Study disputes notion that facial symmetry an indicator of health in children

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(Phys.org) —A team of researchers with members from several universities in the U.K. has found there is no link between facial symmetry in young people and good health. In their paper published in *Proceedings of the Royal Society B: Biological Sciences*, the team describes a study they undertook of British teenager data, comparing health with facial symmetry and what they found by doing so.

So often has the notion of good looks been associated with natural selection in humans, that it's become accepted by the general population. People unconsciously prefer to mate with good-looking people because it means the odds of having a healthy child are increased, the thinking goes. Along with the theory is the idea of facial symmetry—prior research has shown that the closer a face is to being perfectly

symmetrical, the more likely the person is to be deemed good-looking, or attractive. That would imply that good symmetry in a potential mate is a good indicator of attractiveness and thus healthy offspring, ostensibly, the real reason we pair up and attempt to procreate. But is it all true? That's what the researchers in Britain sought to learn.

Rather than conduct exhaustive surveys, the team used data from the Avon Longitudinal Study of Parents and Children—an ongoing national study in the U.K. where children are tracked from birth to learn more about health issues in general. The team was able to use data from 4,732 British teens aged 15 and 16 years old, which included medical histories (via their primary care physician) and photographs. The team used scanning techniques to analyze the photographs to determine the degree of symmetry of their faces. They then compared degree of facial symmetry to medical histories.

In studying the results for all of the teens, the researchers report that they were not able to find any link between those that had more symmetrical faces and better health, or the opposite, for that matter. Children with asymmetrical faces were no more or less likely to experience scarlet fever, stomach ailments, influenza, etc. than were those children with more symmetrical faces.

This suggests, the researchers conclude, that unconscious analysis of facial symmetry by those looking for a mate as a sign of likelihood of healthy children, is largely a myth. That of course begs the question of why then do we find those with more symmetrical faces more attractive? Apparently, we just don't know.

More information: Facial fluctuating asymmetry is not associated with childhood ill-health in a large British cohort study, *Proceedings of the Royal Society B*, rspb.royalsocietypublishing.or … nt/281/1792/20141639

Abstract

The idea that symmetry in facial traits is associated with attractiveness because it reliably indicates good physiological health, particularly to potential sexual partners, has generated an extensive literature on the evolution of human mate choice. However, large-scale tests of this hypothesis using direct or longitudinal assessments of physiological health are lacking. Here, we investigate relationships between facial fluctuating asymmetry (FA) and detailed individual health histories in a sample (n = 4732) derived from a large longitudinal study (Avon Longitudinal Study of Parents and Children) in South West England. Facial FA was assessed using geometric morphometric analysis of facial landmark configurations derived from three-dimensional facial scans taken at 15 years of age. Facial FA was not associated with longitudinal measures of childhood health. However, there was a very small negative association between facial FA and IQ that remained significant after correcting for a positive allometric relationship between FA and face size. Overall, this study does not support the idea that facial symmetry acts as a reliable cue to physiological health. Consequently, if preferences for facial symmetry do represent an evolved adaptation, then they probably function not to provide marginal fitness benefits by choosing between relatively healthy individuals on the basis of small differences in FA, but rather evolved to motivate avoidance of markers of substantial developmental disturbance and significant pathology.