

ANALISIS INDOOR AIR QUALITY TERHADAP GEJALA *SICK BUILDING SYNDROME* PADA PEKERJA DI PT X TAHUN 2023

Alya Diah Ullhaque

Abstrak

Kualitas udara dalam ruangan yang buruk dapat berdampak negatif pada kesehatan manusia. Lingkungan kerja yang berada di dalam ruangan tertutup dan sistem ventilasi yang kurang memadai dapat meningkatkan risiko pekerja mengalami gejala *sick building syndrome*. Penelitian ini bertujuan menganalisis faktor risiko yang paling memengaruhi dengan gejala *sick building syndrome* pada pekerja di PT X. Penelitian menggunakan desain studi *cross-sectional* dan data diolah dengan uji *chi-square* dan uji regresi logistik ganda dengan sampel seluruh pekerja area produksi di PT X yang berjumlah 91 pekerja. Pengukuran karbon monoksida, suhu, kelembaban, PM₁₀, dan formaldehida menggunakan alat *particle counter*, sedangkan pengukuran kecepatan angin menggunakan alat anemometer. Pengukuran dilakukan di 17 titik. Hasil penelitian menunjukkan 85 dari 91 pekerja (93,4%) mengalami gejala *sick building syndrome*. Terdapat hubungan antara variabel suhu ($p\text{-value}=0,013$) dan kecepatan angin ($p\text{-value}=0,031$) gejala *sick building syndrome*. Variabel paling dominan adalah variabel formaldehida (POR=0,457). Disimpulkan bahwa variabel yang berhubungan dengan gejala *sick building syndrome* adalah suhu dan kecepatan angin dengan variabel formaldehida sebagai variabel paling dominan. Disarankan bagi perusahaan untuk melakukan monitoring kualitas udara dalam ruangan secara berkala dan memperbaiki sistem ventilasi di area produksi.

Kata Kunci: Kualitas udara dalam ruangan, Pekerja, *Sick building syndrome*

ANALYSIS OF INDOOR AIR QUALITY ON SICK BUILDING SYNDROME SYMPTOMS AMONG WORKERS AT PT X IN 2023

Alya Diah Ullhaque

Abstract

Poor indoor air quality can harm human health. A closed indoor work environment and an inadequate ventilation system can increase the risk of sick building syndrome symptoms. This study aims to analyze the most significant risk factors with symptoms of sick building syndrome in workers at PT X. The study used a cross-sectional study design and the data was processed with the chi-square test and multiple logistic regression tests with a sample of all production area workers at PT X. A total of 91 workers included in this study. Carbon monoxide, temperature, humidity, PM₁₀ and formaldehyde were measured using a particle counter and wind speed was measured using an anemometer. Measurements were taken at 17 different points. The results showed that 85 out of 91 workers (93.4%) experienced symptoms of sick building syndrome. There is a relationship between temperature (p-value=0.013) and wind speed (p-value=0.031) symptoms of sick building syndrome. The most dominant variable is the formaldehyde (POR=0.457). It is concluded that the variables associated with symptoms of sick building syndrome are temperature and wind speed, with formaldehyde being the most dominant. The company is advised to monitor indoor air quality regularly and improve the ventilation system at the production area.

Keywords: Indoor air quality, Sick building syndrome, Workers