Analyzing private dental clinics in Riyadh City, Saudi Arabia

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Abstract
Aim: To survey private dental clinics and analyze its clinicians in Riyadh city Saudi Arabia.

Materials and methods: Private dental clinics that had been registered with the Ministry of Health (MOH), Health Affairs System and accepted to participate were included. All clinics were visited to collect data. Number of practicing dentists, nationality, and their specialty classification were recorded. The location and year of establishment of each dental center were also collected.

Results: Out of 236 private dental clinics registered in MOH, 162 clinics accepted to participate. The total number of dentists in these clinics was 877. The majority of dentists were males (63.97%). The percentage of non-Saudi dentists were 86.66%, and Syrians dentists being the highest group (40.25%). The primary specialty of dentists was general dentistry (70.5%). The location of private dental clinics was found to be concentrated in some areas and not evenly distributed in Riyadh city. There were 49 clinics in Olaya, followed by 45 clinics in Rawdha municipality.

Conclusion: Private dental clinics in Riyadh city are operated mainly by non-Saudi dentists. Moreover, there is still a need for more female dentists and dental specialists. There are areas in Riyadh city that lack private dental clinics.

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1. Introduction

Dental caries and periodontitis are the most common infectious oral disease worldwide (Holde et al., 2016). According to the World Oral Health reports, 60–90% of schoolchildren and nearly 100% of adults have dental caries (Organization, 2012). Oral diseases in children and adults are higher among poor and disadvantaged population groups (Petersen, 2003). The prevalence of dental caries is considered very high in Saudi Arabia and it is estimated to reach 94% in 9 years of age.
Previous studies have indicated that regular dental visits lead to better oral health and hence improve the quality of life (McGrath and Bedi, 2001). Therefore, the Saudi Ministry of Health (MOH) has put much of its attention to develop and upgrade dental clinics and services.

Cities of Saudi Arabia have witnessed a comprehensive reforms and rapid development over the past 20 years. Riyadh, as the capital city, is one of the world’s fastest growing cities, and its population has risen steadily at a rate of 4% per year. According to governmental data, the population size has reached over six million in 2016 (Riyadh HCfTDo, 2016). There are 451 dentists in MOH hospitals in the Riyadh region and 203 dentists in MOH health centers which bring the total of dentists to 654 dentists working under the umbrella of the MOH. On the other hand, more patients who cannot utilize dental services in the governmental clinics and therefore, are seeking such service in the private sector. The number of dentists in the private clinics in Riyadh has reached 3111. However, there is lack of basic information about the dentist’s gender, specialty and nationality. Patients who cannot utilize dental services in the governmental centers and therefore, are seeking dental care in the private sector (KoSA, 2015).

Previous research had indicated that patient’s utilization of dental clinics was based on the quality of dental care (Saeed and Mohamed, 2002). It is clearly that the quality of care depends mainly on practicing dentists. Therefore, more data is needed to shed some light on dentists practicing in private clinics. Moreover, the geographic location had been cited to be critical factor in choosing a dental clinic by patients (Al-Hussyeen, 2010). In Riyadh city, information about private dental clinics locations and distribution is lacking. The purpose of this study is to survey private dental clinics and analyze its clinicians in Riyadh city.

2. Material and methods

This was a cross sectional prospective study and the Institutional Review Board approval was provided by the research committee (IR#0199). All specialized private dental clinics located in Riyadh city that were registered in the MOH, Health Affairs system were included. Dental clinics that were within hospitals were not included. The list was obtained in June 2016 and dental centers were visited during the period from August to October 2016. A unified questionnaire was used to collect data. A representative from each dental clinic was interviewed to answer all questions. The participation in the study was voluntary and those who refused were documented and excluded from further analysis. Information on number of practicing dentists, their gender, specialty, classification, and nationality were gathered. The location, year of establishment and contact numbers were also recorded. The location of each center was captured using shared location tool in Google Maps software (California, USA).

3. Results

The MOH list provided has a total of 236 dental clinics registered and they were all visited. Out of 236 clinics, 68.6% (n = 162) accepted to be enrolled while 31.4% (n = 74) refused to participate. It was found that the total number of dentists were 877. The majority of dentists were males (n = 561, 63.97%) compared to female dentists (n = 316, 36.03%). With respect to their nationality, the majority of dentists were non-Saudis (n = 760, 86.66%). The Syrian dentists (n = 353, 40.25%) were the highest among all other nationalities, followed by Egyptians dentists (n = 150, 17.10%). Dentists who are being identified to be Saudi were 13.34% (n = 117). The full list of all nationalities of dentists analyzed were shown in Table 1. As for dental specialty, the general practitioners were the highest dentists group (70.5%; n = 618) compared to specialists and consultants (29.5% n = 259). Furthermore, among specialists/consultants, orthodontists had the highest number (42.9%; n = 111), and were mostly females (28.5%; n = 32). The distribution of other specialties is shown in Table 2.

The year of establishment of clinics visited were categorized accordingly. As shown in Table 3, number of clinics between the periods from 1984 to 1990 and 2011 to 2016, were 10, 203, and 59, respectively. The location of all private dental clinics

| Table 1 | Nationality of practicing dentists in private dental clinics. |
|---------|----------------------------------------------------------|
| Nationality | Number |
| Syria    | 353     |
| Egypt    | 150     |
| Saudi Arabia | 117    |
| Philippine | 78     |
| Palestine | 40     |
| Sudan    | 33      |
| Yemen    | 30      |
| Jordan   | 29      |
| Lebanese | 15      |
| India    | 12      |
| United States of America | 5      |
| Canada   | 3       |
| Venezuela | 3      |
| Tunisia  | 2       |
| Colombia | 2       |
| South Africa | 1     |
| Mexico   | 1       |
| Eritrea  | 1       |
| Chile    | 1       |
| Chile    | 1       |
| Azerbaijan | 1     |
| Total    | 877     |

| Table 2 | Classification according to dental specialty of practicing dentists in private dental clinics. |
|---------|----------------------------------------------------------|
| Specialty | Number |
| General dentist | 618 |
| Orthodontist    | 111 |
| Prosthodontist  | 55  |
| Oral surgeon    | 27  |
| Endodontist     | 26  |
| Pedodontist     | 15  |
| Periodontist    | 13  |
| Restorative dentist | 10 |
| Advanced general dentist | 2 |
| Total            | 877 |
was also analyzed. It was found that among the 236 dental clinics registered, Olaya and Rawdha had the highest number of clinics; 49 and 45, respectively (Table 4).

4. Discussion

Healthcare in Saudi Arabia is one of the main focus areas of vision 2030. One of its initiatives to be accomplished is to expand privatization of health services and increase the efficient utilization of available resources and the use of technology and digital information (Vision, 2020). The current governmental data about dental private clinics in Riyadh city lacks basic information; clinician’s gender, nationality, specialty, and location of dental centers. Therefore, the current study aimed to develop a database and analyze clinicians’ workforce of private dental clinics in Riyadh city.

It is believed that a high quality of healthcare services increases individuals’ utilization of dental services (Saeed and Mohamed, 2002; Butters and Willis, 2000). There are other factors involved as well; including access to care, financial reasons, and attitudes toward dental care (Al-Hussyeen, 2010). The number of private dental clinics in Saudi Arabia has steadily increased every year. However, patients seeking dental care in private sector often lack basic information about the location and dental specialty offered in these clinics. Beside governmental database, there are lack of specific information needed about clinics registered. There are 236 dental clinics registered in MOH system in Riyadh city as of June 2016. The current study was able to collect data from 162 dental clinic centers and the rest; 74 elected not to participate for unknown reasons. According to MOH statistical book for the year 2015, a total of 3111 dentists were registered in the region of Riyadh. However, data findings from this study shows that there are 877 dentists. The difference in the two numbers was mainly attributed that the current study surveyed dental clinics in Riyadh city rather than Riyadh region included in MOH statistical book (KoSA, 2015). In addition, a system is lacking to verify information obtained or collected from these centers. The MOH aims to achieve the highest levels of transparency in 2030. Clearly, the current study suggests that work must be done to achieve this goal.

Results obtained from the current study indicated that most of dentists’ workforce were male as compared to female (n = 536). Dental clinic centers reported that 341 dentists to be female gender. The social and religious factors dominated in Saudi Arabia society may play a key factor in choosing private dental clinic. Patient’s perception and preference of either genders is lacking and need to be studied.

According to the current study, 40% of dentists working in private dental clinics were Syrians. There are significantly increasing in the number of Saudi dental graduates. Yet, it appears that the private dental clinics fail to recruit them. There are many explanations that can be elicited. Non Saudi dentists may accept low wage and work for extended hours. Furthermore, Saudi graduates prefer government jobs for long term security and postgraduate education opportunities. The MOH plans to spend over 23 billion Saudi riyals on new initiative to meet 2030 vision (Vision, 2020). The current study gives a window to adopt plans in order to address this issue.

Last, the present study indicated that private dental clinics are not evenly distributed geographically in Riyadh city. The location of dental center was found to be a main factor discouraging patients from receiving dental care (Al-Hussyeen, 2010). Riyadh city is considered to be very crowded streets. It has been reported that the patient’s satisfaction increased as the dental clinics center was in close proximity location (Mussard et al., 2008).

In conclusion, private dental clinic centers are not distributed evenly in Riyadh city. The majority of dentist’s workforce are Non-Saudis. There are more general practitioners compared to specialists. There is need for more specialists in some of dental specialty.

Conflict of interest

The authors declared that there is no conflict of interest.

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