Debate
the role of women in the teaching-Research of anatomy in medicine: THE GENDER ISSUE

# WOMEN TEACHING ANATOMY IN R. NORTH MACEDONIAHISTORICAL: BACKGROUND AND CURRENT TRENDS 

Niki Matveeva, Julija Zhivadinovik Bogdanovska<br>Institute of Anatomy, Faculty of Medicine, University "Ss Cyril and Methodius", Skopje, R. North Macedonia



Prof. Niki Matveeva

## Historical background

The Republic of North Macedonia is one of the successor states of the former Yugoslavia, a country with almost 2 million citizens located on the Balkan Peninsula in the Southeast Europe. It became a member of the United Nations in 1993 under the name of Former Yugoslav Republic of Macedonia (FYR Macedonia). Having reached an agreement with Greece that resolved the longstanding name dispute the country officially changed its name and finally assumed its place on the map of the Western Balkan nations.
The establishment of the Department of Anatomy is connected with the establishment of the Faculty of Medicine in the capital city of Skopje in 1947, immediately after the World War II. In that period the country was devastated and ruined with dominantly agricultural population in a very
poor health condition. At that time there were only 120 doctors, a few stomatologists, less than 100 high-school dental technicians and 96 pharmacists, for about 1,200,000 inhabitants (Donev, 2012, 2016). On average, there were 1 doctor and 1 nurse per 10,000 residents. In the beginning, the Institute of Anatomy had three modest rooms which served as lecture halls, training rooms, classrooms and laboratories. The Department of Anatomy has been located in the nowadays premises since 1948, when the construction of the building of the Faculty of Medicine was finished. The lecture with which the first generation of students at the Faculty of Medicine was introduced to anatomy was held by the first Head and Director of the Department, Prof. Dr. Zdenko Krizhan (Donev and Polenakovic, 2012). He successfully organized and carried out the four-semester course in anatomy together with Prof. Dr. Leon Melkonian and the demonstrators from the first generations of students at the Faculty of Medicine who were involved in practical lectures. In the period from 1957/58 to 1962/63 school years, the teaching of anatomy was carried out by visiting professors from the Institute of Anatomy at the Faculty of Medicine in Belgrade: Prof. Dr. Marjan Bosković, Prof. Dr. Slavoljub Jovanović, Prof. Dr. Branislav Negovanovic and others. In that period, male students of medicine were dominant and the male dominance between the teaching staff was evident as well (Petlichkovski, 2008). The catastrophic earthquake in 1963 destroyed a large part of premises of the Institute of Anatomy, part from the equipment and museum preparations. In the academic year 1963/64, the teaching was taken over by prof. Dr. Josif Josifov, who became Director and Head of the

Department of Anatomy. However, from year to year, the number of female students has been continuously and constantly increasing. Women became huge part of the highly educated health personnel (doctors, dentists and pharmacists) who entered the battle against diseases, poverty and centuries of long regression in order to improve the health status of the population. During that period, the Institute of Anatomy employed the first Doctors of Medicine who were later elected as assistants and became members of the teaching staff. Since then, members of the teaching staff of our Department were always elected from amongst the graduated Doctors in Medicine. During the period of the seventies and eighties of the last century women became majority of the staff, approximately $80 \%$ to $90 \%$ of the teaching and research staff of our Department. Since 1988, female professors, without exception, were always elected for the highest positions, Head and Director of the Department: Prof. Dr. Anica Kargovska Klisarova, Prof. Dr. Nadezhda Djordjevic, Prof. Dr. Kostandina Kornetti Pekevska, Prof. Dr. Dobrila Tosovska Lazarova, Prof. Dr. Anja Strateska Zafirovska, Prof. Dr. Marija Papazova. Since 2016 the Head of the Department of Anatomy is Prof. Dr. Julija Zivadinović - Bogdanovska. Prof Dr Niki Matveeva is the president of the Macedonian Association of Anatomists.

## Current overview

The teaching activity of the Department of Anatomy takes place through provided and accredited anatomy courses within the undergraduate studies for students from the Faculty of Medicine, Faculty of Dentistry, Faculty of Pharmacy, Faculty of Physical Education, Sport and Health and the three-year professional studies for nurses/technicians, physiotherapists, speech therapists and radiological technologists. The members of the Department also participate in performing the third cycle of postgraduate studies, as well as in the specialties with curricula that include anatomy. The scientific projects that are currently being carried out at the Department of Anatomy are led by female professors and realized by investigations in different areas of anatomy: Morphologic characteristics of the heart conductive system, Dermatoglyphics in healthy individuals compared to the patients with confirmed diagnosis of schizophrenia and psoriasis; Anthropometrics characteristics of growth and nutritional status in children population in R. North Macedonia; Anthropometric and biochemical parameters in detecting obesity as a risk factor for metabolic syndrome in the student population etc.

Approximate percentage of female students entering the Faculty of Medicine in our country in the last 5 years was $55 \%$. Female students graduated from Medicine in the last 5 years were approximately $60 \%$. Countries and regions differ regarding the historical and current participation of women physicians according to different sociocultural contexts and policies. Steiner Hofbauer et al. (2022) and Müller M, (2019) reported that female students and graduates outnumber their male colleagues in Austria and the EU countries (European Commission, Directorate-General for Research and Innovation, 2021). In contrast to these data women hold only $30 \%$ of professor positions at state medical universities in Austria and only 11.9\% of all chief physicians are female (, 2021). According to Penny et al. (2014), women in UK are equally represented in medicine, but they are underrepresented in academic medicine. In opposition with medical practice, not as much progress has been made in academic medicine towards greater gender equity. Women continue to be under-represented in academic medicine, in positions of influence and in authorship and citation practice (Blake et al., 2000; Sidhu et al., 2009). In our country, there is a problem to attract more graduated male students to work in institutions dominated by activity mainly in the field of medical education and scientific research, where medical clinical practice is less involved. The state's constant austerity in terms of hiring young staff in these institutions increases the burden on the existing staff, which in turn leaves little time for work in clinical medical practice where there are greater opportunities for advancement and earnings. In addition to this problem, there is also a continuous exodus of graduated medical students to the countries of the European Union, where there are better working conditions and better incomes. All these problems reduce our opportunities to create a working environment where there will be a relative balance in relation to the gender of the employees. The feminization of medical education in our country is probably due to the fact that this field, in contrast to surgery and internal medicine, does not require heavy workloads and night duties. Today, the Department of Anatomy consists of 8 people: six professors, one associate professor and one assistant professor. All employees are female with one exception, one professor. The situation in our University ("Ss Cyril and Methodius") is representative for other universities in our country. However, horizontal segregation across specialties and vertical segregation along the medical hierarchy for women still persist (Ramakrishnan et al., 2014). In many counties fewer women are found in
prestigious specialties, in tertiary care and in academic medicine. Female physician salaries were found in the study of Riska et al. (2001) to be $65 \%$ of male physician earnings due to a larger number of men in sectors of medicine that traditionally require longer hours and provide high salaries. According to Levinson and Lurie's (2004) opinion women and men practice medicine differently and the growth of women in medicine could improve the physician-patient relationship and promote more teamwork among medical staff. Half or even more of all doctors may be female but the powerful and influential parts of medicine are still dominated by men (Bear, 2011).

## Future perspectives

The "feminization of medicine" and massive migration of physicians to the EU countries has also been leading to workforce shortage and changes in the quality of medical care. Politicians and government officials use the rising number of female doctors and parental leaves as an explanation for the physician shortage. We can only hope that appropriate politics of certain government departments can improve not only gender diversity and balance in medicine but the level of patient care and scientific research as well. Women often suffer from a "confidence gap" and perceive themselves as less capable than man. Women need support in their professional development (especially in the period of child care and parental leaving) through mentoring and career coaching to achieve the balance between home and work. Women don't need a special treatment, they should be treated as individuals who make their own choices and have their own medical career path.

## References

Ärztekammer Ö. (Ed). 2021. Ärztestatistik für Österreich. Wien: Österreichische Ärztekammer. Julija Zhivadinovik Bogdanovska Bear JB, Woolley AW. 2011. The role of gender in team collaboration and performance. Interdiscip Sci Rev; 36:146-53.
Blake M, La Valle I. 2000. Who Applies for Research Funding? Key Factors Shaping Funding Application Behaviour Among Women and Men in British Higher Education Institutions. London: National Centre for Social Research.

Donev D. 2016. Macedonian Medical Association: Seventy Years from Its Establishment, 1945-2015. Open Access Macedonian Journal of Medical Sciences 4, 733-39. DOI:https://doi.org/10.3889/ oamjms. 2016.105.

Donev D, Polenakovic M. 2012. Contributions of the doctors from Macedonia to the establishment and initial development of the Faculty of Medicine in Skopje, R. Macedonia. Prilozi; 33: 239-77.
European Commission, Directorate-General for Research and Innovation, She figures 2021 gender in research and innovation: statistics and indicators, Publications Office, 2021, https://data.europa.eu/doi/10.2777/06090
Levinson W, Lurie N. 2004. When most doctors are women: What lies ahead? Ann Intern Med;141: 471-74
Müller M, editor. Jahresbericht 2019. 2020. Med Uni Wien. Vienna: Verlag Medizinische Universität Wien.
Penny M, Jeffries R, Grant J, Davies SC. 2014. Women and academic medicine: a review of the evidence on female representation. J R Soc Med 107: 259-63.
Petlichkovski A, Trajkov D, Strezova A, Spiroski M. 2008. 60 Years (1945-2005) Macedonian Medical Association. Mac J Med Sci. 1: 5-9. https://doi.org/10.3889/MJMS.1857-5773.2008. 0023
Polenakovic M, Donev D. 2011. Contributions of the doctors from Croatia in establishing and initial development of the Faculty of Medicine in Skopje, Republic of Macedonia. Prilozi; 32: 331-58.
Ramakrishnan A, Sambuco D, Jagsi R. 2014. Women's participation in the medical profession: insights from experiences in Japan, Scandinavia, Russia, and Eastern Europe. J Womens Health (Larchmt); 23: 927-34. doi: 10.1089/jwh.2014.4736.

Riska E. 2001. Medical careers and feminist agendas: American, Scandinavian and Russian women physicians. New York: Aldine de Gruyter,
Sidhu R, Rajashekhar P, Lavin VL. 2009. The gender imbalance in academic medicine: a study of female authorship in the United Kingdom. J R Soc Med; 102: 337-42
Steiner-Hofbauer V, Katz HW, Grundnig JS, Holzinger A. 2022. Female participation or "feminization" of medicine. Wien Med Wochenschr.;2:1-6. doi: 10.1007/s10354-022-00961-y.

