

University Students' Indoor Air Quality Knowledge and Practices in RAK.

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Background

Indoor air quality (IAQ) refers to the air quality within and around buildings, particularly in relation to the health and comfort of building occupants. IAQ can be affected by temperature, humidity, ventilation, and exposure to pollutants like mold and chemicals. Poor IAQ is linked to various health issues, such as respiratory problems and cognitive impairment. This study is set against the backdrop of the UAE's national air quality agenda, including public awareness campaigns to address indoor and outdoor air pollution.

Objective

The study aimed to evaluate the level of knowledge about indoor air quality (IAQ) among university students in Ras Al-Khaimah and assess their practices in maintaining or improving IAQ in their environments. It seeks to identify knowledge gaps and areas where increased awareness and education could enhance students' efforts to improve IAQ.

Methods

A cross-sectional survey was conducted at three universities: RAK Medical and Health Sciences University (RAKMHSU), the American University of Ras Al-Khaimah (AURAK), and the University of Bolton. A convenience sampling technique was used, with 386 students participating. The data was collected through a pre-validated, 10-question questionnaire distributed via Google Forms and face-to-face interactions. Statistical analysis, including t-tests and chi-square tests, was performed using IBM SPSS version 29 to explore relationships between demographic factors and IAQ knowledge, with a significance level of $p < 0.05$.

Results

The study revealed that only 26.9% of students demonstrated appropriate indoor air quality (IAQ) knowledge. Medical students and females had significantly higher knowledge scores than their non-medical and male counterparts. The most common sources of IAQ awareness were online platforms, while academic resources were underutilized. Despite the knowledge gap, 85.2% of the students reported engaging in positive practices to improve IAQ, such as opening windows and avoiding indoor smoking. Those with higher knowledge were more likely to engage in these positive behaviors (**Figure 1**).

Association between total knowledge score and practice of respondents

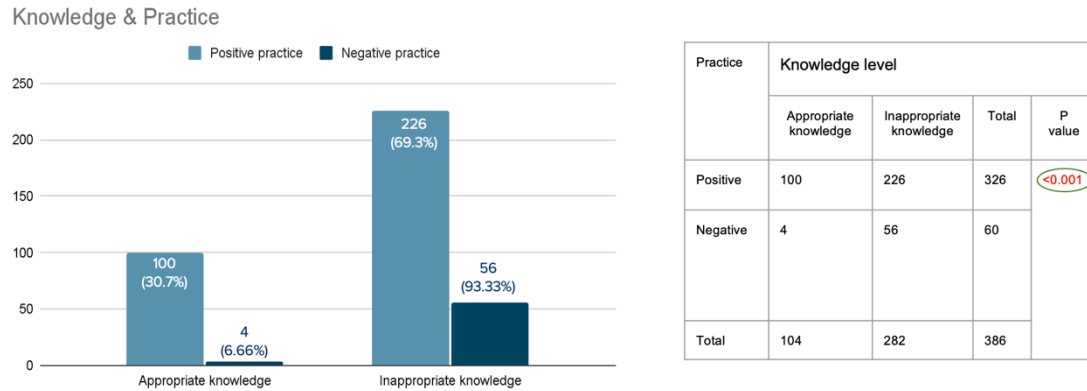


FIGURE 1: The association between knowledge level and positive practices to improve IAQ is statistically significant with a p-value of less than 0.001. This suggests that individuals with appropriate knowledge regarding IAQ are more likely to engage in positive practices compared to those with inappropriate knowledge.

Conclusion

The study found that while university students had generally low knowledge about indoor air quality, they engaged in relatively positive practices to improve it. The results underscore the need to reinforce academic resources and promote awareness initiatives to bridge the knowledge gap. Future research should explore broader populations' attitudes and practices towards IAQ, mainly focusing on how well-informed individuals can influence public perceptions.

Keywords

Indoor Air Quality (IAQ), University Students, Knowledge and Practices, Air Pollutants, Awareness, Cross-sectional Survey.