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Imagine that you are at the pub with your friends. You start to hear a commotion at the next table. A fight has broken out between two fellow patrons, and it escalates quickly. Above the laughter and music, you hear punches being thrown and glasses breaking. You notice one of the men pull a knife from his back pocket and gasp as you see him plunge this knife into the abdomen of the other man. Your friend shouts, "Call 999!" Fearing for your own safety, you make the call, stating the basic facts of what you have just witnessed to the emergency response team. A few moments later you hear sirens; police and paramedics are on the scene. They want to talk to you. You thought that you would have a nice evening out with friends, and now you are a key witness to a crime. Feeling distressed and shocked by what you just saw, you shake hands with a police officer, and prepare to give your statement. How will the police question you to ensure that they get an accurate and complete account of what happened? Have their interviewing techniques been supported by empirical research? In this chapter, we focus on these questions, highlighting several "best-practice" interviewing techniques.

Although the situation described above is relatively uncommon, thousands of witnesses or victims of crime are interviewed each year. Many of these individuals are considered "vulnerable" victims or witnesses. For example, in the UK, over 56,000 children were registered for or on child protection plans in 2014, meaning they were identified as needing protection from physical, emotional, or sexual abuse and neglect (National Society for Prevention of Cruelty to Children, 2014). The intellectually disabled and elderly are also at enhanced risk for becoming victims of crimes. It is important to consider how interview techniques may be tailored to accommodate the needs of particular groups of victims or witnesses.

In this chapter, we begin by reviewing some of the shortcomings and consequences of traditional investigative interviews and discuss the Cognitive Interview (CI), which was designed to interview cooperative, primarily adult, witnesses in light of these shortcomings. Next, we discuss research on interviewing vulnerable victims and witnesses, focusing on children, individuals with intellectual or developmental disabilities, and the elderly. We discuss the social and cognitive abilities of each, along with research that has examined the most effective ways to elicit accurate and complete recall from these populations. In so doing, we review the Memorandum of Good Practice (MOGP) and Achieving Best Evidence (ABE) guidelines, as well as the National Institute of Child Health and Human Development (NICHD) Investigative Interview Protocol. At times, we use the terms "victims" and "witnesses" interchangeably.

Shortcomings and Consequences of Traditional Investigative Interviews

Conducting an investigative interview is a demanding and difficult task. Police often feel tremendous pressure to solve a case quickly and must consider a host of factors when interviewing witnesses, including their cognitive and social abilities. They may interview witnesses in less than ideal conditions (e.g., with visual and auditory distractions). Witnesses may be under stress or possible coercion from others concerning what to say (or not say), and they may be hesitant to disclose information for fear of embarrassment or punishment to others. Interviewers must listen closely and formulate appropriate follow-up questions while trying to avoid seeming distracted or disengaged. Moreover, in some situations, there may be no additional evidence (e.g., DNA), making the investigative interview crucially important for solving the case, prosecuting the perpetrator, and enhancing public safety. Despite the numerous challenges involved in conducting investigative interviews, interviewers must strive to conduct thorough interviews with each and every witness.

To aid in this cause, researchers have developed several "best-practice" interviewing techniques. These techniques were developed in response to shortcomings in investigative interviews which were observed in several high profile daycare child sexual abuse cases in the 1980s and 1990s (see Ceci & Bruck, 1995) and in several field studies (Fisher, Geiselman, & Raymond, 1987; George & Clifford, 1992; Warren, Woodall, Hunt, & Perry, 1996). These shortcomings included the following:

- 1) Interviewers established little rapport with interviewees and frequently interrupted them.
- 2) Interviewers often used complex and compound questions or language (e.g., "So you were in a supine position?").
- 3) Interviewers used few open-ended prompts ("Tell me what happened"), and instead tended to rely on asking a series of direct and potentially pre-scripted questions ("How old was he?"), with frequent suggestive or leading questions ("Was he fair skinned?"; "He touched you a second time, didn't he?").
- 4) Questions were often asked in a pre-defined order, and interviewers sometimes asked interviewees to elaborate on information only after the topic had changed.
- 5) Interviewers often neglected to tailor the interviews to interviewees' developmental, social, and cognitive abilities (e.g., conducting a narrative practice with children), but rather followed a similar interview protocol for all individuals regardless of age, IQ, and/or any disabilities.

These shortcomings, and the very real consequences that may result when best practices are not followed (see Case Studies 1 and 2), underscored the need for interviewing techniques that could increase the quantity and accuracy of information that witnesses report. Improving interviewing techniques can help ensure justice for all – protecting victims and innocent suspects alike. Interviewing guidelines and protocols were thus developed with a basis in developmental,

cognitive, and social psychological theories. Next, we review one such technique – the Cognitive Interview (CI).

Case Study 1: The consequences of poor quality investigative interviews

The consequences of interviews that do not adhere to best practice can be profound for all involved, including the alleged victim. In a case in Scotland, a mother alleged that her 6-yearold daughter was abused by the girl's biological father. The mother told investigators that, after a visit from her father, the girl had a "reddish looking vagina." Without appropriate planning and background investigation, a series of poor-quality, suggestive interviews were conducted that ultimately formed the basis of legal proceedings in which the child and mother testified. However, because the initial investigation was scant, investigators did not fully appreciate that the mother and father were amidst a bitter divorce, and that the mother had possibly planned to play the "abuse card" in an effort to secure custody of her child and prevent all contact with the father. The poorly-conducted interviews were played to the court, and the girl was called for live cross-examination. The child was asked over 200 questions about statements made in her interviews and broke down in tears from mental exhaustion after being directly accused of lying about the allegations. To this day, she still requires ongoing therapy and remains estranged from her father. The social workers who conducted the interviews were severely criticised by the judge in the case. Their employers placed them on "sick leave", and they later moved on to new careers. Ultimately, we will never know whether abuse occurred, but the absence of properly-conducted interviews had serious consequences for the child.

Case Study 2: The consequences of failing to recognise the value of high-quality investigative interviews

Failure to recognise the value of good forensic interviews comes with a cost. In a recent case in England, a 12-year-old girl was interviewed twice by police about allegations of rape by her stepdad. The abuse was suspected by her mother who arrived home and found her partner in the girl's bedroom late one evening. The girl disclosed to her mother that abuse had occurred, and they went to the police who investigated and conducted two ABE interviews. In the interviews, the girl described three incidents in detail. She described the first time she was raped, the last time, and another time that "stuck out" in her mind because her stepdad was very drunk. The police referred the case on, and it was scheduled as a high court case. While preparing for the case, the defense attorneys asked a memory expert to review the interviews, and the expert provided a report which concluded that the interviewers followed correct procedures, and thus the testimony would be "robust to challenge". Therefore, the defense attorneys elected not to file the report from their expert. Instead, they argued that the girl was making up the allegations and telling lies. In court, the prosecuting attorneys did not lead with evidence from the girl's interviews and instead relied on the mother as a key witness, although she had not actually witnessed the abuse herself. The jury was not persuaded and returned a "not guilty" verdict. It is likely that had the attorneys relied on the interviews, a "guilty" verdict would have been obtained.

The Cognitive Interview (CI)

The CI (Fisher & Geiselman, 1992) is a toolbox of interview techniques used primarily with cooperative adult witnesses since some of the cognitive components are less suitable for

children (see Fisher, Ross, & Cahill, 2010; Fisher, Schreiber Compo, Rivard, & Hirn, 2014; Memon, Meissner, & Fraser, 2010 for reviews). Originally, the CI was derived mostly from cognitive principles, but later came to incorporate many social communication elements, as well. It is used around the world and is particularly popular in the UK.

Overview of the CI

First, interviewers establish rapport and outline the ground rules of the interview (e.g., interviewees should do most of the talking, they should avoid guessing). Second, interviewers ask the interviewees to tell them everything they remember. Third, interviewers instruct the interviewees in the use of different retrieval strategies to aid them in elaborating further on any recalled information (e.g., relaying the event from a different perspective, drawing a sketch). Finally, interviewers review the information that interviewees recalled and provide them with contact information in case they remember additional details in the future. The techniques used in the CI can be broken down into the following components: social dynamics, cognitive processes, and communication (see Box 1).

Social dynamics. The component of social dynamics involves the elements of *building* rapport and active witness participation. Rapport can be established through verbal behaviours (e.g., expressing interest in the interviewee, disclosing information about themselves as interviewers) and non-verbal behaviours (e.g., head nodding, making eye contact). Some researchers have found that rapport increases the accuracy of information that adults report, while decreasing incorrect details or misinformation reported (see Vallano & Schreiber Compo, 2015 for review). Interviewers can encourage active witness participation by conveying that interviewees should lead the interview and do most of the talking, asking open-ended questions

which activate recall memory and require interviewees to elaborate on responses, and avoiding interruptions.

Cognitive processes. It is difficult to recall experiences in great detail. In fact, it is a normal feature of human memory that an event account is never complete at the first recall session. Studies show that both children and adults report new correct details with additional interviews (La Rooy, Pipe, & Murray, 2005; Odinot, Memon, LaRooy, & Millen, 2013).

Retrieving a memory and reporting it to others is especially taxing if there has been a long delay from the target event to the interview. In the pub fight example at the beginning of the chapter, police conducted interviews immediately. But what if an investigative interview is conducted days, weeks, or even years following an alleged event? It is imperative that interviewers are aware of the limitations of human memory and that their interviewing procedures follow suit. Investigative interviewing techniques like the CI seek to minimise these limitations by relying on several key cognitive processes.

The cognitive processes component of the CI involves five main elements: 1) *multiple* and varied retrieval, 2) context reinstatement, 3) limited cognitive resources, 4) minimisation of guessing, and 5) minimisation of constructive recall. In light of research evidence demonstrating that witnesses often recall new information in each telling, the CI instructs interviewees to use *multiple and varied retrieval* or recall event details multiple times and in different ways. For example, this means that interviewers can ask interviewees to recall the event in reverse order or from a different perspective (e.g., the perpetrator's perspective). Witnesses may also be asked to *mentally reinstate the context* (i.e., mentally put themselves back to the time and place of the event). These techniques have been shown to increase the amount of information that interviewees recall (Anderson & Pichert, 1978; Smith & Vela, 2001). Because interviewees have

limited cognitive resources, the interviewers may also suggest techniques to facilitate concentration, such as closing their eyes, which increases the number of correct, but not incorrect, details recalled (Perfect et al., 2008).

To minimise guessing, interviewees should be told to respond with "I don't know" if they do not remember the requested information. Finally, to minimise constructive recall, interviewers should avoid suggestive and leading questions. These types of questions may lead interviewees to provide a particular response (e.g., "He had a knife, correct?") and may introduce misinformation (i.e., incorrect information) into interviewees' accounts. Interviewers should also be careful of nonverbal behaviours which may indicate satisfaction with or disapproval of particular responses. For instance, smiling or head nodding may indicate satisfaction with a response, whereas a furrowed brow or perplexed look may indicate disapproval.

Communication. The final component of the CI is communication, and it involves encouraging elaborate responding and use of non-verbal techniques. Interviewers should emphasise that interviewees report any and all details that they recall, including seemingly insignificant and contradictory information. In other words, interviewees should let others decipher whether the information is pertinent to solving the case. Another retrieval strategy involves asking interviewees to recall information non-verbally, such as through the use of a sketch. Some information can be more easily depicted visually, such as the scene of a crime.

Empirical Support for the CI

Numerous field and laboratory studies have been conducted to examine the effectiveness of the CI, and the results are robust and reliable. Field studies can give a sense of what it is like to implement and conduct the CI in the "real world," whereas experimental studies conducted in the laboratory can help researchers draw causal conclusions about the interviewing techniques.

Generally, the CI results in a 25% to 50% increase in the amount of information that witnesses report compared to standard police interviews (Fisher, Milne, & Bull, 2011; Fisher et al., 2010; Fisher et al., 2014). For example, Fisher, Geiselman, and Amador (1989) trained detectives on the CI and found that from pre- to post-training interviews, these detectives elicited 47% more information from witnesses. Also, the detectives trained on the CI elicited 63% more information from witnesses than detectives not trained on the CI.

Researchers can rely on a technique known as "meta-analysis" to combine the results of many studies, and thus, make broader conclusions about a particular topic. According to one such meta-analysis which considered the results of 47 published articles on the CI (see Memon, et al., 2010), the CI: 1) increases the number of correct details recalled, 2) slightly increases the number of incorrect details recalled (e.g., saying the perpetrator wore a black shirt instead of a blue shirt), and 3) does not increase the number of confabulations, or self-generated details (e.g., saying there was a weapon involved when there was no weapon at all). Although there is a potential small increase in incorrect details recalled, this outcome can be avoided if interviewers encourage witnesses to monitor the information they report, by, for example, not guessing and indicating when they do not know the answer.

Variants of the CI

Unfortunately, empirical support for a technique does not necessarily mean that it is implemented easily or successfully in the field. A key complaint among law enforcement is that the CI is overly burdensome and takes too long to administer. Some feel that they are insufficiently trained to administer the protocol (Dando, Wilcock, Milne, 2008; Kebbell, Milne, & Wagstaff, 1999). To adapt to interviewers' needs and interview demands, researchers have developed and tested different forms of the CI.

Shortened form CI. Some researchers have examined shortened forms of the CI, investigating how the full CI compares to versions with various elements removed (Dando, Wilcock, Behnkle, & Milne, 2011; Dando, Wilcock, Milne, & Henry, 2009; Davis, McMahon, & Greenwood, 2005). Studies conducted on shortened forms of the CI have removed elements such as the instruction to recall the event in reverse order or from a different perspective since research has shown that police officers are likely to abandon these elements because they are difficult to implement. The shortened forms of the CI appear to be as effective as the full CI at increasing the quantity and accuracy of information from interviewees, while also saving time.

Future research will continue to test this important question: What elements can be removed from the CI without decreasing the quantity or accuracy of recall typically associated with the CI? Answering this question will help law enforcement appropriately allocate time and resources, while also helping scientists learn about how event memory is best enhanced.

Self-administered CI (SAI). Many crimes have multiple witnesses. Imagine that instead of a fight between two individuals at the pub, you witness a riot break out in the street after a football match. Dozens are involved. Perhaps a handful of officers arrive on the scene and are faced with the difficult task of sifting through the memory accounts of numerous witnesses. However, they have limited time and resources – where should they start and how should they proceed? It is crucial that they gather as much information as possible, but also that they do so under time constraints because delays could result in witnesses forgetting details, leaving the scene, and/or talking to each other and thus contaminating their memories with others' recollections. For these reasons, researchers created the SAI (Gabbert, Hope, & Fisher, 2009).

This variant follows the same basic structure as a standard CI, but requires that interviewees write down their event recall in a booklet instead of conveying their memory

accounts aloud to an interviewer. This means that no interviewer needs to be present!

Interviewees are asked to proceed through the booklet sequentially and are given instructions to report everything but avoid guessing, reinstate the context, describe the perpetrator in detail, and draw a sketch of the crime scene. Finally, interviewees are asked to respond to a series of questions about additional event details that might be important and to describe any other witnesses to the crime.

Studies have shown that witnesses feel comfortable using the SAI and understand the various instructions. This speaks to the feasibility of using this tool in practice. Notably, the SAI reduces the amount of misinformation that witnesses might otherwise recall if they were interviewed at a later time point (particularly if they talk with other witnesses to the event or listen to the media). The SAI reduces forgetting over time since it can be administered immediately following the event (Gabbert et al., 2009). Importantly, police can still follow up with potential key witnesses after receiving the SAI to gather additional information in the traditional interview context. In fact, the SAI can help police identify who is most beneficial to interview in person. Future research needs to develop variants of the SAI for use with witnesses who may have difficulty reading and writing. Research should also explore the effectiveness of the SAI in eliciting accurate information for different types of crimes.

Concluding Remarks on the CI

Research has demonstrated clear benefits of using the CI. It is important to note that interviewers need not use all components of the CI. Its flexibility allows interviewers to adjust the protocol in line with the demands of their job (e.g., using a shortened version of the CI), the comfort level of the witnesses (e.g., extended rapport-building, not asking them to close their eyes), and nature of the crime (e.g., SAI). Attention has now turned to how best to encourage and

facilitate law enforcement's use of the CI. For example, researchers are currently testing how to effectively train law enforcement on the CI. It appears that training should occur over time, discuss the theory behind the interview, and include practice sessions with feedback. Refresher trainings may also be necessary to ensure that police officers do not revert back to their old interviewing techniques (Dando et al., 2008; Snook & Keating, 2011).

Interviewing Vulnerable Witnesses

Every day, investigative interviewers encounter all kinds of victims and witnesses, many of whom are considered "vulnerable." Vulnerable witnesses are the focus of the remainder of this chapter. They include children, the elderly, and individuals with intellectual and developmental disabilities that may put them at heightened risk for suggestibility, misunderstandings, or difficulty communicating in legal contexts.

Child Witnesses

Although children face legal involvement less often than adults, many children must provide testimony about their own victimisation or other witnessed events (e.g., domestic violence). Often, their testimony is crucial. Particularly in cases of child sexual abuse, there is typically a lack of external (or corroborative) evidence or an inability to tie external evidence to the identity of a particular perpetrator. Children's statements usually represent how abuse is identified in the first place and may be the only evidence available for prosecuting this crime and making sure that treatment and other services are available to child victims. Many people are skeptical about children's abilities to provide accurate eyewitness accounts (Quas, Thompson, & Clarke-Stewart, 2005). However, children can, under developmentally-appropriate conditions, provide reliable and accurate accounts of past events (Peterson, 2012). However, it is imperative

that interviewers elicit children's testimony in ways that are mindful of their cognitive and social limitations as eyewitnesses.

Cognitive and social factors affecting children's interview performance. Children's cognitive and social abilities are rapidly developing, and thus children differ, sometimes dramatically, from adults in ways that have implications for their performance in investigative interviews. Although not exhaustive, below we highlight several important areas where adults and children differ in ways that interviewers must consider when questioning children (see Box 2).

Vocabulary. Young children's vocabulary grows at a remarkable pace with the average 6-year-old knowing approximately 10,000 words (Anglin, 1993)! However, this rapid development may sometimes lead interviewers to overestimate children's understanding and ability to use different words, resulting in questions that children are unable to understand. Children may also hold very specific definitions of words and fail to recognise that interviewers' use of these words is meant to be interpreted more broadly, which can lead to contradictions in children's testimony (e.g., they deny ever being at the perpetrator's "house" because they were at the perpetrator's "apartment"; Walker, 1999).

Narrative ability. Children are still learning how to talk about past events and engage in conversation with others (Nelson & Fivush, 2004). Within the context of an investigative interview, children are asked to take on the role of "expert" and do most of the talking.

Typically, children have not had much practice relaying a coherent narrative to others. They may not realise the expectation for providing detailed responses to questions or understand the types of information that would be of interest to interviewers.

Conceptual understanding. To convey key aspects of events (e.g., timing, frequency) requires understanding of certain concepts that may be beyond children's capabilities (Orbach & Lamb, 2007). That is, children often have difficulty with the concept of time. They may have trouble responding to questions about when or how many times an event occurred. However, interviewers sometimes ask these types of questions, especially when incidents have allegedly occurred repeatedly because children often have to isolate and discuss specific "episodic" incidents rather than what "usually" occurred (Powell, Roberts, & Guadagno, 2007).

Willingness to indicate misunderstandings. Children rarely say "I don't know" or request clarification from interviewers (Bruck & Ceci, 1999; Malloy, Katz, Lamb, & Mugno, 2015). Rather, children try to respond to questions, even those that are difficult to understand (Carter, Bottoms, & Levine, 1996; Saywitz, Snyder, & Nathanson, 1999) or nonsensical (Waterman, Spencer, & Blades, 2004). This may be because they do not realise that they need clarification (i.e., they fail to monitor their comprehension accurately). Or, it may be because children are deferent to adult authority, are afraid to correct or question adults, and hold the expectation that they should respond to all questions rather than say that they "don't know."

Source monitoring. Children may have difficulty with source monitoring or recalling the source of retained information (Poole & Lindsay, 1995). For example, they may have difficulty separating real from imagined events and answering such questions as, "Did I experience this happening, or did I only hear about this happening?" Source monitoring becomes a particularly crucial issue when interviewers introduce information via suggestive or leading questions, and children's poor source monitoring abilities are thought to be one of the reasons underlying children's heightened suggestibility.

Suggestibility. A wealth of research exists on children's suggestibility. Generally, this research shows that children tend to be more suggestible than adults (see Bruck & Ceci, 1999 for a review). These studies have demonstrated how children, especially preschool children, are susceptible to leading and suggestive questions and may incorporate misinformation into their event accounts, even reporting that entirely false events occurred.

As a result of learning about these cognitive and social limitations affecting children's investigative interview performance, policy makers considered ways to improve investigative interviews in practice. In 1992, the UK Home Office first published the Memorandum of Good Practice (Home Office, 1992), which we describe next.

Memorandum of Good Practice (MOGP)/Achieving Best Evidence (ABE)

In the late 1980s and early 1990s, there was a transformation in the way the UK viewed children's participation in legal proceedings. During this time, the UK witnessed the confluence of emerging digital technology (which could allow for videotaping of interviews), a scientific understanding of children's eyewitness capabilities, and the legal and political willpower to radically redesign the professional response of the criminal justice system to children. The end goal was to modify the legal system to better fit the needs of children, rather than forcing children to participate in a legal system not designed for their needs, which was considered both unfair and unkind.

The Memorandum of Good Practice (MOGP) formalised a consensus of professional opinions about procedures to adopt when interviewing children. It was developed by a team of international experts on children's memory and provided guidance on how to elicit testimony from children. Psychologists had already established some of the basic parameters for questioning children, with a focus on eliciting information using open-ended prompts ("Tell me

what happened"). Therefore, a key recommendation of the MOGP was for interviewers to obtain narrative accounts from children that "stand-alone" and appear to be credible descriptions of past experiences to juries and fact-finders.

It was recommended that MOGP interviews be conducted by specially trained police officers or social workers and adopt a phased approach. First, interviewers were encouraged to develop rapport with victims before discussing allegations. This was intended to increase children's willingness to talk and help interviewers begin to understand the communication style and capabilities of the children. Part of this rapport phase included the use of open-ended prompts to familiarise children with the type of prompting that would occur throughout the interview. After rapport was established, the MOGP recommended the introduction of ground rules. The ground rules were meant to overcome some of the limitations discussed above (e.g., children's unwillingness to say "I don't know"). Interviewers were then encouraged to transition to obtaining a free narrative using open-ended prompts. This was recommended for children of all ages since it would allow interviewers to collect children's testimony without any contamination. Only after exhausting recall with open-ended prompts were interviewers advised to use focused questions to inquire about information that might be missing and clarify details.

Although a good idea in theory, researchers found that the anticipated reforms following the introduction of the MOGP were not widespread and uniform. Interviewers had difficulty following the recommendation to use open-ended prompts, and some continued using closed questioning (i.e., more focused or specific questions; Davies et al., 1995; Lamb et al., 2002; Sternberg, Lamb, Davies, & Westcott, 2001; Westcott et al., 1998).

Achieving Best Evidence (ABE)

ABE interview guidelines (Home Office, 2002, 2007; Ministry of Justice, 2011) superseded the original MOGP and are regularly updated and republished to incorporate changes in emphasis, legal developments, and new research that continues to shape best practice. As with the MOGP, ABE guidelines are not legally enforceable, but are offered as an evidence-based approach to child interviewing. As such, interviewers are encouraged to follow the guidelines as much as possible and be able to justify departures from these guidelines should any occur.

ABE guidelines are amongst the most comprehensive in the world today and include detailed recommendations about broadly collecting evidence from children and vulnerable persons beyond the interview itself. For example, ABE guidelines emphasise the importance of planning and preparation before any forensic interview. Time spent examining the case characteristics and determining what information will be sought from interviewees is used to determine the scope of the interview. Consultations with other professionals such as prosecutors, psychologists, and intermediaries may all influence the investigative interview. Before interviewing the victim, investigators may want to collect additional evidence from the crime scene and/or interview other witnesses to obtain a clear perspective of the alleged offence and determine the steps that should be taken that are in the best interest of the victim. Victims should be treated as individuals and dimensions such as age, gender, culture, religion, daily routines, and intellectual ability should all be taken into consideration. Also, a consideration of the broader aspects of the case is recommended to inform whether an interview will be conducted, who will conduct the interview, and the number of interviews that will be required.

As with the MOGP, a phased approach to the interview is recommended with open-ended prompts used prior to focused questioning. ABE relies primarily on obtaining a narrative account from victims and recommends caution when using alternative techniques such as dolls, images

and pictures, and props. This cautionary note reflects the lack of professional consensus about the value of these techniques. ABE also recommends using specialist interview techniques such as the Cognitive Interview and National Institute of Child Health and Human Development Investigative Interview Protocol when appropriate.

Evaluation of ABE. There has been no scientific evaluation of ABE interviews although there have been regular reviews conducted by professional agencies. Recently, the practices and interviews of different police forces were reviewed (HMCPSI & HMIC, 2014), and the reviewers noted deviations from the ABE guidelines, poor documentation of interview planning, and a lack of training and ongoing professional development for interviewers. However, this review was based on the analysis of only 69 interviews and case files in a small number of police forces, and the selection criteria for inclusion of specific case interviews is unclear. Further scientific analysis of the ABE is required.

The U.S. National Institute of Child Health and Human Development (NICHD) Investigative Interview Protocol

Although the MOGP and ABE guidelines were intended to lead to widespread changes in investigative interviewing practices, research indicated that relatively few interviewers followed them (Sternberg et al., 2001). Researchers reasoned that a *structured* protocol needed to be in place to encourage interviewers' use of appropriate interviewing techniques, and this led to the development of the NICHD Protocol (Lamb, Hershkowitz, Orbach, & Esplin, 2008; Orbach, Hershkowitz, Lamb, Sternberg, Esplin, & Horowitz, 2000; and see Lamb, LaRooy, Malloy, & Katz, 2011; Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007a for reviews). This interview protocol contains two main phases: a phase leading up to the discussion of the target

event (the pre-substantive phase) and a phase focusing on the target event (the substantive phase; see Box 3).

Presubstantive phase. The interviewer's aim during the pre-substantive phase is to make sure the child understands the ground rules of the interview, build rapport with the child, and allow the child to practice providing a detailed narrative.

Introductory comments. Interviewers introduce themselves and often administer a truth induction ceremony because, in some jurisdictions, children must demonstrate that they understand the difference between "truth" and "lies" before they can provide testimony. The interviewer may ask questions such as, "If I said that you took your shoes off when you came into the room, would that be true or not true?" Interviewers also establish the following ground rules: 1) the children should refrain from guessing and instead say they "don't know" if they are unsure about the answer to a question, 2) they should indicate when they do not understand a question, and 3) they should correct any mistakes made by the interviewer. These ground rules are practiced with children to ensure comprehension.

Rapport building. Like the MOGP, interviewers next attempt to establish rapport with the children so that they feel comfortable talking with and disclosing information that may be traumatic or embarrassing. With the NICHD Protocol, building rapport involves asking children open-ended questions about their likes and dislikes.

Practice narratives. Next, interviewers ask the children to describe a neutral event (e.g., yesterday, a recent holiday) to get them accustomed to providing detailed responses. This is referred to as an episodic narrative practice. After children have recounted some details about their day, for example, interviewers will ask them to elaborate further (e.g., "You said you went to the store with your mum. Then what happened?"). In several studies, researchers have found

that children provided more detailed responses to open-ended questions about target events after engaging in an episodic narrative practice that also contained open-ended questions (see Roberts, Brubacher, Powell, & Price, 2011, for a review). Episode narrative practice also helps children get used to recalling details of *specific* events (e.g., what happened on their most recent birthday), rather than what *usually* occurs at an event (e.g., what they tend to do on birthdays). This is vital in cases where children must provide details of specific incidents of repeated abuse, as many children are victimised on more than one occasion (Sas & Cunningham, 1995).

Substantive phase. During the transition to the substantive phase, interviewers use a series of open-ended prompts to encourage the children to identify the target event. To avoid being suggestive, interviewers attempt to get children to identify the target event with as little as input as possible (e.g., "Tell me why you've come to talk to me today"). Once a target event is identified, interviewers first request that children narrate by using an invitation prompt (e.g., "Tell me everything you can remember"), and then follow up on information that children mention (with cued invitations) to elicit additional details, just as in the episodic narrative practice. For example, they might ask, "You said that your neighbour touched you. Tell me more about him touching you."

Children often provide less information than adults in response to invitations; however, their responses tend to be more accurate than their responses to more focused or closed-ended questions (Lamb, Orbach, Hershkowitz, Horowitz, & Abbott, 2007b). Once the children's free recall is exhausted, the interviewers may return to information that the children previously mentioned during free recall and follow up with directive questions (e.g., "You said that other people saw what happened. Who was there?"). Finally, if critical details are still missing from the children's reports, the interviewer may resort to some option-posing questions, but their use

should be limited. Option-posing questions provide children with response options (e.g., "Did he touch you over or under your clothes?"), and often take the form of yes-no questions (e.g., "Was anyone else home when it happened?"). As with any best-practice interview protocol, it is imperative that interviewers avoid suggestive or leading questions. Overall, the substantive phase conforms to a funnel approach where interviewers begin by asking open-ended questions before proceeding to ask more specific questions.

Empirical support of the NICHD Protocol. Numerous field studies support the effectiveness of the NICHD Protocol for increasing the quality and quantity of information provided by children. Also, these studies show that the NICHD Protocol improves interviewer performance by helping them to adhere to best practice guidelines like the MOGP and ABE. Interviewers trained on the NICHD Protocol tend to use more open-ended prompts and fewer option-posing and suggestive questions than interviewers who use a traditional police interview (see Benia, Hauck-Filho, Dillenburg, & Stein, 2015, for a meta-analysis). Interviewers trained on the NICHD Protocol also tend to ask any option-posing and suggestive questions later in the interview which helps prevent contamination in the form of interviewers introducing new information. Furthermore, when the NICHD Protocol is used, most initial disclosures of abuse occur in response to open-ended prompts (Lamb et al., 2007a; Sternberg, Lamb, Orbach, Esplin, & Mitchell, 2001).

Although these field studies involving actual forensic interviews provide evidence in support of using the NICHD Protocol, they cannot make claims about the accuracy of children's reports. This can only be accomplished by testing the NICHD Protocol in the laboratory as has been done in a few studies. For example, Brown et al. (2013) found that, when interviewed with the NICHD Protocol, 5- to 7-year-olds recalled more accurate details about a staged event in

response to invitation prompts than any other type of question (e.g., directive, suggestive), lending support to the protocol's "funnel" approach to avoid contaminating children's reports.

Concluding remarks about the NICHD Protocol. The NICHD Protocol caters to children's cognitive and social limitations and addresses many of the challenges faced by children in the investigative interview context. However, interviewer adherence to the NICHD Protocol requires periodic refresher trainings. In fact, Lamb, Sternberg, Orbach, Esplin, and Mitchell (2002) found that the provision of regular supervision (e.g., group trainings that occurred every month or two over the course of a year) and feedback on interviews was necessary to prevent interviewers from reverting back to relying on option-posing and suggestive questions.

The NICHD Protocol, like the CI, is geared toward obtaining memory accounts from cooperative victims and witnesses. However, there are a number of reasons why children may be reluctant to disclose maltreatment (see Pipe, Lamb, Orbach, & Cederborg, 2007, for a review). For example, children may be told or threatened to keep the wrongdoing a secret (Malloy, Brubacher, & Lamb, 2011; Malloy, Lyon, & Quas, 2007). A "revised" version of the NICHD Protocol was recently developed for use with reluctant witnesses. This protocol emphasises rapport-building and interviewer supportiveness to facilitate children's disclosure of maltreatment. Specifically, interviewers are encouraged to engage in rapport-building *before* establishing the ground rules of the interview and to use additional rapport-building techniques. For example, they may express interest and concern for the child by asking how they are and acknowledging that it can be difficult to talk about certain experiences. Interviewers can also use nonverbal behaviours such as smiling and eye contact to encourage the child's participation in the interview. Hershkowitz, Lamb, and Katz (2014) found that reluctant children who were

alleged victims of sexual or physical abuse by family members were more likely to make an allegation of abuse when interviewed with the revised NICHD protocol than with the standard NICHD protocol. Therefore, the revised protocol has shown some promise in interviewing reluctant victims, though additional research is needed.

Elderly Witnesses

The world's population is aging. According to a recent United Nations report, the nature of this demographic shift is unprecedented in human history. This aging trend has implications for the legal system because many more elderly individuals are becoming victims or witnesses to crime, including abuse or neglect (Acierno et al., 2010; Bennett, Jenkins, & Asif, 2000). In a sample of over 66-year-olds living in private homes in the UK, Biggs, Erens, Doyle, Hall, and Sanchez (2013) found that almost 1 in 10 were mistreated (i.e., victims of financial, psychological, physical, or sexual abuse or neglect) during a 1-year period. In the next few decades, gathering information from older eyewitnesses will be increasingly necessary and thus of utmost importance to legal professionals and policymakers. The elderly are considered vulnerable witnesses. In fact, the ABE guidelines recognise their vulnerability and attempt to accommodate them accordingly. For example, the ABE guidelines note that special measures may be taken with elderly eyewitnesses including, but not limited to, taking breaks and conducting the interview over multiple sessions so as not to fatigue the witness.

Compared to the extensive body of literature concerning children's eyewitness capabilities, less research exists concerning the testimonial capabilities of the elderly.

Nevertheless, and as we review next, researchers have learned a great deal about factors that affect the elderly's performance and how to enhance their memory of experienced or witnessed events.

Cognitive and social factors affecting the interview performance of elderly witnesses. Children and the elderly – the vulnerable witnesses at opposite ends of the age spectrum - share many characteristics. For example, like child maltreatment cases, many crimes against the elderly go unreported. This may be because feelings of shame or embarrassment limit their desire to tell anyone or because they fear repercussions from others for doing so. Like children, many older adults are also abused by known and trusted perpetrators who are in charge of their care. Thus, like children, feelings of loyalty may prevent disclosure, or victims of elder abuse may lack sufficient contact with other individuals (e.g., those outside the home) who could be disclosure recipients.

Fact finders may be skeptical of the eyewitness credibility of both children and the elderly (see Bornstein, 1995, for a review). Research demonstrates that jurors perceive testimony from older adults as less accurate than testimony from younger adults, perhaps because of widely held stereotypes about the frailty of human memory in old age (Ross, Dunning, Toglia, & Ceci, 1990). However, stereotypes about the elderly may cut both ways. In some experiments, the elderly are also perceived as more accurate, honest, trustworthy, and intelligent than younger adults giving testimony (Ross et al., 1990), perhaps because of benevolent stereotypes about the elderly as upstanding citizens. This is similar to a phenomenon concerning child witnesses, namely that young children are typically considered by jurors to be incompetent in terms of memory and suggestibility but honest, whereas older children and adolescents are often considered to be dishonest but competent (Bottoms & Goodman, 1994). Therefore, how jurors perceive the credibility of an elderly eyewitness may depend on whether the particular case at hand emphasises memory accuracy and detail versus honesty. Of importance, the elderly may hold negative beliefs about their own memory abilities which may affect their memory

performance and help explain why they, at times, express less confidence in their memory reports (Yarmey, 1984; Yarmey & Kent, 1980).

Similar to child witnesses, the elderly tend to have relatively poor source monitoring abilities and may misattribute where they learned various information (e.g., from witnessing an event to only hearing about it; Johnson, Hashtroudi, & Lindsay, 1993; Multhaup, de Leonardis, & Johnson, 1999). This may help explain why some studies demonstrate that the elderly are more susceptible than younger adults to post-event misinformation and more suggestible (Loftus, Levidow, & Duensing, 1992; Mitchell, Johnson, & Mather, 2003). The elderly appear more susceptible to forming false memories, while also demonstrating greater confidence in these false memories (see Jacoby & Rhodes, 2006, for a review).

An extensive body of research documents that cognitive functioning declines with age with noteworthy declines in memory performance (Balota, Dolan, & Ducheck, 2000; Craik & Jennings, 1992). Many studies, though not all, have shown memory deficits in older, compared to younger, adults. Typically older adults provide less complete and less accurate event accounts than younger adults (see Bartlett, 2014, for a review). For example, Gabbert, Memon, and Allan (2003) found that older adults recalled fewer correct details about a simulated crime event than university students. List (1986) examined children's, young adults', and older adults' memories of staged crime videos. Children (10-year-olds) and older adults (over 65) performed similarly in terms of completeness, but the older adults were the least accurate of the three age groups.

Like child witnesses, the accuracy and completeness of memory reports from the elderly are influenced heavily by the manner in which they are tested. Free recall sessions are particularly difficult (see Bornstein, 1995). This suggests that providing retrieval cues and

strategies may be especially beneficial for the elderly. Like children they may depend more on external cues to trigger their memory such as those provided in the CI.

Interviewing elderly witnesses. In several studies, researchers have found that using a CI, or a slightly modified CI, improves eyewitness performance among the elderly with typical increases in the quantity and accuracy of information recalled and reductions in the effects of misinformation on recall (e.g., Holliday et al., 2012; Wright & Holliday, 2007). For example, Mello and Fisher (1996) tested older and younger adults' memories for a videotaped convenience store robbery using a standard police interview, CI, or modified CI. The modified CI limited the opening free recall narration portion and eliminated the "perspective taking" component in light of the elderly's challenges with these aspects of investigative interviews. Also, interviewers using the modified CI were asked to avoid interruptions, notify the witness that the interview would progress slowly, and use simple wording with all questions. Although results revealed no difference in memory performance between the older and younger adults, the CI enhanced performance more for the older than younger adults. However, the modified CI did not improve performance beyond the regular CI.

Research has also shown that the SAI is beneficial with elderly populations. In one study (Gawrylowicz, Memon, Scoboria, Hope, & Gabbert, 2014), elderly participants improved their immediate recall of a simulated crime event with the SAI and also "transferred" their knowledge to recalling a second event one week later. That is, participants who first received a SAI appeared to learn from this tool and thus performed better when freely recalling a subsequent event without the SAI.

Witnesses with Intellectual and Developmental Disabilities

It is imperative that interviewers recognise that no two witnesses are exactly the same. Some witnesses may have an intellectual or developmental disability: In fact, individuals with intellectual disabilities (ID) and individuals with Autism Spectrum Disorder (ASD) are disproportionately likely to experience victimization and thus be questioned about their experiences (Vig & Kaminer, 2002; Westcott, 1991). Many potential jurors assume that individuals with disabilities cannot provide credible accounts of their experiences (Henry, Ridley, Perry, & Crane, 2001; Valenti-Hein & Schwartz, 1993), and this may hinder prosecution of their cases. While their cognitive and social deficits may make them more difficult to interview, research shows that individuals with disabilities can provide reliable eyewitness testimony.

Cognitive and social abilities of affecting the interview performance of witnesses with intellectual and developmental disabilities. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), individuals with ID have an IQ of approximately 70 or below and display deficits in conceptual (e.g., reading, math), social (e.g., interpersonal skills), and practical (e.g., personal care, independent completion of daily tasks) domains (American Psychiatric Association, 2013). They tend to be more compliant than children without ID and are eager to please others, particularly those in an authority position, which has implications for their suggestibility (Henry, Bettenay, & Carney, 2011). ID is often co-morbid with other developmental disabilities, such as Down Syndrome or ASD, and each of these disabilities may present their own challenges for an investigative interviewer. The category of ID is fairly broad, ranging from those with mild to severe cognitive and social impairments, which is important to recognise especially in light of general claims and skepticism about the eyewitness capabilities of affected individuals.

In response to open-ended invitations to talk, individuals with ID often recall fewer event details than individuals without ID of the same age. However, this information tends to be quite accurate (Henry et al. 2011; Kebbell & Hatton, 1999; Milne, Sharman, Powell, & Mead, 2013; Perlman, Ericson, Esses, & Isaccs, 1994). Several studies suggest that individuals with ID are more suggestible than individuals without ID (Brown, Lewis, & Lamb, 2015; Gudjonsson & Henry, 2003; Henry & Gudjonsson, 2007). They may be more likely to falsely acquiesce to interview questions (Clare & Gudjonsson, 1993; Michel, Gordon, Ornstein, & Simpson, 2000), and change their responses more often to repeated questions (Everington & Fulero, 1999; Henry & Gudjonsson, 2003). Thus, it seems especially important to avoid suggestive questions when questioning individuals with ID, especially those with moderate ID.

According to the DSM-V, individuals with ASD display marked deficits in social communication and interactions, along with rigid and repetitive behaviours (American Psychiatric Association, 2013). These individuals also tend to lack a theory of mind (or understanding that someone may have a belief other than their own; Baron-Cohen, 2000), may exhibit social anxiety (see MacNeil, Lopes, & Minnes, 2009 for review), and often focus on peripheral details of an event as opposed to extracting the greater meaning or gist (see Happe & Frith, 2006, for a review; Henry et al., 2011). Affected individuals may have deficits in event memory (see Henry et al., 2011; Maras & Bowler, 2014 for reviews), though findings have been mixed.

Research has shown that children and adults with ASD may not differ significantly from their same-aged peers without ASD in the accuracy of their event-related recall and their suggestibility (children: Bruck, London, Landa, & Goodman, 2007; McCrory, Henry, & Happe, 2007; adults: Maras & Bowler, 2010, 2012a; North, Russell, & Gudjonsson, 2008; but see

Maras, Memon, Lambrechts, & Bowler, 2013). However, in some studies, *children with ASD* recalled fewer event details than children without ASD (Bruck et al., 2007; McCrory et al., 2007). In contrast, *adults with ASD* have not differed significantly from adults without ASD in the quantity of event-related details recalled, particularly under certain interview conditions (e.g., a traditional structured interview protocol was used, the physical context of the event was reinstated). Furthermore, adults with ASD have demonstrated more difficulty recalling correct event details about people and actions than adults without ASD (Maras & Bowler, 2010, 2012b). Research on the event memory of adults with ASD has primarily focused on asking participants to recall picture slides or video clips, and future studies should consider more ecologically valid study designs such as having witnesses describe more complex, experienced events.

Interviewing witnesses with intellectual and developmental disabilities. Although some modifications may be needed, empirical studies suggest that the CI and NICHD Protocol are effective methods for interviewing individuals with ID and ASD. For example, Brown and Geiselman (1990) found that, when compared to a control interview, the CI increased the number of correct details that adults with ID recalled, without a concurrent increase in incorrect details recalled. However, the CI also increased the number of confabulations that adults with CI made (also see Milne & Bull, 2001). Milne et al. (2013) found that a modified CI (without the "change perspective" instruction) was beneficial for children with severe ID. In fact, use of the CI as opposed to a structured interview (without some of the cognitive components like mental context reinstatement and reverse-order recall) resulted in a 27% increase in the event details these children recalled, with no decrease in accuracy. Gentle, Milne, Powell, and Sharman (2013) found similar benefits of a modified CI with children with moderate and mild ID, and further demonstrated that the CI can improve their ability to provide coherent narratives. Brown et al.

(2015) examined the recall performance of children with ID when questioned with the NICHD Protocol. Similar to children without ID, children with both mild and moderate ID provided a substantial amount of information and the most accurate information in response to open-ended questions (also see Brown, Lewis, Lamb, & Stephens, 2012).

In a few studies, researchers have tested the CI with individuals with ASD (e.g., Maras & Bowler, 2010). This research shows that the recall of individuals with ASD may be less accurate when interviewed with the CI as opposed to a structured interview that does not include some of the cognitive components. This suggests that the CI may need to be tailored to the characteristics of individuals with ASD, possibly removing certain components that benefit individuals without ASD. For example, the "change perspective" instruction may be ineffective for individuals with ASD because their well-documented deficits in theory of mind make it difficult to consider another individual's perspective. However, other components of the CI may be particularly beneficial for individuals with ASD. For instance, Mattison, Dando, & Ormerod (2015) found that having children with ASD draw a sketch following an event may facilitate their accurate recall of event details. Overall, the research on interviewing children with intellectual and developmental disabilities is in its infancy, and future studies should continue to examine how to best harness the interviewing techniques that we have for use with these populations.

Summary

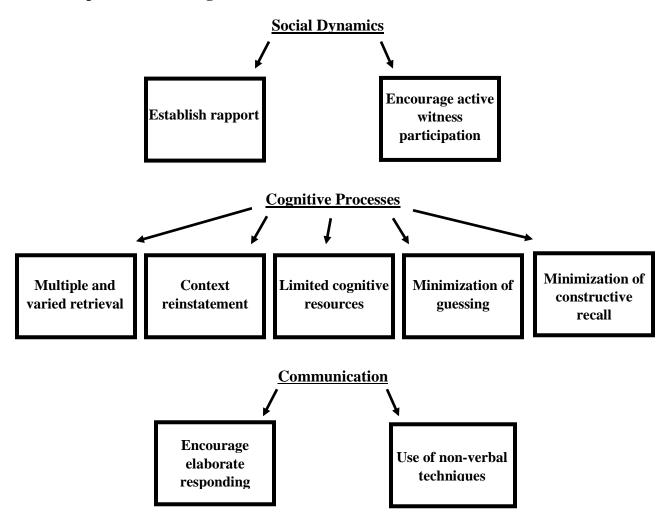
- Interviewers face many challenges when conducting investigative interviews. In the 1980s and 1990s, researchers identified a number of shortcomings of traditional investigative interviews (e.g., frequent interruptions, complex questions, failure to account for individual differences in witness abilities).
- The Memorandum of Good Practice (MOGP) and the Achieving Best Evidence (ABE) guidelines were established in England and Wales to begin to address some of the shortcomings found in traditional investigative interviews.

- The Cognitive Interview (CI) is a best-practice interviewing protocol primarily used with cooperative, adult witnesses. The CI reliably increases the amount of information recalled by witnesses. Several CI variants are available to accommodate different interview conditions (e.g., time constraints, multiple witnesses).
- Children, the elderly, and individuals with intellectual or developmental disabilities are considered "vulnerable" witnesses.
- Children's developing cognitive and social abilities make interviewing them in legal contexts especially challenging. The National Institute of Child Health and Human Development (NICHD) Investigative Interview Protocol is a developmentally-appropriate, empirically-based protocol that has been shown to increase the quantity and accuracy of information that children recall.
- The elderly may be more suggestible than younger adults, and they tend to provide less complete and accurate event accounts compared to younger adults. The CI enhances the event recall of the elderly just as it does with younger adults.
- Individuals with intellectual disabilities (ID) can recall event details accurately, but often provide fewer event details and are more suggestible than those without ID. Individuals with Autism Spectrum Disorder may not differ in the quality and quantity of their event recall or their suggestibility compared to same-aged peers, but they tend to have marked deficits in social abilities that could present difficulties within an interview context. With slight modifications, best-practice interview protocols may still facilitate the recall of these populations.

Essay/Discussion Questions

- 1. What were some of the shortcomings of traditional investigative interviews and how did the Memorandum of Good Practice (MOGP) and Achieving Best Evidence (ABE) guidelines begin to address some of these shortcomings?
- 2. Describe the key components of the Cognitive Interview (CI) and in what ways these techniques facilitate how witnesses recall event details. Under what conditions might interviewers consider using a variant or modified version of the CI?
- 3. How do children differ from adults in ways that have implications for children's performance in investigative interviews? In what ways does the National Institute of Child Health and Human Development (NICHD) Investigative Interview Protocol accommodate children's developing cognitive and social abilities?
- 4. What characteristics make individuals with intellectual or developmental disabilities and the elderly "vulnerable" witnesses? How effective are best-practice interviewing protocols at facilitating the recall of event-related information from these populations?

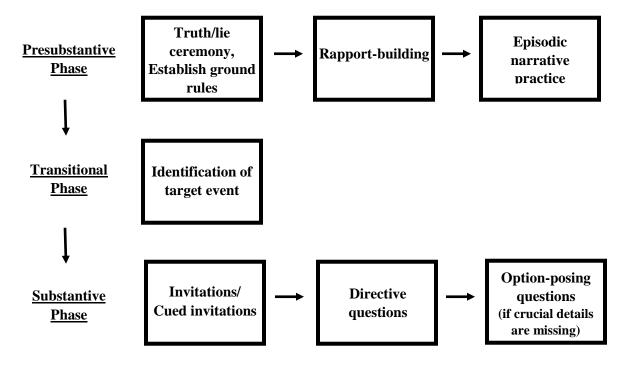
Box 1. Components of the Cognitive Interview.



Box 2. Important areas where adults and children differ within an interview context.

- 1. Vocabulary
- 2. Narrative ability
- 3. Conceptual understanding
- 4. Willingness to indicate misunderstandings
- 5. Source monitoring
- 6. Suggestibility

Box 3. Stages of the NICHD protocol.



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