Assessing Knowledge, Attitude, and Practices (KAP) Towards Indoor Air Quality Management Among Kindergarten Teachers in Putrajaya, Malaysia

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Research conducted in Malaysian kindergartens has reported elevated levels of indoor air pollutants. Poor ventilation, high occupant density, and the use of cleaning products or materials that emit harmful substances have been identified as key contributors. These conditions not only compromise children's health but also hinder cognitive performance and learning engagement. In response to these concerns, a cross-sectional survey was conducted from 1st April to 1st June 2025 to assess the levels of knowledge, attitude, and practices related to IAQ among kindergarten teachers in Putrajaya, Malaysia. A set of survey questionnaire was distributed through an online Google survey form to all kindergarten teachers and 59 responses were collected. Results showed that 87.1% of teachers had a higher degree of knowledge and attitude towards IAQ. In terms of practices, a moderate level of practices among nearly half (58.1%) of the teachers was noted. The Spearman correlation analysis revealed strong positive relationships among knowledge, attitude, and practice scores related to IAQ. Notably, the strongest correlation was observed between attitude and practice ($\rho = 0.946$), indicating that individuals with more positive attitudes toward indoor air quality (IAQ) management are significantly more likely to engage in good IAQ practices. Additionally, high knowledge levels were also strongly associated with both positive attitudes ($\rho = 0.786$) and practices ($\rho = 0.749$). Although the correlation analysis revealed strong positive relationships between KAP, the overall moderate level of IAQ practices among teachers suggests that other external factors may be limiting the implementation of good IAQ practices in kindergartens.