

Health status and health practices of Montenegrin family physicians

Zdravstveno stanje i zdravstvene navike u populaciji porodičnih lekara u Crnoj Gori

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Sažetak **Introduction:** Physicians have lower mortality rates than general population, but similar rates of chronic diseases. **Aim:** The aim was to investigate health status and health practices of family medicine doctors in Primary Health Care Center Podgorica, Montenegro and compare it to high school teachers. **Method:** A total of 104 (69.3%) physicians and 40 teachers (50%) responded to a questionnaire about their health status and health practices. **Results:** A total of 45% of practitioners and 45% of teachers self-reported at least one disease without significant difference in the incidence and type of disease ($p=0.162$). There was also no difference in using sick leave ($p=0.633$). Both groups tended to work when sick, but significantly more physicians worked when tired ($p=0.026$). Most of respondents were registered with a general practitioner, but only teachers tended to visit their physician when ill ($p<0.001$). Thirty minutes of daily physical activity was reported by 16.3% of the physicians and 15.0% of the teachers without a significant difference ($p=0.915$). **Conclusion:** Compared to the teachers Montenegrin physicians have similar health status and health practices. However, physicians more often tend to work when they are tired and to self-care when they are ill. Physicians need to pay attention to the lifestyle habits and to follow the recommendations for themselves what they provide to their patients.

Key words: physicians' health, disease, health habits, prevention

Summary **Uvod:** Lekari imaju nižu stopu mortaliteta, ali sličnu stopu obolevanja od hroničnih bolesti u poređenju sa opštom populacijom. **Cilj:** Cilj ovog istraživanja je da se ispita zdravstveno stanje i zdravstvene navike u populaciji porodičnih lekara u Crnoj Gori i da se podaci uporede sa osobama druge profesije, tj. nastavnicima. **Metode:** Ukupno 104 (69.3%) lekara i 40 nastavnika (50%) je popunilo anketni upitnik koji sadrži pitanja o zdravstvenom stanju i zdravstvenim navikama. **Rezultati:** Ukupno 45% lekara i 45% nastavnika je potvrdilo da imaju barem jedno hronično oboljenje, bez statistički značajne razlike u incidenci i vrsti bolesti ($p=0,162$). Takođe nije bilo razlike u odsustvovanju s posla ($p=0,633$). Obe grupe ispitanika su pokazale tendenciju da dolaze na posao i rade i kada su bolesni, ali značajno više lekara nego nastavnika je radilo i kada su umorni ($p=0,026$). Većina ispitanika je registrovana kod porodičnog lekara, ali su samo nastavnici pokazali tendenciju posete lekaru kada su bolesni ($p<0,001$). Oko 30 minuta dnevne fizičke aktivnosti potvrdilo je svega 16,3% lekara i 15% nastavnika, bez postojanja statistički značajne razlike u ispitivanim grupama ($p=0,915$). **Zaključak:** Lekari imaju slične zdravstvene navike i sličnog su zdravstvenog stanja kao nastavnici. Međutim, lekari češće rade i kada su umorni i češće sami sebe leče kada su bolesni. Lekari treba da obrate pažnju na životne navike i da i sami slede preporuke koje daju svojim pacijentima.

Ključne reči: zdravlje lekara, oboljenje, zdravstvene navike, prevencija

Introduction

There is a belief that physicians cannot get sick. Studies have shown that they have lower mortality rates than general population, but similar rates of chronic diseases and for some other diseases, even higher rates than in other professions (1, 2). Physicians are especially prone to mental disorders and depression (3, 4). This may be due to

excessive workload, demanding superiors, constant exposure to criticism and other factors that cause stress (3, 4). The heavy workload and the lack of financial and organizational resources, are important risk factors for burnout in physicians (5, 6). Almost 65% of European family medicine doctors (FMDs) exhibit signs of burnout (7)

with various and non-specific symptoms (8). As a response to chronic emotional and interpersonal stressors at work burnout leads to reduced job performance (9). The physicians' behaviour can have a detrimental effect on the health of patients and lead to more malpractice suits (10) and patient dissatisfaction (11).

In Slovenia, Penšek and Selič (11) conducted the first study in Slovenian family medicine practitioners focusing on the relationship between empathy and burnout and aiming to assess the extent of burnout and the level of empathic attitude in FMDs and also to explore their associations with socio-demographic factors, working conditions and health. Slovenian family doctors mainly reported no chronic illness and used either none or less than six sick leave days in a year. Approximately every fifth (19.3%) needed 6 or more sick leave days per year. Self-assessment of their general health was well, the same for mood and emotional state (11).

Although they have the same health needs as the rest of the population, physicians often neglect their health (2, 12). When faced with a disease, they do not follow the advice they give to their patients. They tend to work when they are sick. They rarely contact colleagues for help. If they do so, they rarely choose colleagues outside their work and usually do not get quality medical care (2, 13). The possession of medical knowledge and skills, as well as the ability to prescribe drugs puts them in a position to treat themselves. This practice is more common among general practitioners (GPs) than specialists (14). Such patterns of behaviour can easily lead to overlooking some diseases, while impaired health could prevent physicians from adequately performing their professional activities (15). This was also recognized by the British Medical Association, which in 1995 set the guidelines on ethical responsibilities for practitioners when treating themselves, members of their families and colleagues (4). A special emphasis is placed on their own health, pointing that practitioners do not have only personal but also professional duty to take care of their health because violated health could prevent them from adequately caring for their patients (4).

To the best of the authors' knowledge there is hardly any recent study material available in Europe on this subject. Research on this topic can help improve well being of healthcare workers which is one of the most important things in strengthening health care system.

The aim of this study was to determine if Montenegrin physicians follow above mentioned recommendations and take care of their health, through determining their health condition and health habits. We also wanted to show if in that respect they differ from other professions, i.e. teachers.

Methods

This research was carried out as a cross-sectional study using a modified questionnaire on physicians' health taken from the website of the Medical Chamber of Serbia.

The questionnaire consisted of several sections that included professional and socio-demographic data, health data and data on using health services, health and life satisfaction data, nutrition data, data on leisure time and physical activity. It was distributed among physicians in the Primary Health Care Center (PHC) in Podgorica, Montenegro during October, 2016.

In order to determine whether physicians differ from other professions, we simultaneously distributed the same questionnaire to the teachers of the High School "Slobodan Škerović" in Podgorica.

In the PHC, questionnaires were distributed to 150 physicians and 104 fulfilled questionnaires were returned for a response rate of 69.3%. In the high school, 80 questionnaires were distributed, out of which 40 completed questionnaires were returned, yielding a response rate of 50%.

Statistical analyses were made using SPSS (version 16, SPSS Inc, Chicago, IL, USA). We applied the Chi-square (χ²) test or Fisher's exact test to estimate the deviation of the frequency of the various independent variables. To compare the continuous variables, between the two different groups, a Student's t-test for unpaired samples (for a normal distribution), or a Mann-Whitney U test (for non-normal distribution) was used for the significance level p<0.05.

Results

There were no significant differences between the respondents in the two occupational groups regarding age, length of service, marital status, and number of children. They only differed regarding gender structure (p=0.001) (Table 1).

Table 1. Demographic characteristics of respondents
Tabela 1. Demografske karakteristike ispitanika

		Physicians	Teachers $\bar{x} \pm SD$	p
Age (years)*		43.42±12.07	44.72±10.27	0.550‡
Gender	Male/Female	12/91	15/25	0.001§
Marital status†	Single	32 (30.8)	9 (22.5)†	0.735§
	Married	61 (58.7)	27 (67.5)	
	Divorced	7 (6.7)	3 (7.5)	
	Widow	4 (3.8)	1 (2.5)	
They have children†		61 (58.7)	29 (72.5)	0.179§
Number of children*		1.14±1.10	1.50±1.18	0.096‡

* $\bar{x} \pm SD$ - Arithmetic mean ± standard deviation, † number (%), ‡ - t test, § Chi-square test

As shown in Table 2, the most common chronic disease in both groups was hypertension

Table 2. Prevalence of chronic diseases in physicians compared to teachers

Tabela 2. Prevalenca hroničnih bolesti kod lekara u poređenju sa nastavnicima

Disease	Physicians	Teachers	p†
Hypertension	21 (20.2)	8 (20.0)*	0.837
Heart rhythm disorders	2 (1.9)	1 (2.5)	0.626
Coronary artery disease	1 (0.9)	0	0.722
Heart attack	0	0	/
Stroke	0	0	/
Tuberculosis	0	0	/
Bronchial asthma	0	0	/
Chronic bronchitis	2 (1.9)	0	0.520
Lipid disorders	12 (11.5)	2 (5.0)	0.350
Diabetes mellitus	5 (4.8)	2 (5.0)	0.701
Hyperthyroidism	2 (1.9)	1 (2.5)	0.626
Hypothyroidism	3 (2.9)	1 (2.5)	0.691
Migraine	6 (5.8)	3 (7.5)	0.701
Chronic anxiety or depression	2 (1.9)	0	0.520
Allergies	6 (5.8)	2 (5.0)	0.821
Gastric or duodenal ulcer	1 (0.90)	1 (2.50)	0.479
Chronic liver disease	1 (0.9)	0	0.722
Colon disease	2 (1.9)	1 (2.5)	0.626
Ulcerative colitis	0	1 (2.5)	0.618
Diseases of the gallbladder	8 (7.7)	1 (2.5)	0.442
Kidney diseases	4 (3.8)	0	0.575
Rheumatic diseases	3 (2.9)	0	0.560
Osteoporosis	3 (2.9)	0	0.560
Anemia	3 (2.9)	2 (2.5)	0.618
Obesity	9 (8.7)	4 (10.0)	0.754
Malignant disease	0	0	/

* count (%), † Chi-square test

Majority of the physicians said that they had often worked when exhausted, while the number of the teachers who gave the same answer was significantly lower (p=0.026) (Table 3).

Table 3. Percentage of respondents working when sick and tired

Tabela 3. Učestalost zaposlenih koji rade i kada su bolesni i umorni

Do you go to work when sick?	Physicians	Teachers	p†
No. Never	6 (5.8)	2 (5.3)*	0.154
Rarely	4 (3.8)	6 (15.8)	
Sometimes yes, sometimes no	19 (18.3)	7 (18.4)	1.
Often	36 (34.6)	8 (21.1)	
Yes. Always	39 (37.5)	15 (39.5)	
Do you work when you are tired?			
No. Never	1 (1.0)	0	0.026
Rarely	3 (2.9)	4 (10.3)	
Sometimes yes, sometimes no	3 (2.9)	4 (10.3)	
Often	30 (28.8)	4 (10.3)	
Yes, always	67 (64.4)	27 (69.2)	

* count (%), † - Chi-square test

There was no statistical difference in obesity status between examined groups (p=0.778), as shown in Table 4.

Table 4. Anthropometric characteristics of respondents

Tabela 4. Antropometrijske karakteristike ispitanika

	Physicians	Teachers	p‡
Weight (kg)*	70.4±13.3	76.89±15.46*	0.023
Height (cm)*	169.3±9.5	173.4±8.2	0.014
BMI (kg/m ²)*	24.7±6.4	25.41±3.77	0.172
BMI >30kg/m ² †	12 (11.5)	6 (15.0)†	0.778§

* $\bar{x} \pm SD$ - Arithmetic mean \pm standard deviation, † number (%), ‡ - t test, § Chi-square test

There was no statistically significant difference in the smoking status and the number of smoked cigarettes between the groups (p=0.775 and p=0.061, respectively) (Table 5).

Table 5. Tobacco use and coffee consumption of respondents

Tabela 5. Učestalost upotrebe duvana i kofeinskih napitaka kod ispitanika

Smoking status	Physicians	Teachers	p‡
smoker	25 (24.0)	10 (29.4) ‡	0.775§
Ex smoker	17 (16.3)	6 (17.6)	
Never smoked	62 (59.6)	18 (52.9)	
Number of cigarettes per day	18.50±8.83	26.50±10.01 *	0.061
Duration of smoking (years)	21.26±12.08	21.10±10.83	0.984
Number of cups of coffee per day	2.09±1.22	2.10±1.39	0.761

* $\bar{x} \pm SD$ - Arithmetic mean \pm standard deviation, † number (%), ‡ - Mann-Whitney test, § Chi-squared test

Significantly more subjects among teachers consult their GP when they feel unwell (p<0.001), while significantly more physicians did not consult anyone and had treated themselves personally (p<0.001) (Table 6).

Table 6. Use of health services by respondents

Tabela 6. Učestalost korištenja zdravstvenih usluga kod ispitanika

Who do you address first when you have a health problem?	Physicians	Teachers	p†
My GP	39 (37.9)	34 (85.0) *	<0.001
Specialist	14 (13.6)	0	
Private practice	3 (2.9)	0	
Somebody else	7 (6.8)	3 (7.5)	
Nobody, I physician myself	40 (38.8)	3 (7.5)	
Are you registered with GP?	92 (89.3)	37 (92.5)	0.794

Table 6.....cont..

Have you visited your GP in the past 12 months?			
• Yes			
• Yes, but earlier than past 12 months	46 (46.0)	25 (67.6)	0.076
• Never have visited GP	33 (33.0)	7 (18.9)	
	21 (21.0)	5 (13.5)	
What was the reason for the visit?			
• Preventive check up	17 (16.3)	6 (15.0)	0.955
• Illness	20 (19.0)	10 (25.0)	0.593
• Administration	47 (45.2)	14 (35.0)	0.357
Have you visited your gynecologist in the past 12 months?			
Yes	45 (50.0)	13 (54.2)	
Yes, but earlier than past 12 month	42 (46.7)	10 (41.7)	0.906
Never have visited gynecologist	3 (3.3)	1 (4.2)	

* count (%), † - Chi square test

Only 11.6% of the physicians and 15.0% of the teachers were satisfied with their income. The satisfaction with income was equal in the examined groups (p=0.781) (Table 7).

Table 7. Personal and professional attitudes of respondents

Tabela 7. Lični i profesionalni stavovi ispitanika

Question/Attitude	Physicians	Teachers	p
Health status			
Very bad	1 (1.0)	0*	0.699‡
Poor	3 (2.9)	2 (5.0)	
Fair	30 (29.1)	13 (32.5)	
Good	42 (40.8)	18 (45.0)	
Very good	27 (26.2)	7 (17.5)	
I am responsible for my health			
I disagree	16 (15.7)	9 (22.5)	0.356
I am not sure	12 (11.8)	7 (17.5)	
I agree	74 (72.5)	24 (60.0)	
If I care about my health I will be healthy			
I disagree	15 (14.7)	10 (25.0)	0.158
I'm not sure	16 (15.7)	9 (22.5)	
I agree	71 (69.6)	21 (52.5)	
Even if I cared about my health I could easily get ill			
I disagree	76 (74.5)	27 (67.5)	0.433
I'm not sure	21 (20.6)	12 (30.0)	
I agree	5 (4.9)	1 (2.5)	
If I am healthy that is pure luck			
I disagree	72 (70.6)	22 (55.0)	0.178
I'm not sure	19 (18.6)	13 (32.5)	
I agree	11 (10.8)	5 (12.5)	
The five most common reasons for life dissatisfaction:			
Income	46 (47.4)	15(39.5)	0.586
Health	5 (5.2)	4 (10.5)	0.442
Unhappy with myself	4 (4.1)	5 (13.2)	0.124
Job	3 (3.1)	3 (7.9)	0.437
Children	4 (4.1)	0	0.575
I am completely satisfied	24 (24.7)	6 (15.8)	0.401
Assess satisfaction with financial compensation for your work:			
Very dissatisfied	32 (30.8)	9 (22.5)	0.781
Dissatisfied	43 (41.3)	16 (40.0)	
Not satisfied or dissatisfied	17 (16.3)	9 (22.5)	
Satisfied	9 (8.7)	5 (12.5)	
Very satisfied	3 (2.9)	1 (2.5)	

* count (%), † - Chi square test

Both groups had similar nutrition habits (Table 8). A small number of the respondents were engaged in regular physical activity (Table 8). The physicians spent significantly more minutes sitting per day (p<0.001) (Table 8).

Table 8. Nutrition and exercise habits of respondents

Tabela 8. Navike u ishrani i upražnjavanju fizičke aktivnosti ispitanika

How many days weekly do you have:	Physicians	Teachers	p†
Breakfast			
Never	11 (10.6)	4 (10.0)*	0.952
Sometimes	31 (29.8)	13 (32.5)	
Every day	62 (59.6)	23 (57.5)	
A snack before lunch			
Never	39 (37.5)	17 (42.5)	0.733
Sometimes	47 (45.2)	18 (45.0)	
Every day	18 (17.3)	5 (12.5)	
Lunch			
Never	3 (2.9)	2 (5.0)	0.530
Sometimes	17 (16.3)	4 (10.0)	
Every day	84 (80.8)	34 (85.0)	
A snack after lunch			
Never	36 (34.6)	11 (27.5)	0.198
Sometimes	49 (47.1)	16 (40.0)	
Every day	19 (13.2)	13 (32.5)	
Dinner			
Never	8 (7.8)	3 (7.5)	0.367
Sometimes	38 (37.3)	20 (50.0)	
Every day	56 (54.9)	17 (42.5)	
How do you spend your free time?			
Reading, watching TV, sitting	46 (44.2)	15 (39.5) ‡	0.511
Walking, driving a bicycle	38 (36.5)	16 (42.1)	
Engaged in physical activities to maintain physical fitness at least 4 hours a week	17 (16.3)	7 (18.4)	
Exercise regularly, several times a week	3 (2.9)	0	
How often do you have 30 minutes of physical activity?			
Every day	17 (16.3)	6 (15.0)	0.915
6 times a week	10 (9.6)	6 (15.0)	
3 times a week	32 (30.8)	13 (32.0)	
Once a week	25 (24.0)	7 (17.5)	
3 times a month	7 (6.7)	3 (7.5)	
Never	12 (11.5)		
I cannot practice due to age, illness / disability	1 (1.0)	5 (12.5)	
Water consumption (glasses per day) ‡	4.63±2.69	4.67±3.13	0.575§
Sitting (minutes per day) ‡	532±148	329±209	<0.001§

* Count (%), † - Chi-square test, ‡ $\bar{x} \pm SD$ - Arithmetic mean \pm standard deviation, § Mann-Whitney test

Discussion

The characteristics of the physicians and teachers involved in this study differed significantly only in terms of gender structure. This can be explained by the fact that the most of the respondents were GPs and when it comes to choosing a specific area of medicine, women care more about striking a balance between family and career than men do. This is why there are much more women in the areas of general/family medicine and psychiatry (16, 17).

The self-reported health status was similar for both groups. In terms of physical health, one of the studies conducted among physicians in the United Kingdom showed that 44% of them had chronic health problems (1). They usually suffer from the same diseases as the rest of the population: cardiovascular diseases, respiratory diseases, musculoskeletal problems and malignant diseases (3). The most common disease among our respondents is hypertension.

Absenteeism due to illness or injury can also be a measure of health, but it should be kept in mind that physicians often work even when sick (18). Getting ill could mean, among other things, that they do not have good medical knowledge (19). A one-year study carried out by McKeivitt et al. (20) showed that family physicians/GPs and physicians working in hospital were significantly less likely to take sick leave up to 7 days than employees of the surveyed company. The same study showed that 80% of the physicians said they would go to work while sick (20). In addition, a study that compared health and lifestyle habits of GPs and teachers showed that teachers were significantly more absent from work due to illness than physicians (21). Given that both these professions are identified as those whose members are often at work even when sick, the results of our study could confirm that physicians get sick as often as teachers and that they only take sick leave when the disease really progresses and it tends to be a longer sick leave (22).

The number of obese patients in the observed groups was similar, but still somewhat smaller than in the general population (23).

The percentage of smokers among the surveyed groups was also similar and reflects the actual number of smokers in Montenegro (24). As compared to other countries of Southeastern Europe, Montenegro is in the middle in terms of the percentage of smokers among physicians. In relation to non-European countries Montenegro is among the countries with the highest percentage of physicians who smoke (25, 26).

For a long time, there has been a debate about the harmfulness of caffeinated beverages for health. However, a moderate intake of caffeinated beverages, two to three cups of coffee per day which is the quantity our respondents consume is completely safe for health (27, 28).

Practitioners are very bad patients as they largely ignore and minimize their problems. Self-treatment is very widespread (12, 29). A systematic review of a large number of studies showed that in 76% of the studies, 50% of the physicians or medical students reported self-treatment (30).

A study conducted in China showed that only 14% of the surveyed physicians decided to consult their FMD/GP, and that 70% of respondents considered their FMD/GP unneeded (31).

Our study has shown that the majority of physicians resort to self-treatment. Unlike physicians, most teachers visit their GP when they have a health problem. The physicians who visit their GP due to illness often do not get an adequate treatment, since, as research has shown, they usually choose colleagues with whom they work or are friends with, and who see them as fellow physicians rather than patients. Such appointments are usually superficial, not accompanied by either adequate documenting or diagnosis of the problem (32-34).

Physicians rarely practice preventive measures (35). Data from relevant literature show that a small number of physicians are vaccinated against tetanus and hepatitis B (3). A study showed that only 36% of Norwegian women physicians had a Pap smear every three years (19). The results also show that physicians, although aware of the risk factors for certain diseases, do not invest efforts to control these factors and thus prevent or delay the occurrence of the disease (36). A small number of the surveyed physicians and teachers had visited their physicians for systematic check-ups in the previous 12 months.

Despite all the barriers they encounter in the health system, physicians are mostly satisfied with their health. Nearly 70% of middle-aged Canadian physicians claimed that they had a very good or excellent health status, which in the general population corresponds to the age group between 20-34 years (26). Our data are similar. Those, who claimed not to be completely satisfied, were, in most cases, dissatisfied with their income. Other studies have shown that physicians' satisfaction is largely dependent on income and that, as regards income, FMD/GPs are somewhere in the middle as compared to other specialities (37).

The physicians' profession requires good mental and physical health, which depends largely on diet (38). A small number of the respondents would eat the recommended 5 meals and drink 2 liters of liquid a day. Instead of the recommended 150 minutes, our respondents were mostly active 60-90 minutes a week.

Limitations and strengths

According to the authors' best knowledge, this is the first study that deals with the health of the physicians in Montenegro. The strengths of the research are that all the physicians of the Podgorica PHC were covered by the study and that the response rate was high. Therefore, the results could be applied to all physicians in primary health care setting. The control group of teachers did not differ much from the group of physicians according to demographic characteristics, which enabled us to adequately compare the health status and health habits of the representatives of both professions. The limitation of this study is reflected in the fact that the collected data relies heavily on the self-assessment of the respondents and their sincerity in

answering the questionnaire. Some of the examined variables could only be assessed through a questionnaire while the health status and the use of health service could have been better evaluated if the medical records of the respondents had been taken into account.

Conclusion

This research has shown that physicians suffer from the same diseases as teachers. Members of both professions go to work even when sick, while physicians work in a significantly higher percentage even when exhausted. In both groups, there is a small number of obese respondents, but the percentage of smokers is high. Physicians need to pay attention to the lifestyle habits and to follow the recommendations for themselves what they provide to their patients.

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Research was conducted according to ethical principles, and was approved by the Ethics Committee of Medical Faculty, University of Montenegro, reference number 2754.

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