

Usage of Generative Tools and Knowledge, Attitudes, Perceptions on Artificial Intelligence Among Dental Undergraduates – A Cross-Sectional Survey

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Artificial Intelligence (AI) has diversified its applications into healthcare and higher education, broadening into dentistry and dental education. The objective of the current study was to assess the knowledge, attitudes, perceptions on AI and usage of GenAI tools by dental undergraduates. A cross-sectional survey was conducted among a random sample of dental undergraduates (n=225). A questionnaire was developed with 10 questions (yes/no) for knowledge, 10 questions (5-point Likert's scale) for attitudes and perceptions. Level of knowledge was categorised based on the number of 'Yes' responses 10-8 good, 7-5 fair and <5 as poor. Descriptive statistics were obtained using Microsoft Excel. Of the respondents, 91.1% (205/225) had used Generative AI tools. Most common GenAI tools used was Chat GPT 88.9% (200/225), Google Bard 14.7% (33/225), and Microsoft Bing Chat 8% (18/225). From the total cohort 24.4% (55/225) were daily users, while 36.0% (81/225) used them weekly, and 25.8% (58/225) rarely. Knowledge score among AI users was rated as good in 30.7% (63/205), fair in 51.2% (105/205) and poor in 18.0% (37/205). Regarding attitudes, 61.3% (138/225) either agreed and strongly agreed that AI tools can help them study and improve their grades, while 42.2% (95/225) believed these tools can help them become better dental surgeons. However, only 39.1% (88/225) thought its acceptable to use GenAI tools for assignments and case reports. 58.7% (132/225) thought AI tools can reduce the creativity of humans and 38.2% (86/225) stated AI can surpass humans. Furthermore, 51.1% (115/225) of the cohort believed AI would become an essential tool for higher education and healthcare in future. Our results furnish important insights for educators and policymakers on students' knowledge and perspectives on AI, which are critical considerations when incorporating AI into curriculum, teaching, and assessments.

Keywords: Artificial Intelligence, Dental Undergraduates, Sri Lanka