

REVIEWER'S REPORT

Manuscript No.: IJAR-54484

Date: 23-10-2025

Title: AI powered smile in dentistry A review

Recommendation:

Accept as it is

Accept after minor revision ...✓.....

Accept after major revision.....

Do not accept (Reasons below)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality			✓	
Clarity		✓		
Significance			✓	

Reviewer Name: **Sudhanshu Sekhar Tripathy**

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewer's name.

Reviewer's Comment for Publication

The manuscript titled “AI Powered Smile in Dentistry” presents an informative overview of the applications of Artificial Intelligence (AI) across various branches of dentistry, with a particular focus on diagnostic accuracy, treatment planning, and digital smile design. The topic is relevant and timely, reflecting the ongoing technological evolution in oral healthcare. The paper is well referenced and covers diverse subfields such as AI-assisted diagnostics, teledentistry, radiology, and ethical considerations. However, **minor revisions** are needed to improve organization, strengthen the abstract, and refine the presentation.

Recommendation: Accept after Minor Revision

Detailed Reviewer's Report

1. Scope & Relevance

- The topic is highly relevant to modern **digital dentistry and AI-driven healthcare innovation.**

REVIEWER'S REPORT

- The manuscript effectively highlights how AI enhances diagnostic precision, clinical decision-making, and patient satisfaction.
- The inclusion of **AI in smile design and oral radiology** is of great practical and academic interest.
- The work aligns well with current global research trends in AI-assisted dental care.

2. Structure & Technical Presentation

- The paper follows a generally logical structure (Abstract → Introduction → Applications → Ethical Issues → Conclusion).
- **Abstract:** informative but could be refined to include clearer objectives, findings, and keywords.
- Some subheadings (e.g., *Applications in Oral Medicine and Radiology*) can be merged or streamlined to avoid redundancy.
- Figures mentioned in the text should be properly numbered and captioned.
- Overall readability is good, though section transitions could be slightly smoother.

3. Methodological / Analytical Details

- As a **review-based paper**, the descriptive approach is appropriate.
- The discussion includes multiple dimensions—clinical, technological, and ethical—which enhances its comprehensiveness.
- Adding a short note in the introduction clarifying that this is a *narrative or literature-based review* would improve clarity.
- The section on *AI techniques (ANN, PCA, Fuzzy Logic, etc.)* is well-detailed; it could benefit from a brief comparative table summarizing their dental applications.

4. References & Citations

- The reference list is extensive and includes several **recent sources (2023–2025)**, which strengthens its credibility.
- Some references are duplicated or inconsistently formatted—please standardize using a uniform style (APA or IEEE).

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REVIEWER'S REPORT

- A few citations in the abstract and introduction are missing; ensure every major claim is referenced.
- Maintain consistent numbering and remove extra spaces or line breaks.

5. Language & Style

- The manuscript is generally well-written and understandable.
- Minor grammatical corrections are needed (e.g., spacing, punctuation, and capitalization).
- Avoid long, compound sentences; use concise phrasing for clarity.
- Ensure consistent use of terminology (e.g., “Artificial Intelligence” vs. “AI”).
- Improve coherence between sections through brief linking sentences.

6. Key Strengths

- Comprehensive coverage of AI across **diagnostics, prosthodontics, radiology, and teledentistry**.
- Balanced discussion of **ethical, regulatory, and data privacy issues** in clinical AI applications.
- Includes multiple references demonstrating up-to-date literature awareness.
- Integrates both **clinical relevance and technological perspective**, offering a holistic view of digital dentistry.

7. Areas for Improvement (Minor Revision Needed)

1. **Refine Abstract** — include objectives, scope, and key outcomes clearly.
2. **Standardize references** and eliminate duplicates.
3. **Label and caption figures** correctly.
4. **Smoothen transitions** between sections for better logical flow.
5. **Proofread for grammar and formatting** before final submission.

Final Feedback to Author

This manuscript contributes a valuable and timely discussion on the impact of Artificial Intelligence in dental practice and smile design. It demonstrates strong content depth and broad literature coverage. With minor revisions in

International Journal of Advanced Research

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REVIEWER'S REPORT

structure, formatting, and stylistic polish, it will be suitable for publication and serve as an insightful reference in AI-driven oral healthcare research.