Children's Long-Term Retention of Salient Personal Experiences

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Research on young children's long-term retention is reviewed in this article. More specifically, the abilities of 3- to 7-year-olds to remember the details of two types of medical experiences—a routine physical examination and an invasive radiological procedure—are discussed in the context of a framework for considering the flow of information in the developing memory system. The framework emphasizes four general themes about memory performance and provides a vehicle for relating research on memory development to discussions of children's testimony and adults' abilities to remember early experiences.

KEY WORDS: medical; examination; memory; recall; children.

The research outlined here is concerned with young children's abilities to remember the details of personally experienced events over relatively long delay intervals. The perspective adopted in this article is that an understanding of children's long-term retention is of central relevance to a number of both "basic" and "applied" issues. Concerning the former, studies of memory are contributing to a fundamental reassessment of young children's cognitive abilities. Indeed, investigations of preschoolers' surprising memory skills (e.g., Fivush & Hudson, 1990; Wellman, 1988), at least under some conditions, have successfully challenged earlier views of young children's recall abilities as being quite restricted (e.g., Myers & Perlmutter, 1978). Concerning the latter, research on long-term retention can inform current understanding of children's abilities to provide accurate testimony in legal settings (see, e.g., Ceci, Toglia, & Ross, 1987; Doris, 1991; Goodman, 1984; Ornstein, Larus, & Clubb, 1991). Although many factors influence children's testimony, memory is nonetheless

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of fundamental importance because children cannot provide evidence about
events that cannot be remembered and subsequently reported. Basic research
on children's memory is also directly relevant to discussions of the abilities of
adults to remember both traumatic and nontraumatic childhood events.

In the present overview, selected findings from an on-going program
of research on children's memory for physical examinations and other medical
experiences (e.g., Baker-Ward, Gordon, Ornstein, Larus, & Clubb, 1993; Merritt,
Ornstein, & Spicker, 1994; Ornstein, Baker-Ward, Gordon, & Merritt, in press
a; Ornstein, Shapiro, Clubb, Follmer, & Baker-Ward, in press-b) will be discussed.
Medical "stimulus events" have been selected for study because in some respects
they are similar to the types of abusive experiences about which children are
often asked to testify. Indeed, a visit to the doctor for a check-up provides
a reasonable, although admittedly not perfect, analog for sexual abuse, which
obviously cannot be studied in an experimental fashion. For example, during the
check-up, children are undressed and are handled physically by an adult, often
an opposite-sex, unknown adult. Moreover, certain aspects of the experience are
stressful, at least for some children. Another medical event, a voiding cystoure-
throgram (or VCUG), provides an even more striking analog of sexual abuse,
one that is both less familiar and more stressful than the routine office visit.

Illustrative studies of young children's long-term retention of the details
of these two contrasting types of medical experiences are presented first. Baker-Ward et al.'s (1993) examination of memory for a well-child check-up is
outlined, followed by Merritt et al.'s (1994) study of memory of a voiding
cystourethrogram (or VCUG), an invasive radiological procedure involving uri-
nary bladder catheterization. Aspects of these studies and several follow-up in-
vestigations are then discussed in terms of an informal framework (see Ornstein
et al., 1991) that has been used to characterize much of the literature on the
development of memory. This framework focuses on the flow of information
within the developing memory system and leads to a consideration of (1)
the factors that influence the encoding of information by children of dif-
ferent ages; (2) the effects of events that occur in the "delay" interval
between an original event and a subsequent memory interview and report;
and (3) the development of methods for obtaining the most accurate and
complete reports from children.

**Children's Memory for Medical Experiences**

*The Doctor Visit Study*

Baker-Ward et al. (1993) recruited 3-, 5-, and 7-year-olds who were
scheduled to visit their pediatricians for routine physical examinations. During