**Questionnaire Study on Artificial Intelligence and machine learning in Orthodontics**

This online survey is about knowledge, perception and attitude towards the use of Artificial intelligence in dentistry amongst orthodontic academicians, clinicians and postgraduate students. However, participation in the study is voluntary and participant identity, personal and study data will be kept anonymous

**Section 1**

DEMOGRAPHIC DATA

Name:

Age:

Gender:

Place:

Student/ clinician/ academician:

Years in practice:

Year of study (for pg students):

College/clinic name:

Contact details:

**Section 2**

BASIC KNOWLEDGE ABOUT Artificial Intelligence

1. How aware are you about the use of AI in routine daily life (like speech recognition, text recognition, email spam filters)?

Not at all aware

Not so aware

Somewhat aware

Extremely aware

1. Which of the following is an AI app ?
   1. Alexa
   2. Cortana
   3. Siri
   4. All of the above
2. What according to you is Artificial intelligence
   1. Playing games on computer
   2. Solving complex mathematical problems
   3. Computer programming language
   4. Branch of science dealing with algorithms to simulate human intelligence
3. Do you have basic understanding of Artificial intelligence terminologies like machine learning, deep learning?

Not at all aware

Not so aware

Somewhat aware

Extremely aware

1. What is machine learning

A subset of AI where computer program learns automatically from experience

AI is synonymous with machine learning

A subset of deep learning to solve complex problems

None of the above

1. How did you get to know about AI?

Conferences

Lectures in university

Web browsing and Social media

Newspaper and magazines

1. What are your concerns of use of AI

Data privacy

Hacking and cyber security attacks

Fear of job replacement

Less human interaction with the patient

**Section 3**

ATTITUDE TOWARDS Artificial Intelligence IN DENTISTRY

1. AI can revolutionize dentistry in general.

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. AI can be used as a tool for diagnosis and treatment planning in dentistry

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. AI can be used as a quality control system to evaluate the treatment results/ success

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. If there is disagreement between AI judgment and dentist’s judgment, I will follow AI’s judgment?

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. AI will be helpful to budding dentists in diagnosing and for decision making in difficult clinical situations.

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. AI can be perceived as a partner rather than a competitor in forseeable future of dentistry

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. Do you agree that the use of AI should be recommended to fellow practitioners

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. Are you of the opinion that AI should be introduced in regular curriculum of graduate and post graduate students pursuing dentistry

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

**Section 4**

AI IN ORTHODONTICS

1. Do you think AI can be a useful tool for boosting performance and enhancing the quality of care in orthodontics?

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. AI can be used in orthodontics for

Bone age assessment

Extraction vs non extraction decision making

Cephalometry

All of the above

1. You are currently using AI in cephalometry for

Cephalometric tracings

Automated landmark identification and cephalometric analysis

Manual landmark identification and cephalometric analysis

Not using AI

1. AI for bone assessment using CVMI staging can be helpful tool to overcome inter examiner bias

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. Which is the best and most accurate software for CVMI assessment using AI?

Res- Net 18

Inception Res-Net V2

Inception V3

Mobile Net V2

1. AI can be a useful tool in decision making for orthognathic surgery of skeletal malocclusion using lateral cephalograms.

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. Do you agree that AI software for post treatment smile prediction (like “Smile view” Invisalign), can increase the patient acceptance for orthodontic correction?

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree

1. The incorporation of AI to CBCT analysis will be a valuable addition to diagnosis and planning

Strongly disagree

Somewhat disagree

Undecided

Somewhat agree

Strongly agree