Supplementary Materials 1

HIGHLIGHTS

- Brick producers, their families, and the rest of the population unrelated to brick production are exposed to particulate compounds ($PM_{2.5}$ and PM_{10}). AQS scores, VOCs, and their causes need to be further studied.
- Studies have shown that pollution is associated with an attenuated rate of lung function decline from early adulthood.
- Being children, women, elderly, and living close to artisanal brick production are risk factors for impaired lung function and developing asthma.
- Being children (male) exposed to artisanal brick production, being overweight, having a low weight for age, and living with food insecurity are risk factors that increase the effects of bad air quality.
- The frequency of respiratory symptoms can be measured.
- Follow-up on the measurement of health indicators and symptoms in vulnerable populations (children, the elderly, women, and those with diseases) should be undertaken.
- The advantages and disadvantages regarding governmental intervention are as follows: The advantages of cleaner brick production are reductions in the direct impact of health risks on producers, their families, and the environment. Regarding economic and social aspects, it achieves fair prices, and producers participate in a formal market where they can have access to health services and perform less precarious work. A disadvantage is that since it is a new low-emission or -polluting technology, the price of bricks is 50% higher (according to an analysis by producers and the government); therefore, construction companies do not pay fair prices, generating an inequitable and unfair transformation in efforts to transform an economic sector that has undergone years of precarious and neglected work by governments.
- This study contributes to the description and analysis of low-cost portable sensors, such as ATMOTUBE. Nonetheless, the reliability, sensitivity, and specificity of the equipment, as well as other brands or models of sensors for measuring air quality, must be further reviewed in highly contaminated environments, such as the brick-kilning economic sector studied.
- Guanajuato changed government in September 2024, and its Secretariat of Environment and Territorial (SMAOT) (Secretaria de Medio Ambiente y Desarrollo Territorial in Spanish) is currently called the Secretary of Water and Environment (SAMA) (Secretaria del Agua y Medio Ambiente in Spanish), who recently

began work with the Intergovernmental Joint Commission and will continue with the Government Decree (December 2024).

- [a] Link of current air quality- monitoring program: "Pilot Platform of Citizen Air Quality Surveillance System (In Spanish: Plataforma ciudadana de calidad del aire)":

https://www.ugto.mx/campusleon/dcs/redicinaysa-noticiasnovedades/redicinaysa-sistema-de-vigilancia-ciudadana-de-la-calidad-del-aire

Monroy-Torres, R. REDICINAySA, Suppl 2; 2024. https://www.ugto.mx/campusleon/dcs/images/redicinaysa/publicaciones/2024/REDICINAYSA_SUPLEMENTO_ESPECIAL2_SISTEMA-DE-VIGILANCIA.pdf