police interviewers, the results revealed no main effect of level of disability, $F(1, 26) = 0.06$, $p > .05$. For the caregivers, more negative strategies were used with children who had moderate ($M = 4.30$, $SD = 3.50$) than mild ($M = 1.44$, $SD = 1.72$) intellectual disabilities, $F(1, 26) = 8.49$, $p < .01$. For the remaining strategies, there were no effects except an interaction between interviewer type and level of disability, $F(1, 52) = 5.79$, $p < .05$. As with the negative strategies, caregivers used more other strategies with children who had moderate ($M = 4.40$, $SD = 3.95$) than mild ($M = 2.00$, $SD = 2.66$) intellectual disabilities, $F(1, 26) = 3.70$, $p = .06$. However, for the number of other strategies used by police interviewers there was no main effect of level of disability, $F(1, 26) = 2.09$, $p > .05$.

While a range of different strategies was used, their total number was too small to permit any meaningful statistical analyses that compared the rate of different strategies across the interviewer groups. However, Figures 6.1 and 6.2 present the proportion of all strategies reported by police versus caregivers (collapsed over individual interviewer participants) that represented the negative and other subcategories outlined in Table 6.4. These figures show that police officers tended to use only two main strategies; repeating the question and using positive feedback about the process of the interview. In contrast, the caregivers used a variety of different types of strategies, including telling the child there is more to tell and criticising the child. The high rate of these latter two negative strategies among

caregivers is also highlighted when considering the proportion of interviewers in each interviewer category who used each of the prompts at least once. No police officer criticised the child and only 4% stated that there is more to tell, whereas 39% of caregivers criticised the child on at least one occasion during the interview and 32% stated there must be more to tell.

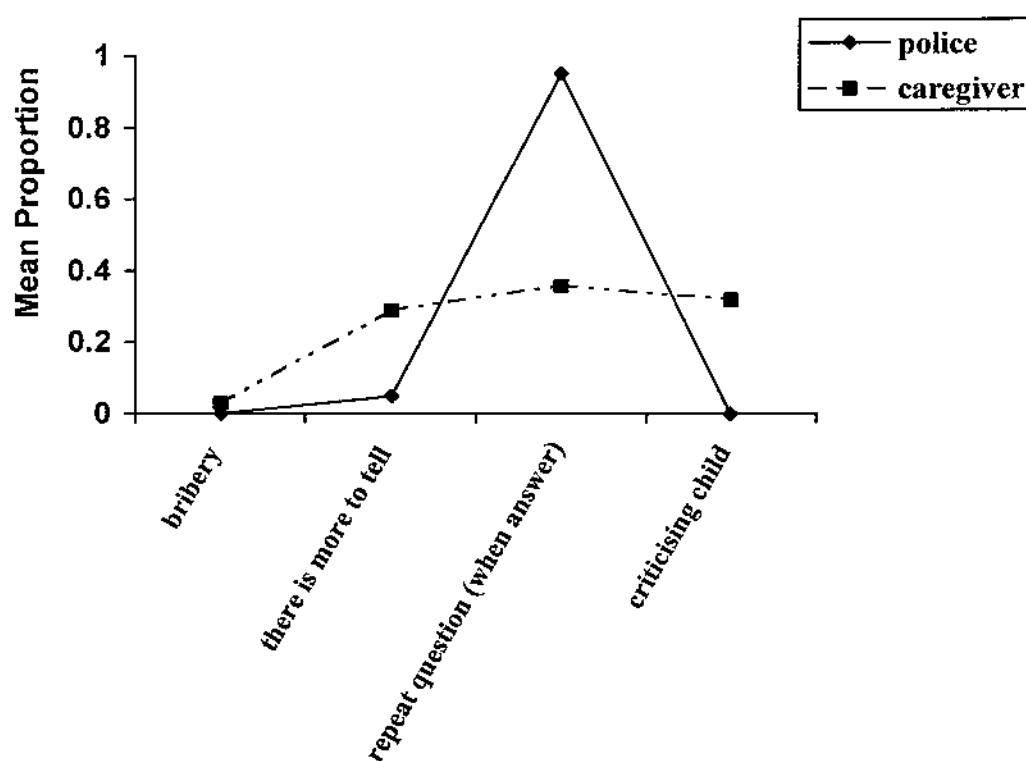


Figure 6.1. Mean proportion of all negative strategies used by police and caregiver interviewers to keep the child on task.

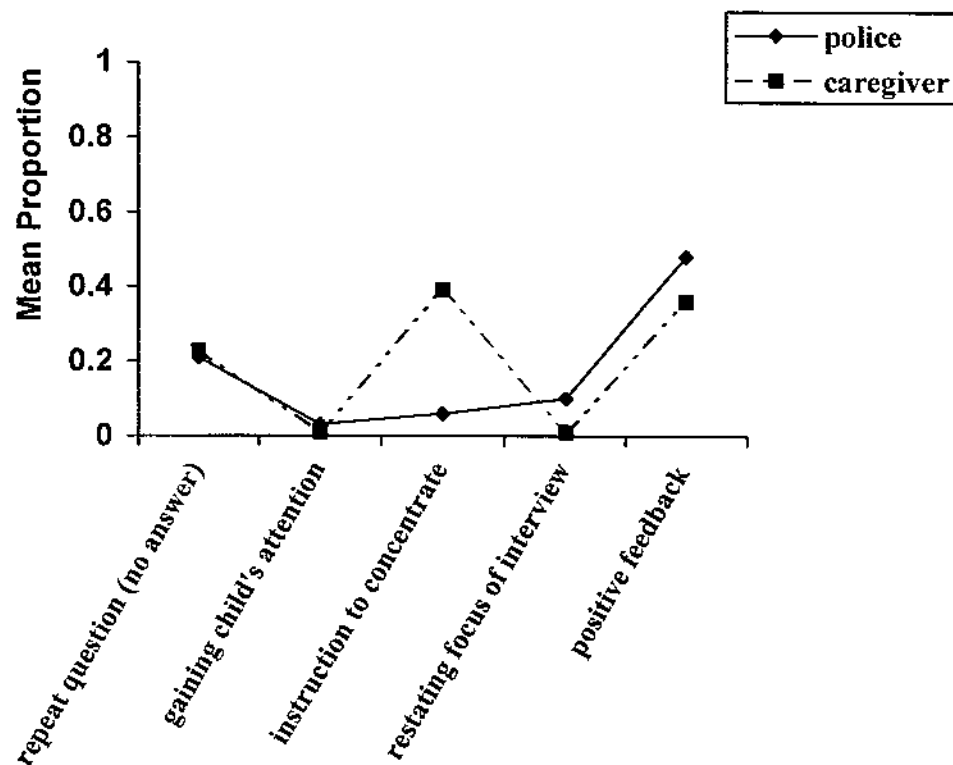


Figure 6.2. Mean proportion of all other strategies used by police and caregiver interviewers to keep child the on task.

Explanations of the procedure or rules of conversation

Table 6.5 presents the mean number of statements made by caregivers and police officers that explained either the procedure of the interview or the rules of conversation. A 2 (interviewer type) x 2 (level of disability) ANOVA was conducted on these responses which revealed only one finding; a main effect of interviewer type, $F(1, 52) = 10.54, p < .01$. Police officers ($M = 3.36, SD = 2.86$) provided more of these statements than caregivers ($M = 1.25, SD = 1.65$).

Table 6.5: Mean number of statements used to explain the procedures and rules of conversation

	N	Total Strategies
Police		
Mild	18	3.28 (3.14)
Moderate	10	3.50 (2.42)
Caregiver		
Mild	18	1.28 (1.93)
Moderate	10	1.20 (1.03)

Note: Standard deviations appear in parentheses.

Interviewers used four different types of explanations within the interviews. Of these possible explanations, 96% of police officers provided at least one explanation about the procedures or rules of the interview compared to 61% of caregivers. However, the use of the different types of instructions were relatively similar across the groups. Figure 6.3 presents the proportion of all strategies reported by police versus caregivers (collapsed over individual participants) that represented the total strategies outlined in table 6.5. This figure demonstrates that the majority of rules and procedures provided by both types of interviewer were rationales for the interview (e.g., “I wasn’t there when the girl came to your school and I don’t know anything about it, so I need you to tell me as much as you can remember”) and explanations for repeated questions (e.g., “I’m really sorry, but I didn’t get what you said, why...?”). As can be seen, both police and caregiver interviewers rarely explained to the child that it was acceptable to say ‘I don’t know’ or instructed the child to inform the interviewer if information was misunderstood. Further, no interviewer told the child (s)he could take a break if (s)he got tired in the interview.

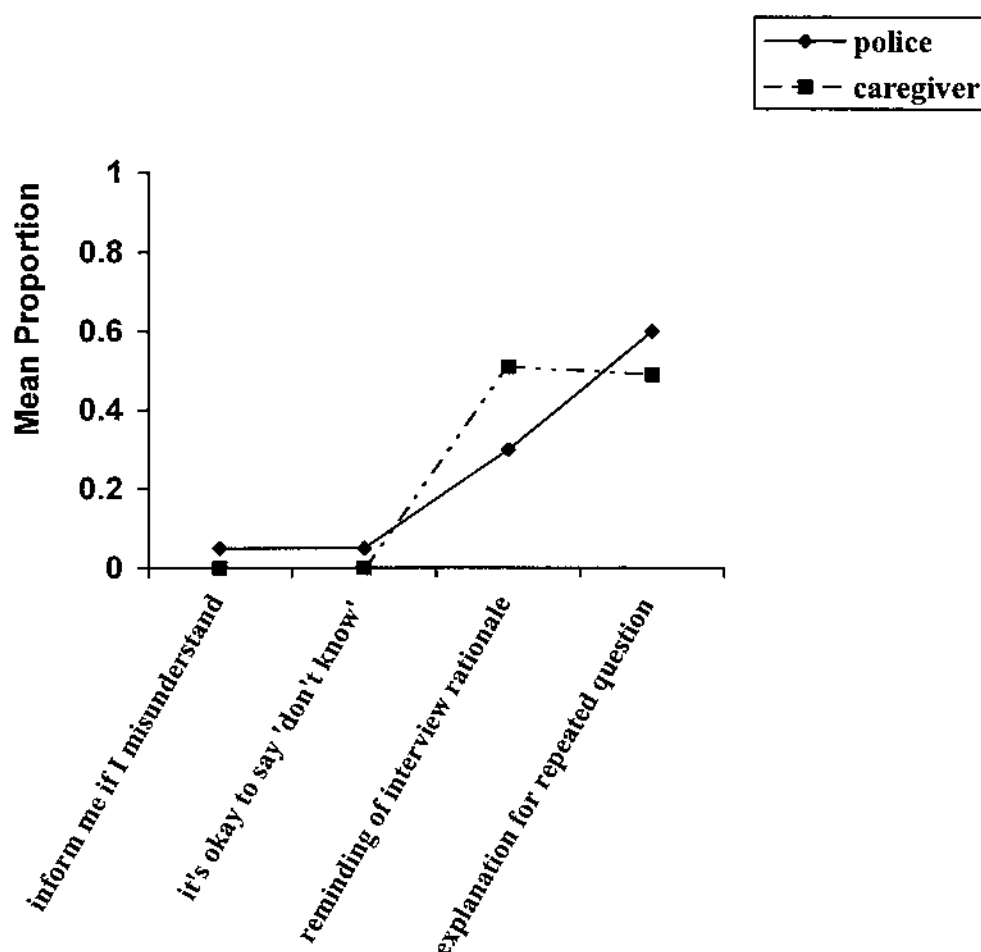


Figure 6.3. Mean proportion of all statements used to explain the procedures and rules of the interview to the child.

Strategies for understanding children's responses.

Table 6.6 shows the mean number of strategies (both negative and other) used by interviewers to clarify information previously provided by the child. A 2 (interviewer type) x 2 (level of disability) ANOVA was performed separately on each of these categories. Results revealed a main effect of interviewer type, $F(1, 52) = 11.28, p < .01$ on the mean number of negative strategies used by interviewers, with caregivers ($M = 1.11, SD = 2.04$) using more negative strategies than police officers

($M = 0.07$, $SD = 0.26$). The tendency for caregivers to use more negative strategies is also illustrated when considering the percentage of all interviewers who used at least one negative strategy: Only 7% of police officers disputed information recalled by the child or asked the child if they were sure about their response. In contrast, 46% of the caregivers used at least one of these strategies throughout the interview.

Table 6.6: Mean number of strategies used to clarify something the child said previously

	N	Negative	Other
Police			
Mild	18	0.06 (0.24)	5.50 (4.73)
Moderate	10	0.01 (0.32)	6.90 (5.90)
Caregiver			
Mild	18	0.50 (0.79)	2.67 (2.61)
Moderate	10	2.20 (3.05)	3.00 (3.33)

Note: Standard Deviations are in parentheses.

The analysis on the mean number of negative strategies also revealed a main effect of level of disability, $F(1, 52) = 5.30$, $p < .05$, which was moderated by an interaction between interviewer type and level of disability, $F(1, 52) = 4.78$, $p < .05$. To examine this interaction, the effect of disability level was analysed separately for each interviewer type. The results showed that caregivers used more negative strategies with children who had moderate ($M = 2.20$, $SD = 3.05$) than mild ($M = 0.50$, $SD = 0.79$) intellectual disabilities, $F(1, 26) = 5.13$, $p < .05$, whereas no effect of disability level was found for police interviewers, $F(1, 26) = 0.18$, $p > .05$.

Analyses on the remaining strategies used by interviewers to clarify information revealed only one finding; police officers ($M = 6.00$, $SD = 5.11$) used more of these strategies than caregivers ($M = 2.79$, $SD = 2.83$), $F(1, 52) = 8.33$, $p < .01$.

Figures 6.4 and 6.5 present the proportion of all strategies (negative and other) reported by police versus caregivers (collapsed over individual participants) that represented the negative and other subcategories outlined in Table 6.6. These figures show that although the caregivers tended to use more negative strategies and fewer other strategies than the police officers, the types of strategies used were qualitatively very similar across the two interviewer groups. Note that almost all the negative strategies used disputed a child's initial response. Police and caregivers occasionally requested that the child demonstrate an action or event detail, although this was rare.

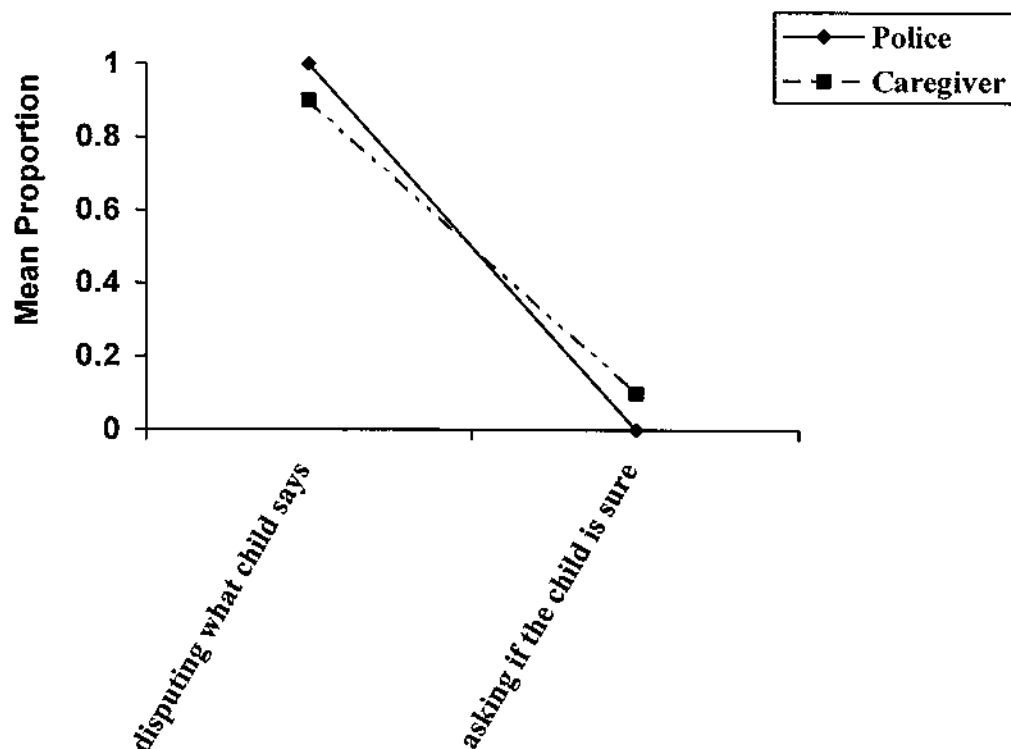


Figure 6.4. Mean proportion of all negative strategies used by police and caregivers to understand children's responses.

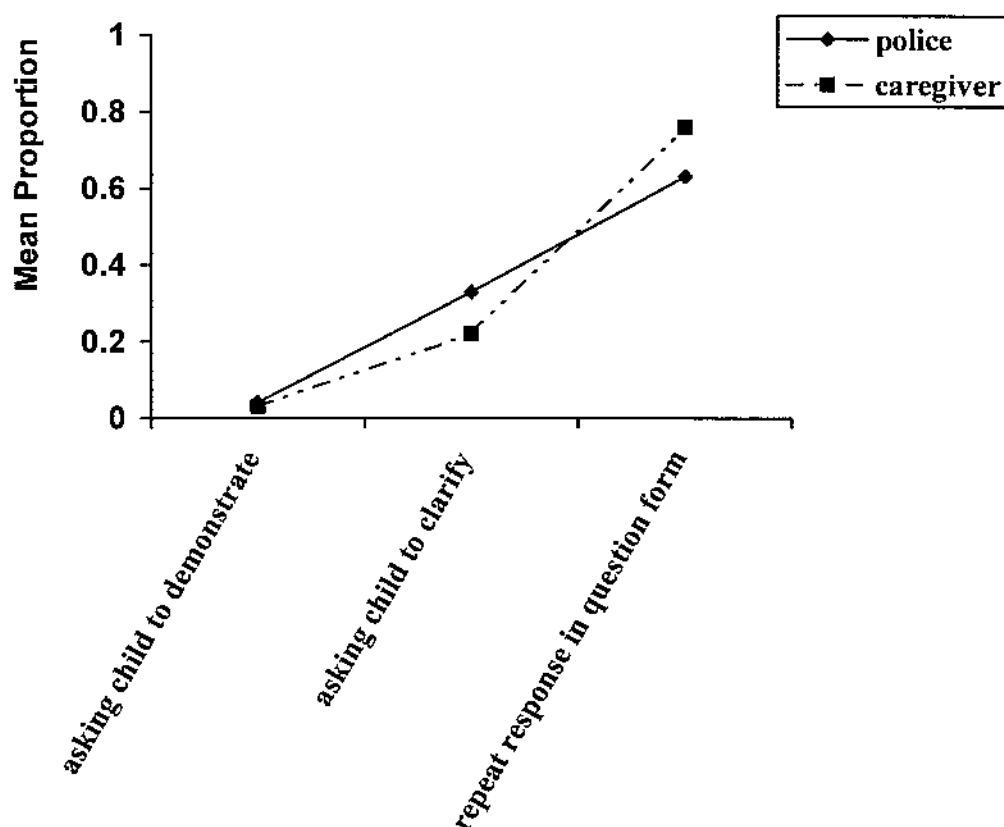


Figure 6.5. Mean proportion of all other strategies used to understand children's responses.

Police interviewers' responses to specific event information that was not reported in context

The police officers interviews were examined to determine the manner in which they responded (if at all) to specific target details (i.e., instantiations) provided by the children that were not described in context (see Table 6.1). Within the police interviews, children provided a total of 46 specific target details that were not in context ($M = 1.64$ $SD = 1.39$)⁵. Police were found to follow-up 61% of these details at some point in the interview, using a total of 75 prompts ($M = 2.68$ $SD = 4.76$). Of

⁵ Note that only six of the children provided no specific target details that were not in context.

the possible types of prompts available to elicit the information, the majority (59%) were specific cued-recall prompts (e.g., ‘who’, ‘what’, ‘when’, ‘where’ or ‘how’ questions). For the remaining follow-up prompts, 20% were closed questions, 17% were free-narrative prompts, and on 4% of occasions a clarification prompt was used (e.g., “I’m sorry, you said something about a Boo, what were you saying?”). Of those specific items that were followed-up, on only nine (31%) of the occasions did children actually provide the specific contextual information.

Children’s responses to interviewer free-narrative prompts

Earlier, it was noted that the caregivers were less likely to use free-narrative prompts than police interviewers. Table 6.7 shows the mean proportion of children’s responses to free-narrative prompts that provided event related, irrelevant and no information. A series of 2 (interviewer) x 2 (level of disability) ANOVAs were performed on each of the categories, with the first factor manipulated within-subjects. These analyses were performed to determine whether the child’s tendency to provide event-related information in response to these prompts differed across the interviewer type and the children’s level of disability.

The results revealed two findings; a main effect of type of interviewer on the proportion of event-related responses $F(1, 26) = 4.44, p < .05$ and the proportion of no responses $F(1, 26) = 5.17, p < .05$. These effects indicated that children provided more event-related responses to police interviewers’ free-narrative prompts ($M = 0.60, SD = 0.26$) than to those of caregivers ($M = 0.43, SD = 0.34$). Further, the children were less likely to remain silent (i.e., provide no response) to the police interviewers’ free-narrative prompts ($M = 0.27, SD = 0.18$) compared to those of caregivers ($M = 0.43, SD = 0.35$).

Table 6.7: Children's responses to interviewer free-narrative prompts

	N	Information related to the event	Information not related to the event	No information provided
Police				
Mild	18	.67 (.25)	.10 (.16)	.23 (.14)
Moderate	10	.48 (.25)	.19 (.15)	.33 (.22)
Caregiver				
Mild	18	.49 (.32)	.08 (.24)	.43 (.32)
Moderate	10	.34 (.38)	.23 (.33)	.44 (.40)

Note: Standard deviations appear in parentheses.

Note that the differences between children's responses to police officers' and caregivers' free-narrative prompts cannot be attributed to differences in the nature of the free-narrative prompts used; these were similar across the two categories of interviewers. Approximately two out of every three free-narrative prompts asked by the police and caregiver groups were open-ended questions (as opposed to minimal encouragers).

Questionnaire for police

Immediately following the interview, police officers were asked to estimate (a) the child's level of intellectual disability, (b) the degree to which the child's intellectual disability interfered with the child's ability to communicate information about the event and (c) the appropriateness of their own questions when interviewing the child. With regard to estimating the child's level of disability, the rate of accuracy

was 60%. In all remaining cases, police officers underestimated the child's level of disability. Four children with a mild intellectual disability and one child with a moderate intellectual disability were ranked in the 'borderline' category. One child with a mild intellectual disability was incorrectly rated as having no disability and the remaining five children, who had a moderate intellectual disability, were ranked in the mild intellectual disability category.

With regard to the officers' perceptions of the degree to which the children's intellectual disabilities interfered with their ability to communicate, a one-way ANOVA was performed to determine whether the ratings differed according to the child's actual level of disability (mild or moderate). There was no significant effect of disability, $F(1, 26) = 1.16, p > .05$. In other words, police perceived that the communication deficits of children with mild intellectual disabilities ($M = 2.28, SD = 1.13$) were at a similar level to those of children with moderate intellectual disabilities ($M = 2.70, SD = 0.67$).

With regard to the police officers' perceptions of the appropriateness of their own questions, their ratings ranged from okay to good ($M \text{ rating} = 2.86, SD = 0.71$). Of more importance, however, was the fact that interviewers' ratings did not appear to reliably discriminate the best and worst performers. When the sample was split according to whether the participants performed above or below the mean in their use of free-narrative prompts, there was no significant difference in mean ratings between the higher ($M = 2.94, SD = 0.18$) versus lower ($M = 2.73, SD = 0.19$) performers. Indeed, one of worst performers (i.e., an interviewer who asked 54% of closed questions) rated his performance as 'good'.

Discussion

The current study provided a detailed description of the interviewing styles of police officers and caregivers when questioning children with mild or moderate intellectual disabilities about a staged event. The aim of this examination was to understand how children with intellectual disabilities are being interviewed in the field and whether the style of these interviews may explain (at least in part) the under-representation of children with intellectual disabilities within the legal system. Overall, the findings revealed that while the police interviews were generally consistent with 'best-practice' guidelines, there were many ways in which they could be improved. Further, the nature of the interviewing conducted by the police officers and caregivers differed markedly. The findings in relation to each interviewer group are discussed in turn.

The police officers

Previous research indicates that police interviewers have considerable difficulty adhering to 'best-practice' guidelines when interviewing children. The predominant difficulty of police across English-speaking countries appears to be the avoidance of leading and suggestive questions and the reliance on specific cued-recall and closed questions as opposed to the recommended open-ended prompts (see Powell, 2002, for review). Interestingly, with regard to the police officers in this study, the questioning style was less inconsistent with 'best-practice' guidelines than that indicated by previous research. Approximately 31% of the questions asked of children with mild intellectual disabilities and approximately 35% of questions asked of children with moderate disabilities were broad open-ended prompts and minimal encouragers. These rates are more than double that of many previous studies (i.e.,

Aldridge & Cameron, 1999; Davies, Westcott, & Horan, 2000; Warren, et al., 1996; Warren, Woodall, Thomas, Nunno, Keeney, Larson, & Stadfeld, 1999). Further, the use of leading and suggestive questions (and other coercive interview techniques such as bribery or criticism) was rare for both the mild and moderate disability groups even though the officers were relatively persistent in trying to elicit event-related information.

Importantly, the more child-centered approach used by the investigative interviewers in this study was not particular to the measures adopted. The definitions of the various question types are consistent with those commonly reported by experts in the literature (i.e., Poole & Lamb, 1998; Wilson & Powell, 2001). However, the relative high performance of the police in this study needs to be considered in relation to the fact that the training of these officers was superior to some of the previously described courses. As indicated earlier, the training these officers received had included practice and critical feedback in interviewing children, and a whole day on interviewing people with intellectual and physical disabilities. Further, the children in this study were relatively verbal (i.e., they had no major physical or communication impediments) and were relatively motivated to talk (i.e., the event was enjoyable and the children hadn't been threatened to keep the event secret). These factors would have potentially made it easier for the interviewers to elicit details in the children's own words compared to interviews conducted in the field.

Although the officers in this study tended to use a relatively high number of open-ended questions compared to previous studies, the results should not be taken to mean that the police officers were performing at an optimal or desirable level. First, experts advise that the majority of information obtained should be in the child's own words (Lamb, et al., 1998). However, only one in three questions used by the police

were designed to elicit open-ended responses and less than one in five prompts used to follow up information that was not described in context were open-ended. Further, the interviewers tended to talk more than was necessary (Poole & Lamb, 1998). The interviewers relied heavily on the use of open-ended questions during free-narrative rather than minimal encouragers, and while they would commence the interview with a free-narrative prompt they would often quickly move to more specific questions to clarify information rather than allow the child to exhaust his/her memory first. For example:

Police officer: So what happened on that day, tell me from the start.

Child: From the beginning, okay we saw Pop the koala, we read the same story, same puzzle and then we lied on the sweet grass

Police officer: On the, which grass?

Child: The green grass, I think near the beach

Police officer: So with this grass, was it real grass?

A tendency of interviewers to interrupt the child's account has been noted in other studies. For example, an evaluation of police interviewers in the United Kingdom reported that in 43% of interviews, the child was needlessly rushed from free-narrative to the questioning phase (Davies et al., 1995; Warren et al., 1996).

A second problem identified in this study was that relatively few ground-rules were provided to the children during the interviews even though these are an important component of most prominent investigative interview protocols (Poole & Lamb, 1998). For instance, only 30% of the police interviewers provided a rationale for why the child needed to recall specific information and only 11% informed the child that it was okay to say 'I don't know' or 'I don't understand'. Third, while the police officers generally refrained from using coercive, critical or other *negative*

strategies, the range of appropriate strategies used to keep the child on task and to clarify responses was relatively narrow. The officers rarely reminded the children of the topic and did not often explicitly state that they needed the child to rephrase or expand on earlier comments because the earlier response was not understood. Instead interviewers tended to ask specific questions when aspects of the event were not clearly understood.

The importance of encouraging children with intellectual disabilities to talk as much as possible in investigative interviews is highlighted by previous studies that have revealed that free-narrative and open-ended prompts generate the most accurate recall, even among children of moderate intellectual disabilities (Dent, 1992; Henry & Gudjonsson, 1999; Pear & Wyatt, 1914; see also Chapter 5). The importance of these prompts is also supported in this study by the fact that the interviewers had difficulty judging the extent of children's intellectual deficits and avoiding the use of closed questions⁶, and that most of the free-narrative prompts were successful in eliciting event-related information. Even for the moderate intellectual disability group who had the greatest memory and language impairments, nearly half (i.e., 48%) of all the free-narrative prompts elicited new event-related information. Further, when the police interviewers used open-ended questions, they were more effective in eliciting event-related information than open-ended questions used by the caregivers. This may be due in part to the police officers' more child-centered, open-ended approach (see Lamb, et al., 1998). Child-centred and open-ended approaches

⁶ When specific cued-recall and closed questions are used they need to be carefully tailored to the child's abilities. For example, simple sentences need to be used containing words or terms that are appropriate for the child's level of development. The fact that the police were relatively poor judges of the children's level of development and were not necessarily aware of the dangers of using closed rather than open questions heightens the risk that confusions, contamination or misunderstanding could arise with the use of these questions. In contrast, open-ended questions are appropriate for all ages because they do not specify what specific information is required and thereby reduce the potential for misunderstanding.

to questioning encourage elaborate responses and encourage interviewees to perceive themselves to be competent conversational partners.

The caregivers

The questioning approach used by the caregivers deviated substantially from the questioning used by the police officers that is dictated by 'best-practice' guidelines. Overall, the caregivers were less persistent than the police officers in eliciting information from their children. Further, among the questions that caregivers did use, there was a heavy reliance on specific cued-recall and closed questioning, with only around 13% of all questions being framed in a broad open-ended manner. Compared to the police officers, the caregivers used a higher proportion (i.e., 17%) of leading questions, and were less likely to explain the rules of conversation (i.e., the importance of saying 'I don't know' or 'I don't understand'). Further, strategies typically used by the caregivers to keep the child's attention on the task were quite coercive. These included criticising the child, bribery and telling the child that there is more to tell. In this study, 39% of caregivers criticised their child on at least one occasion during the interview and 46% disputed their child's answer on at least one occasion, with a large number of these focused at children with moderate intellectual disabilities. Indeed, the rate of negative strategies was found to increase as the level of disability increased.

Why did caregivers rely on these strategies? One likely possibility is that the caregivers were merely using a style of questioning that came naturally to them. Specific, direct and leading questions are very widely used in English-speaking culture (Powell, 2002) and extensive specialised training is usually required by professionals to master an open-ended style of questioning. Indeed, the style of

interviewing by caregivers in this study was not dissimilar to the questioning of some investigative interviewers in previous studies (Lamb, Sternberg, Orbach, Esplin, & Mitchell, 2002; Sternberg et al, 2001; Warren et al., 1999). However, the fact that negative strategies by caregivers was higher among children with moderate, as opposed to mild intellectual disabilities, suggests that caregivers perceive that the more communication barriers the child has, the more they need to coerce or direct the child to engage in conversation with them. Further, there was anecdotal evidence to support that caregivers tended to underestimate the abilities of their children to relay information about the event on their own. Caregivers frequently made comments (directed to the research assistant in front of the child) such as “I don’t think you are going to find this one very helpful”, “I don’t think she knows”, “Its hard to get him to talk”. Such perceptions are likely to be self-fulfilling in that when children are not perceived by their caregivers to be competent conversational partners, they are discouraged further from speaking out (Schneider & Gearhart, 1985; Williams, 1995). This was highlighted in this study by the reduced tendency of the children to respond to open-ended questions by caregivers (compared to police officers) with information related to the event.

The strategies adopted by the caregivers in this study would impact not only on children’s performance in interviews in the home, but also their performance in investigative interviews. First, as caregivers are often a primary source of information for interviewers regarding the child’s level of functioning, if caregivers underestimate their child’s ability, this may also lead the investigative interviewer to underestimate the child’s ability. Second, should caregivers (who are often the initial source to whom children disclose abuse) follow-up an initial disclosure with highly direct, leading and suggestive questions, this may contaminate or damage the

accuracy and/or credibility of subsequent evidence provided by the child (Ceci & Bruck, 1993). Indeed, a clear and uncontaminated account of abuse from the child witness is one of the most reliable predictors of a successful prosecution of child abuse (McGough, 1994).

Third, on a broader level, children's everyday interaction impacts on their performance in an investigative interview by influencing their perceptions of their own abilities as conversational partners and their understanding of the roles of adults and children during verbal interaction. With few interaction experiences that emphasise the importance of their own views and with frequent negative experiences (e.g., criticism from adults when they attempt to initiate conversation), children with intellectual disabilities develop low self-esteem and feelings of incompetence with language. This negative self-perception discourages them from providing important and useful information in their own words when invited to do so by police. In fact, on some occasions in this study, children reiterated the excuses given by caregivers for why they could not perform well in the interview. For example one child with a mild (IQ = 58) level of disability said at the commencement of the interview, "*I can't [remember] very well, because my brain's not very smart. My brain is shaped like a peanut*". When encouraged by the officer to partake in the interview, this child actually exceeded his own and caregivers' expectations by recalling seven of the target items from the event in context and provided one of the most highly elaborate and accurate accounts of the story.

Finally, the manner in which children are typically engaged in conversation has been shown to affect their language development (Roberts, et al., 1991; Tannock, et al., 1992; Yoder & Davis, 1990). Both caregivers and teachers play a primary role in children's development, however, with little encouragement to pursue topics that

interest them, children are not supported in expanding or practicing their communication skills (Roberts et al., 1991). If the styles of interaction that children with intellectual disabilities are typically engaged in are direct, closed or interviewer-centred, then these children would not be given the experiences necessary to develop adequate cognitive structures which support the recall of information in response to open-ended questions (Abbeduto, Weissman & Short-Meyerson, 1999). As seen in study one (Chapter 5) as well as this study, limited communication experiences lead children with intellectual disabilities to rely more heavily on direct and specific forms of questioning compared to mainstream children even when they have sufficient language and memory ability to relay the event in their own words.

Overall, the nature of the interviews conducted by the police officers and caregivers could explain (albeit in part) the poor quality of evidence obtained from children with intellectual disabilities. While police officers tended to ask a relatively high proportion of open-ended questions compared to previous studies, they frequently interrupted the children's account and used a relatively narrow range of minimal encouragers and other strategies designed to keep the child talking. Further, caregivers used a relatively high number of direct, leading and negative prompts which included disputing initial responses and criticising the child. The broader implications of these findings for both researchers and practitioners will be discussed in the next and final chapter.

CHAPTER 7 – IMPLICATIONS OF THE RESULTS FOR IMPROVING THE QUALITY OF EVIDENCE AMONG CHILDREN WITH INTELLECTUAL DISABILITIES

The aim of this thesis was to examine two broad issues in relation to the investigative interviewing of children (aged 9 to 13 years) with mild and moderate intellectual disabilities. First, how do children with intellectual disabilities perform (relative to children matched for chronological and mental age) when recalling an event in response to various questions? Second, what question types and interview strategies do police officers and caregivers use to elicit accurate and detailed accounts about an event from children with intellectual disabilities? The rationale for exploring each of these issues was to determine possible ways of improving the elicitation of evidence from children with intellectual disabilities. While children with intellectual disabilities constitute a high proportion of all child victims of abuse (Conway, 1994; Goldman, 1994; Morse, et al., 1970), they rarely provide formal reports of abuse and of those incidents that are reported, few cases progress to court (Henry & Gudjonsson, 1999).

The two studies employed in this thesis incorporated events that had been staged in the children's schools and included a wide array of specific target items (i.e., actions, objects, and verbalisations). Study 1 (Chapter 5) involved a standard interview paradigm administered by the researcher whereby the children were presented with biasing information about the event and were subsequently required to answer various questions designed to elicit their recall of the event details. The children's performance in this latter interview was compared to that of children matched for chronological and mental age. Note that this study was considered

generalisable (at least in part) to the legal setting because many children who give evidence are required to remember specific details about an event with some degree of precision. Further, the interview structure used in this study was a 'phased' approach, which resembled that of current 'best-practice' guidelines (Home Office, 2002). Study 2 (Chapter 6) shifted the focus of the examination onto interviewers' rather than children's performance. An event was staged in the children's schools, and caregivers and police officers were required to use whatever techniques they would normally use to elicit a detailed and accurate account of the event.

Overall, the results of this research demonstrated that children with intellectual disabilities are clearly able to provide accurate and detailed evidence about an event that they participated in several days or weeks earlier. The accuracy and detail of their recall, however, is determined by the nature of the questions asked, as well as social/contextual factors related to the interview situation. Further, when considering research on the effect of various questioning strategies, the way in which children with intellectual disabilities are currently being interviewed in the field is less than optimal. On the basis of the current findings, it appears that improvements in the evidence of children with intellectual disabilities will depend on the extent to which; (a) investigative interviewers can adhere to 'best-practice' interview guidelines in interviewing children, (b) interviewers' perceptions reflect the true capabilities of these children, and (c) children with intellectual disabilities are encouraged and given the confidence to speak out about their experiences during their daily life. This final chapter discusses each of these issues (with reference to the current research findings) and their implications for researchers and investigative interviewers of children with intellectual disabilities.

7.1 The Importance of Adhering to ‘Best-Practice’ Guidelines

As indicated in Chapter 3, current recommendations for conducting investigative interviews with children who have intellectual disabilities are based on a phased approach (Home Office, 2002). A phased approach specifies that interviewers begin by eliciting an account of the event in the child’s own words, with as little prompting from the interviewer as possible. The interviewer then progresses to more specific forms of questioning (e.g., specific cued-recall and closed questions) when free-narrative prompts (i.e., open-ended questions and minimal encouragers) have not been fruitful in eliciting further details. The results of Study 1 clearly supported that a phased questioning approach should be used where possible when interviewing children with intellectual disabilities. Although the children with mild and moderate intellectual disabilities in Study 1 provided less complete information than mainstream children in response to free-narrative prompts, these prompts were effective in eliciting highly specific event-related information, even from children with moderate intellectual disabilities. Further, the details provided in response to free-narrative prompts were just as accurate as those details provided by the mainstream children. This is in contrast to the findings involving specific questions where more errors were reported from children with intellectual disabilities compared to mainstream children.

Despite the important benefits of a phased interview approach, the use of free-narrative prompts was a distinct source of difficulty for the police officers. The police interviewers who participated in the mock interview paradigm of Study 2 were successful in avoiding leading, suggestive and coercive questioning. However, only one in three questions asked by these interviewers was open-ended. Further,

minimal encouragers were not often used (irrespective of the child's level of disability) and the interviewers had a tendency to cut-off the children's narrative accounts with specific questions when these questions could have been withheld until later in the interview. Whilst the results of this study may be generalisable to police officers' performance in the field (i.e., they are not dissimilar to research with mainstream children), they may be an overestimation of the quality of interviewing being conducted with children who have an intellectual disability. That is, the event was enjoyable and not secretive, and therefore there were no motivational reasons for children not to report it. Further, the children had no major compounding physical or speech impairments and the officers had received specialised training (involving practice and critical feedback) in the elicitation of information from children.

So what is needed to assist investigative interviewers in eliciting information from children with intellectual disabilities in the children's own words? First, more research is needed to determine how interviewers acquire and maintain skills in eliciting free-narrative accounts from children. The officers who partook in this research had received training involving practice and critical feedback and a full day especially devoted to the topic of interviewing persons with intellectual disabilities. However, this was not sufficient to prevent them from interrupting the children's accounts, from directing the flow of conversation and from asking a high proportion of specific (particularly closed) questions. Previous research indicates that improvements in open-ended child-centered interviewing requires training that incorporates continued *post*-training individual supervision and feedback by experts as well as multiple 'refresher' training sessions (Lamb, Sternberg, Orbach, Esplin & Mitchell, 2002; Lamb, Sternberg, Orbach, Hershkowitz, Horowitz, & Esplin, 2002). This is relevant to the current sample because while practice was included in the

courses of these officers, for most officers it ceased immediately after the completion of the 2-week training course. It is likely, however, that other (additional) factors would moderate the success of post-training intervention (see Ericsson & Charness, 1994; Gardner, 1995). For example, post-intervention variability in performance may be due to interviewers' personal attributes, such as level of victim empathy, motivational factors, degree of prior education, and the nature of prior interviewing experiences. Post-intervention variability in performance may also be due to organisational or systemic factors such as team supervisors' awareness of best-practice guidelines, workloads and the time in which training is introduced in one's career. Research, to date, on the effectiveness of training in investigative interviewing with children has not identified the relative impact of these factors.

Second, improvements in the quality of evidence obtained from children with intellectual disabilities will be dependent in part on whether police and human service organisations allow investigative interviewers adequate time to conduct interviews and to conduct more than one interview if necessary. Compared to mainstream children, children with intellectual disabilities have shorter attention spans, they generally take longer to provide accounts in their own words and they require particular care during the rapport-building phase so that interviewers can adequately determine the child's abilities and preferred style of communication (Ericson et al., 1994; Home Office, 2002; Iarocci & Burack, 1998; Marchant & Page 1997). In contrast, organisations and workplace supervisors put considerable pressure on investigative interviewers to obtain information as quickly as possible (Aarons & Powell, in press; Kebbell & Milne, 1998). A perceived lack of time could partially explain the poor quality of some police interviews. When officers are hurried or anxious, they tend to interrupt the witness or introduce highly specific,

closed questioning earlier than necessary (Davies, Wilson, Mitchell & Milsom, 1995). This pattern of interaction was clearly evident in Study 2 of this thesis where a maximum time limit of 17-minutes was imposed on all interviewers.

Third, the elicitation of quality evidence from children with intellectual disabilities requires specialised training in how to follow ‘best-practice’ guidelines as well as knowledge about how to deviate from these guidelines when accommodating the communicative requirements of individual children with intellectual disabilities. No child in the current study utilised auxiliary or alternative forms of communication and no child required the use of an interpreter. If this were the case, persistent use of open-ended questioning could potentially have damaged rapport, and increased the child’s level of frustration (Marchant & Page, 1997). The need to tailor the interview to the child’s individual needs is addressed further in the next section.

7.2 The Importance of Understanding the Child’s Capabilities

The results of Study 1 (and previous research e.g., Young, et al., 2003) revealed considerable variation in children’s language abilities within both the mild and moderate intellectual disability groups. Having knowledge of an individual child’s communication abilities (relative to his/her peers) is obviously helpful for an interviewer when attempting to tailor his/her interviewing style to the child’s needs and abilities. The need for prior information about the child is applicable to any interview, but officers acknowledge that this is particularly important when interviewing children with intellectual disabilities (see Aarons, et al., 2003). Without this prior knowledge of children’s capabilities, interviewers claim they experience considerable anxiety and stress as they do not feel adequately equipped to anticipate

and thereby ‘minimise the hurdles’ that stand in the way of effective communication (Aarons, et al., 2003, p. 16).

While it is true that police officers are not able to easily detect the extent of the children’s disabilities in a brief interview (Study 2), this research demonstrated that interviewers who seek advice from caregivers may be overestimating the ability of these people to accurately discern their child’s capabilities and to recommend techniques for minimising communication ‘hurdles’. The perceptions of caregivers (in particular) are based on a very different style of questioning to that of police interviewers. Caregivers tend to use a high level of coercive, leading and critical questioning techniques (Study 2) and such techniques underestimate the abilities of these children to provide reliable and detailed accounts of events (Ceci & Bruck, 1993).

Further, mental age (which is an important measure of children’s abilities among teachers and other educational professionals) was not found to be as useful an indicator of children’s memory performance as developmental theories would suggest¹. Indeed, the children in this study sometimes performed significantly below their mental age, which reflects the fact that performance in investigative interviews is dictated by individual, social and motivational factors as well as cognitive functioning per se. The direct impact of social and motivational factors was demonstrated in this research. Anecdotally, the children tended to downgrade their own abilities and they were less likely to provide event-related information to open-ended questions by their caregivers (who were more direct, negative and coercive)

¹ The idea that mental age is a useful predictor of children’s performance is based on Zigler’s (1969) ‘developmental theory’. This theory proposes that differences in the performance of children (with and without intellectual disabilities) on cognitive tasks is based on a delay in the development of cognitive processes and that delay is matched at the level of the child’s mental age (Ellis & Cavalier, 1982).

than the police interviewers (Study 2). Further, in a standard interview, the children with intellectual disabilities were more likely than mainstream children to rely on specific questions (Study 1).

The poor quality of questioning by caregivers and the fact that differences in performance frequently occurred between children with intellectual disabilities and their mental age-matched peers emphasises that the onus must rest on the interviewer to take responsibility for assessing the child's ability to relate information during the investigative interview process and to minimise the detrimental effect of the child's prior (potentially negative) experiences when engaging in conversation with adults. One strategy that might be helpful during the pre-interview assessment phase is to encourage the child to give an account about an innocuous event (e.g., a recent holiday or birthday party; Lamb, Sternberg, Esplin, 1998) prior to recalling the abusive event(s). This is a strategy proposed in two prominent interview protocols (i.e., the Stepwise interview and the NICCHD interview protocol; see Poole & Lamb, 1998 for discussion). The strategy is designed to provide the interviewer with a sense of the individual child's ability to recall past events (i.e., the level of detail that can be provided) and to inform the child of the nature of the adult-child interaction which is child-centered. Research involving mainstream children has demonstrated that an open-ended style of interaction about an innocuous event during the rapport-building phase enhances the quality and elaborateness of children's subsequent responses during the main part of the interview (Sternberg et al., 1997). There is no reason to suspect that this benefit would not generalise to children with intellectual disabilities.

7.3 The Importance of Encouraging Children with Intellectual Disabilities to Speak About their Experiences During their Daily Life

The research presented in this thesis provided some empirical support for the fact that children with intellectual disabilities (particularly children with moderate intellectual disabilities) are being exposed to conversational experiences in the home that could negatively impact on their performance in an investigative interview. Indeed, the caregivers in Study 2 used a direct, relatively controlling and coercive interview style, which contained few open-ended questions. As outlined in Chapter 6, these strategies are potentially detrimental to children's performance in investigative interviews both directly, as well as indirectly. If a caregiver uses a coercive and leading style of questioning about an alleged incident of abuse, this could obviously contaminate the child's subsequent account of the abuse during an investigative or evidential interview (Ceci & Bruck, 1993). However, direct, coercive and leading questioning also impacts on a child's ability to relate events by inhibiting the child's language development and reducing the child's motivation and confidence to learn effective ways of communicating (Roberts et al., 1991; Mahoney, 1988; Saetermoe et al., 1999).

Taken together, the findings of Study 1 and 2 imply that improving the quality of evidence elicited from children with intellectual disabilities requires improvements in the type and quality of interaction these children experience with adults on a daily basis. When child interviewees have limited experience in open-ended or child-centered forms of communication, they are unlikely to develop appropriate skills for participating in this style of interaction (Abbeduto et al., 1999). Greater experience would involve educating caregivers about the abilities of their children, the impact of a direct and coercive style of interaction, and techniques for

achieving a more child-centered or open-ended style of communication. While it is important that this education begin as early as possible (i.e., in formal early-intervention programs) it is also important for caregivers to be encouraged to both support and further challenge their children's abilities as they grow. Offering children with intellectual disabilities greater opportunities to speak out may also help in preventing abuse and facilitating early detection of abuse (Marchant & Page, 1997).

7.4 Conclusion

The research reported in this thesis demonstrated the usefulness of the phased approach in eliciting accurate and forensically relevant information from children with intellectual disabilities. Using this approach, children with mild and moderate disabilities were able to provide accurate and detailed evidence about an event that they participated in several days or weeks earlier. Further, when minimal cues or prompts were used by the interviewers, the children with intellectual disabilities provided event-related information that was as accurate as that of mainstream peers (matched for both mental and chronological age).

The research also demonstrated, however, that police officers who specialise in the investigation of child abuse have difficulty abiding by 'best-practice' guidelines in interviewing. While their performance was relatively non-leading and much more open-ended than that of caregivers (i.e., caregivers used a very direct, negative and coercive questioning style), the officers had a tendency to use a high proportion of closed questions, and to cut off the child's free-narrative account with specific questions too early. On the basis of these findings, it is proposed that improvements in the quality of evidence of children with intellectual disabilities are

dependent on better training of investigative interviewers and caregivers in the adoption of 'best-practice' guidelines in interviewing. First, investigative interviewers need to be better trained to adhere to open-ended questions where possible throughout the interview and to use a wider array of strategies to keep the child on task. Second, caregivers need to be better educated about the abilities of their children, the benefits of an open-ended questioning style for their child's language development and confidence as conversation partners. Further, caregivers need to be educated in how to use non-leading, open-ended and non-coercive questioning techniques.

Provided the perceptions of police interviewers and caregivers better reflect the true capabilities of children with intellectual disabilities, and provided these persons learn how to maintain the use of open-ended interview techniques, improvements in the quality of evidence from children with intellectual disabilities would likely be achieved. In addition, these improvements would likely improve the perceptions of children with intellectual disabilities of the investigative interview process and their own competence as informants. Indeed, children with intellectual disabilities (regardless of the degree of their communication deficit) deserve to be heard, deserve to be believed and deserve to have the legal ramifications brought down upon those people who commit crimes against them.

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Appendix A: Magic Show Script (Version A)

Hi everyone, my name's **Trina**, and I am a magician. Is anyone else's name Trina?

Do you know anyone called Trina?

Today I'm going to do a magic show for you, but first I need to check who is here, so I am going to very quickly call out everyone's name and see who is here. *(Take the roll and then ask)* What was my name again?

I haven't been a magician for very long and I'm still learning how to do magic tricks. Do you want to know how I became a magician? **My dad is a magician**, but he is getting too old to do magic shows anymore, so he is teaching me how to do the magic tricks. Is anyone else's dad a magician?

I have been practicing my magic tricks a lot and soon I have to do a magic show for kids in prep and I need to make sure that the tricks that I use will be okay for them. So I need your help today to tell me whether you think that the tricks are okay or not.

What I need you to do is to tell me how much you like the tricks I do, because if you think they're really good then I'll use them with the preps, but if you think they're not very good then I won't use them. So after I've finished a trick I want you to **clap your hands** to show me how much you liked the trick. If you think it's a good trick then clap loudly like this, but if you think it's only okay then just clap softly like this. Can you practice for me?

I thought that every good magic show needs a poster and I thought that preps would like a poster, so I brought a one with me today. See the poster says “Magic show” on it.

I brought some special magician’s things for me to wear....

Magician has to step into the cape, has some difficulty pulling it over her arms

*I accidentally got a knot in my laces, so I can’t put my cape on the normal way, instead **I have to step into it to get it on.** But then the laces are too big, so I have to tie another knot to keep the cape on. I hope that I don’t get a knot in it this time, otherwise I won’t be able to get it off. I also brought my white magician gloves and my magician’s hat.*

Ooohh! My hat doesn’t seem to be fitting properly. Oh I know why. I’ve got a special friend who lives in my magician’s hat. You know how some magician’s have rabbits that live in their hats. Well I don’t really like rabbits so I have a different animal that lives in my hat, he is a koala and his name is **Boo**. Do you want me to see if my friend Boo the koala wants to come out and play with us? Let me just ask him.
(*Whisper to Boo in the hat*)

Oh no, Boo says he is too tired to come out and play today because he had a friend come over and stay the night in my hat. I’ll show you a picture of his friend. His friend was a kangaroo and Mrs Kangaroo had a cold and was **sneezing** all night, right in Boo’s ear, so Boo couldn’t get any sleep. Can you make the sound of sneezing? (*ensure they make the sound of sneezing whilst the picture of the kangaroo is being held up*).

So Boo won't come out and play with us today, but perhaps if you are all really quiet, he will come out and say hello. I'll just ask him if he will come out and say hello to you.

"Hi everyone, my name's Boo and I'm a koala. I'm really tired, because I didn't get any sleep last night. Do you know why I didn't get any sleep? Because I had a friend, Mrs Kangaroo stay at my house and she had a cold, she was sneezing all night long Ahhh Choo! I think that maybe I'm getting a cold too, so I had better go back and get some sleep. Bye"

Poor Boo, he must be really tired.

I hope all you guys got enough sleep last night. Nobody was sneezing and keeping you awake? I wouldn't want anyone to be like Boo and fall asleep in the middle of the magic show. So just to make sure that everyone is wide awake and ready to do the tricks, I think we should do a warm-up activity.

The warm-up activity I want everyone to do is **wiggle their fingers**. You have to stand up to do this and you have to wait for me, because I'm going to count to ten and you have to wiggle your fingers ten times, once for every time I count. When we are finished I want you all to sit down and be ready for the magic tricks. Are you all ready? (*everyone wiggles their fingers ten times*)

I think that everyone looks awake now. Are you ready to do some magic tricks?

I need a helper to help me with my magic tricks and to be fair, I'm going to pick someone's name from the roll. Now I need something to help me point to a name on the roll.

Let me see, what's in my bag that I can use... A **crayon**, that's a good thing to pick a helper with. Do you guys use crayons at school for colouring in or writing? They're pretty good for colouring in, I think that younger kids like to use them. What colour crayon do you think I should use?

Now I will close my eyes and let the crayon pick someone from the roll.

... You can be my helper. I had better write your name down, so that I will remember who my helper is later on, when I am doing the magic tricks. I'll use my crayon to write your name on this piece of paper (*Write name down and show it to children so they can see the crayon*)

I think that everything is ready now to do some magic tricks, I just have to turn my magic powers on. To turn magic powers on I just have to tell the magic what to do.

"It's time for the magic show to start, so magic powers do your part"

Okay I think that we are ready to start....

Lollipop Trick

Now for my first trick. I am going to make something disappear.

Over here I have my brown paper bag with lollipops in it, and I don't need all of them.

I have lots of different lollipops in my bag and I've brought along some fruit for you to guess what the different flavours are and because I didn't think prep children would be very good at telling flavours. There is this flavour lollipop (*hold up plastic raspberry*), yes that's right its raspberry flavoured and there is this flavour (*hold up fake apple*), yes an apple flavoured lollipop. There is this flavour (*hold up fake grapes*), yes, that's right, its grape flavoured lollipop. Finally there is my favourite flavoured lollipop that tastes like this (*hold up fake banana*).

Mmm, **Banana flavour**, I just love banana flavoured lollipops, but its strange, do you know I don't actually like bananas? In fact I hate bananas, but I love banana flavoured lollipops, that's pretty strange isn't it? Well because I love banana flavoured lollipops so much, I think that I might just keep the banana flavoured lollipop to eat later. I'll just put it in my pocket, so that I can get it later.

I don't want the rest of the lollipops, so I'll make them disappear. Where do you think I should send them to? (*Allow children to make suggestions*)

Yes, I think that the shop is the best place for them, so other people can buy them later.

I need your help to send the lollipops back to the shop. There is a magic word that magician's say to make magic work. The magic word is "**Abracadabra**" Now I am going to tell the magic what I want it to do, then I want you to say the magic word afterwards. Are you ready?

"Bippety Bop, lollipops won't you go back to the shop"

Now you all say *Abracadabra*

Where is my helper, can you come and look in the paper bag, have the lollipops gone back to the shop? Sorry, what's in the bag? Oh it's a dirty **rock**, what's that doing in there? Can you get the rock out and see if the lollipops are gone?

The magic must have gotten confused, it sent the lollipops away, but it gave me a dirty rock instead.

Well what did you all think of that trick, do you think prep children will like it?
(*respond to level of clapping*)

Yes, I think that I did do something wrong in that trick? (*magician has a think about what went wrong.*)

Oh, I remember now, I forgot to tap my magic wand. I forgot to tell you that when I do a magic trick, I always have to **tap my magic wand three times** to make the magic work properly. Can you all tap on your leg three times? Yes, that's right, so next time I do a trick remind me to tap my wand three times.

Egyptian water box trick

In my next trick I am going to use my special magic box that can make things appear. This trick can get a bit messy, so I've brought along my **raincoat**. It's the raincoat I wore when I was a little, because I didn't want to get the raincoat I wear now to get messy. I'll just put my raincoat on the floor, so any mess lands on it.

I haven't used my box for a couple of weeks and it's been sitting **under my bed**. It gets pretty dusty under my bed. Does it get dusty under your beds? Well I want the trick to work properly this time, so I'm going to quickly clean the box to make sure it's not dirty or dusty from sitting under my bed.

I am really thirsty and I could really use a drink, I forgot to have a drink at breakfast time, so I really need a drink now. I think that's what I'll make appear in the box. Now I need you to say the magic word that will make a drink appear, remember what it was? "Abracadabra". You say that word after I have said what I want the trick to do and how many times do I have to tap, can you show me? Three times, that's right. Are you ready?

"Let's have a think on making magic make me a drink." Now say the magic word (*Abracadabra*) and I'll tap my wand three times. Let's look in the box.

Oohh, look a drink!!!

(*Pull out the drink*) Mmmm, what type of drink is this? (*Get children to guess*)

(*Drink it*). Oohhh, yes you were right it is yummy **orange juice**.

Did you think that was a good trick? Remember if you think it was a good trick that prep kids would like clap your hands loudly. (*respond to the loudness of the clap*) By the way you are clapping it sounds like you thought that was a very good trick.

Well I feel all cool after that trick made the drink appear for me, but you guys didn't get anything, I think I should do a trick where you all get something refreshing.

I have a special bag that can make things appear, see this colourful bag. It's empty at the moment, but if we say the right words, and I tap my magic wand, maybe we can make something appear for all of you.

Now can you remember the word you say for the magic "Abracadabra" that's right and remember to wait for me to tell the trick what to do before you say the magic word.

"Kalamazoo, I think these guys would like something too". (*Abracadabra*) and I tap my magic wand three times.

Helper, can you come and look in the bag for me, is there anything in there? Oooh, **lip gloss**, and its ice-cream flavour. Yumm!

I'll give all of you a little bit of lip gloss, Mmmm, it tastes great! I have these cotton buds, and I'll put a little bit on each one for you. Just put the lip gloss on your lips.

Did you think that that was a good trick? Clap and tell me how much you like that trick

It's almost time for you to go back to class, but before you go back, I have something special for you all because you have been such a big help today.

The surprise is a sticker and I have lots of them in my special sticker purse, but you have to guess what is on the sticker before you get one.

(*Give some hints, ask some children to guess*). The sticker is of a **dinosaur**

I want you all to stay sitting down and I will give you all a sticker, but you have to put the sticker on your **jumper**, right here (*show them*), so that I can see it and make

sure that everyone has a sticker. (*Make sure that everyone puts their sticker on their jumper*). Now everyone show me their sticker on their jumper, I want to make sure you all have one.

Thank you all for coming and watching my magic show today, I think I know now what tricks to use for the prep kids.

Before you go back to class I had better turn my magic powers off, because I wouldn't want to accidentally do something, like turn your teacher into a **frog**. I don't think that she would like to be a frog very much, all green and slimy and hopping around all over the place.

Now before I tapped my wand to make the magic work but this time I need to **hop on the spot** to make the magic stop, but I still need you to say the magic word "Abracadabra".

So I'll tell the magic what to do and hop, then you say the magic word "Tippety top, I think its time for the magic to stop" ("*Abracadabra*")

Well the magic is turned off now, so your teacher is safe, she won't be turned into a frog.

Thank you for all your help today. Goodbye

Appendix B: Biasing Interview (Children who saw Version A of Magic Show)

“I heard that a magician came to your school and did a magic show the other day. I heard that she had a poster like this one with ‘magic show’ written on it. Do you remember the magic show? I heard the magician did some tricks, but I wasn’t there that day and I don’t know what happened. So I need to ask you some questions about what the magician did the day she came to your school.”

1. I heard that the magician was called **Trina** and that **Trina** wore a black hat.
What did **Trina**’s black hat look like?

2. You had to **stomp your feet** to show the magician how good her tricks were.
When it was a good trick you **stomped your feet** like this, but when it wasn’t a good trick you **stomped your feet** like this. Show me how you **stomped your feet**, like this or like this?

3. I heard that the magician hadn’t been a magician for very long. She became a magician because she **got a magic set for her birthday**. Who gave her the **magic set for her birthday**?

4. The koala was tired because his friend stayed the night. His friend had a cold and was **sneezing** all night. Who was the koala’s friend that **sneezed** all night?

5. The magician needed a helper for the magic show and she used a **crayon** to choose the helper. What colour was the **crayon** that she used to choose the helper?
6. I heard that (**false child**) was the magician's helper. Was (**false child**) a good helper?
7. The magician had to say a magic word to make her trick work. She had to say **Abacadabra**. Did the whole class say **Abacadabra** with her?
8. The magician had some lollipops in a bag and **raspberry** was her favourite flavour lollipop. Did the magician eat the **raspberry** lollipop or did she put the **raspberry** lollipop in her pocket to eat later?
9. When she was doing her tricks the magician had to **tap her wand one time** like this, to make the tricks work (tap on table). Where did she **tap her wand** like this (tap **one time** again)?
10. I heard that the magician made a drink appear because she was very thirsty and I heard that the drink was **orange juice**. Where did the drink of **orange juice** come from?
11. Because the drink trick was messy the magician had to put a **garbage bag** on the floor to keep it from getting wet. What colour was the **garbage bag** she put on the floor?

12. The magician made something for you to use. She made some **lip gloss** that was ice-cream flavour, mmm, yum, and you put the **lip gloss** on like this (demonstrate). Did everyone in your class get to use the **lip gloss**?
13. The magician had to do something special to turn the powers off. She had to **hop on the spot** to turn her magic powers off. How many times did the magician **hop on the spot**?
14. The magician had to turn her powers off and she said if she didn't turn her powers off she might do magic by mistake, like turn your teacher into a **squeaky little mouse**. What did your teacher say when she heard that she might be turned into a **squeaky little mouse**?

Appendix C: Memory Interview (Children who saw Version A of Magic Show)

“Hi [child’s name]. You may remember that my name is Sarah and I spoke to you yesterday about the magic show. Do you remember talking to me about the magic show? Well I really messed up because I accidentally taped over all of your answers. So I need to ask you again about the magic show. This time the questions might be a bit different, so just do your best to tell me what you can remember.”

(If a child fails to respond to the first four prompts or questions of any of the different questioning formats, then questioning automatically moves to the next question type (i.e., from free-narrative phase 1 to free-narrative phase 2).

Free-Narrative Phase (Part 1)

“First I want you to tell me everything that you can remember, even the little things that you don’t think are important. Just do your best to tell me everything that happened in the magic show. Start at the beginning. What was the first thing that happened?”

Use minimal encouragers (‘Mmm’, ‘Uh huh’ yes, ‘Nodding head’, ‘What else happened’ and ‘What happened next’) where appropriate. Also encourage the child with comments such as “you’re doing a good job”

Protocol for free-narrative phase (part 1)

The first time the child indicates they cannot recall any further information (e.g., "I can't remember anything else" or "that's all") say "Tell me what else happened in the magic show". The second time they indicate they cannot recall any more information ask "Is there anything else you can tell me about what happened in the magic show?". If they say or indicate that they cannot recall any further information and information about all the target items hasn't been provided then move on to free-narrative phase (part 2).

Free-Narrative Phase (Part 2) (full list of possible questions asked)

(Follow up each of the open-ended questions with minimal encouragers as in free-narrative phase, part 1)

1. You said there was a magician, tell me everything you can remember about the magician.
2. I heard that the magician had a puppet friend. Tell me everything you can remember about the puppet friend.
3. The magician had to do lots of things to make the magic work. Tell me everything you can remember she had to do to make the magic tricks work.

4. You said the magician did a trick with lollipops. Tell me about everything you can remember about that trick.
5. I heard that the kids in the class had to help the magician. Tell me about all the things that the kids in the class had to do to help the magician.
6. You said that the magician had a magic box. Tell me everything you can remember about the magic box trick.
7. I heard the magician did a trick where she made something for you. Tell me everything you can remember about the trick where the magician made something for you.
8. The magician had to do lots of things at the end of the magic show. Tell me everything you can remember about what the magician did at the end of the magic show.

(If child has not recalled information about all 21 target items after the free-narrative phase, ask cued-recall questions about those target items for which information has not been recalled. If in response to the cued-recall question, child has not recalled the specific instantiation, then immediately after the cued-recall question ask the corresponding forced-choice question. If again no response is provided than ask the appropriate non-verbal forced-choice question).

Cued-Recall Questions

1. A magician came to do a magic show for you. What was the magician's name?
2. The magician asked you to do something to show her if a trick was good. What did you have to do to show her a trick was good?
3. Why did the magician decide to become a magician?
4. The magician wore a black cape in the magic show. How did she put on the cape?
5. The magician brought a koala friend to the magic show. What was the koala's name?
6. The koala was tired because Mrs Kangaroo stayed over and kept him awake all night. What did Mrs Kangaroo do to keep the koala awake all night?
7. The magician made you do something to make you warm-up. What did the magician make you do ten times to warm-up?
8. The magician needed a helper for the magic show. What did she use to choose the helper and to write the helper's name?
9. What was the helper's name?

10. You and the magician had to say a magic word to make the tricks work. What was the magic word?
11. The magician had some lollipops in the magic show. What was the magician's favourite lollipop?
12. The magician sent the lollipops back to the shop but the trick didn't work and she got something else, what did she get in her bag?
13. The magician had to tap her wand to make the tricks work. How many times did she have to tap her wand?
14. The magician made a drink appear in a box. What type of drink was it?
15. I heard the magician had to clean her magic box because it was dirty. Why was the magic box dirty?
16. The magician said that the box trick could get very messy so she put something on the floor, so the floor wouldn't get messy. What did she put on the floor?
17. The drink was for the magician, but she made something for you. What did she make for you to use?
18. The magician gave you some surprise stickers. What was on your sticker?

19. The magician asked you to put the sticker somewhere. Where did you put the sticker?
20. The magician had to turn her magic powers off because she might turn your teacher into something? What might she turn your teacher into?
21. The magician did something to turn her magic powers off. What did she have to do to turn her magic powers off?

Forced-Choice Questions (Verbal)

1. Was the magician's name Trina, Katie, or Sophie?
2. Did you have to stomp your feet like this, pat your head like this, or clap your hands like this to show the magician her tricks were good?
3. Was it because she saw a movie about magic tricks, or was it because her father was a magician, or was it because she got a magic set for her birthday?
4. Did she put it over her head like this, did she step into the cape like this, or did she wrap it around her waist like this?
5. Was the koala's name Kip, Boo or Pop?

6. Was Mrs Kangaroo sneezing, hiccuping or coughing?
7. Did the magician make you wiggle your fingers ten times, did she make you touch your toes ten times, or did she make you jump on the spot ten times?
8. Did she use chalk, a texta or a crayon to choose a helper and write the helper's name?
9. Was the helper's name Child B(false), Child C(new) or Child A(true)?
10. Was the magic word Hey-Presto, Abracadabra or Alacazam?
11. Was the magician's favourite lollipop banana, orange or raspberry?
12. Did the magician get a clock a rock or a sock in her bag?
13. Did she tap her wand one time, three times or five times to make the trick work?
14. Was it a drink or milk, a drink, a coke, or a drink of orange juice?
15. Did the magician put a towel, a raincoat or a garbage bag on the floor?

16. Was the magic box dirty because she left it in her car, because she left it under her house or because she left it under her bed?
17. Did the magician make lip gloss, handcream or face spray for you to use?
18. Was it a ball sticker, a dinosaur sticker or a flower sticker?
19. Did you put the sticker on your hand, on your jumper or on your cheek?
20. Would she turn your teacher into a mouse, into a bird or into a frog?
21. Did she have to rub her tummy, turn around twice or hop on the spot to turn the powers off?

Forced-Choice Questions (Non-Verbal)

1. Was the magician's name Trina (*show card with name written on it*), Katie (*card*) or Sophie (*card*)? Point to one.
2. Point to which one you had to do to show the magician her tricks were good, did you have to stomp your feet like this (*demonstrate action to child*), pat your head like this (*action*) or clap your hands like this (*action*)? Show me which one.

3. Was it because she saw a movie about magic tricks (*card with picture on it*), or was it because her father was a magician (*card*), or was it because she got a magic set for her birthday (*card*). Can you point to one?
4. Show me which one the magician did to put on her cape. Did she put it over her head like this (*action*), did she step into the cape like this (*action*), or did she wrap it around her waist like this (*action*)?
5. Point to the one that is the koala's name, Kip (*card with name*), Boo (*action*) or Pop (*action*)?
6. Was Mrs Kangaroo sneezing like this (*action*), hiccuping like this (*action*), or coughing like this (*action*), which one?
7. Did the magician make you wiggle your fingers like this (*action*), touch your toes like this (*action*) or jump on the spot like this (*action*)? Show me which one.
8. Point to which one she used, did she use chalk like this (*card with picture and name*), a texta like this (*card*) or a crayon like this (*card*)?
9. Was the helper's name Child B (*card with name*), Child C (*card*), or Child A (*card*)?

10. Point to the magic word, was it Hey-Presto (*card with word written*), Abracadabra (*card*) or Alacazam (*card*)?
11. Point to the magician's favourite lollipop, was it the banana (*card with picture*), the orange (*card*) or the raspberry (*card*)?
12. Point to the one the magician got, did she get a clock (*card with picture*), a rock (*card*), or a sock (*card*) in her bag?
13. Did she tap her wand one time like this (*action*), three times like this (*action*) or five times like this to make the trick work (*action*)? Show me which one.
14. Was it a drink of milk (*card with picture*), a drink of coke (*card*), or a drink of orange juice (*card*)? Point to the right one.
15. Point to what the magician put on the floor, did she put a towel (*card with picture*), a raincoat (*card*), or a garbage bag (*card*) on the floor?
16. Was the magic box dirty because she left it in the car (*card with picture*), because she left it under her house (*card*) or because she left it in her car (*card*)? Point to the right one.
17. Did the magician make lip gloss (*card with picture*), handcream (*card*) or face spray (*card*) for you to use? Choose one.

18. Was it a ball sticker (*card with sticker on it*), a dinosaur sticker (*card*) or a flower sticker (*card*)? Point to the one it was.
19. Point to where you put the sticker on your hand like this (*action*), on your jumper like this (*action*), or on your cheek like this (*action*)?
20. Would she turn you teacher into a mouse (*card with picture*), into a bird (*card*), or into a frog (*card*)? Point to the right one.
21. Did she have to rub her tummy like this (*action*), turn around twice like this (*action*), or hop on the spot like this to turn the powers off (*action*)? Show me which one.

Appendix D: Deakin Activities (Example of one session)

Equipment

- | | |
|--------------------------------------|-----------------------------------|
| - 'D for Deakin' poster and blu-tack | - chalk and card |
| - koala | - puzzle of clown balancing balls |
| - kookaburra poster | - handcream |
| - garbage bags to sit on | - tape of birds and tape-player |
| - white cloak | - apple stickers |
| - story of Easter | - envelope for stickers |
| -Jellybean badge | - badge: leaves and bark |

1. Preparing the children for the Deakin Activities

"Hi my name is _____ and we are going to do something very special today, it's called the Deakin Activities. Can you say that word for me again?"

"I have brought with me a poster, to help you all remember what the name of the activities is, I'm just going to put it up on the wall so that you can see the poster during the Deakin Activities"

"I have brought with me something special for you all to sit on, who knows what these are? (*holding up garbage bag*) and what do we use them for? I am going to give you all a garbage bag and I want you to put it on the floor and sit down"

Teachers sit on a chair.

"To remind you that I am the leader of the Deakin activities, I get to wear a special cloak. Today the cloak is **white**, who else is wearing something that is white?"

Because I am wearing the cloak and the leader of the Deakin Activities, you all have to be very quiet and listen to what I say, and I get to tell you what to do”.

“Because I am getting to wear something special, I have also brought something special for you guys to wear, so that you can all feel special about getting to see the Deakin Activities, I have brought with me badges, and there is something special on the badges, can you all see (*Leaves and Bark*).....”

“I have brought a special friend with me today and he’s a koala, he’s name is **Pop**, let’s see whether Pop wants to come out and play with us today (*talk to koala in bag*) O... oh, do you know what has happened? Last night Pop had his friend **Mrs Kookaburra** stay over at his house and Mrs Kookaburra kept poor Pop awake all night hiccupping, can you make the sound of hiccupping. I actually have a picture of Mrs Kookaburra to show you, has anyone seen a kookaburra before? (*show picture of kookaburra*). So poor Pop is very tired, but do you want to see if Pop will come out and say hello?”

Pop comes out and says hello to the children

Pre-story

“In a moment I am going to read you a story, but I want to make sure that you are all wide awake for the story, so I need you to do a warm-up activity for me. For the warm-up activity, I want you all to stand up and **touch your toes ten times**, while I count to ten. Are you all ready, and when we are finished you have to sit down ready for the story. Ready....”

3. Introduce story

“Today’s story is about **Easter**”

“I was worried because I didn’t have a story to read to you today so and I searched my whole house but I couldn’t find a story, so I used the telephone and called someone at Deakin University and they quickly **sent this story in the post** so that I could read it to you today.”

“I need someone to help me hold up the pictures during the story” Teacher picks someone to hold up the pictures.”

“So I remember who held up the pictures for me today, I am going to write [*Child C’s*] name with **chalk** to make a bookmark. What colour chalk do you think I should use to write down the name?” Write child’s name on a piece of card and show to all the children so that can see the name written. “Can you all see, Child C’s name, in the ___ chalk

Name of child who held the pictures: _____

4. Question time

“Now I am going to ask some questions about the story, I hope that you were all listening very carefully” Ask a few questions

5. Puzzle time

“Now we are going to do a jigsaw puzzle. There’s only one puzzle and you all get to help me put it together. We’ve got to try to put the puzzle together so that it makes a funny clown. See if you can tell me what the clown is doing.” (*Clown is **balancing balls.***)

6. Relaxation activity

“It’s pretty tiring work putting jigsaw puzzles together, so now we are going to have a little rest so that you aren’t tired for the rest of the day. What I want you all to do, is to lie down on your backs with your legs stretched out straight. I want you all to close your eyes and keep them closed while I put some music on.”

Turn on the tape labelled **birds**.

Read the following very slowly and calmly making sure that the children have their eyes closed and are quiet:

*“I’d like you to keep your eyes closed and remain very calm and quiet now while we all rest. While we rest I’d like you all to think about being in a big bird house. Think about how beautiful the songs of the **birds** sound..... As you are resting, think about what it would be like to be a bird making peaceful beautiful songs all day... and as you think about the beautiful songs of the birds, I want you to try to relax your **tummy**... think about how relaxed your tummy feels when you hear about how peaceful those birds sound...As you breath calmly and slowly, think about how relaxed your tummy feels...as the birds sing their songs.... Think about how warm*

and restful your tummy feels as your teacher comes round and gently touches your tummy to see if it's soft and warm."

Teacher walks around to one child at a time touching their tummy saying "Does your tummy feel soft and warm _____(*child's name*)?" Encourage children to respond with 'Yes'.

"Now keep your eyes closed while I count slowly to three. When I get to three, open your eyes and sit up. One....Two.....Three....."

7. Getting refreshed

"Now you have had a little rest, we need to do something to make sure that you are all refreshed, it is important to get refreshed after a rest, so that you are all awake for the rest of the day and don't feel sleepy anymore. Today we are going to get to refreshed using some **handcream**. You will all get a bit of handcream and I want you to rub it into your hands like this....."

8. Surprise time

"Because you have all been very good today and listened very carefully I have a surprise for you all. Now the surprise is hidden in here, who knows what this is? (*Bring out **envelope** containing **apple** stickers*). That's right, it's an envelope, what do you use envelopes for? Well inside the envelope is your surprise. The surprise is a sticker and it's a sticker of something that you can eat that is good for your teeth."

“Who thinks they know what the surprise sticker is?” (let the children have some guesses)

“When you get the sticker I want you all to put it on your hand, right here so that I can see that everyone has a sticker”

9. Packing up time and going back to classroom area

“That’s it for the Deakin Activities for today, now I have to pack up, and I have to be very quick because I have to go and visit my friend. She’s in **hospital because she broke her leg**. What do you think I can buy for her on my way to the hospital to cheer her up?” (*let children give some suggestions*)

“Well you’ve given me some good ideas, but I had better hurry.....I need you guys to pack up your garbage bags and give me back your badges so that I can hurry to the hospital to visit my friend. Thank you for your help today.”