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EDITORIAL COMMENT

Smoking in Portugal: Where do we stand today?

Tabagismo em Portugal: em que ponto nos encontramos atualmente?

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Smoking is one of the leading causes of preventable illness and death worldwide.[1,2] It is a cause of various respiratory, gastrointestinal and urinary cancers, diabetes, cardiovascular disease and chronic obstructive pulmonary disease, and is a determinant of certain infections, including pneumonia, influenza and tuberculosis.[3] It is also associated with increased risk of death from renal failure, intestinal ischemia, hypertensive heart disease, other respiratory and gastrointestinal diseases, and other conditions. Smokers have two- to three-fold higher all-cause mortality than those who have never smoked; around 17% of the excess mortality among current smokers appears to be due to diseases that are not currently established as attributable to smoking.[4] Furthermore, it is a major cause of attributable loss of disability-adjusted life years, even as exposure is declining.[2] In Portugal, it was the second leading risk factor for early death and disability for both sexes combined in 2015.[2]

Several recent systematic reviews have further demonstrated that smoking is associated with increased risk of heart failure,[5] abdominal aortic aneurysms[6] and sudden cardiac death.[7] Even smoking a single cigarette a day is associated with increased risk of developing coronary heart disease and stroke: there appears to be no safe level of smoking for cardiovascular disease.[8] A meta-analysis of large observational trials showed that smoking cessation reduced the risk of cardiovascular death by 36% among smokers with coronary artery disease, over a mean follow-up of five years. Smoking cessation is the most powerful modifier of cardiovascular risk in smokers.[9]

According to the World Health Organization, there has been notable progress in reducing the prevalence of smoking, with the overall rate of current smoking among individuals aged over 15 years worldwide declining from 23.5% in 2007 to 20.7% in 2015. However, rates are not declining in all countries; they report that of the 195 countries monitored, 94 are experiencing decline, five have increasing rates, 47 see no significant change and 49 are not conducting sufficient monitoring to identify a trend.[1] Data for Portugal showed a trend for a decrease in the overall current smoking prevalence, mainly due to a steady decrease in males.[10] However, these reports only focused on

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overall trends in smoking prevalence, without information or analysis on related socioeconomic factors.

For their study published in the current issue of the *Journal*, Leite et al. used data from five Portuguese National Health Interview Surveys (NHIS) to show trends in tobacco use and related socioeconomic factors in Portugal from 1987 to 2014.[11] Their study updates and broadens the findings of Alves et al.[12] and, as reported in other studies[13,14] and countries,[1,10] is further evidence of diverging paths in smoking prevalence: while the prevalence in men is decreasing and reached a minimum in the 2014 NHIS (26.7%), for women smoking prevalence is increasing and reached a maximum (14.6%), based on the available data, in 2014. The prevalence among women may not yet have reached its peak.

The authors also found gender-based divergences in inequalities, with men presenting diminishing inequalities and a trend for stabilization of inequalities in women. The most vulnerable groups, in both men and women, were individuals with low education level, the divorced and the unemployed. Furthermore, in women, those in more qualified occupational groups also had higher odds of smoking, raising concerns about widening of inequalities in the near future.[11] Previous studies found that socioeconomic inequalities in smoking contribute to socioeconomic inequalities in mortality,[15,16] with 51-65% of social inequalities in total mortality among men being due to smoking.[15] These unfavorable trends could be reversed with effective tobacco control policies, especially if groups that are more vulnerable to inequalities are targeted.[17] However, in every European country, at least some of these tobacco control measures have not yet been fully implemented,[18] leaving considerable room for the development of more comprehensive and equity-oriented strategies of tobacco control.[17]

Monitoring the prevalence of tobacco use is crucial to efforts to control the global tobacco epidemic. Reliable prevalence data provide the information on the magnitude of the tobacco epidemic and its influencing factors that is required to plan and adopt tobacco control interventions and assess their impact.[1] Moreover, having a full picture of patterns and trends in tobacco use, especially when accounting for diverging paths according to different demographic or socioeconomic characteristics, helps enable interventions to be tailored to best meet the needs of different population subgroups.[1] A previous overview of systematic reviews found that, when designing and implementing tobacco control programs, governments should prioritize regulations that ban smoking and increase tobacco product prices,[19] the latter intervention demonstrating the greatest potential to reduce socioeconomic inequalities in smoking.[20] However, although no information was provided regarding the effects of these policies according to the characteristics of different subgroups, other studies have found that there are subgroups with diverging responses to smoking cessation interventions.[21,22] In accordance with the current emphasis on personalized care, these differences should also be considered when planning population-based tobacco control policies, favoring the implementation of interventions that have the greatest proven effectiveness in the most vulnerable target subgroups. Nevertheless, the striking lack of research demonstrating the real effectiveness of applying specific interventions to specific subgroups undermines the current application of these interventions and, at both country and continent level, more general policies have consistently been preferred.[23] However, the effects of these general strategies on smoking prevalence are not fully known and different studies have reported conflicting results.[23,24] Future research should clarify these issues, identifying the most cost-effective interventions and designing implementation strategies that optimize the effect on smoking cessation, especially in the most vulnerable subgroups.

While smoking has detrimental effects on various organs and systems, its importance as a major risk factor for cardiovascular disease cannot be overemphasized. The data from Leite et al.,[11] highlighting the trends in prevalence and inequalities in daily smoking, can be used to support more appropriate population-based interventions targeting smoking cessation in Portugal. However, further research is still needed to find the most effective strategies.

Conflicts of interest

The author has no conflicts of interest to declare.

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