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IN MEDICAL IMAGING:
FROM PATIENTS TO PIXELS
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Knowledge And Awareness of Magnetic Resonance Imaging Safety Among Healthcare Workers in A Single Medical Centre

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Introduction: Magnetic resonance imaging (MRI)-related incidents reported to the U.S. Food and Drug Administration (FDA) between 2008 and 2017 indicated that 59% involved serious thermal injuries, followed by 11% traumatic events, 9% projectile-related accidents, and 6% acoustic injuries. Locally, a medical centre in Klang Valley recorded three projectile-related MRI incidents between 2015 and 2023 that involved both clinical and non-clinical staff. Despite these occurrences, no official study in Malaysia has assessed healthcare workers' knowledge and awareness of MRI safety protocols. Given their critical role in ensuring a safe MRI environment, this study aimed to evaluate the level of MRI safety knowledge and awareness among healthcare workers at a single medical centre. **Methods:** A descriptive cross-sectional study was conducted using a structured questionnaire distributed electronically from August to October 2024. A total of 268 healthcare workers from various departments voluntarily participated. Scores were categorised as high, moderate, and low levels of knowledge and awareness. **Results:** Associations with demographic factors were analysed using the chi-square test. The results indicated that most participants demonstrated good knowledge and awareness of MRI safety. Significant associations were found between professions and both knowledge and awareness. However, no statistically significant associations were observed with gender or age. Although education and work experience were not significantly associated with knowledge levels, both were significantly associated with awareness. **Conclusions:** This study provides the first local baseline data on MRI safety knowledge and awareness, highlighting the need for role-specific training and supporting policy development to enhance MRI safety practices.

Keywords: awareness, knowledge, MRI safety, healthcare workers