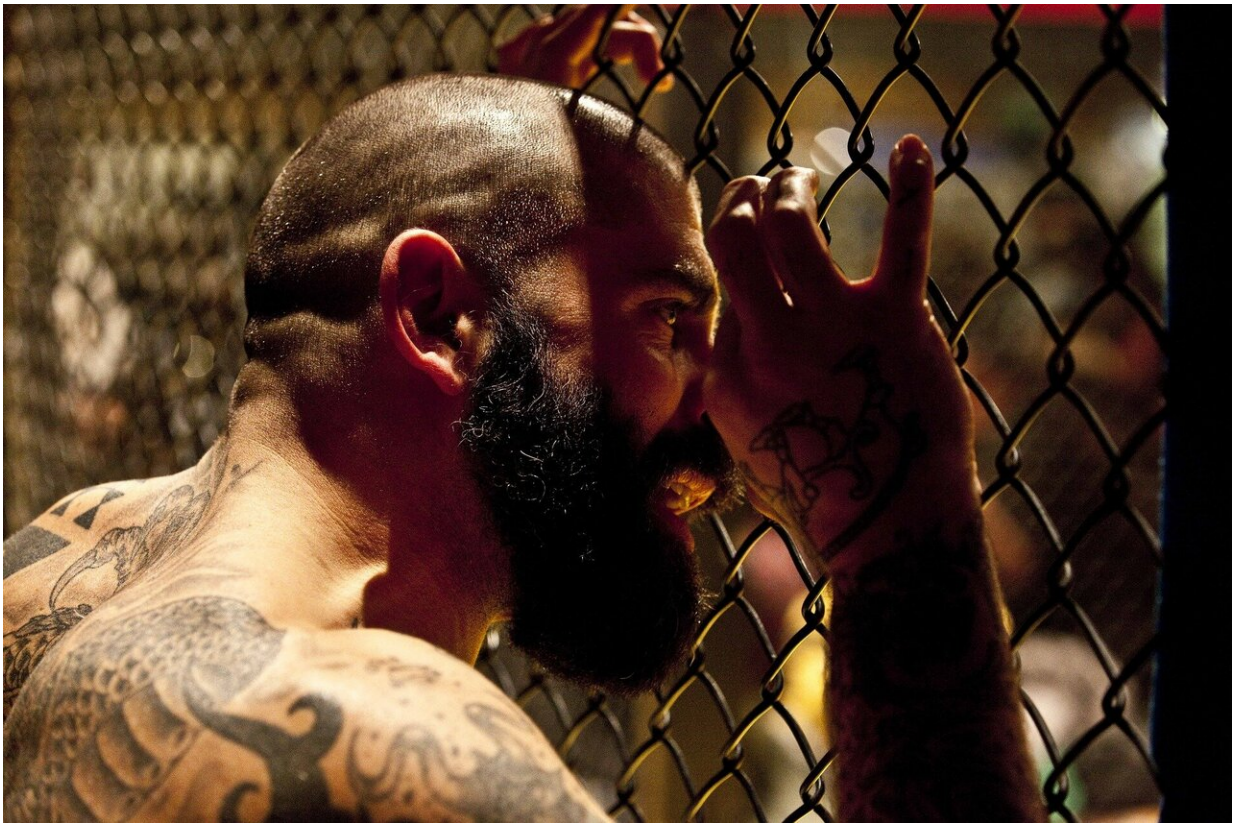# Can you pick an MMA winner by studying fighters' faces?

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Credit: CC0 Public Domain

With the UFC set to appear in Prague for the first time this February 23rd, Czech researchers at Charles University have been getting into the fighting spirit.

"Recent research shows that humans are capable of inferring fighting ability from facial and body cues," says Dr. Vit Trebicky, lead author of a new study in *Frontiers in Psychology*. "But our latest findings suggest that when it comes to predicting the [performance](#) of Czech MMA fighters, you shouldn't judge a book by its cover."

Fighters with the highest anaerobic capacity tend to look the toughest

Trebicky and colleagues created standardized 360 degree photographs of 44 Czech MMA fighters, which were assessed on their perceived fighting ability by 94 university students (46 males).

"We compared these assessments with the fighters' actual performance—MMA score, isometric strength, anaerobic performance and lung capacity—as well as [physical characteristics](#) like age, height and body composition."

The MMA score consists of a fighter's wins-to-all-fights ratio.

"In contrast to previous studies, we did not find any significant links between the actual and the perceived fighting ability," Trebicky reports.

However, based on the headshots raters were to some extent able to predict physical performance-related characteristics.

"In general, heavier fighters and those with higher anaerobic performance were judged as more successful based on their facial features."

A good big'un beats a good little'un

Trebicky suggests one reason why these results differed from previous studies might be the use of 360 degree standardized photographs, with neutral expressions and head positions.

"This is an important point because several earlier studies used downloaded static photographs of professional fighters, which varied in lighting conditions, head tilts and expressions that might bias inferences about fighting performance."

Nevertheless, the researchers acknowledge the limitations of their approach.

"The popularity of MMA in the Czech Republic is increasing relatively slowly, so the fighters who participated in our study ranged from beginner amateurs to seasoned professionals. MMA score may provide a less accurate estimation of success rate in amateurs as they have generally had fewer fights.

"Reliability of the MMA score could also be affected by the way in which fighters are paired for matches, which is not a random process," Trebicky concedes.

"Moreover, psychological characteristics such as personality, ability to cope with stress, or successful execution of techniques and other skills probably affect fighting ability and success. These factors, however, exceed the scope of the current study and remain to be investigated in future."

Provided by Frontiers