

# Stress undermines empathic abilities in men but increases them in women

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Stressed males tend to become more self-centred and less able to distinguish their own emotions and intentions from those of other people. For women the exact opposite is true. This is the main finding of a study just published in *Psychoneuroendocrinology*, carried out with the collaboration of SISSA in Trieste

Stress, this enemy that haunts us every day, could be undermining not only our health but also our relationships with other people, especially if we are men. In fact, stressed women apparently become more "prosocial". These are the main findings of a study carried out with the collaboration of Giorgia Silani, from the International School for Advanced Studies (SISSA) of Trieste. The study was coordinated by the Social Cognitive Neuroscience Unit of the University of Vienna and saw the participation of the University of Freiburg.

"There's a subtle boundary between the ability to identify with others and take on their perspective - and therefore be empathic – and the inability to distinguish between self and other, thus acting egocentrically" explains Silani. "To be truly empathic and behave prosocially it's important to maintain the ability to distinguish between self and other, and stress appears to play an important role in this".

Stress is a psycho-biological mechanism that may have a positive function: it enables the individual to recruit additional resources when faced with a particularly demanding situation. The individual can cope with stress in one of two ways: by trying to reduce the internal load of "extra" resources being used, or, more simply, by seeking external support. "Our starting hypothesis was that stressed individuals tend to become more egocentric. Taking a self-centred perspective in fact reduces the emotional/cognitive load. We therefore expected that in the experimental conditions people would be less empathic" explains Claus Lamm, from the University of Vienna and one of the authors of the paper.

The surprise was that our starting hypothesis was indeed true, but only for males. In the experiments, conditions of moderate stress were created in the laboratory (for example, the subjects had to perform public speaking or mental arithmetic tasks, etc.). The participants then had to imitate certain movements (motor condition), or recognise their

own or other people's emotions (emotional condition), or make a judgement taking on another person's perspective (cognitive condition). Half of the study sample were men, the other half were women.

"What we observed was that stress worsens the performance of men in all three types of tasks. The opposite is true for women" explains Silani.

Why this happens is not yet clear. "Explanations might be sought at several levels", concludes Silani. "At a psychosocial level, women may have internalized the experience that they receive more external support when they are able to interact better with others. This means that the more they need help - and are thus stressed - the more they apply social strategies. At a physiological level, the gender difference might be accounted for by the oxytocin system. Oxytocin is a hormone connected with social behaviours and a previous study found that in conditions of [stress](#) women had higher physiological levels of oxytocin than men".

**More information:** L. Tomova, B. von Dawans, M. Heinrichs, G. Silani, C. Lamm, "Is stress affecting our ability to tune into others? Evidence for gender differences in the effects of stress on self-other distinction," *Psychoneuroendocrinology*, Volume 43, May 2014, Pages 95-104, ISSN 0306-4530, [dx.doi.org/10.1016/j.psyneuen.2014.02.006](https://doi.org/10.1016/j.psyneuen.2014.02.006). ([www.sciencedirect.com/science/ ... ii/S0306453014000572](http://www.sciencedirect.com/science/.../S0306453014000572))

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