

Ability to recognise expression tied to listening and emotion

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The tests found people who are good at labelling expressions from faces are also good at labelling expressions from voices. Credit: Carling Hale

West Australian researchers have developed two new tests that examine a typical person's ability to recognise basic facial expressions.

The UWA study, published in *PLOS ONE*, highlights how the skill to accurately read other people's <u>faces</u> is fundamental to social interactions.

Lead author and UWA School of Psychology's Romina Palermo says although the tests measure similar processes in <u>facial recognition</u>, they are not identical.



"In the first test, people see three faces and they choose which expression is different from the other two," Associate Professor Palermo says.

"For instance, one face could be posing a happy expression, and the other two sad expressions.

"To perform well at this task you don't need to know anything about expression but be able to see how they differ perceptually."

In the second test, people view one face quickly, and then select which label best describes the expression (happy, disgusted, angry, fearful, sad, surprised).

"To perform well at this task people need to know what the labels mean and how to discriminate between them," she says.

From the tests, A/Prof Palermo and fellow researchers found that people who are good at labelling expressions from faces are also good at labelling expressions from voices.

"This suggests that there is a system that processes emotion from all types of input, not just faces," she says.

"We also found that the ability to recognise facial expression is related to the ability to recognise facial identity.

"That is, people who are good are recognising expressions from faces are also good at recognising identity from faces."

A/Prof Palermo says this suggests there is an initial stage of high-level facial processing that is common to both face identity and face emotion processing.



She says pre-existing tests were designed to examine whether groups of people with developmental or neurological conditions find it difficult to recognise facial expressions of emotion. The new tests find differences in the ability in typical individuals.

"We need to be able to reliably measure ability so we can determine why some people are better at recognising expressions than other people," she says.

"Our tests are also suitable for researchers interested in questions from the psycho- social domain, such as what personality or life-experience factors might be associated with individual variation in the important skill of face emotion processing [empathy, extroversion, maternal attachment style]."

From the two tests, researchers are now able to further explore how people vary when it comes to recognising <u>facial expressions</u> of emotion.

More information: Palermo R, O'Connor KB, Davis JM, Irons J, McKone E (2013) "New Tests to Measure Individual Differences in Matching and Labelling Facial Expressions of Emotion, and Their Association with Ability to Recognise Vocal Emotions and Facial Identity." *PLoS ONE* 8(6): e68126. DOI: 10.1371/journal.pone.0068126

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