

Social behaviour and mood in everyday life: the effects of tryptophan in high trait-quarrelsome individuals

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Most data on the role of serotonin in social behaviour come from studies in animals, in patients, or in laboratories, rather than in normal people in everyday life. However, recent advances in social science methodology have made it possible to study normal variations in social behaviour along the agreeable-quarrelsome and dominant-submissive axes.

Using this approach, one study recently showed that administration of the serotonin precursor, tryptophan, decreased quarrelsomeness and increased dominance in normal people in everyday life. The present research explored the possibility that serotonergic manipulations may affect aggressivity especially in those with high trait quarrelsomeness. It was hypothesised that such individuals would not only be less quarrelsome and more dominant on tryptophan, but also more agreeable.

Thirty-nine men and women scoring high on two measures of trait quarrelsomeness took tryptophan and placebo for 15 days each. Throughout the study, they recorded their behaviours, mood and perceptions of others during social interactions. The event-contingent recording method used was designed to measure social behaviours, mood, and perceptions of others in everyday life with as little retrospective bias as possible. All data analyses were performed using multilevel models.

As predicted, participants reported less quarrelsome behaviours while on tryptophan. Men also reported more agreeable behaviours. Both men and women reported more positive affect during their social interactions and perceived their interaction partners as more agreeable. In addition, they perceived their interaction partners as more dominant. In men, tryptophan also decreased their own dominance.

The decline in dominance may have been due to the decline in quarrelsomeness and suggests that participants were originally using their quarrelsomeness to increase their dominance.

This study adds to the evidence that increasing serotonin levels can promote more constructive social behaviours. Also, given the observed changes in social perceptions, it raises the possibility that serotonin enhances empathy.

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Poster session of choice: Cognition and Behavioural Neuroscience (Friday, June 4)