ISSN 2029-1701
ISSN 2335-2035 (Online)

Mokslinių straipsnių rinkinys
VISUOMENĖS SAUGUMAS IR VIEŠOJI TVARKA
PUBLIC SECURITY AND PUBLIC ORDER
2018 (20) Scientific articles

ANALYSIS OF STUDENTS' PHYSICAL HEALTH MONITORING CHARACTERISTICS

Algirdas Muliarčikas[1]

[1]*Mykolas Romeris University, the Faculty of Public Security, Department of State Border Guard*
V. Putvinskis str. 70, LT-44211 Kaunas
Tel.:: (370 37) 303653
E-mail: a.muliarcikas@mruni.eu

Abstract. Law enforcement officials need not only good practical skills of legal knowledge, but good health, adequate psychological and physical fitness as well. Regardless of the nature of the activity, officials often suffer from stressful situations that adversely affect their health. A sufficiently problematic circumstance that negatively affects the status of statutory officers is cardiovascular disease. It is likely that special knowledge, proper physical fitness, and a system for monitoring and controlling the status of officers could positively influence the personal commitment of statutory officers to maintain a good level of physical health. The article reviews the results of the questionnaire survey for the students of Mykolas Romeris University, Public Security Faculty and future statutory officials. The aim of the survey was to reveal how students evaluate their health, whether they control the state of their health with the help of elementary functional indicators, and what measures they will use to improve their physical health and general well-being. The questionnaire approbated in 1999 was used to conduct the survey[1]

Keywords: physical health, heart rate, blood pressure, health condition monitoring, future statutory officers.

INTRODUCTION

Citizens of the Republic of Lithuania willing to become statutory officers must have a good command of the state language, be of an appropriate age, have a good reputation, possess good health and, accordingly, be physically prepared.[2]. The status of applicants for statutory officers and officials is assessed by the Central Commission of Medical Experts [3], while physical preparation is evaluated by education institutions[4] or physical fitness instructors[5]. Adequate physical fitness is also necessary for law enforcement officials in both the European

[1] Muliarčikas A., Kazlauskas V. Sportuojančiųjų ir nesportuojančiųjų Lietuvos veterinarijos akademijos studentų požiūrio į fizinį aktyvumą tendencijos. *Socialinių – humanitarinių mokslų vaidmuo universitetinio ugdymo sistemoje: mokslinių straipsnių rinkinys*. Kaunas: LŽŪU, 2000, p. 350-353.
[2] Stok į policiją. Viskas ką reikia žinoti, jei nori tapti policijos pareigūnu. [interactive] [accessed 2018-04-19] http://stokipolicija.lt/stojimas/pradzia/.
[3] Specializuotos medicininės ekspertizės tvarka. [interactive] [accessed 2018-04-14] https://cmek.vrm.lt/tvarka.php
[4] Atranka į mokymo įstaigą. [interactive] [accessed 2018-04-14] http://stokipolicija.lt/stojimas/lpm/atranka-i-mokymo-istaiga/
[5] Lietuvos policijos generalinio komisaro 2016 m. liepos 18 d. įsakymas Nr. 5-V-581 (Lietuvos policijos generalinio komisaro 2017 m. balandžio 25 d. įsakymo Nr. 5-V-374 redakcija) "Policijos pareigūnų papildomų reikalavimų, susijusių su fiziniais ir praktiniais gebėjimais eiti tam tikras pareigas, ir atitikties šiems reikalavimams tikrinimo bei profesinio taktinio, specialaus fizinio rengimo pratybų ir sportinės veiklos organizavimo tvarkos aprašas".

ISSN 2029-1701
ISSN 2335-2035 (Online)
Mokslinių straipsnių rinkinys
VISUOMENĖS SAUGUMAS IR VIEŠOJI TVARKA
PUBLIC SECURITY AND PUBLIC ORDER
2018 (20) Scientific articles

and American continents [6],[7],[8],[9],[10],[11],[12],[13],[14],[15],[16],[17]. There are no unified requirements for the physical preparation of officials; therefore, there are relatively different requirements for the preparation of law enforcement representatives in each individual country, or even in the region of the[18]. The requirements for the statutory officers of our country are regulated by the standards of specialist training, [19],[20] as well as the relevant orders[21].

In analyzing the peculiarities of work activity, it is necessary to pay attention to the fact that a significant part of the population, about a quarter of men and even more of women, remain

[6] Fiziskās sagatavotības vērtēšanas metodika amatpersonām ar speciālajām dienesta pakāpēm. [interactive] [accessed 2018-02-15] http://vsc.iem.gov.lv/wp-content/uploads/Metodika1.pdf
[7] Fiziskās sagatavotības prasības Iekšlietu ministrijas sistēmas iestāžu un Ieslodzījuma vietu pārvaldes amatpersonām ar speciālajām dienesta pakāpēm. [interactive] [accessed 2018-02-15] https://likumi.lv/doc.php?id=257102
[8] Politseiametniku ning Politsei- ja Piirivalveameti kõrgema ametniku kutsesobivusnõuded, nende kontrollimise tingimused ja kord. [interactive] [accessed 2018-02-15] https://www.riigiteataja.ee/akt/118042013016.
[9] Obwieszczenie Granicznej Ministra spraw wewnętrznych z dnia 13 lipca 2015 r. w sprawie ogłoszenia jednolitego tekstu rozporządzenia Ministra Spraw Wewnętrznych i Administracji w sprawie testu sprawności fizycznej funkcjonariuszy Straży. [interactive] [accessed 2018-02-15] http://www.infor.pl/akt-prawny/DZU.2015.152.0001121,rozporzadzenie-ministra-spraw-wewnetrznych-i-administracji-w-sprawie-testu-sprawnosci-fizycznej-funkcjonariuszy-strazy-granicznej.html
[10] Normy testu sprawności fizycznej dla policjantów w służbie [interactive] [accessed 2018-02-15] https://wspol.edu.pl/zws/index.php?option=com_content&view=article&id=50:normy-testu-sprawnopci-fizycznej-dla-policjant-w-ssuibie&catid=32:informator-dla-policjant
[11] Normy testu sprawności fizycznej dla policjantek w służbie. [interactive] [accessed 2018-02-15] https://www.wspol.edu.pl/zws/index.php?option=com_content&view=article&id=51:normy-testu-sprawnopci-fizycznej-dla-policjantek-w-ssuibie&catid=32:informator-dla-policjant
[12] Anforderungen des Auswahlverfahrens im Sporttest der Bundespolizei. [interactive] [accessed 2018-04-04] http://www.sporttest-polizei.de/bundeslaender/bundespolizei/.
[13] Anforderungen beim Sporttest der Polizei. [interactive] [accessed 2018-02-19] http://www.sporttest-polizei.de/bundeslaender/
[14] Povolanie policajta. [interactive] [accessed 2018-02-19] https://www.minv.sk/swift_data/source/policia/prevencia/zakon_cest_a_odvaha/POVOLANIE%20POLICAJTA.pdf
[15] Previerky fyzickej zdatnosti. [interactive] [accessed 2018-02-19] https://www.akademiapz.sk/prijimacia-skuska-0
[16] Volanti J.M., Ma C.C., Fekedulegn D. et al. Associations Between Body Fat Percentage and Fitness among Police Officers: A Statewide Study. *Safety and Health at Work*. 2017, 8 (1): 36-41.
[17] The 11 components of proper police fitness. [interactive] [accessed 2018-03-11] https://www.policeone.com/police-products/fitness-health-wellness/articles/508738-The-11-components-of-proper-police-fitness/
[18] Anforderungen beim Sporttest der Polizei. *op. cit.*
[19] Lietuvos Respublikos Švietimo ir mokslo mininsterija Socialinės apsaugos ir darmo ministerija. Policininko rengimo standartas. [interactive] Vilnius 2008. [accessed 2018-02-14] http://www.kpmpc.lt/Skelbimai/PDFstandartai/Policininkas.LT.3.pdf
[20] Lietuvos Respublikos Švietimo ir mokslo mininsterija Socialinės apsaugos ir darmo ministerija. Pasieniečio rengimo standartas. [interactive] Vilnius 2008. [accessed 2018-02-14] http://www.kpmpc.lt/Skelbimai/PDFstandartai/Pasienietis.LT.3.pdf
[21] Lietuvos policijos generalinio komisaro 2016 m. liepos 18 d. įsakymas Nr. 5-V-581 (Lietuvos policijos generalinio komisaro 2017 m. balandžio 25 d. įsakymo Nr. 5-V-374 redakcija) *supra note* 5

sedentary at work.[22] This is especially attributative to the police [23],[24], where about 80% of workers spend more time working a sedentary job. As a result of insufficient physical activity and other factors, the number of people with overweight increases significantly [25] [26]. Similar tendencies prevail not only in Lithuania but also in other countries [27],[28]. This situation has a significant impact on human health and functional capacity. There is a decline in meeting the required standards for law enforcement officers in some countries. The physical fitness and state of health of US officials, in most cases investigated, are not in line with the desired level of preparation [29], , and in some cases even lower than the average level of physical fitness of civilians[30]. The research performed with German law enforcement officers found that physiological characteristics that characterize their physical abilities [31] were also lower than the desirable ones. Insufficient physical fitness, cardiovascular disease, overweight, frequent stressful situations negatively affect the physical health of law enforcement officers and frequently leads to death [32],[33],[34]. It has been determined that the most common cause of death in Lithuania is cardiovascular disease [35]. In order to prevent cardiovascular diseases, researchers recommend balanced nutrition, increase strength and aerobic capacity training, which have a very positive effect on the prevention process of cardiovascular disease, diabetes, bone thinning

[22] Grabauskas V, Klumbienė J, Petkevičienė J ir kt. *Suaugusių Lietuvos žmonių gyvensenos tyrimas, 2014*. Kaunas: Lietuvos sveikatos mokslų universitetas, 2015.
[23] Adams, J., Schneider, J., Hubbard, et. Al (2010). Measurement of functional capacity requirements of police officers. [interactive] *Baylor University Medical Center Proceedings* 2010, 23: 7-10 [accessed 2018-03-20]https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2804486/#.
[24] Boyce, R. W., Jones, G. R., Schendt, K. E. et.al. Longitudinal changes in strength of police officers with gender comparisons. *The Journal of Strength Conditioning Ressearch* 2009, 23(8): 2411–2418.
[25] Grabauskas V., Klumbienė J., Petkevičienė J. ir kt. *Suaugusių Lietuvos žmonių gyvensenos tyrimas 2012*. Kaunas: Lietuvos sveikatos mokslų universitetas, 2013
[26] Grabauskas V, Klumbienė J, Petkevičienė J ir kt.*op.cit.* p.20
[27] Hallal P.C., Andersen L.B., Bull F.C. et al. Global physical activity levels: surveillance progress, pitfalls, and prospects. *The Lancet.* 2012 Jul 21;380(9838):247-57
[28] Sport and physical activity. [interactive] *Report. Eurobarometer. 2014*. [accessed 2018-04-06] http://ec.europa.eu/public_opinion/archives/ebs/ebs_412_en.pdf
[29] Williams J., Ramsey V. The Need for Law Enforcement Wellness Interventions: A Critical Review. [interactive] *The Sport Journal.* 2017 (57), September 5 [accessed 2018-03-12] http://thesportjournal.org/article/the-need-for-law-enforcement-wellness-interventions/
[30] Varvarigou V., Farioli A., M. Korre et. al. Law enforcement duties and sudden cardiac death among police officers in United States: case distribution study. [interactive] *BMJ.* (Published 18 November 2014) [accessed 2018-03-12] http://www.bmj.com/content/bmj/349/bmj.g6534.full.pdf
[31] Leischik R., r Foshag P., Strauß et. all. Aerobic Capacity, Physical Activity and Metabolic Risk Factors in Firefighters Compared with Police Officers and Sedentary Clerks. [interactive]. *PLOS*. 2015. [accessed 2018-03-13]. http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0133113#sec019
[32] Varvarigou V., Farioli A., M. Korre et. al. *op. cit.*
[33] Zimmerman FH. Cardiovascular disease and risk factors in law enforcement personnel: a comprehensive review. *Cardiol Rev* 2012;20:159-66.
[34] Kales SN, Tsismenakis AJ, Zhang C, Soteriades ES. Blood pressure in firefighters, police officers, and other emergency responders. *Am J Hypertens* 2009; 22:11-20.
[35] Mirties priežastys 2015. Higienos instituto Sveikatos informacijos centras, Vilnius. 2016, p.7

and even cancer[36],[37],[38],[39],[40]. According to K. Keith, who worked as a physical fitness instructor at the Atlanta Police Academy, the process of preparation of police officers comprises 11[41] physical fitness components that would not only positively affect physical health but also would be advantageous in any physical confrontation.

The question may be implied from the gathered information: what is the attitude of students, future law enforcement officers and Bachelors of Laws towards the preservation of their health, its improvement and their body state monitoring focusing on cardiovascular system indicators?

The purpose of this paper - to find out the peculiarities of students' physical health monitoring based on basic parameters of their cardiovascular system and ways of maintaining and improving students' physical health.

Methodology. The sample comprised men (n = 76) and women (n = 80) who joined Mykolas Romeris University's Public Security Faculty in 2014. The average age of the participants in the study was 21 years. The respondents were selected by the method of convenience sampling. A questionnaire consisting of 40 questions was approbated in the framework of the "Physical Activity" program of the Kaunas City Health Department [42]. The questionnaire data provided by the students was not directly related to their academic activity. The article analyzes the responses of 14 questionnaire questions reflecting the aspects of students' attitudes towards their physical health, its monitoring and preservation. All received data were assigned to relative groups and analyzed with respect to gender (groups of men and women) and physical activity of the students (engaged and not engaged in sports during leisure time).

The research methods of analysis, survey, abstraction, generalization, mathematical statistics (to determine the reliability of the data by $\chi 2$- chi square indicator) were used.

---

[36] The 11 components of proper police fitness, *supra note* 17
[37] Warburton D.E.R., Nicol C.W., Bredin S.S.D. Health benefits of physical activity: the evidence. [interactive] *Canadian Medical Association Journal.* 2014, 174(6): 801-809. [accessed 2018-04-06]. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1402378/
[38] Fortenbery J. H. An Exploratory Study on Physical Fitness Policies Among Police Departments in North Carolina. [interactive]. *Nova Southeastern University.* 2016. [accessed 2018-04-018]. https://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1003&context=cahss_jhs_etd
[39] Leischik R., r Foshag P., Strauß et. all. Aerobic Capacity, Physical Activity and Metabolic Risk Factors in Firefighters Compared with Police Officers and Sedentary Clerks. [interactive]. *PLOS*. (Published July17, 2015) [accessed 2018-03-13]. http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0133113#sec019
[40] Taylor A.J., Watkins T., Bell D. et al. Physical activity and the presence and extent of calcified coronary atherosclerosis. *Medicine & Science in Sport & Exercise*. 2002, 34: 228 – 233.
[41] The 11 components of proper police fitness. *Op.cit.*
[42] Muliarčikas A., Stanislovaitis A. Kauno miesto gyventojų požiūrio į sveikatą ir fizinį aktyvumą tendencijų aspektai. *Visuomenės sveikata*. 2003, 4 (23): 57-63.

ISSN 2029-1701
ISSN 2335-2035 (Online)
Mokslinių straipsnių rinkinys
VISUOMENĖS SAUGUMAS IR VIEŠOJI TVARKA
PUBLIC SECURITY AND PUBLIC ORDER
2018 (20) Scientific articles

ANALYSIS OF DATA

The majority of the respondents (87.2%) statistically reliably ($p < 0.001$) stated that they cared for their health. In terms of gender, there was no statistically significant difference between men (89.5%) and women (85%) caring about their health ($p > 0.05$). Most of students engaged in sports (94.8%) ($p < 0.001$) take care of their health in comparison with the students not engaged in sports (65%) .

Equally, the respondents consider their health status as "good" (48.7%) or "satisfactory" (48.7%). Significantly lower ($p < 0.001$) number of the respondents – “unsatisfactory” (1.3%) and "bad" (1.3%). Except for the fact that a part of the respondents (2.5% of women and 0% of men - $p < 0.05$) rated their health as "bad," there were no statistically significant differences between women and men in physical health assessment indicators ($p > 0.05$). 5% ($p < 0.01$) of not engaged in sports respondents rated their health as "bad". Only a statistically significant difference was found ($p < 0.01$) in the category "bad", in the health state assessment of engaged and not enaged in sports (5%) students.

The largest proportion of all respondents visited a doctor 1-2 times a year due to the illness ($p < 0.001$) referring to the respondents' groups (Table 1). Unlike men ($p < 0.001$), 17.5% of surveyed women noted that they visited doctors 3-5 times a year. 12% of the respondents who were engaged in sports indicated this answer as well.

In response to the question: "Do you control (count) the pulse rate?" 78.2% of the respondents ($p < 0.001$) noted the answer "No"; 19.2% - "Yes" and 2.6% ($p < 0.001$) - "Do not know how to measure it". There was no statistically significant difference between the results of the responses of men and women groups. The results of the responses are of significant difference only within the groups (Table 2).

A similar relationship was found between the responses of men and women and the respondent groups of engaged in sports and not engaged in sports (Table 2). The highest proportion of the respondents in each group noted the answer "No" ($p < 0.001$).

ISSN 2029-1701
ISSN 2335-2035 (Online)
Mokslinių straipsnių rinkinys
VISUOMENĖS SAUGUMAS IR VIEŠOJI TVARKA
PUBLIC SECURITY AND PUBLIC ORDER
2018 (20) Scientific articles

Table 1. The distribution of responses to the question "How often do you visit a doctor due to illness or ill-being a year?" (%)

	0 times (1)	**1-2 times (2)**	**3-5 times (3)**
ALL respondents	28,2%$^{***(2,3))}$	62,8%	9%$^{***(1,2)}$
MEN	36,8%$^{***(2,3)}{}_{+}$	63,2%	0
WOMEN	20%	62,5%$^{***(1,3)}$	17,5%
ENGAGED IN SPORTS	25,9%$^{***(2)}$	62,1%	12,0%$^{**(1)}$
NOT ENGAGED IN SPORTS	35,0% $^{*(2,3)}$	65,0%	0

* (P<0.05); **(P<0.01); *** (P<0.001), in group- ***, between groups- $_{+++)}$

Table 2. The distribution of responses to the question "Do you control (count) your pulse rate? (%)

	Yes (1)	**No (2)**	**D not know how (3)**
ALL respondents	19,2%$^{***(2,3)}$	78,2%	2,6%$^{***(1,2)}$
MEN	15,8%$^{***(2,3)}$	81,6%	2,6%$^{***(1,2)}$
WOMEN	22,5%$^{***(2,3)}$	75,0%	2,5%$^{***(1,2)}$
ENGAGED IN SPORTS	20,7%$^{***(2,3)}$	77,6%	1,7%$^{***(1,2)}$
NOT ENGAGED IN SPORTS	15,0%	80,0%$^{***(1,3)}$	5,0%

* (P<0.05); **(P<0.01); *** (P<0.001), in group- ***, between groups- $_{+++)}$

Comparison of the results of responses between the groups did not reveal a statistically significant difference. Within all groups, except for the group "Not engaged in sports", the results of the responses were statistically significantly different (Table 2). In this group, there was no statistically significant difference between results of the answers "Yes" and "Do not know how" ($p > 0.05$).

Most of the students participating in the survey did not know their resting pulse rate ($p < 0.001$) (Table 3). The other answers to the question "What is your resting heart rate?" were not statistically significantly different both between groups and within groups ($p > 0.05$).

Table 3. The distribution of responses to the question "What is your resting heart rate" (%)

	60 (1) bpm	**72 (2) bpm**	**84 (3) bpm**	**108 (4) bpm**	**(5) Do not know**
ALL respondents	9%	14,1%	10,3%	2,6%$^{*(1-3)}$	64,0%*** (1-4)
MEN	7,9%	15,8%	8,9%	0	68,4%*** (1-4)
WOMEN	10%	12,5%	12,5%	5,0%	60,0%*** (1-4)
ENGAGED IN SPORTS	12,0%	13,8%	12,0%	0	62,0%*** (1-4)
NOT ENGAGED IN SPORTS	-	15,0%	5,0%	10,0%	70,0%*** (1-4)

* (P<0.05); **(P<0.01); *** (P<0.001), in group- ***, between groups- $_{+++}$)

Only the response of all respondents is statistically reliable - the resting heart rate reaches 108 bpm and the results of other responses (Table 3) ($p < 0.05$).

Table 4 . The distribution of responses to the question "How long do you calculate the pulse rate? (%)

	10 s (1)	**30 s (2)**	**60 s (3)**	**Do not calculate (4)**
ALL respondents	2,6%	5,1%	24,3%$^{***(1,2)}$	68,0%$^{***(1-3)}$
MEN	5,3%	7,9%	15,8%$^{*(1)}{}_{++}$	71,0%$^{***(1-3)}$
WOMEN	0	2,5%	32,5%$^{***(1,2)}{}_{++}$	65,0%$^{***(1-3)}$
ENGAGED IN SPORTS	3,4%	5,2%	20,7%$^{***(1,2)}{}_{+}$	70,7%$^{***(1-3)}$
NOT ENGAGED IN SPORTS	0	5,0%$^{***(3)}$	35,0%$^{*(4)}{}_{+}$	60,0%$^{***(1-2)}$

* (P<0.05); **(P<0.01); *** (P<0.001), in group- ***, between groups- $_{+++}$)

Most respondents do not control, do not count their pulse rate. This tendency is evident in all groups ($p < 0.001$) (Table 4). The largest part of those who are controlling their pulse calculate it by 60 s ($p < 0.001$). The statistically significant difference was found between the students (Table 4):

- men measuring pulse during 10 and 60 s ($p < 0.05$), and women - 30 and 60 s ($p < 0.001$);

-engaged, not engaged in sports students who marked the answer 60 s ($p < 0.001$), 30 and 10s;

- men and women ($p < 0.01$) and those who were engaged and not engaged in sports ($p < 0.05$), marked the answer 60 s;

66.7% ($p < 0.001$) of all respondents answered "Yes" to the question "Does blood pressure reflect physical health status?" 57.9% of men, 75% of women, 65.5% of engaged and 70% of

not engaged in sports students responded analogously ($p < 0.001$). The rates of this response among men and women are statistically significantly different ($p < 0.05$).

The answers "No" (12.8%) and "I do not know" (20.5%) were statistically significantly indicated by ($p < 0.05$) the total number of respondents. The statistically significant differences between men (15.8% and 26.3%), women (10% and 15%), engaged in sports (13.8% and 20.7%), not engaged in sports (10% and 20%) groups were not found. There is no difference found between the groups as well. Two answers: "Yes" and "No" to the question "Do you measure blood pressure?" were given in the questionnaire. 30.8% of respondents, 28.9% of men, 32.5% of women, 34.5% of engaged and 20% of not engaged in sports respondents noted that they measure their blood pressure. In all groups, a statistically significant ($p < 0.001$) higher number of respondents did not measure their blood pressure. There was no significant difference in the reliability of the answers between the groups.

Table 5. The distribution of responses to the question "How often do you measure your blood pressure?"(%)

	(1) **Once a week**	(2) **Once a month**	(3) **Once a year**
ALL respondents	13,0%$^{***(2,3)}$	56,5%	30,5%$^{**(2)}$
MEN	0	50%$_{+}$	50%$_{+}$
WOMEN	23,1%$^{**(2)}$	61,5%	15,4%$^{***(2)}{}_{++}$
ENGAGED IN SPORTS	5,3%$^{***(2,3)}{}_{+++}$	57,9%	36,8%$_{++}$
NOT ENGAGED IN SPORTS	50%$_{+++}$	50%	0

* (P<0.05); **(P<0.01); *** (P<0.001), in group- ***, between groups- $_{+++}$)

The respondents who measured their blood pressure, in most cases, marked the answer "Once a month" (Table 5). More men (50%) than women (15.4%) measured blood pressure once a year ($p < 0.01$). The statistically significant difference was found between the responses ($p < 0.001$) of engaged in sports students (5.3%) and not engaged in sports (50%) students who measured their blood pressure once a week.

The statistically reliable ($p < 0.001$) majority of the respondents who did not measure their blood pressure substantiated such a decision by marking the answer "I feel well" - 75.5% of all respondents; 73.1% of men; 77.8% of women; 75.7% of engaged and 75% of not engaged in sports students. The answers to "No conditions" or "I do not care" were noted by a relatively similar number of the respondents. Accordingly, 7.7% and 19.2%, statistically significantly different were the answers given by the male group ($p < 0.05$). A reliable difference in the results of these answers among all students (9.4% and 15.1%) or individual groups (women -

11.1% and 11.1%, engaged 10.8% and 13.5%, not engaged in sports 6.3% and 18.8%) was not established. There was no statistically significant difference between the results of the groups.

In response to the question "What is your blood pressure?" the larger ($p < 0.001$) part of the respondents indicated "I do not know": 57.7% of all respondents, 60.5% of men, 55% of women, 58.6% of engaged and 55% of not engaged in sports students. There was no statistically significant difference between the results of the surveyed groups. By indicating their blood pressure, the students who participated in the survey selected the answer "120/80" most often (37.2%). The results of men (36.8%;) and women (37.5%), as in the case of engaged (39.7%) and not engaged in sports students (30%), did not statistically significantly differ ($p > 0.05$).

Students were able to give two answers to the question: "How would you try to get rid of overweight?" Compared to others ($p < 0.001$), the first two choices are the most popular responses - "Physical activity" and "Balanced nutrition". Accordingly, 92.3% and 79.5% of all respondents, 93.6% and 79% of men, 92% and 80% of women, 91.2% and 84.5% of engaged in sports students, 93.3% and 65% of not engaged in sports students. Other answers: "By starving", "Special diet", "Going to the sauna". Comparing the difference between the groups of women (12.5%) and men (0%) and not engaged in sports (20%) and engaged in sports students (1.8%), the proportion of women and not engaged in sports students would more likely choose starving ($p < 0.001$) as the way to decrease overweight. There was no statistically significant difference between the other responses.

39.8% of all the students who took part in the survey remained hard-working due to drinking coffee. The smaller number of respondents (25.6%, $p < 0.05$) noted that they were energized by physical exercise. Correspondingly, 29% and 26.3% of men and 50% and 25% ($p < 0.01$) of women and the majority (37.8% and 29.3%) of engaged and (45% and 15%) of not engaged in sports students marked these answers (Table 6).

Table 6. The distribution of responses to the question "I remain hard-working during the day when I…"(%)

	(1)Drink coffee	**(2) Exercise**	**(3)Have rich breakfast**	**(4)Eat non animal-origin food**
ALL respondents	39,8% ***(3)	25,6% *(1)	12,8% **(2)	16,7% ***(1)
MEN	29% ++	26,3%	23,7% +	15,8%
WOMEN	50% **(2) ++	25,0% **(3)	7,5% ***(1);**(4) +	17,5% ***(1)
ENGAGED IN SPORTS	37,8%	29,3% *(3,4) +	15,5% ***(1)	17,2% ***(1)
NOT ENGAGED IN SPORTS	45% **(2-4)	15,0% +	15,0%	15,0%

* (P<0.05); ** (P<0.01); *** (P<0.001), in group- ***, between groups- +++)

Comparing the choice of men and women, the latter ones gave statistically significantly higher priority ($p < 0.01$) to coffee while men to breakfast ($p < 0.05$). In the majority of respondents, men, women, engaged and not engaged in sports students consider that in order to improve their physical health, first of all, it is necessary to get rid of negative habits and choose physical activity performing exercises with doses ($p < 0.001$). The statistically significantly lower proportion of the respondents emphasized the importance of a special diet, vitamin use and lean food (Table 7). There was no statistically significant difference between the groups' response results.

Table 7. The distribution of responses to the question "Which three ways of improving physical health would you choose? (%)

	(1)Exercises with dosed load	**(2)Eliminate negative habits**	**(2)Special diet**	**(4)Vitamins**	**(5)Eat leaner food**
ALL respondents	55,1%	66,7%	30,8%^{***1,2}	26,9%^{***1,2}	30,8%^{***1,2}
MEN	60,5%$^{***(3,5)}$	63,2%$^{***(3,5)}$	29,0%	34,2%^{**1,2}	23,7% $^{+}$
WOMEN	50,0%$^{*(3)}$	70,0%$^{***(3,5)}$	32,5%	20,0%^{***1,2}	37,5% $^{+}$
ENGAGED IN SPORTS	56,9%$^{***(3-5)}$	63,8%$^{***(3-5)}$	31,0%	29,3%	24,1%
NOT ENGAGED IN SPORTS	50,0%$^{*(2)}$	75,0%^{***3,4}	30,0%	20,0%^{*1,5}	50,0%^{*2}

* (P<0.05); **(P<0.01); *** (P<0.001), in group- ***, between groups- $_{+++)}$

DISCUSSION

When analyzing the survey data from a retrospective point of view [43],[44], it can be stated that in the course of 12 years, the students' attitude to their physical health did not change. Scientists who perform similar surveys receive relatively different results. One study claims that almost half of the respondents [45], , while others [46] - - a higher proportion of respondents consider their health to be good, women worse than men. Our study did not identify such circumstances. Compared to previous year's studies [47],[48], , there was a slight tendency to visit

[43] Muliarčikas A., Morkūnienė A., Štarevičius E., Mickevičius V. Būsimų pareigūnų – LTU studentų – požiūris į fizinės sveikatos būklės kontrolę ir valdymą. *Ugdymas. Kūno kultūra. Sportas.* 2005, 2 (56): 21-27.
[44] Muliarčikas A., Veršinskas R., Stanislovaitis A. Studentų fizinės sveikatos tausojimo, gerinimo, pulso bei kraujospūdžio kontrolės ir mankštinimosi laisvalaikiu sąsajos analizė. *Ugdymas. Kūno kultūra. Sportas.* 2006, 2(61): 32–38.
[45] Šulnienė R. Studenčių požiūrio į fizinį aktyvumą ir sveikatą kaita. *Jaunųjų mokslininkų darbai*. 2012, 5 (38): 57-61.
[46] Proškuvienė R., Černiauskienė M. Būsimų kūno kultūros specialistų sveikata ir gyvensena. *Visuomenės sveikata*. 2009, 2(45): 67-72.
[47] Muliarčikas A., Morkūnienė A., Štarevičius E., Mickevičius V. *op. cit*. p.22
[48] Muliarčikas A., Veršinskas R., Stanislovaitis A. *op. cit*. p. 34

doctors less often. Similarly to other authors' research,[49] , women are more likely to visit doctors than men.

There was a gradual decrease in the proportion of students who control their pulse rate and an increase in those who do not know the values of heart rate [50]. Students' opinion that blood pressure reflects the state of physical health of a person has not changed statistically significantly since 2005. Comparing the results of the current survey and previous research [51,52] , we can claim that a 3-8% higher proportion of respondents do not measure their blood pressure, and its values are not known by a relatively similar proportion of respondents. In the retrospective aspect, nearly 20% more current respondents stated that they did not measure the blood pressure due to their good condition. Other researchers [53],[54] highlight the fact that women measure blood pressure more often. We found only a similar trend, but not a statistically significant reliable fact.

As in previous studies [55],[56] , the students who participated in our research, in order to reduce or eliminate overweight, favored physical activity and a balanced diet. Researchers have identified that the number of people who eat fresh vegetables has increased recently [57]. Attention should be drawn to the fact that a significantly higher proportion (about 40%) of the current study population emphasized the benefits of balanced nutrition. Such student responses are in line with other researchers' data [58],[59]. According to them the dietary habits of the population have changed - the quantity of fresh vegetable consuming people has increased.

When comparing students' answers about the ways of improving physical health and measures affecting their well-being throughout the day, physical activity prevails in the 1 to 2 responses. Similar opinions are followed by many other students who have participated in the

[49] Grabauskas V, Klumbienė J, Petkevičienė J ir kt. *Suaugusių Lietuvos žmonių gyvensenos tyrimas, 2014*, *supra note* 22, p. 23.
[50] Muliarčikas A., Morkūnienė A., Štarevičius E., Mickevičius V *op. cit*. p. 24
[51] , Muliarčikas A., Morkūnienė A., Štarevičius E., Mickevičius V *op. cit*. p. 25
[52] Muliarčikas A., Veršinskas R., Stanislovaitis A. *op. cit*. p. 36
[53] Grabauskas V., Klumbienė J., Petkevičienė J. ir kt. *Suaugusių Lietuvos žmonių gyvensenos tyrimas 2012*. *supra note* 25, p. 21.
[54] Grabauskas V, Klumbienė J, Petkevičienė J ir kt. *Suaugusių Lietuvos žmonių gyvensenos tyrimas, 2014*. *supra note* 22, p. 26.
[55] Muliarčikas A., Morkūnienė A., Štarevičius E., Mickevičius V. *supra note* 43 p. 25.
[56] Muliarčikas A., Veršinskas R., Stanislovaitis A. *supra note* 44 p. 34.
[57] Grabauskas V, Klumbienė J, Petkevičienė J ir kt. *Suaugusių Lietuvos žmonių gyvensenos tyrimas, 2014 supra note* 22, p. 29.
[58] Grabauskas V, Klumbienė J, Petkevičienė J ir kt. *op.cit.* p. 70-98.
[59] Studentų fizinio aktyvumo ir sveikatingumo ugdymo aukštojoje mokykloje analizė: studentų poreikiai ir galimybės. Tyrimo ataskaita. [interactive] Klaipėda, 2015. [accessed 2018-04-10] http://www.jrd.lt/informacija-dirbantiems-su-jaunimu/informacija-apie-jaunima/tyrimai/student_fizinio_aktyvumo_ir_sveikatingumo_ugdymo_auktojoje_mokykloje_a....pdf

study [60],[61],[62],[63]. In our research, women feel better when they drink coffee in the morning, while men – when they have breakfast. Daily breakfast in many respects has a positive effect on people's health [64]. Compared to the previous investigations [65],[66] , nowadays, significantly more students who participated in the survey emphasized the importance of abandoning harmful habits[67] to improve physical health.

Summing up the results, we can claim that some respondents are familiar with the information on the most basic indicators of the cardiovascular system and know the measures to maintain and improve physical health. Like many students [68] , their knowledge in this area is not sufficient and poorly applied in practice. The cardiovascular system of young people can function to high physical activity[69] , but the process of education without targeted monitoring and management can lead to negative consequences. The most common causes of death in Lithuania are diseases of the circulatory system [70], , which occur at an earlier age. We believe that it is necessary to include study curriculum subjects which provide information on the aspects of health promotion [71],[72] and improvement as well as encourage an interest in healthy lifestyle [73]. Such measures are likely to facilitate the optimization, individualization and management of the self-development process [74] and avoid negative consequences.

---

[60] Muliarčikas A., Morkūnienė A., Štarevičius E., Mickevičius V. *op.cit*. p. 25
[61] Muliarčikas A., Veršinskas R., Stanislovaitis A. *op. cit.* p. 34.
[62] Karkockienė D. Medicinos ir sveikatos mokslų studentų patiriamo streso ypatumai ir jo įtaka miego kokybei. *Visuomenės sveikata*. 2011, 2(53): 83-92
[63] Studentų fizinio aktyvumo ir sveikatingumo ugdymo aukštojoje mokykloje analizė: studentų poreikiai ir galimybės. Tyrimo ataskaita. *op.cit.*
[64] Grabauskas V, Klumbienė J, Petkevičienė J ir kt. *op. cit.* p. 70.
[65]Muliarčikas A., Morkūnienė A., Štarevičius E., Mickevičius V. *op. cit.* p.24
[66] Muliarčikas A., Veršinskas R., Stanislovaitis A. *op. cit.* p 34.
[67] Moterys ir vyrai Lietuvos visuomenėje 2014. *Moterų ir vyrų pokyčių visose srityse išplėstinis lyginamasis poveikio vertinimas. Poveikio vertinimo ataskaita, supra note* 21.
[68] Proškuvienė R., Černiauskienė M. Būsimų kūno kultūros specialistų sveikata ir gyvensena. *Supra note 46,* p. 67-72.
[69] Bartkevičienė A., Bakšienė D., Vainoras A. et al The Impact Of Regular Long Term Physical Load on Cardiovascular Functional Parameters in Children And Adolescent Athletes. Sveikatos mokslai. 2013, 1(86): 53-59
[70] Mirties priežastys 2015. Higienos instituto Sveikatos informacijos centras, Vilnius. 2016
[71] Šulnienė R. Studenčių požiūrio į fizinį aktyvumą ir sveikatą kaita. *Jaunųjų mokslininkų darbai*. 2012, 5 (38): 57-61.
[72] Zajančkauskienė Z., E.Zajančkauskas *Studentų požiūris į visuomenės senėjimo problemą bei sveiko senėjimo prevencines galimybes.* Šiauliai. 2012. *https://www.google.lt/search?q=STUDENT%C5%B2+PO%C5%BDI%C5%AARIS+%C4%AE+VISUOMEN%C4%96S+SEN%C4%96JIMO+PROBLEM%C4%84+BEI+SVEIKO+SEN%C4%96JIMO+PREVENCINES+GALIMYBES&oq=STUDENT%C5%B2+PO%C5%BDI%C5%AARIS+%C4%AE+VISUOMEN%C4%96S+SEN%C4%96JIMO+PROBLEM%C4%84+BEI+SVEIKO+SEN%C4%96JIMO+PREVENCINES+GALIMYBES&aqs=chrome..69i57j69i60l3.5759j0j8&sourceid=chrome&ie=UTF-8* [interactive] [accessed 2018-04-10]
[73] Moterys ir vyrai Lietuvos visuomenėje 2014. *Moterų ir vyrų pokyčių visose srityse išplėstinis lyginamasis poveikio vertinimas. Poveikio vertinimo ataskaita, supra note* 21.
[74] Karkockienė D. Medicinos ir sveikatos mokslų studentų patiriamo streso ypatumai ir jo įtaka miego kokybei. *Visuomenės sveikata*. 2011, 2(53): 83-92

CONCLUSIONS

According to the respondents of our research, future statutory officials, they are taking care of their health. The results of the survey are partly confirmed by such a statement. However, the majority of respondents did not control the frequency of heartbeat and did not know the values of their pulse.

More than two thirds of the respondents did not measure their blood pressure and did not know their values. Taking into account the fact that students need to improve endurance, strength and speed themselves while they do not manage and use the most basic health monitoring measures, a risk of provoking certain cardiovascular diseases appears.

Students have a certain amount of knowledge about the peculiarities of healthy lifestyle. The results of the survey suggest that there is a lack of practical skills for the preservation and improvement of physical health.

Students need to gain more knowledge about the most basic indicators of monitoring the main body systems; to be able to use them practically in the process of physical preparation, to develop adequate levels of personal physical activity programs and realize the principles of healthy lifestyle.

REFERENCES

1. Adams, J., Schneider, J., Hubbard, et. Al (2010). Measurement of functional capacity requirements of police officers. *Baylor University Medical Center Proceedings* 2010, 23. 7-10. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2804486/# [interactive] [accessed 2018-03-20].
2. Anforderungen des Auswahlverfahrens im Sporttest der Bundespolizei http://www.sporttest-polizei.de/bundeslaender/bundespolizei/ (interaktyvus, žiūr. 2018-02-19]
3. Anforderungen beim Sporttest der Polizei http://www.sporttest-polizei.de/bundeslaender/ [interactive] [accessed 2018-02-19]
4. Atranka į mokymo įstaigą. http://stokipolicija.lt/stojimas/lpm/atranka-i-mokymo-istaiga/ [interactive] [accessed 2018-02-14]
5. Bartkevičienė A., Bakšienė D., Vainoras A. et al The Impact Of Regular Long Term Physical Load on Cardiovascular Functional Parameters in Children And Adolescent Athletes. Sveikatos mokslai. 2013, 1(86): 53-59
6. Boyce, R. W., Jones, G. R., Schendt, K. E. et.al. Longitudinal changes in strength of police officers with gender comparisons. *The Journal of Strength Conditioning Ressearch* 2009, 23(8), 2411–2418.
7. Fiziskās sagatavotības vērtēšanas metodika amatpersonām ar speciālajām dienesta pakāpēm http://vsc.iem.gov.lv/wp-content/uploads/Metodika1.pdf [interactive] [accessed 2018-04-15]
8. Fiziskās sagatavotības prasības Iekšlietu ministrijas sistēmas iestāžu un Ieslodzījuma vietu pārvaldes amatpersonām ar speciālajām dienesta pakāpēm https://likumi.lv/doc.php?id=257102 [interactive] [accessed 2018-02-15]
9. Fortenbery J. H. An Exploratory Study on Physical Fitness Policies Among Police Departments in North Carolina. *Nova Southeastern University.* 2016. https://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1003&context=cahss_jhs_etd [interactive] [accessed 2018-04-018].

10. *Global action plan for the prevention and control of NCDs* 2013-2020. WHO. 2013, p. 55
11. Grabauskas V., Klumbienė J., Petkevičienė J. ir kt. *Suaugusių Lietuvos žmonių gyvensenos tyrimas 2012*. Kaunas: Lietuvos sveikatos mokslų universitetas, 2013.
12. Grabauskas V., Klumbienė J., Petkevičienė J. ir kt. *Suaugusių Lietuvos žmonių gyvensenos tyrimas 2014*. Kaunas: Lietuvos sveikatos mokslų universitetas, 2015.
13. Hallal P.C., Andersen L.B., Bull F.C. et al. Global physical activity levels: surveillance progress, pitfalls, and prospects. *The Lancet.* 2012 Jul 21;380(9838):247-57
14. Kales SN, Tsismenakis AJ, Zhang C, Soteriades ES. Blood pressure in firefighters, police officers, and other emergency responders. *Am J Hypertens* 2009;22:11-20.
15. Karkockienė D. Medicinos ir sveikatos mokslų studentų patiriamo streso ypatumai ir jo įtaka miego kokybei. *Visuomenės sveikata*. 2011, 2 (53): 83 – 92.
16. Leischik R., r Foshag P., Strauß et. all. Aerobic Capacity, Physical Activity and Metabolic Risk Factors in Firefighters Compared with Police Officers and Sedentary Clerks. *PLOS*. 2015. http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0133113#sec019 [interactive] [accessed 2018-03-13].
17. Lietuvos policijos generalinio komisaro 2016 m. liepos 18 d. įsakymas Nr. 5-V-581 (Lietuvos policijos generalinio komisaro 2017 m. balandžio 25 d. įsakymo Nr. 5-V-374 redakcija) "Policijos pareigūnų papildomų reikalavimų, susijusių su fiziniais ir praktiniais gebėjimais eiti tam tikras pareigas, ir atitikties šiems reikalavimams tikrinimo bei profesinio taktinio, specialaus fizinio rengimo pratybų ir sportinės veiklos organizavimo tvarkos aprašas".
18. Lietuvos Respublikos Švietimo ir mokslo mininsterija Socialinės apsaugos ir darmo ministerija. Pasieniečio rengimo standartas. Vilnius 2008. http://www.kpmpc.lt/Skelbimai/PDFstandartai/Pasienietis.LT.3.pdf [interactive] [accessed 2018-02-14].
19. Lietuvos Respublikos Švietimo ir mokslo mininsterija Socialinės apsaugos ir darmo ministerija. Policininko rengimo standartas. Vilnius 2008. http://www.kpmpc.lt/Skelbimai/PDFstandartai/Policininkas.LT.3.pdf [interactive] [accessed 2018-02-14]
20. Mirties priežastys 2015. Higienos instituto Sveikatos informacijoscentras, Vilnius. 2016, p. 188
21. Moterys ir vyrai Lietuvos visuomenėje 2014. *Moterų ir vyrų pokyčių visose srityse išplėstinis lyginamasis poveikio vertinimas. Poveikio vertinimo ataskaita.* Parengta pagal Valstybinės moterų ir vyrų lygių galimybių 2010-2014 metų programos priemonę Nr. 25.3. Socialinės apsaugos ir darbo ministerija. Kaunas. 2014.
22. Muliarčikas A., Kazlauskas V. Sportuojančiųjų ir nesportuojančiųjų Lietuvos veterinarijos akademijos studentų požiūrio į fizinį aktyvumą tendencijos. *Socialinių – humanitarinių mokslų vaidmuo universitetinio ugdymo sistemoje: mokslinių straipsnių rinkinys*. Kaunas: LŽŪU, 2000, p. 350-353.
23. Muliarčikas A., Stanislovaitis A. Kauno miesto gyventojų požiūrio į sveikatą ir fizinį aktyvumą tendencijų aspektai. *Visuomenės sveikata*. 2003, 4 (23): 57-63.
24. Muliarčikas A., Morkūnienė A., Štarevičius E., Mickevičius V. Būsimų pareigūnų – LTU studentų – požiūris į fizinės sveikatos būklės kontrolę ir valdymą. *Ugdymas. Kūno kultūra. Sportas.* 2005, 2 (56): 21-27.
25. Muliarčikas A., Veršinskas R., Stanislovaitis A. Studentų fizinės sveikatos tausojimo, gerinimo, pulso bei kraujospūdžio kontrolės ir mankštinimosi laisvalaikiu sąsajos analizė. *Ugdymas. Kūno kultūra. Sportas.* 2006, 2(61): 32–38.
26. Normy testu sprawności fizycznej dla policjantek w służbie https://www.wspol.edu.pl/zws/index.php?option=com_content&view=article&id=51:normy-testu-sprawnopci-fizycznej-dla-policjantek-w-ssuibie&catid=32:informator-dla-policjant [interactive] [accessed 2018-02-15]
27. Normy testu sprawności fizycznej dla policjantów w służbie https://wspol.edu.pl/zws/index.php?option=com_content&view=article&id=50:normy-testu-

sprawnopci-fizycznej-dla-policjant-w-ssuibie&catid=32:informator-dla-policjant [interactive] [accessed 2018-02-15]

28. Obwieszczenie Granicznej Ministra spraw wewnętrznych z dnia 13 lipca 2015 r. w sprawie ogłoszenia jednolitego tekstu rozporządzenia Ministra Spraw Wewnętrznych i Administracji w sprawie testu sprawności fizycznej funkcjonariuszy Straży. http://www.infor.pl/akt-prawny/DZU.2015.152.0001121,rozporzadzenie-ministra-spraw-wewnetrznych-i-administracji-w-sprawie-testu-sprawnosci-fizycznej-funkcjonariuszy-strazy-granicznej.html [interactive] [accessed 2018-02-15]
29. Politseiametniku ning Politsei- ja Piirivalveameti kõrgema ametniku kutsesobivusnõuded, nende kontrollimise tingimused ja kord https://www.riigiteataja.ee/akt/118042013016 [interactive] [accessed 2018-02-15]
30. Povolanie policajta https://www.minv.sk/swift_data/source/policia/prevencia/zakon_cest_a_odvaha/POVOLANIE%20POLICAJTA.pdf [interactive] [accessed. 2018-02-19]
31. **Previerky fyzickej zdatnosti** https://www.akademiapz.sk/prijimacia-skuska-0 [interactive] [accessed 2018-02-19]
32. Proškuvienė R., Černiauskienė M. Būsimų kūno kultūros specialistų sveikata ir gyvensena. *Visuomenės sveikata*. 2009, 2(45): 67-72
33. Specializuotos medicininės ekspertizės tvarka. https://cmek.vrm.lt/tvarka.php [interactive] [accessed 2018-02-14].
34. Sport and physical activity. *Report. Eurobarometer. 2014*. http://ec.europa.eu/public_opinion/archives/ebs/ebs_412_en.pdf [interactive] [accessed 2018-04-06].
35. Stok į policiją. Viskas ką reikia žinoti, jei nori tapti policijos pareigūnu. http://stokipolicija.lt/stojimas/pradzia/ [interactive] [accessed 2018-04-19].
36. Studentų fizinio aktyvumo ir sveikatingumo ugdymo aukštojoje mokykloje analizė: studentų poreikiai ir galimybės. Tyrimo ataskaita. Klaipėda, 2015. http://www.jrd.lt/informacija-dirbantiems-su-jaunimu/informacija-apie-jaunima/tyrimai/student_fizinio_aktyvumo_ir_sveikatingumo_ugdymo_auktojoje_mokykloje_a...pdf [interactive] [accessed 2018-04-10]
37. Šulnienė R. Studenčių požiūrio į fizinį aktyvumą ir sveikatą kaita. *Jaunųjų mokslininkų darbai*. 2012, 5 (38): 57-61.
38. Taylor A.J., Watkins T., Bell D. et al. Physical activity and the presence and extent of calcified coronary atherosclerosis. *Medicine & Science in Sport & Exercise*. 2002, 34: 228 – 233.
39. The 11 components of proper police fitness. https://www.policeone.com/police-products/fitness-health-wellness/articles/508738-The-11-components-of-proper-police-fitness/ [interactive] [accessed 2018-03-11]
40. Volanti J.M., Ma C.C., Fekedulegn D. et al. Associations Between Body Fat Percentage and Fitness among Police Officers: A Statewide Study. *Safety and Health at Work*. 2017, 8 (1): 36-41.
41. Varvarigou V., Farioli A., M. Korre et. al. Law enforcement duties and sudden cardiac death among police officers in United States: case distribution study.*BMJ.* (Published 18 November 2014). http://www.bmj.com/content/bmj/349/bmj.g6534.full.pdf [interactive] [accessed 2018-03-12].
42. Warburton D.E.R., Nicol C.W., Bredin S.S.D. Health benefits of physical activity: the evidence. *Canadian Medical Association Journal.* 2014, 174(6): 801-809. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1402378/ [interactive] [accessed 2018-04-06].
43. Williams J., Ramsey V. The Need for Law Enforcement Wellness Interventions: A Critical Review. *The Sport Journal.* 2017 (57), September 5 http://thesportjournal.org/article/the-need-for-law-enforcement-wellness-interventions/ [interactive] [accessed 2018-03-12]
44. Zajančkauskienė Z., E.Zajančkauskas *Studentų požiūris į visuomenės senėjimo problemą bei sveiko senėjimo prevencines galimybes.* Šiauliai. 2012.

https://www.google.lt/search?q=STUDENT%C5%B2+PO%C5%BDI%C5%AARIS+%C4%AE+VISUOMEN%C4%96S+SEN%C4%96JIMO+PROBLEM%C4%84+BEI+SVEIKO+SEN%C4%96JIMO+PREVENCINES+GALIMYBES&oq=STUDENT%C5%B2+PO%C5%BDI%C5%AARIS+%C4%AE+VISUOMEN%C4%96S+SEN%C4%96JIMO+PROBLEM%C4%84+BEI+SVEIKO+SEN%C4%96JIMO+PREVENCINES+GALIMYBES&aqs=chrome..69i57j69i60l3.5759j0j8&sourceid=chrome&ie=UTF-8 [interactive] [accessed 2018-04-10]

45. Zimmerman FH. Cardiovascular disease and risk factors in law enforcement personnel: a comprehensive review. *Cardiol Rev* 2012;20:159-66.

STUDENTŲ POŽIŪRIO Į SAVARANKIŠKĄ FIZINĮ AKTYVUMĄ ASPEKTAI

Algirdas Muliarčikas*
Mykolo Romerio Universitetas

S a n t r a u k a

Straipsnyje analizuojami būsimųjų teisėsaugos pareigūnų, Mykolo Romerio universiteto Viešojo saugumo fakulteto studentų anketinės apklausos rezultatai. Gauti apklausos rezultatai atspindi studentų požiūrį į savo sveikatą, žinias apie elementariausius žmogaus organizmo būklę charakterizuojančius fiziologinius rodiklius bei fizinės sveikatos tausojimo ir gerinimo būdus.

Straipsnio tikslas - išsiaiškinti studentų santykio su elementariausiais Širdies kraujagyslių sistemos būklės kontrolės rodikliais bei fizinės sveikatos tausojimo ir gerinimo būdais ypatumus.

Straipsnyje analizuojami vyrų (n=76) ir moterų (n=80), įstojusių 2014 metais į Mykolo Romerio universiteto Viešojo saugumo fakultetą, anketinės apklausos rezultatai. Tyrime dalyvavusiųjų amžiaus vidurkis – 21 metai. Anketa aprobuota įgyvendinant Kauno miesto Sveikatos skyriaus programą „Fizinis aktyvumas“. Visi gauti duomenys buvo priskirti santykinėms grupėms ir analizuoti atsižvelgiant į lyties (vyrų ir moterų grupė) ir studentų fizinio aktyvumo (laisvalaikiu sportavo ar nesportavo) aspektus. Tyrime naudoti analizės, apklausos, abstrakcijos, apibendrinimo, matematinės statistikos (duomenų skirtumo patikimumui nustatyti pagal $\chi 2$- - chi kvadrato rodiklį) metodai.

Statistiškai patikimai didesnė respondentų (87,2%) dalis teigė, kad rūpinasi savo sveikata. Ja rūpinasi didesnė dalis sportuojančių (94,8%) studentų, lyginant su nesportuojančiais, (65,0%). Vienodas respondentų kiekis savo sveikatos būklę įvertina kategorijomis „gera“ (48,7%) ar „patenkinama“ (48,7%). Ženkliai mažesnė dalis – „nepatenkinama“ (1,3%) ir „bloga“ (1,3%). Didžiausia dalis visų apklaustų bei suskirstytų pagal respondentų grupes, dėl ligos pas gydytoją lankėsi 1-2 kartus per metus. Skirtingai nei vyrai, 17,5% apklausoje dalyvavusių moterų, pažymėjo, kad pas medikus lankėsi 3-5 kartus per metus. „Ar kontroliuojate (skaičiuojate) pulso dažnį?“ - 78,2% respondentų pažymėjo atsakymą „Ne“; 19,2% - „Taip“ ir 2,6 % – „Nemoku“ skaičiuoti. Dauguma apklausoje dalyvavusių studentų neskaičiuoja ir nežino savo pulso pulso dažnio ramybės būklėje (68,0% ir 64,0). Kad matuoja kraujospūdį atsakė 32,1% visų respondentų, 28,9% vyrų, 32,5% moterų, 34,5% sportuojančių ir 20% nesportuojančių respondentų. Visose grupėse statistiškai patikimai didesnis skaičius atsakiusių, kad nematuoja kraujospūdžio. Statistiškai patikimai didesnė dalis nematuojančių kraujospūdžio respondentų, tokį sprendimą pagrindė pažymėdami atsakymą „Gerai jaučiuosi“ - 75,5%. Atsakydami į klausimą „Koks Jūsų kraujospūdis?“ - didesnė (57,7%) respondentų dalis pažymėjo atsakymą „Nežinau“. Studentų nuomone, atsikratant antsvorio, reikėtų teikti prioritetą fiziniam aktyvumui (92,3%) ir suderintai mitybai (79,5%). Iš visų anketavime dalyvavusių studentų 39,7% dieną būna darbingi kai ryte išgeria kavos, o 25,6% – atlikę fizinę mankštą. Lyginant vyrų ir moterų pasirinkimą, pastarosios statistiškai patikimai didesnį prioritetą suteikė kavai. Gausesnės dalies visų respondentų ($p<0,001$) vyrų, moterų, sportuojančių ir nesportuojančių studentų nuomone, siekiant pagerinti savo fizinę sveikatą pirmiausia reikėtų rinkis fizinę veiklą atliekant dozuoto krūvio fizinius pratimus, taikyti specialią dietą bei vartoti vitaminus.

Pagrindinės sąvokos: fizinė sveikata, širdies tvinksnių dažnis, kraujospūdis, būklės kontrolė, būsimieji pareigūnai.

Algirdas Muliarčikas* Doc. dr. Mykolo Romerio universiteto Viešojo saugumo fakulteto Valstybės sienos apsaugos katedros lektorius. Mokslinių tyrimų kryptys: visuomenės fizinis lavinimas ir sveikatinimas, fizinės prievartos veiksmai ir jų panaudojimo aplinkybės, fizinio parengtumo ir asmens saugumo sąsaja.
Algirdas Muliarčikas* Assoc. prof. Dr. Mykolas Romeris University, Faculty of Public security, Department of State Border Protection. Research interests: Human physical education and healthiness, circumstances of physical violence actions and its resort, correlation of physical training and personal security.