

[Review]

A Short Review of Bangladesh Dentistry

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Abstract

The story of Bangladesh dentistry begins after the establishment of Dhaka Dental College as a unit of Dhaka Medical College in 1961. By around 1980, the concept of dentistry finally entered the public's consciousness by the continuous efforts of many young dentists at that time. Still, the number of dentists and educational facilities was limited due to lack of financial and institutional support from public sector. However, in 1994, the government opened the door for the private sector to become involved in training young dentists. After that, a remarkable number of private dental colleges started their activities under Dhaka University. Now, public hospitals are providing out-patient clinics to make up for their lack of facilities. The private sector is also extending efforts to provide treatment by out-patient department services. However, interdisciplinary treatment facilities are only available in a few hospitals. Presently, in Bangladesh, a large number of initiatives are underway to increase the number of qualified dentists. Skilled technicians, adequate dental laboratories, equipment and training are necessary to upgrade dental practices. Improving mass awareness of people for oral health care is also very important. Print, electronic media, various social and professional bodies can play important roles in this effort. Recently Bangladesh has had remarkable success in achieving the target of Millennium Development Goals. Therefore, by the combined effort of the public and private sectors, it should be possible to improve the status of Bangladeshi dentistry in the near future.

Key words : Bangladesh Dentistry, Dental facilities, Dental training

1. Historical Background

Before 1971 Bangladesh was a part of Pakistan known as East Pakistan. On 16th December 1971 Bangladesh won its independence after a war of liberation (Hannan, 2001). Before liberation, patients were generally treated by non-qualified dentists and charlatans, or “quacks”, who performed only extraction of teeth and the making of different types of dentures. Besides these quacks, there were also many Kobiraji (persons using herbs, spells and other supernatural “treatment” methods) at that time. Kobiraji visited door to door, offering various treatments for all kinds of illness in exchange for money. Peoples' general concept regarding dental treatment was very poor in this era. Dental care was neglected; tooth pain simply meant that the tooth must be extracted. In this situation Dhaka Dental College was established as a unit of Dhaka Medical College in 1961. M.M

Haque was the 1st principal and administrator of Dhaka Dental College at that time. At the beginning, there were only five students and no teacher. After 3 months Dr. A.H. S. Rahman from the Punjab region of India joined the college. In 1965 the five students obtained BDS (Bachelor of Dental Surgery) degrees from Dhaka University.

2. The Emergence of Dentistry in Bangladesh

Between the establishment of Dhaka Dental College in 1961 and 1980 there was no remarkable development of dentistry in Bangladesh. There were a few modern facilities and technologies for dentistry. However, in early 1980 there was a remarkable improvement in the field of dental education, research and treatment due to foreign scholarships offered by the Japanese government and supported by other organizations of Japan. After 1980 many dentists took the

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Ph.D. and other post-graduated degree from Japan and other countries. Thus, a new era of Bangladesh dentistry was started at that time. The latest technologies, instruments and materials became available inside the country in a limited way. However, the number of qualified dental surgeon was still limited. The quack practitioners remained in business.

3. Present situation

1) Public Sector

As we know, Bangladesh is a developing country in south Asia with a population of 155 million. There is an alarmingly inadequate number of dentists, with the lowest dentist-to-patient ratio in the world. The scarcity of funds and skilled manpower is an ongoing problem for the development of the health sector. Due to various realities in the public sector, dentistry has not developed much yet. There are now only three dental institutes in Bangladesh. Among them, Dhaka Dental College is the only full-fledged dental college under Dhaka University (Fig.1). The other two are attached to the Chittagong and Rajshahi Medical Colleges, and don't have sufficient infrastructure or facilities³⁾. Dhaka Dental College has both an outpatient department (OPD) and inpatient department (IPD) facilities. Now every year only 210 students can be admitted in the public sector for a BDS degree (Government of the People's Republic of Bangladesh, Directorate General of Health Services, 2010). However, only a few years before, this facility was limited to 100 students. Besides these, three medical colleges and institutions in the country have inpatient facilities for maxillofacial surgery. The Bangladesh Sheikh Mujib (BSM) Medical University of Dhaka has been providing OPD, IPD and also specialty services in the field of dentistry. Dental treatment



Fig.1 Dhaka Dental College, the only public dental college in Bangladesh.

service is also available in every 250-bed general hospital at the district level. This service is also available in some 100-bed district hospitals. There are around 70 such hospitals. In Bangladesh, there are OPD facilities at the grass-roots level. About 467 health complexes have OPD facilities at the grass-roots level. In addition, every medical college in the public sector has an OPD facility. Though this infrastructure exists, the numbers of dentists, technicians, instruments, necessary materials, lab facilities and skilled manpower are not sufficient. This is why the state of dental education and the availability of treatment facilities, though much improved, are still not very good in Bangladesh.

2) Private Sectors

Due to the scarcity of funds in the public sector, it is necessary for the private sector to initiate the development of the health sector of Bangladesh. It has been proven over the years that it is almost impossible for the government alone to implement a well-structured policy for its huge population. In this context, it becomes imperative for the government to consider the magnitude of the problem. Since 1994, the government has been encouraging the private sector to share the burden and help improve the health services in the country. Responding to changes in government policy, many non-government medical colleges and hospitals have been established in the past decades and are in the process of being set up. However, the expansion in the area of dentistry is still far below the desired level. In this context, on 20th April of 1995, Pioneer Dental College (*) obtained permission from the government and affiliated with Dhaka University. Within a couple of years, other private dental colleges started their activities. Among them, City Dental College

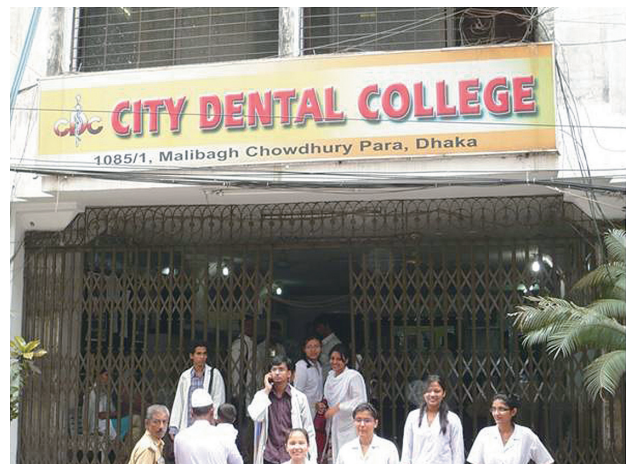


Fig.2 City Dental College, one of the private dental colleges in Bangladesh.

(Fig.2), Sapporo Dental College (**), Pioneer Dental College and Bangladesh Dental College (***) are performing very active roles in the development of dentistry in Bangladesh. At present, there are about eight private dental colleges (Bangladesh Medical and Dental Council, 2006). One private dental college for women named Saphena Women's Dental College (****) also started activity recently. Due to the limited infrastructure and facilities, the performance of the private dental colleges is not uniformly good. Most of them don't have their own campus and hospital facilities. Some of them have their own campus, but the areas are very limited. These private dental colleges are also providing OPD service. On the other hand, the lack of skilled teaching staff and also other skilled manpower like technicians and lab worker is a burning issue. Recently, the situation has been changing day by day. Besides this, many dentists are running their private clinics for low-cost dental care of the masses. However, most private dental treatments in private clinics are expensive, so it is very difficult for the general populace to get treatment from a private clinic. At the present time, a few corporate hospitals such as Square, Lab aid and Apollo are providing dental treatment. However, their treatment fee is very high. Most of the people cannot afford to go there. Only some rich persons get services from this type of hospital. The Bangladesh Institute of Research and Rehabilitation for Diabetes, Endocrine and Metabolic Disorder (BIRDEM) is providing specialized OPD service for diabetic dental patients. But private dental treatment facilities are still limited only to city areas, mostly in Dhaka city and some other big cities. Thus, rural people must still travel far to visit dental treatment facilities.

3) Under-Graduate Education

The candidate must pass Secondary School Certificate (S.S.C.) and Higher Secondary Certificate (H.S.C.) Examinations from any one of the Secondary and Higher Secondary Education Boards of Bangladesh. The H.S.C. examination must be in Premedical Group, i.e. Science with Physics, Chemistry and Biology. The students must obtain at least 60% marks in the combined S.S.C and H.S.C. Examinations or equivalent qualifications. Detailed criteria for selection of candidates are determined from year to year by the Director General of Health Services in Medical Education & Health Manpower Development. A candidate selected for admission in the Dental College is obliged to follow the curriculum,

rules and regulations approved by the Bangladesh Medical and Dental Council and the respective University. The curriculum, rules and regulations are subject to changes from time to time (Ahsanullah, 2006).

The B.D.S course comprises eight terms in four years of studies, followed by a year of compulsory professional practice in the form of rotational internship. The medium of instruction and assessment is English.

A term having 20 weeks for teaching has at least 100 full working days and therefore approximately 600 hours of teaching time. On this basis each year has approximately 1200 hours of teaching time and the whole course has total 208 weeks academic time.

Subjects to be taught in each year are as follows ;

- 1st year – Anatomy, Histology, Physiology, Biochemistry and Science of Dental Materials
- 2nd year – General & Dental Pharmacology, Pathology, Microbiology, Oral Anatomy, Physiology, Prosthodontic Technique and Dental Public Health
- 3rd year – General Medicine, General Surgery, Oral Pathology, Periodontology, Prosthodontics, Conservative Dentistry & Endodontics, Oral & Maxillofacial Surgery, Orthodontics and Pediatric Dentistry
- 4th year – Oral & Maxillofacial Surgery, Conservative Dentistry & Endodontics, Prosthodontics, Orthodontics and Pediatric Dentistry

The seminar or integrated teaching system is introduced from the beginning of the 1st year and it is organized periodically, at the end of each system or topics. Each subject must introduce card and its satisfactory completion by the students should be obligatory before being sent up for the University Examination. At the end of each year, there is a University Examinations named as 1st Professional B.D.S, 2nd Professional B.D.S, 3rd Professional B.D.S and Final Professional B.D.S. Examinations. After passing all professional examinations successfully, every student has to complete a-year internship training. Then they can get the registration number from BMDC for practice.

4) Post-Graduate Education

In the past decades of Bangladeshi dentistry, there was no opportunity to have post-graduate education. Only a select few dentists went abroad to have post-graduate education. Japan, USA and UK were the main destinations of dentists

in Bangladesh for short- and long-term training courses, diplomas, MS degrees also Ph.Ds. Among them, Japan made a remarkable contribution to post-graduate dentistry education in Bangladesh. However, now, Bangladeshi dentists have some limited facilities for post-graduate studies. Dentists can take a diploma and MS degree from BSM Medical University in different disciplines. Dhaka Dental College also offers an MS degree under Dhaka University. Besides these, dentists can take a Fellow of College of Physicians and Surgeons (FCPS) degree from Bangladesh College of Physicians and Surgeons (BCPS). Everywhere dentists are facing tight competition for chances at this sort of post-graduate study because seats are very limited. Some professional bodies are also organizing seminars, symposiums and hands-on programs to improve the quality of dentistry. Furthermore, new-generation dental graduates are also interested in preventive dentistry and public health. They are taking MPH degrees from Dhaka University.

4. Treatment Facilities of Dentistry in Different Disciplines

1) Conservative Dentistry

Conservative dentistry is basically concerned with the conservation of teeth in the oral cavity. Dentists in Bangladesh deal with the diagnosis, treatment and consequences of dental caries by various types of restoration to maintain full function and aesthetic appearance. In endodontics, the basic treatments are various types of fillings, root canal treatment, surgical endodontics, endodontic implants, and different types of whitening and management of traumatized teeth (Ahsanullah, 2006). Presently, a good number of endodontists are practicing in Bangladesh but the level of sophistication is still very low. Use of a gyromatic handpiece and operating microscope should be started. Also, now a few private clinicians have started the use of lasers in their practice, mainly Low Level Laser Therapy (LLLT) and carbon dioxide laser. However, they are very expensive. Now Bangladesh has many more dentists who have a post-graduate degree in conservative dentistry and endodontics.

2) Oral & Maxillofacial Surgery

In case of maxillofacial surgery, various types of treatment facilities are provided for patients. These treat, for example, maxillofacial trauma, malignant diseases of the oral cavity, benign tumors, odontogenic cysts, non-odontogenic



Fig.3 Outpatient treatment at Bangabandhu Sheikh Mujib Medical University.

cysts, maxillofacial deformity, congenital cleft of the lip and palate, odontogenic space infections, pericorneal infections, TM joint problems, maxillary antral pathology, impaction and many other diseases (Ahsanullah, 2006). Dhaka Dental College and BSM Medical University (Fig.3) have indoor facilities for maxillofacial surgery. In addition, three medical colleges and one institute have inpatient facilities for maxillofacial surgery. In the private sector, many hospitals are providing maxillofacial treatment. In private dental offices, dentists are also performing minor type surgical interventions. In facial deformity cases orthognathic surgery and distraction osteogenesis is an integral part of treatment. However, again, inadequate equipment and training are the problem. Microvascular reconstruction and TMJ surgery also require an expensive operating microscope and arthroscope. Presently, Bangladesh has a remarkable number of dentists who have a specialty in maxillofacial surgery. They are also taking different short- and long-term courses at home and abroad.

3) Orthodontics

Due to the socio-economical condition of the country, orthodontic treatment has not been that popular in the country. Recently, orthodontics has gradually become more popular. There are very many dentists with a specialty in orthodontics. They deal with mal-aligned teeth, mild skeletal deformity, and many other orthodontic problems (Ahsanullah, 2006). Due to the high cost of treatment facilities in the public sector are very limited. Treatment is available in the private sector, however, the number of specialist orthodontists are limited.

4) Prosthodontics

In the field of prosthodontics, Bangladeshi dentists pri-

marily deal with missing teeth, partial dentures, complete dentures, removable prostheses, fixed prostheses (crown and bridge), and maxillofacial prostheses (Ahsanullah, 2006). There is a critical lack of trained dental technicians and good lab facilities in Bangladesh. This is why the quality of the different prostheses is not up to the standard. However, recently, Bangladesh has developed a lot in this field. Especially, Bangladeshi dentists have started dental implant work in a limited way. Thus, good behind-the-scenes lab and technician support should be enhanced. Many younger-generation dentists are taking post-graduate study in prosthodontics. Thus, the future of prosthodontics is hopeful.

5) Children, Community and Preventive Dentistry

Presently in Bangladesh, this is a burning issue. Many foreign organizations like JICA, WHO and many other country-based NGOs are working in this field to increase mass awareness. Students of dentistry are getting education in this area in their final-year course. Newer-generation dentists are also taking post-graduate education in public health.

5. Future Prospects of Bangladesh Dentistry

For taking care of the oral health of a huge population, it is essential to increase the number of qualified dentists. Presently, in both the public and private sectors, a host of initiatives are underway to increase the number of qualified dentists. Also, skilled technicians, adequate dental laboratory, equipment and training opportunities are necessary to upgrade dentistry practices and standards (Fig.4). Mass awareness of the people for oral health care is also very important. Print, electronic media, and various social and pro-

fessional bodies can play important roles in this area. Recently Bangladesh has had remarkable success in achieving the target of Millennium Development Goals (MDG)(Rahman, 2005). Therefore, by the combined efforts of the public and private sectors, it may be possible to improve the status of Bangladeshi dentistry in the near future.

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(*) <http://www.pioneerdentalcollegeandhospital.com/>

(**) <http://www.sapporodentalcollege.com.bd/index.html>

(***) <http://bdc-edu.com/>

(****) <http://www.saphenawdc.net/>



Fig.4 Hands-on training organized by Bangladesh Academy of Dentistry International in Dhaka in Jan.2011.

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1999 BDS from Dhaka Dental College, Under Dhaka University

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Professional Experiences

2001–2002 Hounerary Dental Surgeon, Department of Oral Surgery, Dhaka Dental College and Hospital

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