

Research Article

Oral Health Knowledge and Practices of Children in a Primary School in Turkey

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Introduction

In order to be more effective, oral health care should be given to the child population through systematic school-based public health educational and preventive programs. This aspect is a starting point for oral health promotion campaigns. In Turkey, school-based educational oral health programs have not been routinely implemented in primary schools yet. Whereas some developed and developing countries have educational oral health programs [1,2], some others do not have any [3,4]. In some countries, an association was found between increased knowledge and better oral health practice [5-7].

In Turkey, the most recent oral epidemiological study showed that the prevalence of dental caries was 61.1% at age 12 and 61.2% in children aged 15; DMFT was 1.9 ± 2.2 for 12 years and 2.3 ± 2.5 for 15 years. For both age groups, caries was similar for 12- and 15-year-olds in urban and rural areas and the high prevalence of decayed teeth (D) indicated the need for dental care. A local study also reported that the mean DMFS was negatively correlated with self-reported dental health determinants among Turkish school children [8]. Another study found the existence of a strong correlation between the oral health behaviours, socioeconomic and socio-demographic factors, and the oral health status of Turkish adolescents [9].

The aim of this study was to assess the knowledge and practices (KP) of schoolchildren towards oral hygiene and oral health using a self-administered closed ended questionnaire.

Materials And Methods

In this descriptive study, the data was gathered in a primary school located in a low socio-Economical status settlement in Ankara, Turkey. At the data collection stage, the number of primary school children was 10,870,570 nationwide [10]. The number of students enrolled in the 5th to 8th grades mounted to 234 students in the study school; the participation proportion was 97.0% (n=227).

The data were gathered via a self-administered questionnaire filled in the classrooms in 2007. The questionnaire used was similar to that used in 2004 study of oral health in Turkey. Questionnaire form included 61 questions.

A verbal approval was obtained from the head of the school and a verbal consent from the students. It took about 30-40 min to fill a questionnaire. Interpersonal communication was not allowed and the children were informed to answer the questions by themselves and be honest. Questionnaires were completed under the supervision of an investigator.

The first part of the questionnaire was used to gather data regarding socio-demographic variables: current residence, age in years, parental educational and occupational status. The practiced oral health habits visiting dentist (ever or never), age at first visit and frequency of visits (regular, irregular, when having complaint) were also questioned.

Oral hygiene habits having a personal tooth-brush and tooth-paste (yes or no), and usage frequency of tooth-brush (more rarely, once/day, at least twice a day) were recorded. Smoking/drinking habits: inquires regarding frequency (never, ever, once, ex or current smoker) was assigned.

Children were asked if they considered themselves to have a healthy mouth, whether they were happy with the appearance of their own teeth and healthiness of teeth is important for general health.

The final part of the questionnaire dealt with assessing the dental health knowledge in ("yes", "no", "do not know" format) role of regular tooth brushing and visiting dentist in aiding caries prevention, consumption of sugary foods can provoke dental caries development and caries ruins the appearance.

Chi square test was performed to test the significance of the differences in bivariate analysis.

Results and Discussion

Half of the students were male and the distribution to grades was similar. They were between the ages of 10 to 16; mean age was 12.7 ± 1.2 (Table 1).

One-fourth of fathers had lycée or higher education while 10.5% of mothers. Almost three-fourth of students had health security. Of them, 44.5% had skipped main meals; female students ate snacks between main meals (93.9%) significantly more than males (76.1%) ($p < 0.05$). The most consumed goods were sweet foods like biscuits, cake, etc. (45.4%), followed by fruits (43.2%), milk/yogurt (28.6%) and sweet drinks like cola (28.2%).

Of the students, 77.5% had ever visited a dentist; the age at first visit was between 3 and 14. Only 12.5% of them visit the dentist regularly (Table 2). The last reason for visiting a dentist was mostly pain and/or tooth decay. Ninety-six point five percent had toothbrush; 43.1% of them was brushing their teeth at least twice a day (Table 2). Only one student did not use toothpaste.

They stated that the healthiness of teeth is important for general

Table 1: Some socio-demographic characteristics of the students (Ankara-Turkey, 2007).

	n	%
Sex		
Male	113	49.8
Female	114	50.2
Age		
10-11	45	19.8
12	59	26.0
13	58	25.6
14	56	24.7
15-16	9	3.9
	X±SD= 12.7±1.2	
Grade		
Fifth	51	22.5
Sixth	63	27.8
Seventh	63	27.8
Eighth	50	22.0

Table 2: Percentage distribution of some oral health related behaviors of the students(Ankara-Turkey, 2007).

Oral health related behaviors	n	%
Visiting a dentist (n=227)		
Never	40	17.6
Ever	176	77.5
Don't remember	11	4.8
Age at first visit (n=174*)		
3-5	6	3.4
6-7	23	13.2
8-9	24	13.8
10-11	33	19.0
12-14	17	9.8
Don't remember	71	40.8
Frequency of visits (n=164*)		
Regular	22	14.0
Irregular	61	36.6
When having complaint	81	49.4
Having tooth brush (n=227)		
Yes	219	96.5
No	8	3.5
Frequency of brushing teeth (n=209*)		
At least twice a day	91	43.5
Once a day	46	22.0
More rarely	74	34.4
Using tooth paste (n=219)		
Yes	218	99.5
No	1	0.5

*None responses excluded

health (90.3%); regular visit to dentist could protect dental problems (82.4%), regular brushing could protect against decay (88.1%) and gingiva (%69.8); eating sweet foods produces caries (89.3%). One-fifth of the students were ever a subject for jape because of the appearance of their teeth and more than one-third had ever lived school absenteeism related to a dental problem. Half of the students did not know whether there is a protective substance in toothpastes (Table 3).

Students reported that 46.3% of them considered their dental health moderate, 38.8% good; they have similar opinion about their gingival status. Only 45.3% was happy with the appearance of their teeth; half of them thought that they know the proper dental care; very few stated that someone may hesitate to visit dentist because of possible pain. Of the students, 87.6% thought that caries ruin the appearance and 62.4% it is troublous to use denture (Table 4). More than one-fourth of them stated that if a dentist makes a dental examination, he/she would tell "they should have brush their teeth more properly" and one-fifth "they need a filling" or "he/she have to extract the tooth" (Table 5).

There was no statistically significant difference according to sex and grade related to the abovementioned variables.

Compulsory education in Turkey consists of 8 years of primary school and the age for starting primary school is 6. The school years are the most influential stages of children's lives and provide an effective milieu for promoting oral health. Lifelong beliefs and attitudes are subject to develop in these years.

Oral health related knowledge and practices of children are very important determinants of the status of oral health and a good tool for future interventions. Awareness related to oral health among them is also important. Although there was some local preventive intervention studies [11-12]; there is still no nationwide programme in Turkey.

High proportion of study participants reported having sweets every day which was very high compared to the study done by Petersen et al. [13] and Jürgensen & Petersen [14]. Overall, there was significant difference between male (76.1%) and female (93.9%) participants concerning the frequency of sweet consumption which is

Table 3: Some knowledge and practices of the students related to oral health (Ankara, 2007).

Knowledge and practices	n	%
Healthiness of teeth is important for general health (n=226*)		
Yes	205	90.7
No	1	0.4
Don't know	20	8.8
Regular visit to dentist could protect dental problems (n=224*)		
Yes	187	83.5
No	11	4.9
Don't know	26	11.6
Regular brushing could protect decay (n=222*)		
Yes	200	90.1
No	6	2.7
Don't know	16	7.2
Regular brushing could protect gingiva (n=225*)		
Yes	157	69.8
No	13	5.8
Don't know	55	24.4
Eating sweet foods produces caries (n=225*)		
Yes	201	89.3
No	13	5.8
Don't know	11	4.9
Protection substance in toothpaste from decay (n=223*)		
Yes	103	46.2
No	9	4.0
Don't know	111	49.8
Own teeth was ever a subject for jape (n=224*)		
Yes	23	10.3
No	201	89.7
Ever school absenteeism related to a dental problem (n=226*)		
Yes	90	39.8
No	136	60.2

*None responses excluded

Table 4: Some opinions of the students related to oral health (Ankara, 2007).

Opinions	n	%
Health status of own teeth (n=226*)		
Very good	11	4.9
Good	88	38.9
Moderate	105	46.5
Bad	22	9.7
Health status of own gingival (n=226*)		
Very good	15	6.6
Good	95	42.0
Moderate	88	38.9
Bad	28	12.4
Happy with the appearance of own teeth (n=227)		
Yes	102	45.3
Sometimes	11	4.9
No	112	49.8
Know proper dental care (n=227)		
Yes	124	54.6
No	103	45.4
Someone should hesitate to visit dentist because of possible pain (n=223*)		
Yes	15	6.7
No	185	83.0
Don't know	23	10.3
Caries ruin the appearance (n=225*)		
Yes	197	87.6
No	6	2.7
Don't know	22	9.8
Troublous to use denture (n=226)		
Yes	141	62.4
No	14	6.2
Don't know	71	31.9

*None responses excluded

not in agreement with the study of Harikiran et al. [15].

Most of the participants stated that "regular dental visit could protect dental problems"; the data showed that only 12.5% of them had practised it. The most common reason for visiting the dentist was pain rather than for early diagnosis and prevention. Corresponding

figures were much higher than those reported in Greek study [16].

Toothbrush and toothpaste were the most commonly used oral hygiene aids as reported elsewhere [4,17-20].

However, the use of dental floss was still not very popular among

Table 5: Opinions of the students on what a dentist would tell to them if he makes a dentalexamination (Ankara-Turkey, 2007).

Opinions (n=227)	Total	
	n	%
"You should've brush your teeth more properly"	185	83.7
"I have to clean your teeth"	26	11.8
"I have to make a filling"	47	21.3
"I have to extract your teeth"	45	20.4
"You need an orthodontic treatment"	74	33.5

*More than one answer; the percentages were taken out of total

the school children in this study (11.5%) as evident in Malaysia [20]. Frequency of tooth brushing habits was low among the group when comparing with the children in Scotland [21]. Present study showed that 43.1% of the school children brushed their teeth at least twice a day, which was similar to Greek children¹⁶ but more than the figure reported by 2004 national study (33.7% for 12 year-olds and 38.2% for 15 year-olds) [22].

Participants stated that general health has a strong relationship to oral health and dental diseases. This figure was much more than that found in Malaysian school children [20]. In accordance with Chinese study, they agree that regular tooth brushing and visit to dentist, low consumption of sugary foods and drinks could protect dental problems [23] but almost half of the children were not aware of the preventive effect of fluoride.

In this study, the majority of students assessed their own dental and gingival health status as moderate or better. Similar results have been reported in the recent literature [16]. In another study, twelve-year old school children in Baghdad reported high satisfaction with their dental status (87.5%) [24], while a Chinese study reported that 24% of the respondents were dissatisfied with the appearance of their teeth [23]. In the present study, half of the students felt satisfied by the appearance of their teeth, which may partly explain why half of them had not visited a dentist for regular examinations. In Chinese study, 11% of participants declared that other students made fun of their teeth [23]; these findings are concordant with this study.

Potential Limitations

This present study was comprised as a questionnaire-based study with data on oral health knowledge and practices of fifth to eighth grade school children. Data collection by means of a questionnaire may have certain limitations. Over-reporting has to be considered especially concerning the oral hygiene habits and frequency of dental visits. This occurs because respondents often reflects well upon themselves rather than what they really think or do [25].

Conclusions

Although 5th-8th grade students have rather good knowledge, the oral health practice among the school children from low socio-economical position is still below the satisfactory level. The incorporation of oral health education activities into primary and pre-schools' curriculum should be taken place in addition to the activities done for promoting the awareness of general population about oral health issues, but more efforts in the form of educational materials, health promotion activities need to be carried out. Besides, intervention including dietary counseling can contribute improvement of oral health-related behaviour in school children.

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