

Educational Response to the Marketization of Healthcare. The Case of Dentistry in Bulgaria during the Period of Transition

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Abstract

Purpose: To share our experience with the formation of dental professionals as entrepreneurs, leaders, and managers of their practices.

Relevance of the Problem: The transition to a free-market economy created prerequisites and demonstrated the need for entrepreneurship and managerial skills to deal in the market social environment, especially in the field of healthcare services provision. The harmonization of dental education within the EU resulted in the elaboration of common frame requirements based on a list of competencies for the dental practitioner. In response, we established a department of public health and developed a series of programs and of textbooks "Social medicine and medical ethics", "Public health and Healthcare management" and "Dental health and Dental practice management".

Materials and Methods: Secondary data from a longitudinal study of the re-professionalization of dentists in Bulgaria and a review of the undergraduate dental curriculum are applied.

Results: Professional and market situation: As of 31.12.2022, 79.8% of women dentists and 82.2% of male dentists determine their status as self-employed owners, 12.2% of women dentists and 10.8% of male dentists work in rented surgeries, and only 8% of female and 7% of male dentists -as salaried. Only a few dentists work as specialists (between 18% in 1995 and 5.5% in 2011). A trend of change from solo to the group-practice organization is observed. Half of the women dentists and 28% of male dentists work without auxiliary staff. The public/private sources of financing are changing from 60%:40% to 40%:60%. The private insurance schemes cover only about 1 - 2% of oral health expenditures. Most co-payment represent out-of-pocket healthcare expenditures. Less than half of the population visits a dentist once a year. After 12 years of teaching marketing and management of dental practice 74% of dentists in Bulgaria are able to solve diverse managerial problems alone, 9% educate themselves and only 17% look for consultations. The Public dental health course provides dentists with relevant knowledge.

Conclusion: The dental practitioner as owner and director of their practice combines social and professional experience. Therefore, adequate focused teaching of managerial knowledge and skills has to be an essential part of dental education.

Keywords: Dental Profession; Professionalization; Global Dental Market; Dentists' Mobility; Dental Education

Introduction: Problem Identification and Purpose Setting

The overall evolution in the art and science of dentistry, including the implementation of an academic dental curriculum, resulted in the differentiation of dentistry from medicine as an autonomous profession based on professional higher education, autonomy, authority

and social mission (the process of professionalization in mid19th century)¹. Sophisticated dental materials, computer technologies, techniques for effective communication and the ergonomic organization of the dental practice in recent decades transformed it into one of the most advanced fields of medicine and medical science. The digitalization and the globalization of the oral health services market boost once again the progress of dental services delivery [1-4].

The political changes of 1989 in Bulgaria, started the transition from an egalitarian society with privileged social groups to a stratified society with a variety of wellness standards but equal access to social goods and benefits. Implementing a new constitution generated the legislative prerequisites for the reform in public sectors, including the public healthcare sector. The process of changing the Bulgarian healthcare model from a social-democratic into a social-solidarity “conservative” model affected the whole society - profession and patients. The professional status of individual dentists is changing too. Sociological investigations evidenced the importance of autonomy for the members of the dental profession and the preference to practice as self-employed general practitioners [5-8].

The monopolistic State-organized and State-regulated Healthcare systems were replaced by a system of public funds to be accumulated based on the shared participation of the State, the employers and the employees. This universal public fund was established (similar to the Bismarck system of healthcare financing) to cover the expenses for healthcare services consumed by the population on a prepayment base. The fund supports some local health establishments on the capitation principle through local social affairs services. Direct payment is kept as a co-payment [9,10].

Along with the increasing openness of the country to the world, a very fruitful period for international contacts and experience exchange started for public health and educational institutions, boosting comparative data analyses between 1989 and 1999 several working groups dealing with the professional and health legislation and the educational reform in Bulgaria were established [11-13].

Two very important changes in the evolving market of dental services were observed: 1. The contractual nature of professional activities should become obvious; 2. The complexity of the products dentists deliver is ever-increasing [14,15].

These social facts, relevant to the period of transition from a planned economy to a free-market economy and from the employee to the liberal status of health professions justified the revision of the undergraduate medical and dental curricula. The need to introduce entrepreneurial and managerial skills to undergraduate dental education is supported by dentists’ interest in starting their own dental practices and working as liberal practitioners [16,17].

In 2007 Bulgaria became an EU member. The harmonization of dental education among member-states comprises comparable curricula and common frame requirements under a list of competencies for the dental practitioner. According to the “profile of European dentist,” some upgrades to the dental curriculum in Bulgaria, are relevant to the European good practices on one hand and the new socio-professional status of dental practitioners in the country on the other hand. The new program with a focus on professionalism was purposed to provide graduating dentists with appropriate knowledge and skills to manage their practices in the evolving market of services and commodities while keeping the highest standard of social responsibility and professional ethics [18,19].

¹Professionalism in dentistry is a complex, multidimensional construct, which has individual, interpersonal, and societal dimensions as dentists are holders of higher education, autonomy, authority, and ethical standards. In 1999 the Governments of the European economic area member states, agreed upon the basic criteria for comparability of academic education, including: admission, equivalence of awarded degrees, curricula structure and length of training, credit systems and mobility of students and faculties (Appendix 1). As a result of this basic framework, European universities started the process of revising and harmonizing their education following the scheme 3-5-8 (3 years of education before obtaining a Bachelor degree, 5 years of education for a Master degree and 8 years of education for a PhD degree).

Purpose and Objectives

This presentation aims to share our experience with building the role of dentists, apart from medical clinicians, as entrepreneurs, leaders and managers of their practices as an answer to the fast-changing social environment in Bulgaria shaped by the deep social, economic, and political changes, globalization and EU membership.

Objectives: Educational response to social and healthcare reforms

- To recognize the business and market aspects of dental care services delivery in different social systems and the dental service itself, including socio-economic-political-legislative frameworks.
- To formulate some basic descriptors of professionalism and professional attitudes of dentists and to comment on them in the context of the social dynamic.
- To construct a model of social partnership through entrepreneurship and professionalism based on qualitative and quantitative longitudinal analysis.
- To integrate the teaching of management and marketing of the dental practice in the undergraduate dental students' curriculum: course programs, textbooks, assessments.

Materials and Methods

A brief review of the social, global, and European dimensions of the transition, secondary data analysis from a twenty-year longitudinal study of the re-professionalization of dentists in Bulgaria, and a review of the dynamics of the undergraduate dental curriculum are performed.

Results

The marketization of dental services delivery and the access to care and use of dental services by the population

Oral healthcare in Bulgaria over the last 3 decades is available on the liberal market of services provided by private dental practices. The access to oral healthcare for the population is assisted by a standard package of basic conservative treatments (examination, fillings), exodontia, and some preventive care. The procedures in the standard package are negotiated every year between the Bulgarian Dental Association (BgDA) and the National Health Insurance Fund (NHIF) with the signature of the Minister of health.

The public/private sources of financing are changing from 60%:40% to 40%:60% for the period of 20 years. The private insurance schemes cover about 1 - 2% of oral health expenditures. It is not surprising that less than half of the population visits a dentist once a year, contrary to the average for the EU (between 62 and 90% [20]).

The dental profession and the professionalization of the socio-professional group of dentists in Bulgaria during the period of transition

Dental health services delivery became one of the most dynamic specialized markets in the 21 century. In this context, dentistry and dentists in Bulgaria demonstrate a strong and fast trend in stratification and social mobility [21], evidenced by:

- The prevailing status of ownership of the dental practices (Figure 1 and 2).
- An increase in the number of dentists and de-feminization (Figure 3 and table 1).

- Generational mobility (Table 2).
- General practice and continuing education versus specialists’ practices and specialization.
- Equipment, auxiliary staff, and teamwork (Figure 4 and 5).
- Competition and choice of the organization of services delivery (Table 3 and figure 6).

In 2011, 20 years after the legalization of the professional autonomous regulation 79.8% of women dentists and 82.2% of male dentists in Bulgaria determine their status as self-employed owners, 12.2% of women dentists and 10.8% of male dentists working in rented surgeries, while only 8% of female and 7% of male dentists were working as salaried (Figure 1 and 2).

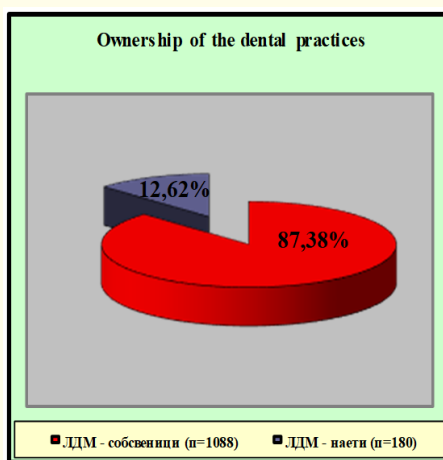


Figure 1: Ownership of the dental practices.

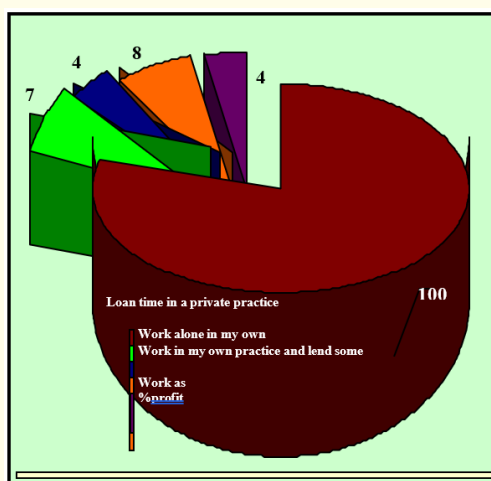


Figure 2: Types of practice.

The sustainable increase of the number of the dentists in Bulgaria is most demonstrative for the latest decade (Figure 3). Along with this trend a trend of de-feminization is observed. For a period of 20 years the male to female ratio changed from 27% to 35% (Table 1).

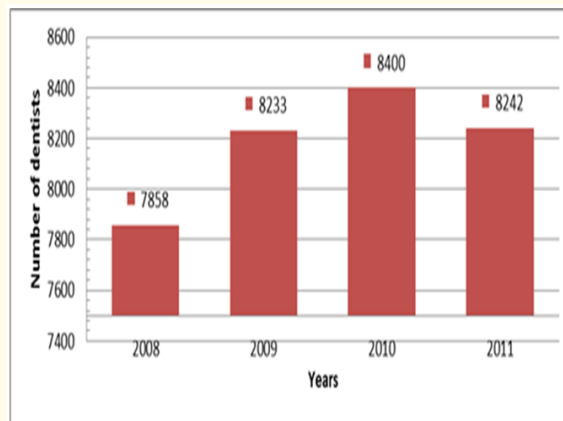


Figure 3: Number of dentists in Bulgaria in the EU.

	Number of Dentists	Male/female ratio (%) of male dentists
1995	6778	27.00%
2004	7987	32.00%
2008	7834	34.00%
2014	8350	35,33%
2018	9063	35.00%

Table 1: Male to female dentists' ratio.

The percentage of students originating from families of dental and medical doctors is going up between 1995 and 2004 (from 32% to 54%) and slowing down afterward. In Bulgaria, after 1989, the percentage of parents of dental students with medical or dental degree, doubled.

For the whole studied period the portion of students originating from families with medium income prevails (up to 70% in 2004 and 82% in 2008). Most of them perceive the income of their families as medium (between 68% and 82%) [22,23] (Table 2).

Survey		Family Income			Education of Parents		
Year	Authors	Low	Medium	High	Higher Medical	Higher other	Lower
1995	Katrova, Tzenova	21.7%	73,5%	4.8%	32,8%	40.10%	27,1%
2004	Katrova, Papanchev	17.0%	73,9%	9,1%	54,5%	37.50%	8,0%
2008	Katrova, Mihaleva	10.0%	82,0%	8.0%	46,0%	54.00%	-
2014	Katrova	14,8%	78,2%	7.0%	38.65%	58.26%	3.09%
2018	Katrova	25,6%	68,4%	6.0%	23.23%	65.65%	5.05%

Table 2: Generational mobility - dental students' origin.

Competitive market and rising patients’ expectations for quality care impacted on the attitude of dentists toward lifelong learning: The portion of dentists attending short continuing education courses increased (from 48.50% in 1995 to 67.60% in 2009) while the number of postgraduate dental students for the same period decreased considerably.

Only a few dentists work as specialists (between 18% in 1995 and 5.5% in 2011). The proportion of men working as specialists was higher (respectively 19% and 12%).

Continuing education, apart from professional duty yet represents an investment - in time and money: For the majority of dentists, the average investment in postgraduate learning is between 1.00% and 3.00% of their income. The average time most dentists devoted annually is between 1 and 2 weeks. Frequently attended courses are those with a fast return of the spent money. The interest in dental materials, implantology, and periodontology short training increased from 18.50% in 1995 to 38.00% in 2009) [24,25].

Equipment, auxiliary staff, and teamwork

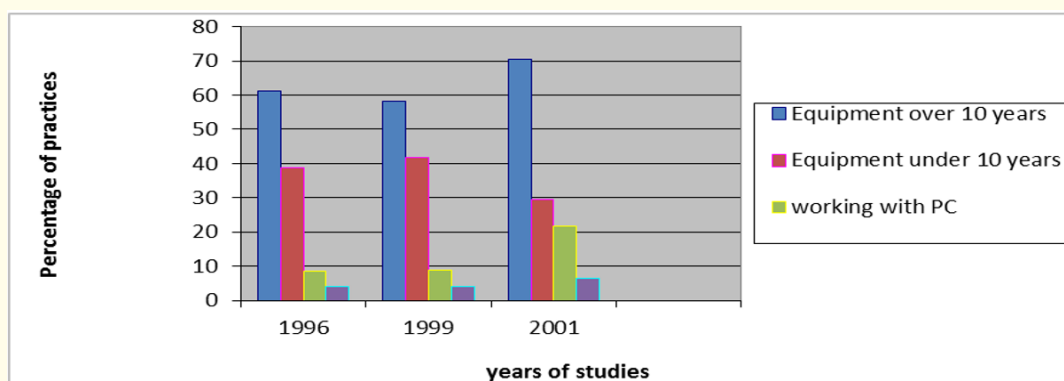


Figure 4: Improvement of the technical environment. Equipment.

Half of women and 28% of male dentists worked without auxiliary staff [22-24].

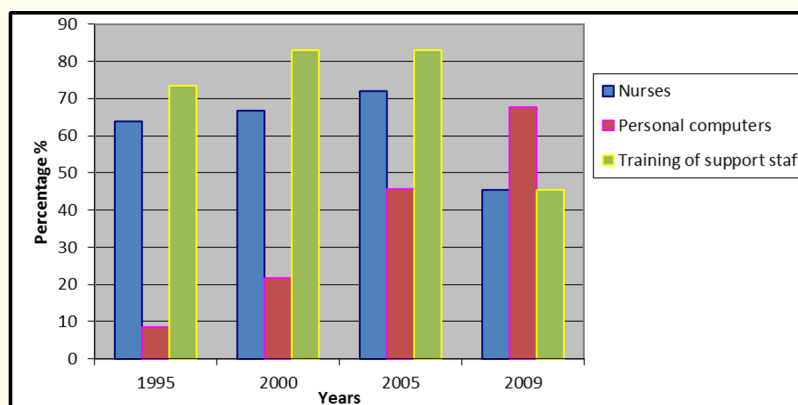


Figure 5: Auxiliary staff.

The digitalization and globalization boosted once again the marketization of the oral health services, patients, and dentist mobility, thus challenging the professional education to provide graduating dentists with adequate competencies to deal in a very competitive market environment.

The increase in the proportion of Bulgarians over the age of 65 years implies an increase in treatment needs. The decline in the purchasing power of the aging population limits the demand for oral health care services. In contrast, the number of new graduates increases (Figure 6) similarly to the trend all over the World [26-29].

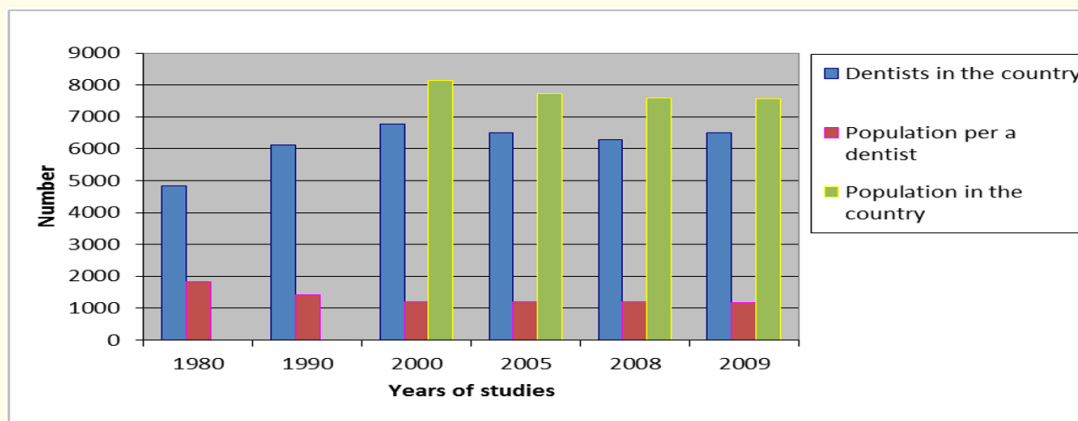


Figure 6: Dynamics of the dentists to population ratio.

A trend of change from solo to the group-practice organization is observed [16]. The number of individual practices decreases of 34.8%, while the number of dentists registered in Medico-dental centres demonstrates increase of 72.4% [6,24,27].

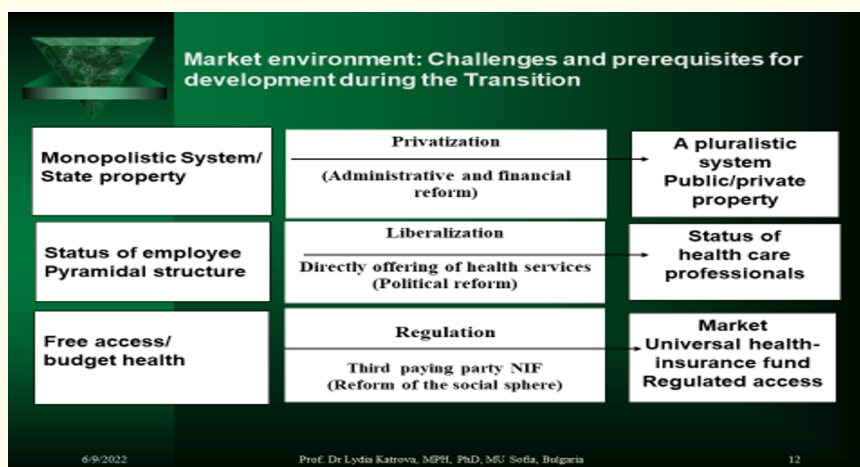
The preparedness of dentists and their awareness of the need for managerial skills were studied and showed that after 12 years of teaching marketing and management of dental practice 74% of dentists in Bulgaria are able to solve diverse managerial problems alone, 9% educate themselves and only 17% look for consultations (Table 3).

	Number	%
I read specialized literature	96	56,5
Look for specialized consultation	71	41,8
Look for a colleague for consultation	105	61,8
Learn from my own experience	104	61,2
I am ready	12	7,1
I am not interested	1	0,6
I do not find relevant sources of information	4	2,4
Total (More than 100% as more answers are given)	393	231,2

Table 3: Readiness for management of the dental practice.

Educational response

A comprehensive program for dental professionals was open for update and fitting with the new learning environment and new learning technologies. The first program of social medicine and public dental health evolved in the period of transition and radical health reforms. The first textbook entitled “Social medicine and public dental health” was published in 1998. During the preparatory period before the country becomes an EU member, a revised dental curriculum was adopted and the program in social medicine and dental public health was reshaped in accordance with the recommendations for harmonization between member states in the EU in “modular form”. The material was distributed in two courses: “Social medicine and medical ethics “- for the second semester in the second year and “Public dental health” -for the first and second semesters of the third-year dental students, with a total duration of 105 + 45 hours for 3 semesters. Among the topics of lectures and seminars: Health care as a social system; Legislative basis of public health, Dental Health Service in Bulgaria; Health management; Healthcare financing; Management and marketing in the dental practice (Two slides on figure 7a and 7b) [30].



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- CONTENT OF THE LECTURE**
1. Definitions:
 - ◆ Notion of market. Basic marketing concepts
 - ◆ Marketing of services
 - ◆ Marketing of ideas
 - ◆ Organization, structure, leader, management
 2. Models for marketing strategy
 3. Internal marketing
 4. Marketing the dental practice; When? Why?
 5. Business plan, principles for development
 6. Business plan for the establishment and management of a dental practice
- 6/9/2022 Prof. Dr Lydia Katrova, DDS, MPH, PhD 18

Figure 7a and 7b: Slides included in the lecture “Management and marketing in the dental practice”.

Marketing as a social process

“Marketing is not just a science of studying the market, it is a social process facilitating the individuals and the groups of people to obtain what they need and want by producing and exchanging products and values”. “From a societal point of view, marketing is the link between a society’s material requirements and its economic patterns of response. Marketing satisfies these needs and wants through exchange processes and building long-term relationships.

The starting point in the marketing of medical/dental services is the definition of patients’ needs. In addition, the study of the needs and the creditworthy demand for dental services (counseling, treatment, monitoring of medical conditions, general and specialized care availability and affordability) is necessary for the adequate supply of healthcare.

Service marketing: Relates to the marketing of services, as opposed to tangible products. A service (as opposed to a good) is typically defined as follows: The use of it is inseparable from its purchase (i.e. a service is used and consumed simultaneously). It does not possess material form and thus cannot be touched, seen, heard, tasted, or smelled. The use of a service is inherently subjective, meaning that several persons experiencing a service would each experience it uniquely. Service marketing has seven major traits the so-called 7 P’s of marketing in total: product, price, promotion, process, physical environment and people.

Selling process: The selling process consists of a complete set of steps that must take place in order to execute a sale transaction from start to finish. It may include such events as the initial contact, product demonstrations, trial periods, bidding, price negotiations, signing of contracts, and delivery of the product or service being sold.

Management of the healthcare system and management of the dental practice

Organization of dental care in outpatient dental clinics in Bulgaria after 1991 has been characterized by complete dominance of the private sector, independent professional management and the introduction of the third payer. Dental practitioners are involved in the management of the health system (macro-level) and of the dental healthcare service (meso-level), through the representation of the Bulgarian dental association in the national governing bodies. The micro-level of governance is performed in the practices and clinics usually owned and directed by medical and dental practitioners.

The doctor of dental medicine as a leader and a manager

Despite the modest size of the dental organization managed by a doctor (he could just be self-employed without any other staff in practice), competencies and responsibilities include all essential elements of the management and administration. The actual management activity of doctors of dental medicine occurs at the micro-level. In their practice, they must be able to manage all aspects of the “micro-businesses”. They have to combine the leadership capacities with the knowledge and skills of the manager.

The basic managerial functions of the doctor of dental medicine could consider the following: Practice planning, providing adequate equipment, staff secure financing, development of the practice and the staff, as well as their own professional development in the medium and long term planning.

Professional management activity: Representation of the practice; leadership and coordination of all activities in practice; carrying out medical, diagnostic, preventive, consultancy; training, quality control, maintenance of internal order (schedules, hygiene, safety), maintaining the office in every aspect (organization, repairs, etc).

Management of human resources: The management of human resources consists of continuous postgraduate education, selection, and appointment of staff, effective communication with staff, electronic registration documentation the maintenance of high professional ethics, standards of care and behavior.

Ownership of dental practice: As an owner of the health care facility and executive director, the dental practitioner performs simultaneously at all levels of management. He must combine clear vision and skills for setting goals for the development of the practice (strategic level of management) with skills for organizing, implementing, and controlling each diverse specific activity of everyday life (medium level of management) and performing the treatment procedures (operational level of management).

The development of a business plan: Must comply at least with the following recommendations: 1. Reflect a real and comprehensive status of the organization and the opportunities to achieve real objectives; 2. Outline the direction of development with the use of the advantages (strengths) and avoid the weaknesses; 3. Specify the actual threats that can ruin it; 4. Reflect the interdependence provider-customer; 5. Take into account the strengths and weaknesses of competitors; 6. Reflect the tendency of reduction of resources; 7. Assist in attracting investors; 8. Reveal the strategy of development; 9. Develop backup strategies to deal with unpredictable and unpreventable crises.

Textbooks

The discipline “dental public health” provides knowledge, professional skills and motivation to dental students and dental practitioners in the following areas:

- Development of healthcare as part of the development of society;
- Management of the health system;
- Preparation for the Doctor of Dental Medicine as a member of a regulated profession;
- Management of dental practice in the real social and market environment;
- Partnership in the implementation of community measures relevant to individual and public goals for better oral health.

The series for dental students and dental practitioners, including: “Essentials of social medicine and medical ethics” [1], “Essentials of public health and healthcare management” and “Essentials of dental public health and dental practice management” has the purpose to assist dental students and dental practitioners in finding their best pattern of practice and building up an appropriate working environment in order to achieve professional prosperity while keeping their health and professional longevity. Last, but not least, it is aimed to assist them to stay sensible about the needs of the population for appropriate services, prevention, and better quality of life. Part three of book 2, comprising chapters 10 and 11, is focused on the building and management of the dental practice.

Chapters 5, 6, 7, 8 and 9 of book 3 deal with the principles of ergonomics, the organization of the working place, procedures performance, timing and teamwork recommendations. Part three, comprising chapters 10 and 11, is focused on the building and management of the dental practice [33-35].

Discussion

The processes of globalization created opportunities but also challenged public health, as part of the social organization, in particular, in countries in transition in Eastern and Central Europe. The reformation of healthcare systems in those countries generated major problems pertaining to the transformation of ownership of healthcare entities, legalization of new socio-professional statuses, and education of the public and professional communities in terms of democracy and the free market. Along this process, the populations and the states in these counties faced severe economic constraints and resources shortage. Other problems are generated by the uneven distribution

of resources and the dictate the world monopolies of medical products and medical equipment exercised in the local healthcare markets. Generational and social mobility of Bulgarian dentists is directed toward consolidation of the social status, evidenced by the family continuity in professional choice and sustainable presence in the upper-medium stratum. The overall evolution in the art and science of dentistry, including the implementation of an academic dental curriculum, resulted in the differentiation of dentistry from medicine as an autonomous socio-professional group based on professional higher education, autonomy, authority and social mission. Sophisticated dental materials, computer technologies, techniques for effective communication, and the ergonomic organization of the dental practice transformed it into one of the most advanced fields of medicine and medical the science in late 20th century and now a day [36-38]. The re-professionalization of dentistry in Bulgaria and the fast developing market of dental services for a period of economic challenges the population faces represent a great chance for the fast adaptation of the dentist in the new market environment. Along with accepting the dental practice as a business enterprise the need to build a great business appears. It starts with the perception of leadership, multiplies through teamwork, and results in significant opportunities for excellent dentistry and maximum profit.

Conclusion

The dental practitioner as owner and director of their practice combines social and professional experience. Therefore, adequate focused teaching of managerial knowledge and skills has to be an essential part of dental education.

Conflict of Interest

I declare that no financial interest or any conflict of interest exists in connection with the above publication.

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