

Systems for the Provision of Oral Health Care in the Black Sea Countries Part 6: Turkey

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Abstract

This paper starts by outlining the country, the population structure and growth pattern in Turkey. It then explains the present provision of oral health care in Turkey. It gives information about dentists, dental faculties, the health insurance system, dental education programme and epidemiological data on oral health in Turkey.

Key Words: Turkey, Oral Health Care, Dental Education, Dental Workforce

Introduction

The Country and Population Structure

Turkey occupies 779,452 km² at the crossroads between Europe, Asia, and the Middle East (*Figure 1*). Since the formation of the Turkish Republic in

1923, it has striven to develop a secular democracy. Since 1999, Turkey has been a candidate for membership of the European Union (EU), which is a major objective of the Government and has an important influence on the direction of economic, political and social policy [2].



Figure 1. Map of Turkey [1].

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In 1927, Turkey's population was 13.6 million according to the census, which was conducted four years after the establishment of the Republic [2].

The Turkish population is expected to reach replacement level in 2005 and to reach 88 million by the year 2025. As a consequence of past trends, major changes are expected to take place in the relative and absolute sizes of age groups. During the next 20 years, the size of the age group 20-54 years will have doubled, and the proportion of the elderly will reach 10% [3].

Population growth

The annual population growth rate of 1.83% (1.50% in 2000) is above the average growth rate of developed countries (0.6%) and also above the average growth rate of the developing countries [3]. This has significant consequences for the economic development of the country and for its health care system.

The population growth has been around 20-25 per thousand since the 1970s. The latest estimate of the population growth rate was 18.3 per thousand in 2000. The population of Turkey has almost quadrupled since the establishment of the Republic. After a long period when population growth rates fluctu-

ated at around 2.5% per annum, the 2000 census revealed that the growth rate had slowed down to 1.8%, resulting in a total population of 67.8 million in 2000. According to the projections, the population of Turkey is expected to reach 76 million in the year 2010 and 88 million in 2025 (Population Reference Bureau, 1999) [3].

In 2008, the total population of Turkey was 72,561,312 of whom 50.3% were male and 49.7% were female (2009 data). Half of the Turkish population is below the age of 29 years. The proportion of the population between 15 and 64 years of age is 67% (Figure 2). Twenty-five per cent of the population lived in rural areas (2008 data). The percentage of the population with sustainable access to a clean water source was 96.64% (2006 data) [4].

The proportion of the population living in urban centres is high (75%) and highest in Istanbul (99%), where just under 18% of the total Turkish population live [4].

The Country and its Health Insurance System

Health care is provided by public, semi-public, private and philanthropic organisations, including the

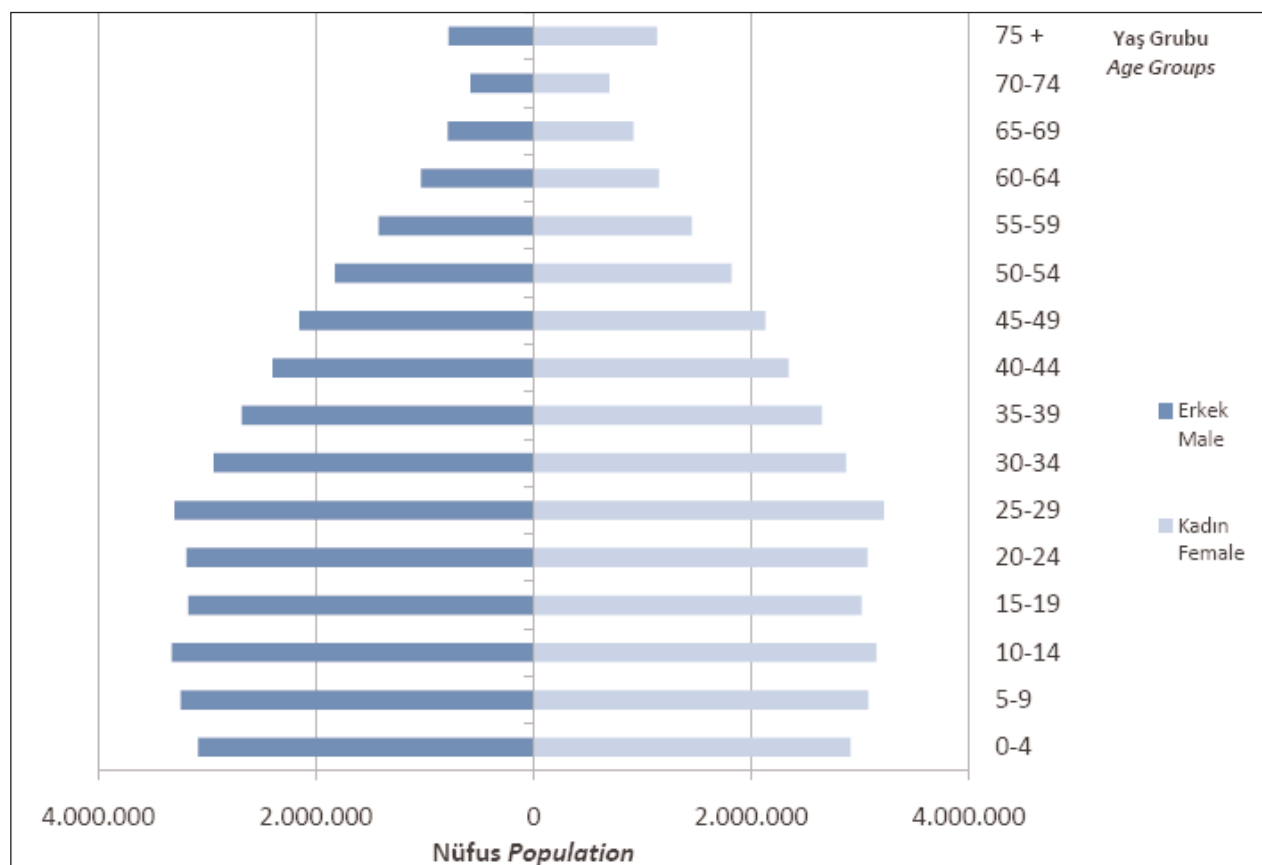


Figure 2. Population pyramid 2008, Turkey [4].

Ministry of Health (MOH), universities, the Ministry of Defence and private health professionals [1].

Primary health care is provided through health centres, health posts, maternal and child health (MCH) and family planning (FP) centres, and tuberculosis dispensaries. Municipalities play a role in environmental health and sanitation [1].

Several reforms have been implemented to harmonise health benefits across the different health insurance schemes, as well as Green Card holders (those who are poor). In 2005, Green Card holders were given access to outpatient care and pharmaceuticals [1].

In the same year, the Social Insurance Association (SSK; a health insurance fund for public sector workers) beneficiaries were given access to all public hospitals and pharmacies [1].

In 2006, the pharmaceutical positive list across all the health insurance schemes, including (in effect) Green Card holders, was integrated [1].

In 2007, legal measures gave all citizens of Turkey access to free primary care, even if they are not covered under the social security system. With the legislative changes unifying the three different social security and health insurance schemes (*SSK, Bag-Kur and Emekli-Sandigi*) into one unified social security institute, the Social Security Institute of Turkey (SSI) was established in 2006 [1].

With an accompanying law, the Universal Health Insurance Fund (UHI Fund) was founded. A claims and use management system called MEDULA was established to process claims for all the health insurance funds, including the Green Card. Just under 92% of the population is covered by health insurance according to the State Planning Organisation (SPO) data 2005 [2].

The Provision of Oral Health Care

Oral health care, like all other health services, is mainly provided by the Ministry of Health, the SSK (social insurance organisation), universities, the Ministry of Defence, private practitioners, and paramedical professionals. The number of private hospitals is low and not all of them provide oral health care. The organisation of health service delivery needs to be improved. For a long time, there were three main sources of health care financing in Turkey: the state, social security institutions, and direct payment by the patient. During recent decades, health insurance companies have emerged, offering services throughout the country.

This has resulted in the private health insurance sector emerging as the country's most fast-developing insurance branch. However, oral health treatments have rarely been included in the package and patients pay private dental practitioners directly [5].

Deficiencies in the health insurance systems, with results such as unequal and unaffordable use of oral health services, led politicians to call for the development of a new health insurance system for all. The national health insurance system was introduced in 2008 and covers oral health care. It aims at decreasing the cost of health services and encouraging preventive health practices. As part of these introduced changes, some groups in society are given special preference: for example, in oral health, children aged between 5 and 15 years are entitled to apply to any of the institutions and the private sector for orthodontic treatment, restoration of teeth and root canal therapy on primary and secondary permanent molars, on demand. People ineligible for participation in the national health insurance but accepted as very poor are entitled to free oral health care, with the exception of orthodontic and prosthodontic treatment. However, the introduction of the new insurance system has increased demand for dental services in state hospitals and clinics, resulting in long waiting lists. Consequently, the rural population and the urban poor experience difficulty in obtaining dental services when they need them [5].

Turkey has not yet developed a system in which routine regular dental visits are the accepted norm. Nor has an oral health culture been developed. It appears, therefore, that the population needs to be educated about the advantages of regularly visiting a dentist. For the dental caries prevalence among the youth to be reduced and their oral health to be improved, responsible policymakers would need to develop and implement appropriate oral health promotion and care programmes for use in mother-and-child health centres, day-care centres and primary schools. Links with the private sector, which provides the lion's share of oral care in the country, should also be established. Studies evaluating the appropriateness and effectiveness of the oral care delivery systems in the country are not currently available [5].

The Dental Workforce

In 2008, Turkey had more than 22,000 active dentists (92% of all Turkish dentists) of whom 41% were male and 59% were female. Active and inactive dentists are shown in *Figure 3. Table 1* shows

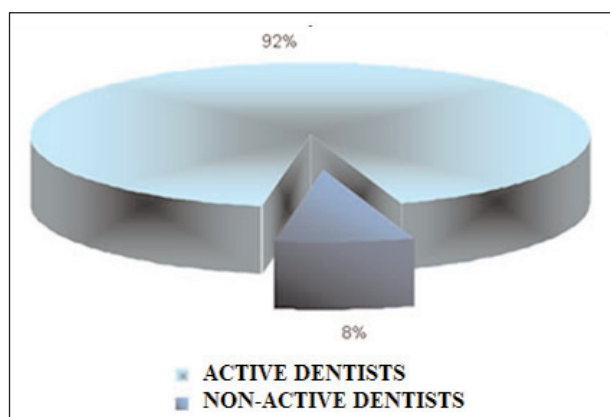


Figure 3. Active and non-active dentist ratios [6].

dentists by employment. Of the total active dentist population, 65% worked in private practices, 25% in government hospitals, 9% in university hospitals and 1% in other institutions and 20% practise in Istanbul [6].

TurkStat, Turkey's Statistical Yearbook, 2009 stated the number of dental hospitals was 38 in 2007 and 55 in 2008 [4].

In addition to general dentistry, since 2009 there have been six recognised dental specialities in Turkey. They are oral and maxillofacial surgery, orthodontics, periodontics, paediatric dentistry (formerly known as paedodontics), prosthodontics (some prosthodontists further their training in "oral and maxillofacial prosthodontics", which is the discipline concerned with the replacement of missing facial structures, such as ears, eyes, noses), and endodontics. To become a specialist requires an advanced graduate training programme in a dental school.

After graduating, Turkish dentists register with a Turkish Dental Association (TDA). Since 1998, there has been a continuing dental education (CDE) programme in Turkey, which is directed by the TDA. Participation in the CDE programme is optional. It concerns the scientific developments and technological improvements in dentistry and aims to refresh and reinforce knowledge and skills gained during undergraduate training and to teach new knowledge and techniques.

Dental Education

The undergraduate programme for dentists lasts for five years of professional education and one year of

language education for students who do not have adequate English. During the first two years of the professional education, besides basic medical sciences and basic dentistry courses, students are required to take pre-clinical courses that will help to improve their technical skills. The practical (clinical) studies, which in the past covered only two years, have been extended to three years in order to provide students with more practical experience before graduation [7].

Students start to work in dental clinics from the third year of the undergraduate education, thus providing them with more clinical experience, which is crucial in dentistry, than before. During the fourth and fifth years of the undergraduate programme, there is intensive clinical instruction as well as dental and medical courses in theoretical aspects of health care [7].

Graduate education includes Master's and doctoral programmes. The doctoral programme, which is for a minimum of four years, is available in eight disciplines. The necessary number of credits can be completed by taking required or elective theoretical and practical/theoretical courses in the first two years. A comprehensive examination can be taken once the required number of credits has been achieved, and the academic dissertation can be completed and defended. Successful candidates are granted a "doctor's degree" in the relevant area [7].

In 2009, there were 23 state dental schools and five private dental schools in Turkey. Their increasing number is shown in *Table 2* and *Figure 4*. In line with the increasing number of dentistry faculties, the number of dentists graduating each year in Turkey has grown rapidly. *Figure 5* shows the number of dentists graduating in Turkey between 2005-2009 [5].

There are three colleges for training dental nurses and dental technicians. Every year, on average 100 dental technicians and 50 dental nurses graduate in Turkey. However, there are no official data for the total number of them. At present, dental hygienists are not trained in Turkey.

Epidemiology

A robust and reliable information recording system to determine the national oral health status is lacking in Turkey. As in some other developing coun-

Table 1. Dentists by Employment [6]

Government service	Private practice	University	Military	Year	Source
6048	12,529	1574	673	2004	Turkish Dental Association

Table 2. Number of Dental Faculties in Bands of Years and Education Programmes of Dental Faculties by Years (2008 data) [6]

YEARS	GOVERNMENT FACULTIES	PRIVATE FACULTIES	YEARS	LENGTH OF EDUCATION PROGRAMME
1908-1959	1	-	1908	2 years
1960-1969	6	-	1920-1930	3 years
1970-1979	8	-	1933	4 years
1980-1989	9	-	1964	5 years
1990-1999	13	2	2007-.....	5 years (Likely to be 6 years in the future)
2000-2009	23	5		

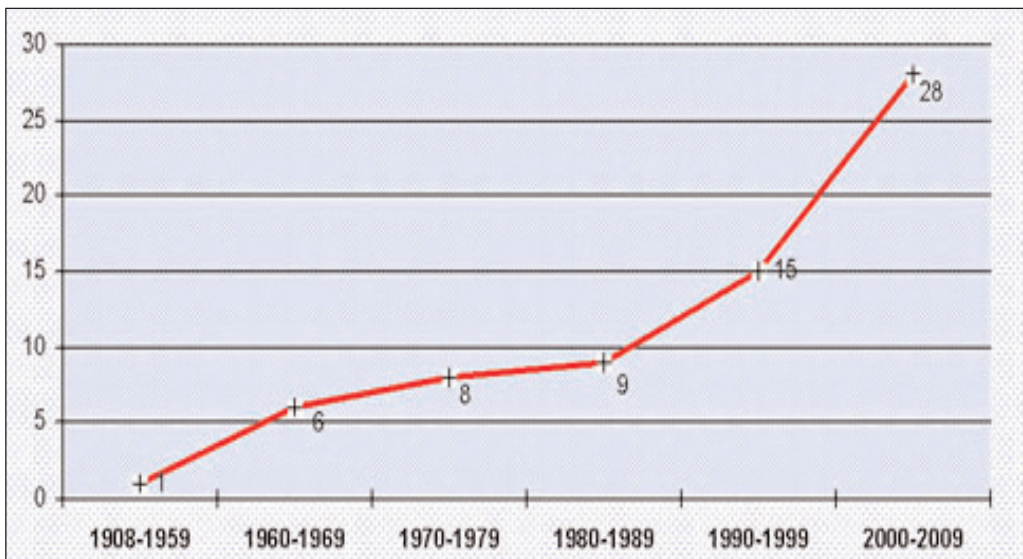


Figure 4. Number of dentistry faculties in Turkey 1908-2009 (2008 data) [6].

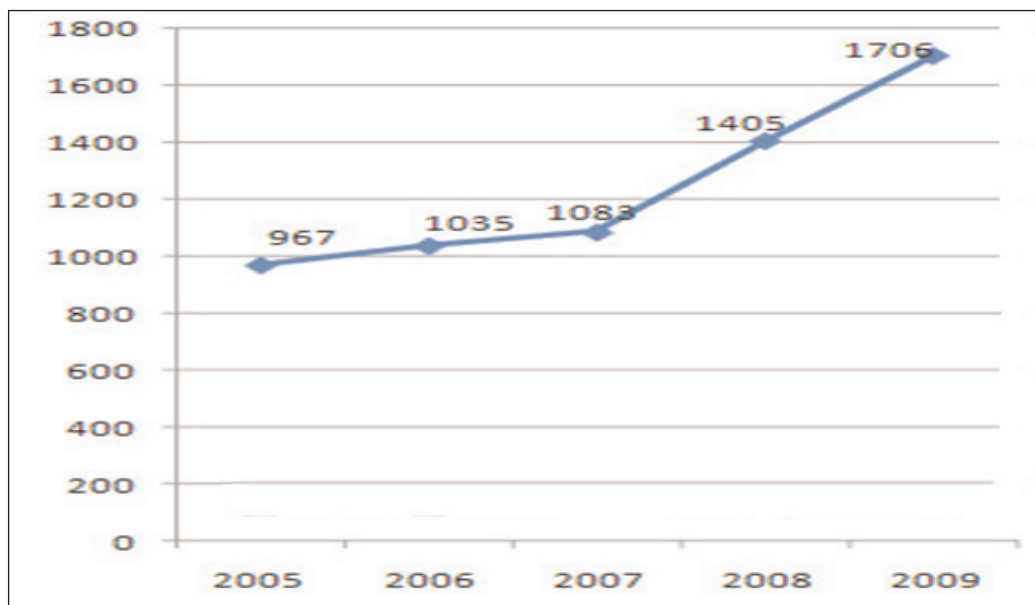


Figure 5. Number of dentists graduating in Turkey 2005-2009 (2008 data) [6].

tries, oral diseases have been neglected and were not prioritised by health planners. Consequently, oral health care programs have not been integrated into national and community health programmes. Epidemiological surveys can improve the monitor-

ing of trends in population-level oral health. Recently, the index age groups, as recommended by WHO, were included in a survey to allow comparison with the results of similar studies carried out in other countries [8].

No representative data on status of the population's oral health existed in Turkey before 1988, when the first national study was conducted. According to the 1988 study, both children and adults had high caries prevalence: at age 5-6 years, only 12% of children were caries free. The mean DMFT was 2.73 for 12-year-olds, 4.14 for age range 15-19 years, 11.59 for 35-44 years, and 28.76 for 65 years or older [9].

Another representative oral health survey for Turkey was undertaken between September 2004 and February 2005. At the end of the study, 7,833 individuals had been examined. Only 30.2% of the five-year-olds were caries-free, and their mean dmft was 3.7. Mean DMFT was 1.9 in 12-year-olds, 2.3 in 15-year-olds, 10.8 in 35-44-year-olds, and 25.8 in 65-74-year-olds. In both adolescents and adults, the prevalence of caries was higher among females than males. In rural areas, the prevalence of caries was high among five-year-old children, and DMFT was high in the elderly. Many 65-74-year-olds were edentulous. Healthy periodontal tissue was noted in 56.2% of 15-year-olds. In the 35-44 year-old age group, calculus was seen in the mouths of 62.6%, and 1.2% had attachment loss of 6 mm or greater in at least one tooth [8].

Dental services are predominantly provided by private dentists because the state allocates limited resources to finance them. The emphasis is placed on curative rather than preventive services and fees are charged for services. Currently, there are neither community-oriented oral health promotions nor organised preventive programs. National health authorities should give priority to improving the oral health of all ages/age groups; a number of community-based, especially prevention-oriented, projects should be implemented. Efforts should be made at all levels to increase awareness of dental diseases and improve oral hygiene practices, by using the existing public health system [8].

A random sample of 2183 individuals in Bayrampasa (a district of Istanbul) aged between 18 and 74 years were invited for a free dental examination and interview in 2008. The mean decayed, missing and filled teeth index (DMFT) was 11.44 and the Significant Caries (SiC) Index was 14.00, increasing from 6.00 for the 18-19-year-old age group to 15.32 at 33-44 years, and 28.00 at 65-74 years. [10]

In 2009, a cross-sectional study of Turkish children aged 5-6 years old and children from five nursery schools in Istanbul was performed. Of 542 stu-

dents examined, the mean decayed/missing/filled primary teeth (dmft) index was 3.74 (SD 3.49) and the SiC index was 7.75 (SD 2.56). Some 76.8% of the children had experienced dental caries. [11].

Costs

It is difficult to say much about the cost of oral health care in Turkey. At present, very little public money is spent on oral health care. The World Bank reported that in 2007, per capita overall health spend in Turkey was US\$465, just under 70% of which was spent by the Government [12].

The Ministry of Health sets minimum costs of dental treatment provided by self-employed dentists. Today, the "2007 Minimum Costs Schedule" is still in force.

Turkish Dental Association & Public Dental Health Projects

The Turkish Dental Association (TDA) was founded on 7th June, 1985 as a regulatory body for dentistry in Turkey and its central office is located in the capital city of Turkey, Ankara. One of the most important objectives of the TDA is to improve the public oral-dental health [6].

Between 1st January 2005 and 1st January 2006, the TDA made a protocol with Procter & Gamble, and the Social Services and Child Protection Institution. The objective was to identify the status of the oral health of the children residing in the Social Services and Child Protection Institution's Children's Nursing Homes to improve their oral health and to provide preventive dental care and education [6].

A "Tooth Protection Days" campaign, which is arranged by the TDA and Colgate, has been carried out for five years. Tooth Protection Days cover a period of three weeks, during which the public is informed of the development of oral health awareness regarding oral diseases that are preventable in nature, and fissure sealants are applied to children aged between 6 and 12 years. In the last five years, 13,421 dentists have participated, and fissure sealants have applied free of charge to 214,375 children aged between 6-12 years and 630,000 people have benefited from a free oral examination. Since 2003, the workforce of the Dental Schools has contributed to the campaign [6].

A further project has been "Oral Health Promotion in Schools", which has had the objective of improving knowledge, attitudes and behaviour of primary schoolchildren regarding their personal

hygiene, oral health, toothbrushing and fluoride use. This project is now province-based and is implemented for children from the first to the fifth grades of primary schools. It started in the 2007-2008 school year and will continue next four years [6].

Another project is the “Status Analysis of Oral and Dental Health in Turkey” project, which is part of the “Live, Learn, Laugh” Unilever and FDI co-project established in 2005 and contains 45 projects

in 38 countries. The “Live, Learn, Laugh” project aims to improve the oral health education and encouragement in the already developed and still-developing countries. Finally, the TDA/Signal/Fédération Dentaire Internationale (FDI) research project will last for a period of three years and more than 7,000 people will take part in the project, providing information about the oral health profile of Turks from both rural and urban areas [6].

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