

## **Noise Exposure, Awareness and Practice in Faculty of Engineering Workshops, UiTM**

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### **Structured Abstract**

**Background:** Noise is a significant physical pollutant in workplaces, particularly in environments such as engineering workshops. Prolonged exposure to high noise levels can result in adverse health effects, including hearing loss, stress, and cognitive impairments. This study focuses on evaluating noise exposure, awareness, and practices among students in the Faculty of Engineering Workshops at UiTM. The aim is to identify noise levels, develop noise mapping, and assess the relationship between noise exposure and health impacts on students.

**Methods:** A comprehensive study was conducted, which involved noise level measurements and a survey among students. Noise levels were measured using a sound level meter (SLM) across different locations within the workshops. A questionnaire was administered to assess students' awareness of noise exposure and its impact on their health, particularly focusing on cognitive functions and stress levels. The data collected were analyzed using Pearson's correlation to identify the relationship between noise exposure and reported health effects.

**Results:** The noise levels in the workshops ranged from 75.9 dB(A) to 93.2 dB(A), with some areas exceeding the recommended exposure limits. The survey results indicated significant concerns among students regarding speech comprehension and concentration due to noise. About 94.4% of students found the noise levels annoying, and only 66.7% consistently used personal hearing protectors (PHP). The analysis revealed a strong correlation between high noise levels and negative impacts on cognitive functions and stress.

**Conclusion:** The study concluded that high noise levels in UiTM's engineering workshops negatively impact students' cognitive functions and stress levels, highlighting the need for regular noise monitoring and the use of personal hearing protectors. Implementing quieter equipment, soundproofing measures, and regular maintenance are recommended to reduce noise exposure.

**Keywords:** Noise exposure, Cognitive functions, Stress levels, Personal hearing protectors, Noise mapping

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