Global Prevalence of Obstructive Sleep Apnea in Adults: Estimation Using Currently Available Data

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Rationale. Obstructive sleep apnea (OSA) is a major public health issue. The prevalence of OSA is thought to be increasing due to the obesity pandemic and the aging of the population. Improvements in technology over time have also improved our ability to detect OSA. Prevalence estimates have been made in some populations, but for other regions in the world prevalence is less clear. In 2007, The World Health Organization (WHO) estimated more than 100M people are affected by OSA, although they acknowledged that this value was not based on robust data. The aim of this study is to estimate the global adult prevalence of OSA. Methods. We brought together a group of key opinion leaders who have expertise in this area with a view towards estimating the global prevalence of OSA. We identified 16 countries with published prevalence papers based on objective sleep studies such as the Wisconsin Sleep Cohort data from the U.S. (34% men; 17% women), the Hypnolaus data from Switzerland (50% men; 23% women), the Ip data from Hong Kong (9% men; 4% women), the EPISONO data from Brazil (47% men; 31% women), the Reddy data from India (14% men; 6% women), and the Marshall data from Australia (24% men; 25% women). For certain regions, we found no reliable estimates of prevalence and thus assumed a population prevalence by utilizing BMI data from WHO and geography to match to an appropriate study. Population numbers including gender and age were obtained from the United Nations World Population Prospects. Results. The global adult population is 5.03B (2.50B men and 2.53B women). Prevalence statistics were applied to population numbers in each country based on the corresponding age range and gender. We also estimated prevalence of OSA based on severity [apnea hypopnea index (AHI) ≥5 and AHI ≥15] and gender. Based on our initial estimates, we believe that the global prevalence of OSA (AHI ≥5) in adults is in the range of 1 billion people. Conclusion. This number represents a major public health burden and speaks to the need for new approaches to allow for the diagnosis and treatment of OSA. In addition, the prevalence of OSA is likely to continue to increase over time due to demographic and other factors. OSA is a highly prevalent condition which still requires considerable ongoing advocacy efforts to raise awareness of the burden of disease and benefits of treatment and prevention.

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