

## Workforce Analysis of Dentists in Private Clinics in Al-Ahsa Governorate, Saudi Arabia

Ali A. Alkhamis BDS, SBE<sup>1</sup>, Muneer M. Alsalem BDS<sup>3</sup>, Abdullah H. Alsaad BDS<sup>3</sup>, Fahd M. Alsalleeh, BDS, MS, PhD<sup>2\*</sup>

<sup>1</sup>Ministry of Health, Al-Ahsa Dental Center, Department of Endodontics, Saudi Arabia

<sup>2</sup>King Saud University, College of Dentistry, Department of Restorative Dental Sciences, Saudi Arabia

<sup>3</sup>Ministry of Health, Primary Health Care Centers, Saudi Arabia

DOI: [10.36348/sjodr.2020.v05i08.010](https://doi.org/10.36348/sjodr.2020.v05i08.010)

| Received: 18.08.2020 | Accepted: 25.08.2020 | Published: 30.08.2020

\*Corresponding author: Fahd M. Alsalleeh

### Abstract

**Objectives:** To survey and analyze the distributive pattern of dentists working in private dental clinics in Al-Ahsa Governorate, Saudi Arabia. **Methodology:** This study used a unified questionnaire to survey private dental clinics in Al-Ahsa Governorate from August to December 2019. Clinics were included if they had registered with the Ministry of Health and were operating in Al-Ahsa's private sector. Clinics that were not available to visit during the survey period were excluded. During the study, participating clinics were visited and several data points were collected for each facility, including the total number of practicing dentists, year they joined the facility, and each clinician's nationality, gender, and specialization. **Results:** The study showed 69 dental clinics registered with the Ministry of Health and serving the private sector in Al-Ahsa Governorate. Sixty-six clinics (95.7%) agreed to participate. In the resulting survey of 301 practicing dentists, 73.8% were non-Saudi with Egyptians making up the largest national group at 27.2%. Among the Saudi dentists (n=79), 95% had joined their clinic in the last three years. For all participants the primary specialization was general dentistry (80.4%), the majority of whom were Saudi (31%) or Egyptian (27.7%). Among the dental specialists, 42.4% were orthodontists followed by maxillofacial surgeons at 27%. **Conclusion:** Private dental clinics in Al-Ahsa governorate are operated mainly by non-Saudi dentists. In the last three years, the number of Saudi general dentists joining private dental clinics has increased but there is still a need for dental specialists.

**Keywords:** Dentists, Private clinics, Specialists, Dental hospitals.

**Copyright @ 2020:** This is an open-access article distributed under the terms of the Creative Commons Attribution license which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use (NonCommercial, or CC-BY-NC) provided the original author and source are credited.

## INTRODUCTION

Dental caries and periodontal diseases are common infectious oral diseases and a significant public health problem worldwide. According to the World Oral Health reports, 60 to 90% of schoolchildren, and nearly 100% of adults have dental caries [1]. The prevalence of dental caries is considered very high in Saudi Arabia, ranging from 60 to 80% in children and adults, with decayed missing-filled teeth (DMFT) index scores ranging from 3.5 to 5.0 [2]. Several studies have been conducted to assess and analyze etiological factors and ways to improve oral health in Saudi Arabia. A recent study indicated that 18.5% of the Saudi population had visited a dentist every six months [3]. Previous studies have suggested that regular dental visits lead to better oral health, which can improve quality of life [4]. Therefore, the Saudi Ministry of Health (MOH) has paid a great deal of attention in recent years to developing dental clinics, upgrading

services, and implementing preventive care initiatives to improve oral health. Moreover, private dental clinics are increasing in number in all cities of the kingdom.

Healthcare systems are essential for promoting, improving, and maintaining the health of the population and is one of the main areas of focus for Saudi Arabia's Vision 2030. One of the goals of this initiative is to expand the privatization of health services and increase the efficient utilization of available resources, to include technology and digital information. Toward this end, the MOH has provided guidelines and references to foster the development of a private health sector, including dental clinics [5].

Cities within Saudi Arabia have witnessed comprehensive reforms and rapid development over the past ten years. In Al-Ahsa, the largest governorate in Saudi Arabia's Eastern Province, the population has risen steadily at a rate of 4% per year. According to

governmental data, the population size reached one million in 2019. Meanwhile, there are 325 dentists working in private dental clinics in Al-Ahsa [6]. A previous study indicated that 87% of dentists working in private clinics in Riyadh city were non-Saudi [7]. In the last two to three years, the government has intensified efforts to increase Saudi dentists in private dental clinics, to include a decree issued by the Saudi Ministry of Human Resources and Social Development, in partnership with the Ministry of Health, providing for the localization of dental professionals in two phases. The goal of the first phase is to settle 25% of Saudi dentists as of April 2020; and the second phase aims to reach 30% by April 2021.

As more patients seek dental care in the private sector, there is a lack of necessary information about those dentists such as gender, specialty, and nationality in the Al-Ahsa governorate. Previous research indicated that the patient's utilization of dental clinics was based on the quality of dental care [7]. The quality of care depends mainly on practicing dentists. Therefore, more data is needed to shed some light on dentists practicing in private clinics. The objective of this study was to survey private dental clinics and analyze its dentist in Al-Ahsa Governorate, Saudi Arabia.

## METHODOLOGY

This was a prospective cross-sectional study conducted among all specialized private dental clinics located in Al-Ahsa governorate that were registered with the Ministry of Health (MOH) Health Affairs system. Site visits were completed during the period from August to December 2019. A unified questionnaire was used to collect data. A representative from each dental clinic was interviewed to answer all questions. Participation in the study was voluntary. All collected data entered into an Excel (Microsoft Office; Microsoft, Redmond, WA) spreadsheet. Information on the number of practicing dentists, their gender, specialization, and nationality were gathered. The year in which the clinician joined the facility was also collected. The location of each institution was

captured using a shared location tool in Google Maps software (California, USA).

## RESULTS

While the MOH registry indicated 102 registered dental centers, 32.4% (n=33) were not available in their designated locations. The remaining 67.6% (n=69) of dental centers were visited. Three of these (4.3%) refused to participate and were excluded, leaving a total of 66 dental centers (95.7%) that enrolled in the study (Table-1).

The total number of practicing dentists was 301. Based on gender, 57% of dentists were males (n = 172) and 43% were females (n = 129). General practitioners were the most common type of dentists, comprising 80.4% of the group (n = 242) compared to specialized dentists who only comprised 19.6% (n= 59). Among those who specialized, orthodontia was the most common specialty dentists (42.4%; n=25) followed by oral surgeons (27%; n=16). The distribution of all specialties is shown in Table-2.

With respect to nationality, the majority of dentists were non-Saudi (n =222, 73.8%). The most common nationality recorded was Egyptian (n = 82, 27.2%), followed by Saudi nationals (n = 79, 26.2%) and then Syrians (n = 51, 16.9%). The full list of all nationalities of dentists is shown in Table. 3.

The majority of Saudi clinicians responded that they had joined their clinic within the last three years (n=75; 95%), compared to 126 (52%) non-Saudi dentists. Only 4 Saudi dentists (5%) had been at their private clinics between 4 to 9 years, compared to 104 (96.3%) non-Saudi dentists. Only 41 dentists, all of whom were non-Saudi, had been at their private clinic more than 10 years (Table-4).

The location of each clinic listed on the MOH system was also analyzed. According to the municipalities of the Al-Ahsa governorate, of the 66 dental clinics included, Hofuf and Mubarratz had the greatest number of clinics with 35 and 24 (Figure-1).

**Table-1: Total number of dental centers**

|                        | % (n)            |                      | % (n)            |
|------------------------|------------------|----------------------|------------------|
| <b>Visited</b>         | <b>67.6 (69)</b> | <b>Accepted</b>      | <b>95.7 (66)</b> |
|                        |                  | <b>Rejected</b>      | <b>4.3 (3)</b>   |
| <b>Unable to visit</b> | <b>32.4 (33)</b> | <b>Not available</b> | <b>60.6 (20)</b> |
|                        |                  | <b>Closed</b>        | <b>30.3 (10)</b> |
|                        |                  | <b>Not yet open</b>  | <b>9 (3)</b>     |
| <b>Total (n)</b>       | <b>102</b>       |                      |                  |

**Table-2: Total number of dentists based on specialty**

| Specialty             | %(n)       |                |           |
|-----------------------|------------|----------------|-----------|
| General practitioners | 80.4(242)  |                |           |
| Specialized dentists  | 19.6(59)   | Specialty %(n) |           |
|                       |            | Orthodontic    | 42.4 (25) |
|                       |            | Surgery        | 27.1 (16) |
|                       |            | Pedodontic     | 6.8 (4)   |
|                       |            | Periodontic    | 6.8 (4)   |
|                       |            | Prosthodontic  | 5.1 (3)   |
|                       |            | AGD*           | 5.1 (3)   |
|                       |            | Endodontic     | 3.4 (2)   |
|                       |            | Restorative    | 1.7 (1)   |
| Implant               | 1.7 (1)    |                |           |
| <b>Total (n)</b>      | <b>301</b> |                | <b>59</b> |

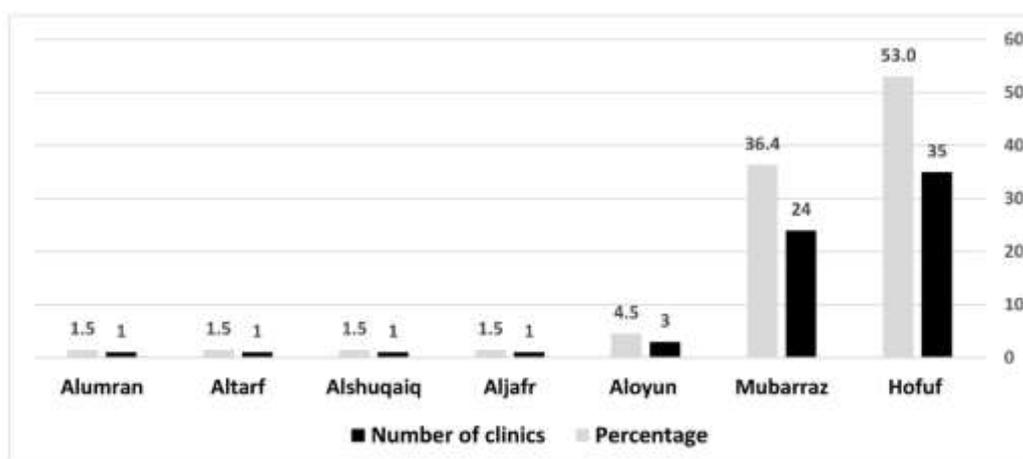
\*AGD: Advanced general dentistry

**Table-3: Total number of dentists based on nationality**

| Nationality      | General practitioners %(n) | Specialized dentists %(n) | Total %(n) |
|------------------|----------------------------|---------------------------|------------|
| Egyptian         | 27.7 (67)                  | 25.4 (15)                 | 27.2 (82)  |
| Saudi            | 31 (75)                    | 6.8 (4)                   | 26.2 (79)  |
| Syrian           | 15.7 (38)                  | 22 (13)                   | 16.9 (51)  |
| Indian           | 5 (12)                     | 10.2 (6)                  | 6 (18)     |
| Jordanian        | 4.1 (10)                   | 11.9 (7)                  | 5.6 (17)   |
| Palestinian      | 4.1 (10)                   | 8.5 (5)                   | 5 (15)     |
| Sudanese         | 4.5 (11)                   | 3.4 (2)                   | 4.3 (13)   |
| Pakistani        | 2.5 (6)                    | 1.7 (1)                   | 2.3 (7)    |
| Yamani           | 1.7 (4)                    | 5.1 (3)                   | 2.3 (7)    |
| Filipino         | 2.5 (6)                    | 0                         | 2 (6)      |
| Tunisian         | 0.8 (2)                    | 0                         | 0.7 (2)    |
| Lebanese         | 0                          | 3.4 (2)                   | 0.7 (2)    |
| Iraqi            | 0.4 (1)                    | 0                         | 0.3 (1)    |
| British          | 0                          | 1.7 (1)                   | 0.3 (1)    |
| <b>Total (n)</b> | <b>242</b>                 | <b>59</b>                 | <b>301</b> |

**Table-4: Nationality in relation to years of experience**

| Experience         | Saudi (n) | non-Saudi (n) |
|--------------------|-----------|---------------|
| < 3 years          | 75        | 77            |
| 4-9 years          | 4         | 104           |
| 10+ years          | 0         | 41            |
| Total Participants | 79        | 222           |



**Fig-1: The diagram show geographic distributions of private dental clinics in Alahsa governorate. They were unevenly distributed. Hofuf and Mubarraz had the highest number of clinics; 35 and 24, respectively**

## DISCUSSION

Although it is widely believed that quality of healthcare services drives an individuals' utilization of dental services [8, 9], there are many other important factors including access to care, financial reasons, and attitudes toward dental care [10]. As the number of private dental clinics in Saudi Arabia steadily increases, patients seeking dental care in the private sector often lack the necessary information about these clinics. Besides the governmental database, there is a lack of specific information about private sector clinics, including details about the clinicians and the specialties they offer. The current study aims to analyze this workforce in Al-Ahsa Governorate and contribute to greater transparency of available dental services in this region. The MOH aims to achieve the highest levels of transparency in 2030 and intends to spend over 23 billion Saudi riyals on related initiatives. The current study seeks to provide insights on achieving this goal.

The current study shows that private dental clinics are not evenly distributed geographically in Al-Ahsa. A previous study shows a similar trend in Riyadh city [7]. The location of the dental centers was found to be the main factor discouraging patients from receiving dental care [11, 12]. Patient satisfaction increased as the dental clinic center was the nearby location [13].

As of August 2019, there were 102 dental clinics enrolled in the MOH system in Al-Ahsa. This study was able to collect data from only 66 dental centers; the remaining 36 were not available to visit and were excluded. According to MOH statistical book for the year 2018, a total of 325 dentists were registered in the region of Al-Ahsa. This study shows only 301 dentists. The difference in these numbers can be attributed to the clinics that were excluded, as well as dentists who left private clinics for MOH jobs.

According to the data collected, 73.8% of dentists working in private dental clinics were non-Saudi. However, Saudi dentists were the second-highest nationality recorded at 26.2%. There has been a significant increase number of Saudi dental graduates in the last five years. Although many Saudi graduates prefer government jobs for long-term security and post-graduate opportunities, there may be opportunity for private dental clinics to recruit from Saudi dental school graduates.

Results also indicate that 43% of dentists in Al-Ahsa are female. An earlier study showed that most of the dentists' workforce in Riyadh city were male [7]. The social and religious factors which dominate Saudi society may play a critical factor in a patient's decision to choose a private dental clinic. It clear that more female dentists are drawn to work in private clinics.

In conclusion, private dental clinic centers are not distributed evenly in Al-Ahsa. The majority of dentist's workforce is non-Saudis. There are more general practitioners compared to specialists. There was an increase in the last three years of Saudi general dentists to join private dental clinics. There is a need for more dental specialists.

## REFERENCES

- Petersen, P. E., Bourgeois, D., Bratthall, D., & Ogawa, H. (2005). Oral health information systems-towards measuring progress in oral health promotion and disease prevention. *Bulletin of the World Health Organization*, 83, 686-693.
- Al Agili, D. E. (2013). A systematic review of population-based dental caries studies among children in Saudi Arabia. *The Saudi dental journal*, 25(1), 3-11.
- Linjawi, A. I., Bahaziq, A. M., Qari, A. H., Baeshen, H. A., & Hassan, A. H. (2019). Impact of Dental Visits on Oral Health Awareness in Saudi Arabia. *The journal of contemporary dental practice*, 20(7), 784-788.
- Brondani, B., Emmanuelli, B., Alves, L. S., Soares, C. J., & Ardenghi, T. M. (2018). The effect of dental treatment on oral health-related quality of life in adolescents. *Clinical oral investigations*, 22(6), 2291-2297.
- Health, S.M.O., Healthcare Investor Licensing Guide 2019.
- Health, S.M.O., Statistical Yearbook 1439H. 2018.
- Alsalleeh, F., Alohal, M., Alzeer, M., Aloseimi, M., Almuflehi, N., & Alshiha, S. (2018). Analyzing private dental clinics in Riyadh City, Saudi Arabia. *The Saudi dental journal*, 30(1), 70-73.
- Butters, J. M., & Willis, D. O. (2000). A comparison of patient satisfaction among current and former dental school patients. *Journal of dental education*, 64(6), 409-415.
- Saeed, A. A., & Mohamed, B. A. (2002). Patients' perspective on factors affecting utilization of primary health care centers in Riyadh, Saudi Arabia. *Saudi medical journal*, 23(10), 1237-1242.
- Al Johara, A. (2010). Factors affecting utilization of dental health services and satisfaction among adolescent females in Riyadh City. *The Saudi dental journal*, 22(1), 19-25.
- Moshkelgosha, V., Mehrzadi, M., & Golkari, A. (2014). The public attitude towards selecting dental health centers. *Journal of Dentistry*, 15(3), 129-134.
- Ungureanu, M. I., & Mocean, F. (2015). What do patients take into account when they choose their dentist? Implications for quality improvement. *Patient preference and adherence*, 9, 1715-1720.
- Mussard, J., Ashley, F. A., Newton, J. T., Kendall, N., & Crayford, T. J. (2008). What do you think of your dentist? A dental practice assessment questionnaire. *Journal of Evaluation in Clinical Practice*, 14(2), 181-184.