

〈Regular Article〉

Sanitary Masks Modify the Flow of Gaze on a Face When Evaluating Healthiness: A Study with Japanese Women

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Abstract

Background: Sanitary masks cover the lower part of the face, reducing visual clues about health. This study investigated whether wearing a mask affects the flow of gaze on the visible areas of the face by using an eye-tracking system. We also examined the impact of wearing a mask and the potential benefit of makeup on a healthy appearance.

Materials and Methods: Japanese women with and without visible signs of aging ($n = 4$ each) were selected as models. Their photographs were taken under four conditions: with/without makeup and with/without a mask. The photographs were presented to 60 women ($n = 30$ aged 20–30 years, $n = 30$ aged 45–55 years) who were asked to evaluate the models' healthiness. Their flow of gaze on the models' faces was recorded with an eye-tracking system, and observed areas, gaze time, and order of observation were analyzed.

Results: Regardless of the condition, gaze was focused first, and for the longest time, on the eyes and nose. Wearing a mask increased gaze time on the eyes and expanded the observed areas to the hair, forehead, and neck and décolleté. Wearing a mask decreased healthiness ratings, but makeup counterbalanced this effect. Older observers focused more on the mouth areas compared with younger observers, while the area under the nose was observed more for older models.

Conclusion: Wearing a mask not only reduces visual information but also modifies how the visible areas of the face are observed. Wearing makeup while wearing a mask might enhance the perception of health.

Key words: sanitary mask, makeup, eye tracking, face perception, gaze, face evaluation.