



Memory and eyewitness testimony in autism

Summary

- People with autism have good memory for facts and knowledge of the past but they can struggle to remember specific *episodes* from the past.
- They can find it particularly difficult to freely recall all of the elements of a past experience – the *who, what, where, when* and *how* – and how these piece together. However, if they are given more support to help them remember – such as cues or prompts – they can often recall these details.
- The Cognitive Interview in its traditional form does not help witnesses with autism remember more details. An intermediary might be best placed to advise on appropriate interviewing techniques based on the profile of the individual witness in question.
- People with autism tend to recall fewer social details of an event (e.g. relating to people and actions), although their recall of non-social details such as objects and surroundings is usually good.
- There is no evidence that people with autism are more suggestible. They may, however, be more compliant in some situations.

Memory in autism

There is consistent evidence that people with autism have specific difficulties with their memory and that this impacts on how they understand and relate to the world around them. Rather than having a bad memory *per se*, people with autism have areas of strengths and weaknesses in different aspects of their memory that can affect the evidence that they provide, although this may vary between individuals.

Memory for events

Most people know that the capital of France is Paris, however few of us will recall when or where we learnt that piece of knowledge. These two instances form different types of memory: knowledge-based information, such as the names of capital cities, forms what psychologists call *semantic* memory, whereas memory for an event or specific episode is called *episodic* memory.

People with autism generally have good *semantic* memory, but sometimes show a poorer *episodic* memory. In particular, they often have difficulty recollecting past *personally experienced* episodes and remember fewer specific events (and take longer to do so) than people without autism. For example, they may remember that their brother hits them when he gets angry (semantic memory), but fail to recall a specific example of this, such as the time their brother came home from work earlier than usual

and was really angry because his girlfriend had just broken up with him and he threw a vase on the floor before punching them in the stomach (episodic memory).

Generally people are better at recalling aspects of an event that they personally participated in; however people with autism do not always spontaneously focus their recall more on their own personal involvement. Importantly however, if prompted for what happened then they often are able to recall their own actions. Questioners may need to provide people with autism more (non-suggestive) cues or directive questions to help them remember specific details that may not be recalled spontaneously in response to more open-ended prompts (e.g., “*tell me everything*”).

Memory for *who, what, why, when and where*

Source monitoring is the memory for who, what, why, when, where and how something has happened. In order to recall an event, markers of time, space, place, meaning and emotion need to be tied together in one’s mind, so that we can remember the event as a whole episode, not just bits of it. So we may recall that last Tuesday we met our friend Joe and had lunch in a new café by the river, where Joe told us that he had been offered a new job. This forms an episodic memory. In order to monitor the source of our memory that Joe has a new job, we need to recall the other pieces of the episode (that he told us when we met him for lunch in the café by the river on Tuesday). People with autism sometimes have difficulty in remembering all of these pieces of information together – so they may remember that Joe has a new job and they may also know that they had lunch with him, but they may not link the two together and thus cannot recall that they know this *because* he told them when they had lunch last Tuesday. This is what psychologists call a *source monitoring failure*. Other examples of source monitoring failures might include incorporating things they have read about, learned or seen into their own descriptions without realising it, confusing who performed which actions, or confusing the order in which things have taken place (before/after a crime for example). Therefore when asked to freely recall what happened (without any further cues or questions), people with autism may be more susceptible to mixing these sort of details of events.

Supporting people with autism to remember

An important research finding is that, in spite of the difficulties just described, when people with autism are appropriately supported they can often recall as much as people without autism (who are of a similar level of intellectual ability). Therefore, when asked to freely recall an earlier learnt shopping list, for example, people with autism often freely recall fewer words from the list than people without autism. However when recall is cued, for example by informing the person that the list contained items of fruit or giving them a number of possible options, they are able to recall and recognise items on the list at a similar rate to people without autism. Similarly, the *task support hypothesis* applies to helping people with autism with what psychologists call source monitoring - remembering the “who, what, why, when, where and how”. In other words, the difficulties that people with autism have with remembering are often reduced or eliminated altogether when they are provided with appropriate cues and prompts.

Emotion and memory

Research has found that people with autism show difficulties with processing and responding to emotionally significant information such as faces and social scenes. Whereas people with autism are better at remembering (and forget less over time) things that are emotionally arousing, this is not always the case for people with autism; at least in laboratory memory studies. However, it is worth noting that in the only research to date looking at this from an eyewitness perspective using more event-based stimuli, people with autism did recall more of an emotionally arousing video of a shooting compared with a video that had the same actions but no violence. It may be that, in contrast to typical laboratory studies that use lists of words for example, the salience and narrative of an eyewitness event provides a form of scaffolding for memory for people with autism.

Eyewitness testimony in autism

Interviewing people with autism

The Cognitive Interview (the preferred technique amongst UK police services) is useful for assisting most witnesses to remember more details. However, research has shown that the Cognitive Interview is not helpful for people with autism. It is likely that the series of 'context reinstatement' instructions (e.g., to remember contextual details surrounding the event) 'overloads' people with autism, who already struggle to filter out irrelevant information. Some recent work, however, suggests that drawing might help people with autism to recall an event. If in doubt, best practice would be to use a simple structured Achieving Best Evidence interview, rather than a Cognitive Interview. An intermediary will be able to advise on appropriate interview techniques based on the strengths and weaknesses of the person (e.g., the use of drawing, or visual or verbal cues).

Types of details that people with autism report in interviews

Autism is characterised by, among other things, impairments in social interactions and social understanding. It is not surprising, therefore, that they tend to recall fewer details (sometimes also with less accuracy) about *people* and *actions*. However, people with autism are usually just as good as people without autism in reporting details about surroundings and objects in interviews.

Suggestibility of people with autism

Suggestibility is the extent to which people come to accept messages that are (implicitly or explicitly) communicated to them and hold them as their own thoughts. Consider, for example, that you witness a mugging where the perpetrator is not wearing a hat, but when questioned in court the barrister asks "what did his hat look like?" You might accept that the perpetrator was wearing a hat, and even go onto to form a false memory of the hat which you describe in subsequent statements about the event. *Compliance*, on the other hand, is where people consciously go along with suggestions even though privately they do not agree with them, which may be for a number of reasons including a desire to please others or avoid conflict or confrontation.

To date there is actually no evidence that people with autism are any more *suggestible* than people without autism. A handful of studies have looked at suggestibility to misinformation (e.g., hearing false details about a previously witnessed event) and suggestive questioning styles (e.g., “*describe his red sweater?*”) in children and adults with autism, all of which have reported that people with autism are no more or no less suggestible than people without autism. In other words, they are just as (but not more) likely as people without autism to incorporate misinformation from others into their reports, and they are equally prone to acquiescing to misleading and suggestive questions. However, these studies have used high-functioning people with autism; with intellectual disability (regardless of whether they have autism or not) a person is likely to be more suggestible than someone with a higher level of intelligence. One study suggests that people with autism *may* be more *compliant* in some situations, which could indicate, for example, increased compliance to interrogative pressures. However, a lack of research in this area indicates that this assertion should be interpreted with caution.

Further reading

- Boucher, J., Mayes, A., & Bigham, S. (2012). Memory in Autistic Spectrum Disorder. *Psychological Bulletin*, 138(3), 458–96. doi:10.1037/a0026869
- Maras, K. L., & Bowler, D. M. (2014). Eyewitness Testimony in Autism Spectrum Disorder: A Review. *Journal of Autism and Developmental Disorders*. doi:10.1007/s10803-012-1502-3
- Mattison, M. L. A, Dando, C. J. & Ormerod, T. (2015). Sketching to remember: Episodic free recall task support for child witnesses and victims with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 45(6), 1751-1765. doi: 10.1007/s10803-014-2335-z

By Dr Katie Maras, BSc, MSc, PhD, AFBPsS
University of Bath
&
Fran Davies, MA(Oxon) MSc; MSc, PGCE, AFBPsS, C.Psychol
University of Essex