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**DEMOGRAPHIC CHARACTERISTICS, PROFESSIONAL STATUS AND QUALIFICATION OF  
TEACHERS IN THE SPECIALTY "DENTAL TECHNICIAN"**

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### АННОТАЦИЯ

Качество высшего образования - одна из ведущих проблем. Преподавание и обучение - два взаимосвязанных и взаимозависимых аспекта обучения. Обучение в условиях высшей медицинской школы - это организованный и целенаправленный процесс. Целью обучения по специальности «Зубной техник» является освоение студентами основных практических действий, требующих самостоятельности и являющихся результатом разноплановой работы в независимой медико-технической лаборатории зубных техников. Преподаватель - ключевая фигура и человек, ответственный за достижение целей обучения по специальности. Наша цель - установить профессиональный статус и составить демографическую характеристику учителей по специальности «Зубной техник» (со степенью по специальности), которые преподают в медицинских колледжах страны. Для достижения поставленной цели мы использовали следующие методы: социологический метод-опрос, изучили литературные источники и правила обучения по специальности «Зубной техник». Анкета разработана самостоятельно. Для представления результатов использовался описательный и графический анализ. Среди учителей по специальности в Болгарии преобладают мужчины, и в целом учителя представляют собой группу относительно пожилых людей с длительным педагогическим стажем и хорошим педагогическим опытом, который коррелирует с их возрастом. Большинство преподавателей по специальности работают по трудовому договору с учебными заведениями. Мы обнаружили, что они поддерживают свою квалификацию, регулярно посещая аспирантуру.

### ABSTRACT

The quality of higher education is one of the leading issues. Teaching and learning are two interrelated and interdependent aspects of learning. The training in the conditions of the higher medical school is an organized and purposeful process. The purpose of the training in the specialty "Dental Technician" is for students to master the basic practical activities that require independence and result from the diverse work in the independent medical and technical laboratory of dental technicians. The teacher is a key figure and a person responsible for achieving the goals of training in the specialty. Our goal is to establish the professional status and make a demographic description of teachers in the specialty "Dental Technician" (with a degree in the specialty) who teach in medical colleges in the country. To achieve this goal we used the following methods: sociological method-survey, we studied literature sources and regulations for training in the specialty "Dental Technician". The questionnaire is self-developed. Descriptive and graphical analysis was used to present the results. Men predominate among the teachers in the specialty in Bulgaria, and in general the teachers are a relatively aging group, with a long teaching experience and good pedagogical experience, which correlates with their age. Most of the people teaching in the specialty work under an employment contract with the educational institutions. We found that they maintain their qualifications by regularly attending postgraduate courses.

**Ключевые слова:** лектор, специальность «зубной техник», возраст, социально-профессиональный статус, научная работа.

**Key words:** lecturer, specialty "Dental Technician", age, socio-professional status, research

**Introduction:** Learning is a joint activity of learners and learners, when the former impart knowledge, skills and habits to learners, to one degree or another guide the process of their acquisition (teaching), and the latter acquire this knowledge, skills and habits (learning). Teaching and learning are two interrelated and interdependent aspects of learning (2).

The training in the conditions of the higher medical school is an organized and purposeful process of building and developing the professional competencies of the future medical specialists, as a result of which the trainees acquire not only a certain system of knowledge, skills and competencies, but also build and develop as highly qualified specialists. for health needs (3.6).

The purpose of the training in the specialty "Dental Technician" is for students to be acquainted

and master the basic practical activities that require independence and result from the diverse work in the independent medical and technical laboratory of dental technicians. Upon completion of the training, the student must build himself as a specialist, able to integrate his knowledge of individual disciplines and skillfully translate them into practical skills and habits necessary to practice the profession to be competitive (5).

Exercise is a polyvalent didactic component of learning and without it, as well as without repetition, neither permanent assimilation and consolidation of the learning content nor the formation of skills, habits, abilities and integral properties of the personality can be achieved. The most important requirements for it to be effective are its purposefulness, systematicity, duration and permanence (1).

Modern life and the labor market are characterized by increased demands on students. The expectations of the students studying in the specialty "Dental Technician" in the Medical Colleges (main units of the medical universities) are for successful coping with the training and enrollment in the system of modern health care after graduation. The high demands of dentists and patients lead to the need for students to acquire and maintain a high level of ability to develop an arsenal of knowledge and skills during their studies (3).

The new educational model imposed by the Bologna Process, according to which higher education is oriented from incoming to outgoing parameters (learning outcomes presented as knowledge, skills and competencies) requires skills from the teacher, with the help of which to convince his students that knowledge is power, and its mastery is the magic of sowing wisdom (3).

Over the last decade we have witnessed an increased interest in the quality of education and teaching in Bulgarian universities (8). It is one of the leading issues. Of paramount importance in its implementation is the human resource in universities: teaching staff - age structure, scientific production, qualification, professional experience; students and their motivation, cognitive abilities, etc. (9).

According to the Unified State Requirements for Training in the Dental Technician, teachers who conduct practical training must have a bachelor's or master's degree in Health Care Management and an Educational Qualification Degree (EQD) in Dental Technician (7).

The European Commission's Green Paper (2008) states that the health workforce in the Member States of the European Union faces serious challenges: global aging and the global aging of the workforce itself. The number of young people entering the health professions is insufficient to replace those who leave the professions due to their age (4).

In our opinion, the global aging of the population and the workforce in healthcare also has an impact on

the workforce in education and in particular in training in the specialty "Dental Technician".

**Objective:** To make a demographic characteristic and study the professional status and qualification of teachers in the specialty "Dental Technician" with a degree in the specialty.

**Materials and methods:** To achieve this goal we used a sociological method and studied literature sources and regulations for training in the specialty "Dental Technician". The questionnaire is self-developed. The results are presented by descriptive and graphical analysis.

The object of study are lecturers in the specialty working at the Medical University-Varna, Medical University-Sofia and Medical University-Plovdiv. The survey was conducted in 2020 and reflects the opinion of 18 teachers, which are 75% of teachers with EQD in the specialty at the moment.

**Results and discussion:** The training in the specialty "Dental Technician" on the territory of the country is conducted only in three colleges - Sofia, Varna and Plovdiv, which are the main units of MU-Varna, MU-Sofia and MU-Plovdiv. It is held in compliance with the Law on Higher Education and the Unified State Requirements of 2008. Graduates acquire the qualification of "professional bachelor" in the specialty "Dental Technician".

The general population includes 24 teachers with EQD in the specialty. The study involved 18 teachers, which is 75.00% (of the general population).

The majority of the sample are men (61.11%), because in reality there are more male teachers in the specialty. This is a trend that has been observed since the beginning of the organized training in the specialty. In 1987 there were only 5 women teachers in the specialty (Varna - one and Sofia - four). There are no women teachers in Plovdiv with a degree in the specialty. At present, there are slightly more women than in 1987, but the trend continues. Male lecturers in the specialty predominate.

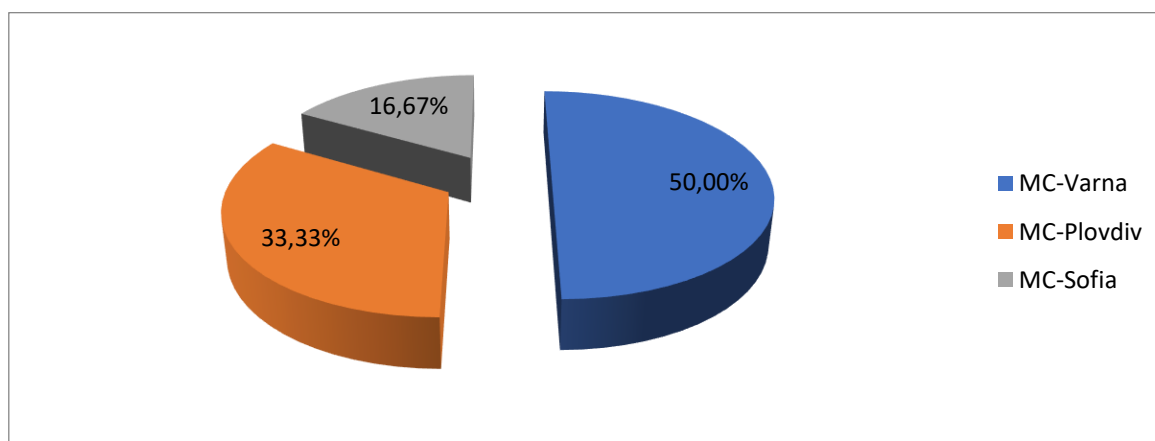


Fig. 1. Distribution of respondents according to the college in which they teach

The study included all colleagues from Plovdiv (6) and almost all from Varna (9 out of 10 participated). We found reluctance to participate in the survey only among colleagues from Sofia (3 out of 8 participated)

and therefore they are only 16.67% of the sample (Fig. 1).

In MC - Varna 9 lecturers with PC in the specialty are of EC with MC and one is on a civil contract. In MC - Sofia 8 lecturers with EQD in the specialty are of EC,

and in MC - Plovdiv 5 of EC and 1 of civil contract. In the colleges in Sofia and Plovdiv there are also such teachers who have a specialty "Dental Technician" (Sofia - 4, Plovdiv - 5). The presence of such teachers is strange, because in USSR it is mentioned that the training is carried out by teachers in the respective professional field, and since 2005 the specialty "dental technician" is in the field of "health care".

We found that the majority of the participants in the study are from EC with the school where he works.

There are 2 colleagues on a civil contract, one each in Varna and Plovdiv. The educational establishments fulfill the requirements that the teachers in the specialty must be at the EC in the educational establishment where they teach.

To determine whether the aging trend affects teachers in the specialty "Dental Technician", we checked the age of the respondents. The data are reflected in fig. 2.

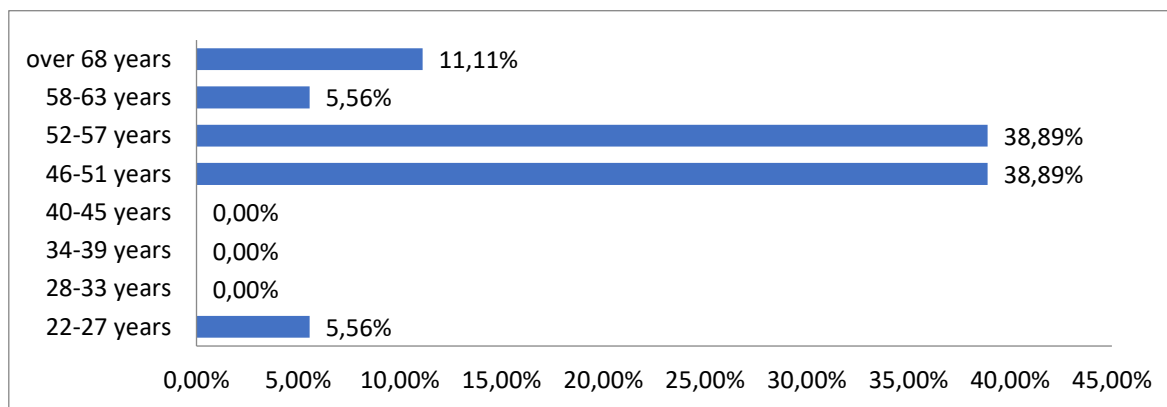


Fig. 2. Age of the respondents

Unfortunately, the data from the survey show that the majority of teachers are over 52 years old (55.56%). There are no young people among the teachers. There is only one colleague in the age group 22-27 and he is on a fee, to the mont of conducting the study.

The work experience of the surveyed persons correlates with their age. It shows a lot of experience and trained over the years specialists to whom teachers have passed their skills (which is positive for the training of students), but you need to think about

rejuvenation, which should not be delayed. It is important to have continuity and colleagues with more pedagogical experience to help their young colleagues to develop their skills so that they can easily pass on their experience to learners.

Due to the requirements set by the Higher Education Act and USSR to the teachers who conduct training in the specialty, we found that the educational institutions comply with the normative documents (Fig. 3).

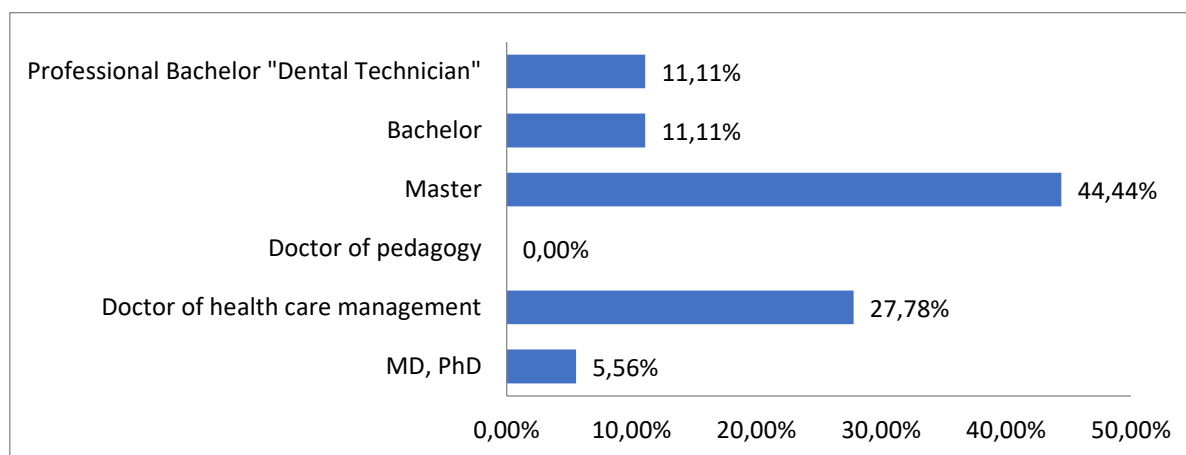


Fig. 3. Educational qualification degree and Educational and scientific degree of the respondents

Colleagues who work part-time have a professional bachelor's degree. Only in MC Varna, the main unit of MU-Varna, there are teachers with educational and scientific degree "Doctor". In other schools, colleagues have a master's degree.

In processing the data, we identified different positions held by teachers. It is noteworthy that only in MC-Plovdiv the colleagues are appointed to the position of "senior lecturer", which is not new for us (Fig. 4). The decision is of the Academic Council of MU-Plovdiv.

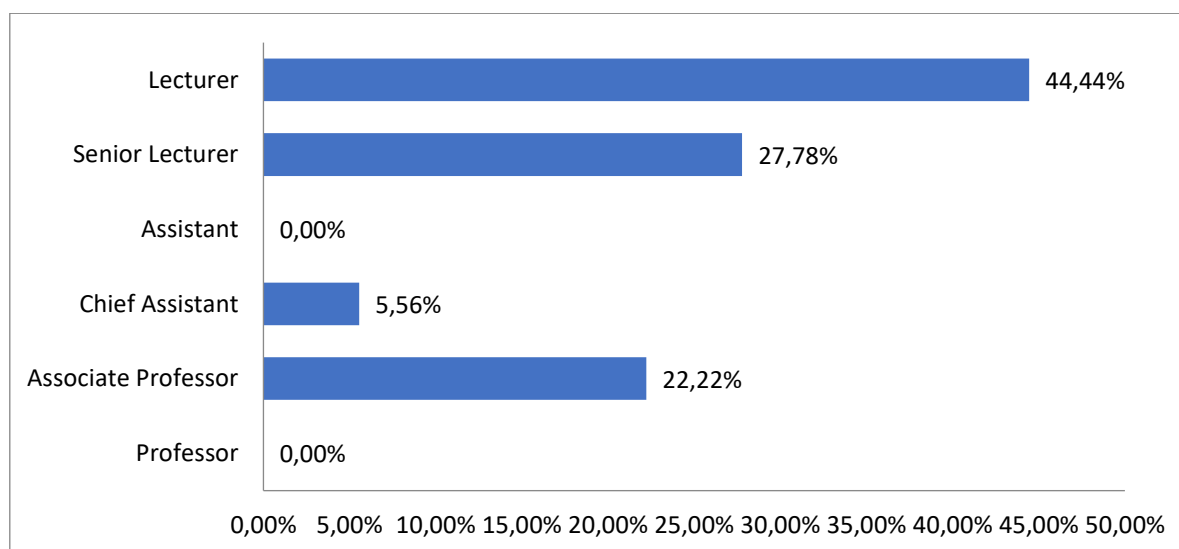


Fig. 4. Position in the educational institution

The academic positions of "Chief Assistant" and "Associate Professor" are held by people working at MU-Varna. Colleagues from Sofia have been appointed to the position of "university lecturer", as well as those from Varna who do not hold academic positions.

The teacher is a key figure and a person responsible for achieving the goals of training in the specialty. To meet this requirement, he maintains his professional qualification by attending PC. At the time of the study in the Ordinance on specialties in health care, there are no specialties for this category of

teachers, except for pedagogy. All teachers have studied in bachelor's and master's programs in "Health Care Management" and "Pedagogy" and have acquired the necessary skills. In order to conduct full-fledged training in the specialty, they must attend professional courses. The training courses are conducted by companies producing or trading on the market, which invite prominent specialists from practice not only in our country but also from abroad.

We checked how many courses each of the respondents has attended in the last five years (Fig. 5).

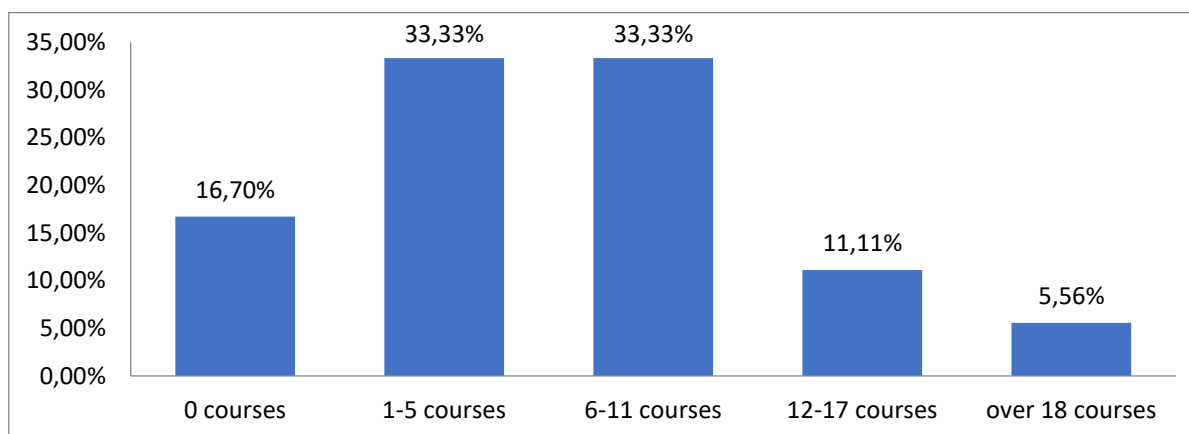


Fig. 5. Number of courses attended in the last five years

We found that the majority of teachers attended PC courses. Most often the number of attended courses is from 1 to 5 and from 6 to 11. We also found such respondents who state that they have visited from 12 to 17 and even over 18 courses for the last five years. Therefore, teachers take care of their professional growth and maintain their qualification because they realize its importance for training in the specialty.

Based on the processed questionnaires and their results, we can draw the following conclusions:

1.The teachers in the specialty "Dental Technician" in Bulgaria are a relatively aging group with a long teaching experience and good pedagogical

experience. Men predominate, which is a trend since the creation of the specialty.

2.The persons teaching in the specialty have the necessary qualification and most of them work on a Basic employment contract with the educational establishments.

3.Respondents regularly attend postgraduate courses.

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## A DIAGNOSTIC MODEL FOR GERD PHENOTYPES BASED ON EPIDEMIOLOGICAL AND CLINICAL DATA OF THE RUSSIAN REGISTRY

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### ABSTRACT

**The aim of the study** was to identify the epidemiological and clinical factors predisposing to non-erosive reflux disease (NERD), erosive esophagitis (EE) and Barrett's esophagus in Russian population of patients, and to develop a diagnostic model for GERD phenotypes.

**Materials and methods.** 1433 patients with GERD from Moscow, Moscow region, St. Petersburg and Leningrad region were studied. During the study complaints and anamnestic data were gathered, anthropometry, tests for *H. pylori* infection and upper endoscopy were performed. Spearman rank correlation was used to identify the correlation of clinical characteristics with NERD, EE and Barrett's esophagus. 880 patients with GERD (407 with NERD, 443 with EE, 27 with Barrett's esophagus, 3 with esophageal stricture) were selected for correlation analysis due to the presence of all necessary parameters. To develop multivariable model for GERD phenotype diagnosis (EE/NERD), multivariate analyses was used. The prognostic value of multivariable model was determined based on ROC analysis.

**Results.** The prevalence of two main GERD phenotypes - EE and NERD - was approximately equal in the patients of Russian megapolises. Male gender was significantly negatively correlated with NERD development ( $p=0.002011$ ). An inverse correlation was found between NERD and older age groups ( $p=0.002459$ ), high waist circumference (WC) ( $p=0.003733$ ), long duration of GERD symptoms ( $p=0.012984$ ), the results of the GerdQ $\geq 8$  points ( $p=0.040030$ ). In the group of patients with EE grade A-B, a significant inverse correlation was revealed with age over 40 years ( $p=0.002708$ ), high body mass index (BMI) ( $p=0.020957$ ), and high WC ( $p=0.001293$ ). The male gender ( $p=0.000108$ ) and the duration of GERD symptoms more than 3 years ( $p=0.028292$ ) were significantly associated with severe grades of EE development. The male gender ( $p=0.007505$ ) and not using of PPIs over the past 6 months ( $p=0.015930$ ) were positively associated with Barrett's esophagus. Based on correlation analyses and predictive value 6 variables associated with EE/NERD were chosen: gender, age, GERD-Q results, GERD symptoms duration, WC, BMI. Variables were divided into classes with similar risk with corresponding scores. The cut-off point (total score) with balance of sensitivity and specificity ( $Se \approx Sp$ ) was 549. Area under the curve (AUC) was 0,73, which indicates good quality of the diagnostic model.

**Conclusion.** Female gender, young age, normal BMI and WC, short duration of symptoms and GERD-Q less than 7 points were positively associated with NERD compared with EE among Russian patients. Male patients with long-term GERD symptoms, with overweight and obesity, who do not take PPIs are at high risk of Barrett's esophagus.