

Interviewing alleged victims with intellectual disabilities

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Abstract

Background When interviewing alleged victims of crime, it is important to obtain reports that are as accurate and complete as possible. This can be especially difficult when the alleged victims have intellectual disabilities (ID). This study explored how alleged victims with ID are interviewed by police officers in Sweden and how this may affect their ability to report information as accurately as possible.

Methods Twelve interviews with 11 alleged victims were selected from a larger sample. The complainants were interviewed when their chronological ages ranged from 6.1 to 22 years. A quantitative analysis examined the type of questions asked and the numbers of words and details they elicited in response.

Results Instead of open-ended questions, the interviewers relied heavily on focused questions, which are more likely to elicit inaccurate information. When given the opportunity, the witnesses were able to answer directive questions informatively.

Conclusions Interviewers need special skills in order to interview alleged victims who have ID. In addition to using more open-ended questions, interviewers should speak in shorter sentences.

Keywords crime victims, forensic interviews, intellectual disabilities, interviewer behaviour

Introduction

When investigating possible crimes, it is important to obtain reports from the alleged victims that are as accurate and complete as possible. Obtaining reports from alleged victims can be difficult at the best of times because the alleged offences may be confusing or traumatic, however, and it can be especially difficult to interview some people because of such personal characteristics as their age, frailty, sensory impairments and intellectual disabilities (ID). Children and adults with ID may, for example, have poorer memories and be more suggestible (Kebbell & Hatton 1999; Gudjonsson & Henry 2003) although they may differ greatly among themselves with respect to their psychological vulnerabilities and suggestibility (Ceci *et al.* 2000; Gudjonsson & Henry 2003). In this study, we explored the ways in which adults and children with ID are interviewed by police officers when they are alleged victims of abuse.

The term 'intellectual disabilities' implies that difficulties began early in life and interfered with 'normal' development (Rispen *et al.* 1997). Generally, these developmental deviations are characterized by unique patterns of delay, with the deviance often more marked in one or more specific domains than others (Dyck *et al.* 2004). As a result, different

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forms of developmental delay are often associated with distinctive cognitive changes. For instance, episodic memory may be especially impaired when people with ID have epilepsy or Down's syndrome, whereas judgement and executive functions may be especially impaired when they have conditions such as traumatic brain injuries affecting frontal regions of the brain (e.g. Anderson *et al.* 1999). These differing conditions may affect testimonial capacity, eyewitness accuracy, and suggestibility in specific and distinctive ways (Tager-Flusberg 1999; Bradshaw 2001; Chabert *et al.* 2004).

Autism spectrum disorders (ASDs) have been associated with cognitive weaknesses, different patterns of reciprocal social relatedness, as well as difficulties producing and understanding language. Difficulties with social interaction and communication can make it difficult for individuals with ASDs to understand complex emotions and to recognize that others' perspectives and knowledge (theory of mind) differ from their own (Gillberg 1995; Baron-Cohen 1998, 2001; Frith 2003). Difficulties decoding complex mental states from expressions in the region of the eyes may also be apparent (Baron-Cohen 1989; Baron-Cohen *et al.* 1997). How people with ASDs perform as witnesses has not been studied, although it is likely that they will have difficulty making eye contact and expressing feelings when being interviewed. Verbal children with ASDs may also misunderstand questions about other people's knowledge and beliefs, and the gestures others use when trying to direct their attention (Trevathan 2000). Some may have failed to develop useful spoken language and those who develop speech may be unable to complete answers when they are interrupted. They may be able to provide detailed information about concrete experiences yet be unable to answer even simple questions about the same event (Gillberg 1995).

The fact that people may have difficulty describing their experiences does not necessarily mean that they are incompetent informants. How people with ID are questioned also affects their abilities to report information accurately (Kebbell & Hatton 1999). As with other eyewitnesses, open-ended free-recall questions appear to elicit more accurate information from people with ID than recognition-based questions do, although these adults and children may report less complete information than

eyewitnesses/alleged victims from the general population (Dent 1986; Perlman *et al.* 1994; Kebbell & Hatton 1999). Two types of open-ended questions (invitations and directive questions) prompt respondent to recall information from memory. Invitations do not specify the contents of the memories that are to be retrieved and elicit richer responses than more focused open-ended questions (i.e. directive questions) or recognition (option-posing and suggestive) prompts do. Directive prompts refocus on details that the respondent has previously mentioned and elicit shorter responses than invitations do (Lamb *et al.* 1996a) although they tend to be accurate, like the responses to invitations. Because suggestive questions suggest desirable responses, they should be avoided completely when interviewing people with ID while option-posing questions, which ask respondents to affirm, negate, or select among investigator-given options, should be used infrequently and framed non-coercively (Michel *et al.* 2000; Kebbell *et al.* 2004).

Adults with ID may have poorer event memories than children with similar disabilities although such children may alter their answers more frequently when anxious or stressed than adults do (Gudjonsson 2003; Gudjonsson & Henry 2003). Children with ID generally perform much like mental age-matched peers (Zigler 1969; Fowler 1998; Iarocci & Burack 1998; Henry & Gudjonsson 1999; Michel *et al.* 2000) but severity of disability often explains differences in performance. Children with mild ID report less information in response to open free-recall questions but are as likely as typically developing children of the same age to provide responses to these type of prompts (Henry & Gudjonsson 1999; Henry & Gudjonsson 2003) and to resist misleading questions (Henry & Gudjonsson 2003). Children with moderate disabilities provide less information than both typically developing peers and children with mild ID. They are also more suggestible although their responses to free-recall questions tend to be accurate (Henry & Gudjonsson 2003). People with ID are also more likely to acquiesce to option-posing questions than individuals without ID (Clare & Gudjonsson 1993).

Studies of forensic interviewing have shown that interviewers seldom offer typically developing children the opportunity to respond to open-ended questions. Instead, they rely heavily on focused

questions (Lamb *et al.* 1996a; Craig *et al.* 1999; Cederborg *et al.* 2000; Davies *et al.* 2000; Cederborg & Lamb 2007). Because the 11 police officers (eight females and three men) participating in this study were not trained in how to interview people with ID we predicted that their interviews would resemble those that characterize interviews with typically developing children. A quantitative analysis was performed to explore the type of questions asked in relation to the details provided. Response length correlates with the number of details reported when young people are interviewed (Hershkowitz *et al.* 1997; Kebbell *et al.* 2004) and we thus counted the numbers of words the witnesses and interviewers used in the substantial phases of the interviews we studied. Researchers have previously shown that people with ID provide inaccurate information when questioned using the focused or closed prompts that we expected to predominate (Clare & Gudjonsson 1993; Perlman *et al.* 1994; Gudjonsson & Clare 1995; Ericson 2000), but because this was a field study, we were not able to explore the accuracy of the interviewees' responses.

Method

We sought to describe how some Swedish adults and children with ID were interviewed by examining investigative interviews with 11 of them. One woman made allegations about two different suspects and we therefore studied 12 different interviews with 11 people who had ID. The 11 alleged victims were selected from a larger project involving 69 criminal cases in Sweden (see Appendix for brief descriptions of the cases). Prosecutors from all 39 Swedish districts were asked to send as much information as possible about all recent cases in which men, women, boys and girls with ID were allegedly victimized. Disability is not systematically recorded in Swedish case files, so case selection for the larger project depended on the prosecutors' and police officers' memories and the total sample was selective rather than representative. The 11 alleged victims (and 12 interviews) studied here come from different parts of Sweden and were selected to illustrate varying levels of competence associated with the interviewees' chronological age and type of disability.

The data

The interviews involved 10 females and one male whose chronological ages were between 4.7 and 19.1 years ($M = 12.1$ years, $SD = 4.94$) when exposed to abuse for the first time and between 6.1 and 22.0 years when interviewed ($M = 13.4$ years, $SD = 6.01$). Because adults and children do not perform similarly when interviewed, we divided the sample into two groups: people under 16 years of age ($n = 7$; $M = 8.9$ years, $SD = 2.71$) and people aged 16 years or older ($n = 5$, $M = 19.6$ years, $SD = 2.16$) to test possible differences in interviewer style and interviewee response. The delay between last incident and interview averaged 36 days but ranged from 1 to 286 days.

Quantitative analysis

The first interviews of each witness were transcribed from video recordings and checked to ensure their completeness and accuracy. One native Swedish speaker then identified substantive utterances (those related to the investigated incident) and tabulated the number of new details concerning the investigated event using a technique employed by Lamb *et al.* (Lamb *et al.* 1996b). Details were defined as words or phrases identifying or describing individuals, objects, or events (including actions) related to the investigated incident. Details were only counted when they were new and added to an understanding of the target incidents and their disclosure. As a result, restatements were not counted. The coder also reviewed the transcripts and categorized each interviewer utterance, defined by a 'turn' in the discourse or conversation, using the categories developed by Lamb *et al.* (1996b). For the purpose of these ratings, we did not distinguish between questions and statements.

Interviewer statements made during the portion of the investigative interviews concerned with substantive issues were placed in one of the following categories (Lamb *et al.* 1996b):

1 Invitations (I). Utterances, including questions, statements, or imperatives, prompting free-recall responses from the informant. Such utterances do not delimit the witness' focus except in a general way (for example, 'Tell me everything that happened'), or use details disclosed by the witness as

cues (for example, 'You mentioned that he touched you. Tell me everything about the touching').

2 Directive utterances (D). These refocus the witness' attention on details or aspects of the alleged incident that the witness has already mentioned, providing a category for requesting additional information using 'Wh-' questions (cued recall). For example 'What colour was that shirt?'

3 Summary (SM). Accurate summaries by the interviewer of what the witness had said earlier, without requests for additional information about the incident. Examples: 'You said (a summary of what the witness had mentioned)' or 'I understand that (a summary of what the witness had mentioned)'.

4 Option-posing utterances (OP). These focus the witness' attention on details or aspects of the alleged incident that the witness has not previously mentioned, asking him or her to affirm, negate, or select an investigator-given option using recognition memory processes, but do not imply that a particular response is expected. For example, 'Did he touch your vagina?'

5 Suggestive utterances (S). These are stated in such a way that the interviewer strongly communicates what response is expected (for example: 'He forced you to do that, didn't he?') or they assume details that have not been revealed by the witness (for example: *Witness*: 'We laid on the sofa'. *Interviewer*: 'He laid on you or you laid on him?').

The rater, who was fluent in both Swedish and English, was trained on an independent set of English transcripts until she reached 90% agreement with American raters regarding the identification of details and utterance types. This level of proficiency was reached before she began coding the Swedish transcripts included in the study. The Swedish rater remained reliable ($\geq 95\%$) with American raters who independently coded transcripts of interviews in English during the period that the Swedish interviews were being coded.

Qualitative analysis

In order to gain insight into each witness' possible reporting capacities, circumstances and experiences, we also conducted an inductive review of all the documents (the transcribed interviews, documents from the police investigations and the court files) in

each case. Information about the different participants' test results and capacities was seldom obtained formally during the investigation and the courts were often given this information third-hand (Cederborg & Lamb 2006). As a result, the sample we studied was both heterogeneous and described with inadequate precision. The available information is summarized in the Appendix.

Ethical considerations

All case material was given to the first author by the prosecutors and police officers in accordance with the provisions of Sweden's Official Secrets Act. Personal details and references to places that might permit identification were removed to ensure that none of the victims could be recognized. When the study was conducted, Swedish researchers were not required to have their studies reviewed by human subjects' protection committees, but the present study was reviewed and approved by the official at Linköping University, Sweden, responsible for monitoring research being conducted by University staff. This official ensured that the study was designed and implemented in accordance with the Helsinki declaration (1975) regarding research on humans.

Results

The interviewers' behaviour was characterized with respect to the different types of utterances used and the number of words each included. The effectiveness of those utterances was analysed with respect to the number of new substantive details elicited and the number of words in the alleged victims' responses. Differences in utterance types were analysed using within-subjects ANOVAs. Preliminary analyses were conducted to test for differences between those seven interviews involving people with ID younger than 16 years of age and those five interviews involving people with ID older than 16. There were no significant main effects because of age and no significant age by type of utterance interaction. Accordingly, we report results that excluded age from the analyses.

None of the police officers had been trained to interview people with ID and Table 1 shows how they performed in the 12 interviews.

Utterance type	Utterances		Words		
	Number Mean (SD)	Percent* Mean (SD)	Number Mean (SD)	Percent† Mean (SD)	Average‡ Mean (SD)
Invitation	6.58 _{ab} (4.89)	4.36 _{ab} (2.27)	90.58 _{ab} (61.39)	5.29 _{ab} (3.02)	15.40 (8.82)
Directive	55.33 _{ac} (38.28)	34.74 _{ac} (9.40)	591.17 _{ac} (392.63)	33.47 _{ac} (10.75)	10.98 (1.87)
Summary	29.83 _{abc} (12.90)	20.67 _{abc} (7.54)	304.42 _{abc} (146.77)	18.15 _{abc} (7.00)	10.30 (2.90)
Option-posing	47.00 _{bd} (17.50)	32.35 _{bd} (8.42)	585.83 _{bd} (272.94)	34.36 _{bd} (11.21)	12.27 (2.72)
Suggestive	7.33 _{cd} (4.77)	5.67 _{cd} (4.62)	93.17 _{cd} (60.04)	6.88 _{cd} (6.99)	11.89 (5.60)
<i>F</i> (4, 44)	19.29	40.66	16.93	26.88	2.02
<i>P</i> <	0.001	0.001	0.001	0.001	0.11
η^2	0.64	0.79	0.61	0.71	0.16

Table 1 Number and percentage of utterances and words by police investigators (11 different interviewers in 12 cases)

* Percentage of utterance type out of total number of utterances.

† Percentage of words in utterance type out of total number of words.

‡ Average number of words spoken by investigator per utterance.

Means in the same column that share a subscript are significantly different at $P < 0.05$.

On average, police officers spoke a total of 149.75 (SD = 64.35) utterances and spoke 1698.08 (SD = 661.63) words. Within-subjects ANOVAs revealed significant differences among the means with respect to the number and percentage of each type of utterance and words used by the police officers. Pair-wise comparisons showed that police officers used directive ($M = 55.33$, $SD = 38.28$) and option-posing utterances equally often ($M = 47.00$, $SD = 17.50$); each type of prompt was significantly more common than summaries ($M = 29.83$, $SD = 12.90$), suggestive prompts ($M = 7.33$, $SD = 4.77$) and invitations ($M = 6.58$, $SD = 4.89$). Absolutely and proportionally fewer words were spoken when making invitations ($M = 90.58$, $SD = 61.39$) than in directive ($M = 591.17$, $SD = 392.63$) and option-posing ($M = 585.83$, $SD = 272.94$) utterances but there was no significant difference between the number and proportion of words spoken when asking directive as opposed to option-posing questions. There were no significant differences in the average number of words included in the different types of utterances.

In five of the 12 interviews, the first substantive prompt from the interviewers was an open-ended invitation, whereas the first prompt was directive in four cases and option-posing and suggestive in three. In only two and four cases, respectively, were the second and third substantive prompts open-ended invitations, although in eight cases the second prompt was directive. Seven of the third prompts were option-posing or suggestive.

Table 2 shows the behaviour of the alleged victims during the interviews. On average, they provided a total of 384.75 (SD = 300.71) new details and spoke 1225.92 (SD = 1265.99) words when interviewed. Within-subjects ANOVAs revealed that alleged victims gave significantly more new details in response to directive ($M = 161.83$, $SD = 139.21$) and option-posing utterances ($M = 113.00$, $SD = 66.93$) than in response to invitations ($M = 58.25$, $SD = 119.98$), summaries ($M = 19.92$, $SD = 11.50$) and suggestive prompts ($M = 21.33$, $SD = 21.24$).

Pair-wise comparisons of the numbers of words elicited by prompts of each type revealed no

Table 2 Number and percentage of new details and words from alleged victims (11 different witnesses in 12 cases)

Utterance type	New details			Words		
	Number Mean (SD)	Percent [‡] Mean (SD)	Average [†] Mean (SD)	Number Mean (SD)	Percent [‡] Mean (SD)	Average [§] Mean (SD)
Invitation	58.25 _a (119.98)	10.73 _{ab} (10.98)	6.04 _a (7.08)	236.08 _a (481.97)	10.45 _{ab} (10.58)	20.76 (27.22)
Directive	161.83 _{abc} (139.21)	39.52 _{acd} (8.97)	2.72 _b (1.14)	515.17 _{abc} (536.75)	36.33 _{acd} (9.84)	8.46 _a (5.28)
Summary	19.92 _{be} (11.50)	6.53 _{ce} (4.29)	0.70 _{abc} (.40)	126.08 _{be} (90.32)	12.24 _{ce} (8.05)	4.30 _a (2.10)
Option-posing	113.00 _{de} (66.93)	32.27 _{bef} (12.00)	2.35 _b (1.07)	321.75 _{de} (27.88)	27.88 _{bef} (9.24)	6.76 _a (3.72)
Suggestive	21.33 _{cd} (21.24)	7.36 _{df} (5.05)	2.47 _c (1.81)	84.00 _{cd} (122.32)	8.19 _{df} (7.88)	10.40 (9.81)
<i>F</i> (4, 44)	8.75	29.68	4.21	5.04	17.69	3.50
<i>P</i> <	0.001	0.001	0.01	0.01	0.001	0.05
η^2	0.44	0.73	0.28	0.31	0.62	0.24

* Percentage of new details in response to utterance type out of total number of details.

† Average number of new details given per response.

‡ Percentage of words in response to utterance type out of total number of words.

§ Average number of words spoken per response.

Means in the same column that share a subscript are significantly different at $P < 0.05$.

significant differences between the numbers of words elicited by directive ($M = 515.17$, $SD = 536.75$) and option-posing ($M = 321.75$, $SD = 27.88$) utterances or between the numbers of words elicited by option-posing prompts and invitations ($M = 236.08$, $SD = 481.97$). Directive utterances elicited significantly more words than invitations did. Invitations elicited longer and more detailed responses than other types of prompts. Because directives were the most common types of utterance, followed by option-posing prompts, these results meant that most details and words were elicited using these types of prompts.

Discussion

Over the last few decades, many researchers have studied forensic interview practices, and they have provided remarkably consistent insights into the best ways of obtaining information about experienced events from eyewitnesses and alleged victims in general (Loftus 1979; Fisher *et al.* 1987; Poole & Lamb 1998; Lamb *et al.* 1999; Milne & Bull 1999;

Lamb *et al.* 2003) and from people with ID in particular (Dent 1986; Clare & Gudjonsson 1993; Perlman *et al.* 1994; Bull 1995; Kebbell & Hatton 1999; Henry & Gudjonsson 1999, 2003; Milne *et al.* 1999; Gudjonsson & Henry 2003; Kebbell *et al.* 2004). Different interview strategies may be more or less useful with different witnesses (Kasari & Bauminger 1998) but interviewers should use open question types whenever possible because these maximize accurate recall by both typically developing and intellectually disabled witnesses. Interviewers should thus start with open questions and then proceed to more specific questions as needed (Gordon & Schroeder 1995; Poole & Lamb 1998), bearing in mind that responses from people with ID may become less accurate when they are asked more focused questions (Henry & Gudjonsson 2003; Kebbell *et al.* 2004).

This study explored the characteristics of interviews involving Swedish police officers and people with ID. We predicted that the police officers would not interview the participants appropriately and this hypothesis was supported: the police officers

seemed to question all the alleged victims similarly, asking many focused questions (option-posing and suggestive), regardless of the witnesses' responsiveness or type of disability. They did not provide opportunities for the adults and children to be responsive and did not make enough use of open-ended questions. This is unfortunate because people with ID in fact tend to respond to open-ended questions as accurately as members of the general population (Dent 1986; Perlman *et al.* 1994; Kebbell & Hatton 1999; Kebbell *et al.* 2004). The police officers' unnecessary use of focused questions (option-posing and suggestive) may thus have decreased the accuracy of the information provided because focused questions encourage interviewees with ID to respond even when they do not know the requested information and thus respond inaccurately (Clare & Gudjonsson 1993; Perlman *et al.* 1994; Gudjonsson & Clare 1995; Kebbell & Wagstaff 1997; Kebbell & Hatton 1999; Ericson 2000). The interviewers also relied heavily on directive questions when trying to elicit information from the participants. Directive questions ask respondents for more specific details about events or objects the witness has already mentioned and can help elicit a great deal of information that is more accurate than information elicited using option-posing and suggestive prompts (Lamb *et al.* 1996b). Such questions afford interviewees fewer opportunities to provide information (Henry & Gudjonsson 2003), however, and when directive questions are too specific, they can elicit inaccurate information (Dent 1986; Perlman *et al.* 1994; Kebbell & Hatton 1999; Henry & Gudjonsson 2003; Kebbell *et al.* 2004). More research is also needed on the accuracy of responses to such prompts by individuals with both moderate and mild ID. Because open-ended questions elicit more accurate information from people with ID, there is also a need to further understand whether cued invitations may keep such witnesses focused on the topic at hand and thereby facilitate their performance.

When interviewing alleged witnesses, including those with ID (Home Office 2002; Jones 2003), police officers should give priority to strategies that will help possible victims give the most accurate and complete information they can. In this study, however, the Swedish police officers, like those who interviewed children in previous studies (Cederborg

et al. 2000; Cederborg & Lamb 2007), did not follow this recommendation, and did not determine whether the interviewees could respond informatively to open-ended questions before proposing options or giving suggestions about what the participants might have experienced. In addition to minimizing the delays between incidents and interviews, those interviewing vulnerable witnesses should improve their questioning strategies to avoid contaminating reports and memories.

Police officers also need to recognize that people with ID are a heterogeneous group even when ID have the same aetiology, reflecting the witnesses' backgrounds and personal histories. Irrespective of the specific diagnosis, individuals with ID may have distinct psychological profiles that affect their performance. Because people with ID may be at higher risk of maltreatment (Sobsey & Doe 1991; Westcott 1991, 1993; Westcott & Jones 1999; Sullivan & Knutson 2000; Vig & Kaminer 2002), may not be interviewed promptly and appropriately, and may have difficulty describing their experiences, there is an urgent need to inform police officers why it is preferable to use the types of open questions that maximize accurate recall. Early identification of intellectually disabled witnesses' abilities, capacities and behaviour may also help interviewers to adapt their behaviour appropriately (Jones 2003). In addition, interviewers should be trained to focus on each individual's specific conditions, understand that different interview strategies may sometimes be necessary and avoid popular prejudices about disabled individuals (Westcott 1993; Davis *et al.* 1994; Poole & Lamb 1998; Milne 1999).

The results of this study are limited by the selective nature of this heterogeneous sample and by the fact that we did not have access to complete information about the participants' specific disabilities and circumstances (see Appendix), which together made it impossible to examine the similarities and differences among individuals with similar profiles. The heterogeneity of the sample may also have reduced the power of the statistical tests by combining those with moderate ID with those whose mild ID would allow them to perform better (Henry & Gudjonsson 2003). The selective rather than representative nature of the sample also prevents us from assertions about the ways in which individuals with ID are typically interviewed.

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References

- Anderson S. W., Bechara A., Damasio H., Tranel D. & Damasio A. R. (1999) Impairment of social and moral behaviour related to early damage in human prefrontal cortex. *Nature Neuroscience* **2**, 1032–7.
- Baron-Cohen S. (1989) Perceptual role-taking and proto-declarative pointing in autism. *British Journal of Developmental Psychology*, 113–27.
- Baron-Cohen S. (1998) Modularity in developmental cognitive neuropsychology: Evidence from autism and Gilles de la Tourette syndrome. In: *Handbook of Mental Retardation and Development* (eds J. A. Burack, R. M. Hodapp & E. Zigler), pp. 334–48. Cambridge University Press, Cambridge.
- Baron-Cohen S. (2001) Theory of mind and Autism: a review. *International Review of Research in Mental Retardation* **23**, 169–84.
- Baron-Cohen S., Baldwin D. & Crowson M. (1997) Do children with autism use the speakers' direction of gaze (SDG) strategy to crack the code of language? *Child Development* **68**, 48–57.
- Bradshaw J. L. (2001) *Developmental Disorders of the Frontostriatal System*. Psychology Press, Hove.
- Bull R. (1995) Interviewing witnesses with communicative disability. In: *Handbook of Psychology in Legal Contexts* (eds R. Bull & D. Carson), pp. 247–260. Wiley, Chichester.
- Ceci S. J., Bruck M. & Battin D. B. (2000) Suggestibility of children's testimony. In: *False Memory Creation in Children and Adults. Theory, Research and Implications* (ed. D. F. Bjorklund), pp. 169–201. Lawrence Erlbaum Associates, Hillsdale, NJ.
- Cederborg A.-C. & Lamb M. E. (2006) How does the legal system respond when children with learning difficulties are victimized? *Child Abuse and Neglect* **30**, 451–574.
- Cederborg A.-C. & Lamb M. E. (2007) Intensive training of forensic interviewers. In: *Child Abuse and its Impact* (ed. F. Columbus). Nova Science Publishers, NY (in press).
- Cederborg A.-C., Orbach Y., Sternberg K., J. & Lamb M. E. (2000) Investigative interviews of child witnesses in Sweden. *Child Abuse and Neglect* **24**, 1355–61.
- Chabert C. Jamon M. Cherfouh A. Duquenne V. Smith D. J. Rubin E. & Roubertoux P. I. (2004) Functional analysis of genes implicated in down syndrome: 1. Cognitive abilities in mice transpolygenic for down syndrome chromosomal region-1 (DCR-1). *Behavior Genetics* **34**, 559–69.
- Clare I. C. H. & Gudjonsson G. H. (1993) Interrogative suggestibility, confabulation, and acquiescence in people with mild learning disabilities (mental handicap): Implications for reliability during police interrogations. *British Journal of Clinical Psychology* **32**, 295–301.
- Craig R. A. Scheibe R. Kircher J. Raskin D. C. & Dodd D. (1999) Effects of interviewer questions on children's statements of sexual abuse. *Applied Developmental Science* **3**, 77–85.
- Davies G. M. Westcott H. L. & Horan N. (2000) The impact of questioning style of the eyewitness testimony of preschool children. *Journal of Psycholinguistic Research* **74**, 269–77.
- Davis G. M. Wilson C. Mitchell R. & Milsom J. (1994) *Videotaping Children's Evidence: An Evaluation*. HMSO, London.
- Dent H. (1986) An experimental study of the effectiveness of different techniques of interviewing mentally handicapped child witnesses. *British Journal of Clinical Psychology* **25**, 13–17.
- Dyck M. J. Hay D. Anderson M. Smith L. M. Piek J. & Hallmayer J. (2004) Is the criterion for defining developmental disorders valid? *Journal of Child Psychology and Psychiatry* **45**, 979–95.
- Ericson K. I. (2000) Factors affecting witness capacity in individuals with developmental disabilities. *Dissertation Abstracts International* **60**, 4299.
- Fisher R. P. Geiselman R. E. & Raymond D. S. (1987) Critical analysis of police interviewing techniques. *Journal of Police Science and Administrations* **15**, 177–85.
- Fowler A. E. (1998) Language in mental retardation: Association with and dissociation from general cognition. In: *Handbook of Mental Retardation and Development* (eds J. A. Burack, R. M. Hodapp, & E. Zigler), pp. 290–333. Cambridge University Press, Cambridge.
- Frith U. (2003) *Autism: Explaining the Enigma*. Blackwell Publishing, Frith.
- Gillberg C. (1995) *Clinical Child Neuropsychiatry*. Cambridge University Press, Cambridge.
- Gillberg C. (1996) *Ett barn i varje klass, om DAMP, MBD, ADHD*. [One Child in Each Classroom: About DAMP, MBD, ADHD]. Cura, Sodertalje, Sweden.
- Gordon B. & Schroeder C. S. (1995) *Sexuality: A Developmental Approach to Problems*. Plenum, New York.
- Gudjonsson G. H. (2003) *The Psychology of Interrogations and Confessions: A Handbook*. John Wiley, Chichester.
- Gudjonsson G. H. & Clare I. C. H. (1995) The relationship between confabulation and intellectual ability,

- memory, interrogative suggestibility and acquiescence. *Personality and Individual Differences* **19**, 333–8.
- Gudjonsson G. H. & Henry L. (2003) Child and adult witnesses with intellectual disability: The importance of suggestibility. *Legal and Criminological Psychology* **8**, 241–52.
- Henry L. A. & Gudjonsson G. H. (1999) Eyewitness memory and suggestibility in children with mental retardation. *American Journal on Mental Retardation* **104**, 491–508.
- Henry L. A. & Gudjonsson G. H. (2003) Eyewitness memory, suggestibility and repeated recall sessions in children with mild and moderate intellectual disabilities. *Law and Human Behavior* **27**, 481–505.
- Hershkowitz I., Lamb M. E., Sternberg K. J. & Esplin P. W. (1997) The relationships among interviewer utterance type, CBCA scores, and the richness of children's responses. *Legal and Criminological Psychology* **2**, 169–76.
- Home Office (2002) *Disabled Children and Abuse*. NSPCC, London.
- Iarocci G. & Burack J. A. (1998) Understanding the development of attention in persons with mental retardation: challenging the myths. In: *Handbook of Mental Retardation and Development* (eds J. A. Burack, R. M. Hodapp, & E. Zigler), pp. 349–81. Cambridge University Press, Cambridge.
- Jones D. P. H. (2003) *Communicating with Vulnerable Children. A Guide for Practitioners*. Gaskell, London.
- Kasari C. & Bauminger N. (1998) Social and emotional development in children with mental retardation. In: *Handbook of Mental Retardation and Development* (eds J. A. Burack, R. M. Hodapp, & E. Zigler), pp. 411–23. Cambridge University Press, Cambridge.
- Kebbell M. R. & Hatton C. (1999) People with mental retardation as witnesses in court: a review. *Mental Retardation* **37**, 179–87.
- Kebbell M. R., Hatton C. & Johnson S. D. (2004) Witnesses with intellectual disabilities in court: What questions are asked and what influence do they have? *Legal and Criminological Psychology* **9**, 23–35.
- Kebbell M. R. & Wagstaff G. F. (1997) Why do the police interview eyewitnesses? Interview objectives and the evaluation of eyewitness performance. *Journal of Psychology* **131**, 595–601.
- Lamb M. E., Hershkowitz I., Sternberg K. J., Esplin P. W., Hovav M., Manor T. & Yudilevitch L. (1996a) Effects of investigative utterance types on Israeli children's responses. *International Journal of Behavioral Development* **19**, 627–37.
- Lamb M. E., Hershkowitz I., Sternberg K. J., Boat B. & Everson M. D. (1996b) Investigative interviews of alleged sexual abuse victims with and without anatomical dolls. *Child Abuse and Neglect* **20**, 1251–9.
- Lamb E. M., Sternberg J. K., Orbach Y., Hershkowitz I. & Esplin W. P. (1999) Forensic interviews of children. In: *Handbook of the Psychology of Interviewing* (eds A. Memon & R. Bull), pp. 253–77. Wiley, Chichester; New York.
- Lamb M. E., Sternberg K. J., Orbach Y. & Esplin P. W. (2003) Age differences in young children's responses to open-ended invitations in the course of forensic interviews. *Journal of Consulting and Clinical Psychology* **71**, 926–34.
- Loftus E. F. (1979) *Eyewitness Testimony*. Harvard University Press, London.
- Michel M. K., Gordon B. N., Ornstein P., A. & Simpson M. A. (2000) The abilities of children with mental retardation to remember personal experiences: Implications for testimony. *Journal of Clinical Child Psychology* **29**, 453–63.
- Milne R. (1999) Interviewing children with learning disabilities. In: *Handbook of the Psychology of Interviewing* (eds A. Memon & R. Bull), pp. 165–80. Wiley, Chichester.
- Milne R. & Bull R. (1999) *Investigative Interviewing: Psychology and Practice*. Wiley, Chichester, UK.
- Milne R., Clare I. C. H. & Bull R. (1999) Interviewing adults with learning disability with the cognitive interview. *Psychology, Crime and Law* **5**, 81–100.
- Perlman N. B., Ericson K. I., Esses V. M. & Isaacs J. (1994) The developmentally handicapped witness. Competency as a function of question format. *Law and Human Behaviour* **18**, 171–87.
- Poole D. A. & Lamb M. E. (1998) *Investigative Interviews of Children: A Guide for Helping Professionals*. American Psychological Association, Washington, DC.
- Rispens J., Yule W. & van Yperen. T. A. (eds) (1997) *Perspectives on the Classification of Specific Developmental Disorders*. Springer-Verlag, New York, LLC.
- Sobsey D. & Doe T. (1991) Patterns of sexual abuse and assault. *Journal of Sexuality and Disability* **9**, 185–99.
- Sullivan P. M. & Knutson J. F. (2000) Maltreatment and disabilities: a population-based epidemiological study. *Child Abuse and Neglect* **24**, 1257–73.
- Tager-Flusberg H. (ed.) (1999) *Neurodevelopmental Disorders. Developmental Cognitive Neuroscience*. Bradford Books, Cambridge.
- Trevarthen C. (2000) Autism as a neurodevelopmental disorder affecting communication and learning in early childhood: prenatal origins, post-natal course and effective educational support. *Prostaglandins, Leukotrienes and Essential Fatty Acids* **63**, 41–6.
- Vig S. & Kaminer R. (2002) Maltreatment and developmental disabilities in children. *Journal of Development and Physical Disabilities* **14**, 371–86.

Westcott H. L. (1991) The abuse of disabled children: a review of the literature. *Child: Care, Health and Development* **17**, 243–58.

Westcott H. L. (1993) *Abuse of Children and Adults with Disabilities*. NSPCC, London.

Westcott H. L. & Jones P. H. (1999) Annotation: the abuse of disabled children. *Journal of Child Psychology and Psychiatry* **4**, 497–506.

Zigler E. (1969) Developmental versus difference theories of mental retardation and the problem of motivation. *American Journal of Mental Deficiency* **73**, 536–56.

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Appendix

In Sweden, the accepted term for developmental difficulties is developmental disorder. In Table A1 we briefly summarize the available information about the individuals in this study.

Table A1 Description of data in the court and investigative files

Gender/age interview	Diagnose/assessment	Type of crime	Suspect	Age when abused	Gender police officer
1. Girl/6.1 years old	Moderate DD/assessment	Sexual abuse	Immediate family member	Multiple/4.7–6.1 years old	Female
2. Girl/6.5 years old	DAMP/no assessment	Physical abuse	Immediate family member	Single/6.5 years old	Female
3. Girl/7.1 years old	DD/assessment without specified category	Sexual abuse	Immediate family member	Single/7.1 years old	Man
4. Boy/8.7 years old	DD/no assessment	Sexual abuse	Immediate family member	Single/8.7 years old	Female
5. Girl/9 years old	Mild DD/ASD/assessment	Sexual abuse	Familiar	Single/9 years old	Female
6. Girl/12 years old	DD/no assessment	Sexual abuse	Familiar	Single/12 years old	Female
7. Girl/13.1 years old	Mild DD/no assessment	Sexual abuse	Familiar	Single/13.1 years old	Man
8. Female/17 years old	Mild DD/no assessment	Sexual abuse	Non-immediate family member	Single/17 years old	Female
9. Female/18.4 years old	Moderate DD	Sexual abuse	Familiar	Multiple/17.11–18.4	Female
10. Female/19.1 years old	Mild DD/ASD/assessment	Sexual abuse	Familiar	Multiple/unspecified period	Female
11. Female/21.7 years old*	Mild DD/no assessment	Sexual abuse	Familiar	Multiple/unspecified period	Man
12. Female/22 years old*	Mild DD/no assessment	Sexual abuse	Immediate family member	Multiple/14–22 years old	Man

* The same women in two different cases.

DAMP, deficits in attention, motor control and perception (Gillberg 1996), a label used in Sweden for children who might be classified as attention-deficit hyperactivity disorder or attention deficit disorder in the USA or UK; DD, developmental disorder; ASD, autism spectrum disorder.