

Memory and sense of self may play more of a role in autism than we thought

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Our sense of self is grounded in our memories, but recalling these details is harder for people with autism. pathdoc/shutterstock.com

It's well-known that those with autism spectrum disorders including Asperger's syndrome develop difficulties with social communication and show stereotyped patterns of behaviour. Less well-studied but equally characteristic features are a weaker sense of self and mood disorders such as depression and anxiety. These are connected with a weaker ability to recall personal memories, known as autobiographical memory.

Research now suggests that autobiographical memory's role in creating a sense of self may be a key element behind the development of autistic characteristics.

Autism is much more common in men than in women, to the extent that one theory of autism explains it as the result of an “extreme male” brain, where autistic females are assumed to be more masculinised. Historically, however, research participants have been predominantly male, which has left gaps in our knowledge about autism in women and girls. Psychologists have suggested that the criteria used for diagnosing autism may suffer from a male bias, meaning that many women and girls go undiagnosed until much later in life, if at all

What we remember of ourselves

This is supported by research that suggests women with autism develop different characteristics than autistic males – particularly in respect to autobiographical memory.

Personal memories play a key role in many of the psychological functions that are affected in those on the autistic spectrum. Personal memories help us form a picture of who we are and our sense of self. They help us predict how others might think, feel and behave and, when faced with personal problems, our past experiences provide insight into what strategies we might use to cope or achieve our goals. Sharing personal memories in conversation helps us to connect with others. Recalling positive memories when we feel down can help lift us up, while dwelling on negative personal memories can induce depression.

What's become clear from studies of autobiographical memory in autism is that while those with autism may have an excellent memory for factual information, the process of storing and recalling specific personal experiences, such as those that happened on a particular day in a particular place, is much more difficult. Instead, their memories tend to record their experience in general terms, rather than the specifics of the occasion. This might be due in part to their more repetitive lifestyle, in which there are less occasions that stick out as memorable, but also because they are less self-aware and less likely to self-reflect. However, our research suggests that this memory impairment may be exclusive to autistic males.



Missing or indistinct memories can add to the sense of otherness, confusion and anxiety experienced by autistic people.

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Divided by memory

We examined the personal memories of 12 girls and 12 boys with autism, and compared them with an equal number of girls and boys of similar IQ and verbal ability without autism. We asked them to remember specific events in response to emotional and neutral cue words such as “happy” and “fast”. We also asked them to recall in as much detail as they could their earliest memories, and recollections from other periods of their life.

We know that girls tend to demonstrate better verbal skills and are better at recognising emotions. Might this affect the content and degree of detail they could recall from their own memories? We also wondered whether any gender differences we might find would be replicated between boys and girls with autism, or whether autistic girls would be more like boys – as predicted by the extreme male brain theory.

What we found was that autism did lead to less specific and less detailed memories, but only for the boys. The girls with autism performed more like non-autistic girls – not only were their memories more specific and more detailed than the autistic boys, but like the girls without autism, their memories contained more references to their emotional states than both the autistic and non-autistic boys. So rather than an extreme male brain, the girls with autism were more like girls without autism.

This better autobiographical memory might be one reason why autistic females are often better at masking the difficulties they have with communication and socialising with others, and so are more likely to go undiagnosed. Of course, this poses the question that if they have the building blocks of good communication – access to detailed personal memories – why are they still autistic?

There is some evidence to suggest that the automatic connection between our memories and knowing who we are, and how to use this information to inform how we act in problematic situations, is weaker in those with autism. This means that while women with autism can recall the past, they may not be using their experience to help them understand themselves and solve personal problems.

Even though they may be better able to socialise than boys with autism, this may come at a cost, as greater social interaction brings with it more personal problems, and when problems seem overwhelming this can lead to depression. Indeed, recent research suggests that among those with autism, depression is more common in women than men. This gender difference with respect to personal memories is an aspect of autistic characteristics that has been little studied, and should be explored further.



Memory

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Aspergers

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Self



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