

Perceptions of Teledentistry Among Dental Assistants and Dentists: A Qualitative Exploration of Opportunities and Challenges in Saudi Arabia

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Abstract

Teledentistry has emerged as a promising approach to improve access to dental care and enhance patient outcomes, particularly in underserved areas. However, the adoption and implementation of teledentistry in Saudi Arabia have been limited, and little is known about the perceptions and experiences of dental professionals regarding this technology. This qualitative study aimed to explore the perspectives of dental assistants and dentists in Saudi Arabia on the opportunities and challenges of teledentistry. Semi-structured interviews were conducted with a purposive sample of 20 dental assistants and 10 dentists from various regions of Saudi Arabia. Thematic analysis was used to identify key themes and subthemes related to the perceived benefits, barriers, and facilitators of teledentistry. The findings revealed that dental assistants and dentists recognized the potential of teledentistry to increase access to care, improve patient convenience, and enhance interprofessional collaboration. However, they also identified several challenges, including technical issues, privacy and security concerns, lack of training and support, and resistance to change. The participants emphasized the need for clear policies and guidelines, adequate infrastructure and resources, and ongoing education and training to facilitate the successful implementation of teledentistry in Saudi Arabia. The insights from this study can inform the development of strategies and interventions to promote the adoption and effectiveness of teledentistry in dental practice.

Keywords: teledentistry, dental assistants, dentists, qualitative research, Saudi Arabia

1. Introduction

Teledentistry, the use of information and communication technologies to provide dental care and education at a distance, has gained increasing attention as a potential solution to address the challenges of access, cost, and quality in dental healthcare delivery (Alabdullah et al., 2020). Teledentistry encompasses a range of modalities, including live video consultations,

storeandforward imaging, remote patient monitoring, and mobile health applications (Irving et al., 2018). These technologies can enable dental professionals to diagnose, treat, and monitor patients remotely, as well as collaborate with other healthcare providers and specialists (Ata & Ozkan, 2009).

In Saudi Arabia, the dental healthcare system faces several challenges, such as the shortage and maldistribution of dental workforce, the high prevalence of dental diseases, and the limited access to care in rural and remote areas (Al-Mobeeriek, 2012). Teledentistry has the potential to address these challenges by improving the efficiency, reach, and effectiveness of dental services (Alawwad et al., 2021). However, the adoption and implementation of teledentistry in Saudi Arabia have been slow and fragmented, and there is a lack of research on the perceptions and experiences of dental professionals regarding this technology (Alshammari et al., 2022).

Dental assistants and dentists are key stakeholders in the implementation of teledentistry, as they are directly involved in the delivery of dental care and the interaction with patients (Candamo et al., 2021). Understanding their perspectives on the opportunities and challenges of teledentistry is crucial for designing and implementing effective interventions and policies to promote the adoption and success of this technology in dental practice (Petcu et al., 2020).

This qualitative study aimed to explore the perceptions of dental assistants and dentists in Saudi Arabia regarding the benefits, barriers, and facilitators of teledentistry. The specific objectives were:

1. To identify the perceived advantages and disadvantages of teledentistry from the perspective of dental assistants and dentists
2. To explore the factors that influence the acceptance and use of teledentistry among dental assistants and dentists
3. To elicit recommendations and strategies for the successful implementation of teledentistry in dental practice in Saudi Arabia

The findings of this study can provide valuable insights into the opportunities and challenges of teledentistry in the Saudi Arabian context, and inform the development of evidence-based interventions and policies to support the integration of this technology in dental healthcare delivery.

2. Literature Review

2.1 Teledentistry: Concepts and Applications

Teledentistry refers to the use of electronic information and telecommunications technologies to support and promote long-distance clinical healthcare, patient and professional health-related education, public health, and health administration (Jampani et al., 2011). Teledentistry can be classified into four main categories: (1) teleconsultation, which involves the exchange of clinical information and images between dental providers and specialists for diagnosis, treatment planning, and management; (2) telediagnosis, which involves the use of electronic transmission of dental radiographs, photographs, and other digital data for diagnostic purposes; (3) teletriage, which involves the use of electronic communication to prioritize patients based on their urgency and need for care; and (4) telemonitoring, which involves the use of electronic devices to monitor patients' oral health status and treatment outcomes remotely (Estai et al., 2016). Teledentistry has been applied in various dental specialties and settings, such as orthodontics, periodontics, oral surgery,

and public health dentistry (Ghai, 2020). The potential benefits of teledentistry include improved access to care, reduced costs and travel time, enhanced patient satisfaction and convenience, increased efficiency and productivity, and better interprofessional collaboration and communication (Bhaskar et al., 2020). However, the implementation of teledentistry also faces several barriers, such as technical issues, privacy and security concerns, legal and regulatory challenges, financial constraints, and resistance to change among dental professionals and patients (Ata & Ozkan, 2009).

2.2 Teledentistry in Saudi Arabia

The healthcare system in Saudi Arabia has undergone significant reforms in recent years, with a focus on improving the quality, accessibility, and affordability of healthcare services (Al-Hanawi et al., 2019). The Saudi Vision 2030, a strategic framework for the country's economic and social development, emphasizes the importance of digital transformation and innovation in healthcare delivery (Alshammari et al., 2022). Teledentistry has been identified as a promising approach to address the challenges of access, cost, and quality in dental care in Saudi Arabia, particularly in underserved and remote areas (Alawwad et al., 2021).

However, the adoption and implementation of teledentistry in Saudi Arabia have been limited and fragmented (Alshammari et al., 2022). A survey of dental students and interns in Saudi Arabia found that while the majority had positive attitudes towards teledentistry, only a small proportion had actual experience with this technology (Alasmari et al., 2020). Another survey of dental practitioners in Saudi Arabia found that while most were aware of teledentistry, only a minority had used it in their practice, and many reported barriers such as lack of training, infrastructure, and reimbursement (Alabdullah et al., 2020).

A review of teledentistry initiatives in Saudi Arabia identified only a few pilot projects and case studies, mainly in the areas of oral pathology, orthodontics, and dental education (Alshammari et al., 2022). These initiatives demonstrated the feasibility and acceptability of teledentistry in the Saudi Arabian context, but also highlighted the need for further research, policy development, and capacity building to scale up and sustain the implementation of this technology (Alshammari et al., 2022).

2.3 Perceptions and Experiences of Dental Professionals Regarding Teledentistry

Dental professionals, including dentists and dental assistants, play a crucial role in the adoption and implementation of teledentistry, as they are directly involved in the delivery of dental care and the interaction with patients (Candamo et al., 2021). Understanding their perceptions and experiences regarding teledentistry is essential for designing and implementing effective interventions and policies to promote the success of this technology in dental practice (Petcu et al., 2020).

Several studies have explored the attitudes, knowledge, and practices of dental professionals towards teledentistry in various countries and settings. A systematic review by Aboalshamat (2020) found that dental professionals generally had positive attitudes towards teledentistry, recognizing its potential benefits for improving access to care, enhancing patient satisfaction, and reducing costs. However, they also identified several barriers to the adoption of teledentistry, such as lack of training and experience, technical difficulties, privacy and security concerns, and financial and regulatory challenges (Aboalshamat, 2020).

A qualitative study by Candamo et al. (2021) explored the perceptions of dental hygienists in the United States regarding the use of teledentistry in their practice. The participants identified several advantages of teledentistry, such as increased access to care for underserved populations, improved patient convenience and satisfaction, and enhanced interprofessional collaboration and communication. However, they also reported challenges such as technical issues, lack of training and support, and concerns about the quality and safety of care delivered via teledentistry (Candamo et al., 2021).

Another qualitative study by Petcu et al. (2020) investigated the experiences of dentists in Romania with teledentistry during the COVID-19 pandemic. The participants described how teledentistry enabled them to provide remote consultations, triage, and monitoring for patients, as well as collaborate with other healthcare providers and specialists. However, they also encountered barriers such as lack of infrastructure and resources, resistance to change among colleagues and patients, and administrative and logistical challenges (Petcu et al., 2020).

These studies highlight the need for further research to understand the perceptions and experiences of dental professionals regarding teledentistry in different contexts and settings, particularly in developing countries like Saudi Arabia, where the adoption and implementation of this technology are still in the early stages (Alshammari et al., 2022). Qualitative research can provide valuable insights into the factors that influence the acceptance and use of teledentistry among dental professionals, as well as identify strategies and recommendations for the successful integration of this technology in dental practice.

3. Methods

3.1 Study Design

This study employed a qualitative descriptive design using semi-structured interviews to explore the perceptions of dental assistants and dentists in Saudi Arabia regarding the opportunities and challenges of teledentistry. Qualitative research is particularly suitable for investigating complex and contextual phenomena, such as the adoption and implementation of new technologies in healthcare settings, and for eliciting the perspectives and experiences of key stakeholders (Creswell & Poth, 2018).

3.2 Participants and Sampling

A purposive sample of 20 dental assistants and 10 dentists was recruited from various regions of Saudi Arabia, including urban and rural areas. Purposive sampling is a non-probability sampling technique that involves selecting participants based on their knowledge, experience, and relevance to the research question (Patton, 2015). The inclusion criteria for dental assistants were: (1) currently working in a dental clinic or hospital in Saudi Arabia; (2) having at least one year of experience in dental assisting; and (3) being familiar with the concept of teledentistry. The inclusion criteria for dentists were: (1) currently practicing dentistry in Saudi Arabia; (2) having at least three years of experience in dental practice; and (3) being familiar with the concept of teledentistry.

Participants were recruited through professional networks, social media, and snowball sampling. Snowball sampling involves asking initial participants to recommend other potential participants who meet the inclusion criteria (Patton, 2015). Recruitment continued until data saturation was

reached, which is the point at which no new themes or insights emerge from the data (Saunders et al., 2018).

3.3 Data Collection

Data were collected through semi-structured interviews conducted via telephone or videoconference, depending on the participants' preference and availability. Semi-structured interviews are a flexible and in-depth method of data collection that allows for the exploration of participants' perspectives, experiences, and meanings (DeJonckheere & Vaughn, 2019). The interviews followed a guide that was developed based on the research objectives and the literature review, and included open-ended questions and prompts related to the perceived benefits, barriers, and facilitators of teledentistry in dental practice.

The interviews were conducted in Arabic by a trained interviewer who was familiar with the research topic and the cultural context of Saudi Arabia. The interviews lasted approximately 3060 minutes and were audio-recorded with the participants' consent. The audio recordings were transcribed verbatim and translated into English by a professional translator. The transcripts were checked for accuracy and completeness by the interviewer and another member of the research team.

3.4 Data Analysis

The interview transcripts were analyzed using thematic analysis, a qualitative method for identifying, analyzing, and reporting patterns or themes within the data (Braun & Clarke, 2006). Thematic analysis involves a systematic process of coding the data, generating initial themes, reviewing and refining the themes, and producing a final report (Braun & Clarke, 2006). The data analysis was conducted independently by two researchers who were experienced in qualitative research and familiar with the research topic. The researchers followed the six steps of thematic analysis proposed by Braun and Clarke (2006):

1. Familiarization with the data: The researchers read and re-read the transcripts to become immersed in the data and gain a general understanding of the participants' perspectives and experiences.
2. Generating initial codes: The researchers coded the data inductively, identifying meaningful segments of text and assigning them labels or codes that captured their essence.
3. Searching for themes: The researchers collated the codes into potential themes, looking for patterns and relationships across the data.
4. Reviewing the themes: The researchers reviewed and refined the themes, checking their coherence, consistency, and relevance to the research question.
5. Defining and naming the themes: The researchers defined and named the final themes, capturing their essence and scope.
6. Producing the report: The researchers wrote up the findings, providing a rich and detailed description of the themes, supported by illustrative quotes from the participants.

The researchers met regularly to compare and discuss their coding and themes, and to resolve any discrepancies or disagreements. The final themes were agreed upon by consensus and were reviewed by a third researcher who was not involved in the data analysis. **3.5 Trustworthiness** Several strategies were used to enhance the trustworthiness of the study, based on the criteria of

credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Credibility was enhanced by prolonged engagement with the data, peer debriefing, and member checking. Transferability was enhanced by providing a thick description of the research context and participants. Dependability was enhanced by maintaining an audit trail of the research process and decisions. Confirmability was enhanced by reflexivity and bracketing of the researchers' assumptions and biases.

3.6 Ethical Considerations

The study was conducted in accordance with the ethical principles of the Declaration of Helsinki and the guidelines of the Saudi Commission for Health Specialties. Participation in the study was voluntary and informed consent was obtained from all participants prior to the interviews.

Participants were assured of the confidentiality and anonymity of their responses, and were given the right to withdraw from the study at any time without penalty. The study protocol was reviewed and approved by the institutional review board of the researchers' institution.

4. Results

4.1 Participant Characteristics

A total of 30 participants, including 20 dental assistants and 10 dentists, were interviewed for the study. The characteristics of the participants are summarized in Table 1.

Table 1. Participant Characteristics

| Characteristic | Dental Assistants (n = 20) | Dentists (n = 10) |
|----------------|----------------------------|-------------------|
| Gender | | |
| - Male | 12 (60%) | 7 (70%) |
| - Female | 8 (40%) | 3 (30%) |
| Age (years) | | |
| - 20-29 | 8 (40%) | 0 (0%) |
| - 30-39 | 10 (50%) | 6 (60%) |
| - 40-49 | 2 (10%) | 3 (30%) |
| - 50 and above | 0 (0%) | 1 (10%) |

| Experience (years) | | |
|--------------------|----------|---------|
| - 1-5 | 12 (60%) | 0 (0%) |
| - 6-10 | 6 (30%) | 5 (50%) |
| - 11-15 | 2 (10%) | 3 (30%) |
| - More than 15 | 0 (0%) | 2 (20%) |

4.2 Perceived Benefits of Teledentistry

The participants identified several potential benefits of teledentistry for dental practice in Saudi Arabia, which were grouped into three main themes: (1) improved access to care, (2) enhanced patient experience, and (3) increased efficiency and productivity.

4.2.1 Improved Access to Care

Both dental assistants and dentists recognized the potential of teledentistry to increase access to dental care, particularly for patients in underserved and remote areas. They noted that teledentistry could enable patients to receive remote consultations, diagnosis, and treatment planning without having to travel long distances or wait for appointments. As one dental assistant stated:

"I think teledentistry can be very useful for patients who live in villages or rural areas, who don't have easy access to dental clinics. They can use their smartphones or computers to send their pictures or videos to the dentist, and get advice or treatment options without having to come in person." (DA12)

Similarly, a dentist highlighted the potential of teledentistry to improve access to specialty care: "Teledentistry can also help us to consult with specialists, like oral surgeons or orthodontists, who may not be available in all areas. We can send them the patient's records and images, and get their opinion or guidance on the treatment plan, without having to refer the patient to another clinic." (D7)

4.2.2 Enhanced Patient Experience

The participants also emphasized the potential of teledentistry to improve the patient experience, by increasing convenience, comfort, and satisfaction. They noted that teledentistry could allow patients to receive dental care from the comfort of their own homes, without having to take time off work or arrange for transportation. As one dental assistant expressed:

"I think patients would appreciate the convenience of teledentistry, especially if they have busy schedules or mobility issues. They can have a virtual consultation with the dentist, get their questions answered, and even receive some basic instructions or prescriptions, without having to come to the clinic." (DA5) A dentist also highlighted the potential of teledentistry to reduce patient anxiety and fear:

"Some patients, especially children or those with dental phobia, may feel more comfortable communicating with the dentist remotely, rather than in person. Teledentistry can help to build trust and rapport with the patient, and make them more relaxed and cooperative during the actual treatment." (D3)

4.2.3 Increased Efficiency and Productivity

The participants also recognized the potential of teledentistry to increase the efficiency and productivity of dental practice, by optimizing the use of time and resources. They noted that teledentistry could enable dental professionals to triage patients based on their needs and urgency, and to provide preventive and educational services remotely, freeing up more time for in-person treatments. As one dental assistant stated:

"Teledentistry can help us to screen patients and prioritize those who need immediate care, like those with severe pain or infection. We can also use teledentistry to provide oral hygiene instructions, dietary advice, or follow-up care, without having to schedule a separate appointment." (DA18)

A dentist also highlighted the potential of teledentistry to improve interprofessional collaboration and communication:

"Teledentistry can facilitate the exchange of information and expertise between dental professionals, like between general dentists and specialists, or between dentists and other healthcare providers. We can use teledentistry to share patient records, images, and treatment plans, and to coordinate care more effectively." (D9)

4.3 Perceived Challenges of Teledentistry

Despite the recognized benefits of teledentistry, the participants also identified several challenges and barriers to its adoption and implementation in dental practice in Saudi Arabia, which were grouped into four main themes: (1) technical issues, (2) privacy and security concerns, (3) lack of training and support, and (4) resistance to change.

4.3.1 Technical Issues

Both dental assistants and dentists expressed concerns about the technical aspects of teledentistry, such as the availability and reliability of internet connectivity, the compatibility of different devices and software, and the quality and accuracy of digital images and data. They noted that these technical issues could affect the feasibility and effectiveness of teledentistry, particularly in rural and remote areas. As one dental assistant stated:

"One of the main challenges of teledentistry is the internet connection, especially in some areas where the signal is weak or unstable. This can affect the quality of the video or audio communication, and may lead to misunderstandings or errors in diagnosis or treatment." (DA8)

A dentist also highlighted the need for standardization and interoperability of teledentistry systems: "Another challenge is the lack of a unified platform or standard for teledentistry. There are many different software and applications available, but they may not be compatible with each other or with the existing systems in the clinic. This can create confusion and duplication of efforts, and may compromise the continuity and quality of care." (D5)

4.3.2 Privacy and Security Concerns

The participants also expressed concerns about the privacy and security of patient information and data in teledentistry, particularly in light of the increasing threats of cyber attacks and data breaches. They noted that teledentistry involves the electronic transmission and storage of sensitive personal and health information, which may be vulnerable to unauthorized access or disclosure. As one dental assistant stated:

"I worry about the privacy and confidentiality of patient information in teledentistry, especially if it is sent or stored on unsecured devices or networks. We need to ensure that there are strict protocols and safeguards in place to protect the patient's data from hacking or leaking." (DA15) A dentist also emphasized the need for compliance with legal and ethical standards:

"Teledentistry also raises some legal and ethical issues, such as the need for informed consent, the liability for misdiagnosis or malpractice, and the compliance with data protection and privacy laws. We need clear guidelines and policies to ensure that teledentistry is practiced in a safe, responsible, and accountable manner." (D8)

4.3.3 Lack of Training and Support

The participants also identified the lack of training and support for teledentistry as a significant barrier to its adoption and implementation in dental practice. They noted that many dental professionals, particularly older generations, may not be familiar or comfortable with the use of technology in patient care, and may require additional education and training to develop the necessary skills and competencies. As one dental assistant stated:

"I think one of the main obstacles to teledentistry is the lack of training and education for dental professionals, especially the older ones who may not be tech-savvy. We need more workshops, courses, and resources to learn how to use teledentistry effectively and safely, and to keep up with the latest developments and best practices." (DA3)

A dentist also highlighted the need for ongoing technical and administrative support:

"Teledentistry also requires a lot of technical and administrative support, such as the installation and maintenance of hardware and software, the management of appointments and referrals, and the billing and reimbursement of services. We need dedicated IT and administrative staff to handle these tasks, and to provide troubleshooting and assistance when needed." (D10)

4.3.4 Resistance to Change

Finally, the participants acknowledged the potential resistance to change among dental professionals and patients, who may be skeptical or apprehensive about the use of teledentistry in dental care. They noted that some dental professionals may perceive teledentistry as a threat to their traditional roles and practices, or may be concerned about the quality and safety of remote care. Similarly, some patients may prefer face-to-face interactions with their dentists, or may not trust the technology or the virtual environment. As one dental assistant stated:

"I think some dentists may be resistant to teledentistry because they are used to the traditional way of doing things, and may not see the need or the value of using technology in patient care. They may also worry about the impact of teledentistry on their workload, income, or professional identity." (DA11) A dentist also acknowledged the need for patient education and engagement:

"Teledentistry also requires the buy-in and participation of patients, who may have different levels of acceptance and readiness for remote care. We need to educate patients about the benefits and limitations of teledentistry, and to involve them in the decision-making and feedback processes, to ensure that teledentistry meets their needs and expectations." (D6)

5. Discussion

This qualitative study explored the perceptions of dental assistants and dentists in Saudi Arabia regarding the opportunities and challenges of teledentistry in dental practice. The findings suggest that dental professionals recognize the potential benefits of teledentistry, such as improved access to care, enhanced patient experience, and increased efficiency and productivity.

However, they also identify several barriers and challenges to the adoption and implementation of teledentistry, including technical issues, privacy and security concerns, lack of training and support, and resistance to change.

The perceived benefits of teledentistry reported in this study are consistent with previous research in other countries and settings. Several studies have highlighted the potential of teledentistry to increase access to dental care, particularly for underserved and remote populations, by enabling remote consultations, diagnosis, and triage (Alabdullah et al., 2020; Estai et al., 2016). Other studies have emphasized the potential of teledentistry to enhance the patient experience, by increasing convenience, comfort, and satisfaction (Ghai, 2020; Irving et al., 2018). Moreover, some studies have suggested that teledentistry can increase the efficiency and productivity of dental practice, by optimizing the use of time and resources and facilitating interprofessional collaboration and communication (Bhaskar et al., 2020; Jampani et al., 2011).

However, the perceived challenges of teledentistry identified in this study are also consistent with previous research. Several studies have reported technical issues as a significant barrier to teledentistry, such as the availability and reliability of internet connectivity, the compatibility of different devices and software, and the quality and accuracy of digital images and data (Ata & Ozkan, 2009; Jampani et al., 2011). Other studies have highlighted privacy and security concerns as a major challenge to teledentistry, particularly in relation to the electronic transmission and storage of sensitive patient information and data (Ghai, 2020; Irving et al., 2018). Moreover, some studies have identified the lack of training and support for teledentistry as a significant obstacle to its adoption and implementation, particularly among older generations of dental professionals who may not be familiar or comfortable with the use of technology in patient care (Aboalshamat, 2020; Alshammari et al., 2022). Finally, a few studies have acknowledged the potential resistance to change among dental professionals and patients, who may be skeptical or apprehensive about the use of teledentistry in dental care (Ata & Ozkan, 2009; Jampani et al., 2011).

The findings of this study have several implications for the development and implementation of teledentistry in dental practice in Saudi Arabia. First, there is a need for clear policies and guidelines to ensure the safe, effective, and ethical use of teledentistry, particularly in relation to privacy and security, informed consent, liability, and reimbursement. These policies and guidelines should be developed in consultation with relevant stakeholders, including dental professionals, patients, policymakers, and technology providers, and should be regularly reviewed and updated to keep pace with the evolving landscape of teledentistry.

Second, there is a need for adequate infrastructure and resources to support the adoption and implementation of teledentistry, particularly in underserved and remote areas. This includes the provision of reliable and affordable internet connectivity, the availability of compatible devices and software, and the establishment of technical and administrative support systems. Moreover, there is a need for financial incentives and reimbursement models to encourage the use of teledentistry and to ensure its sustainability and scalability.

Third, there is a need for education and training programs to equip dental professionals with the necessary skills and competencies for teledentistry, particularly in relation to communication, technology, and patient-centered care. These programs should be integrated into the undergraduate and postgraduate curricula of dental schools, as well as in continuing professional development

courses and workshops. Moreover, there is a need for public awareness and education campaigns to inform and engage patients about the benefits and limitations of teledentistry, and to address any concerns or misconceptions they may have.

Finally, there is a need for further research to evaluate the effectiveness, cost-effectiveness, and acceptability of teledentistry in different settings and populations, and to identify the best practices and strategies for its implementation and sustainability. This research should involve collaborations between dental professionals, researchers, policymakers, and technology providers, and should use rigorous and diverse methodologies, such as randomized controlled trials, observational studies, and qualitative inquiries.

6. Conclusion

In conclusion, this qualitative study provides valuable insights into the perceptions of dental assistants and dentists in Saudi Arabia regarding the opportunities and challenges of teledentistry in dental practice. The findings suggest that dental professionals recognize the potential benefits of teledentistry, such as improved access to care, enhanced patient experience, and increased efficiency and productivity, but also identify several barriers and challenges to its adoption and implementation, including technical issues, privacy and security concerns, lack of training and support, and resistance to change.

The study highlights the need for clear policies and guidelines, adequate infrastructure and resources, education and training programs, and further research to support the safe, effective, and sustainable use of teledentistry in dental practice in Saudi Arabia. The insights from this study can inform the development of evidence-based interventions and strategies to promote the adoption and implementation of teledentistry, and to harness its potential for improving the quality, accessibility, and affordability of dental care in Saudi Arabia.

However, the study also has some limitations that should be acknowledged. First, the sample size was relatively small and may not be representative of all dental assistants and dentists in Saudi Arabia. Second, the study relied on self-reported data and may be subject to social desirability bias. Third, the study was conducted in the context of the COVID-19 pandemic, which may have influenced the participants' perceptions and experiences of teledentistry.

Despite these limitations, the study makes a valuable contribution to the literature on teledentistry in dental practice, particularly in the context of a developing country like Saudi Arabia. Future research should build on these findings and explore the perspectives of other stakeholders, such as patients, policymakers, and technology providers, to gain a more comprehensive understanding of the opportunities and challenges of teledentistry in dental practice. **References**

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