Oral health behaviour among a sample of schoolteachers, physicians and nurses in the Syrian Arab Republic

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سلوكيات صحة الفم في عينة من المدرسين والأطباء والممرضات في الجمهورية العربية السورية

نبيل البيروتي

خلاصة : تتأثر الإصابة بتسوس الأسنان وغيره من أمراض ما حول الأسنان بطريقة معيشة كل شخص . ويمكن أن تؤثر المعرفة بصحة الفم وممارساتها في مدى انتشار هذه الأمراض ، كما يمكن أن تخفض من سرعة تقدمها . ولقد شارك في هذه الدراسة عدد مجموعه 210 مدرسا وطبيبا وممرضة عن طريق استبيان مصمم لمعرفة مستوى معارفهم عن صحة الفم وممارستها في منازلهم . وأظهرت النتائج أن هذه المجموعة المتعلمة من الناس بحاجة إلى النهوض بمعارفها وسلوكياتها في مجال صحة الفم .

ABSTRACT Dental caries and periodontal diseases are influenced by the person's way of life. Oral health knowledge and practice may affect their prevalence or slow down the rate at which they progress. A total of 210 teachers, physicians and nurses participated in this study through a questionnaire designed to determine the level of their oral health knowledge and home practice. The results showed that this educated group of the population should have better oral health knowledge and behaviour.

Le comportement en santé bucco-dentaire au sein d'un échantillon composé d'enseignants, de médecins et d'infirmières en République arabe syrienne

RESUME Le mode de vie personnel influence l'apparition de la carie dentaire et des parodontopathies. Les connaissances et les pratiques en matière de santé bucco-dentaire peuvent modifier la prévalence de ces affections ou ralentir le rythme de leur progression. Au total, 210 enseignants, médecins et infirmières ont participé à cette étude en remplissant un questionnaire conçu pour déterminer le niveau de leurs connaissances en matière de santé bucco-dentaire et de leur pratique de l'hygiène bucco-dentaire à la maison. Les résultats indiquent que ce groupe de personnes instruites dans la population devrait avoir de meilleures connaissances en matière de santé bucco-dentaire et un meilleur comportement dans ce domaine.

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Received: 18/10/94; accepted: 24/01/96

Introduction

In recent years, a wide variety of projects have been undertaken to improve public awareness and knowledge of oral health in general, and periodontal health in particular [*1*]. The etiology of caries and periodontal diseases is well known to be influenced by the person's way of life [*2*]. Moreover, a considerable amount of information is already known about the prevention of dental caries and periodontal diseases. If this information were put into practice, it could affect their prevalence or slow down the rate at which they progress [*3*].

The results of a national oral health survey for 15-year-old children in the Syrian Arab Republic (1994) showed that 85% of them had gingivitis and periodontal problems.

The purpose of this study was to assess the existing dental health knowledge and reported oral hygiene home care practices of a sample of schoolteachers, physicians and nurses in the Syrian Arab Republic through a questionnaire.

Subjects and methods

A sample of 210 school-teachers, nurses and physicians from urban and rural areas in the Syrian Arab Republic participated in the study. All of the participants had completed higher education, either at an institute or a university. Teachers were selected randomly from primary schools where a national oral health survey of 12-year-old children had been conducted by the author. Nurses and physicians were working in the school health centres which deliver health services to the primary schools selected.

The questionnaire was designed to have multiple responses. The participant was asked to select one response, or more than one for some of the questions. It included:

1. Personal information: age, sex, personal status, job and location.
2. Questions on toothbrushes: the type of bristles (soft, hard or medium, nylon or natural bristles); the selection of toothbrush (by dentist or dealer advice); the price of toothbrush.
3. Questions on toothpaste: use of toothpaste with or without fluoride; and the benefits of toothpaste containing fluoride (e.g. good taste, makes teeth white, strengthens teeth, or is bactericidal).
4. Questions on oral hygiene practice and teeth cleaning aids such as: toothbrush, traditional aid (*miswak*), dental floss, disclosing agents, etc.; and times of cleaning teeth (after meals, at night before bedtime or irregularly).
5. Questions on dental visits (once or twice yearly, or never); the treatment delivered (filling, extraction, gum treatment, or prophylaxis); and oral health instruction provided by dentist or auxiliary.

Results

The distribution of the participants by location and age is presented in Table 1 and by profession and sex in Table 2. The number of females was more than the number of males; this mostly represents the real situation of schoolteachers in the Syrian Arab Republic.

Toothbrushes

Of the 210 participants in the study, 160 (76.2%) used tooth-brushes for cleaning teeth, 16 (7.6%) used dental floss (in addition to the toothbrush), 16 (7.6%) used *miswak*, 8 (3.8%) used toothpicks, and 10

Table 1 **Distribution of participants by location and age**

Variable	No.	%
Location		
Urban	160	76.2
Rural	50	23.8
Age (years)		
18–28	30	14.3
25–34	108	51.4
35–54	72	34.3
Total	210	100.0

Table 2 **Distribution of participants by sex and profession**

Profession	Sex		Total
	Male	Female	
Teachers	22	140	162
Doctors	14	6	20
Nurses	–	28	28
Total	36	174	210

Table 3 **Distribution of cleaning aids**

Cleaning aid	No.	%
Toothbrush	160	76.2
Miswak	16	7.6
Dental floss	16	7.6
Toothpick	8	3.8
Nothing	10	4.8
Total	210	100.0

Table 4 **Distribution according to material and texture of bristles**

Bristles	No.	%
Material		
Nylon	160	76.2
Natural	6	2.9
Don't know	44	21.0
Texture		
Soft	46	21.9
Medium	30	14.3
Hard	30	14.3
Don't know	104	49.5
Total	210	100.0

(4.8%) did not use any cleaning aid (Table 3).

With regard to the material of the bristles of the brush: 160 participants (76.2%) reported that they used nylon bristles, 6 (2.9%) used natural bristles, and 44 (21.0%) did not know. For the texture of bristles: 46 (21.9%) used soft filaments. 30 (14.3%) used medium, 30 (14.3%) used hard and 104 (49.5%) did not know (Table 4). Selection of toothbrushes was made on the dentist's advice for 82 participants (39.0%) and on dealer's advice for 44 (21.0%); 52 participants (24.8%) selected expensive toothbrushes, 4 (1.9%) selected cheap toothbrushes, and 28 (13.3%) did not know.

Toothpaste

Of the 210 participants, 86 (41.0%) said that they used toothpaste with fluoride, 32 (15.2%) used toothpaste without fluoride. and 92 (43.8%) did not know if the toothpaste contained fluoride or not (Table 5). Eighteen (18) participants (8.6%) thought that fluoride gave a good taste, 34 (16.2%)

Table 5 **Distribution according to type of toothpaste and frequency of brushing**

Type and frequency	No.	%
Toothpaste		
With fluoride	86	41.0
Without fluoride	32	15.2
Don't know	92	43.8
Brushing time		
After meals	48	22.9
Before bedtime	114	54.3
Irregularly	48	22.9
Total	210	100

Table 6 **Frequency of dental visits and instruction in oral hygiene**

Frequency and instruction	No.	%
Dental visit		
Toothache	146	69.5
Once a year	24	11.4
Twice a year	32	15.2
Never	8	3.8
Instruction in oral hygiene		
Yes	90	42.9
No	120	57.1
Total	210	100

said it made teeth white, 120 (57.1%) said it strengthened teeth, 92 (43.8%) said it had a bactericidal effect, and 16 (7.6%) said they did not know.

Oral hygiene

Table 5 shows the frequency of toothbrushing: 48 participants (22.9%) clean their teeth after meals, 114 (54.3%) clean their teeth before bedtime, and 48 (22.9%) clean their teeth irregularly. The duration of toothbrushing differed among the participants, but most of them brush for less than one minute.

Dental visits

Table 6 shows that 146 participants (69.5%) reported that they visit the dentist when they have toothache, 24 (11.4%) visit the dentist once a year, 32 (15.2%) visit twice a year and 8 (3.8%) have never visited the dentist. As to the question of whether the participants received any instruction in oral hygiene practice, 90 (42.9%) responded positively and 120 (57.1%) responded negatively.

Discussion

The participants in this study should have had better knowledge of and behaviour in oral health because all of them were educated people. Some seventy-seven per cent (77.1%) of them were schoolteachers, who are responsible for conveying the educational message, including health information, to schoolchildren, and 22.9% were health personnel, who should know the significant relationship between oral health and general health.

About seventy-six per cent (76.2%) of the participants were living in cities where it is more feasible for them to reach educational facilities and preventive materials than the participants living in rural areas.

About a quarter of the participants (22.9%) did not use a toothbrush regularly, 7.6% used the *miswak* but in the wrong way. Only 7.6% of the participants used dental floss which has been reported to clean effectively all proximal surfaces of teeth. None of the participants reported us-

ing disclosing agents. These responses can explain the high prevalence of gingivitis among the population, even young people, in the Syrian Arab Republic [6].

Of participants 2.9% reported that they use toothbrushes with natural bristles, and 21.0% did not know the kind of bristles, while in fact all toothbrushes sold in the Syrian Arab Republic have nylon bristles. There was poor knowledge with regard to toothpaste: 43.8% of the participants did not know if the toothpaste they used contained fluoride or not, although about 90% of the toothpaste on the market contains fluoride. Although many advertisements on television and in the newspapers explain the benefits of fluoride, 43% of participants did not know that it strengthens the teeth.

The results showed that about 70% of the participants visit the dentist when they are in need (toothache), in spite of the availability of cheap or free dental care at community health centres. This might be due to the lack of awareness about oral health of the group concerned or dissatisfaction with the free dental services. The treatments provided were generally fillings and extraction. Only a few had gum treatment and prophylaxis, although more than 85% of this age group need some kind of periodontal treatment. The last responses showed the comparative lack of health education which was delivered to the participants by the dental personnel.

It is apparent that different educational methods are required to improve knowledge and skills, and the prototype action-oriented school health education programme could be the best method to achieve this. Although dental health education is a relatively new discipline within dentistry, it is suggested that this education should start at an early stage in life, be delivered by trained personnel and be carefully integrated in general health. In addition, great emphasis should be placed on oral health in the curriculum of dental and medical faculties, dental assistants' schools, and teachers' institutes.

Acknowledgments

The author thanks Professor Dr A Takriti, Dr H Burhani and Dr SA Hussein for their valuable comments during the preparation of this study.

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