



IoT-Enabled Smart Toothbrushes for Oral Hygiene Monitoring

A Comparative Study Among Undergraduate and Dental Students in District Mandi, India



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INTRODUCTION & AIM

- Oral diseases affect 3.5 billion people globally, causing significant morbidity.
- Despite brushing being a basic preventive measure, proper duration and technique are often neglected.
- Manual brushing lacks quantifiable monitoring and real-time correction.
- IOT integration aims to standardize technique through digital feedback.

Objectives

- ✓ Assess IOT technology awareness
- ✓ Compare UG vs Dental hygiene practices
- ✓ Evaluate digital monitoring acceptance
- ✓ Explore IoT in preventive dentistry

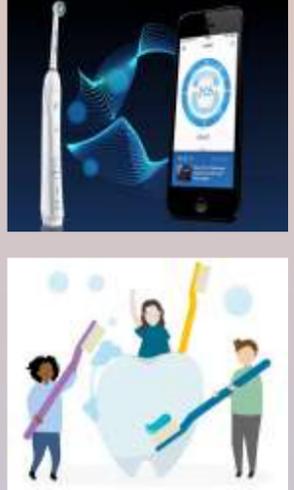
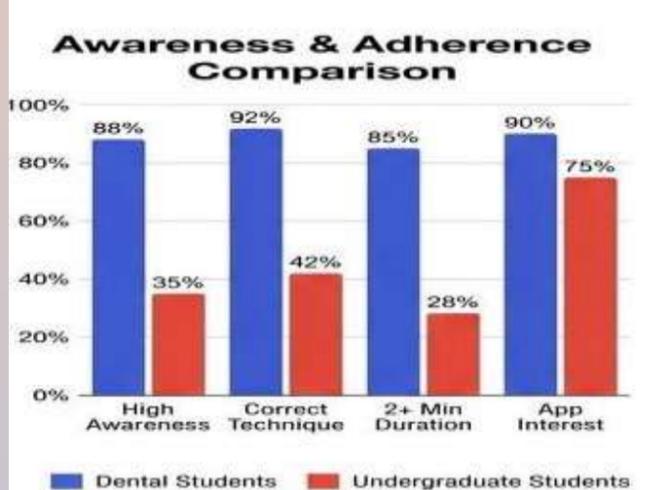
METHODOLOGY

<p>STUDY DESIGN Cross-sectional comparative study</p>	<p>LOCATION Mandi, Himachal Pradesh, India</p>	<p>SAMPLE (N=100) 50 UG 50 Dental Students</p>
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Data Collection

- ✓ Structured questionnaire on habits
- ✓ Smart tech awareness levels
- ✓ Statistical comparative analysis

RESULTS & DISCUSSION



- Key Findings**
- ✓ Dental students show significantly higher awareness.
 - ✓ UG students often brush <2 minutes

CONCLUSION

- IoT toothbrushes are vital tools for innovative oral hygiene and preventive care.
- Education influences awareness: UG students show high potential for digital adoption.
- Mobile health integration fosters long-term behavioral change in young adults.

FUTURE WORK & REFERENCES

- ❖ Larger population studies
- ❖ Tele-dentistry integration
- ❖ Longitudinal behavioral assessment

- REFERENCES**
- ❖ WHO Global Oral Health Data Bank - Oral disease burden statistics.
 - ❖ Smart toothbrush effectiveness in behavioral change studies 2024
 - ❖ Dental student vs undergraduate awareness studies, Regional Health journal.

