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EDITORIAL

Unmasking the hidden threat: COPD awareness and knowledge in Portugal

The burden of Chronic Obstructive Pulmonary Disease (COPD) is recognised worldwide, constituting a major public health problem due to significant morbidity and mortality.[1,2]

Portugal is not an exception to the impact of the COPD burden. The most recent data for the Portuguese population indicates that COPD is the fifth cause of death,[3] with an estimated prevalence of 14.2% for individuals > 40 years old, as shown in a study conducted in the region of Lisbon.[4]

The GOLD report[5] indicates that COPD is preventable and treatable. Detection, early diagnosis, and modifiable risk factors, such as tobacco use, can be determinants for the disease path.

In this context, epidemiological studies of COPD are a crucial element for the prevention, diagnosis, and implementation of health policies to reduce the burden of the disease. In addition, knowledge about COPD among the general population is described in different studies reporting low levels of knowledge with a negative impact on early diagnosis and treatment success.[6,7] In Portugal, COPD epidemiological studies are scarce and the knowledge of the disease among the general population and public awareness is very limited.

The Portuguese Society of Pulmonology (SPP) has been supporting the development of several studies to estimate the prevalence of COPD in Portugal, of which Pneumobil stands out, the first populational survey throughout the national territory in 1996 that displayed a prevalence of 8.9%; A lower prevalence of 5.3% was described in another study conducted in a randomised sample covering the population living in the mainland, in 2002.[8] These two studies, however, have been criticized given some controversy in the recruitment protocol. More recently, as stated before, the BOLD (Burden of Obstructive Lung Disease) study, using a standard protocol in several countries was carried out in the city of Lisbon, in 2008.[4] These studies are crucial to support the development of national policies to promote COPD awareness in the population. It is essential to understand the population's knowledge in this context.

Besides, among the medical community, there is a clear perception that there is still a significant lack of knowledge about this disease in the Portuguese population. This (lack of) awareness and knowledge of the Portuguese population towards COPD still needs to be explored. Considering this perspective, it is crucial to portray the Portuguese population's existing knowledge and perceptions about COPD.

On this basis, the Portuguese Pulmonology Society, conducted an empirical study using an online survey in 2022 to investigate the knowledge and awareness of the population about COPD. The implemented survey focused on two main themes: COPD awareness and smoking exposure.

The study using an internet survey was conducted on 1500 individuals in the whole Portuguese territory. A brief characterisation of the sample indicates that most respondents were female (52.7%) with a mean age of 46. Regarding education, 43.7% have a high school degree, and 48.4% have a university degree. The majority, 62.5%, are employed. Concerning smoking exposure, more than half of the respondents (n=1500), 61.6%, are or were tobacco users, and 38.5% don't use tobacco.

Regarding COPD awareness, the results show that only about a third of all the participants in the study, 32.5%, know or have heard about COPD. Nevertheless, from those that correctly recognized when asked about what COPD is (N=412), only 27.5% correctly recognised the condition as a chronic lung disease.

The profile of the participants that know what COPD includes females living in urban areas with higher levels of education, aged between 45-64 years old.

All the participants in the study were also questioned about what Spirometry is. Just over one-third of the respondents, 34.4%, reported knowing and about one-fourth, 24.9% of the respondents, stated they had already performed the test. The awareness about this exam is

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slightly higher in the groups exposed to tobacco, where stand out the former smokers, with 41.6% vs 31.0% of the non-smoking population. It is also among former smokers that there is a higher proportion of respondents that claim to have already done a spirometry test.

Concerning a subgroup of participants, comprising less than one-third (N=412), who correctly recognized what COPD is, various aspects related to COPD were queried.

The participants were inquired about the sources of information they utilized to obtain information about COPD. Various channels were mentioned, including digital channels (39.8%), friends and family (31.8%), and other health professionals apart from the family doctor or general practitioners (21.6%), while 21.6% relied on their family doctor or general practitioner to have that information.

In this group of participants, knowledge about COPD was assessed based on the symptoms presented in the disease. The results reveal that almost 95% consider the symptom shortness of breath or difficulty breathing, 75.2% consider tiredness, 70.9% refer to cough as a symptom and 69.2% lack of endurance during exercise. Other symptoms, such as chest pain (35.2%), throat pain (10.2%) and fever (7.0%), were also reported.

For individuals with an effective awareness of COPD, the top three aspects that define a COPD crisis include worsening of symptoms, almost one-third, 31.6% of total. Following that, in very similar proportions, about one-fourth of respondents refer to a COPD crisis as a respiratory infection (25.0%) or a lung attack (24.5%).

The perceived seriousness of the disease of these respondents does not seem to correspond to reality; 8% of them even considered that COPD cannot be fatal. In turn, 62.6% consider it one of the ten leading causes of death in Portugal, and 29.4% recognise that COPD is one of the four leading causes of death. When looking into these results as smoker, non-smoker, or former smoker, it does seem that smokers are more aware that COPD is one of the four leading causes of death in Portugal compared to other groups. This does not seem to happen with the other two options, where non-smokers have a slightly higher number of answers. Young participants (18-24 years) with higher education levels and also exposure to tobacco are more aware of the seriousness of the disease.

Concerning COPD screening, just over half of the respondents (52.9%) who correctly recognise COPD know that Spirometry is essential to identify the disease; however, other options are recognised. In fact, CT scan and lung X-ray (55.8% and 53.9%, respectively) are the most commonly mentioned options by respondents. It is worth pointing out that 15.5% of those who reported knowing what COPD is said they did not know how the disease could be identified. The knowledge about Spirometry as a diagnostic test for COPD is higher among the population with tobacco exposure (55.2% of smokers and 61.0% of former smokers, against the 44.8% reported by non-smokers). Similarly, participants in the non-smokers' group have shown that they are less "aware" of how to identify COPD.

Another point that was raised in the survey was COPD severity. Participants with effective knowledge of what COPD is were asked about the severity of the disease on a scale of 1 ("nothing serious") to 10 ("very serious"); 80.8% graded between 8 to 10 (mean value 8.58) and 0.5% graded between 1 to 3. The results show this group of respondents recognise its severity.

In relation to COPD's impact on a patient's quality of life, again, on a scale of 1 ("No impact") to 10 ("much impact"), 89.8% consider that COPD has considerable impact (mean value is 9). Only 0.2% consider that has an impact between 1 to 3.

Curiously, in this sample, almost 90% refer to lung cancer as the disease they most associate with tobacco use.

The overall results obtained in this study highlight the importance of awareness and knowledge of COPD.

The most notable finding is that only one-third of respondents reported having heard of COPD, and of those individuals, just over one-fourth correctly identified it as a chronic lung disease. This level of knowledge was relatively higher among women living in urban areas with higher levels of education. Additionally, in the subgroup of respondents that correctly recognised what COPD is, less than 30% recognised the disease as one of the top four leading causes of death in Portugal. This highlights the lack of awareness and understanding about the severity and impact of this disease on the population.

Another important finding from the study is that just over one-third of respondents recognised what spirometry is. Furthermore, among those who correctly identified COPD, spirometry was only chosen as the third most common option for screening. The results suggest that the knowledge regarding this tool is far from ideal for promoting an early and accurate diagnosis, so improving knowledge about spirometry and its importance is essential, as reported in other studies.[9]

The evidence provided in this study indicates that smokers may be better informed about COPD in some of the surveyed issues.

It is also important to highlight that the respondents' profile regarding educational level is overrepresented in the study sample compared to the latest data available on *Census 2021* relating to the Portuguese population. In this study, almost half of the participants have a higher education degree, and according to Census 2021, only approximately 20% have a higher degree.[10] This could be an important indicator of the results concerning COPD knowledge and awareness in the Portuguese population since, in general, there is a clear relation between a higher education level and better knowledge about diseases, including respiratory diseases.[11] The effective knowledge among the Portuguese population could be even lower than what was portrayed in this study.

This study highlights COPD as a public health concern that needs to be addressed by health authorities through a national strategy that includes a comprehensive approach to bridge the knowledge gap in the Portuguese population from prevention to treatment within different healthcare sectors, primary health care and specialised care.

This demonstrates that there is still a long way to go in the improvement of knowledge and awareness of COPD among the general population. These results demand an urgent response. It is time to take action!

Given the low level of awareness among the general population, increasing education and access to diagnostic testing could be important steps in improving COPD outcomes in Portugal.

Conflicts of interest

Dr. Nuno Cortesão reports speaker fees from AstraZeneca, Linde, MSD and GSK.

Prof. Dr. Tiago Alfaro reports speaker fees from GSK, Bial, Boehringer Ingelheim, MSD, Novartis and AstraZeneca.

Prof. Dr. António Morais reports speaker fees from Boheringer, Sanofi, MSD, AstraZeneca and Bial.

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