Short Communication

Health and Exercise Habits of Dentists with 10 and 20 Years of Clinical Experience

歯科医師の臨床経験と健康状態

Seiji YAMAMOTO*, Hideo MIYAZAKI**,
Ichiroh OHTANI**, Yoshio KUJIRA*
and Tadamichi TAKEHARA**

山本征治* 宮崎秀夫** 大谷一郎**

鯨 吉夫* 竹原直道**

Key words: Health, Exercise habits, Stress, Dentists

索引用語: 健康状態, 運動習慣, ストレス, 歯科医師

Introduction

Although, in the past, the average life span of dentists in Japan was shorter than that of medical doctors and all Japanese, no difference of life span among these groups exists at the present. This may be due to the fact that the dental clinic environment, i. e., dental materials and instruments, has improved and that working conditions, i. e., time spent in clinics has been declining. In addition, knowledge about dentists' health and moves to improve it have increased, and physical exercise, especially, is more popular. In this study, the relationship between the general health of dentists and their exercise habits was examined.

Materials and methods

Eighty-four dentists with clinical experience of 10 years (10-year dentists) and 64 dentists with clinical experience of 20 years (20-year dentists) were examined. Their mean ages were 36.0 and 45.1 years, respectively. The survey was carried out by means of a questionnaire.

* Department of Physical Education, Kyushu Dental College

* 九州歯科大学保健体育

** Department of Preventive Dentistry, Kyushu Dental College (Director: Prof. Tadamichi TAKEHARA)

** 九州歯科大学口腔衛生学教室(主任: 竹原直道教授)

平成2年4月16日受付

The questionnaire, inquiring about the general status of their work, their general and localized health condition, and their previous and present exercise habits, contained 21 items. Their general health and health care was self-evaluated using the following criteria: 5: very good or very positive; 4: good or positive; 3: fair or ordinary; 2: poor or negative; 1: very poor or very negative.

The data was analyzed by the F-test and Student's t-test or the Cochran-Cox approximation.

Results

Table 1 shows the general data for the dentists surveyed. The mean number of patients seen per day for 10-year dentists was 34.5, and was similar to that of 20-year dentists. Eight hours were spent per day in the clinic by both 10- and 20-year dentists.

Table 2 shows the general health and health-care habits of 10- and 20- year dentists. In general the health and fatigue upon rising of 20-year dentists were rated significantly ($p < 0.01, 0.05$) better than those of 10-year dentists. There were no significant difference between the two groups in dietary care, exercise and regular medical check-ups.

Table 3 shows the percentage of dentists having subjective symptoms, including pain or significant fatigue during a one-month period. Musculo-skeletal disorders, especially back pain and neck fatigue, were the most frequently seen disorders. Fatigue of the eyes, irritation, and chronic indigestion were also frequent. For most items, the percentage of 10-year dentists having subjective symptoms was very close to that of 20-year dentists. However, the percentages of 10-year dentists experiencing irritation and chronic indigestion were 2.4 and 1.6 times higher, respectively, than those of the 20-year dentists.

Table 4 shows the health of dentists with 10 and 20 years' experience by past and present exercise habits. Forty-nine 10-year dentists (64 %) and 50 20-years dentists (81 %) exercised regularly at the time of the survey. The health of exercising dentists without regard to past or present was better than that of non-exercising dentists. This tendency was found among both 10- and 20- year dentists. In 10-year dentists, in particular, a significant difference ($p < 0.05$) was found between dentists regularly exercising since school age and those having no such experience.

Discussion

As seen in our previous reports^{1,2)}, the number of dental patients seen and chair-side time decreased

Table 1 General status of dentists 10 and 20 years after setting up practice

	10 years Mean $\pm$ S.D.	20 years Mean $\pm$ S.D.
Number of patients seen per day	34.48 $\pm$ 10.85	32.18 $\pm$ 13.61
Number of hours per day spent in clinic	8.05 $\pm$ 1.03	7.91 $\pm$ 0.95

Table 2 Subjective symptoms and health-care habits of dentists 10 and 20 years after setting up practice

	10 years Mean $\pm$ S.D.	20 years Mean $\pm$ S.D.
Health	3.15 $\pm$ 0.83*	3.46 $\pm$ 0.99*
Morning fatigue on rising	2.81 $\pm$ 1.19**	3.32 $\pm$ 1.19**
Dietary care	3.33 $\pm$ 1.16	3.36 $\pm$ 1.22
Exercise habits	2.74 $\pm$ 1.33	2.88 $\pm$ 1.29
Regular medical check-ups	3.08 $\pm$ 1.49	2.61 $\pm$ 1.58

* $P < 0.05$ ** $P < 0.01$ **Table 3** Disorders reported by dentists 10 and 20 years after setting up practice (per cent of total respondents reporting)

	10 years	20 years
Musculo-skeletal disorders (including pain) :		
In hands	2.2	0.0
In arms	8.9	7.4
In neck	38.9	38.2
In back	41.1	30.9
In leg or feet	11.1	11.8
Fatigue : In general	27.8	25.0
In eyes	42.2	44.1
Irritation	24.4	10.2
Chronic indigestion	25.5	16.2
Chronic headaches	6.7	5.9
Sleeplessness	4.4	8.8
Ear noises	0.0	1.5
Hemorrhoids	2.2	4.4

Table 4 Health of dentists 10 and 20 years after setting up practice by their exercise habits

Student age / Present	10 years		20 years	
	N	Mean $\pm$ S.D.	N	Mean $\pm$ S.D.
Exercise / Exercise	35	3.31 $\pm$ 0.78*	37	3.62 $\pm$ 0.98
Exercise / No exercise	13	3.08 $\pm$ 0.95	5	3.40 $\pm$ 1.52
No exercise / Exercise	14	3.14 $\pm$ 0.95	13	3.54 $\pm$ 0.97
No exercise / No exercise	14	2.79 $\pm$ 0.58*	7	2.83 $\pm$ 0.75

* $P < 0.05$

significantly between 1971 and 1982. In 1982, 70 % of dentists in their 30's ordinarily treated 30 or more patients daily. Of these, 30 % treated 50 or more patients daily. About half of the dentists in their 40's treated 50 or more patients every day. In the present survey, dentists in their 30's and 40's treated 32 to 34 patients each weekday (Table 1). We thus found that the number of patients being treated daily by dentists further decreased since 1982. This tendency will continue in the future as the number of dentists increases and dental caries gradually declines in Japan. On the other hand, chair-side time was unchanged since 1982, suggesting that clinical time per patient is longer and dental treatment of higher quality is being given to patients.

Older dentists, those with 20 years' experience in clinical dentistry, felt their overall health to be better than that of younger ones. The general status of their work, including the number of patients seen and chair-side time, was similar in the two groups. Naturally, younger dentists should be at an advantage in terms of physical health when compared with older ones. Health-care knowledge regarding nutrition, physical exercise, and regular medical examinations was not observed to be different between younger and older dentists (Table 2). These facts lead us to surmise that younger dentists have more stress than older ones.

When dentists were asked to identify subjective symptoms during a one-month period, fatigue or pain of the neck or back, especially the lower back, fatigue of the eyes, and chronic indigestion were most frequently mentioned (Table 3). In England³⁾, 54% of dentists surveyed had back pain, with this kind of musculo-skeletal disorder being most frequent. Hemorrhoids (30 %) and chronic indigestion (22 %) were also quite frequent. The prevalence of these disorders is very similar in dentists in both Japan and England. Thus, they might be considered occupational disorders of clinical dentistry.

It was very interesting that the percentages of dentists experiencing irritation and chronic indigestion, which may be symptoms of stress, were clearly higher in 10-year dentists than in their 20-year colleagues. With the exception of these two symptoms, few differences were observed between the two groups (Table 3). In 10-year dentists, we presume that much stress exists and causes poorer general health and greater morning fatigue.

Eighty-one per cent of 20-year dentists exercised, and this percentage was 17 % higher than that of 10-year dentists. This finding may indicate that older dentists have less stress than younger ones.

Moreover, the result may indicate that 20-year dentists can afford to exercise due to increased technical or managerial orientation in their work, or that they have introduced physical exercise into self-management for their health; or both.

The report of Haward *et al.*⁴⁾ concerning stress in the job and career of a dentist is of great interest. Dentists who were always or usually ahead of schedule had a higher work capacity and less stress than those who tended to be behind schedule. Dentists who made a specific attempt to get a minimum amount of exercise had not only greater capacity for physical work, but also fewer symptoms of stress when compared with nonexercisers. Age factors did not influence these results. These findings indicate that physical exercise is an effective means of reducing the tension and irritation of a dentist's work, and that exercise improves the capacity of dentists to work, improving schedule management in the clinic and further decreasing stress. In our survey, without regard to previous exercise history, present status of health was determined by present exercise habits. We also found that the health of dentists with no experience of regular exercise was inferior to that of dentists with such habits (Table 4). Moreover, as stated above, the health of dentists was adversely affected by stress. Such dentists may be caught in a vicious circle of bad health, work problems, and stress.

References

- 1) Wada H. and Yamamoto S.: Health condition of dentists, Bull. Kyushu Dent. Coll., 3 ; 62, 1972, (in Japanese).
- 2) Yamamoto S. and Kujira Y.: A study of the health condition and the life style of dentists, Bull. Kyushu Dent. Coll., 15 ; 15, 1984, (in Japanese).
- 3) Eccies J. D. and Powell M.: The health of dentists. A survey in South Wales 1965/1966, Brit. Dent. J., 123 ; 379, 1967.
- 4) Haward J. D., Cunningham D. A., Rechnitzer P. A. and Goode R. C.: Stress in the job and career of a dentist, J. Amer. Dent. Ass., 93 ; 630, 1976.