Indoor Mold and Respiratory Health: Assessing Aerosol-Linked Symptoms in University Dormitories

Ainin Sofiya Sarif[1], Nor Ashikin Sopian[1]

[1] *Faculty of Industrial Sciences and Technology, Universiti Malaysia Pahang Al-Sultan Abdullah, Lebuh Persiaran Tun Khalil Yaakob, Kuantan, Pahang 26300, Malaysia*

Abstract

Mold in university dormitories can severely impact residents' health, contributing to respiratory illnesses such as cough and phlegm production. This study investigates the relationship between the prevalence of respiratory diseases among students at Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) and the indoor environmental conditions of university dormitories. Data were collected from 150 respondents through a validated health survey and assessments using the Dampness and Mold Assessment Tool (DMAT). The most frequently reported respiratory symptom was wheezing (28.7%), while the least common was chest pain (14%). Mold and dry air were found to be significant predictors of respiratory symptoms using logistic regression analysis. While dry air increased the likelihood of producing phlegm (OR = 2.680, 95% CI = 1.113–6.453), mold exposure significantly raised the probability of coughing (OR = 3.597, 95% CI = 1.450–8.923) and phlegm (OR = 2.567, 95% CI = 1.071–6.149). A total of 64.1% (Nagelkerke R2) of the variation in respiratory symptoms was explained by the logistic regression model. These results highlight the importance of addressing indoor environmental issues like mold and air quality to reduce health risks and enhance the well-being of residents in dormitories. To alleviate symptoms among students, it is recommended to conduct regular cleaning, maintenance and inspections of the dormitory building.

Keywords: Indoor environment; mold; respiratory health