Researchers identify facial expression for anxiety

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Anxiety (1); Happiness (2); Surprise (5); Interest (4)

(Medical Xpress) -- Researchers from the Institute of Psychiatry (IoP) at King's College London have, for the first time, identified the facial expression of anxiety. The facial expression for the emotion of anxiety comprises an environmental scanning look that appears to aid risk assessment. The research was published this week in the *Journal of Personality and Social Psychology*.

Dr. Adam Perkins, lead author of the study at the IoP at King's says: 'Our research group focuses on understanding the causes of anxiety. No one knows exactly what anxiety is. However many animal studies link it to risk assessment behaviour, suggesting anxiety can be explained as a defensive adaptation. We wanted to see if this was also the case in humans.'

The researchers described specific scenarios likely to elicit standard emotions, such as happiness, sadness, anger, disgust and surprise to a group of participants. They also described scenarios containing ambiguous threats, which are known to elicit risk assessment and anxiety in rodents. Participants were asked to pose whatever facial expression they judged appropriate to the scenarios. A second group of individuals were shown photos and videos of the facial expressions generated in response to the scenarios and asked to match the facial expressions back to the original selection of scenarios. They were also asked to generate an emotion label for each facial expression that they matched to a scenario.

Facial expression images were correctly matched in 89% of emotive scenario presentations on average. The facial expression generated in response to an ambiguous threat scenario was correctly matched to ambiguously threatening scenarios in 90% of scenario presentations.

A third group of participants preferentially matched this facial expression with the label anxiety, not fear or any other major emotion. The characteristics of the facial expression for anxiety comprised darting eyes and head swivels that echoed the risk assessment behaviour of anxious rodents. These results suggest that the anxious facial expression in humans serves to increase information gathering and knowledge of the potentially threatening environment through expanding the individual's visual and auditory fields. Therefore the anxious facial expression appears to have both functional and social components - its characteristics help assess our surrounding environment, and communicate to others our emotional state.

Dr. Perkins adds: 'We hope our findings will in due course help doctors more effectively diagnose anxiety in their patients. We also think the findings may also help security personnel identify individuals engaged in wrongdoing by means of their anxious, risk assessing facial expression.'

To watch the video associated with the study, please click here.

More information: Perkins, A. 'A facial expression for anxiety' *Journal of Personality and Social Psychology* (January 2012) doi: 10.1037/a0026825

Provided by King's College London