



## Cutaneous Allodynia Associated With The Use Of Personal Protective Equipment During The Covid-19 Pandemic

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### Introduction

Headache is defined as any pain located in the head and can have direct and indirect consequences. The use of personal protective equipment (PPE) can be a trigger for headache episodes, especially in individuals with cutaneous allodynia. Objective: To assess the association between headache, the use of personal protective equipment (PPE), and the presence and severity of allodynia in healthcare professionals during the COVID-19 pandemic.

### Materials and Methods

A cross-sectional study was conducted on individuals of both genders, aged  $\geq 18$  years, working three or more days a week, wearing craniofacial PPE for more than two hours. Those who did not work directly with COVID-19 patients were excluded. The frequency, intensity, and duration of headache and the use of PPE were assessed through a structured questionnaire. The presence and severity of allodynia were evaluated using the 12-item Allodynia Symptom Checklist/Brazil (ASC-12/Brazil).

### Results and Discussion

A total of 160 professionals were evaluated, with 106 having headaches and 54 without headaches. The most commonly used PPE items were the hospital mask ( $n=145$ , 90.6%) and N95 mask ( $n=110$ , 68.7%). Significant differences were observed between the periods before and during the pandemic regarding the number of individuals with headaches ( $n=74$ , 46.2% vs.  $n=106$ , 66.2%,  $p=0.001$ ), headache intensity ( $p=0.001$ ), headache frequency ( $p=0.001$ ), and headache duration ( $p=0.001$ ). A significant difference was also observed between the group with headaches and the group without headaches in terms of the presence of allodynia ( $p=0.001$ ), with mild severity being the most prevalent.

### Conclusion

The number of cases, frequency, intensity, duration of headaches, and the severity of allodynia significantly worsened in healthcare professionals during the COVID-19 pandemic. The use of PPE may be related to the worsening or onset of headaches, as well as the worsening of allodynia.

**Keywords:** Headache;personal protective equipment;COVID-19.