

Face masks protect us but disguise feelings

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COVID masks can protect against the virus, but they can also impair social cognition, i.e. the ability to recognise the emotions and mental states of others.
Credit: Pexels

Masks protect people from contracting the coronavirus, but could have a negative side effect. In a recent Perspective paper, scientists from the Max Planck Institute for Human Cognitive and Brain Sciences suggest

that the mouth-nose coverings impair social cognition, i.e. the ability to recognize emotions and mental states of other people. According to the hypothesis, this could accelerate mental deterioration processes. The elderly and people with certain forms of dementia could be particularly affected.

The researchers base their theory that the masks could impair social cognition on several observations. For one thing, a study conducted by the University of Bamberg last year, in the wake of the COVID pandemic, found that emotion recognition through facial expressions is severely impaired when up to 70% of the lower face is covered.

According to the study, the masks primarily impair the recognition of emotions such as disgust, happiness, sadness, and anger, which are largely conveyed via the mouth region. Fear and neutral facial expressions were still well recognized by the study participants. They are primarily read via the eye area.

Older people find it more difficult to recognize moods through the eyes

On the other hand, a study by researchers of the Max Planck Institute for Human Cognitive and Brain Science themselves had shown that even the eye area is not a way for everyone to read the emotions conveyed via it: Older people performed worse than younger people in the so-called reading-the-mind-in-the-eyes test. They found it more difficult to recognize moods through the eyes—the only facial region that is still freely accessible when masks are worn. In fact, while older people rely on the lower part of the face to interpret moods, younger people tend to use the entire facial expression. Thus, in the case of the masks, the researchers conclude the strategy is primarily a problem for the elderly. But not only for them: Also for those affected by dementia. They also have problems reading emotions from the eye area.

"The elderly and people with dementia are already impaired in social cognition," says Matthias Schroeter, head of the research group Cognitive Neuropsychiatry at the Max Planck Institute for Human Cognitive and Brain Science and first author of the Perspective Paper, which has now been published. "Therefore, the effects of masks should be given special consideration for them." In the researchers' view, the consequence could be worse social communication, not only among the elderly, but across all age groups. In addition, cognitive decline processes could accelerate, especially in those who are already affected by it.

Masks are beneficial, but one has to deal with their side effects

The scientists therefore plead for a closer examination of these effects with respect to different age groups and diseases such as dementia. If their hypotheses prove to be true, these impairments would have to be brought more into focus and appropriate countermeasures would have to be taken. It would be possible, for example, to use transparent masks made of plastic. In addition, according to the scientists, more attention should be paid to conducting conversations more explicitly. Instead of subtle facial expressions, one should rely more on clear language and gestures. Finally, more use could be made of telemedicine, in which communication between doctor and patient takes place via the screen. Neither would have to wear a mask, and the quality of the diagnosis would not be affected, for example, when it comes to recognizing brain diseases such as frontotemporal dementia, for which social cognition is an essential criterion.

Doing without masks, to protect against infection, on the other hand, is not an option in Schroeter's view. "Even if studies confirm these risks, the benefits outweigh them. Especially in the elderly and people with dementia, who are particularly at risk of severe disease progression."

This weighing of risks and benefits has to be taken into account, as with any other medical measure. However, if one knows the side effects, Schroeter says, one can learn to deal with them accordingly.

More information: Matthias L. Schroeter et al, Face Masks Protect From Infection but May Impair Social Cognition in Older Adults and People With Dementia, *Frontiers in Psychology* (2021). [DOI: 10.3389/fpsyg.2021.640548](https://doi.org/10.3389/fpsyg.2021.640548)

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