

Glossary

Specific memory disorders: Long-term memory

What are specific memory disorders?

It is increasingly recognised that like adults, children can have specific memory disorders (Gathercole, 1998). It is known that these can adversely affect the development of other skills, such as children's language development, academic attainments, independent living skills and general problem solving abilities (Hood and Rankin, 2005).

Research into the links between specific memory disorders and subsequent learning difficulties and scholastic achievements is ongoing. It is useful to identify specific memory disorders as early as possible in order to ensure that children's educational and life skills programmes are adapted to maximize their learning and independence skills (Bristow et al 1999), although most specific memory disorders are difficult to diagnose clearly until children reach the age of six years or upwards. There are many competing theoretical models that propose different types of memory difficulties in adults and children. However, a lot of researchers agree that one clear difference is between short-term memory and long-term memory disorders.

Long-term memory

The term long-term memory refers to a person's ability to retain information over time, e.g. for minutes to hours or longer. Again there is much theoretical debate about which types of long-term memory processing are possible in humans. One commonly debated account of long-term memory is the difference between storing episodic and semantic information. Episodic memory is memory for events or episodes that include the contextual details of the learning experience, for example, what happened on

the way to school this morning or to recall what happened on a particular birthday. Semantic memory is the ability to remember factual information that does not include the contextual details of the learning event. For example, a child may know that the capital of France is Paris, but not remember the actual event when they were first told such a fact.

There are reports of children who appear to have strengths in semantic memory compared to episodic memory (Vargha-Khadem, 2001) and vice-versa (Temple, 2004).

Children with weaknesses in their episodic memory can exhibit particular patterns of learning, behavioural and social difficulties. For example:

- They may get lost easily
- They may repeat things previously done because they do not remember doing them the first time
- When questioned about their daily experiences, such as what they did at school that day, they find it difficult to provide specific details or describe events
- They may appear socially aloof as they find it difficult to remember shared events
- They may forget when things are going to happen or have happened

Children with semantic memory difficulties will have more pervasive problems in learning the factual contents of the academic curriculum. They might forget things they appear to have learned or forget things more quickly than other children.

Interventions

A neuropsychological assessment is needed to identify where the memory process is failing e.g. whether it is a problem of processing, storage or retrieval. The neuropsychologist can then advise on intervention e.g. whether better memory processes can be taught or compensatory strategies are needed. Precise assessment is needed because sometimes normal teaching and questioning strategies can inhibit learning.

Following the assessment, the neuropsychologist may make recommendations for supporting the child to improve areas of weakness and also guide teachers and parents regarding how to use the child's strengths to maximize their learning despite their specific difficulties. Interventions will depend on the diagnostic information for each child, and his/her age and particular circumstances. There is little evidence to show that memory weaknesses themselves will show functional improvement through training, whether through games or computer programmes. It is more likely that children's memory difficulties could be compensated for using external cues or alternative methods of presenting and manipulating information to be learned (Rankin & Hood, 2005). The availability and use of these strategies is still limited. This is likely to improve over coming years, as specific memory disorders are increasingly recognised in the child population.

References

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Please note: Afasic does not hold copies of any referenced material. These publications should be available at academic libraries.

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