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ORIGINAL RESEARCH

39. Cross Sectional Study on Air Pollution and its Influence on Health-Related Quality of Life in Coimbatore.

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https://www.youtube.com/watch?v=4rJ3DHWeKRs&list=PLhqNq3xJClbafO0Y5bvBcgMmXpgzJxd44&index=6&t=7662s

Background: The air quality inside and outside of buildings and structures is referred to as indoor air quality (IAQ), particularly as it pertains to the comfort and health of building occupants. Since most individuals spend 90% of their time indoors, mostly at home or at work, indoor environment conditions have a significant impact on human wellbeing. Air quality is closely linked to global ecosystems and climate, and the impact of indoor air pollution on people's quality of life is an iceberg.

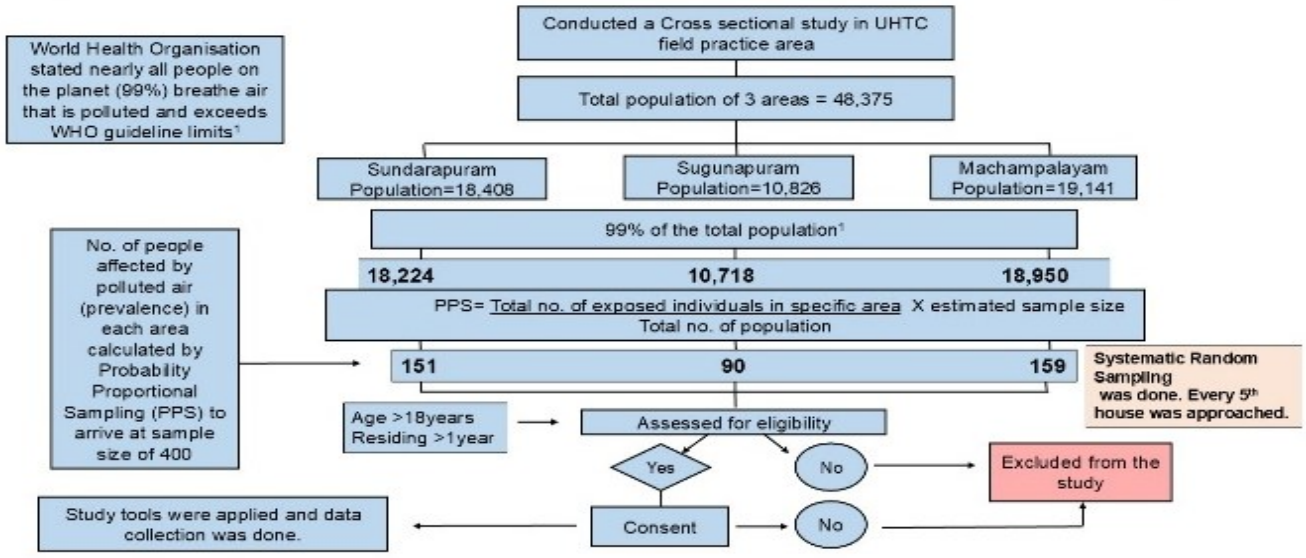
Objectives: The study aim to assess the indoor air pollution and its influence on Health Related Quality of Life (HRQoL) in an urban population.

Methods: A cross sectional study was conducted among 400 adults under an urban field practice area of a private college using systematic random sampling. The semi-structured questionnaire was designed for indoor air pollution along with EuroQol 5-Dimension 5-level (EQ-5D-5L); EuroQol Visual Analogue Scale (EQ VAS) was used. The data collected was entered in Microsoft Excel and analysed using SPSS software v.25. Descriptive statistics such as mean (SD), proportion has been done accordingly with inferential statistics chi-square test was used to see association between categorical variables. Cox proportional hazard model – hazard ratio and Kaplan Meier Curve – visualize life expectancy deterioration (LED) was done accordingly.

Results: The prevalence of indoor air pollution was 72.5% in our study area. Based on EQ 5D 5L, the mean (±SD) score is 0.86 (±0.17), and the EQ VAS score is 76.3 (±11.1) of satisfactory life. There was a significant association between the presence of indoor air pollution and poor health based on EQ-5D-5L score (0.041) type of family (0.002), overcrowding (0.009), second-hand smoking (<0.01), and comorbidities (<0.01).

Conclusion: The study highlighted that indoor air pollution negatively affects the quality of life in the study population, with a 4.56 years loss in Quality-Adjusted Life Expectancy (QALE). To improve the health and well-being of the population, we recommend to enhance the air quality monitoring with strict regulations, using alternate sources of energy in all possible fields, and early detection of the disease as well as health interventions to mitigate the impact of pollution-related health issues.

Figure 1. Flow Chart Depicting Methodology of the Study.



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