

Prosthodontics in the Digital Age: A Systematic Review of Mobile Apps

Shenila Qureshi¹, Raveena Makker², Rajeev Srivastava³, Rahul Razdan⁴, Vedant Patel⁵, Saltanat Khan⁶

Received on: 12 October 2024; Accepted on: 04 November 2024; Published on: 31 December 2024

ABSTRACT

Aim: Our objective is to offer a thorough summary of the current understanding regarding the digital apps available in the field of prosthodontics. By synthesizing the latest research findings, this article emphasizes the noteworthy contributions made by these digital apps to their respective sectors and emphasizes the significance of ongoing innovation in order to fulfill the changing needs of users by analyzing their features, benefits, and impact.

Materials and methods: We searched every English-language publication on digital apps in prosthodontics, including reviews, research, and clinical trials, using PubMed and Google Scholar, among other databases.

Conclusion: With the ability to provide telehealth services, personalized medical advice, and remote monitoring, clinical applications have drastically improved patient outcomes and reduced costs. The incorporation of these applications into daily life not only improves convenience and efficiency but also increases engagement and productivity in a variety of fields.

Keywords: Application, Artificial intelligence, Mobile learning, Smartphone, Tele-dentistry.

Dental Journal of Advance Studies (2024): 10.5005/djas-11014-0065

INTRODUCTION

Information and communication technology (ICT) has emerged as an essential instrument for higher education instruction and learning, especially in the teaching of medical practitioners. Due to the increasing use of mobile devices in healthcare settings, a large number of apps have been created to assist with important functions like communication, information management, and clinical decision-making. Applications that help with clinical case discussions, preparing for postgraduate entrance exams, and patient record administration have proven very beneficial for the dental field. Dental practitioners, including recent graduates, have demonstrated a favorable disposition towards using mobile devices and applications in their practices.¹

Smartphones have evolved from mere communication tools to essential devices for information-seeking and learning, significantly impacting education. In medical education, mobile technology enhances the learning process, with dental students increasingly using mobile phones for their studies. Mobile learning offers advantages such as easy demonstration of clinical concepts and the freedom to access information anytime, anywhere. Apps provide access to updated dental journals, case-based discussions, and books, enriching student's knowledge.

However, there is a lack of regulation and quality reviews for dental educational apps. General educational apps with features like note-taking, file organizing, imaging, voice recording, video playback, group communication, and cloud storage can also be adapted for dental education. Further studies are needed to assess and regulate the quality of dental educational apps.²

The utilization of different apps, teledentistry, and artificial intelligence (AI) in prosthodontics has brought about a paradigm shift in the field. These innovative technologies have significantly enhanced the practice of prosthodontics, leading to improved patient outcomes and enhanced efficiency. The future of

^{1,2,4-6}Department of Prosthodontics, Index Institute of Dental Sciences, Indore, Madhya Pradesh, India

³Department of Prosthodontics, Crown & Bridge and Implantology, Modern Dental College & Research Centre, Indore, Madhya Pradesh, India

Corresponding Author: Shenila Qureshi, Department of Prosthodontics, Index Institute of Dental Sciences, Indore, Madhya Pradesh, India, Phone: +91 8602688085, e-mail: drshenilaqureshi@gmail.com

How to cite this article: Qureshi S, Makker R, Srivastava R, *et al.* Prosthodontics in the Digital Age: A Systematic Review of Mobile Apps. *Dent J Adv Stud* 2024;12(3):160-167.

Source of support: Nil

Conflict of interest: None

prosthodontics lies in the seamless collaboration between human expertise and advanced technologies, ensuring the delivery of exceptional dental care in an increasingly digital and interconnected world.

MATERIALS AND METHODS

We searched every English-language publication on digital apps in prosthodontics, including reviews, research, and clinical trials, using PubMed and Google Scholar, among other databases.

History of Mobile Phones

The evolution of mobile phones and apps has been remarkable over the years. In 1983, the Motorola DynaTAC 8000X, the first portable mobile phone, was introduced. By 1985, Sir Ernest Harrison, then chairman of Vodafone, placed the first mobile phone call in the United Kingdom. Early mobile phones, often referred to as "car phones," were bulky and challenging to carry. In 1994, IBM released

Simon, the first smartphone, which included ten built-in programs like Calculator, Address Book, Mail, Notepad, and Sketchpad. The earliest FDA-approved medical app appeared in 1997. In 2002, RIM's Blackberry 5810 advanced smartphones with features like wireless email and push notifications. Apple's 2007 iPhone launch included preloaded apps like Maps, Weather, and Photo Gallery, followed by the introduction of the first mobile app store in 2008, which saw over 10 million downloads in its first three days. By 2010, FDA-approved medical apps increased, and in 2012, Google consolidated its offerings into the Google Play Store. Medical apps doubled in 2013, and by 2014, app integration extended to devices like watches, tablets, and televisions. 2017 marked a record year for app downloads and revenue, with companies developing unique mobile marketing strategies and m-commerce growing rapidly. In 2018, app cards boosted user engagement by 38%, allowing users to access crucial app information easily. The development of instant

apps in 2019 further simplified app usage by allowing access to app features without installation.³

Digital Apps Used in Prosthodontics

App: A software application made for use on small, wireless computing devices, such as smartphones and tablets.⁴

CLASSIFICATION AND KEY FEATURES OF APPS USED IN PROSTHODONTICS

- Clinical apps (Table 1)
- Educational apps (Table 2)
- Diagnostic app (Table 3)
- Drug-related app (Table 4)
- Shopping app (Table 5)
- Photography app (Table 6)
- Job vacancy app (Table 7)

Table 1: Clinical apps^{3,5-10}

S. No	Name of app	Features
1.	Dental business masters	<ul style="list-style-type: none"> • Develop excellent business and professional skills of the dental team. • Provide with excellent patient care. • Stress free working for the team and exponential growth in work. • Satisfaction and financial targets of the business.⁵
2.	Dental scan	<ul style="list-style-type: none"> • Allows you to take photos of documents with your smart phone and automatically send them to the file of the concerned patient.⁵
3.	Dental shooting	<ul style="list-style-type: none"> • Dental photography for mobile takes professional dental photos and edits them with great results. Step 1: Shoot the dental photos, both intra oral and extra oral in smart phones. With the help of a grid guide take consistent and standardized photos. Also find photographic and radiographic documentation. Step 2: Editing in real time. Highlight the problems and defects. Professional filters. Step 3: Sharing. Create a presentation that can be shared with patients. Show photos to the patient and create PDF. Share PDF via-email and WhatsApp.⁵
4.	RadioXstudy	<ul style="list-style-type: none"> • This is mobile way to study dental radiology. This aids the dentist to interpret the radiographs. This presents an organized, direct, and functional interface, containing topics divided didactically to study like: <ul style="list-style-type: none"> - Anatomy. - Pathology. - Dental anomalies.⁵
5.	Dental pro	<ul style="list-style-type: none"> • This is a dual mobile-based application for dentists and patients aiming to present comprehensive digital solutions for clinical management. <p>Features:</p> <ul style="list-style-type: none"> - Scheduling. - Patient filing. - Monitoring clinical financials. - Update on recent dental innovations through research journals and events.⁵
6.	Dental monitoring	<ul style="list-style-type: none"> • Aids in monitoring the evolution of their patients' orthodontic treatments remotely between in-practice appointments. <p>For patients:</p> <ul style="list-style-type: none"> - Ease of use. - Convenience with regular screening. - Control is possible through regular monitoring to prevent complications. - Better communication. - Motivation. <p>For dentist:</p> <ul style="list-style-type: none"> - Control treatment outcome. - Time optimization. - Patient compliance. - Workflow optimization.³

(Contd...)

Table 1: (Contd...)

S.No	Name of app	Features
7.	My dental clinic	<ul style="list-style-type: none"> – This app helps dentists manage patients and clinic. • Dentists can keep databases of their patients record like. <ul style="list-style-type: none"> – Personal information. – Dental charts. – Dental notes and appointments. – Also attach dental images. – Record of patient payments. – Save appointments.³
8.	Dental monitoring	<ul style="list-style-type: none"> • Dental exams for monitoring purposes. • Provision of cheek retractor for better picture taking. • Clinical notifications. • A picture wall to visualize past and current teeth conditions. • Reminder management. • A training tutorial to take the best photos for the monitoring process.⁵
9.	SmileMate	<ul style="list-style-type: none"> • Online consultation for orthodontic, dental, and periodontal needs. • Analysis of patients' smile photos by AI and evaluation by licensed clinicians. • Bilateral communication with data sharing.⁶
10.	Teledentix	<ul style="list-style-type: none"> • Appointment management, reminders, live video conferencing with dentist.⁶
11.	Dentocontrol	<ul style="list-style-type: none"> • Visual inspection of oral cavity using cameras. • Direct message communication with dental practitioner.⁶
12.	Straight teeth direct	<ul style="list-style-type: none"> • Remote teeth straightening and custom invisible aligners delivery platform. • Direct connection to: customer service, dentist, and clinical team. • Document storage. • Tracked treatment progress. • Secure messaging platform and access to all conversation history. • Provision of impression kit and instruction video for home-based impression taking. • Smile 3D simulation of treatment results.⁶
13.	DDS anywhere	<ul style="list-style-type: none"> • Direct communication between dentist and patient. • Alert dentists in emergency situations. • Access treatment information, sync appointments with calendar.⁶
14.	Teledent	<ul style="list-style-type: none"> • Appointment management. • Live video streaming. • Remote examinations. • Provision to store medical information. • Collaborate with patients in real-time.⁶
15.	DenToGo monitoring	<ul style="list-style-type: none"> • Image-based dental monitoring by expert dentists. • Picture wall to visualize past and current tooth conditions. • Examine timeline to maintain records of past teeth conditions. • Appointment reminders. • 3D matching system to monitor changes in teeth movement. • Training tutorial to take the best photos for the monitoring process.⁶
16.	Denteractive	<ul style="list-style-type: none"> • Search for new or existing dentists. • Search for dental specialists. • Booking dental appointments. • Video consultation with dentist of choice. • Private messaging service for dental consultation. • Emergency consultations. • Facility to upload investigations before consultation. • Track treatment history.⁶
17.	Chat with my dentist	<ul style="list-style-type: none"> • Allow the patient to message his dentist, ask FAQs, clear doubts, fix an appointment, and discuss problems regarding the treatment.⁷
18.	Dentist manager	<ul style="list-style-type: none"> • It is an application that enables dentists to manage a list of patients. The dentist can add multiple patients, store information about them, make pictures, add them to the gallery, add or edit notes in dentition view.³
19.	Dental demo suite GP (DDS GP)	<ul style="list-style-type: none"> • This app has stock images, which the dentist can make use of, to explain a particular procedure. • The prototype application shall make use of self-explanatory videos, which do not necessarily require trained personnel.⁷

(Contd...)

Table 1: (Contd...)

S. No	Name of app	Features
20.	My dentist	<ul style="list-style-type: none"> • With its online website, the app is an award-winning comprehensive oral healthcare management and promotion platform in the UK. • The service providers speak to patients on the phone first to offer help and advice and book appointments if the dentist needs to meet patients face to face.⁷
21.	iRomexis	<ul style="list-style-type: none"> • All images created, including 3-D photographs, are displayed on X-ray equipment. • Images are one of the simple methods to make patient education and consulting more convenient. • Many of these sites provide their own intraoral camera software and screening tools, along with spaces to upload data on complaints and radiographic images.⁸
22.	Evernote	<ul style="list-style-type: none"> • Evernote is a widely-used note-taking and organization app that simplifies the process of capturing, organizing, and retrieving information across multiple devices. • Evernote allows users to create various types of notes, attach files and images, record audio, and clip web pages.⁹ • The app's organizational features include notebooks and tags, enabling users to categorize and filter their content.
23.	Notability	<ul style="list-style-type: none"> • Notability is a highly regarded note-taking app that offers a powerful and versatile platform for capturing, organizing, and annotating digital notes.⁹
24.	iDoc	<ul style="list-style-type: none"> • It is a groundbreaking mobile application designed specifically for dental professionals, revolutionizing dental documentation. • Simplifies dental record-keeping, allowing dentists to digitalize dental charts, record treatment plans, capture and attach images, and streamline workflow. • The app's voice-to-text transcription feature enables efficient note-taking, while seamless integration with dental imaging systems enhances access to radiographs and scans.⁹
25.	Linguee app	<ul style="list-style-type: none"> • LinguAPP is a mobile health (m-Health) application designed to provide remote dental consultations and diagnostics. • LinguAPP works by submitting a triage questionnaire, which is formulated in a simple way for non-specialists and prompts patients to take at least two photos to highlight lesions within their mouth without the use of any template to refer. The specialist is then contacted through an e-mail and can provide a preliminary diagnosis by means of a web interface.¹¹
26.	Smile designer pro	<ul style="list-style-type: none"> • Smile designer pro is an effective tool for dental practitioners that allows them to create the desired smile within the space of a few minutes. • The automation tool reduces about 90% of manual work, minimizing treatment time. • Real-time smile simulation allows the practitioner to create the desired smile within 10 minutes based on the characteristics of the patient's personality.¹⁰
27.	Esthetic digital smile design	<ul style="list-style-type: none"> • It is an innovative method of the esthetic digital smile design that is used for diagnostics and planning of dental treatment, as well as in plastic and maxillofacial surgery. • The treatment guidelines provide for the use of digital photographs and a full-frame video to analyze the dynamic phase of a smile, taking into account physiological characteristics (phonetics, facial expressions, the ratio of dentition and the lips). • The digital esthetic treatment card of the patient complements the medical history and is an integral part of the objective analysis.¹⁰
28.	3Shape smile design	<ul style="list-style-type: none"> • It is a software application that helps the dental practitioner create esthetic smile designs based on critical patient's requirements.¹⁰
29.	Exocad smile creator	<ul style="list-style-type: none"> • It is a software application for the virtual planning of highly esthetic restorations based on the combination of patient photographs, tooth contours, and 3D images. • Smile Creator is available as a Dental CAD 2.3 Matera add-on and as standalone software. • The software includes the creation of personalized images based on the patient personality and facial orientation. • This tool allows dental practitioners to create smiles based on the emotions, behavior, self-esteem, and personality of the patient.¹¹
30.	VisagiSmile	<ul style="list-style-type: none"> • It is a multi-platform web application that analyzes the patient's face shape and personality when designing a smile; this can ensure a more harmonious result of dental procedures.¹⁰
31.	DSD app	<ul style="list-style-type: none"> • It is a mobile application designed to simulate a smile that fits the patient's morpho-psychological characteristics. • The application involves the patient in the design of their own smile. • To design a model that suits a patient, photo and video materials are used, and a comprehensive analysis of the face and the motion synchronization of the teeth, gums, lips, and face in the process of manifesting emotions is carried out.

(Contd...)

Table 1: (Contd...)

S.No	Name of app	Features
32.	Planmeca romexis smile design	<ul style="list-style-type: none"> DSD Facial Analysis analyzes the characteristics and proportions of the face. DSDApp automatically calibrates images and calculates a smile frame. DSDApp offers a library of natural tooth shapes and colors.¹¹ It is user-friendly software that provides a desired result in a few minutes. The visual design options are sent to the patient with the help of the PlanmecaRomexis Cloud service or the Planmecam Romexis and Planmeca iRomexis™ mobile apps. The finished smile design projects can be exported to CAD/CAM software, in particular Planmeca Plan CAD Easy, PlanmecaRomexis 3D Ortho Studio, or the PlanmecaRomexis® 3D software module for their further implementation.¹⁰
33.	Dental treatment simulation PRO	<ul style="list-style-type: none"> It is a smile design software that is an effective tool in dental practice and includes the latest technological advances such as artificial intelligence and machine learning. The software analyzes dental occlusion, the shape of the teeth, the position of the lips when smiling, and determines the ratio between lips and teeth.¹⁰

Table 2: Educational apps³⁻⁶

S.No	Name of app	Features
1.	Dental education app	<ul style="list-style-type: none"> This app is introduced to connect thousands of professionals around the world willing to obtain knowledge on the one hand and those who are ready to share their experience on the other hand.⁵
2.	Talk teeth dental practice management	<ul style="list-style-type: none"> This dental practice management app is to manage the daily operations in the dental office. With this app, we can keep our entire patient's records on our iPad. We can educate the patient about their dental condition in the most entertaining and easy-to-comprehend way with patient education videos. <p>Talk teeth provides:</p> <ol style="list-style-type: none"> 1) Patient filing. 2) Appointments. 3) Patient education. 4) To do list features. 5) Accounting. 6) Custom patient reminders.⁵
3.	Dental scan kod	<ul style="list-style-type: none"> This app aids in improving oral hygiene maintenance. Scan your mouth and get your hygiene score.⁵
4.	Denticalc	<ul style="list-style-type: none"> This app directly impacts clinics productivity and profitability as well as patients' health. Aids in enhancing communication. Improves patient satisfaction. Most effective way to explain treatment to patients.⁵
5.	Dental mitra	<ul style="list-style-type: none"> This is an app from dentist Dr Pranjana Mitra. <p>Features:</p> <ol style="list-style-type: none"> 1) Tips on dental health. 2) Reminders on daily dental hygiene routine. 3) Calculate sweet core. 4) See nearby dentists through Google Maps. <ul style="list-style-type: none"> The goal of this app is to provide an app that meets needs of other practitioners.⁵
6.	Toothflix 2.0	<ul style="list-style-type: none"> This app includes the ADA's Toothflix 2.0 dental patient education videos in English and Spanish, which are arranged for quick access. The facility to email any of the '26' available videos to patients before or after the consult is available. Marking of favorite videos or even extraction of video clip you show most often can be done. The last watched feature makes it easy to retrieve the videos you use most. <p>This is essential for:</p> <ol style="list-style-type: none"> 1) Patient communication tool for health awareness. 2) Case acceptance. 3) Informed consent.⁵
7.	Dental coach	<ul style="list-style-type: none"> Dental prevention app Personal and professional support in dental prevention. This personalized app provides individual assistance to patients and support in following advice. In this dental care, providers can create unique dental care and risk profile, including customized maintenance advice.

(Contd...)

Table 2: (Contd...)

S.No	Name of app	Features
		<p>Key features:</p> <ol style="list-style-type: none"> 1) Dental prevention app. 2) Personalized teeth view. 3) Visual of risk profile. 4) Setting goals and plans. 5) Brushing timer for children and adults apps useful for patients.⁵
8.	Dental desk	<ul style="list-style-type: none"> • This app helps in giving answers to dental problems using clinical and home remedies. • This is not only an informative app but also a platform to provide temporary relief from various dental problems using common household techniques. • Educate patients regarding various alarming dental problems and educate them regarding various treatment modalities. • Apps useful for lab technicians and dentists.⁵
9.	Quick dental guide	<ul style="list-style-type: none"> • This app is designed to comprehensively introduce instruments and concepts to dental hygienists, dental assistants, dental nurses, and technical trainees. <p>Includes topics like:</p> <ol style="list-style-type: none"> 1) Dental anatomy and common dental diseases. 2) Periodontics. 3) Orthodontics. 4) Oral surgery. 5) Restorative dentistry. 6) Sterilization and biomedical waste management. 7) Recent news. 8) Blog does not constitute the providing of medical advice and is not intended to be a substitute for independent professional medical judgment, advice, diagnosis, or treatment.⁵
10.	Dental pockets	<ul style="list-style-type: none"> • Useful for BDS and MDS entrance aspirants. Designed by the team of dental forks as they understand the basic needs and problems faced by students. <p>Features:</p> <ol style="list-style-type: none"> 1) MCQ's subject and year-wise are available. 2) Articles. 3) Forums. 4) Mock tests.⁵
11.	Couch dentist	<p>Key features:</p> <ul style="list-style-type: none"> • Provides answers to patient queries. • Cost comparison in patient's area. • Blogs, videos and educational links. • Group conversations. • Professional guidance from expert dentists. • Personalized answer to query within 24 h.⁶
12.	Tooth 3D app	<ul style="list-style-type: none"> • It is available in different languages and also includes an encyclopedia.³
13.	Scholar droid	<ul style="list-style-type: none"> • The 'Google Scholar' app is available on android smart phones as 'Scholar Droid' allowing users to browse through the application for journals and also give the option to download as a PDF file.

Table 3: Diagnostic app^{3-6,8,13}

S.No	Name of app	Features
1.	iDentist: dental practice management software:	<p>This is used for dental treatment planning. For scheduling dental appointments. Dental assistant.</p> <p>Features:</p> <ul style="list-style-type: none"> • Weekly and monthly calendar for dental treatment planning. • Can be used by several doctors. • Scheduling of SMS appointment reminder. • Keep patient records. • Dental chart of each patient. • Online booking. • Appointment planner. • Medical history of patients. • Create patient records in PDF manner. • Advanced financial reports. • X-ray gallery.⁵

(Contd...)

Table 3: (Contd...)

S.No	Name of app	Features
2.	Dentulu patients virtual dental consultations	Key features: <ul style="list-style-type: none"> • Booking appointments. • Tracking location of dental team. • Emergency call facility scheduling emergency home calls. • Video conferencing for consultations Patient education videos.³
3.	Dentists for me	Key features: <ul style="list-style-type: none"> • Video, audio, and text chat with dentist. • Get a consultation by scheduling an appointment at your convenience. • Free dental consultations.⁶
4.	Dental chat	Key features: <ul style="list-style-type: none"> • Online dental consultations from certified dentists. • Online query resolving. • Search for dentist in specified area.⁶
5.	Teledentistry	Key features: <ul style="list-style-type: none"> • Online clinical data collection, consultation, and treatment planning. • Connect with the first available dentist within 3 h. • Electronic prescriptions sent to a local pharmacy selected by the patient.⁸
6.	Dental manager	<ul style="list-style-type: none"> • Each patient on this app has their own profile. • The patient profile contains any information that is needed for consultation or treatment, and any additional information/procedure is instantly displayed on the patient's dental chart. • For each visit, the user can choose the type of procedure with details about the cost of treatment and the time of the visit.¹³

Table 4: Drug-related app^{5,9}

S.No	Name of app	Features
1.	Dental drugs	<ul style="list-style-type: none"> • Dental drugs app is a must-to-have application for dental professionals. • It's a quite reference for prescribing medications. It also helps with calculating maximum anesthetic dosages or recalling common treatment protocols in practice. • Access to more than 90% of the most commonly prescribed drugs with their relevant dose, dispensary, instructions, and precautions is present. • Emergency protocols for situations that can occur on dental chairs are present. • This app is made by a dentist and is optimized for dentists and dental students.⁵
2.	Common dental drugs	<ul style="list-style-type: none"> • App typically offers a comprehensive database of dental drugs, including their generic and brand names, indications, contraindications, dosage, side effects, and potential drug interactions. • It also includes a search functionality that allows users to quickly find specific medications or browse through different categories of dental drug.⁵ • This feature makes it easier to locate drugs based on their purpose, such as local anesthesia, analgesics, antibiotics, or anti-inflammatory agents.
3.	Epocrates	<ul style="list-style-type: none"> • The app offers a comprehensive drug reference guide that includes information on dosages, interactions, adverse effects, and pricing for thousands of prescriptions and over-the-counter medications. • This feature is particularly useful for healthcare providers who need to quickly look up drug information while prescribing or administering medications to patients. • Epocrates also provides up-to-date information on drug formularies and insurance coverage, helping healthcare professionals make informed decisions about treatment options based on patients' insurance plans.⁹

Table 5: Shopping app⁵

S.No	Name of app	Features
1.	Dental kart	<ul style="list-style-type: none"> • App for shopping of dental materials and instruments.⁵
2.	PinkBlue; India's favorite dental store	<ul style="list-style-type: none"> • Online dental and medical supplies store. • Dental materials, consumables, disposables, instruments, dental equipment.⁵

Table 6: Photography app^{3,5}

S. No	Name of the dental app	Category	Place of use	Developer	Available on	Language available
1.	Dental shooting ⁵	Photography app	Clinics	Dental shooting SRLS	Google Play Store	English
2.	OrthoPic: HD dental images ³	Photography app	Clinics	Lean dental operations	Google Play Store	English

Table 7: Job vacancy app³⁻⁶

S. No	Name of the dental app	Category	Place of use	Developer	Available on	Language available
1.	AP dental jobs ⁵	Job vacancy app	Dental professionals	Dr. K.T.S.S. Rajajee	Google Play Store	English
2.	KDM dental placement ⁵	Job vacancy app	Clinics	RBI Development	Google Play Store	English
3.	Dental experts ⁶	Job vacancy app	Clinics	On Demand Work	Google Play Store	English
4.	Quicdent-temp dental jobs ³	Job vacancy app	Clinics	Quicdent	Google Play Store	English

ADVANTAGES

- Availability of dentist is known to patient
- Waiting time is reduced
- Helps in receiving first aid and decreases chances of complication
- Helps in recording the previous reports of consultation.¹²

DISADVANTAGES

- Making appointments from home delays the consultation of the dentist.
- App users have a fear of hacking their personal details.
- Patients with similar names get confused with each other if they forget their ID number.
- Rescheduling of a patient's appointment is not possible.¹³

CONCLUSION

The introduction of mobile apps in dentistry has indeed brought about significant changes, enhancing various aspects of dental education, practice, and patient care. These apps have provided new avenues for learning, diagnosis, treatment planning, and patient management, making dental practices more efficient and accessible. However, despite these advancements, there remains a need for further studies and research to fully understand the potential and limitations of mobile apps in dentistry. Continuous exploration and development are essential to ensure these technologies are effectively integrated into dental practice, ultimately improving outcomes for both practitioners and patients.

Clinical Significance

By providing accurate treatment planning, real-time communication, and optimized processes, the incorporation of digital apps in prosthodontics improves clinical efficiency, accuracy, and patient results. By cutting chair time and raising patient satisfaction, these developments help provide high-quality prosthetic treatment.

REFERENCES

1. Deshpande S, Chahande J, Rathi A. Mobile learning app: A novel method to teach clinical decision making in prosthodontics. *Educ Health* 2017;30:31–34. DOI: 10.4103/1357-6283.210514.
2. Nayak PP, Nayak SS, Vikneshan M, et al. Smartphone apps-the powerful E learning tools for dental professionals and students. *Online J Health Allied Scs* 2019;18(3):12. Available from: <https://www.ojhas.org/issue71/2019-3-12.html>.
3. Ramani P, Gopalkrishnan S, Warriar A, et al. An overview on mobile application in dentistry. DOI: 10.17605/OSF.IO/7E6DB.
4. Bhola S, Hellyer P. The risks and benefits of social media in dental foundation training. *Bri Dental J* 2016;221(10):609–613. DOI: 10.1038/sj.bdj.2016.854.
5. Purnapriya B, Sudheera A, Navyadeepthi, et al. Smartphone applications in dentistry. *Int J Dent and Med Sci Res* 2021;3(5): 1214–1122. DOI: 10.35629/5252-030512141221.
6. Datta S, Sybil D, Jain V. Teledentistry applications: Potential dental care facilitator amidst a pandemic. *J Clinic Diag Res* 2020;14(12):06–10. DOI: 10.7860/JCDR/2020/46496.14300.
7. Chadda V, Akshi, Sharma A, et al. Current dental apps & the way forward. *Ind J App Res* 2016;6(11):35–37. DOI : 10.36106/ijar.
8. Jha K, Mandal Y, Avinash J, et al. Teledentistry through web apps and IODT-reforming dental care in the COVID-19 Era: Iota.2021;1(3):198–208. DOI: 10.31763/iota.v1i3.485.
9. Ventola CL. Mobile devices and apps for health care professionals uses and benefits. *Pharmacy Therap* 2014;39(5):356–364. PMID: 2488 3008.
10. Yumashev A, Kozlovskaya S, Grishaeva K, et al. The use of digital technologies for teaching dentistry. *Int J Emerg Tech Lea* 2021;16(8):270. DOI: 10.3991/ijet.v16i08.19217.
11. Fazio M, Lombardo C, Marino G, et al. LinguAPP: An m-health application for teledentistry diagnostics. *Int J Environ Res Public Health* 2022;19(2):822–824. DOI: 10.3390/ijerph19020822.
12. Khandavel S, Anita M, Rekha V, et al. Mobile smartphone apps fororal dental health-review article. *Eur J Mol Clin Med* 2020;7(2): 6755–6759.
13. Khatoon B, Hill KB, Walmsley AD. Can we learn, teach and practice dentistry anywhere, anytime? *Bri Dent J* 2013;215(7):345–347.