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Accounts of the confidence-accuracy relation in memory: Understanding overconfidence in low performers

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Background:

There is a tendency to be overconfident about the correctness of answers – overconfidence. Ironically, the overconfidence effect is often greatest for people who score below average. Although research in a variety of fields and different groups of participants has reported the exaggerated overconfidence effect for people of poorer abilities, the reason for this greater inaccuracy is debated.

Objectives:

This study aimed to investigate whether low performers have a general deficit of metacognitive monitoring ability, using a novel method based on Signal Detection Theory, which separates memory accuracy from response bias.

Methods:

Adult volunteers were recruited and received \$15 or credit for psychology courses in return for their participation.

Participants were instructed to study word pairs (cue—target) and to predict the future recall probability providing confidence ratings. Half of the pairs were presented once (weak memory), and the other half three times (strong memory). During the test phase, participants were asked to type the target word when cued by the first word of the pair.

Initial results:

In general, participants had a tendency to overestimate performance. Low performing participants were more likely to overestimate their performance, while good performing participants tended to underestimate their performance. However, it is important to see that their predictions were not sensitive to changes in their performance across different memory strength conditions (weak and strong). This may be due to deficits in metacognition, or response bias.