

People with autism more likely to 'follow their heads and not their hearts'

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Scientists at King's College London have shown why people with autism are more logical in their decision-making and less susceptible to the so-called 'Framing Effect' compared to people who do not have the disorder.

The 'Framing Effect', described by the nobel-prize-winning psychologist Daniel Kahneman in the 1980s, refers to the discovery that decisions are based on the way choices are framed. Kahneman and his colleagues showed that this was because people use their emotions when making decisions, hence some options appear more desirable than others, even when choices offer the same reward.

For example, when given £70 in a gambling scenario, people are more likely to gamble their [money](#) if they think they are going to 'Lose £50' than if they stand to 'Keep £20', even though both options are numerically equivalent. The thought of losing money creates a strong emotional response and people respond by doing something to prevent this from happening (i.e. by gambling their money).

Research has shown that emotional awareness is impaired in people with alexithymia, otherwise known as 'emotional blindness'. As 'emotional blindness' is more common in people with [autism](#), this could mean [autistic individuals](#) are less susceptible to the emotionally driven Framing Effect. Researchers also know that people with alexithymia have difficulties in detecting their own heartbeat, raising the possibility that following one's heartbeat may be linked to the Framing Effect.

In a new study, published today in *Molecular Autism*, people with and without autism were given a computerised task to measure their susceptibility to the Framing Effect. They were repeatedly given the opportunity to gamble in situations where they could either 'lose' or 'gain' money from an initial pot of money.

Participants were also asked to close their eyes and count their heartbeats in order to measure how well they perceived their internal sensations. Finally, emotional awareness was measured using a questionnaire.

People without autism were almost two times more likely to gamble in situations where they could lose money relative to when they could gain money. Although people with autism chose to gamble just as often as those in the non-autistic (control) group, there was little difference between gambling when they were going to lose or gain money.

Among people who did not have autism, those most 'in touch' with their internal sensations, and who also had good emotional awareness, were most susceptible to the Framing Effect. In contrast, susceptibility to the Framing Effect was less pronounced in people with autism because it was not driven by their perception of internal sensations or emotional awareness.

According to the study authors, this indicates that the two groups were using different strategies when making their decisions - people without autism were using their intuition, emotion and 'following their heart', while those with autism used a more rule-based rational strategy.

Punit Shah from the Institute of Psychiatry, Psychology & Neuroscience (IoPPN) at King's College London, said: 'Our study adds to evidence of atypical psychological processes in autism, but also highlights that the condition may carry benefits in situations where it may be useful to 'follow your head and not your heart.'

'It is often thought that people with autism are 'good with numbers' and therefore more rational, but this theory is not well understood. Our research helps to explain that people with autism make more logical decisions because they are not as easily influenced by their internal sensations or 'gut-feelings.'

The study also offers insights into why some people are more susceptible to the Framing Effect, many decades after the concept was discovered. Punit Shah added: 'Our study suggests that complex decisions are related

to very basic biological processes such as the extent to which we feel our heartbeat.'

More information: Punit Shah et al. Emotional decision-making in autism spectrum disorder: the roles of interoception and alexithymia, *Molecular Autism* (2016). [DOI: 10.1186/s13229-016-0104-x](https://doi.org/10.1186/s13229-016-0104-x)

Provided by King's College London

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