



0145-2134(94)00106-5

A COMPARISON OF THE EYEWITNESS ACCOUNTS OF DEAF AND HEARING CHILDREN

STEPHEN PORTER, JOHN C. YUILLE, AND ANDREA BENT

Department of Psychology, University of British Columbia, Vancouver, BC, Canada

Abstract—Children with hearing impairments have been found to suffer a high rate of physical and sexual victimization relative to children in general. The purpose of this investigation was to compare the amount and accuracy of the information contained in the eyewitness accounts of deaf and hearing children. Fifteen deaf and 11 hearing children, aged 8 to 10 years, individually witnessed a series of slides depicting a wallet theft. Their recall was then tested by using the Step-Wise Interview (Yuille, Hunter, Joffe, & Zaparniuk, 1993) consisting of a free recall component followed by increasingly directive questions. Separate 2×2 (deaf/hearing \times question type) between-within factorial ANOVAs were conducted on the amount and accuracy of the information in the accounts ($A = .025$). Results indicated no main or interaction effects for amount recalled. However, a main effect for question type and an interaction effect were evidenced in the analysis on accuracy. Although the accuracy scores of the two groups did not differ in free recall, the deaf children provided much less accurate responses to directive questions whereas the accuracy of the hearing children declined only slightly. Implications for criminal investigations are discussed.

Key Words—Child witness, Deaf, Testimony, Memory.

INTRODUCTION

ALTHOUGH MUCH HAS been learned about the abilities of child eyewitnesses in recent decades (Doris, 1991; Goodman, 1984; Goodman, Aman, & Hirschman, 1987; Goodman & Bottoms, 1993; Yuille, 1988), very little is known about specific populations of children such as children with hearing impairments. There is good reason to conduct such research, however, in that these individuals frequently witness or fall victim to criminal offenses. Research has indicated a high rate of abuse of deaf children in the home and in mainstream and residential settings as compared to other children. Summarizing the findings of several surveys, Sullivan, Vernon, and Scanlan (1987) have estimated that approximately 50% of deaf girls and 54% of deaf boys have been sexually abused. These figures are much higher than those found in the widely-cited Finkelhor (1986) study for children in general (25% and 10% for girls and boys, respectively). Factors influencing this high abuse rate include the geographic isolation of residential schools, the lack of knowledge that deaf children have concerning sexuality, and the belief of offenders that the threat of being reported is small (e.g., Sullivan, Vernon, & Scanlan, 1987). The present study specifically addressed the question of whether the abilities of a population of deaf children to provide testimony differ from those of hearing children.

It is likely that the courts have retained negative attitudes toward deaf children as witnesses just as suspicions of child witnesses in general have been difficult to eradicate. Despite increasing acceptance of children's testimony in the courts, Leippe and Romanczyk (1989) found that trust in recall accuracy continues to increase linearly with the age of the eyewitness (also

Received for publication June 14, 1993; final revision received October 20, 1993; accepted October 24, 1993.

Requests for reprints should be addressed to Stephen Porter, Department of Psychology, University of British Columbia, 2136 West Mall, Vancouver, BC, Canada, V6T 1Z4.

see Goodman, Golding, & Haith, 1984). There is reason to believe that deaf children may be viewed as even less competent witnesses than other children in that they have commonly been viewed by society as being cognitively inferior in general. As noted by Kyle (1989), it was traditionally believed that "without the civilizing effect of spoken language, deaf people walk on a cliff-edge peering into an abyss of dumbness and mental retardation" (p. 109). In an ongoing high profile case in Vancouver, Canada, it is alleged that dozens of deaf children were abused at a provincial residential school for the deaf prior to 1987. According to a recent report by British Columbia's ombudsman, the social workers and education officials initially investigating the charges viewed the deaf children as incompetent witnesses. This bias resulted in the children's allegations being virtually ignored for several years (*Jericho Hill*, 1993).

It is now known that the cognitive abilities of deaf people are similar to those of the general population. Bonvillian, Charrow, and Nelson (1973) reviewed the research concerning the linguistic abilities and educational achievements of deaf people. They concluded that, relative to hearing people, deaf people are not deficient in intellectual competence and that their lower academic achievements require other explanations.

Aside from any biases that may exist against deaf children in the justice system, there are other special problems associated with deaf child witnesses. For example, the evidence of deaf children is sometimes difficult for the courts to evaluate. In R. V. Lantier (1986), a deaf girl was allegedly sexually assaulted by a male associate of her hearing mother. Through a court interpreter, the girl described how the intoxicated man got into bed with her and fondled her genitals. The next morning, the girl informed her mother of the assault. Unfortunately, the mother of the victim was not proficient in sign language. The information the girl provided to the court was somewhat different than the account her mother had given to the police. Noting the discrepancy, the judge acquitted the accused. Clearly, a greater awareness of the competency of deaf children to provide testimony would be useful to the courts in assessing the evidence in such cases.

The memories of people with hearing disabilities have been examined in numerous studies but none have addressed the issue of episodic or eyewitness memory. Nearly all previous research has employed word lists or digits as the memory stimuli. As one might expect, memory for verbal information has been found to be worse in deaf people than hearing people (e.g., Koh, Vernon, & Bailey, 1971). Conrad (1979) reported that memory span for words linearly decreases with level of hearing loss. The memory deficit for words in deaf people is thought by some to result from the fact that they encode and rehearse the words in the form of mental signing (e.g., Bellugi, Klima, & Siple, 1974), rather than the more efficient method of rehearsing the auditory characteristics of the word subvocally. As noted by Rodda and Grove (1987), short-term memory capacity in deaf people is specifically associated with the amount of verbal encoding and processing demanded by the stimulus involved.

This research on verbal memory, however, tells us little about the proficiency of deaf people to act as eyewitnesses. The paucity of research addressing recall for pictures or objects in deaf people may be more closely related to eyewitness or episodic memory. Some studies have provided evidence that visual processing is more efficient in deaf people than hearing people. Ronnberg and Nilsson (1987) found that deaf adults compensated for their handicap in that written recall of visual short-term memory items was significantly better than for hearing adults. They postulated that "the visual short-term memory system entails a deeper mean depth of processing on levels of a processing continuum as well as a broader spectrum of levels than the auditory system." According to this view, deaf people develop better visual attention skills and greater depth of visual encoding resulting in superior visual short-term memory.

A study by Blair (1957) appears to support this contention. He investigated the visual memories of hearing and deaf children for various stimuli, including pictures and objects.

Deaf children were matched with hearing children on the basis of IQ, age, and sex. The deaf participants significantly outperformed the hearing participants on tasks involving memory for designs and the order of stimulus presentation. The deaf children also did better on an object location test in which common objects were displayed in a number of different locations on a card and participants were asked to recall where they had appeared. The only task on which the hearing children outperformed the deaf children was a test of memory span for digits. Kyle (1983) found a superiority in deaf people's memory for a sequence of movie clips. He conducted a study to assess the efficacy of signing as a mode of communication. He asked deaf and hearing participants to describe the silent movie clips that they had viewed. It was found that signed narratives differed from spoken narratives in that they supplied a more accurate account of the sequence of events. Only 5% chronological errors were found in the signed discourse compared to 17% chronological errors in the spoken discourse.

In contrast to the compensation hypothesis, Shigeyuki and Shinichi (1984) found no difference in the memories of deaf and hearing people for pictures. They administered a recency judgment task to deaf and hearing adults and children. Participants judged which of a long series of pictures they had seen previously and in what order of presentation they had viewed them. In this case, hearing loss had no effect on task performance.

To the authors' knowledge, no research has addressed the interesting possibility that deaf and hearing children differ in their levels of suggestibility. Cultural, experiential, or memory differences may exist between deaf and hearing communities that could influence susceptibility to suggestion. For example, deaf children are likely to be more reliant on the attention and protection of their adult caretakers which may affect their responses to questions asked by adults. It is also possible that sign language is, by nature, suggestive when certain types of questions are asked. For example, to pose a general question such as "Was she wearing any jewelry?" in sign language the interviewer would likely point to an ear, the neck, and the fingers to convey the question, inadvertently suggesting information to the child.

Several studies have found that younger children show higher levels of suggestibility than older children and adults (e.g., Loftus & Davies, 1984; Bringmann, Tyler, McAhren, & Bringmann, 1989). Dent and Stephenson (1979) found that using the free recall technique elicits the most accurate accounts of a witnessed incident in children and that the use of general and specific questions tends to decrease the accuracy of the reports. Dent (1986) found that children who were mentally challenged were less accurate than adults and children with average intellectual abilities in their responses to specific questions about an event they had witnessed, whereas accuracy did not differ for the free recall accounts. In the present study, the accounts were dichotomized into information obtained through free recall and through more directive questions to address whether deaf and hearing children differ in this regard. Differences in suggestibility should emerge through an examination of the accuracy of the responses to increasingly directive questions.

Another concern regarding the eyewitness testimony of deaf children is their ability to communicate their memories for an event to investigators. Research addressing the use of the American Sign Language (ASL) has shown that it is not an inferior communication method but is only structurally different from oral English (e.g., Charrow & Wilbur, 1975). Similarly, Bonvillian, Charrow, and Nelson (1973) found that, despite deficiencies in the use and processing of English, most deaf people are able to communicate effectively using ASL. Breslaw, Griffiths, Wood, and Howarth (1981) found that deaf children are able to communicate much more competently than their grammatical ability suggests. Tweney and Hoemman's (1973) research indicates that ASL is capable of transmitting complex message structures. It is likely, then, that deaf children with no intellectual deficiencies should not experience problems communicating memory for an event they have witnessed. Thus, any differences between deaf and hearing children in this study should reflect memory rather than communicative factors.

Although research on the memories of deaf children has been generated, no previous studies have specifically examined their eyewitness abilities. The objectives of the present study were to compare the eyewitness accounts of deaf and hearing children regarding (a) the overall amount of information recalled (b) the overall accuracy of the information recalled and (c) the effect of the type of question on the amount and accuracy of information recalled.

METHOD

Participants

The participants were 15 deaf (8 male, 7 female) and 11 hearing (7 male, 4 female) children attending an elementary school into which a provincial school for children with hearing disabilities had been recently incorporated. Consent forms were forwarded to parents of all eligible (see below) deaf children (24) and hearing children (31) between the ages of 8 and 10 years. Parents who had not returned the forms within 1 week were contacted by telephone and encouraged to do so. If the forms were not returned after another 2 weeks, refusal to permit participation was assumed. The mean age was 9 years, 1 month ($SD = 10.7$ months) for the deaf participants and 8 years, 10 months ($SD = 3.6$ months) for the hearing participants. With one exception, the hearing impairments of the deaf children were believed to have been congenital. The deaf children in this study had severe (loss of 71–90 decibels) to profound (loss of greater than 90 decibels) levels of deafness. All children were judged by their teachers to be of average intellectual functioning. The participants represented a wide range of socioeconomic levels although most were from middle class families.

Materials

A sequence of 24 color slides depicting a wallet-snatching incident was shown. This slide presentation was developed by Powers, Andriks, and Loftus for a 1979 study. The slides begin by showing a young woman walking down a street in a small town. She meets a friend and they converse briefly. The woman then continues down the street where she is bumped by a man wearing a cowboy hat. She drops her groceries and the man proceeds to help her retrieve them. As they stoop to collect her groceries, the man steals a red wallet from the woman's shoulder bag. She thanks him and they continue walking in opposite directions. The woman then notices that her wallet is missing. Two women cross from the other side of the street and point in the direction of the thief.

PROCEDURE

It was initially explained to the participants that the experimenter was interested in learning about children's memory. The participants were then individually escorted to a vacant classroom in the school to view the slide presentation. On the way to the event room, it was explained to them that they would be participating in a few activities. They were seated approximately 7 feet from the screen. During the slide presentation, the experimenter (and in the case of the deaf children the interpreter) was seated slightly behind the child to avoid being a distractor. Each slide was displayed for a period of seconds.

After viewing the slides, the participants were escorted to the interview room. Here, an interview based on the Step-Wise Interview method (Yuille, Hunter, Joffe, & Zaparniuk, 1993) was employed to gauge the memories of the children for the wallet theft. Basically, the interview involved a free recall component in which the child was asked to state everything

he/she could recall about the slide sequence followed by a series of more directive questions intended to clarify and elaborate the information elicited in the free recall account (see Yuille et al., 1993). These directive questions consisted chiefly of open questions (e.g., "You mentioned a wallet. Can you tell me anything more about that?") but occasional specific questions (e.g., "Were there any other people on the sidewalk?").

In the case of the deaf children, the method of relay interpreting was employed to decrease the possibility of misinterpretation or loss of information through the translation of ASL to English. The chief role of the deaf relay interpreter was to facilitate the communication between the hearing interpreter and the child through his knowledge of various dialects and linguistic styles existing within the deaf community. The relay interpreting process involved the interviewer asking the questions in English and the hearing interpreter signing these questions to the deaf interpreter using ASL. The deaf interpreter then relayed the questions to the deaf child and signed the responses of the child to the hearing interpreter who translated them to English. Neither the interviewer nor the interpreters were aware of what had transpired in the slide sequence. All of the interviews were recorded on videotape and audiotape.

Scoring

The eyewitness accounts were subjected to an evaluation procedure based on the protocol developed by Yuille and his colleagues (for a more detailed discussion see Yuille & Cutshall, 1986). The reports were partitioned into single units of information. All details recorded were scored as correct, incorrect, or unclassifiable. This was done by comparing the details to a preconstructed list containing all information that the authors believed to have been represented in the slide sequence.

Each detail was assigned one point if it contained a specific unit of information. For example, the sentence "He took a red wallet" contains one action-oriented detail and two descriptive details. Information that was vague or nonspecific was given one half point (e.g., "The man wore pants"). A detail was considered unclassifiable if the information it related could have occurred but verification was impossible (e.g., "I think there was money in that wallet"). Each detail was next categorized as having been elicited through either free recall questions or directed questions.

The accuracy scores of the eyewitness accounts were based on the proportion of correct details over the total number of correct and incorrect details reported. Thus, the maximum possible score on this criterion was 100% (i.e., perfect accuracy). The information deemed unclassifiable was not entered into this analysis.

RESULTS

The design of the study was a 2×2 (deaf/hearing participants \times free recall/directed questions) between-within factorial design. Since separate analyses of variance (ANOVAs) were conducted on the amount and accuracy of information reported, the alpha level was set at .025 rather than .05. Preliminary tests of assumptions indicated that for amount and accuracy the covariance matrices were homogeneous, the variances within the groups were homogeneous, and the data were spherical.

Number of Details

As Table 1 indicates, the ANOVA revealed no main effect on the between-subject variable ($F [1,24] = .543, p > .025$) for the number of details recalled. The deaf participants recalled an average of 23.7 details overall as compared to 27.8 by the hearing children. Similarly, there

Table 1. Analysis of Variance: Details Recalled

Between-Participants		
Source	<i>df</i>	<i>F</i>
Participants	1	0.54
Error	24	
Within-Participants ^a		
Source	<i>df</i>	<i>F</i>
Question Type	1	4.118
Question Type × Participants	1	0.45
Error	24	

^a Question type was the within-participants factor and hearing ability of witnesses was the between-participants factor.

was no main effect of question type ($F [1,24] = 4.118, p > .025$) or interaction effect ($F [1,24] = .45, p > .025$). As Figure 1 indicates, the deaf participants recalled a mean of 13.7 details during the free recall stage of the interview compared to 17.5 by the hearing participants. During the directive questions stage, a mean of 10.0 details was reported by the deaf children and 10.3 by the hearing children. The free recall accounts elicited a mean of 15.3 details compared to 10.1 by directive questions.

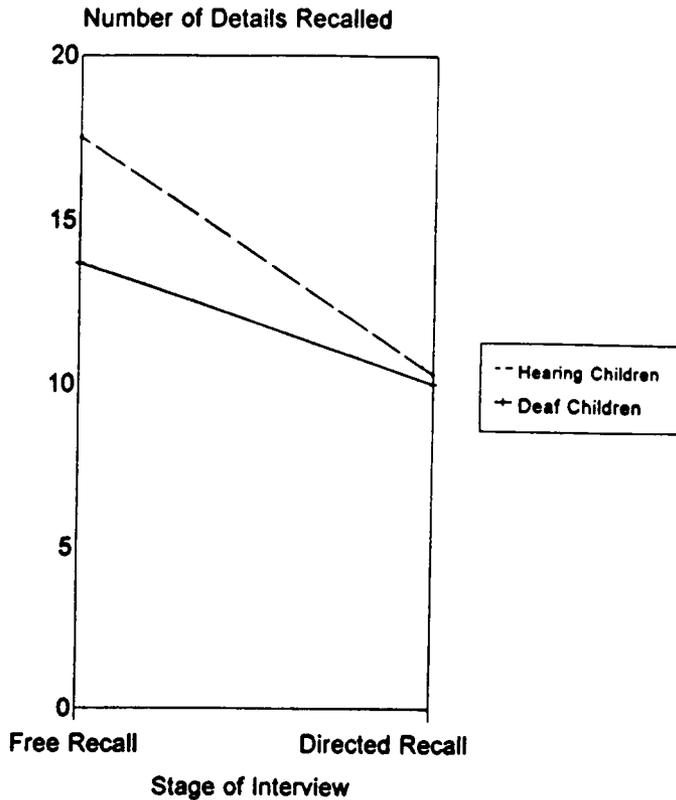


Figure 1. Mean number of details recalled during free and directed recall components of interviews.

Table 2. Analysis of Variance: Accuracy Scores

Between-Participants		
Source	<i>df</i>	<i>F</i>
Participants	1	3.24
Error	24	
Within-Participants ^a		
Source	<i>df</i>	<i>F</i>
Question Type	1	7.03*
Question Type × Participants	1	5.86*
Error	24	

* $p < .025$.

^a Question type was the within-participants factor and hearing ability of witnesses was the between-participants factor.

Accuracy of Details

The second ANOVA on the accuracy of the eyewitness accounts also revealed no main effect on the between-subject variable ($F [1,24] = 3.24, p > .025$). Overall, the deaf participants recalled with 85.7% accuracy compared to 92.6% by the hearing participants. However, as Table 2 indicates, a main effect of the within-subjects factor (Question Type) was found ($F [1,24] = 7.03, p < .025$). The overall mean accuracy of the free recall accounts was 94.7% which was significantly higher than the mean of 82.6% accuracy in the case of the details elicited through directive questions. As Figure 2 indicates, the interaction was also found to be significant ($F [1,24] = 5.86, p < .025$). The deaf participants recalled with 94.8% accuracy during the free recall stage and 76.7% accuracy in the directed recall stage. In contrast, the hearing children hardly changed from the free recall stage (mean of 94.5%) to the directed recall stage (mean of 90.7%).

Followup simple-effects analysis revealed a significant effect of the type of question for the deaf participants ($F [1,24] = 15.2, p < .001$) but no effect of question type for the hearing participants ($F [1,24] = .02, p > .10$). The deaf children were significantly less accurate during the directed recall stage than during the free recall stage whereas the hearing participants did not change appreciably.

DISCUSSION

The present study represents the first empirical investigation of the eyewitness abilities of children with hearing disabilities. Results indicated that deaf children are competent eyewitnesses in general. Overall, there were no differences in the amount or accuracy of the information reported by the deaf and hearing children. Both groups were highly accurate in recalling the wallet theft and the accounts were quite detailed in general. Most hearing and deaf children were able to communicate a clear picture of what they had seen with few errors or important omissions. In terms of the amount of information reported by the deaf and hearing children, there were no differences in either the free recall or directive recall stages of the Step-Wise Interview. As expected, the communication difference did not affect the number of details recalled.

However, the type of question asked to the participants mediated their performance when accuracy was considered. The two groups were equally accurate on the free recall task. On the other hand, during the directive-questions stage of the interviews the deaf children evi-

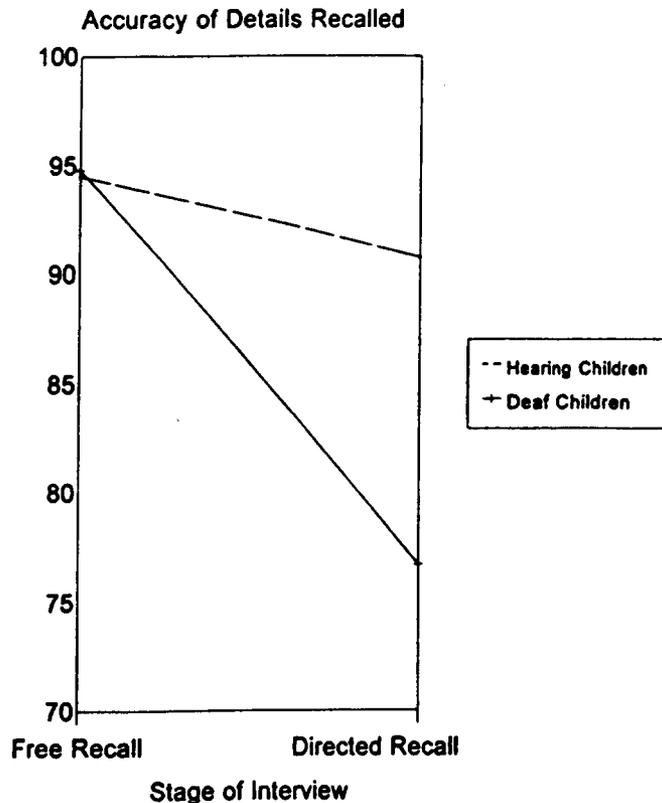


Figure 2. Mean accuracy scores of the information recalled during free and directed recall components of interviews.

denced much lower accuracy scores whereas the accuracy of the hearing children only declined slightly. The reason for the sharp reduction in accuracy when directive questions were asked to the deaf children is unclear. It seems likely that these children held a greater desire to please or retain the attention of the interviewer by providing some response to all questions, even if memory for the item was absent or blurred. As mentioned before, deaf children are more heavily dependent on the attention of adults which may have influenced their responses to adult interviewers. This factor, in conjunction with the inherent suggestive nature of ASL for communicating certain types of directive questions, could have lead to an increased susceptibility to suggestion in the deaf children.

Alternatively, the interpreters in this study mentioned that their experience with deaf children has indicated that they may simply be more creative and imaginative when recounting a narrative than children in general. In support of this contention, during the directive recall stage, one deaf boy described how the thief was attacked by police dogs, arrested, and spent several long, arduous years in prison when, in fact, the slides depicted none of these occurrences. Again, though, this imaginativeness may reflect a strategy by deaf children to retain the attention of the adult listener. Nonetheless, overall the deaf children's accounts were not lengthier than those of the hearing children which would be expected if they were simply using their imaginations to protract their recall accounts. A final possibility for the finding is that the deaf children became less attentive or focussed as the interview progressed resulting in reduced accuracy on responses to questions occurring later in the interview.

Whatever the reason for the effect, this finding has important implications for interviewing

deaf children. As previous research has indicated (e.g., Dale, Loftus, & Rathburn, 1978; Dent, 1982; Dent & Stephenson, 1979), children are usually less accurate when responding to general and specific questions than when providing a free recall account. From this study, it seems apparent that investigators should be especially cautious when asking deaf children questions following a free recall account and that greater credence should be given to the free recall account. Interpreters should exercise extreme care to avoid the inadvertent expression of leading information to the deaf child through hand gestures. For example, in cases of alleged sexual abuse, the interpreter might point to the genital area to inquire about the offense. It is conceivable that such a gesture could result in a false disclosure by the child. If possible, the child should be initially asked to describe his/her experience with the alleged perpetrator, without reference to specific body parts or sexual acts. In the courtroom, cross-examination is likely to be particularly problematic in its directive and suggestive nature (as it is for children in general). It is evident that innovative research is necessary to develop nonleading interview techniques specially designed for cases requiring sign language as the communication medium.

There are several limitations on the generalizability of the current findings to actual investigations. In most cases in which children are questioned as witnesses, they are testifying about an emotionally-charged event such as a situation in which they had been abused. Obviously, the crime that the children witnessed in this study contained none of the emotional aspects that real cases are likely to entail. Another salient limitation to this study stems from the absence of any auditory information in the eyewitness event employed. This experiment was concerned with examining recall ability under highly controlled conditions that would ensure that the memory stimulus (the slide presentation) was equivalent for both the deaf and hearing participants. In many real-life cases, however, auditory information may be an important aspect of the eyewitness event. For example, a witness with a hearing disability will sometimes be unable to describe what a person shouted or how many gun shots were fired. On the other hand, in cases involving abuse of deaf children, the perpetrator is likely to be a caregiver who communicates through sign language and auditory information may not be particularly important to investigators. Finally, the use of slides and video presentations in eyewitness research has been criticized as not necessarily being a "forensically relevant paradigm" (Yuille & Cutshall, 1986). Nonetheless, the current study represents a preliminary examination of deaf children's event recall. Future research should employ different types of eyewitness events including live, staged events and interactional events with deaf children to evaluate the generalizability of these findings.

SUMMARY

The results of this study indicate that in general deaf children are capable of recalling and reporting as much information about a witnessed event as hearing children and with similar accuracy. However, deaf children appear to be substantially less accurate than hearing children when responding to questions of a progressively directive nature, indicating a higher level of suggestibility. Accordingly, interviewers of deaf witnesses or victims need to be especially concerned about resorting to directive questions, which should occur only if all attempts to elicit a free recall account have failed. Similarly, testimony resulting from free recall should be viewed as the most reliable source of information in such cases.

REFERENCES

- Bellugi, U., Klima, E. S., & Siple, P. (1974). Remembering in signs. *Cognition*, 3, 93-125.
- Blair, F. X. (1957). A study of the visual memory of deaf and hearing children. *American Annals of the Deaf*, 102, 254-263.

- Bonvillian, J. D., Charrow, V. R., & Nelson, K. E. (1973). Psycholinguistic and educational implications of deafness. *Human Development*, **16**, 321–345.
- Breslaw, P. I., Griffiths, A. J., Wood, D. J., & Howarth, C. I. (1981). The referential communication skills of deaf children from different educational environments. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, **22**, 269–282.
- Bringmann, M. W., Tyler, K. E., McAhren, P. E., & Bringmann, W. G. (1989). A successful and unsuccessful replication of William Stern's eyewitness research. *Perceptual and Motor Skills*, **69**, 619–625.
- Charrow, V. R., & Wilbur, R. B. (1975). The deaf child as a linguistic minority. *Theory Into Practice*, **14**, 353–359.
- Conrad, R. (1979). *The deaf school child*. London, England: Harper and Row.
- Dale, P. S., Loftus, E. F., & Rathburn, L. (1978). The influences of the form of the question on the eyewitness testimony of preschool children. *Journal of Psycholinguistic Research*, **7**, 269–277.
- Dent, H. (1982). The effects of interviewing strategies on the results of interviews with child witnesses. In A. Trankell (Ed.), *Reconstructing the past* (pp. 279–298). Deventer, Netherlands: Kluwer.
- Dent, H. (1986). An experimental study of the effectiveness of different techniques of questioning mentally handicapped child witnesses. *British Journal of Clinical Psychology*, **25**, 13–17.
- Dent, H. R., & Stephenson, G. M. (1979). An experimental study of the effectiveness of different techniques of questioning a child witnesses. *British Journal of Social and Clinical Psychology*, **18**, 41–51.
- Doris, J. (Ed.). (1991). *The suggestibility of children's recollections: Implications for eyewitness testimony*. Washington: American Psychological Association.
- Finkelhor, D. (1986). *A sourcebook on child sexual abuse*. Beverly Hills, CA: Sage Publications.
- Goodman, G. S. (1984). The child witness: An introduction. *Journal of Social Issues*, **40**, 1–7.
- Goodman, G. S., Aman, C., & Hirschman, J. (1987). Child sexual and physical abuse: Children's testimony. In S. Ceci, M. Toglia, & D. Ross (Eds.), *Children's eyewitness memory* (pp. 1–23). New York: Springer-Verlag.
- Goodman, G. S., & Bottoms, B. (Eds.). (1993). *Child victims, child witnesses: Understanding and improving children's testimony*. New York: Guilford Press.
- Goodman, G. S., Golding, J. M., & Haith, M. M. (1984). Jurors' reactions to child witnesses. *Journal of Social Issues*, **40**, 139–156.
- Jericho Hill School abuse: Government urged to pay compensation (1993). **November 16**. *Vancouver Sun*, p. B1.
- Koh, S. D., Vernon, M., & Bailey, W. (1971). Free-recall learning of word lists by prelingual deaf subjects. *Journal of Verbal Learning and Verbal Behavior*, **10**, 542–547.
- Kyle, J. G. (1983). Meaning in sign: Recalling events in BSL and English. In D. Rogers & J. Sloboda (Eds.), *The acquisition of symbolic skills* (pp. 199–204). New York: Plenum Press.
- Kyle, J. G. (1989). Sign language as cognition for deaf people: Pitfalls and prospects. *Applied Cognitive Psychology*, **3**, 109–125.
- Leippe, M. R., & Romanczyk, A. (1989). The influence of the juror's preconceptions and witness behavior. *Law and Human Behavior*, **13**, 103–129.
- Loftus, E. F., & Davies, G. M. (1984). Distortions in the memory of children. *Journal of Social Issues*, **40**, 51–68.
- Powers, P. A., Andriks, J., & Loftus, E. F. (1979). Eyewitness accounts of females and males. *Journal of Applied Psychology*, **64**, 339–347.
- Regina v. Lantier. (1986). British Columbia Provincial Court.
- Ronnberg, J., & Nilsson, A. (1987). The modality effect, sensory handicap, and compensatory functions. *Acta Psychologica*, **65**, 263–283.
- Shigeyuki, T., & Shinichi, K. (1984). A developmental study on deaf memory: Using the judgment of relative recency task. *Japanese Journal of Educational Psychology*, **32**, 44–51.
- Sullivan, P. M., Vernon, M., & Scanlan, J. M. (1987). Sexual abuse of deaf youth. *American Annals of the Deaf*, **259**–262.
- Tweney, A. D., & Hoemann, H. W. (1973). The development of semantic associations in profoundly deaf children. *Journal of Speech and Hearing Research*, **16**, 309–318.
- Yuille, J. C. (1988). The systematic assessment of children's testimony. *Canadian Psychology*, **29**, 247–262.
- Yuille, J. C., & Cutshall, J. L. (1986). A case study of eyewitness memory of a crime. *Journal of Applied Psychology*, **64**, 339–347.
- Yuille, J. C., Hunter, R., Joffe, R., & Zaparniuk, J. (1993). Interviewing children in sexual abuse cases. In G. S. Goodman & B. L. Bottoms (Eds.), *Child victims, child witnesses: Understanding and improving children's testimony* (pp. 95–115). New York: Guilford Press.

Résumé—On a découvert que les enfants malentendants sont plus souvent victimes de mauvais traitements physiques et sexuels que la population enfantine générale. Cette étude a voulu comparer des informations fournies par des enfants malentendants comparés aux réponses d'enfants entendants, du point de vue quantité et exactitude. Quinze enfants sourds et onze enfants entendants âgés entre 8 et 10 ans ont assisté à une présentation de diapositives où on montrait le vol d'un portefeuille. On a mesuré leur capacité de se souvenir des événements en se servant de l'entrevue Step-Wise développée par Yuille, Hunter, Joffe et Zaparniuk (1993). Ce test demande de raconter spontanément ce qu'on a vu, après quoi on pose des questions progressivement plus précises. On a analysé les deux types de réponses fournies par les deux groupes d'enfants pour déterminer la somme et l'exactitude des informations ($\alpha = .025$). Les résultats ont démontré aucun effet principal ou interactif par rapport à la somme des détails dont les enfants se

sont souvenus. Cependant, en mesurant l'exactitude, on a noté que les deux ordres de questions produisaient un effet principal et un effet interactif. Le degré d'exactitude était le même pour les deux groupes lorsqu'ils relataient spontanément l'incident. Lorsqu'on posa des questions précises, es enfants malentendants ont fourni des réponses beaucoup moins justes alors que l'exactitude des réponses aux questions précises diminua très peu chez les enfants entendants. On discute des conséquences de ces constats par rapport aux enquêtes criminelles.

Resumen—Se ha encontrado que los niños con impedimento para oír sufren un alto grado de victimización física y sexual en relación con los niños en general. El propósito de esta investigación fué comparar la cantidad y exactitud de la información contenida en las narraciones sobre lo que han visto niños sordos y que oyen. Quince niños sordos y once que oyen de ocho a diez años, vieron individualmente una serie de vistas fijas que mostraban el robo de una cartera. Después se probó lo que recordaban al usar la entrevista "Step-Wise Interview" (Yuille, Hunter, Joffe, & Zaparniuk, 1993) que consiste en un componente de un recuerdo libre seguido por preguntas progresivamente directivas. Se realizaron entre-dentro ANOVAS factoriales separados 2×2 (sordo/oye \times tipo de pregunta) sobre la cantidad y exactitud del recuerdo ($A = .025$). Los resultados no indicaron ningún resultado central o efectos de la interacción de la cantidad del recuerdo. Sin embargo, se evidenció un efecto central para el tipo de pregunta y un efecto de la interacción en el análisis de la exactitud. A pesar de que los puntajes sobre la exactitud de los dos grupos no ofrecieron diferencia en el recuerdo libre, los niños sordos ofrecieron respuestas mucho menos exactas a las preguntas directivas mientras que la exactitud de los niños que oyen solo declinó ligeramente. Se discutieron las implicaciones para investigaciones criminales.