Monitoring and regulating eyewitness memory reports in autism

Background

When we recall information from memory, we also monitor our recall for *informativeness* (we try to be as detailed as possible) and for *accuracy* (we try to avoid providing incorrect information). When answering questions, we tend to try and recall detail at a *fine-grained* level (see Figure 1.). We then evaluate our confidence in the accuracy of this level of detail. When confident, non-autistic people will usually provide the fine-grained response. When confidence is low, people tend to recall a less detailed, *coarse-grained* response.

Figure 1. An example of deciding what kind of information to recall based on confidence in accuracy

Monitoring and controlling our memory is important when providing eyewitness testimony, where it is important to give a large amount of accurate information. However, autistic people may struggle with recalling specific memories of past events and monitoring the accuracy of their recall, which may affect their ability to optimise the accuracy and informativeness of their testimony.

Research has yet to investigate the level of detail provided by autistic witnesses, nor their ability to monitor and regulate this. This is important because, for example, to rule out suspects it may be necessary to know the exact colour of the robber's hat (e.g., 'navy blue' –

a *fine-grained* response), rather than a broader, less informative response (e.g., 'dark' – a *coarse-grained* response).

It is also important to consider the setting in which the questions are asked (for example, in a social situation such as a traditional face-to-face interview, or via an online questionnaire). Autistic people's abilities may often be under-estimated because their difficulties understanding others' intentions and needs may make it difficult for them to know what is required of them. Indeed, when more explicit instructions are provided, or when computerised tasks are used, autistic people's difficulties are often reduced.

It is also important to assess whether autistic people's testimony is improved when the task instructions are clearly stated (for example, that witnesses should prioritise being as accurate as possible, *or* as informative as possible, or both). This is crucial for developing appropriate interview support and adaptations to questions.

The study

Autistic and non-autistic adults came to the University of Bath to take part in the study. They watched a short video of a mock bank robbery (see Figure 2). Participants were told that they would watch the video and would then be asked some questions about it. Half of the participants received the questions socially (in a standard face-to-face interview; *the social condition*), whilst the other half answered the questions via an online survey in a separate room (*the non-social condition*).

Figure 2. A still from the mock bank robbery video clip

Participants answered questions about the video in 3 phases:

- Phase 1: participants were asked 20 questions (for example '*what was the colour of the hat worn by the robber at the counter?*') and gave a free-response (that is, they weren't told whether to provide a fine- or a coarse- grained answer).
- Phase 2: participants answered the same 20 questions again, but this time they were asked to provide both a fine- *and* a coarse- grained answer. For example, when asked '*what was the colour of the hat worn by the robber at the counter?*' they provided a fine-grained answer (for example "*white"*) and a coarse-grained answer (for example "*light coloured"*).
- Phase 3: participants were asked to choose one of their Phase 2 answers as their final answer, and were explicitly instructed to prioritise accuracy over informativeness (that is, by reporting coarse-grained responses unless they were certain of the accuracy of their fine-grained responses).

Participants had to give an answer to each question, even if they were not sure (rather than answering with "I don't know/can't remember"). Participants also rated their confidence in the accuracy of their responses from 0% (very very unsure) to 100% (very very sure).

The results

Both autistic and non-autistic groups strongly preferred reporting fine-grained details over coarse-grained detail, even when the fine-grained detail was less accurate. Both groups were more accurate when the instructions clearly stated that they should be as accurate as possible.

Accuracy was also higher for both autistic and non-autistic groups when the questions were delivered socially (face-to-face) compared to online. This is in contrast to the view that autistic people may be less socially motivated than non-autistic people, indicating that autistic people *are* socially motivated, but that social-cognitive difficulties may limit their ability to read social cues, and respond appropriately. However, the autistic group found it

more difficult to regulate their recall decisions in the social condition. That is, they were less likely than non-autistic participants to make optimal choices when deciding whether to report a fine- and coarse- grained response. This may be due to social cognitive difficulties hindering autistic people's thinking skills during social interaction.

Implications for practice

Autistic people are more likely than their non-autistic peers to interact with the police as victims or witnesses, and may therefore need to provide a detailed account of an incident. Our results show that autistic people's difficulties in providing witness testimony may be helped by making the instructions clearer, such as telling a witness that they should only provide exact details where they are very sure these are correct.

The findings also show that autistic adults can monitor and regulate their recall to provide the most accurate type of detail (i.e. choosing between a fine- or a coarse- grained response depending on the strength of their memory), but that providing responses in a social interview situation may limit their ability to effectively decide which information to report.

For more information please see the full paper:
https://researchportal.bath.ac.uk/en/publications/metacognitive-monitoring-and-control-of-eyewitness-memory-reports
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