

## Practice Profile and Workload of Women Dentists in Bulgaria in Times of Socio-Professional Dynamics

**Katrova Lydia Georgieva\***

*Free-Lance Expert in Public Health, Sofia, Bulgaria*

**\*Corresponding Author:** Katrova Lydia Georgieva, Free-Lance Expert in Public Health, Sofia, Bulgaria.

**Received:** January 11, 2024; **Published:** May 02, 2024

### Abstract

The liberalization of professional regulations in Bulgaria after 1990 boosts the interest in dentistry and demonstrate a trend of “de-feminization”. This study aims to establish if and how the market relationship in dentistry impacted the long-term trends in the practice profile and workload of women dentists in Bulgaria compared to their male fellow dentists. This paper summarizes and analyze the trends based on a longitudinal study covering the period 1995-2011, focused on: Dental demographics dynamic by periods and mobility patterns; Practice profile pattern of male/female dentists; Workload in male/female practices; Family status differences between male and female dentists. The results show that for the studied period the general trend is: toward increase of the total number of the registered dentists in Bulgaria (from 4839 to 8,400) uneven distribution (1/3 are working in the capital city) and change of the male: female ratio (from of 26.27% in 1995 to 35.78% in 2011). The formula alone in own practice is the most popular and most desirable by dentists in Bulgaria ( ) with a slow increase of the group practices number. There are no significant differences in the pattern of practice by sex (more than 50% of the newly opened private practices). They work mostly as general practitioners. Their professional/private life balance is challenged. We can conclude that: Contrary to the general trend, in Bulgaria, due to social and demographic factors, the trend is reversed - toward “de-feminization”. Ownership and management of practices pattern of women dentists do not differ from that of the profession in general. Their practice profile and workload in long-term are impacted less by the market environment than the ability to balance their personal and professional lives. To recognize the comparable aspects of male and female professional activities pattern in dentistry in different social systems is necessary for predicting the social and professional dynamics and adequate investment.

**Keywords:** *Practice Profile; Workload of Women Dentists; Bulgaria; Socio-Professional Dynamics*

### Introduction

The fundamental social reforms in Bulgaria, which started in 1989 included remarkable transformations of the healthcare system. During the period 1991-2001 (from the adoption of the new Health law to the switch from tax-funded to a comprehensive national insurance plan model), the monopolistic state-organized and state-regulated model of healthcare changed to a pluralistic decentralized model. For a couple of years, oral healthcare, similar to the overall outpatient sector, evolved from 100% publicly funded to almost 100% privately funded [1].

The new social practices provided the population and the profession with chances and challenges. The dental profession in Bulgaria became self-regulated so that, both the dentists and the profession have again become autonomous. Major stressors for the profession consist of healthcare market globalization, significant expenses to invest in new technologies and innovative management, and the unpredictability of utilization of services rate [2].

Major challenging factors for the population include increasing general taxes and fees and co-payment, exclusion of aging groups from prepaid dental care schemes, and insufficient resources for preventive measures. The National Health Insurance Fund (NHIF) was established to finance medical and dental care, improving to some extent the access to care and thus stimulating the market of dental services [3].

The dental profession in Bulgaria before 1991, similar to the situation in all former socialist countries, has traditionally been dominated by women [4]. The salaried position of dentists, working in government policlinics, was less attractive to men. Conversely, women dentists, working as salaried, enjoyed a three-year maternity leave, 6.5-hours working day, and assistance for growing children (Table 1).

Before 1990	1990-2001	Now
1. 100% public care	Transition	100% private care
2. Employee status/Fixed salary	Double ride	Private owners
3. 3 years of compulsory service	Unrestricted choice	Unrestricted choice
4. 3 years of maternity leave	Less	Less
5. 6.5 hours working day	More	More or less

**Table 1:** Change in the social environment relevant to working conditions of female dentists.

The liberalization of professional regulations in the next period 1990-2001 boosts the interest in dental occupation and especially of male dentists. A considerable and fast increase in the number of dentists and a change in the male/female ratio is observed since that time: Before 1990 the male-to-female ratio was 23:76 while now this ratio is 36:64 and the trend towards de-feminization is steadily persisting [5]. The interest in studying the dental demography and the dynamic of the market of dental services along with the worldwide social and political environment is growing [6]. The situation in Bulgaria represents a real “laboratory” of the process of re-professionalization of dentistry, therefore it has been the focus of our longitudinal studies [7].

### Purpose of the Study

This study aimed to establish if and how the market relationship in dentistry impacted the long-term trends in the practice profile and workload of women dentists in Bulgaria compared to their male fellow dentists.

### Materials and Methods

A longitudinal study during the period 1995-2011 was carried out to illustrate the profile and workload of dental practices as major traits of the socio-professional dynamics under the influence of the overall social transformations in Bulgaria. Data were collected through a series of self-administered questionnaires distributed to weighted stratified random samples of dentists extracted from the Bulgarian Dental Association (BgDA) register. The first field sociological survey of the dental profession was carried out between 1996 and 1997, involving a sample of 842 dentists (12%) from the total of 7129 dentists. The questionnaire completed by 86% of the interviewed was focused on: 1. The structure of the Oral Health Service; 2. The professional profile of dentists; 3. The professional and social mobility of dentists. The next stages of the study are dated 2001, 2005, 2008, and 2011.

In this paper the following aspects are analyzed and discussed:

1. Dental demographics dynamic by periods and mobility patterns;
2. Practice profile pattern of male/female dentists;
3. Workload in male/female practices;
4. Family status differences between male and female dentists.

The data had been treated statistically using the SPSS package including the Cramer test, (U-test), X sq. with  $p < 0.05$  and  $n = 1.96$ .

## Results and Discussion

### Dental demographics dynamic by periods and mobility patterns

In 1996 a total of 7129 dentists worked as follows: 42% in the salaried public sector, 30% in mixed settings - public sector and private practice, and 28% - entirely in private practice. The average age of dentists was 39.7 years, 40.5 years for men and 39.0 for women. The women-to-men ratio was 72.55%:27.5% [8].

By the end of the year 2008, there were 7834 registered doctors in dental medicine, but the number of those in active practice was 7641. The number of actively practicing women dentists was 5080. The average age of dentists was 41.7 years. The women-to-men ratio was 66.55%:33.5% [9].

As of December 2011, the total number of actively practicing dentists was 8240. Over 40% of women dentists in 2011 were in the age group (51 - 60) and only 10% of them were younger than 30 years. The female male to male ratio changed to 64.22%:35.78% [10].

The number of dentists in Bulgaria increased considerably during the studied period. After a sharp increase from 1980 to 2000 (from 4,839 to 6,778) the speed of increase slowed down in the period 2001-2010. The number of dentists started decreasing in 2011, due to the movement of dentists abroad and/ or retirement. By 2010 there were 8,400 registered dentists in Bulgaria, of whom about 66% were women, while in 1990 female dentists represented 75% of the total number of active dentists. The general trend is toward increase of the total number of the registered dentists in Bulgaria. A process of defeminisation of the dental profession is observed in parallel. The male: female ratio changed from of 26.27% in 1995 to 35.78% in 2011 (Table 2).

Year	Number	% Male	% Female
1995	6778	26.27%	73.73%
1997	7129	27.00%	73.00%
2004	6991	32.00%	68.00%
2008	7834	33.50%	66.50%
2011	8240	35.78%	64.22%
2014	8874	35.94%	64.06%
2018	9063	36.10%	63.90%

**Table 2:** Male/female ratio of dentists in Bulgaria change (1995 - 2018).

Another trend is the uneven distribution of dentists over the territory of Bulgaria - considerable concentration of dentists is observed in the capital city Sofia since the 90<sup>th</sup>, and the trend persists: The total number of registered dentists in Sofia as of 31. 12. 2008 was 3262 and 2445 of them were active (1659 women and 786 men). This represents about 1/3 of the total of practicing dentists in the country for

the same period. The women-to-men ratio in the capital city was 67%:33%. The average age of dentists working in the capital city was 39.0 years versus 41.7 for the whole country. Both trends are due to the change of socio-professional status. Older men in chief positions were normally employed in the capital city before the reforms. After they were most apt to start own business as far as it is a legitimate choice.

Before the changes, the only opportunity for career advance resulted from obtaining a position in the boards of district dental departments or regional dental clinics. Usually, these positions were occupied by male dentists with bigger experience, indeed older age. Now, as the major regulator of the distribution of dentists is the market, significant difference is found between male and female dentists in their preferences to practice in the capital city or in the countryside. Now the situation is different. Sofia is the preferred place of work for newly graduate dentists. Therefore, it is not surprising that the average age of dentists in the country increased from 39.7 years in 1997 to 41.7 years in 2008, while the average age of dentists in Sofia declined from 40.7 years in 1997 to 39.0 years in 2008. The average age of dentists is going up for the country and going down for the capital city [11,12].

**Practice profile pattern of male/female dentists**

The economic status characteristic of a socio-professional group is expressed by the ownership, responsibilities and type of partnerships that determine the positions of its members. The difference between self-employed owners of practice and employees is regarded as an important distinction for professional success [13-15]. A couple of years after the re-establishment of the liberal dental practice in Bulgaria (1996) 42% of dentists were still in the salaried public sector, 30% in mixed settings - public sector and private practice, and 28% of them worked entirely in private practice [16].

Almost all dentists had started their careers as salaried, but 43% left the public sector immediately after the legislative changes occurred (V = 0,434). In 5 years (2001) more than 50% were working under private contracts (V = 0,494). 15 years later (2011), 79.8% of women dentists and 82.2% of male dentists determined their status as self-employed owners, 12.2% of women dentists, and 10.8% of male dentists were working in rented surgeries, while only 8% of female and 7% of male dentists were salaried. In 2011 79.8% work alone in their own surgeries, 3.5% work for rent, 7.0% are salaried and about 10% work with colleagues under a contract based on sharing the profit.

There are no significant differences in the pattern of practice by sex. Despite being challenged by the radical social reforms now female dentists showed extraordinary adaptability and efficiency in opening new private practices. For the first 5 years (1991-1996) more than 50% of the newly opened private practices in Bulgaria were owned by female dentists. They work mostly as general practitioners (V= 0,264) [7,8,17- 20] (Table 3 and 4).

Position held	Male/ number	Mean age/ years	Sex Female/ number	Mean age/ years	Total Number	%
1.Ass Professors, Lecturers, etc.	87	38,9	90	37,8	177	3.83
2. Researchers, Professors	20	56,6	16	50,5	36	0.78
3. Experts	1		4		5	0.1
4. Dentists	1002		3003		4005	86.58
5. Chief Dental Dept.	108		196		304	6.57
6. Directors, Vice-directors	51		48		99	2.14
7. Total	1269		3357		4626	100.0

**Table 3:** Job positions' distribution by sex and mean age as of 31.12.1996.

Year of the investigation	Position (%)				
	Dentist/school dentist	Chief Dental Dept.	Directors, Vice-directors	Researchers, Professors, Experts	
1996	70,1	9,5	11,6	2,8	3,3
1999	73,8	8,3	10,5	4,7	2,6
2001	65,3	9,3	17,3	2,7	1,3
2005	54,2	7,3	11,5	3,1	6,2

**Table 4:** Highest position held at the start of private practice for the period 1996-2005.

The results show that for the studied period the formula alone in own practice is the most popular and most desirable by dentists in Bulgaria. Over the years, the percentage of renting equipped offices has decreased at the expense of an increase in the percentage of salaried employees and a percentage of profit in a private office. After 2005 the different types of practice showed a more even distribution. To meet the market expectations for technological development dentists have changed their traditional orientation from solo practice towards the group-practice organization [3,15-17] (Table 5).

Year of the investigation	Alone in own office (%)	Alone in a rented office (%)	On percentage of profit in private office (%)	As a salaried Employee (%)	Rent there office to other dentists (%)
1996	48.2	12.5	3,5	8.6	0,2
1999	60.4	9.8	28.7	10.8	0,3
2001	62.8	6.4	11.8	17.7	1,3
2005	38.2	23.1	15.0	16.7	7,0
2011	79.8	3.5	9.7	7.0	

**Table 5:** Ownership of dental practices and type of partnership for the period 1996-2005.

By the year 1996 more than half of the dentists (57.39%) have a diploma in dental specialty. Only 25% of salaried, 17% of mixed, and 12.6% of private practices deliver exclusively specialized care ( $V = 0,682$ ). The proportion of men working as specialists was higher 19% of male and 12% of female dentists in 1998 and this percentage persists in 2011. The proportion of female dentists with specialty decreased from 67% to 48% for the studied period. Female dentists prevail in pediatric and conservative dentistry while male dentists are found more frequently in oral surgery or prosthodontics. Advanced General Dentistry is the choice of the biggest part of specialty holders without gender difference (Table 6).

Profile of practice	Public	Mixed	Private	General
Specialities holders	57,9%	72,9%	62,8%	64,4%
Work as specialists in salaried position	26,2%	23,4%		25,7% ( $V=0,264$ )
Work as specialists as a self-employed		18,0%	18,3%	18,1%

**Table 6:** Profile of dentists with specialty diploma and the type of practice in 1996.

Only a few dentists in the private sector work as specialists (between 18% in 1995 and 5.5% in 2011). The proportion of female dentists with specialty decreased from 67% to 48% for the studied period and only few of them work as specialists even having a diploma.

### Workload in male/female practices

Most of the dentists work 5 days in the week - 90% ( $V = 0,275$ ), 6 - 7 hours per day ( $V = 0,546$ ) and go on holiday usually for 3 weeks. The workload of female dentists does not differ considerably from that of male dentists - 77.2% of female dentists and 73.3% of male dentists reported working 5 days per week, mainly 6 - 7 hours per diem (Table 7 and 8).

Year of the investigation	Average working days per week		
	Under 5 days	5 days	Over 5 days
1996	1.8	74.3	14.3
1999	10.0	83.7	6.3
2001	5.2	80,5	14,3
2005	10.1	67.2	22.7
2011	24.4	60.3	15.3

**Table 7:** Average working days per week.

Year of the investigation	Average working hours per day		
	Under 5 hours	5 - 8 hours	Over 8 hours
1996	20.3	63.2	17.5
1999	20.5	65.3	14.2
2001	37.2	51.3	11.5
2005	34.2	53.5	12.3
2011	28.5	60.7	10.8

**Table 8:** Daily workload.

### Family status differences between male and female dentists

In 1996 about 75% of active dentists declare "married". 75.4% of women were married, 11.5% - single and 14.1% divorced. In 2011 the "married" status still corresponds to most of them (70.7% of women and 67.4% of men). In 1996 11.5% of dentists were single while in 2011 27.4% of male and 15.1% of female were single. The percentage of divorced in 1996 was at 8.2% while in 2011 the increase of divorces is observed in the female group (10.1% female versus 4.6% divorced male dentists).

In 1996 40.8% reported having one child, 24.8% - two, 0.8% - three or more children, and 33.6% - having no children without big difference between the male and female groups of interviewed. In 2011 the difference is visible: 51% of male and 38% of female dentists declare having no children, 25% of male and 35% of female have one child, 22% of male and 24% of female dentists have 2 children, and less than 3% in both groups have 3 or more children.

### Discussion

The feminisation of the medical professions represents a global trend for the last decade of 20<sup>th</sup> century. Based on the traditionally women dominated medicine and dentistry in former socialist countries, in Bulgaria for the same period, this process has an opposite direction. The proportion of male dentists in Bulgaria has considerably increased during the last three decades. Given this, we can speak of a "de-feminization" of dentistry. Prevalence of women over 50 is a prerequisite for "de-feminization" of the profession along with social factors.

However, it is interesting whether this situation relates to the traditional metatheories of sociology of professions. It is expected to have male predominance in the case of socio-professional groups with better income and social prestige while socio-professional groups dominated by females predominantly work in social interest usually under-employment status [14,15]. The reality in Bulgaria and the trend in socio-professional dynamics showed a specific strong position of women dentists in Bulgaria. Despite being challenged by the radical social reforms, now female dentists in Bulgaria showed extraordinary adaptability and efficiency in opening new private practices. For the first 5 years (1991 - 1996) more than 50% of the newly opened private practices in Bulgaria were owned by female dentists. Compared to the similar process in former Eastern Germany in 2008 only 37% of all self-employed dentists were female, underrepresented in individual and group practices and overrepresented among assistants and substitutes (62% of all dentists) (Bundeszahnärztekammer, 2010). "German female dentists are less ready to choose the path to self-employment as often as their male colleagues (Klingenberger and Schwarte, 2005, pp. 12-13) [23-25].

Equal opportunity for female dentists with young children either opening practices or being reintegrated into the dental profession after prolonged maternity leave will soon be the main issue in the dental profession. This trend should be observed as an important sign of the appearance of a new kind of social problem in the professional development of female dentists related to their double role of mothers and doctors under market conditions. Women dentists, representing the majority of the dental profession in Bulgaria, are now facing the advantages and disadvantages of being self-employed. While in public service, women dentists still enjoyed some social assistance in raising their children. Nowadays, women dentists in the private sector earn much more and have much more choice but have much less social protection.

### Conclusion

1. The dental profession is traditionally dominated by men. The modern trend in most countries is to slowly but steadily increase the relative number of women. In Bulgaria, the trend is reversed - toward "de-feminization". Social and demographic factors are responsible for this trend.
2. Ownership and management of practices pattern of women dentists in Bulgaria do not differ from that of the profession in general.
3. The market relationship in dentistry impacted the long-term trends in the practice profile and workload of women dentists in Bulgaria compared to their male fellow dentists less than the ability to balance their personal and professional lives.
4. To recognize the comparable aspects of male and female professional activities pattern in dentistry in different social systems is necessary for predicting the social and professional dynamics and adequate investment.

### Bibliography

1. Катрова Л. Здравните реформи в преходния период и техните отражения върху професията и образованието по дентална медицина в България (Health reforms during the transition period and Bulgarian dental policy reform of 1991-2001 and their impact on dental education) Здр. политика и мениджм 9.1 (2009): 69-75.
2. Katrova L. "Systems for the provision of oral health care in the black sea countries part 2: Bulgaria". *Oral Health and Dental Management in the Black Sea Countries* 8.2 (2009): 3-7.
3. Katrova L and Kr Tzokov. "Demography and market impacts on dental practices' development in Bulgaria during the period of transition 1990-2010". *Acta Medica Academica* 42.2 (2013): 229-237.
4. Gross D and Schäfer G. "Feminization" in German dentistry. Career pathways and opportunities—A gender comparison". *Women's Studies International Forum* 34.2 (2011): 130-139.



5. Lydia Katrova. "Generational and social mobility of dentists in Bulgaria during the period of transition. Facts and figures". *EC Dental Science* 18.11 (2019): 260-268.
6. Катрова ЛИ., *et al.* "Катрова Политически, икономически и социален контекст на здравните реформи в страните на Централна и Източна Европа. (Political, economic and social contexts of the health reforms of the countries of Central and Eastern Europe)". *Здравен мениджмънт* 3.2 (2003): 12-19.
7. Катрова Л., *et al.* "Промяната на социално-професионалния статус на стоматолозите в България в хода на здравната реформа. (The health reforms and the change of the socio-professional status of dentists in Bulgaria)". *Пробл. на стоматол* 29 (2003): 46-50.
8. Л Катрова and Ж Сурчева. "Динамика на индивидуалните професионални кариери на жените-стоматолози: Настояще и бъдещи тенденции. (Career path dynamics of female dentists: actual status and trends)". *Мед. Преглед* 40.4 (2004): 84-89.
9. Katrova L. "Gender impact on the socioprofessional identification of dentists in Bulgaria". *Journal of Dental Education* 68.7 (2004): 19-22.
10. Katrova L., *et al.* "Oral health care reforms in Bulgaria during the period of transition". *Oral health and Dental Management in the Black Sea Countries* 6.4 (2007): 3-8.
11. Katrova L and Tzokov Kr. "Current status of the dental practice in Bulgaria. Meta-analysis". *Journal of IMAB* 18.2 (2012): 181-187.
12. Катрова Л and Кр Цоков. "Жените-лекари по дентална медицина-особености на организацията на денталната практика". *Социална медицина* 20.2/3 (2012): 59-61.
13. Lydia Katrova. "The interest of dentists in continuing dental education in the process of reprofessionalization of dentistry in Bulgaria". *Scientific Archives of Dental Sciences* 4.11 (2021).
14. Atchison KA., *et al.* "Gender differences in career and practice patterns about PGD-trained dentistry". *Journal of Dental Teaching* 66.12 (2002): 1358-1367.
15. Adams TL. "Gender and feminization in health care professions". *Sociology Compass* 4.7 (2010): 454-465.
16. Katrova L GP. "Change of the socio-professional status of dentists". (Промяна на социо-професионалния статус на стоматолозите. Дисертационен труд за присъждане на научна и образователна степен "Доктор"), Sofia (Dissertation) (1997).
17. Katrova L GP. "Social status of dentists and social perspectives for the dental profession (Стоматологичната професия-състояние и перспективи)". *Leading Technology in Dentistry Publishing*, Sofia. ISBN: 945-90363-1-6. (Monography, Bulgarian) (1998): 290.
18. Krasimir Tsokov. *Organization of dental practice under market conditions*. Sofia, (Dissertation) (2014).
19. Katrova L. "Dynamic of the individual professional development change of dentists in Bulgaria". *Medical Management and Health Policy* 31.2 (2000): 3-13.
20. Katrova L. "Reproduction of the population and reproductive attitude of Bulgarian women for the period 1975-1996". *Medico-statistical analysis Medical Management and Health Policy* 31.1 (2000): 10-18.
21. Katrova L. "Female dentists in the dental profession". *Stomatological Review* 29.1 (1998): 9-17.
22. Katrova L. "Socio-demographic impacts on the professional identification of dentists". In: N. Tilkidjiev. ed. *The middle class as a precondition of a sustainable society, Papers from a sociological conference of the Association of the Middle Class Development (AMCD), Konrad Adenauer Foundation sponsorship*. Sofia LIK Publishing house (1998): 458-468.



23. Farrel S. "Contribution of women dentists to general practice". *International Dental Journal* 40.3 (1990): 142-144.
24. Brennan DS and AJ Spencer. "Difference in time devoted to practice by male and female dentists". *British Dental Journal* 172.9 (1992): 347-349.
25. Perret JB. "La feminisation dans la medecine dentaire". *Rev Mens Suisse Odontostomatol* 100.10 (1990): 1238-1239.

**Volume 23 Issue 5 May 2024**

**©All rights reserved by Katrova Lydia Georgieva.**