

Passive Smoking with Sleep Quality among Adults from an Indigenous African Population: Results from the COMBAT-CVDs Study

Akinkunmi Paul Okekunle^{1,2†}, Osahon Jeffery Asowata³, Onoja Matthew Akpa^{3,4,5},

¹Department of Medicine, College of Medicine, University of Ibadan, Nigeria. ²Department of Food and Nutrition, Seoul National University, 08826, Korea. ³Department of Epidemiology and Medical Statistics, College of Medicine, University of Ibadan, Nigeria. ⁴Institute of Cardiovascular Diseases, College of Medicine, University of Ibadan, Nigeria. ⁵Division of Epidemiology, Biostatistics and Environmental Health, School of Public Health, University of Memphis, USA.

Passive Smoking is linked with an increment in the odds of poor Sleep Quality. Context-specific public health interventions are indispensable for extenuating passive smoking exposure, especially among vulnerable populations, and its impact on Sleep patterns.

BACKGROUND

Passive smoking (PS) has been linked with cardiovascular diseases (CVD) and other health-related outcomes, but it is yet to be well known if PS is related to sleep quality (SQ) among indigenous Africans. This study evaluated the association of PS with SQ among adults who had never smoked in an indigenous African population.

RESULTS

Almost 1,572 (49.2%) were males, and the mean age was 34.8±15.1 years. PS exposure was associated with a 0.29 unit rise in SQ scores (β : 0.29, 95%CI: 0.19 – 0.38; $P < 0.001$) in the entire sample after adjusting for age, sex, family history of CVD, education, income, living residence, alcohol use, physical inactivity, waist-to-hip ratio scores, and hypertension status. The sex- and age-stratified analysis revealed similar trends with higher estimates among females and those < 50 years. [Figure 1](#)

METHODS

Overall, 3,193 participants who had never smoked or used tobacco products were identified in the Community-based Investigation of the Risk Factors for Cardiovascular Diseases in the Ibadan and suburbs (COMBAT-CVDs) study in Ibadan, Nigeria. Participants self-reported PS exposure, defined as “no” or yes. Also, a standardized SQ scale was applied to determine SQ, denoting that higher SQ scores imply poor SQ. A multivariable-adjusted linear regression model was used to estimate the beta (β) coefficient and 95% confidence interval (CI) for higher SQ scores in a continuous model by PS status adjusting for relevant covariates at a two-sided $P < 0.05$.

CONCLUSIONS

In this study, PS is linked with an increment in SQ scores and, by extension, poor SQ. The impetus of culturally – appropriate interventions (and, where possible, legislation) cannot be underscored in protecting the vulnerable, particularly populations who do not smoke, from the potential impact of tobacco smoke on health outcomes.

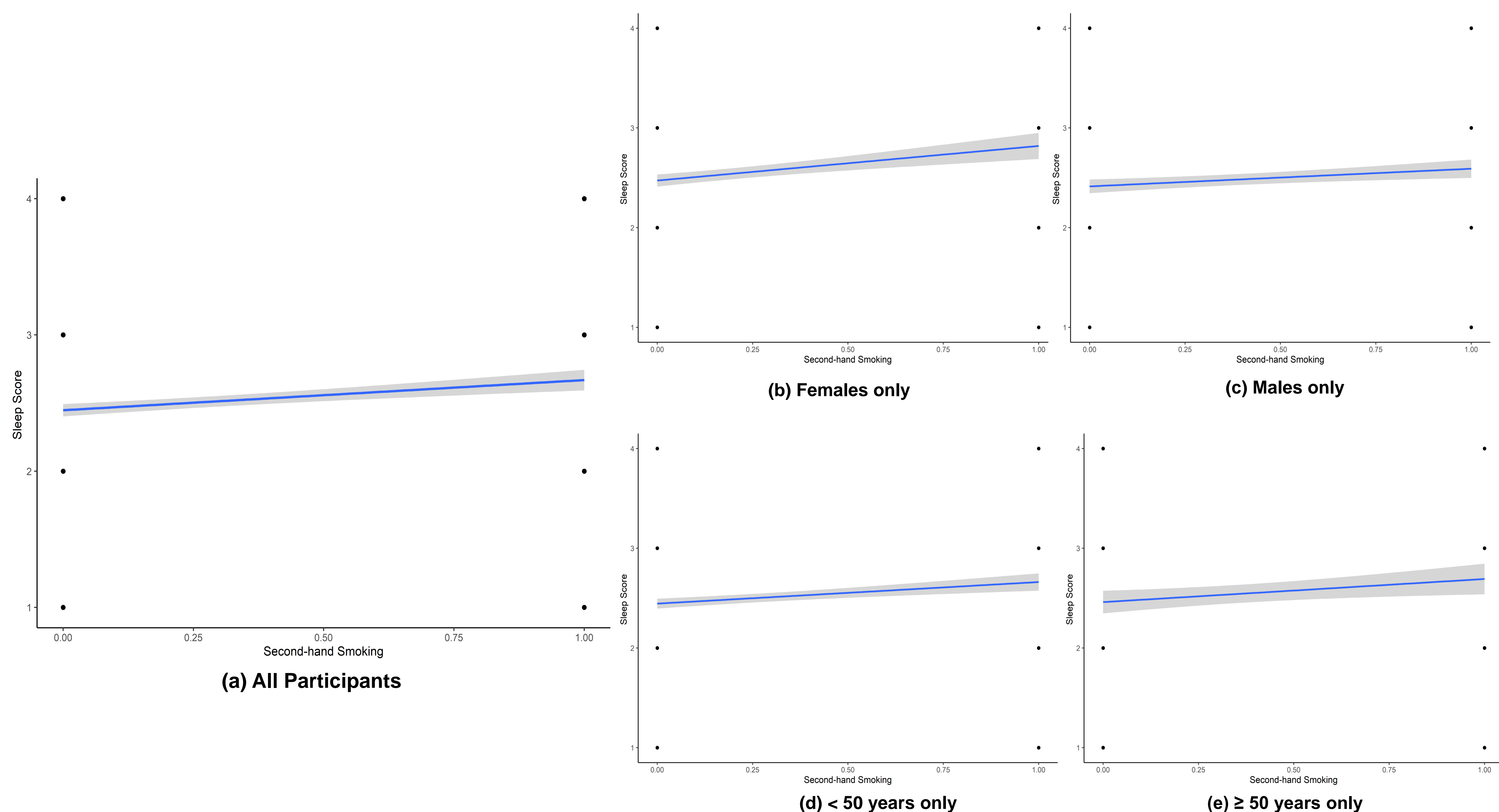


Figure 1: The multivariable-adjusted linear models for the associations between passive smoking exposure and sleep quality scores among all participants (a), females only (b), males only (c), < 50 years (d) and ≥ 50 years (e)

ADDITIONAL KEY INFORMATION

†Author Contact Information: College of Medicine, University of Ibadan, Ibadan, Nigeria. email: akinokekunle@gmail.com. **Data Availability:** Individual participant data that underlie the results reported in this article (text, tables, and figures) has been de-identified. The dataset is available upon reasonable request, and a proposal to access the data should be directed to the COMBAT-CVDs study data access committee (PI: onojamatthew@yahoo.co.uk). Data requestors will need to sign a data access agreement. **Acknowledgements:** We want to thank all volunteers for participating in the study. **Funding Source:** None. **Conflicts of Interest:** None declared.