

 <p>ISSN NO. 2320-5407</p>	<p>Journal Homepage: - <a href="http://www.journalijar.com">www.journalijar.com</a></p> <p><b>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</b></p> <p>Article DOI: 10.21474/IJAR01/19424 DOI URL: <a href="http://dx.doi.org/10.21474/IJAR01/19424">http://dx.doi.org/10.21474/IJAR01/19424</a></p>	
---	--	---

### RESEARCH ARTICLE

#### THE IMPACT OF THE 'BRUSH DJ' ORAL HEALTH APP ON ORAL HYGIENE BEHAVIOR

**Dr. Sindhu Ravindra<sup>1</sup> and Dr. K. Venkata Rama Krishna<sup>2</sup>**

1. BDS, MDS, Assistant Professor, Department of Oral Medicine and Radiology, The Oxford Dental College and Hospital, Bangalore.
2. MBBS, MD-Psychiatry, ESI Hospital, Sanathnagar, Hyderabad.

#### Manuscript Info

##### Manuscript History

Received: 05 July 2024

Final Accepted: 09 August 2024

Published: September 2024

#### Abstract

Copyright, IJAR, 2024. All rights reserved.

#### Introduction:-

In recent years, the adoption and integration of mobile technologies into healthcare have significantly transformed how health services are delivered and accessed. With a vast majority of the population owning smartphones and forming strong attachments to these devices, mobile health applications have emerged as a promising tool for promoting health and wellness.

One such innovative application is Brush DJ, an app designed to encourage effective oral hygiene practices by playing music for the recommended two-minute brushing duration. Based on information from a recent user survey, this paper explores how well the Brush DJ app can improve dental hygiene practices<sup>1</sup>.

#### Objectives:-

1. Assess how well the Brush DJ app encourages users to practice healthy oral hygiene.
2. Provide insights into the app's features and functions as a potential tool for improving oral hygiene habits.
3. Assess the impact of the app on brushing frequency, duration, and technique.

#### Methodology:-

A qualitative cross-sectional user perception survey was carried out among Brush DJ app users. For two weeks, participants were required to use the app twice a day. After this period, they completed a post-intervention questionnaire assessing changes in their oral hygiene habits and knowledge.

#### Results:-

A total of 100 participants completed the survey. Here are some key findings:

**Corresponding Author:- Dr. Sindhu Ravindra**

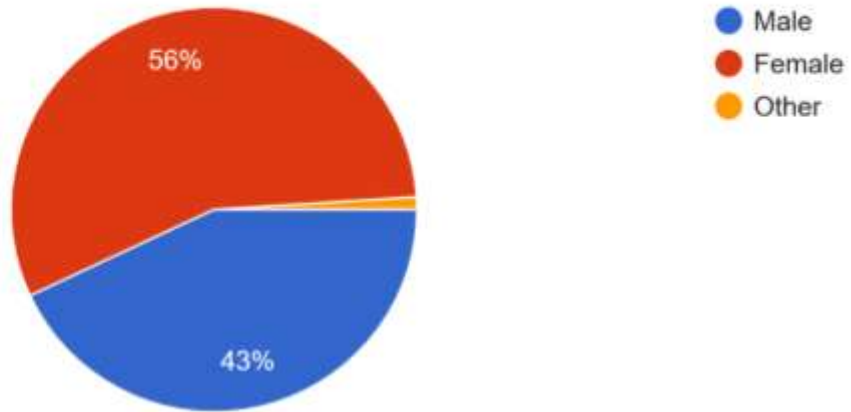
Address:- BDS, MDS, Assistant Professor, Department of Oral Medicine and Radiology,  
The Oxford Dental College and Hospital, Bangalore.

**Figures And Diagrams**

**Figure 1:** Gender Distribution of Participants

What is your gender?

100 responses

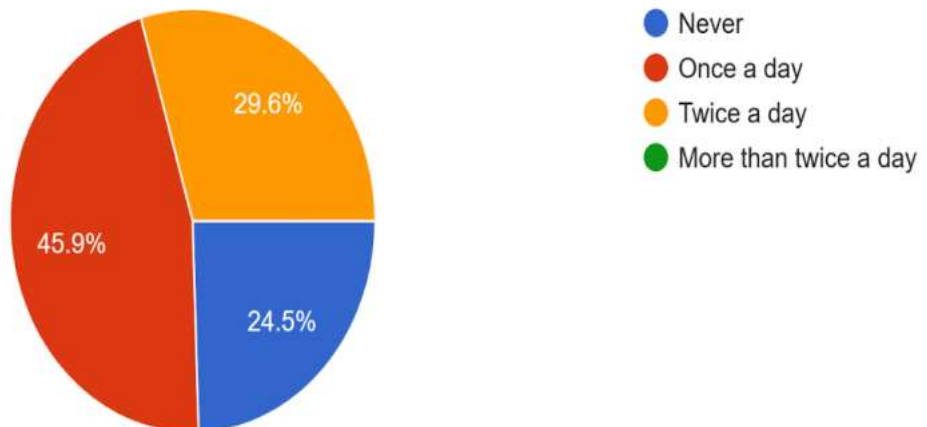


- 100 participants completed the survey after they used the Brush DJ App for an average of 2 weeks. 56% participants were female and 43% identified as male.

**Figure 2:** Brush DJ App Usage Frequency

How often do you use the Brush DJ app while brushing?

98 responses

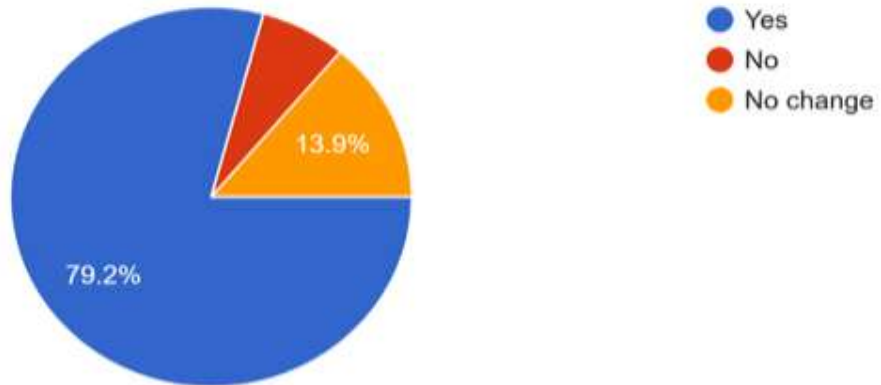


- 98 participants used the Brush DJ app every time they brushed their teeth, while 45.9% used once a day, 29.6% used it twice a day.

**Figure 3:-** Brush DJ App Usage –feeling of cleanliness.

Since using the app does your teeth feel cleaner?

101 responses

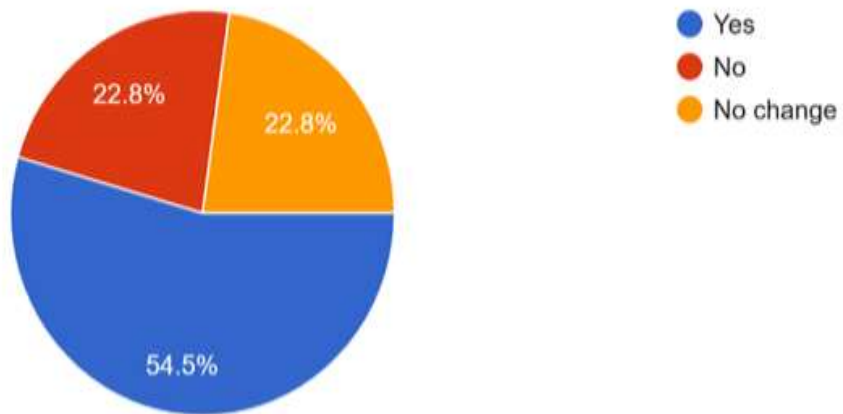


- Of the participants, 79.2% said the app encouraged them to clean their teeth for longer than they had previously, and 7% noted no change in their brushing habits and 13.9% noted no change.

**Figure 4:-** Brush DJ App Usage –Bleeding of gums.

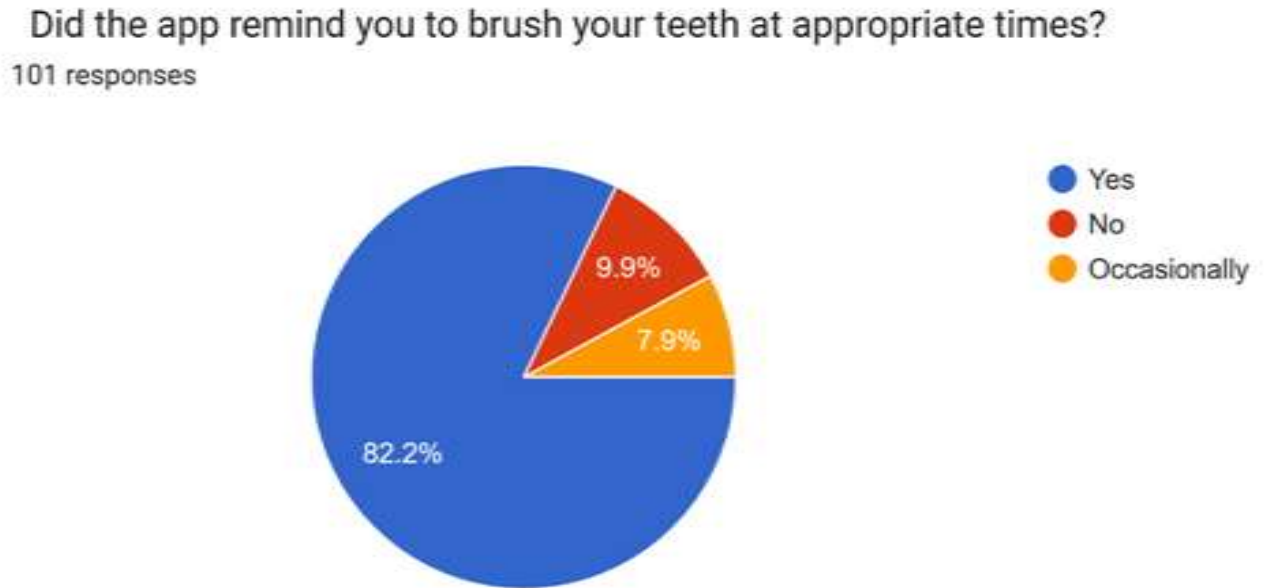
Since using the app do your gums bleed less?

101 responses



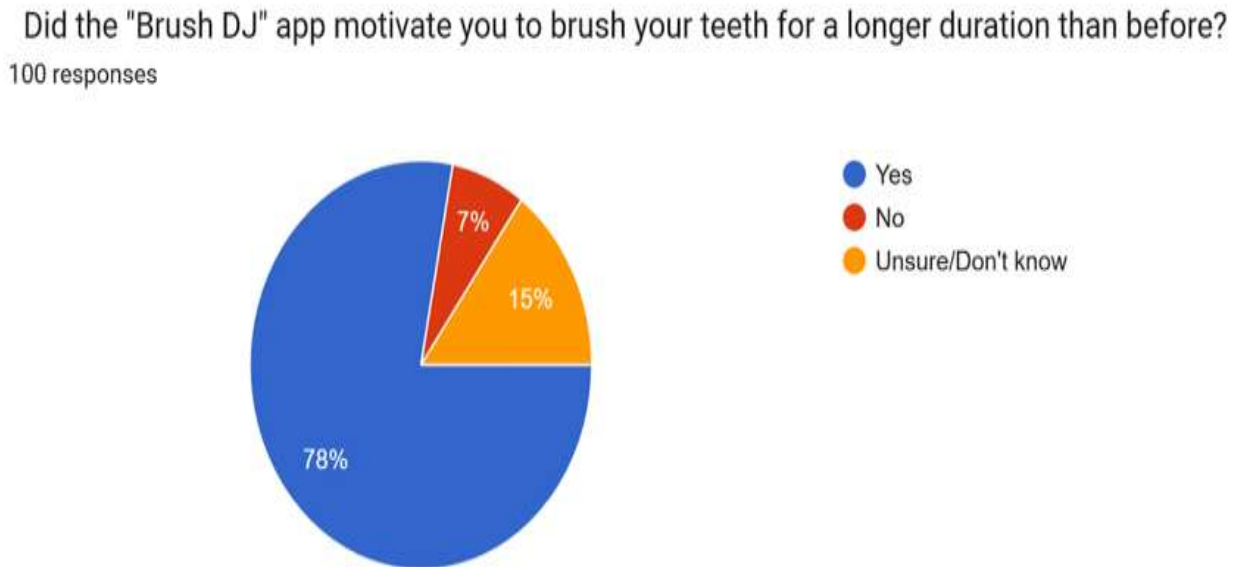
- 54.5% reported their gums bleed less after using the app.
- Two minutes of brushing eliminates 26% more plaque than 45 seconds, according to research, while a survey conducted in the US discovered that people wash their teeth for an average of 46 seconds<sup>2</sup>. It's encouraging that app users are reporting longer brushing sessions, and it seems that listening to music encourages longer brushing sessions.

**Figure 5:** Brush DJ App Usage –Reminder



- Of the participants, 82.2% said the app reminded them to wash their teeth at the right times, 9.9% said it didn't, and 7.9% said they only sometimes received reminders.

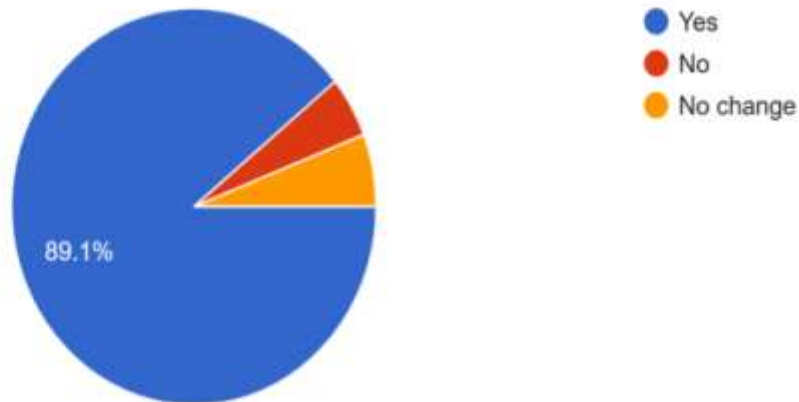
**Figure 6:-** Brush DJ App Usage.



- Of the participants, 78% said that the app encouraged them to clean their teeth for longer than they had previously, while 7% said that nothing changed and 15% don't know.

**Figure 7: Brush DJ App Usage** ➤

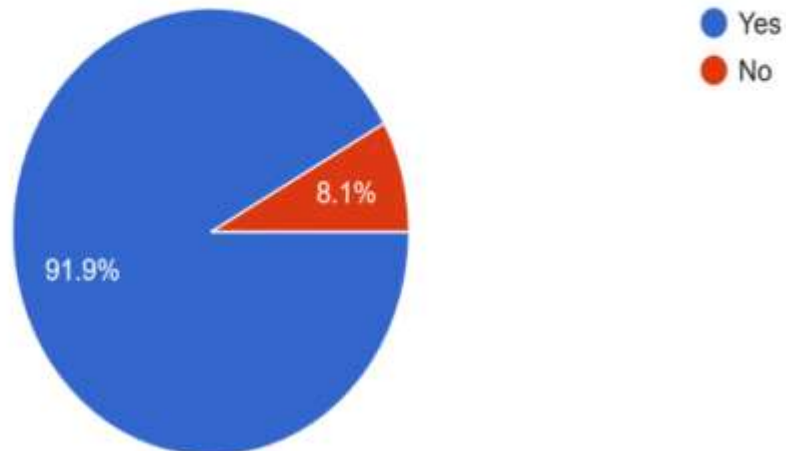
Did the "Brush DJ" app increase your knowledge about oral hygiene behaviour?  
101 responses



- 89.1% of participants reported that the Brush DJ app increased their knowledge about oral hygiene behavior
- Respondents said the app demonstrated to them how to brush all of their teeth, not just the front ones, and that they found the videos helpful. They also said the app helped them complete oral hygiene duties in the proper order.

**Figure 8:- Brush DJ App Usage.**

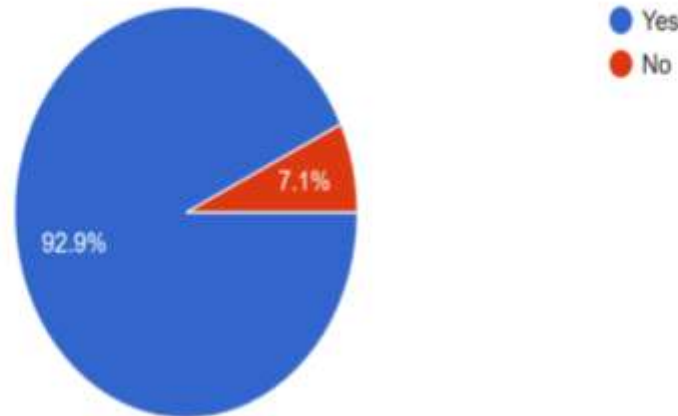
Did you find the Brush DJ app easy to use and navigate?  
99 responses



- 91.9% participants found the Brush DJ app easy to use and navigate

**Figure 9:-** Brush DJ App Usage.

Did you find the Brush DJ app helpful in establishing a consistent oral hygiene routine?  
99 responses



- 92.9% of participants reported that the Brush DJ app was helpful in establishing a consistent oral hygiene routine.

#### User Testimonials

- Motivation: "My 7-year-old son enjoys brushing his teeth with his favorite rhyme playing. It's a huge relief for me!" - 37-year-old woman.
- Education: "I used to brush for about 30 seconds. The app helped me brush for the recommended two minutes. My teeth feel much cleaner." - 28-year-old software engineer.
- Compliance: "The app keeps me focused on brushing, ensuring I don't wander off." - Female, aged 35–44 years.
- Perceived Benefits: "My gums bleed less since using the app. It's easy to use, and my grandson enjoys it too." - Senior citizen.

#### Conclusion:-

The Brush DJ app appears to be a promising tool for motivating effective oral hygiene practices. Most participants reported cleaner teeth, less gum bleeding, and an increased brushing duration. While some users did not notice immediate changes, the app's overall effectiveness and ease of use were well-received.

#### Study Limitations

- The two-week study period may have been too short to observe significant changes.
- The reliance on self-reported data could induce bias.

#### Future Research

To evaluate the Brush DJ app's long-term efficacy and cost-effectiveness in comparison to more conventional oral hygiene promotion strategies, more research is required. This study may usher in a new age in the promotion of oral health, driven by technology and evidence-based interventions.

#### References:-

1. Underwood B., Birdsall J., & Kay E. The use of a mobile app to motivate evidence-based oral hygiene behavior. *Br Dent J* 219 E2 (2015). <https://doi.org/10.1038/sj.bdj.2015.660>
2. US Food and Drug Administration. Mobile medical applications. Available at <http://www.fda.gov/medicaldevices/productsandmedicalprocedures/connectedhealth/mobilemedicalapplications/default.htm>
3. Brush DJ app dentist wins funding boost. *Br Dent J* 226 387 (2019). <https://doi.org/10.1038/s41415-019-0186-x>