

## ORIGINAL ARTICLE

### Health of dentists in United Arab Emirates.

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## **Abstract**

**Objectives:** The aims of this study were to investigate the prevalence and nature of some health and lifestyle problems among dentists in United Arab Emirates (UAE).

**Method:** A cross-sectional study by using one-stage complex sampling technique using a self reported questionnaire distributed to all 844 dentists, working in three cities (Abu Dhabi, Dubai and Sharjah) in UAE.

**Results:** Seven hundred and thirty three (87%) dentists, aged 22-70 years, responded. More than half 442(61%) of dentists do not exercise regularly. Around one seventh of the dentists are smokers. One hundred and eighteen dentists (16%) reported having some known systemic problem. The most common systemic health problems were cardiovascular diseases 56 (8%).

**Conclusion:** The present study has indicated that the prevalence of exercise among dentists in UAE was relatively low, some systemic health problems, especially cardiovascular diseases, were presents among dentists practicing in UAE. Cigarette consumption was relatively high in this population of dentist. Further continuing educational and investigation of the appropriate intervention to improve rates of exercise, reduce the level of smoking among dentists in UAE is needed, which may help reduce the level of systemic diseases.

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### **Conflict of interest**

The authors declare that they have no conflict of interest with respect to the submitted work.

### **Ethical statement**

The authors confirm that this research has been conducted in full accordance with the World Medical Association Declaration of Helsinki. The current study was approved by the ethics committee of Ajman University of Science and Technology AUST, General Authority for Health Services for the Emirate of Abu Dhabi, Department of Health and Medical Services of government of Dubai, and Ministry of Health in UAE. Written consents were obtained from all participants in this study.

## **Introduction**

Dentistry is a stimulating and rewarding occupation but is physically and mentally demanding <sup>1</sup>. It has been suggested that dentists lack awareness and knowledge about managing their stress <sup>2-4</sup>. The most common stressors reported include time- related pressure, heavy workloads, financial concerns, anxious patients, staff problems, poor working conditions, medical emergencies in the surgery and the routine nature of the job <sup>2, 5</sup>. Failure to adapt to or contend with the working environment can predispose to illness <sup>6</sup>. The most frequent causes of premature retirement among dentists were musculoskeletal disorders (29.5%), cardiovascular disease (21.1%), and neurotic symptoms (16.5%) as reported by Burke and co-researchers<sup>7</sup>, therefore, practicing dentists should be aware of these illnesses and try to take steps to avoid them, especially musculoskeletal problems and cardiovascular disease <sup>7</sup>. Despite anecdotal evidence of these conditions, there has been little published on systemic problems specifically in relation to dentists.

Self-awareness and benefits of regular exercise are the needs of the hour. Various studies have been done to record self-perceived health and health-related behaviors of dentists in other countries but little is known about the health of dentists in United Arab Emirates (UAE). This study was designed to investigate the prevalence and nature of some health and lifestyle problems of dentists in UAE including work-related issues that relate to exercise, cigarette smoking, and systemic diseases.

## **Methods**

The current study was approved by the ethics committee of Ajman University of Science and Technology (AUST), General Authority for Health Services for the Emirate of Abu Dhabi, Department of Health and Medical Services of government of Dubai, and Ministry of Health in UAE.

The questionnaire used in this study consists of 21 close-ended questions which consisted an information on the individual characteristics such as age, gender, marital status, number of years since graduation and number of hours worked per week. Furthermore, information on a range of health issues of dentists was sought, including exercise, cigarette smoking, and systemic diseases. A total of 844 dentists (GDP and specialists) working in three cities (Abu Dhabi, Dubai and Sharjah) in both sectors (private and public) in UAE selected for inclusion in this study. At least one year of work experience in the current position was a criterion for eligibility to be included in the study.

The Clinics were selected from the membership register of Ministry of Health for emirates of Abu Dhabi, Dubai and Sharjah. This includes Dental clinics, Medical centers, polyclinics and hospitals. The purpose of the questionnaire and how they should be answered was explained, and whenever necessary further information was provided to the participant. The questionnaires were distributed by the researchers between July 2005 and February 2006. All the data entered into the Microsoft Excel, and then transferred into SPSS program. Data analyses were conducted by the use of SPSS windows version 11.0 (SPSS Inc., Chicago, IL, USA). The chi-square test was used were appropriate and the level of statistical significance was set at  $P < 0.05$ . Univariate and bivariate analysis were used when appropriate.

## **Results**

This cross-sectional study examined the prevalence of, and some factors associated with, health problems among dentists in United Arab Emirates. Questionnaires were completed by seven hundred and thirty-three 733 dentists from Abu Dhabi, Dubai and Sharjah from both sectors (public and private) with a total response rate of 87%. Missing data were excluded from the analysis. Of the 733 dentists 445(61%) were males, and 288(39%) were females, with an age range from 22-70 years (mean  $\pm$  SD = 38.1  $\pm$ 10.3). Background data on age, number of years since graduation (or in clinical practice), and

working hours per week been summarised in Table 1. Male dentist used to work for longer hours than female.

More than one third of the dentists (39%) reported exercising on a regular basis (Table 2). Male dentists were significantly more likely to report exercising on a regular basis ( $P<0.05$ ). A variety of reasons for not exercising regularly were given (Table 2), the most common reason for not exercising was the lack of time (43%). Not exercising on regular basis were more common among dentists in the public sector than in the private sector ( $P<0.05$ ) (data not presented in the tables).

As shown in table 3 more than one fifth of the male dentists are smoker, there were significant difference between regular smoking and sex ( $P<0.05$ ). There was a clear association between having systemic disease and the regular smoking ( $P<0.01$ ). (data not presented in the tables).

The prevalence of reported systemic problems, have been summarized in Table 4. One hundred and eighteen dentists (16%) reported having some known systemic problem at some time since graduation. The most commonly reported systemic illness included cardiovascular diseases 56 (8%), gastrointestinal conditions 38 (5%), neurologic symptoms 14 (2%), respiratory problems 9 (1%) with the remainder reporting a variety of different conditions. There were significant difference in the prevalence of cardiovascular disease and sex ( $P<0.05$ ).

## **Discussion**

This cross sectional study examined the prevalence of, and some factors associated with health problems in dentists in UAE by means of a self-administered questionnaire. To our knowledge, this is the first study to report on health problems among dentists working in UAE. Although the response rate for this study was good, one of the major limitations of this type of research is that what people report may differ from that which they actually do.

In most of the studies the dentists are reported to be relatively inactive and very few took some form of physical exercise and acknowledge the benefits of the same <sup>4</sup>. The prevalence of exercise in this population of dentists was relatively low, particularly given the relatively high rates of musculoskeletal problems seen in this population <sup>8</sup>. The present investigation showed that, only (39%) of dentists reported exercising on a regular basis. Similar findings were reported in Thailand <sup>9</sup>. It has been noted however that poor general physical fitness has been associated with musculoskeletal symptoms. This finding is in line with the study reported by Leggat and co-researchers <sup>9</sup>. On the contrary, a study conducted in Poland <sup>10</sup> reported no significant relationship between the practice of physical activity and the number of musculoskeletal disorders.

A significant association was found between not exercising regularly and the gender of the participant, being a female dentist was significantly associated with not exercising regularly. The main reason reported for that is because of lack of time, which could be attributed to home and family responsibilities. However, those who reported not exercising regularly because of time limitation; they were working more than 35 hours weekly. That means those dentists can adjust their time in order to improve their physical fitness and doing their exercise regularly.

In addition, it had been noticed that, for the dentists who are working in the public sector were not doing their exercising habit regularly to greater extent than dentists in the private sector. This might be attributed to the working times for the dentists. For those dentists who work in the public sector in UAE; they have a fixed working time for 8-hours continuously, while dentists in the private sector on average they work two shifts- (4 hours in the morning and 4 hours in the evening) ; therefore, they have more flexible working time for doing some healthy lifestyle habits like exercise.

It is surprising that almost 14 % of dentists smoke in UAE this rate of smoking appears to be much higher than that reported in other population of dentists <sup>1,11</sup>, specifically among male dentists. This high prevalence of dentists, who reported smoking, is of particular concern; therefore, continuing education in the avoidance of smoking would be

beneficial. Further studies are needed to identify causes of high rate of smoking and to identify the appropriate interventions which would reduce its prevalence among dentists in UAE.

In general, it would be expected that the prevalence of disease among dentists would be lower compared with averages from other groups within the population since dentists belong to a higher socioeconomic grouping<sup>12,13</sup> and higher socioeconomic status affords better dietary habits, better living conditions and the ability to transform health information into actions<sup>14</sup>. In this respect, the prevalence of illnesses such as cardiovascular disease, tumors, and respiratory diseases is in fact higher within the general population compared with the dental profession<sup>15</sup>. The present study showed that around one sixth of the dentists (16.1%) were having systemic diseases, mainly due to cardiovascular problems. This percentage is lower than what been reported in a study conducted by Leggat and co-researchers<sup>9</sup> in Thailand where they found that 27.8% of dentists having a systemic diseases.

It is worthwhile to mention that, it was noticed that the prevalence of systemic problems among dentists in the public sector were higher as compared to dentists in the private sector. This could be due to the different positions of dentists in the public sector in the hierarchy of the workplace with possible more stress over the work activities as compared to private practitioners or it might be attributed to the fact that dentists in the private sector are exercising more regularly. In spite of a cross-sectional study cannot show causality, but the results implicated physical exercise as a buffer against systemic problems. This finding is supported by the study conducted in Finland<sup>16</sup>. As Lehto and co-authors<sup>16</sup> suggested that, poor general physical fitness may be partly responsible for these problems. There is a scope for further decreasing the prevalence and severity of these problems by performing regular specific exercises<sup>17, 18</sup>. Therefore, measures should be examined to improve participation rates in exercise amongst this group of dentists. In addition, male dentists reported having more systemic problems as compared to their female colleagues. On the other hand, the prevalence of systemic diseases was higher among smokers as smoking is a well-known hazard to health.



Paying the necessary attention to occupational and individual risk factors, prevalence, symptoms, and consequences of these disorders, and implementing the recommended health and safety measures can enable a long and healthy career. It is essential to aim to provide background information for the dentists regarding the magnitude of the problem, particular risk factors and the available recommendations for prevention <sup>19</sup>.

## **Conclusion**

The present study has indicated that some systemic health problems, especially cardiovascular diseases, were present among dentists practicing in UAE. Lack of time was cited as the most common reason for dentists not exercising, especially among female dentists. Cigarette consumption was relatively high in this population of dentist. Further continuing educational and investigation of the appropriate intervention to improve rates of exercise, reduce the level of smoking among dentists in UAE is needed, which may help reduce the level of systemic diseases.

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**Table 1:** Age, Number of years since graduation and working hours by sex.

	<b>Male (n=445)</b> <b>(Mean ± SD)</b>	<b>Female (n=288)</b> <b>(Mean ± SD)</b>
Age (years)	40.8±9.2	36.4±7.5
Number of years since graduation	16.7±9.2	13.5±8.1
Working hours per week (hours)	30.5±15.5	26.6±14.5

**Table 2:** Number (Percentage) of dentists reported to be exercising regularly and reported reasons for not exercising classified by sex.

	<b>Male</b> <b>n (%)</b>	<b>Female</b> <b>n (%)</b>	<b>Total</b> <b>n (%)</b>
<b>Exercise regularly</b>			
Yes*	205 46	80 28	285 39
No	236 54	206 72	442 61
Total	441 100	286 100	727 100
<b>Reasons for not exercising</b>			
Not a sports person**	24 5	30 10	54 7
No time**	167 38	147 51	314 43
Too tired**	61 14	78 27	139 19
Others	26 6	24 8	50 7

\*  $P < 0.05$   
\*\*  $P < 0.01$

**Table 3:** Number (Percentage) of dentists reported smoking on a weekly basis by sex

<b>Smoking on a weekly basis</b>	<b>Male <i>n</i> (%)</b>	<b>Female <i>n</i> (%)</b>	<b>Total <i>n</i> (%)</b>
Non-smoker	351 79	277 98	628 86
smoker*	92 21	7 3	99 14

\*  $P < 0.05$ \*\*  $P < 0.01$ **Table 4:** Prevalence of reported systemic problems by sex

	<b>Male <i>n</i> (%)</b>	<b>Female <i>n</i> (%)</b>	<b>Total <i>n</i> (%)</b>
<b>With systemic problem</b>	74 17	44 15	118 16
<b>Type of systemic problems</b>			
Cardiovascular*	42 9	14 5	56 8
Gastrointestinal	22 5	16 6	38 5
Neurotic symptoms	8 2	6 2	14 2
Respiratory problems	4 1	5 2	9 1
Others	22 5	15 5	37 5

\*  $P < 0.05$ \*\*  $P < 0.01$