

## **Ecological study of sick building syndrome among healthcare workers at johor primary care facilities**

### **ABSTRACT**

Introduction: Persistent exposure to indoor hazards in a healthcare setting poses a risk of SBS. This study determines the prevalence of and risk factors for SBS among healthcare workers in health clinics. Methods: A cross-sectional study was conducted across four health clinics from February 2022 to May 2022. As part of the study, self-administered questionnaires were completed to determine symptoms related to SBS. An indoor air quality (IAQ) assessment was conducted four times daily for fifteen minutes at five areas in each clinic (laboratory, lobby, emergency room, pharmacy, and examination room). Result: Most of the areas illustrated poor air movement ( $<0.15$  m/s), except for the laboratory. The total bacterial count (TBC) was above the standard limit in both the lobby and emergency room ( $>500$  CFU/m<sup>3</sup>). The prevalence of SBS was 24.84% (77) among the healthcare workers at the health clinics. A significant association with SBS was noted for those working in the examination room (COR = 2.86; 95% CI = 1.31; 6.27) and those experiencing high temperature sometimes (COR = 0.25; 95% CI = 0.11; 0.55), varying temperature sometimes (COR = 0.31; 95% CI = 0.003), stuffy air sometimes (COR = 0.17; 95% CI = 0.005; 0.64), dry air sometimes (COR = 0.20; 95% CI = 0.007; 0.64), and dust sometimes (COR = 0.25; 95% CI = 0.11; 0.60) and everyday (COR = 0.34; 95% CI = 0.14; 0.81). Only healthcare workers in the examination room (AOR = 3.17; 95% CI = 1.35; 7.41) were found to have a significant risk of SBS when controlling for other variables. Conclusion: SBS is prevalent among healthcare workers at health clinics.