

MEDICAL DOCTORS IN HUNGARY: 30 YEARS AFTER GRADUATION

DATA ON LIFESTYLE, MORBIDITY, DEMOGRAPHY AND DIFFERENCES BETWEEN SPECIALTIES

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SUMMARY

There are few studies from East and Central European countries on health-status, lifestyle and social circumstances of medical professionals. We evaluated data of a cohort of physicians who had graduated 30 years ago in Hungary and compared the data of their professional carrier, life style, health outcomes, and medical specialties.

Questionnaires compiled by an expert group and filled in by 208 physicians (83 men and 125 women) were analysed. Men mostly work as surgeons, women were mostly employed as primary care specialists. Women changed their specialty and/or place of work more often than men. Male primary care physicians had more children than women and others specialists. At graduation, most of them had a normal BMI. Since then, a significant increase in weight and BMI was observed in both genders and across all specialty groups. The largest increase in body weight and BMI (mean 5.27) was recorded among female primary care physicians. Recorded physical activity was low in general, with male primary care specialists being most active and female primary care physicians the least. Female doctors in surgical specialties had longer resting time. Male physicians rarely participated in regular health screenings. The incidence of hypertension was higher than the Hungarian national average for that age. About 5% of primary care physicians identified themselves as regular smokers. Abstinence and regular daily alcohol consumption were reported in equal ratio. Burn-out symptoms were rarely experienced.

This generation had started its medical profession before the significant progressive changes in the medicine occurred in the last decades. While physicians do not always follow their own professional advices, their lifestyle proved a little bit healthier than that of the population at large, especially for women and their health outcomes, except hypertension, were also better. In general, they were not satisfied with the financial and working conditions of the recent Hungarian healthcare system.

Key words: demography, doctors, health, family physicians, lifestyle, morbidity, primary care, Hungary

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INTRODUCTION

The mental well-being and physical fitness of medical doctors represent an important issue for health services worldwide (1, 2). Some studies focused only on female physicians, while others surveyed recent medical graduates (3, 4). General practitioners (GPs) represent the largest group of physicians (4). Other studies focused on specific issues such as smoking (in France, Greece, Switzerland, and Poland) or alcohol consumption (in Estonia, Hungary, Germany, USA, and India) (5–11).

Mental health problems, particularly depression due to overwork and emotional pressure, are severe (12, 13). Indeed, work satisfaction is known to be negative predictor of mental disorders, especially among women (14).

Doctors often fail to follow the same current preventive health recommendations they advice their patients. Moreover, research suggests that a large proportion of doctors have never registered with a general practitioner (15).

Quality of life is linked to a number of factors, to profession and working position (16).

Studies focused mainly on psychological health, thus information concerning the physical health and relation to social circumstances remains limited. No previous study evaluating these differences between medical specialties was found.

We aimed to evaluate the morbidity, demographic characteristics and lifestyle factors prevailing in the study cohort of Hungarian physicians and compare the data to those of the general population.

MATERIALS AND METHODS

Subjects

The subjects were recruited from 423 physicians who graduated in 1979 at Semmelweis University of Medicine, Budapest,

Hungary. Hundred and thirty-eight doctors who participated at the 30-year jubilee meeting (November 2009) were asked to complete a questionnaire. It was also sent to 88 colleagues who were not present but their addresses were available.

Survey Design

The questionnaire consisted of 42 multiple-choice questions and 11 sub-questions, in the following sections:

- demographic data: gender, age, marital status, number of children, and place of residence;
- medical career: pre- and post-graduation intentions, the number of years spent in different fields of medicine; place and position of their job; their overall job satisfaction;
- anthropometric data: current and 1979 height and weight;
- morbidity data;
- self-reported health: rating own health status, comparison to patients of the same age, and participation in routine screening;
- lifestyle factors: physical activity and leisure time activities, sleeping, smoking habit, and alcohol consumption.

They were inquired about the recent problems of the Hungarian healthcare system.

In some questions, there were overlaps between answers and there are lacking data in others, therefore numbers and percentages are often not identical.

Statistical Analysis

Continuous variables were compared using Student's unpaired t-test or ANOVA. Categorical variables were evaluated using a χ^2 or Fisher's test, as appropriate.

RESULTS

208 questionnaires (83 men and 125 women) were accepted and analyzed.

Demographic Findings

The mean age (\pm SD) of participants was 55.2 ± 2.1 (range: 54–67 years) with an average of 2.20 ± 1.09 children for males and 1.87 ± 1.03 children for females. Male primary care physicians have more children (2.43 ± 0.82) than women (1.87 ± 0.93); however, there was no significant difference between specialties ($p=0.34$). Ninety percent of men and 73% of women were married, 6% and 15% divorced, respectively. Of all the women 3% lived with their spouse and 8% were widowed.

The geographic distribution of place of residence and employment is presented in Table 1.

Among those who had previously left Hungary, most immigrated to America or Western European countries.

Table 1. Distribution according to the place of work or residency and gender (some respondents gave multiple answers)

Place of work or residency	Men (N=83)			Women (N=125)		
	duration of employment (years)			duration of employment (years)		
	n (%)	mean	SD	n (%)	mean	SD
Budapest	50 (60)	21.1	8.5	71 (50)	23.6	9.2
Big city	10 (12)	15.8	12	16 (11)	4.7	0.5
Small city	24 (25)	8.8	9.2	33 (24)	11.0	6.1
Village	5 (6)	9.3	11.9	6 (5)	14.3	6.2
Abroad	10 (12)	11.2	10.9	6 (5)	10.8	6.9

Table 2. Specialty groups and years spent in this field (some doctors worked in more specialties)

Type of specialty	Men (N=83)			Women (N=125)		
	time spent in the field (years)			time spent in the field (years)		
	n (%)	mean	SD	n (%)	mean	SD
Primary care (family physician, occupational health)	20 (24)	20.2	9.4	41 (33)	19.8	10.2
Non-surgical (internist, psychiatry, neurology, podiatry, etc.)	21 (27)	21.4	10.3	49 (39)	21.8	9.6
Surgical (surgery, urology, ENT, ophthalmology, etc.)	29 (36)	24.3	9.6	20 (13)	18.9	11.8
Oxyology Anaesthesiology	1 (1)	30	0	7 (6)	5.3	4.1
Diagnostic (radiology, pathology)	10 (12)	16.4	12.8	15 (13)	22.5	11.8
Other (non medical/governmental)	12 (16)	18.6	9.3	13	14.8	11.9

Medical Careers

Significantly ($p < 0.01$) more men were specialists in surgery (Table 2). Most of the men working in the specialty had intended to work in this field at the time of graduation, whereas women were more likely to have deviated from their career paths ($p = 0.04$). Since graduation, 30% of men and 48% of women changed their working place and/or specialty ($p < 0.05$), usually based on family (9% and 24%; $p = 0.02$) or professional reasons (18% and 12%), respectively. However, for both genders career changes were equally likely to be for financial reasons (5%) or because of changing place of residence (4%). Around 10% of women and 23 % of men had previously worked abroad.

The participants were working in the whole range of healthcare: administrative leaders (including the Minister of Health), ten of them were university professors (in Hungary or abroad). Around 40% of men and 22% of women worked in senior positions, 36% and 41% as private practitioners, and 25% and 34% within the public healthcare system, respectively.

The number of on-call duties (night shifts) decreased by decades from 6–8 monthly in the first decade of carrier to about 2, thirty years later, mainly due to appointment to a senior position.

Anthropometric Findings

A significant increase in weight and BMI was observed for both genders and across all specialty groups (Table 3).

There was no significant difference between the genders or medical specialties. The largest increase in body weight and BMI (mean: 5.27; 95% CI 3.84–6.69) was observed among female primary care specialists. At the time of graduation, the majority of the respondents had normal BMI values, whereas at the time of the survey many of them, mostly men, were considered overweight or obese (Table 4).

Morbidity

Medications were used by 41% of men and 44% of women, respondents on regular medication mostly live in big cities ($p = 0.041$). The most frequent diagnoses can be found in Table 5.

Few of the respondents mentioned psychological morbidities. Of those diagnosed with a lipid disorder, all were living outside of Hungary; women were more likely to use lipid-lowering therapy than men, mainly for secondary prevention. With respect to treatment adherence, 56% of men and 70% women always, 38% and 14% seldom, and 4% of both genders never follow medical recommendations, without any difference regarding specialty.

Over the past 30 years, 73% of men and 77% of women had received an average of 1.4 hospitalizations (besides delivery). Of the respondents, 46% reported that as patients, they received preferential treatment from medical personnel.

When treating patients, 28% of the doctors paid more attention to the patients suffering from the same conditions as the doctors themselves. Only 36% of the male and 20% of the female doctors had their own family physicians (55% in administrative terms for both genders). Female physicians were significantly less likely to be treated by family physicians than men (in 29%).

Self-perceived Health Status

Twelve percent of male and 22% of female compared their own health status and appearance to that of their patients, and 70% of men and 64% of women believed that their health status was better. Almost 21% of men and 15% of women believed that their profession had a negative impact on their health status. Of the males, 37% regularly attended screening examinations or diagnostic procedures in comparison with 57% of female doctors.

Table 3. Registered anthropometric parameters, recent and 30y ago

	Men (N=83)						Women (N=125)					
	height		weight		BMI		height		weight		BMI	
	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD
Recent	178.6	7.1	88.6	15.4	27.7	4.2	164.5	6.4	68.4	11.3	24.2	3.1
Graduation			77.2	11.1	25.4	4.2			57.1	7.7	21.1	2.5

Table 4. Moving to higher BMI categories since time of graduation

	Recent BMI		BMI at graduation			
		n	underweight < 18.5 kg/m ²	normal 18.5–24.9 kg/m ²	overweight 25–29.9 kg/m ²	obese 30 kg/m ²
Men N=83	normal	23	0	21	2	0
	overweight	35	0	22	13	0
	obese	25	0	13	6	6
Women N=125	normal	60	2	55	3	0
	overweight	42	6	33	3	0
	obese	13	0	11	1	1

Table 5. The most frequent pathologies, time since diagnosis were set up (means and \pm SD)

	Men (N=83)			Women (N=125)		
		time since diagnosis (years)			time since diagnosis (years)	
Diagnoses	n (%)	mean	SD	n (%)	mean	SD
Diabetes	5 (6)	8	5.3	2 (2)	3	
Hypertension	27 (33)	8.8	5.3	30 (24)	8.7	11.8
Lipid disorder	7 (8)	4.8	3.4	11 (9)	8.6	15.6
Malignancy	3 (4)	3	2.8	7 (6)	6.3	5.0
Rheumatoid disorders	5 (6)	6.2	5.6	9 (7)	9.1	7.5

Table 6. Sleeping habit; characteristic and length of daily sleeping

	Characteristics of sleeping N (%)				Length of sleeping (hours)			
	quiet	troubled	using sleeping pills		workdays		weekends	
			sometimes	always	mean	SD	mean	SD
Men	51 (62)	19 (24)	4 (5)	1 (2)	6.6	0.92	7.7	0.9
Women	81 (65)	22 (18)	4 (3)	4 (3)	6.7	0.91	7.6	0.9

Lifestyle Indicators

Self-reported sleep patterns were generally good, reported to be longer at weekends (both genders) and in all specialist groups (Table 6). Female doctors in surgical specialties reported an average of 7.2 hours of sleep per night between workdays – a significantly longer rest time when compared to other medical specialties ($p=0.049$).

Physical Activity

Twenty two percent of male and 12% of female reported sport activity on a daily basis, while 15% and 12% of women reported no physical activity.

Men were significantly more active than women, although female physicians considered regular exercise to be more important than males. Male primary care physicians performed 4.4 exercise sessions weekly, while female primary care physicians only 1.2 sessions ($p=0.001$).

Smoking

Only 5% of men and 6% of women were regular smokers at this time. For those who quit smoking, the mean age of quitting was 44.1 ± 12.1 years for men and 39.6 ± 10.6 years for women.

Alcohol and Substance Abuse

Based on self-reported data, 9% of men and 10% of women abstained from drinking alcohol, while 58% and 72% only imbibed occasionally, and 8% of both genders reported regular drinking. The amount of consumed alcohol was 4.8 ± 4.1 units per week for men and 1.65 ± 0.98 units per week for women. The mean age when regular drinking commenced was 27.6 ± 7.9 years in men and 32.8 ± 10.4 years in women. No differences between medical specialties were found, but male surgeons reported higher consumption (5.1 ± 10.6 unit per week; $p=0.048$). Substance and narcotic use was not inquired.

Leisure Time

Women were significantly more likely to read novels (40% versus 16%) while men undertake physical activities (53% versus 35%).

Burn-out

Thirty years after graduation, 41% of male and 37% of female doctors were content, while 44% of male and 51% of female were often satisfied with their profession.

DISCUSSION

Demography

Male doctors have more children than females, and the fact that primary care physicians tended to have larger families may reflect the different working conditions between specialties (13, 17). Within the cohort, divorce rates were smaller than in the USA (18). The distribution of medical specialties follows a similar pattern to the overall Hungarian medical community (17). Budapest is geographically over-represented. In Hungary, there is limited mobility between cities and regions.

Medical Careers

In other countries, general practice was commonly chosen for lifestyle reasons; desire to have close contact with patients and shorter postgraduate training have also been cited as factors motivating graduates to enter primary care positions (19, 20). Since primary care was recognised in Hungary as board specialty only 30 years ago, it was not a career option for the respondents.

The major problems affecting healthcare system were rated as a lack of financial resources, followed by human resource constraints. The average age of doctors in Hungary is quite high, for primary care the average age is over 57 years. There is no

incentive for junior doctors to specialise in primary care due to low salaries. The informal payment (tipping) system used to obtain better access or a higher quality service is still widespread in Hungary and that has a negative effect on the healthcare system.

In the last years, many of experienced doctors have left Hungary in favour of other countries with better work condition and 6–8 times higher salaries.

Anthropometric

Changes in BMI were expected to match global trends in obesity and are similar to the findings of a study on US physicians of the same age groups (20–22). The higher proportion of weight gain of primary care specialists may be explained by the characteristics of the specialty and by individual lifestyle factors (2).

Morbidity

The incidence of hypertension among doctors was higher, but lower than in the USA, the prevalence of other illnesses had the same ratio than in the average Hungarian population (17, 20).

Self-reported Health Status

Female physicians were found to be more conscious of their appearance and health status than males. This can be explained by the different gender attitudes. All of the respondents judged their health status to be better than that of the general population, which is similar to another survey (23). Male physicians rarely participate in regular health screens. About one third of the respondents do not have their own local family doctor. This may be because in Hungary, one can access secondary care or tertiary hospitals without attending the family physician, whereas in other countries cannot (24, 25).

Lifestyle Indicators

Females demonstrated better scores for healthy eating, rate of weight gain, and alcohol consumption. The proportion of smokers among physicians was lower than in other countries (7, 11, 26).

Limitations

It was impossible to find more persons of this cohort. Data was largely obtained using self-reporting questionnaires, thus the possibility of recall bias cannot be ruled out. Other limitations may include missing data in the findings. The relationship between working conditions and drugs prescribed for medical reasons was not evaluated.

To our knowledge no other study with such a wide range of questions has been published covering this geographical area and from this time period (27, 28).

CONCLUSIONS

Attitudes, orientations, motivations and working circumstances of physicians have changed during the last decades. Working in the medicine field has never been a well-paid job in the Eastern

European countries (27). We believe that members of this cohort have chosen medicine rather a profession than a mere job. Although physicians do not always follow their own professional advices, their lifestyle proved a little bit healthier than that of the population at large, especially in women, i.e., their health outcomes, except hypertension, were better. In general, respondents were not satisfied with the financial and working conditions of the recent Hungarian healthcare system.

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Authors' Contributions

IR – constructing questionnaire, corresponding with participants, text writing, literature search, final text editing, ESz – analyzing data, ZL – managing questionnaires, literature search, text writing.

Conflict of Interests

None declared

Ethics approval was previously obtained through the regional Ethical Committee (South-Budapest region).

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