

## Abstract

**Background:** During the coronavirus pandemic of 2019, there has been an upsurge in the number of reported cases of facial dermatosis caused by face masks wearing within the general population. Face mask-induced facial dermatosis has been investigated previously in healthcare workers without involving the general population. However, as a precautionary measure against the coronavirus disease 2019 (COVID-19) pandemic, wearing a face mask has become mandatory for the general population, similar to healthcare workers.

**Objective:** To measure the prevalence of COVID-19 pandemic-induced facial dermatosis. Also, to determine the type of face mask used that causes the most facial dermatosis and the association between prolonged usage of face masks and facial dermatosis in Western Saudi Arabia's population.

**Methods:** The study covers the Western region of Saudi Arabia. A self-administered Google survey was shared on social media. The study used prior surveys from similar studies. The data collection included participants' demographic information, pre-existing skin conditions, mask type, and mask-related skin conditions. The data were analyzed using the statistical package for the social sciences (SPSS) version 20.0 (IBM Corp., Armonk, NY).

**Results:** The median age was 30 years (interquartile range {IQR} 23-43). Females represented 65.5% of our sample. Face mask-wearing was associated with skin changes in 41.7% of the population. The most common skin condition associated with mask use was pimples and pustules representing 28.7%, of which the most common site was on the cheeks 31.4%. Acne vulgaris was the most common pre-existing skin condition, affecting 8.7% of the total population. Of the total, 46.2% experienced an exacerbation of their pre-existing skin condition with or after wearing masks. Skin changes were significantly associated with skin type and duration of wearing the mask ( $P < 0.001$ ).

**Conclusion:** The prevalence of facial mask-induced facial dermatosis is 41.7% of the general population in which surgical mask was responsible for most cases. In addition, there is a strong association between the duration of wearing the mask and facial dermatosis.