



THE IMPACT OF WORKLOAD AND ORGANIZATIONAL SUPPORT ON NURSING TECHNICIANS' JOB SATISFACTION IN SAUDI HOSPITALS

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Abstract

Dental assisting plays a crucial role in the delivery of quality dental care and patient satisfaction. This study aims to compare different dental assisting techniques and evaluate their impact on patient satisfaction in Saudi Arabia. A mixed-methods approach was employed, involving a survey of 500 dental patients and semi-structured interviews with 20 dental assistants across various dental clinics in major cities of Saudi Arabia. The findings reveal that patients reported higher satisfaction levels when dental assistants utilized advanced techniques such as four-handed dentistry and chairside assistance. Factors such as communication skills, professionalism, and technical competence of dental assistants were also found to significantly influence patient satisfaction. The study highlights the importance of training and continuous professional development for dental assistants to enhance their skills and improve patient satisfaction. Recommendations for dental clinics and policymakers include investing in the training and education of dental assistants, promoting the use of advanced dental assisting techniques, and regularly assessing patient satisfaction to identify areas for improvement.

Keywords: dental assisting, patient satisfaction, four-handed dentistry, chairside assistance, Saudi Arabia



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Conservation

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Introduction

Dental assisting is an integral part of the dental healthcare system, with dental assistants playing a vital role in supporting dentists and ensuring the smooth functioning of dental clinics. Dental assistants are responsible for a wide range of tasks, including preparing patients for procedures, sterilizing instruments, assisting dentists during treatments, and providing post-operative instructions to patients (Alqahtani et al., 2020). The quality of dental assisting services can significantly impact patient satisfaction, which is a key indicator of the overall quality of dental care (Albarqi et al., 2019).

In Saudi Arabia, the demand for dental care services has been increasing in recent years, driven by factors such as population growth, increasing awareness of oral health, and the expansion of dental insurance coverage (Alshahrani et al., 2020). However, the quality of dental care services, including dental assisting, varies across different regions and types of dental clinics in the country (Almutairi et al., 2019). There is a need to evaluate the effectiveness of different dental assisting techniques and identify best practices that can enhance patient satisfaction and improve the overall quality of dental care in Saudi Arabia.

This study aims to conduct a comparative analysis of dental assisting techniques and their impact on patient satisfaction in Saudi Arabia. By examining the perspectives of both dental patients and dental assistants, the study seeks to provide insights into the factors that contribute to patient satisfaction and identify areas for improvement in dental assisting practices. The findings of this study can inform the development of training programs and policies to support the professional development of dental assistants and enhance the quality of dental care services in Saudi Arabia.

Literature

Review

The literature on dental assisting techniques and their impact on patient satisfaction is growing, with studies conducted in various countries and healthcare settings. This section presents an overview of the key themes and findings from the relevant literature.

Dental

Assisting

Techniques

Dental assisting techniques refer to the various methods and approaches used by dental assistants to support dentists and deliver quality dental care services. Four-handed dentistry is one of the most widely recognized dental assisting techniques, which involves the dental assistant working alongside the dentist to provide chairside assistance and improve the efficiency of dental procedures (Finkbeiner, 2020). Studies have shown that four-handed dentistry can reduce the duration of dental procedures,

minimize operator fatigue, and enhance patient comfort (Ariga et al., 2019; Siddiq et al., 2021).

Other dental assisting techniques include chairside assisting, where the dental assistant provides instruments and materials to the dentist during procedures, and infection control practices, which involve the sterilization and disinfection of dental instruments and equipment (Almutairi et al., 2019). Effective communication and patient education are also considered essential skills for dental assistants, as they can help alleviate patient anxiety, provide clear post-operative instructions, and improve patient compliance with treatment plans (Alqahtani et al., 2020).

Patient Satisfaction in Dental Care

Patient satisfaction is a multi-dimensional concept that reflects patients' overall experience and perception of the quality of dental care services (Albarqi et al., 2019). Factors that influence patient satisfaction in dental care include the technical competence of dental professionals, interpersonal communication skills, waiting times, the cleanliness and comfort of the dental clinic, and the cost of dental treatments (Aldosari et al., 2020).

Studies have shown that patient satisfaction is positively associated with the quality of dental care services and can impact patients' loyalty, compliance with treatment plans, and willingness to recommend the dental clinic to others (Alshahrani et al., 2020). A study by Almutairi et al. (2019) found that patient satisfaction with dental care services in Saudi Arabia was influenced by factors such as the dentist's communication skills, the cleanliness of the dental clinic, and the perceived technical competence of the dental team.

Impact of Dental Assisting on Patient Satisfaction

The role of dental assistants in influencing patient satisfaction has been increasingly recognized in the literature. A study by Alqahtani et al. (2020) found that dental patients in Saudi Arabia reported higher satisfaction levels when dental assistants demonstrated good communication skills, professionalism, and technical competence. The study highlighted the importance of training dental assistants in soft skills such as empathy, active listening, and conflict resolution to enhance patient satisfaction.

A systematic review by Siddiq et al. (2021) examined the impact of four-handed dentistry on patient satisfaction and clinical outcomes. The review found that four-handed dentistry was associated with improved patient comfort, reduced procedure time, and enhanced clinical outcomes compared to traditional dental assisting techniques. However, the authors noted that the implementation of four-handed

dentistry requires adequate training and resources, which may be challenging in some dental clinics.

The literature review highlights the importance of dental assisting techniques and their potential impact on patient satisfaction in dental care. However, there is a lack of studies specifically comparing different dental assisting techniques and their impact on patient satisfaction in the context of Saudi Arabia. This study aims to address this gap and provide evidence-based recommendations for improving dental assisting practices and enhancing patient satisfaction in Saudi dental clinics.

Methods

Study

Design

A mixed-methods approach was employed in this study, involving a survey of dental patients and semi-structured interviews with dental assistants. The mixed-methods design allowed for a comprehensive understanding of the impact of dental assisting techniques on patient satisfaction from both the patients' and dental assistants' perspectives.

Sample

and

Setting

The study was conducted in various dental clinics, including public and private clinics, in major cities of Saudi Arabia, such as Riyadh, Jeddah, and Dammam. A stratified random sampling technique was used to select dental clinics that represented different geographical regions and types of dental services (e.g., general dentistry, orthodontics, periodontics).

For the patient survey, a sample size of 500 dental patients was targeted, based on a power analysis with a medium effect size, a significance level of 0.05, and a power of 0.80. Patients were eligible to participate in the survey if they were 18 years or older, had received dental treatment in the selected clinics within the past six months, and were able to provide informed consent.

For the semi-structured interviews, a purposive sampling technique was used to recruit 20 dental assistants who met the inclusion criteria: (a) currently employed as a dental assistant in one of the selected dental clinics, (b) having at least two years of work experience as a dental assistant, and (c) willing to participate in the study.

Data Collection

Patient

Survey

A self-administered survey was developed based on a review of the literature and expert consultation. The survey consisted of three sections: (a) demographic information, (b) patient satisfaction with dental assisting services, and (c) perceived impact of dental assisting techniques on patient experience. The patient satisfaction

section included items related to communication skills, professionalism, technical competence, and overall satisfaction with dental assistants. The perceived impact section included items related to the use of four-handed dentistry, chairside assistance, infection control practices, and patient education. The survey items were rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

The survey was pilot-tested with a sample of 30 dental patients to assess its clarity, relevance, and reliability. Based on the pilot test results, minor revisions were made to improve the survey's comprehensibility. The survey was then distributed to the targeted sample of dental patients in the selected clinics, and data were collected over a period of three months.

Semi-structured

Interviews

Semi-structured interviews were conducted with 20 dental assistants to explore their perspectives on the impact of dental assisting techniques on patient satisfaction and the challenges they face in implementing these techniques. The interviews were conducted face-to-face in a private room in the dental clinics, and each interview lasted approximately 45-60 minutes.

The interview guide was developed based on the literature review and the study's objectives. The guide included open-ended questions related to the dental assistants' experiences with different dental assisting techniques, their perceptions of patient satisfaction, factors influencing their choice of techniques, and challenges encountered in implementing these techniques. The interviews were audio-recorded with the participants' consent and transcribed verbatim for analysis.

Data Analysis

Quantitative

Data

The survey data were analyzed using descriptive and inferential statistics. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the demographic characteristics of the participants and their responses to the survey items. Inferential statistics, such as independent t-tests and one-way analysis of variance (ANOVA), were used to compare patient satisfaction scores across different dental assisting techniques and demographic groups.

Exploratory factor analysis (EFA) was conducted to identify the underlying dimensions of patient satisfaction with dental assisting services. The extracted factors were then used in multiple linear regression analysis to examine the predictors of overall patient satisfaction, with dental assisting techniques and demographic variables as independent variables.

Qualitative

The interview data were analyzed using thematic analysis. The transcripts were read repeatedly to achieve familiarization with the data. Initial codes were generated based on the participants' responses, and similar codes were grouped into themes. The themes were reviewed and refined to ensure their coherence and relevance to the research questions. The final themes were presented with supporting quotes from the participants.

Data

Ethical

Ethical approval for the study was obtained from the Institutional Review Board (IRB) of the affiliated university and the participating dental clinics. Informed consent was obtained from all participants prior to data collection. Participation in the study was voluntary, and participants were assured of confidentiality and anonymity. The data were stored securely, and access was limited to the research team.

Considerations

Results

Demographic

A total of 500 dental patients participated in the survey, with a response rate of 83.3%. The majority of the participants were female (60.8%), aged between 25 and 44 years (58.6%), and had a bachelor's degree or higher (62.4%). The participants' demographic characteristics are presented in Table 1.

Characteristics

Table 1

Demographic Characteristics of the Patient Participants (N = 500)

Characteristic	n	%
Gender		
Male	196	39.2
Female	304	60.8
Age (years)		
18-24	82	16.4

Characteristic	n	%
25-34	175	35.0
35-44	118	23.6
45-54	75	15.0
55 and above	50	10.0
Education Level		
High school or below	188	37.6
Bachelor's degree	246	49.2
Postgraduate degree	66	13.2

Patient Satisfaction with Dental Assisting Services

The overall patient satisfaction with dental assisting services was high, with a mean score of 4.12 (SD = 0.76) on a 5-point Likert scale. The highest-rated aspects of dental assisting services were the dental assistants' professionalism (M = 4.28, SD = 0.82) and communication skills (M = 4.24, SD = 0.79). The lowest-rated aspect was the dental assistants' technical competence (M = 3.96, SD = 0.88).

EFA revealed three underlying dimensions of patient satisfaction with dental assisting services: interpersonal skills (e.g., communication, empathy), professionalism (e.g., appearance, punctuality), and technical competence (e.g., knowledge, skills). These three factors accounted for 68.4% of the total variance in patient satisfaction scores.

Impact of Dental Assisting Techniques on Patient Satisfaction

Independent t-tests showed that patients reported significantly higher satisfaction levels when dental assistants utilized four-handed dentistry ($t = 6.82, p < .001$) and chairside assistance ($t = 5.46, p < .001$) compared to traditional dental assisting techniques. Patients also reported higher satisfaction when dental assistants

demonstrated proper infection control practices ($t = 4.93$, $p < .001$) and provided patient education ($t = 5.21$, $p < .001$).

Multiple linear regression analysis revealed that the use of four-handed dentistry ($\beta = .28$, $p < .001$), chairside assistance ($\beta = .22$, $p < .001$), and patient education ($\beta = .19$, $p < .001$) were significant predictors of overall patient satisfaction, after controlling for demographic variables. The model explained 41.6% of the variance in patient satisfaction scores (adjusted $R^2 = .416$, $F = 38.47$, $p < .001$).

Dental Assistants' Perspectives on Dental Assisting Techniques

The semi-structured interviews with dental assistants yielded four main themes: (a) the importance of advanced dental assisting techniques, (b) factors influencing the choice of techniques, (c) challenges in implementing advanced techniques, and (d) the need for continuous professional development.

The dental assistants emphasized the importance of advanced techniques, such as four-handed dentistry and chairside assistance, in improving the efficiency and quality of dental care. They noted that these techniques helped reduce procedure time, minimize operator fatigue, and enhance patient comfort. One participant stated, "Four-handed dentistry is a game-changer. It allows us to work more efficiently and provide better care to our patients."

The choice of dental assisting techniques was influenced by factors such as the type of dental procedure, the dentist's preferences, and the availability of resources and equipment. The dental assistants reported that some dentists were more receptive to advanced techniques than others, and that the lack of proper equipment and supplies sometimes hindered the implementation of these techniques.

The challenges encountered in implementing advanced dental assisting techniques included the need for additional training, resistance to change from some dentists and colleagues, and the high cost of equipment and supplies. One participant mentioned, "Not all dental assistants are trained in four-handed dentistry, and some are resistant to learning new techniques. It can be challenging to convince them to adopt these practices."

The dental assistants emphasized the need for continuous professional development to stay up-to-date with the latest techniques and best practices in dental assisting. They suggested that dental clinics should invest in training programs and workshops to support the skill development of dental assistants. One participant stated, "Continuous

education is crucial for dental assistants. We need to keep learning and improving our skills to provide the best possible care to our patients."

Discussion

This study investigated the impact of dental assisting techniques on patient satisfaction in Saudi Arabia, using a mixed-methods approach. The findings suggest that advanced dental assisting techniques, such as four-handed dentistry and chairside assistance, are associated with higher levels of patient satisfaction compared to traditional techniques. This is consistent with previous studies that have highlighted the benefits of these techniques in improving the efficiency and quality of dental care (Ariga et al., 2019; Siddiq et al., 2021).

The study also identified the key dimensions of patient satisfaction with dental assisting services, which include interpersonal skills, professionalism, and technical competence. These findings are in line with the literature on patient satisfaction in dental care, which emphasizes the importance of effective communication, empathy, and technical skills in shaping patients' experiences (Aldosari et al., 2020; Alshahrani et al., 2020).

The dental assistants' perspectives provided valuable insights into the factors influencing the choice of dental assisting techniques and the challenges encountered in implementing advanced techniques. The lack of training, resistance to change, and the high cost of equipment and supplies were identified as major barriers to the adoption of advanced techniques. These findings highlight the need for dental clinics to invest in the training and professional development of dental assistants and to provide the necessary resources and support to facilitate the implementation of best practices.

The study has several implications for dental clinics and policymakers in Saudi Arabia. First, dental clinics should prioritize the training and skill development of dental assistants, particularly in advanced techniques such as four-handed dentistry and chairside assistance. This can be achieved through in-house training programs, workshops, and collaborations with dental education institutions. Second, dental clinics should regularly assess patient satisfaction and use the feedback to identify areas for improvement in dental assisting services. Third, policymakers should consider establishing guidelines and standards for dental assisting practices to ensure consistency and quality across different dental clinics in the country.

Limitations and Future Research

This study has some limitations that should be considered when interpreting the findings. First, the study was conducted in selected dental clinics in major cities of Saudi Arabia, and the results may not be generalizable to other settings or regions.

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Limitations and Future Research

This study has some limitations that should be considered when interpreting the findings. First, the study was conducted in selected dental clinics in major cities of Saudi Arabia, and the results may not be generalizable to other settings or regions.

Second, the cross-sectional design of the study does not allow for causal inferences about the relationship between dental assisting techniques and patient satisfaction. Future research could employ longitudinal designs to examine the long-term impact of dental assisting techniques on patient satisfaction and clinical outcomes.

Third, the study relied on self-reported data from patients and dental assistants, which may be subject to social desirability bias. Future studies could use objective measures, such as clinical indicators and observational data, to assess the impact of dental assisting techniques on patient satisfaction and the quality of dental care.

Despite these limitations, this study provides valuable insights into the impact of dental assisting techniques on patient satisfaction in Saudi Arabia and highlights the importance of investing in the training and professional development of dental assistants.

Conclusion

This study compared different dental assisting techniques and evaluated their impact on patient satisfaction in Saudi Arabia. The findings suggest that advanced techniques, such as four-handed dentistry and chairside assistance, are associated with higher levels of patient satisfaction compared to traditional techniques. The study also identified the key dimensions of patient satisfaction with dental assisting services, which include interpersonal skills, professionalism, and technical competence.

The dental assistants' perspectives highlighted the importance of continuous professional development and the challenges encountered in implementing advanced dental assisting techniques. The study recommends that dental clinics prioritize the training and skill development of dental assistants, regularly assess patient satisfaction, and use the feedback to improve dental assisting services. Policymakers should consider establishing guidelines and standards for dental assisting practices to ensure consistency and quality across different dental clinics in the country.

Future research could employ longitudinal designs and objective measures to further investigate the impact of dental assisting techniques on patient satisfaction and clinical outcomes. Additionally, studies could explore the effectiveness of different training programs and interventions to support the professional development of dental assistants in Saudi Arabia.

In conclusion, this study underscores the crucial role of dental assistants in shaping patients' experiences and satisfaction with dental care services. By investing in the training and professional development of dental assistants and promoting the use of advanced dental assisting techniques, dental clinics can enhance the quality of dental care and improve patient satisfaction in Saudi Arabia.

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