

## Self-rated health among physicians

Algirdas Baubinas, Romualdas Gurevičius<sup>1</sup>, Konstancija Jankauskienė<sup>2</sup>, Jonas Sąlyga<sup>3</sup>,  
Jonas Kairys<sup>4</sup>, Vilma Jurkštienė<sup>2</sup>, Egidijus Kėvelaitis<sup>2</sup>

*Institute of Public Health, Vilnius University, <sup>1</sup>Institute of Hygiene, <sup>2</sup>Department of Physiology, Kaunas University of Medicine, <sup>3</sup>Klaipėda Seamen's Hospital, <sup>4</sup>Vilnius Šeškinės Polyclinic*

**Key words:** *self-rated health; physicians; sex; age; hospital; polyclinic.*

**Summary.** *The aim of the study was to analyze self-rated health among physicians depending on their sex, age, workplace (hospital or polyclinic), and specialty.*

**Material and methods.** *The studied group consisted of 377 26–70-year-old physicians randomly selected from various county hospitals and polyclinics of Lithuania. There were 85 men and 292 women. The inquiry was performed using the complemented (by the authors of the study) version of the WHO anonymous questionnaire of the quality of life (1995). Responses were evaluated based on physicians' evaluation of their own health, which was rated as very good, good, satisfactory, poor, and very poor.*

**Results.** *Only 8.2% of males and 5.8% of females evaluated their health as very good ( $P > 0.05$ ). More men, compared to women, evaluated their health as good (62.3% and 53.1%, respectively;  $P < 0.05$ ), whereas more females evaluated their health as satisfactory, compared to males (36.0% and 25.9%, respectively;  $P < 0.05$ ); 2.4% of males and 5.1% of females ( $p > 0.05$ ) stated that their health was poor. In most cases, physicians of different age groups presented equal evaluations of their health except for physicians in the age groups of 26–37 and 38–43 years – those who evaluated their health as very good comprised a significantly higher percentage ( $P < 0.05$ ), compared to other age groups. As expected, a higher percentage of older physicians evaluated their health as satisfactory. In addition to that, more hospital physicians, compared to those working in polyclinics, evaluated their health as good (12.8% and 1.8%, respectively;  $P < 0.05$ ) and vice versa – significantly more physicians working in polyclinics evaluated their health as satisfactory, compared to those working in hospitals (38.1% and 26.8%, respectively;  $P < 0.05$ ). A significantly higher percentage of surgeons, compared to general practitioners or therapists, evaluated their health as very good (15.8%, 4.5%, and 6.1%, respectively;  $P < 0.05$ ) and a significantly lower percentage – as satisfactory ( $P < 0.05$ ).*

**Conclusions.** *Irrespectively of sex, 6.4% of the studied physicians evaluated their health as very good; 55.2%, as good; 33.7%, as satisfactory; 4.7%, as poor; and 0.3%, as very poor. A higher percentage of physicians who evaluated their health as very good or good were 26–37 and 38–43 years of age, whereas more physicians in older age groups evaluated their health as satisfactory. A higher percentage of physicians working in hospital evaluated their health as very good, whereas more physicians who worked in polyclinics evaluated their health as satisfactory. Compared to general practitioners and therapists, surgeons more frequently evaluated their health as very good and significantly less frequently – as satisfactory.*

### Introduction

A number of studies have been performed – both in Lithuania and elsewhere in the world – on self-rated health in various groups of population and on factors that might influence people's health. Health and its evaluation is one of the indicators of the quality of life, and therefore studies of such type are very common. Meanwhile, scientifically substantiated in-

formation about self-rated health among physicians in relation to their sex, age, workplace (hospital or polyclinic), etc. is very scarce. This creates an impression that physicians as a separate occupational group has become undeservedly marginal and ignored by physicians themselves. Health, social and other issues of medical personnel have not been extensively analyzed in most countries, and thus information on

this subject is insufficient if published at all, and it is mostly found in nonscientific literature. It is noteworthy that sparse studies performed in this field most frequently deal with factors affecting physical health rather than with the evaluation of one's health. The majority of studies analyze physicians' stress-related problems, social issues, and relationships with colleagues or in the family (1). Literature sources emphasize that physicians are negatively affected by the lack of time and physical and mental load during working hours (2–4). Although responsibility for patients' health makes physicians satisfied with their work, they frequently feel physically and mentally exhausted. The reason for this is frequent encounters with other people's (patients') pain, suffering, and death. In addition to that, physicians' work is associated with continuous competition and tension in working relationships not only with the colleagues, but also with the administration (5).

The majority of studies are limited to the evaluation of the mental health of students of medicine, resident physicians, or assisting physicians. Studies showed that as much as 70% of Australian students of medicine frequently felt exhausted (6); in the United States, the percentage of such students was 76%, and one-half of them were diagnosed with both exhaustion and depression (7). Even 8.8% of German students of medicine had pronounced depression, and 5.1% felt fear (8). Cases of depression among students of medicine in the United States and Canada are threefold more common than in the general population (9). In the United States, 12.8% of male physicians and 19.5% of their female colleagues were diagnosed with pronounced depression (10). It is thought that stress of various origins has attracted so much attention because it has been evidently proven as one of the major risk factors for cardiovascular diseases (11). It must be emphasized that foreign scientific literature frequently presents only presumptions about physicians' health without providing any concrete data. In Lithuania, physicians' health on the population level has not been evaluated yet, and the available information about factors affecting physicians' health is scarce. The majority of studies have been oriented toward the evaluation of physicians' fatigue and nervous stress. Studies have shown that family physicians and ambulance crews frequently experience negative emotions; in particular, family physicians more frequently experience negative rather than positive emotions (12, 13). The 2007 study of clinicians' level of happiness complemented previous studies and showed that 62.3% of physicians felt themselves happy and only 7.5% – unhappy. The study found that happiness depended

on marital status, satisfaction with marriage, and love relationships (14). This suggests that family is the main condition of mental health determining the relationships not only among family members, but also among colleagues.

The aim of this study was to analyze physicians' self-rated health with respect to their sex, age, length of service, and workplace.

### Material and methods

A sociological inquiry of the physicians was performed during August–September 2006, using the WHO quality-of-life questionnaire (15) that we complemented with additional questions of interest.

At the beginning, we performed a pilot study involving 44 physicians. This study allowed for determining the validity of the questionnaire, i.e. whether the respondents equally understood the questions. After the evaluation of the obtained results, we adjusted six questions and repeatedly performed the pilot study with the same subjects. Thirty-six physicians were included in the latter study. We determined the kappa coefficient (16) that in this case was 0.71 and indicated that the degree of agreement was substantial. The first page of the questionnaire stated the aim of the study and provided the instruction for filling in the questionnaire and assurance of the anonymity and confidentiality of the data.

During the next stage, we sent applications (including the questionnaire for familiarization) to the heads of hospitals and polyclinics, asking permission to perform the inquiry of physicians in their healthcare institutions. Healthcare units were randomly selected, taking into account the counties in which they were operating. However, some institutions refused to participate in studies of such character, and thus we could not strictly observe random selection of the healthcare units, limiting the selection to the units that agreed to participate in the study. The principle of the representation of counties was maintained.

The inquiry included physicians (who were at work on the day of the inquiry) of hospitals and polyclinics of major Lithuanian cities and counties (Vilnius, Kaunas, Klaipėda, Šiauliai, and Utena). In total, 425 anonymous questionnaires were distributed; 399 (93.9%) questionnaires were received, of which 22 (5.5%) were unsuitable for the analysis (not fully answered). In total, 377 of the questionnaires were analyzed, which comprised 88.7% of the total number of the distributed questionnaires.

The respondents were distributed into groups according to their age, sex, workplace (the healthcare

institution they were working in), and specialty. Age was divided into intervals following the variation analysis of the age (a continuous value) of the studied group. In total, the inquiry included 85 males and 292 females; 149 (39.5%) of the studied physicians worked in hospitals, and 218 (57.8%) – in polyclinics.

Statistical data processing was performed using SPSS v.13 software. The evaluation of the relationships between attributes was performed using Pearson's (for continuous values) and Spearman's (for discrete values) correlation coefficients. For the analysis of category data, we used  $\chi_c$  criterion and  $df$  (number of the degrees of freedom). The data were processed by calculating absolute values, percentage, and 95% confidence intervals. The interpretation of the association strength of correlation coefficient  $r$  that was applied for the evaluation of symmetrical continuous relationships was the following: up to 0.2, weak relationship; 0.3–0.5, moderate relationship; 0.6–0.7, strong relationship; and 0.8–1.0, very strong relationship. The results were considered as statistically significant if  $P$  value was  $<0.05$ .

### Results

The study showed that men and women (Fig. 1) presented different evaluations of their health ( $P=0.05$ ); 88.2% of men and 89.1% of women ( $P>0.05$ ) evaluated their health as good or satisfactory. Only 11.1% of the respondents provided other evaluations of their health.

However, statistically significantly more men and women evaluated their health as "good" rather than "satisfactory" ( $P<0.001$ ) or other ("very good," "poor," or "very poor"). Only one out of the 377 respondents (0.3%) evaluated his health as "very poor." This respondent was a 65-year-old male with more than 30-year experience of working at district hospital.

The analysis of the findings showed that physicians working in city and district hospitals and polyclinics presented different evaluations of their health (Table 1).

The findings of the study showed that differing evaluations of their health were presented by physicians working in city and district hospitals ( $P=0.006$ ), city hospitals and polyclinics ( $P<0.001$ ), and in city hospitals and district polyclinics ( $P=0.002$ ). Meanwhile, the comparison of physicians' evaluations of their health among district hospitals and city and district polyclinics, and among city and district polyclinics showed no differences ( $P>0.05$ ).

A significantly higher percentage of physicians who evaluated their health as "very good" was observed among those working in city hospitals, compared to any other studied personal healthcare units ( $P<0.001$ ). More than half (55.6%) of the studied physicians evaluated their health as "good." The percentage of physicians who presented such evaluations was similar in all studied healthcare units ( $P>0.05$ ). Somewhat different situation was observed among physicians from different healthcare units who eva-

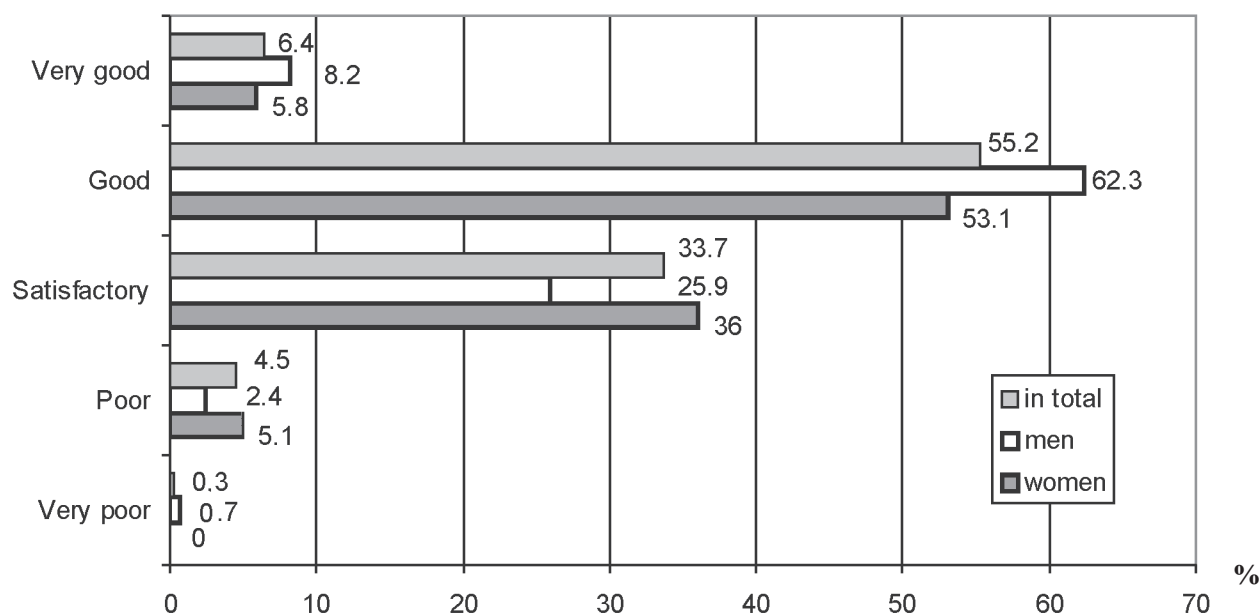


Fig. 1. Physicians' self-rated health in different sex groups

$\chi_c=14.6$ ;  $df=4$ ;  $P=0.05$ .

**Table 1. Physicians' self-rated health according to workplace**

Health evaluation	Workplace								Statistical values
	City hospitals		District hospitals		City polyclinics		District polyclinics		
	n	%	n	%	n	%	n	%	
Very good	17	17.7	2	3.8	2	1.6	2	2.1	$\chi^2=29.2; P<0.001$ $\chi_c=1.0; P=0.811$ $\chi_c=8.1; P=0.045$ $\chi_c=4.0; P=0.260$
Good	55	57.3	29	54.7	65	52.4	55	58.5	
Satisfactory	21	21.9	19	35.8	48	38.7	35	37.2	
Poor	3	3.1	2	3.8	9	7.3	2	2.1	
Very poor	0	0.0	1	1.9	0	0.0	0	0.0	
Total	96	100	53	100	124	100	94	25.6	

$\chi_c=19.91; df=4; P<0.001$ .

**Table 2. Physicians' self-rated health in different age groups**

Health evaluation	Age groups										Statistical values
	26–37 years		38–43 years		44–48 years		49–55 years		56–70 years		
	n	%	n	%	n	%	n	%	n	%	
Very good	10	12.1	10	12.3	2	2.9	2	2.6	0	0.0	$\chi_c=17.1; P=0.002$ $\chi_c=12.8; P=0.012$ $\chi_c=20.3; P<0.001$ $\chi_c=1.6; P=0.803$
Good	47	56.6	53	65.4	41	60.3	39	52.0	28	40.6	
Satisfactory	22	26.5	16	19.8	22	32.4	29	28.7	37	53.6	
Poor	4	4.8	2	2.5	3	4.4	5	6.7	3	4.3	
Very poor	0	0.0	0	0.0	0	0.0	0	0.0	1	1.5	
Total	83	100	81	100	68	100	75	100	69	100	

$\chi_c=30.19; df=4; P<0.001$ .

luated their health as “satisfactory.” The percentage of such physicians was significantly higher ( $P<0.05$ ) in city and district polyclinics and district hospitals than in city hospitals.

The analysis of the physicians' evaluation of their health according to age (Table 2) showed that respondents of different age provided differing evaluations. Different evaluations were also found according to health categories, except for “poor health.” In this category, the evaluations were similar in all age groups.

The percentage of physicians who evaluated their health as “very good” in the age groups of 26–37 and 38–43 years was similar, but significantly exceeded the respective percentage in the age groups of 44–48, 49–55, and 56–70 years ( $P<0.05$ ). Compared to other age groups, the lowest percentage of physicians who evaluated their health as “good” was in the age group of 56–70 years ( $P=0.05$ ); no differences between other age groups in this respect were detected.

The percentage of physicians who evaluated their health as “satisfactory” was similar in all age groups except for the age groups of 56–70 years where the

percentage of such respondents was significantly ( $P<0.001$ ) higher than in the age groups of 38–43 years.

Different tendencies in the evaluation of health emerged in different age groups. Among 26–37-year-old physicians, the evaluation of one's health according to health categories differed ( $P<0.05$ ), except for those who evaluated their health as “very good” or “poor” – no significant difference in the percentage was found here. No significant differences were found in the age group of 38–43 years between those who evaluated their health as “very good” or “satisfactory” ( $P>0.05$ ) and between those who evaluated their health as “very poor” or “poor” ( $P>0.05$ ), in the age group of 44–48 years – between those who evaluated their health as “very good” and “poor” or “very good” and “very poor” ( $P>0.05$ ), in the age group of 49–55 years – between physicians who evaluated their health as “very good” and “poor,” “very good” and “very poor,” or “good” and “satisfactory,” and in the age groups of 56–70 years – between the respondents who evaluated their health as “good” or “satisfactory” ( $P>0.05$ ).

The study also showed that the evaluation of one's

health among physicians tended to worsen with advancing age ( $r=-0.250$ ;  $P=0.01$ ).

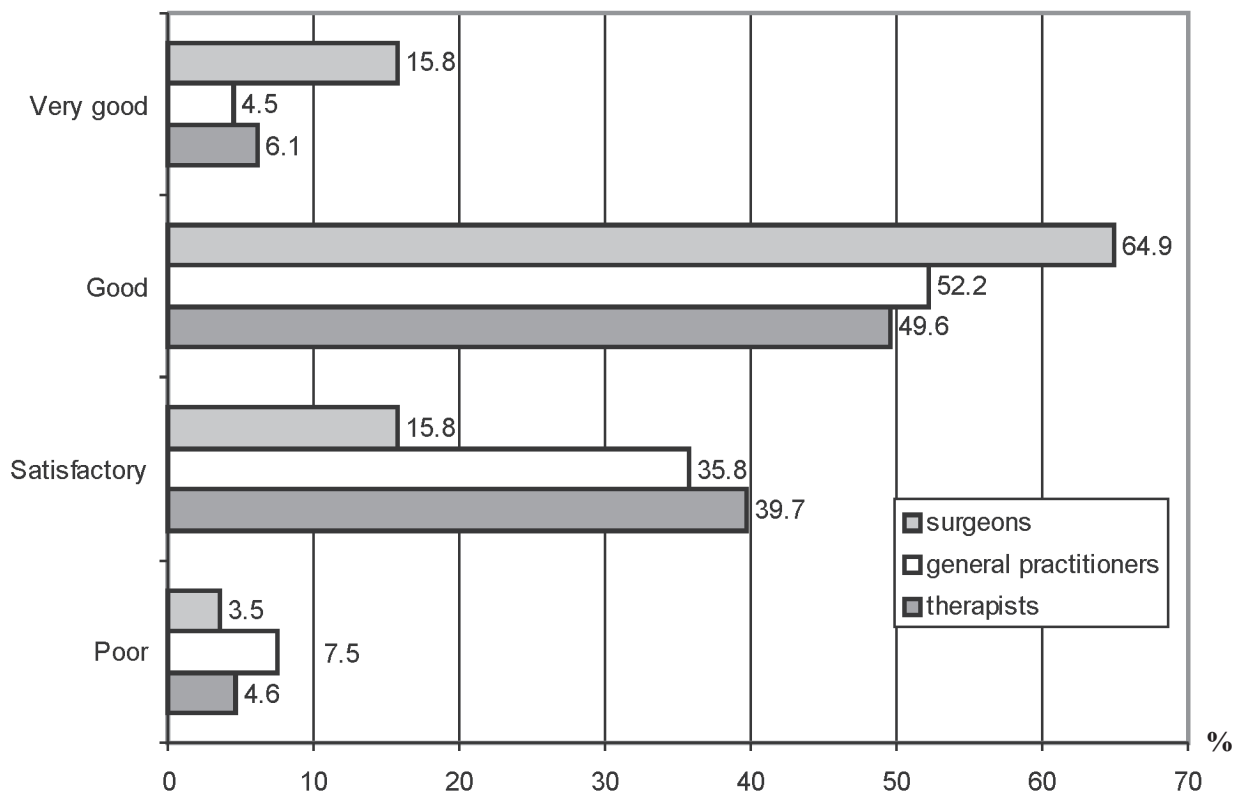
Findings of the study show that physicians working in these institutions presented differing evaluations of their health ( $\chi^2=22.23$ ,  $P<0.001$ ). The majority of physicians working in hospitals (83.2%) and polyclinics (93.1%) evaluated their health as “satisfactory” or “good,” but significantly higher percentage of such evaluations was observed among physicians working in polyclinics ( $P=0.004$ ). It must be emphasized that more than one-half of physicians working in the studied healthcare units (56.3% of physicians who worked in hospitals, and 55.1% of physicians working in polyclinics) indicated that their health was good ( $P>0.05$ ). However, the percentage of physicians who evaluated their health as “very good” was higher in hospitals than in polyclinics ( $P<0.0001$ ).

The evaluation of physicians’ health according to their specialty (Fig. 2) showed that surgeons, general practitioners (GPs), and therapists evaluated their health differently ( $\chi^2=77.93$ ,  $P<0.001$ ). A higher percentage of surgeons, compared to GPs and therapists, evaluated their health as “very good” or “satisfactory” ( $P<0.05$ ). Surgeons also more frequently evaluated their

health as “good,” compared to therapists ( $P<0.05$ ). Meanwhile, the comparison of the evaluation of one’s health presented by GPs and therapists yielded no differences in any of the cases ( $P>0.05$ ).

### Discussion

In Lithuania, like in other countries, especially large amounts of data have been accumulated on self-rated health among schoolchildren, youth, and other groups of population, as well as on the factors influencing health status in these groups. Studies showed that Lithuanian schoolchildren presented poorer evaluations of their health, compared to their peers in other countries: as many as 21% of girls and 9.9% of boys stated that they felt themselves “not very healthy.” Among 28 countries that participated in the study, Lithuania occupied penultimate position. For comparison, only 2.6% of Finnish schoolgirls and 1.3% of schoolboys of respective age stated that they felt “not very healthy” (17). According to the findings presented by other authors, 30–35% of girls and 17–21% of boys presented such evaluations of their health (18–20). Schoolchildren who experienced bullying at schools provided significantly poorer evaluation of



**Fig. 2. Physicians’ self-rated health according to their specialty**  
 $\chi^2=77.93$ ;  $df=4$ ;  $P<0.0001$ .

their health and frequently complained of pain of different localization, nervous tension, and insomnia (21). It is noteworthy that representatives of youth and other groups of population presented poorer evaluations of their health than schoolchildren did (22–28). Literature also provides data about subjective health evaluation among men as a prognostic indicator of the probability of death and mortality from cardiovascular diseases and ischemic heart disease (29). Detailed analysis of the findings of the study revealed the characteristics of physicians' self-rated health. More than one-half (55.2%) of the physicians evaluated their health as "good," and 33.7% as "satisfactory." Only 4.5% of the respondents stated that their health was "poor." Although it was expected that a significant part of the studied physicians would evaluate their health as "very good," only 6.4% of the respondents presented such evaluations. Even in the age groups of 26–43 years, the percentage of physicians who evaluated their health as "very good" was only 12.1–12.3%. The evaluation according to age groups revealed a similar situation. Our findings do not provide a direct explanation of this phenomenon. So far, only certain assumptions may be made. It is common knowledge that a physician's work is highly specific and responsible, and is associated with continuous psychological and physical stress. Due to low salaries, newcomers and physicians with limited experience are forced to work in several workplaces thus trying to solve financial problems in the family. Like in case of other young people, socioeconomic problems faced by young physicians are especially tender – low salaries, unsolved problems of living place, personal transport, the choice of desired kindergarten and school for one's children, and other problems affect family relationships, and enormous responsibility and continuous physical and mental stress at work create an atmosphere of dissatisfaction with work, which in the long run becomes one of the major causes of poor health. Another fact has to be mentioned. According to the number of physicians per 10 000 population, Lithuania occupies one of the leading positions in Europe (30); this would indirectly point at lower workloads and shorter waiting lists. However, in reality, this is not the case – physicians' workload is immense, and waiting lists for examinations are not getting any shorter. In our opinion, long waiting lists affect not only the patients' but also the physicians' health. The reason for this phenomenon lies in the healthcare system and healthcare policy. Physicians spend a significant amount of their working time doing social rather than their direct medical work, including endless

paperwork, complicated filling of sick-leaves, etc., which should not be a part of medical services. It can be stated that trying to establish their positions in this complicated life, young and most able-bodied physicians do so at the expense of their health. We think that qualitative studies will confirm these assumptions. It must be emphasized that irrespectively of age, 63.2% of physicians (70.6% of males and 59.1% of females;  $P=0.058$ ) evaluated their health as "very good" or "good." The comparison of these findings with the data on the general Lithuanian population showed that very good and good health status was observed in 41.5% (43.4% of males and 40.1% of females) of the Lithuanian population (30). Evidently, physicians evaluated their health better than other inhabitants of Lithuania of respective age. The findings of contemporaneously performed studies of the self-rated health among physicians and youth showed that young people evaluated their health similarly to physicians: 64.7% of young males and 59.2% of females evaluated their health as "very good or good" (22). These findings evidently show that socioeconomic problems of physicians are essentially similar to those faced by other Lithuanian population, but physicians – due to the specificity of their work – more frequently experience concurrent major physical and emotional stress, compared to other occupational groups. On the other hand, physicians are fully aware of possible consequences of health risk factors and know how to avoid those consequences, adhering to healthy lifestyle principles at work and in personal life and passing their experience to their patients and the general population who, unfortunately, frequently ignore those principles.

### Conclusions

1. Only 6.4% of the studied physicians (8.2% of males and 5.8% of females) evaluated their health as "very good," 55.2% (62.3% of males and 53.1% of females) as "good," 33.7% (25.9% of males and 36% of females) as "satisfactory," 4.7% (2.4% of males and 5.1% of females) as "poor," and one male evaluated his health as "very poor."

2. Physicians' self-rated health was age-dependent, but the percentage of physicians who evaluated their health as "poor" was similar in all studied age groups and ranged between 2.5% and 6.7%.

3. A higher percentage of hospital physicians (12.8%) compared to those working in polyclinics (1.8%) evaluated their health as "very good," while more physicians working in polyclinics evaluated their health as "satisfactory," compared to their colleagues

who worked in hospitals (38.1% and 26.8%, respectively). A similar percentage of physicians working in hospitals and polyclinics evaluated their health as “good” (56.3% and 55.1%, respectively) and “poor” (3.4% and 5.0%, respectively) was similar.

4. A significantly higher percentage of surgeons evaluated their health as “very good,” compared to

general practitioners and therapists (15.8%, 4.5%, and 6.1%, respectively), while significantly more general practitioners and therapists evaluated their health as “satisfactory,” compared to surgeons (35.8%, 39.7%, and 15.8%, respectively). General practitioners and therapists in all cases presented similar evaluations of their health.

## Gydytojų sveikatos savivertė

**Algirdas Baubinas, Romualdas Gurevičius<sup>1</sup>, Konstancija Jankauskienė<sup>2</sup>, Jonas Salyga<sup>3</sup>,  
Jonas Kairys<sup>4</sup>, Vilma Jurkštienė<sup>2</sup>, Egidijus Kėvelaitis<sup>2</sup>**

*Vilniaus universiteto Visuomenės sveikatos institutas,<sup>1</sup>Higienos institutas,<sup>2</sup>Kauno medicinos universiteto Fiziologijos katedra,<sup>3</sup>Klaipėdos jūrininkų ligoninė,<sup>4</sup>Vilniaus Šeškinės poliklinika*

**Raktažodžiai:** sveikatos savivertė, gydytojai, lytis, amžius, ligoninė, poliklinika.

**Santrauka.** *Tyrimo tikslas.* Įvertinti gydytojų sveikatos savivertę priklausomai nuo jų lyties, amžiaus, darbovietės (ligoninė, poliklinika) ir specialybės.

*Tirtųjų kontingentas ir tyrimo metodai.* Tiriamąją grupę sudarė 377 atsitiktinai iš įvairių Lietuvos apskričių ligoninių ir poliklinikų atrinkti 26–70 metų gydytojai (85 vyrai ir 292 moterys). Apklausai naudota mūsų papildyta anoniminė PSO 1995 m. Gyvenimo kokybės anketa. Atsakymai įvertinti atsižvelgiant į tai, kaip patys gydytojai įvertino savo sveikatą: labai gera, gera, patenkinama, bloga ir labai bloga.

*Rezultatai.* 8,2 proc. vyrų ir 5,8 proc. moterų savo sveikatą įvertino labai gerai ( $p>0,05$ ), gerai savo sveikatą įvertinusių vyrų buvo daugiau (62,3 proc.) nei moterų (53,1 proc.) ( $p<0,05$ ). Tuo tarpu patenkinamai įvertinusių savo sveikatą gydytojų moterų buvo didesnis procentas nei gydytojų vyrų (atitinkamai – 36,0 ir 25,9 proc.,  $p<0,05$ ). Blogą sveikatą konstatavo 2,4 proc. vyrų ir 5,1 proc. moterų ( $p>0,05$ ). Daugeliu atvejų, nepriklausomai nuo amžiaus, gydytojai savo sveikatą įvertino iš esmės vienodai, išskyrus 26–37 ir 38–43 amžiaus grupių gydytojus, kurių buvo žymiai didesnis procentas ( $p<0,05$ ) nei kitų amžiaus grupių gydytojų, įvertinusių savo sveikatą labai gerai. Didesnis procentas vyresnio amžiaus gydytojų savo sveikatą įvertino patenkinamai. Be to, didesnis procentas ligoninių nei poliklinikų gydytojų (atitinkamai – 12,8 ir 1,8 proc.,  $p<0,05$ ) savo sveikatą įvertino kaip gerą, ir atvirkščiai – patenkinamai savo sveikatą įvertinusių poliklinikų gydytojų buvo reikšmingai daugiau nei ligoninių gydytojų (atitinkamai – 38,1 ir 26,8 proc.,  $p<0,05$ ). Žymiai didesnis procentas chirurgų, lyginant su bendrosios praktikos gydytojais ir terapeutais (atitinkamai – 15,8; 4,5 ir 6,1 proc.;  $p<0,05$ ), savo sveikatą įvertino labai gerai, tačiau žymiai mažesnis procentas – patenkinamai ( $p<0,05$ ).

*Išvados.* Nepriklausomai nuo lyties, 6,4 proc. gydytojų savo sveikatą įvertino labai gerai, 55,2 proc. – gerai, 33,7 proc. – patenkinamai, 4,7 proc. – blogai ir 0,3 proc. – labai blogai. Didesnis procentas gydytojų, savo sveikatą įvertinusių labai gerai ir gerai, buvo 26–37 ir 38–43 metų grupėse, o patenkinamai – vyresnėse. Didesnis procentas ligoninėse dirbančių gydytojų savo sveikatą įvertino labai gerai, o poliklinikų gydytojų – patenkinamai. Chirurgai dažniau nei bendrosios praktikos gydytojai ir terapeutai savo sveikatą įvertino labai gerai ir žymiai rečiau – patenkinamai.

Adresas susirašinėti: A. Baubinas, VU Visuomenės sveikatos institutas, Čiurlionio 21, 10222 Vilnius  
El. paštas: algirdas.baubinas@mf.vu.lt

## References

1. Vanagas G, Bihari-Axelsson S, Vanagienė V. Ar bendrosios praktikos gydytojo amžius, lytis ir šeimos padėtis turi įtakos psichosocialiniam stresui darbe? (Do age, gender and marital status influence job strain development for general practitioner?) *Medicina (Kaunas)* 2004;40(10):1014-8.
2. Tyssen R, Vaglum P, Gronvold N, Ekeberg O. The impact of job stress and working conditions on mental health problems among junior house officers. A nation wide Norwegian prospective cohort study. *Med Educ* 2000;34 (5):374-84.
3. Tyssen R, Vaglum P, Gronvold N, Ekeberg O. Factors in medical school that predict postgraduate mental health problems in need of treatment. A national wide and longitudinal study.

- Med Educ 2001;35(2):110-20.
4. Tyssen R, Vaglum P, Gronvold N, Ekeberg O. Mental health problems among young doctors: an updated review of prospective studies. *Horv Rev Psychiatry* 2002;10(3):154-65.
  5. Naumanen-Tuomela P, Gronvold N, Ekeberg O. Occupational health nurses' perspective. *Public health. Blackwell Science* 2006;18(2):108-15.
  6. Willcock SM, Daly MG, Tennant CC, Allard BJ. Burnout and psychiatric morbidity in new medical graduates. *Med J Aust* 2004;181(7):357-60.
  7. Shanafelt TD, Bradley KA, Wipf JE, Back AL. Burnout and self-reported patient care in an internal medicine residency program. *Ann Intern Med* 2002;136(5):358-67.
  8. Seliger K, Braehler E. Psychische Gesundheit von Studierenden der Medizin: Eine empirische Untersuchung. (Mental health of medical students: an empirical study.) *Psychoterapeut* 2007;52(4):280-86.
  9. Dyrbye LN, Thomas MR, Shanafelt TD. Systematic review of depression, anxiety and other indicators of psychological distress among U.S. and Canadian medical students. *Acad Med* 2006;81(4):354-73.
  10. Center C, Davis M, Detre T, Ford D, Hansbrough W, Hendin H, et al. Confronting depression and suicide in physicians: a consensus statement. *JAMA* 2003;289(23):3161-6.
  11. Williams ES, Konrad TR, Linzer M, McMurray J, Pathman D, Geraity M, et al. Physician, practice and patient characteristics related to primary care physician and medical health: results from physician work life study. *Health Services Research* 2002;37(1):119-41.
  12. Raškevičienė R, Buteikienė L, Vasilavičius P. Nuovargis ir nervinė įtampa greitosios medicinos pagalbos darbuotojų darbe ir jų ryšys su sveikatos sutrikimais. (Influence of fatigue and mental stress on health of ambulance workers.) *Visuomenės sveikata* 2005;2(29):58-64.
  13. Glumbakaitė E, Kalibatas J, Kanapeckaitė V. Veiksniai, skatinantys bendrosios praktikos (šeimos) gydytojų motyvaciją ir turintys įtakos jų darbo kokybei. (The analysis of factors influencing the motivation and quality of work of general practitioners (family physicians).) *Visuomenės sveikata* 2005;3(30):8-12.
  14. Grigaliūnienė V, Burba B, Šlioža V, Ramanauskas I. Medikų, dirbančių klinikinį darbą, subjektyvios gerovės (laimingumo) ir psichosocialinių veiksnių ryšys. (The social well-being characteristics of medical personnel involved in clinical work.) *Visuomenės sveikata* 2007;2(37):27-33.
  15. WHOQOL-100. Programme on mental health World Health Organization. Geneva, 1995 (WHO/MNH/PSF/95).
  16. Tomaškova H, Šlachtova H, Šplichalova A. Methodical approach to data processing from a questionnaire survey. *Biomed Papers* 2003;147(1):101-7.
  17. Stankevičienė L, Zaborskis A. Lietuvos ir kitų šalių moksleivių gyvenimo ir sveikatos palyginimas. (International comparison of health behaviour in school-aged children.) *Visuomenės sveikata* 2000;1(11):3-11.
  18. Baubinas A, Vainauskas S. Psychosocial factors and their influence on schoolchildren's health. *Acta Medica Lituanica* 1998;2:150-4.
  19. Vainauskas S. Lietuvos moksleivių gyvenimo ir požiūrio į savo sveikatą įvertinimas. Daktaro disertacija. (Evaluation of the lifestyle of Lithuanian schoolchildren and its implications on their view of their health status. Doctoral thesis.) Vilnius: Vilniaus universitetas; 1998 p. 96.
  20. Goštautas A, Šeibokaitė L. Moksleivių savo sveikatos vertinimų kitimai mokykloje. (Changes in self-rated health during the school years.) *Visuomenės sveikata* 2006;3(34):33-8.
  21. Zaborskis A, Vareikienė I. Patyčios mokykloje ir jų sąsajos su moksleivių sveikata bei gyvenimu. (School bullying and its association with health and lifestyle among schoolchildren.) *Medicina (Kaunas)* 2008;44(3):232-39.
  22. Sketerskienė R, Šurkienė G. Lietuvos bendrojo lavinimo mokyklų pagrindinio ugdymo programos mokinių savijauta ir požiūris į mokyklą. (Lithuanian basic school pupil's well-being and attitude towards school.) *Visuomenės sveikata* 2006;4(35):9-15.
  23. Baubinas A, Jankauskienė K, Kuodytė-Kazlienė R. Vyresniojo mokyklinio amžiaus moksleivių ir jaunimo sveikatos savivertė. (Self-health evaluation of senior schoolchildren and youth.) *Visuomenės sveikata* 2007;2(37):22-26.
  24. Zlatkuvienė V, Proškuvienė R, Černiauskienė M, Žilinskienė E. Būsimųjų pedagogų psichoemocinės ir fizinės sveikatos savivertė. (Self-esteem of physical and psychoemotional health among future educators.) *Visuomenės sveikata* 2007;3(38):39-43.
  25. Jatulienė N, Čepienė J, Kalibatas J, Sapkauskienė B. Utenos apskrities darbingo amžiaus gyventojų požiūris į sveikatą ir pagrindines gyvenimo kokybės dimensijas. (Attitude of able-bodied inhabitants of Utena county towards health and general quality-of-life dimensions.) *Visuomenės sveikata* 2006;4(35):9-15.
  26. Šinkariova L, Endriukaitienė A. Vyrų ir moterų psichosocialinių darbo charakteristikų ir sveikatos rodiklių palyginimas. (Gender differences in psychosocial work characteristics and employee health.) *Visuomenės sveikata* 2007;2(37):22-6.
  27. Žaliūnas R, Blužas J, Jankauskienė K, Gražulevičienė R, Baubinas A, Juozulynas A, et al. Prognozuojama vyshivajemosti sredi muzhskoj populiacii (15 let i starshe). (Predicted survival in Kaunas male population (15-year olds and older)). *Kardiologija* 2006;46(9):41-6.
  28. Jurgelėnas A, Šurkienė G, Juozulynas A, Stukas R, Buzytė V, Baubinas A, et al. Socialiniai gyvenimo kokybės skirtumai Vilniuje. (The social differences of quality of life in Vilnius.) *Visuomenės sveikata* 2007;3(38):31-8.
  29. Rėklaitienė R, Kazlauskaitė M, Tamošiūnas A, Domarkienė S. Kauno vidutinio amžiaus gyventojų subjektyvus sveikatos vertinimas ir mirties tikimybė (20-ties metų stebėjimo duomenys). (Self-rated health and probability of death among middle-aged Kaunas population (20-year follow-up).) *Medicina (Kaunas)* 2004;40(8):807-15.
  30. Visuomenės sveikatos stebėsenos duomenų fondas. Lietuvos sveikatos informacijos centras 2006. Available from: URL: <http://www.lsic.lt/>

*Received 25 August 2008, accepted 3 July 2009  
Straipsnis gautas 2008 08 25, priimtas 2009 07 03*