



Scientific letter

Face Mask Exemptions, Respiratory Patients, and COVID-19 in Spain. Data From the 2021 ITC EUREST-PLUS Spain Survey



Exención de mascarillas, pacientes respiratorios y COVID-19 en España. Datos de la Encuesta ITC EUREST-PLUS España 2021

Dear Editor,

During the initial waves of the COVID-19 pandemic, respiratory patients received confusing messages by several patient associations and the World Health Organization^{1,2} to be exempted from wearing face masks. Allegedly, many assumed that difficult breathing through face masks might exacerbate their respiratory condition, producing asthma attacks or chronic obstructive pulmonary disease (COPD) exacerbations. In its December 2020 Interim Guidance on Mask use in the context of COVID-19, WHO cited studies suggesting that masks might have an adverse impact on respiratory disease patients, but they did not provide any guidance about whether respiratory disease patients should or should not wear masks; explicitly, it reads in page 10 of 22 the following paragraph and references: “. . . mask use may have disadvantages for or difficulty wearing masks, especially for children, developmentally challenged persons, those with mental illness, persons with cognitive impairment, those with asthma or chronic respiratory or breathing problems, those who have had facial trauma or recent oral maxillofacial surgery and those living in hot and humid environments”.^{3,4} Indeed, the Spanish Society of Pneumology and Thoracic Surgery (SEPAR) issued a statement to the Ministry of Health in October 2020, and then a press release, to withdraw the exemption of wearing face mask for respiratory patients.⁵ Therefore, many asthma, COPD and other respiratory patients did not protect themselves and, if infected, might be contagious to others.^{6,7}

The objective of this report was to cross-sectionally assess the use of face masks in adult smokers according to self-reported diseases using data from the EUREST-PLUS Spain Survey. The EUREST-PLUS Spain Survey, part of the International Tobacco Control Policy Evaluation (ITC) Project, surveyed a national representative sample of adult smokers in Spain in 2021, as a follow up survey that started in 2016.^{8,9} This longitudinal study started in 2016 (wave 1), with follow-up surveys in 2018 (wave 2) and 2021 (wave 3). In this last wave, we recontacted all respondents in wave 2 and recruited new smokers to replace those lost due to attrition, using the same sampling frame as the one used in the previous surveys, and the final sample included 1006 respondents.¹⁰ The EUREST-PLUS studies have received ethical approval by the Human Research Ethics Committee of the University of Waterloo and the Clinical Research Committee of the Hospital de Bellvitge

(ORE # 21262 and PR100/16, respectively, for waves 1 and 2; and ORE#41105 and PR248/17 for the EUREST-PLUS Spain study). Included several items on perceptions and behaviors on COVID-19,¹¹ so it might be an asset to cross-sectionally explore the use of face masks according to self-reported diseases. We therefore compared responses in healthy individuals versus those self-reporting respiratory disease (asthma, COPD, and chronic bronchitis; and participants with diseases other than respiratory (depression, anxiety, alcohol problems, chronic pain, diabetes, heart disease, lung cancer, other cancer, tuberculosis, severe obesity).

We cross-sectionally explored the findings on selected ITC EUREST-PLUS Spain survey questions on perceptions and behaviors on COVID-19, including face masks, in 1006 participants according to self-reported respiratory disease. We therefore compared responses in 816 healthy individuals versus those 44 self-reporting respiratory disease and 146 participants with a non-respiratory disease. As seen in [Table 1](#), those with self-reported respiratory disease indicated wearing a face mask all of the time when being in public places less frequently (73.1%) than those with self-reported non-respiratory disease (84.3%) or those reporting no such diseases (83.8%). When we recategorized the frequency of mask use into wearing it “all of the time” versus “otherwise”, these differences were statistically significant; the odds ratio (adjusted for age and sex) of always wearing a mask in participants with respiratory disease versus healthy individuals is 0.42 (95% CI: 0.21–0.83) $p = 0.013$. Further, when participants were asked “If you got the coronavirus, how severe do you think the illness would be for you, COMPARED TO others your age who got it?”, the respective percentages for “A lot more severe for me than for other” were 19.5%, 6.4% and 2.9% ($p < 0.001$). Thus, despite the fact that those with self-reported respiratory disease were much more concerned about the severity of COVID-19 illness, they were significantly less likely to regularly use a face mask to protect themselves from SARS-CoV-2 infection.

This pattern of findings among respiratory patients is consistent with the idea that guidance on mask wearing was confusing, and as a result such patients at highest risk were less likely to take protective measures. As all risks associated with COVID-19 are further magnified by active and passive-smoking,¹² we call for more research to re-educate the public, and particularly respiratory patients, to make sensible use of face masks, especially in crowded places and indoors, to reduce further the COVID-19 associated clinical burden.^{13,14} Some limitations of this research include: underdiagnosis of respiratory disease due to self-report of conditions, reduced statistical power in some comparisons, and potential social desirability bias inherent to self-reported information.

Respiratory health is indeed fundamental to overall health in the community, and the presence of SARS-CoV-2 in our lives will likely produce successive waves of ill-health. Therefore, the impact of the pandemic may change, but the risk to the health of

Table 1
Frequency of mask use in public places and self-perceived COVID-19 severity, by self-reported disease status. ITC EUREST-PLUS Spain Survey, 2021.

n (%)	Respiratory disease n = 44	Non-respiratory disease n = 146	Healthy n = 816
<i>Frequency of mask use</i>			
All of the time	32 (73.1)	121 (84.3)	683 (83.8)
Most of the time	8 (18.6)	16 (10.4)	94 (11.6)
Sometimes	3 (4.7)	7 (4.0)	30 (3.2)
Rarely	0	2 (1.3)	6 (1.0)
Not at all	1 (3.6)	0	3 (0.4)
<i>Self-perceived COVID-19 severity</i>			
A lot more severe for me	7 (19.5)	10 (6.4)	15 (2.9)
Somewhat more severe	14 (31.1)	38 (30.8)	94 (13.3)
A little more severe	13 (27.3)	47 (33.4)	287 (39.9)
Neither more nor less severe	9 (22.1)	43 (28.7)	320 (42.7)
A little less severe	0	1 (0.7)	9 (1.2)
Somewhat less severe	0	0	1 (0.2)

people with respiratory diseases remains. Use of face masks should be enforced, particularly by respiratory patients, within the ongoing seventh wave and beyond in Spain (and surely in other countries), as the COVID-19 pandemic is far from over.^{15,16}

Informed consent

All participants gave informed consent to participate.

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Authors' contributions

MF, EF and GTF designed the EUREST-PLUS Spain study. MF coordinated data collection. JBS, MF and JA conceptualized the research question and plan of analyses, and statistics were conducted by YC. JBS wrote the first draft and all authors contributed to successive versions. All authors approved the final version. EF is the guarantor.

Conflict of interest

GTF has been an expert witness or consultant for governments defending their country's policies or regulations in litigation. All other authors have no conflicts of interest to declare.

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