

AB025. Association between sleep quality and non-communicable disease in Mexico: a national representative cross-sectional study

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Background: Decreased in sleep quality has become a global health problem. Mexican population has reported the highest prevalence of overweight and obesity (75.2%), hypertension (47.8%) and diabetes (18.3%) in his history. Therefore, this study aims to evaluate the association between sleep quality and overweight, obesity, hypertension, and diabetes in a national representative survey.

Methods: We use data from a national representative survey (ENSANUT 2016) to perform a cross-sectional study, with a sample of 8,649 adults and a representativeness of 71.1 million. Sleep quality was assessed by asking the hours of sleep, perception of the sleep quality, difficulties initiating or maintaining sleep, and early-morning awakening and the Berlin survey, stratifying in three categories. We used glycosylated hemoglobin, fasting glycemia, insulin, blood pressure, weight, and height measurements. Homeostatic model assessment (HOMA) index and body mass index (BMI) were calculated. Diagnosis of diabetes, hypertension and obesity were obtained using international criteria. Biochemical and anthropometric measurements were compared and associated with sleep quality and Berlin survey.

Results: Mean hours of sleep were 7.5, percentage of people sleeping less than 7.0 hrs was 23.98%, and 37.35% with difficulties to initiate or maintain sleep. In Berlin survey, category 1st was 30.74%, second 20.95%, and third 16.93%. Comparing the mean of people without positive categories (n=3,014) versus people with three positive categories (n=471) in Berlin survey, higher glycemia

(108.2 vs. 114.4 mg/dL), hemoglobin A1c (HbA1c) (5.6 vs. 5.9 mg/dL), insulin (11.4 vs. 16.3 UI), HOMA index (2.2 vs. 4.7), systolic blood pressure (116 vs. 126 mmHg), diastolic blood pressure (70 vs. 76 mmHg), BMI (25 vs. 34 kg/m²), and waist circumference (87 vs. 106 cm) were observed.

Conclusions: People who have worse sleep quality tend to have higher levels of BMI, blood pressure, glycemia, insulin, glycosylated hemoglobin values than those with better sleep quality.

Keywords: Sleep quality; diabetes; hypertension; overweight; obesity

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have completed the ICMJE uniform disclosure form (available at <https://jphe.amegroups.com/article/view/10.21037/jphe-2023-apru-ab025/coif>). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). The study is a secondary analysis of an open access database from the ENSANUT 2016 study, which has the approval of the Ethics Committee from the National Institute of Public Health of Mexico (INSP). All the participants signed a consent form, which belongs to the INSP.

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doi: 10.21037/jphe-2023-apru-ab025

Cite this abstract as: Castellanos-Torres P, Illescas-Zarate D. AB025. Association between sleep quality and non-communicable disease in Mexico: a national representative cross-sectional study. J Public Health Emerg 2024;8:AB025.