



Mobile Applications for Pediatric Dentistry-A Review

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ABSTRACT

The rise in the use of smartphone users has gone up in great numbers in the past decade. There almost nothing that is left out that can't be assessed through a smart phone and also the pandemic creating social distancing between the dentist and the patient, smartphone has been an excellent tool for tele-dentistry. This article provides an overview to some of the apps which are available in playstore which could be used by pediatric dentists and also could be recommended to their patients and parents.

Keywords: Mobile Applications; Pediatric dentistry; Smartphone; Tele-Dentistry

INTRODUCTION

In the past decade, the way technology has taken leaps and bounds is extremely commendable. According to recent survey 62% of the world population are smart phone users which amounts to 4.88 billion¹. Having a smart phone indicates you could access the entire world from the comfort of anywhere. The number of mobile applications in the healthcare industry has also seen a rise. With the pandemic casting its shadow, a social distancing was seen between the healthcare professional and the patients. Tele-medicine became the new normal. The spread of mobile applications to field of dentistry too had no barrier. Mobile applications eliminate time constraints by providing health care services to people at any time of the day. The pandemic also saw the rise of downloads in mobile applications related to dentistry this has been attributed to the restrictions laid down by the government. Many people preferred to use mobile applications. The field of pediatric dentistry is also affected by these developments, and the number of applications related to this field is rising day by day. Bohn, et al. evaluated the approaches of patients to dental applications, and they found that patients liked the applications and found them educational and useful; and that the applications improved the patients' communication with the dentist¹.

According to different surveys it was concluded that there around 151 applications related to pediatric dentistry available for android phones and 168 for IOS devices

These applications include apps that aid in Practice Management/ Aiding Diagnosis, apps giving access to Publications/Journals/News Dental Emergency, apps aiding to formulate Pediatric Dental Drugs Management Apple App Store Applications for Pediatric, Apps for Patients and Their Families, Games, General Information for Families, Brush Timers and Simulations for Children and Dental Emergency¹.

Mobile applications for pediatric dentist

According to surveys there are 21 apps for pediatric dentists available in the play store. These Applications basically aid in clinical practice, contribute to the diagnosis, treatment of diseases, enable the dentist to follow innovations and developments in the field of pediatric dentistry. The Handbook of Pediatric Dentistry, developed by The American Academy of Pediatric Dentistry (AAPD), launched in 2012, which is among the mobile applications, is an application available in both the App Store and Google Play Store. It provides AAPD members to access information easily and quickly. In the content of the application, some sections can help pediatric dentists in their clinical practice and at the same time follow the innovations in this field. The most up-to-date approaches to diagnosis and treatment in pediatric dentistry can be accessed from the login, Search the Handbook, Browse the Handbook by Chapter, Member Website, Authors & Intro, Oral Health Policies & Recommendations options¹.

Pediatric dental dosing calculator is another such app, which helps to formulate drugs doses for infants and children. This app provides content that allows the pediatric dentist to adjust the drug dose according to the age and weight of the child and provide complete information about the drug to be prescribed, when the drug is to be prescribed for patients¹.

Journal pediatric dentistry app provides access to case studies and publications. Biggest plus feature of this application is that it sends notifications when new journals are published, allowing pediatric dentists to be informed instantly. In addition, it offers quick access to these notes by downloading the magazines, adding notes to important places, and making highlights.

Dental trauma and emergency related apps are also of great importance to pediatric dentists. ToothSOS application is an application associated with the International Association of Dental Traumatology [IADT]. This app provides guidelines on how to manage and prevent dental trauma. The latest dental trauma guide is available for dentists. In addition, continuing education on trauma is also available on this application.

Mobile applications for parents and patients

Dental education app for parents helps in educating parents about different the necessary information to maintain their children's dental health. It enlightens parents in detail about the frequency of children's tooth brushing, the frequency of dental visits, and breastfeeding. The dental trauma guide by IADT could also help the parents to manage trauma like avulsion, and also prevention of dental injuries. Various games are also available on app store for kids to get familiar with the dentist. "My Little Dentist" available on the Google Play Store on the android and iOS platform of the smartphone. The app gives the kids an idea as to what would be the nature of their treatment in an interactive manner. The patients can be virtually made dentists and can be made to do patients in the app that included extractions, scaling, filling and were taken into confidence and how painlessly a dental procedure could be performed can be shown to the child³. My Bright Smile by Colgate designed five cool interactive dental hygiene games for kids to instil correct dental hygiene habits. Brusheez—The Little Monsters Toothbrush Timer encourages, through interactive characters, teeth brushing and learning proper oral hygiene. The app uses a customizable character which makes learning good oral health habits a relatable experience. The avatar and the child brush their teeth together while a timer runs down. Disney Magic Timer, claimed by Oral-B, "90% of kids brush longer with the Disney Magic Timer app!" This app has over 20 Disney characters to pick from. The character becomes clearer as the child brushes their teeth. Along with that, upbeat music plays while a timer shaped like Mickey Mouse counts down the recommended amount of time to brush teeth. This app works with Crest or Oral-B Pro-Health Stages products². Brush DJ - The app can sync with media library has free music already installed. It also uses Apple music to give a wider song choice for use in the app. The app allows you to set reminders like when to replace your toothbrush or when it's time to schedule an appointment with the dentist. Chomper Chums - Designed to teach proper oral hygiene techniques and to help kids make healthy food and drink choices. Choose a Chomper Chum to brush, floss and rinse with your child. Earn coins and Super Smile Award points each time your child completes an activity. Use the coins to buy food and drink for your Chomper Chum³. Children need a little extra help when it comes to their oral hygiene. Most children don't think brushing their teeth is fun, but there are plenty of good apps out there to make oral hygiene interactive. Although sometimes kids get a little too much screen time, spending a few extra minutes with one of these applications may help children look forward to brushing and flossing their teeth

It was been analysed that many children dental health related apps have been downloaded from app stores which showcases that parents are concerned for their child's oral hygiene and kids are actively engaged in this apps.

Conclusion

Mobile applications are easy and quick to access, help in Providing oral hygiene education and motivation to family and child, Preparing the child for dental procedures, preventing dental phobia in children, enabling family to cope with emergencies such as dental trauma, aid in Dentists' ability to integrate technology and clinical practices, Ease of access for dentists to new, up-to-date information. However there few disadvantages: The risk of inaccurate and incomplete information in applications also Disruption of dentist appointments by adhering to the information in the applications. Screening time also effects the eyes proves everything in a balance goes well. Hence mobile apps should be used as motivational methods as the effectiveness is still a work in progress.

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