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THE IMPACT OF PROFESSIONAL ACTIVITIES ON PERSONAL LIFE AND HEALTH OF DENTISTS

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Abstract

Medical sociology (or sociology of medicine, depending on the specific linguistic environment in which this discipline develops) is the middle-level sociological theory and develops in frames of the human factor in medicine (organization of medical services for the population, social perceptions among medical staff, and patients, gender issues related to activities of medical staff and interaction with patients, social expectations of the population regarding the activities of medical institutions, quality assessment of medicine in a particular society, etc.). Medical sociology might have an important impact on improving the quality of medical services, on the social well-being of medical personnel and patients, but it is still not the most developed branch of science. One of the reasons for that might be an underestimation of joint research activities between representatives of medical sciences and sociology, as well as a lack of sociologists in medicine. At the same time, a wide range of issues is interrelated and relevant at all stages of the organization and provision of dental care, including the analysis of gender imbalance, professional growth and professional development, competitiveness, occupational hazards, and the health status of dentists.

In this regard, studies on actual problems in the field covered by medical sociology are needed. The article discusses some of the sex and age determinants of dental activity, in particular, the workload of male and female dentists, their health status, and problems related to the remuneration of dentists. Based on the data of the sociological study, a comparative analysis of the perceptions of men and women dentists regarding these issues is carried out. Along with the similarity and some differences in the perceptions of men and women dentists regarding their workload and earnings, it is concluded that women dentists assess the impact of professional activities on their health and personal life more critically than men.

Keywords: dentists, workload, sex and age specifics, health, comparative analysis.

Introduction

Medical Sociology defined as a multidisciplinary field of studies and research is focused on health services organization and health care and includes social stratification, organizational analysis, occupations and professions, gender. It is linked to medical anthropology, social epidemiology, demography, and ecology [Mechanic D, 2001]. It is proposed to differentiate two trends in medical sociol-

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Tel.: +7 (916) 2045855 E-mail: edita@mail.ru ogy: sociology in medicine and sociology of medicine. The first is about applying various sociological methods in studying purely medical issues, based on the opinion of medical personnel and patients, while the second "focuses on testing sociological hypotheses, using medicine as an arena for studying basic issues in social stratification, power and influence, social organization, socialization, and the broad context of social values" [Kovaleva M, Barkovskaya A, 2012; Makeeva I et al., 2017; Margaryan E, Paramonov Y, 2017].

One of the fundamental concerns of medical sociologists over the past 50 years has been to document and explain gender differentials in healthcare [Wright E, Perry B, 2010]. In particular, the qual-

ity of medical services provided depending on the sex of doctors and patients, gender stereotypes among medical personnel and patients, public and professional perceptions and priorities regarding interrelation between positions occupied in the healthcare system, the quality of medical services, and sex of doctors and patients, the level of employment of women and men doctors, their distribution by areas and positions in the healthcare sector (in particular, on leadership positions), and other issues are studies in the context of gender issues in medicine [Kurbatov A et al., 2011; Sudyin S, 2012; Doroshina V et al., 2019].

The studies conducted in the USA demonstrate a gender misbalance in the branches of medicine. It is a social fact, having its roots and serving as an interesting object for studies. According to statistics (2019), women dominate in obstetrics and gynecology (83.4%), allergy and immunology (73.5%), pediatrics (72.1%), medical genetics and genomics (66.7%), hospice and palliative medicine (66.3%), dermatology (60.8%), while men as physicians dominate in orthopedic surgery (84.6%), neurological surgery (82.5%), interventional radiology (80.8%), thoracic surgery (78.2%), pain medicine (75.3%), and radiology (73.2%) [Murphy B, 2019].

In dentistry, 67,5% of the American physicians are men and 32,5% are women. The median age of Dentists is 47.4, and male employees are generally 8 years older than their female counterparts. And, women dentists have a lower average salary than men [Data USA, 2018].

The studies on women in dentistry demonstrate a dilemma between the professional involvement (including career development) of a dentist and his/her private life. Studies demonstrate that there is a certain percentage of female dentists sacrificing or postponing their family life and childbirth due to professional growth, which is also visible on the level of students of medical universities; envisaging the long study, most of them plan their family as followed after their professional stability [Ayers KMS et al., 2008; Sandhya J, 2017]. Many women dentists experience work-family conflicts daily and have difficulties especially within a certain sociocultural context where patriarchal cultural norms and laws identify women as primary homemakers and put pressure on women professionals [Rajeh M, 2017].

Among the issues studied, are those related to salaries earned by men and women physicians working in the same positions, their health conditions affected by their profession, and gender stereotypes they share. In particular, it is noted that the activity of dentists is one of the most harmful to the health of dentists themselves, in particular, to their nervous system [Alzahem et al, 2020]; stressful situations are common and are often offset by smoking and alcohol consumption [[Myers H, Myers L, 2004]]. At the same time, unfortunately, such studies rarely take into account the sex specificity of doctors.

In this paper, we tried to see whether the workload of the dentists correlates with their sex, professional status, and wages. We also tried to examine the level of satisfaction of dentists of both sexes by their wages, and by their health condition, including dental health.

MATERIAL AND METHODS

In terms of this paper, we surveyed 76 practicing dentists of the state and private clinics, as well as students of the medical universities in Moscow, Russia. During the study conducted from July 9 to October 9, 2020, the structured questionnaire was created and disseminated via relevant Facebook groups of professionals through the Survey Monkey platform for conducting sociological surveys. Professional communication on virtual social network sites like Facebook has increased significantly due to the spread of the global COVID-19 pandemic and the limited interaction and communication of specialists offline (in the academic en-

vironment in particular). Therefore, the use of virtual platforms for conducting sociological surveys is becoming more and more justified. The questionnaire was distributed in Russian. Among the questions addressed to the respondents are those examining the length of the workload of women and men dentists, their attitudes to-

To overcome it is possible, due to the uniting the knowledge and will of all doctors in the world

ward the balance/misbalance between their working time, and personal life, as well as those assessing the level of satisfaction of the physicians by their salaries. Through the questions included, we also tried to make self-assessment of the respondents' health (including their dental health) and the possible risks to it caused by dental profession and practice.

RESULTS

Among the respondents, 74% are women, and 26% are men; 45% are young professionals (among them dental hygienists) under 25, 32% are respondents aged 26-35, 15% are dentists from 36-55 years old, and 8% are people over 56 years old. 12% of the respondents are students of the dental faculties of Moscow universities, 18% are residents, 67% are practicing dentists, and 3% are retired doctors. 21% respondents (all women) hold Ph.D. degree in medical sciences, and 4% respondents are professors. 6.5% of the respondents (4% women and 2.6% men) hold administrative positions in medical institutions, 9.2% (5.2% men and 4% women) had an administrative position in the past.

There are more women (50%) than men (25%) employed in the public sector, while there are more men (75%) than women (55%) preferring to work in the private sector; some combine serving in a public sector with having a practice at a private clinic.

Working in the public sector is preferred because of guaranteed wages and social security policies provided in terms of the state normative, which is especially important for employees with small children or those who plan to give birth soon. The choice of the private sector is economically more feasible and professionally comfortable. It provides high-quality and modern equipment, dental materials, opportunity for professional growth, and a high level of intercollegiate professional communication. At the same time, according to other studies, women working in the private sector often emphasize violations related to the payment of maternity benefits to the employer, the lack of sick leave, and vacation pay [Margaryan, E, 2020].

According to the age of physicians, 42% of the respondents of 26-35 years old, 55% of 36-55, and 57% of 56 years old and older prefer to work 4-5 days a week. Working less than 4 days a week is also normal for the older group (56 and older) of

respondents (43%), as well as is often the case for the other age groups of respondents (41% of respondents of 26-35 and 36% of 36-55 years old). There is a majority of mainly young respondents (70% of the respondents under the age of 25 years old) reported to normally work without weekends. They were dental hygienists, residents, doctors. This might be determined by a combination of their internship with an attempt to gain maximal practice while studying and assisting their supervisors.

Regarding the sex of respondents, more mendentists have a longer working week than women (65% of men to 46% of women normally having 4-5 working days per week) while working less than 4 days a week is more preferable for women (41%) than for men (30%).

Men-dentists also used to work longer per day; 35% of men and 30% of women used to work 8 hours daily, while 40% of men and 38% of women used to overwork (12 working hours per day). More women (29%) than men (20%) prefer a shorter (6 hours) working day.

Fewer working days for women were associated with the need to care for children and run a household. The choice of working hours was also determined by the work schedule, as well as the territorial proximity of children's and educational institutions.

We asked the respondents how the workload of a dentist affects their personal life and received the following information:

- 1. Because of the heavy workload, 40% of men and 38% of women dentists have no time for self-development,
- 2.36% of women and 35% of men have no time to maintain personal health and do sports appropriately,
- 3. 25% of all respondents (men and women equally) do not devote enough time to their families,
- 4. 7% of women dentists surveyed have no time to have children,
- 5. 9% of women and 5% of men dentists say their professional workload and activities cause family conflicts, and 4% of the surveyed women dentists got divorced.

There are also positive links between the work-load of a dentist and his/her life. 30% of men and 25% of women dentists see no negative influence of their profession on their life, while 15% of men

and 11% of women say thanks to their profession they have a happy life.

Most of the respondents (57%) of both sexes are indifferent about the sex of their supervisor/administrator. Men-managers are preferred to women for the rest of the survey participants, especially for the dentists under of the 25 and 36-55 years old, and for women (30% of women to 20% of men dentists prefer to have a man-administrator). 10% of men and 11% of women dentists surveyed prefer to work under the administration of a woman.

Although the majority of all respondents has no preferences regarding the sex of the administrator to work with, among the rest of them nobody of the age group of 26-35 years old, and only 6% of younger (under of the 25 years old) dentists are ready to work under the supervision of a woman. 14% of respondents over 56 years old prefer to work with women in administration. In all other cases, men-managers are preferred to women.

We tried to assess the level of satisfaction of all age groups of dentists (both sexes) by their salaries. The most satisfied by the salary is the age group of 26-35 than of 36-55 years old (55% of rather satisfied to 36% of rather unsatisfied respondents). The age group of 55 years old and older is rather unsatisfied with the salary (71%) compared to the satisfied respondents (29%). The answers of the youngest representatives of the profession are determined by lack of experience and need to combine their study with professional duties. Satisfaction with the salary was expressed by doctors who have the ability to regulate the conditions and schedule of work, adult children or those who do not have a family and children, as well as specialists who hold administrative positions.

And, men are more satisfied with their salary in dentistry (50%) than women (43%), while there are more female respondents mentioning they would prefer a better salary (32%) compared to the similar opinion among men (25%). 25% of the respondents of both sexes have no concrete opinion on this question.

We also tried to assess the influence of the profession on the health of dentists, as perceived by them. First, the impact of professional activities on the health of the dentist is perceived by women as more harmful than by men. A higher percentage of female dentists (55% compared to 45% of male re-

spondents) indicated damage caused by the professional activity to their vision, to their musculoskeletal system (54% of female to 45% of male dentists), and their psycho-emotional condition (27% of women to 25% of men dentists).

Second, respondents of both sexes equally (25%) reported a harmful influence of their workload on their nervous system, while again more women (25%) than men (17%) indicated damage caused to their digestive system. At the same time, the majority of respondents (75% of men and 52% of women) reported no damage which the profession could cause to hearing function, and there are more men (55%) than women (30%) who feel no problem with the respiratory system to be connected to the professional activity.

And, looking at the dental health of dentists perceived by them, one might see that again, women-dentists assess their dental health more critically than men. In particular, women dentists used to visit a dentist to prevent dental diseases (54% to 45%), and for the planned treatment (36% to 30%) more often than men.

Men dentists prefer to apply to a physician at the last moment when an emergency treatment is needed (25% of men to 11% of women). Discussing the influence of the professional workload and activity on private life, we saw that every fourth dentist has no time for maintaining his/her health. Accordingly, the need for emergency treatment might occur when there is no time for preventive measures. Men-dentists seem to be more affected by such situations than women.

Thus, the study shows a generally similar picture of the workload of male and female dentists, as well as different workloads depending on age in terms of decreasing workload in the group of older professionals. Experts of both sexes believe that the main disadvantages of being busy at work are the lack of time for professional growth, for maintaining their health and sports, as well as for communicating with the family. We did not identify dentists' preferences regarding the gender of the manager with whom they would like to work, which is rather indicative of the gender balance in the management of medical institutions. At the same time, the group of respondents who are in the minority and have certain gender preferences would still like to work with a male administrator, and this concerns the preferences of both sexes. As for the health of dentists, their professional activities, according to physicians of both sexes, mainly harm their vision and musculoskeletal health; female dentists are more concerned about their health than men and emphasize the harm to their psychoemotional state. Besides, female dentists are more likely than men to turn to their colleagues for prevention and treatment, while male dentists are more likely to seek dental care in emergency cases.

REFERENCES

- Alzahem AM, Alhaizan YA, Algudaibi LY, Albani RM, Aljuraisi AM, Alaqeel MK. Psychologic stress and burnout among dental staff: A cross-sectional survey. Imam Journal of Applied Sciences. 2020; 5: 9-15.
- Ayers KMS, Thomson TM, Rich AM, Newton JT. Gender differences in dentists' working practices and job satisfaction. Journal of dentistry. 2008; 36: 343–350
- 3. Data USA. URL: https://datausa.io/profile/soc/dentists
- 4. Doroshina VYu, Sokhova IA, Polyakova MA, Margaryan EG. Comparative evaluation of the effectiveness of oral care products in inflammatory diseases of the oral cavity, accompanied by teeth hyperesthesia. The New Armenian Medical Journal. 2019; 13(3): 34-40
- Kovaleva MD, Barkovskaya AY. [Gender issues in the sociology of medicine] [Published in Russian]. Sociology of medicine. 2012; 2: 17-18
- Kurbatova V, Amlaev KR, Muravyov K.A.[Current state of health inequality: environmental, gender, and economic aspects (review)] [Published in Russian], The science. Innovations. Technologies. 2011; 74: 24-30.
- 7. Makeeva I.M, Svistunova EG, Margaryan EG, Protsenko AS. [Features of labor activity and opportunities for professional growth of dentists taking into account their gender differences] [Published in Russian]: Dentistry. 2017; 3: 49-51
- 8. Margaryan EG., Sociology of Medicine: Gender Problems of the Competitiveness of Women Dentists. Bulletin of Yerevan University, Sociology Series. 2020; 2: 14-20.
- Margaryan EG, Paramonov YuO, [Research of preferences of men and women in choosing methods of aesthetic and functional rehabilitation in dentistry.]
 [Published in Russian], Dentistry. 2017; 6: 23-25.
- 10. Mechanic D, The Role of Sociology in Health Affairs. Health Affairs. 1990; 9(1): 85–97. doi:10.1377/hlthaff.9.1.85

- Mechanic D. Medical Sociology. Editor(s): Smelser NJ, Baltes PB. International Encyclopedia of the Social & Behavioral Sciences. Pergamon. 2001; 9530-9534. URL: https://doi.org/10.1016/B0-08-043076-7/01893-3.
- Mohammed AA, Abdulhadi AY, Yousef AL, Mohammed AR, Majed AA, Khaled AM. Psychologic stress and burnout among dental staff: A cross-sectional survey. Imam Journal of Applied Sciences. 2020; 5(1): 9-15. URL: https://www.e-ijas.org/temp/ImamJApplSci519-2758866_073948.pdf
- 13. Myers HL, Myers LB, 'It's difficult being a dentist': stress and health in the general dental practitioner. British Dental Journal. 2004; 197: 89–93. DOI: 10.1038/sj.bdj.4811476
- 14. Murphy B. These medical specialties have the biggest gender imbalances. American Medical Association. 2019. URL: https://www.ama-assn.org/residents-students/specialty-profiles/these-medical-specialties-have-biggest-gender-imbalances
- 15. Rajeh M, Nicolau B, Pluye P, Qutob A, Esfandiari S. Are There Barriers for Professional Development of Women Dentists? A Qualitative Study in Saudi Arabia. JDR Clinical & Translational Research. 2017; 2(2): 119-131
- Sandhya J. Female dentists and work-family bal ance: Challenges and strategies. International Dental & Medical Journal of Advanced Research. 2017; 3: 1-4.
- 17. Sud'in SA. [Gender aspect of sociology of medicine and health] [Published in Russian]. Women in Russian society. 2012; 4: 24-31
- 18. Wright ER, Perry BL. Medical Sociology and Health Services Research Past Accomplishments and Future Policy Challenge. Journal of Health and Social Behavior. 2010; 51: 107-119. DOI: 10.1177/0022146510383504

(A)

THE NEW ARMENIAN MEDICAL JOURNAL

Vol.15 (2021). No 1



CONTENTS

4. Esayan M.S., Selifanova E.I., Margaryan E.G., Makeeva I.M.

MICROFLORA CHANGES OF ORAL CAVITY IN PATIENTS WITH SYSTEMIC SCLERODERMA AND SJOGREN'S SYNDROME

- 10. SITDIKOVA O.F., KABIROVA M.F, GERASIMOVA L.P., KUDASHKINA N.V, GUBINA O.F.

 INTERCONNECTION BETWEEN THE PECULIARITIES OF CHRONIC GINGIVITIS AND THE DENTAL PLAQUE BIOFILM COMPOSITION UNDER CONDITIONS OF PSYCHOEMOTIONAL STRESS
- 19. Romanenko I.G., Golubinskaya E.P., Zyablitskaya E.Yu., Arakelyan K.A., Makalish T.P.

 MUCOUS MEMBRANE OF THE ORAL MUCOSA ON THE MODEL OF COMPLICATIONS OF HIGHDOSE RADIATION AND CYTOSTATIC CANCER THERAPY OF THE OROPHARYNGEAL REGION
- 27. GIREEVA A.I., POLYAKOVA M.A., LALAEV K.V., BABINA K.S., SOKHOVA I.A., DOROSHINA V.YU., SELIFANOVA E.I., ESHTIEVA A.A., KADZHOYAN A.G., PODKHVATILINA A.S., PIANZINA A.V., NOVOZHILOVA N.E.

ORAL HYGIENE LEVEL AND COMPOSITION OF ORAL MICROBIOTA IN PATENTS WITH PEMPHIGUS VULGARIS DURING THE PERIODS OF EXACERBATION AND REMISSION

34. APRESYAN S.V., STEPANOV A.G.

THE DIGITAL PROTOCOL DEVELOPMENT AND EFFECTIVENESS EVALUATION FOR COMPLEX DENTAL TREATMENT

44. Alfarraj M., Karabit Z.

EVALUATION OF THE EFFICACY OF PLATELET RICH FIBRIN ON THE FOLLOWING COMPLICATIONS AFTER SURGICAL EXTRACTION OF THE LOWER THIRD MOLAR IN SMOKER PATIENTS (RANDOMIZED CLINICAL TRIAL)

53. Shhada J, Abou Nassar J, Almodalal M.A

INFLUENCE OF CASTING ON MARGINAL FIT OF METAL COPINGS FABRICATED FROM WAX OR LIGHT-CURED RESIN (IN VITRO STUDY)

- 59. Volkov A.G., Dikopova N.Zh., Arzukanyan A.V., Kondratiev S.A., Paramonov Yu.O., Budina T.V., Tan Huiping
 - DISTRIBUTION OF METAL COMPOUNDS IN THE TISSUES OF THE ROOT OF THE TOOTH WITH APEX-FORESES (IONTOPHORESIS OF COPPER AND SILVER)
 - MARGARYAN E. G, DAUROVA F.YU., ATANESYAN A. V.

THE IMPACT OF PROFESSIONAL ACTIVITIES ON PERSONAL LIFE AND HEALTH OF DENTISTS

- 72. KHARAZIAN A.E., GEVORKYAN A.A.
 - 3D PRINTED MID-FACE NON-DELAYED PROSTHETIC RECONSTRUCTION AFTER CANCER SURGERY OF ORBIT (EXENTERATION)
- 77. DIKOPOVA N.ZH., VOLKOV A.G., KOPECKY I.S., NIKOLSKAYA I.A., MARGARYAN E.G., BUDINA T.V., SAMOKHLIB YA.V., KONDRATIEV S.A., PARAMONOV YU.O., ARAKELYAN M.G.

CLINICAL AND EXPERIMENTAL VALIDATION OF THE OZONE THERAPY EFFECTIVENESS IN CASE OF ACCIDENTAL EXPOSURE OF THE DENTAL PULP

85. KOLESNIK K.A, ROMANENKO I.G.

CHANGES IN TOOTH HARD TISSUES AND PERIODONTAL TISSUES DURING ORTHODONTIC TOOTH MOVEMENTS IN RATS WITH EXPERIMENTAL GASTRITIS

- 91. GIZHLARYAN M. S., MESROBIAN A.A., TAMAMYAN G. N, ANASTASIADI M. G., SAHAKYAN L. S., KRMOYAN L.M., PETROSYAN M. T., MELNICHENKO I. V., DANELYAN H. S., DANIELYAN S. H., VAGHARSHAKYAN L. H. CHEMOTHERAPY-INDUCED THROMBOCYTOPENIA IN PEDIATRIC ACUTE LYMPHOBLASTIC LEUKEMIA: A SINGLE-INSTITUTION REPORT
- 95. Chebysheva S.N., Zholobova E.S., Geppe N.A., Aleksanyan K.V., Meleshkina A.V., Nikolaeva M.N., Khachatryan L.G., Farber I.M.

FEATURES OF PSORIATIC SKIN LESIONS IN CHILDREN WITH JUVENILE PSORIATIC ARTHRITIS

100. GELEZHE K.A., KUDRAVTSEVA A.V., RYZHII E., KHACHATRYAN L.G., BOGDANOVA E.A., SVITICH O.A.

THE ROLE OF THE SKIN MICROBIOME IN THE DEVELOPMENT OF ALLERGIC INFLAMMATION IN ATOPIC DERMATITIS





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