

Limited Perceptions and Knowledge of Undergraduate Dental Students about Artificial Intelligence in Dental Schools, Cross-sectional study

Objective:

This study aims to assess the perceptions and knowledge of undergraduate dental students about artificial intelligence (AI) in dental schools through a cross-sectional study.

Methodology:

This was a multicenter, cross-sectional study. Participants recruitment was achieved by sending an online questionnaire to the undergraduate students at the assigned universities. The questionnaire consisted of two parts. The first seven questions record general information about participants and their perceptions of AI. The remaining questions are about the knowledge of participants about the applications of AI. The data was analysed using SPSS version 26.

Results:

165 undergraduate students from 20 universities related to the dental sciences responded to the questionnaire. 80.6% of participants found the use of AI in dentistry exciting. I have a basic knowledge of the working principles of artificial intelligence. 80.6% of participants believe that applications of AI should be part of undergraduate dental training. 66.6% of students are aware of the opportunities and threats that AI can create. The results show that 75% of the students indicated that they got their information about AI through social media. Regarding the association of years of studies with AI applications used in periodontics, the knowledge about AI applications in 'aggressive periodontics', 'compromised teeth', and 'success in rate of dental implant' was significantly higher in senior students than junior students ($p < 0.05$). Concerning applications of AI used in restorative dentistry and prosthodontics, only 'computer colour matching', tooth surface losses', and 'I do not know' showed statistical significance ($p < 0.05$) with the year of study of participants. Senior students show significantly better knowledge in 'success in re-treatment' and 'working length determinant'.

Conclusion:

Although undergraduates are enthusiastic about AI and aware of its threats and benefits, their knowledge is limited. In addition, undergraduate programmes must exert more effort to prepare students for the era of artificial intelligence.