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ÍNDICE

EDITORIAL

This special issue of TMQ Magazine is dedicated to Healthcare Quality.

Healthcare quality is the promotion and provision of effective and safe care, reflected in a culture of excellence, resulting in the attainment of optimal or desired health. The aim of fostering the quality of healthcare is improving the experience of care, improving the health of populations, and reducing per capita costs of health care. Whereas worsening quality indicators of healthcare might shake public trust in the overall healthcare system, the quality of healthcare is receiving increasing attention from researchers. However, where exactly does healthcare quality begins and where does it ends? The routine of healthcare quality involves with professionals (their medical and soft competencies and education of those), patients (their needs, expectancies, and education), institutions (and their development), and regulatory agencies among the many parties regularly referring to it. Regarding to that the original articles in this issue deal with the following topics: Assessment of the quality of studies by the students of health sciences; Factors of psychosocial work environment and their impact on stress experienced by nurses; Blood donors' opinion on nurse communication; Perception of causes of disease in patients with acute coronary syndrome on risk factors of cardiovascular disease; Women's Awareness about Epidural Anesthesia during Childbirth; and Nurses Role in Educating Self-Care After Hysteroscopy.

Evidence suggests that the safety and quality of care in healthcare institutions can be recognizably improved by educating healthcare professionals and patients. Therefore, health research becomes essential, and the scientific evidence it generates can be put into use in everyday practice in order to improve healthcare quality.

Thus, we thank all our Authors and Reviewers for their tremendous efforts and all the time they have spent in recent months to produce this issue. Their efforts highlight the importance of interdisciplinarity in researches of healthcare quality and confirm that quality should become an academic and scientific issue with its own educational content and research.

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Perception of causes of disease in patients with acute coronary syndrome on risk factors of cardiovascular disease

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Abstract:
Acute coronary syndrome (hereinafter referred as ACS) is one of the main cardiovascular diseases that is a life-threatening one. That's why it is highly relevant to pay attention to the knowledge acquired by patients on the risk factors causing cardiovascular disease (hereinafter referred as CVD). The aim of the research is to analyse the awareness of causes of disease in patients with ACS. Research methodology is based on a quantitative research, whereas the adapted questionnaire has been used for data collection. Part of the instrument on possible causes of disease from Illness Perception Questionnaire (IPQ-R) has been applied for this research. Internal compatibility of their perception scale is sufficiently high and Cronbach's alpha equals to 0.84. SPSS 17.0.1 for Windows statistics software package has been applied for the research accomplished. Research sample consists of 199 patients with ACS. The research has been accomplished with regard to the principles of research ethics. After the perception of causes of disease in patients with ACS depending on sociodemographic indicators has been analysed it has been identified that women considerably more frequently have emphasized heredity (r=0.16; p=0.028), whereas men emphasized smoking (r=-0.17; p=0.015). The researched ones in the majority of cases tend to relate the causes of their disease with risk factors and psychological aspects; the least of the researched ones related them to coincidence and immune system. After the opinion of the researched has been analysed on 3 most important causes of their disease it has been determined that the majority tend to put into the first place stress/anxiety while the second position is occupied by food and bad eating habits, smoking, and heredity. Overwork and ageing as the causes of disease more frequently have occupied the third place.

Key words:
Ischemic heart disease; patients; acute coronary syndrome; risk factors.

1. Introduction

Acute coronary syndrome (ACS) is one of the main cardiovascular diseases that is a life-threatening one. This is one of the most common reasons of hospitalization in the world. The syndrome could transform from unstable angina (UA) to acute myocardial infarction (AMI) and irreversible myocardial necrosis. ACS definition depends on specific characteristics of each element of clinical triad, electrocardiographic changes, and biochemical heart markers. Increase in biochemical markers and electrocardiographic changes are not necessarily typical of ACS; sometimes the diagnosis fixed in documents is enough (Thygesen et al., 2012).

80 % of diseases caused by cardiovascular disorders in the world are attributed to the countries of low and average income (Benjamin et al., 2017). Major part of all death cases related to cardiovascular diseases (51 %) is attributed to women (Izadnegahdar et al., 2014). Lithuanian statistics proves it by providing the death reasons of Lithuanians that have not changed for many years. In 2017 40,142 people died from circulatory system diseases in the country: 19,286 men and 20,856 women (The Register of Death Causes, 2018). By means of the research done in Spain the tendency of increase in ACS cases has been determined and it has been forecasted that the number of ACS cases from 2013 to 2049 will have increased from 69 % to 116 % whereas the number of the diseased depending on sex will have been increased to 6 % of men and 26 % of women with the age from 25 to 74 (Degano et al., 2013).

Accordingly, increase in morbidity of cardiovascular diseases directs greater attention towards the patients with these diseases as well. The research of knowledge on risk factors of cardiovascular disease (CVD) done by patients themselves is of high relevance. Comprehensive research on knowledge of patients diagnosed with ACS is based on the understanding of patients themselves about their health state, self-evaluation as well as the efforts directed towards the understanding of a disease.

The aim of the research is to analyse the awareness on factors of cardiovascular disease in patients with acute coronary syndrome.

2. Spread of the disease and risk factors in patients with ACS

Yearly more and more people die from cardiovascular diseases compared to any other diseases. Aging population as well as higher standard of living are distinguished as major reasons of this (Mahmood et al., 2014). In addition, it has been estimated that the number of people over 50 until 2050 will have increased to 35 % whereas the number of people over 85

will have tripled. Moreover, it is forecasted that one in three of elderly people will probably suffer from chronic disease or disability including cardiovascular diseases that limit independence (Jaarsma et al., 2014).

As the origin of ACS is multiple it is not enough to determine any particular risk factor; therefore, it is important to identify and evaluate all of them. Over two hundred risk factors are known today. While analysing scientific articles it has been noticed that risk factors are called differently: traditional (reversible) and non-traditional (irreversible) or modifiable and non-modifiable. All over the world risk factors are the same with the difference of their denomination; therefore, different names of them have been found.

Traditional risk factors are smoking, hypertension, low level of high-density lipoproteins (HDL), high level of low-density lipoproteins (LDL), metabolic syndrome, diabetes, atherosclerosis, insufficient physical activity, inappropriate nutrition (insufficient amount of fruits and vegetables), chronic stress, depression etc. Non-traditional risk factors are age (in case of men it increases after 45, whereas in case of women after 55), genetic reasons such as inheritance (cardiac diseases and deaths in first degree relatives of men under 55 and women under 65), race and ethnic group (Musunuru et al., 2010; Burokienė et al., 2013; Sasidhar et al., 2014).

While analysing literature and searching for connections among risk factors it has been attempted to bring to light the effect of risk factors and the causes of disease; consequently, it is significant to determine the spread of risk factors of diseases. Although in Lithuania as well as in other countries of European Union the life expectancy of residents has been increasing their health is not good enough. Poor nutrition, low physical activity, unhealthy lifestyle (consumption of alcohol, tobacco or psychoactive substances as well as particular viewpoint towards oneself) increases morbidity and mortality although both of them could be avoided by applying appropriate means and making solutions. Apart from already mentioned risk factors social, economic, environmental, and in some cases political factors have great impact as well (Juozulynas et al., 2012). Comprehensive research done by scientists from Lithuania and abroad have contributed by dividing all the risk factors of cardiovascular diseases into two groups of traditional and non-traditional ones.

Traditional risk factors that could be controlled:

- smoking;
- high blood pressure;
- high level of lipids in blood;
- diabetes;

- imbalanced nutrition;
- obesity;
- low physical activity;
- permanent stress (depression).

Although there are about 200 risk factors these are distinguished as essential and most frequent ones.

Non-traditional risk factors that could not be controlled:

- age (men over 45 and women over 55);
- inheritance;
- already-diagnosed atherosclerotic disease of blood vessels (heart, brain, blood vessels in legs etc.);
- sex (male).

Knowledge acquired on the new genomic variations (there are approx. 90 of them) causing risk could help in identifying new causal biological processes as well as improving diagnosing and treatment (Roberts, 2018). Risk factors are co-related and strengthen the impact of each other. The more risk factors the higher chance to catch a disease. By knowing general risk, a doctor, a nurse, and a patient could make necessary decisions for more effective prophylaxis and treatment of cardiovascular diseases. Each patient independently from the level of risk factors should be provided with an opportunity to discuss as the discussions on lifestyle improvement that give a chance to choose appropriate nutrition, physical load, lipid rate as well as medicine for blood pressure reducing, treatment of diabetes, and medicine for myocardial infarction or giving up smoking could be useful for all people. The knowledge on the risk factors of cardiac diseases is the first stage in reducing of risk factors (Goff et al., 2014).

3. Research material and method

This research is aimed at analysing of awareness on risk factors of patients diagnosed with ACS. Scientific literature collection and analysis on the awareness of risk factors expression of patients with ACS started in January 2017 and continued until November 2018. The research has been accomplished from November 2018 to January 2019 at the Klaipeda University Hospital providing secondary level services. The contingent researched has consisted of 199 patients with ACS; the ones after coronagraphy and/or percutaneous coronary intervention fulfilled and have been treated at the hospital during the research period: 64.8 % men and 35.2 % of women. With regard to age the average equals to 63.71±11.27 years in the age group from 18 to 86. Education of the researched

differs; however, the major part of them (59.7 %) has acquired secondary/vocational education and about one third (34.7 %) of the researched has acquired higher education. Primary education has been obtained only by a small part of the researched (6.5 %). The majority (61.3 %) of the researched has been unemployed: 45.2 % of them are retired, 2.5 % retired with disability, 3.5 % unemployed and 10.1 % disabled ones.

A questionnaire has been chosen for the accomplishment of the research. The questionnaire measures demographic data, lifestyle, and knowledge on a cardiovascular disease. It is necessary to choose the most appropriate answer from the variants provided. The part of *Illness Perception Questionnaire* (IPQ-R) instrument on possible disease causes has been applied. Internal compatibility of their perception scale is sufficiently high and Cronbach's alpha equals to 0.84. These are 18 statements on possible disease causes that reflect personal opinion on a patient but not the causes identified by a doctor or family members (Moss-Morris et al., 2002). *Heart Disease Fact Questionnaire (*HDFQ) has been used there. The questionnaire consisting of 25 statements has shown sufficiently high internal compatibility (knows (1)/doesn't know (0) with Cronbach's alpha equalling to 0.78. HDFQ is a cognitive instrument consisting of 25 statements that is aimed at the researching of awareness on the risk factors of heart diseases. HDFQ instrument raises the question on risk in general but not on individual risk of a respondent. With the permission received from both authors of the instrument used double translation technique from English has been applied. The instrument is aimed to evaluate the awareness of patients on risk factors in case of cardiovascular disease and could be applied for scientific and clinical purposes (Wagner et al., 2005).

SPSS 17.0.1 for Windows statistics software package has been applied for the analysis of data. The spread of interval variables according to normal law by applying Kolmogorov-Smirnov Test as well as evaluating the sizes of asymmetry and excess rates. The distribution of all interval variables has corresponded to normality law. The data on interval variables has presented as an average ± standard deviation (M±SD), in case of rank variables as an average (median) (M(Me)), whereas in case of nominal variables as a number of cases (per cent) (n(%)). For the comparison of interval characteristics in two independent groups with normal distribution *One-Way ANOVA (F)* method with multiplex *Post Hoc* comparison has been used by applying *LSD* criterion. For the evaluation of occurrence frequency of characteristics *Chi-square* ($\square^2$) criterion has been applied. While analyzing the interrelations of characteristics Pearson (r) and Spearman (r) correlation methods have been applied. Significance levels of statistical hypotheses have been used: when $p<0.05$ it is considered as significant (*), when

p<0.01 (**) it is considered as highly significant, when p<0.001 (***) it is considered as extremely significant, whereas when p>0.05 (NS) it is considered as statistically insignificant.

4. Research Results

While analysing the distinction of causes of disease depending on the sociodemographic indicators of the researched it has been identified that 1) women considerably more frequently than men have emphasized inheritance (r=0.16; p=0.028), whereas men in a more frequent manner than women emphasized smoking (r=-0.17; p=0.015); older ones considerably more often than younger ones have accentuated ageing (r=0.20; p=0.004), whereas younger people have emphasized smoking (r=-0.18; p=0.011); 3) the researched with higher education level have distinguished food and bad eating habits (r=0.17; p=0.014), poor one's own healthcare in past (r=0.15; p=0.039), inheritance (r=0.15; p=0.039) while the researched with lower education level more often than those with higher one have emphasized overwork (r=-0.19; p=0.009) as well as weakly immune system (r=-0.15; p=0.036); 4) working people considerably more frequently compared to the unemployed have accentuated smoking (r=0.18; p=0.012), whereas the unemployed ones have distinguished ageing (r=-0.17; p=0.018) (Table 1).

Table 1 Influence of researched sociodemographic indicators on distinction of most important causes of disease

Causes	Sex		Age		Education		Job position	
	r	p	r	p	r	p	r	p
Stress/anxiety	0.13	ns	-0.06	ns	0.09	ns	-0.01	ns
Overwork	-0.08	ns	-0.09	ns	**-0.19**	**0.009**	0.09	ns
Emotional state	0.06	ns	0.08	ns	-0.12	ns	-0.07	ns
Negative attitude to one's life	-0.09	ns	-0.06	ns	0.01	ns	0.07	ns
Personality	-0.08	ns	0.03	ns	-0.02	ns	0.02	ns
Food or bad eating habits	0.08	ns	-0.02	ns	**0.17**	**0.014**	0.05	ns
Ageing	0.05	ns	**0.20**	**0.004**	-0.07	ns	**-0.17**	**0.018**
Poor one's own healthcare in past	0,04	ns	0.03	ns	**0.15**	**0.039**	-0.07	ns
Behaviour with regard to one's own health	-0.09	ns	0.03	ns	0.07	ns	-0.05	ns
Inheritance	**0.16**	**0.028**	-0.04	ns	**0.15**	**0.039**	-0.01	ns
Smoking	**-0.17**	**0.015**	**-0.18**	**0.011**	-0.10	ns	**0.18**	**0.012**
Alcohol consumption	-0.08	ns	-0.04	ns	-0.11	ns	0.05	ns
Environmental pollution	-0.12	ns	0.05	ns	0.02	ns	-0.11	ns
Weakened immune system	0.00	ns	0.05	ns	**-0.15**	**0.036**	-0.06	ns
Inflammation or viral infection	0.07	ns	-0.03	ns	0.09	ns	0.05	ns
Coincidence	-0.12	ns	-0.05	ns	-0.03	ns	0.00	ns

ns - stands for statistically non-significant correlation

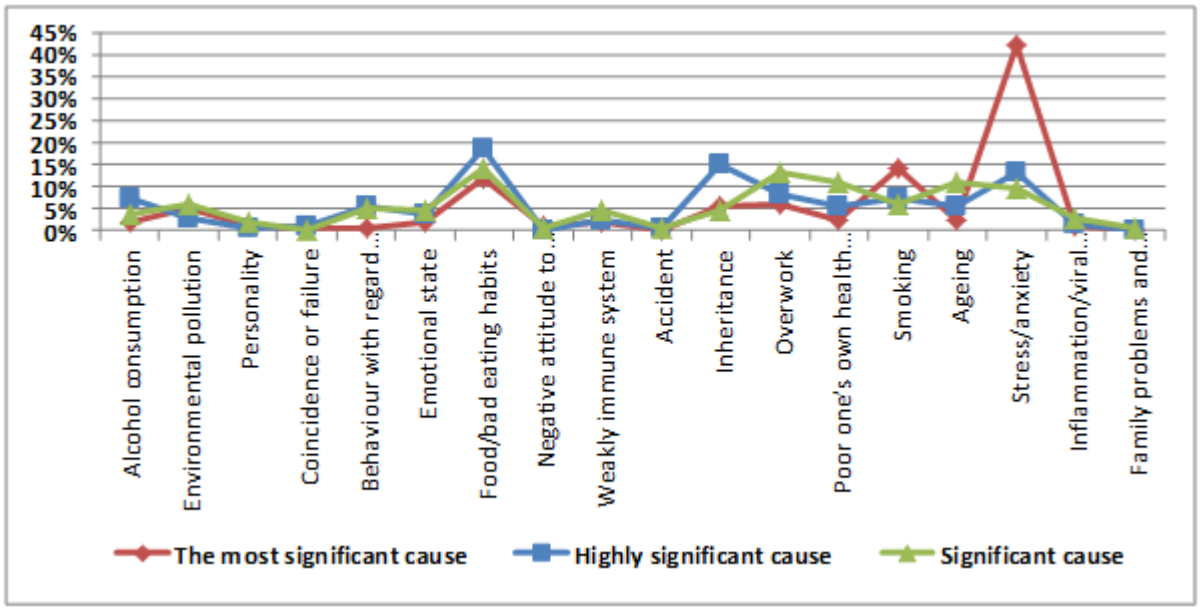
Research results have shown that the researched tend to relate one's own causes of disease mostly to risk factors (3.70±0.84 points) and psychological aspects (3.39±0.89 points), while the weakest relation has been distinguished with coincidence (2.62±1.16 points) or immune system (3.19±1.00 points). It has been identified that although, in the opinion of the major part of the researched, the cause of their disease is stress or anxiety (4.15(5) points) as well as overwork (3.81(4) points) other psychological aspects have been evaluated lower than risk factors. Most frequently, in the opinion of the researched, causes of their disease have been related to risk factors in particular with food or bad eating habits (3.88(4) points), ageing (3.86(4) points), poor one's own healthcare in past (3.70(4) points), and smoking (3.56(4) points) (Table 2).

Table 2 Evaluations of scales of causes of disease and their components in general group of researched

Scales	Causes	M±SD M(Me)
Psychological aspects		3.39±0.89
	Stress or anxiety	4.15(5)
	Overwork	3.81(4)
	Family problems/concerns	3.38(4)
	Emotional state	3.34(4)
	Negative attitude to life	2.83(3)
	Personality	2.81(3)
Risk factors		3.70±0.84
	Food or bad eating habits	3.88(4)
	Ageing	3.86(4)
	Poor one's own healthcare in past	3.80(4)
	Behaviour with regard to one's own health	3.76(4)
	Inheritance	3.70(4)
	Smoking	3.56(4)
	Alcohol consumption	3.33(4)
Immune system		3.19±1.00
	Environment pollution	3.57(4)
	Weakly immune system	3.24(3)
	Inflammation or viral infection	2.76(3)
Coincidence		2.62±1.16
	Accident or injury	2.69(3)
	Coincidence or failure	2.56(3)

During the research the researched have been asked to identify 3 most important factors damaging their health. After the opinion of the researched on the causes of disease has been analysed it has been determined that stress/anxiety is of high importance to the majority (42.2 %). Food or bad eating habits, smoking, and inheritance have been identified as the most

significant causes of disease and have occupied the second place. Overwork (13.1 %) and ageing (11.1 %) as the causes of disease have been evaluated in the third place (Picture 1).



Picture 1 Distribution of the researched according to distinction of 3 most significant causes of disease

5. Conclusions

After the analysis with regard to sociodemographic indicators of the researched has been fulfilled the distinction of the most significant causes of disease has been made as follows: 1) women considerably more frequently have emphasized heredity, whereas men, younger people, and working ones tend to accentuate smoking; 2) both the unemployed and older people considerably more often distinguish ageing; 3) the researched with higher education level considerably more frequently have emphasized food and bad eating habits, poor one's own healthcare in past, and inheritance while the researched with lower education level have distinguished overwork and weakly immune system.

Research results have shown that the researched tend to relate causes of their disease mostly with risk factors and psychological aspects; the least relation has been made with coincidence or immune system. It has been determined that although, in the opinion of the majority, the cause of their disease have been stress or anxiety as well as overwork, in the opinion of the researched, the causes of their disease have been related to risk factors in particular with food or bad eating habits, poor one's own healthcare in past, behaviour with regard to one's own health, ageing, inheritance, and smoking.

After the opinion of the researched on 3 main reasons of their disease has been analysed it has been identified that the majority tend to put into the first place stress/anxiety, whereas second place is occupied by food or bad eating habits, smoking, and inheritance. Overwork and ageing as the causes of disease more frequently have occupied the third position.

6. Literature

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Factors of psychosocial work environment and their impact on stress experienced by nurses

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Abstract:
In contemporary working life there are various important changes happening all the time. Changes in working life inevitably influence health, life, and work quality of the people working. The factors of psychosocial work environment are the major factors conditioning job satisfaction as well as the quality of it. Psychosocial work environment factors are related to the conditions of work environment, work requirements and control, work organisation, interpersonal relations among employees or between an employer and an employee; these factors cause stress to a person at work and they are the major factors conditioning job satisfaction. The aim of this research is to analyse the psychosocial work environment factors experienced by nurses as well as their influence on the stress suffered by them. Research methodology: Quantitative research has been accomplished, whereas the second version of the Copenhagen Psychosocial Questionnaire (COPSOQ II) has been applied for data collection. Results: Psychosocial work environment factors of nurses are the main sources of stress experienced except for impact and development prospects; there are statistically significant ($p<0.05$) connections identified. The greatest stress experienced at work is related to the lack of fairness and respect ($r=-0.36$; $p<0.001$). Burnout syndrome in nurses is statistically significantly related to almost all psychological work environment factors. Conclusions: Psychosocial work environment factors increase the risk of psychological state deteriorating in nurses as well as influence the stress experienced by nurses.

Key words:
Psychosocial work environment; psychosocial work environment factors; stress at work.

1. Introduction

The wellbeing of healthcare professionals, their mental health, and the influence of health on patient care have become the topic of high relevance and great interest in the world (Bridgeman et al., 2018). In recent decades scientists have acknowledged that psychosocial work environment and the influence of it on health, behaviour, and work results (related to patient care), effectiveness and productivity in an organisation is a significant research area (Tuvesson et al., 2011; Javaid et al., 2018). Healthcare professionals who provide patient care on a daily basis could not realize the influence of their health on their work (for example, unsatisfactory health state of healthcare professionals and burnout are related to worse results of patient care and increased risk of medical errors) (Bridgeman et al., 2018). Therefore, comprehensive understanding of psychosocial work environment of nurses is of high importance in order to respond to all patient needs. The factors of psychosocial work environment as well as stress experienced are treated as one of the major challenges for employees faced at work.

Stress is one of the greatest problems attributed to contemporary life in all its spheres. In scientific research articles the concept of *stress* has no unified definition. That means that there is no appropriate word or phrase that could describe *stress*. In dictionaries stress is defined as *physical, mental or emotional tension or the state or sense that is experienced when a person realizes that these requirements exceed personal or social resources that could be mobilised by a person* (The American Institute of Stress or AIS).

Stress experienced is related with changes in lifestyle (for example, increased consumption of alcohol and tobacco, drug abuse, sleep disorders, and lower physical activity), whereas it influences physical and mental health of a person (Salvagioni et al., 2017). Li – Ping Chou et al., (2014) and Salvagioni et al., (2017) have emphasised that continuous stress related to work could influence negatively the quality of work; moreover, it is related to accidents at work, lower job satisfaction level, loss in motivation to work, higher employee turnover, and the syndrome of employee burnout. Consequently, it causes danger not only to health of employees but also is attributed to greater medical errors as well as insufficient health care. Burnout is also related to increased number of truancies, leaving work, and insufficient quality of health care (for example, increased number of patient falls), medical errors, increased number of infection spreads, and negative influence of all of these factors on patient care (Gomez-Urquiza et al., 2017).

Psychosocial work environment is described as a multiple and complex phenomenon structured in three levels: task level that including control aspects; role expectations, and work requirements; social and organisational level including such aspects as social interaction, communication, management, and organisational culture; finally, individual level involving the aspects of commitments and work motivation (Tuvesson et al., 2011).

The factors of **work requirements and work control** such as the increase in workload, longer work hours, and more intensive work speed are generalised as increased work requirements (Kaliatkaitė et al. 2011). Rodwell et al., (2013) indicates that work requirements could be emotional and cognitive (emotional and mental strain caused by work) as well as quantitative and qualitative (how much of work could be done and what is the expected quality of it).

Work control is defined as *the ability of an employee to take work related decisions or participate in taking of them as well as the ability to choose the ways for work to be done (methods, speed, work environment, and workload)* (Pisanti et al., 2016). Lack in control at workplace could be related with patient complaints and expressed dissatisfaction of care, irregular work hours (overtime), lack of information on organisational solutions, and vague expectations that cause conflicts on role clarity (Bridgeman et al., 2018).

Work organisation is one of the factors of psychosocial work environment that is the system of organisational and technical instruments that leads to purposeful use of workforce and working time as well as creates normal conditions necessary for organisational level. Work organisation includes the identification of working time duration, its distribution throughout a day, work overtime, types of work contracts, work control, the aspects of salaries, organisation and maintenance of work places, ways and methods of work, work conditions, learning opportunities, and changes planning in an organisation (Pisanti et al., 2016).

Work content outlines the aspects of work meaning and diversity: independence in decision making (i.e. the lack of freedom in decision making), too high or too low influence in work planning and implementing, the quantity of information received as well as its acquisition, emotional tension (stress), monotony, and low job satisfaction. Clear comprehension of one's role at work, independence in decision making together with employer's support increases inner motivation of employees. These factors encourage positive emotions among working people as greater commitment to an organisation as well as positive attitude towards work has been built (Albrecht, 2012).

Interpersonal relations among employees and/or relations with an employer is the factor of psychosocial work environment covering culture at workplace, relations of employees in a team, the behaviour of management (for example, support, division of labour, and position of management), the ability to improve qualification, make decision in a free manner, and receive responses on the work accomplished. The atmosphere at workplace (for example, interpersonal relations in a team), the role of employees as well as responsibility taken have great impact on work results, efficiency, and attitude to work, whereas role uncertainty, discrepancy, and insufficiency are the source of stress for an employee (Kaliatkaitė et al. 2011).

Social support is the factor that helps to reduce negative impact of high work requirements and insufficient work control. Social support is related with the support received from colleagues and managers in an organisation. Greater support received from colleagues and managers gives a chance to forecast better psychological health of employees, greater job satisfaction, and commitment to one's place (responsibility) (Pisanti et al., 2016; Lawson et al., 2009).

Management is an integral factor of psychosocial work environment. In the opinion of Avey et al., (2010), management based on encouragement and enabling of employees as well as the acknowledgment of their achievements, providing of social support and other principles allows employees to understand one's own roles clearly, provides possibilities to seek for improvement, encourages not to be afraid to identify the problems appeared bravely and submit suggestions aimed at the improvement of conditions.

Summing up, it could be stated that psychosocial work environment is defined as a multiple and complex phenomenon. Each factor of psychosocial work environment makes specific impact on a nurse, a patient, and organizational culture. Such factors of psychosocial work environment as work requirements and work control are related to better psychological health of employees. Appropriate work organization could reduce negative effect caused by excessive requirements put on employees as well as psychological tension experienced. Communication based on trust, support from colleagues, and positive attitude of managers could decrease negative impact of excessive requirements on employees as well as psychological tension. The factors of psychosocial work environment in the work of nurses have impact on the emotional state of nurses and cause fatigue; those things in turn reduce the motivation of nurses to work well as well as cause stress or burnout at a workplace; thus, psychosocial work environment and the impact done by it on health, behaviour, and work results (related to patient care), efficiency, and productivity of nurses in an organisation is a substantial research field.

2. Research material and method

This research is done in order to analyse the opinion of nurses on the factors of psychosocial work environment. While accomplishing this research the collection and analysis of scientific literature has been fulfilled from January 2017 until November 2018. The research has been accomplished in the medical institutions located in Klaipeda that provide secondary level service (October 2018-December 2018). The participants of the research are nurses who work in medical institutions providing secondary level service, during the research period voluntary agreed to participate in the research and were present at their workplace. Quantitative survey (anonymous questionnaire survey) has been chosen for the research to be done by applying a questionnaire. The questionnaire is made of 48 closed questions. These questions are oriented to the clarification of characteristics of nurses as well as the evaluation of factors attributed to psychosocial work environment. The questionnaire consists of two parts:

Part I. Eight questions are structured to scrutinize demographic characteristics of nurses as well as the basic factors related to work (for example, age, sex, education, work position, workplace, workload, and work experience in healthcare system and department). The questions have been made by the author of the research on the basis of scientific literature.

Part II. The second version of the Copenhagen Psychosocial Questionnaire (COPSOQ II) has been used to evaluate the factors of psychosocial work environment of nurses. The instrument of this research has been created by National Centre for the Working Environment (NRCWE). The questionnaire as well as all the information related to the instrument of this research is available on the website of this research centre.

The short version of COPSOQ II has been used in this research work; it consists of 34 questions the majority of which are divided into scales. In order to evaluate the factors of psychosocial work environment the following scales have been involved: work requirements (work speed and emotional requirements); work organization and work content (impact, possibilities for improvement, and work meaningfulness); interpersonal relations (awareness, recognition, role clarity, and social support from managers and colleagues); work connections (job satisfaction, stress experienced, and conflicts). The reliability of individual scales on the basis of Cronbach's alpha varies from 0.61 to 0.81 (Kristensen et al. 2005, p. 441).

Seven questions from this questionnaire have not been included into the research done: 2 on conflicts in family; 1 on sexual harassment; 1 on threat of violence; 1 on physical violence, and 1 on bullying at work. These questions are not related to the aim of this research.

Five-level Likert scale has been applied to evaluate the questions where 1 stands for *never/almost never*, 2 for *rarely*, 3 for *sometimes*, 4 for *often*, and 5 for *always*. The questions included into COPSOQ II are evaluated from 0 to 100 points. Most frequently there are five possible answer variants provided; for example, *always*, *often*, *sometimes*, *rarely*, *never/almost never* or *excellent*, *very good*, *good*, *not bad*, *bad* and evaluated respectively by 100, 75, 50, 25, and 0 points. In case when four answer variants provided, for example, *satisfied very much*, *satisfied*, *unsatisfied*, and *unsatisfied very much* 100, 66.7, 33.3, and 0 points are attributed respectively. As several questions are of an opposite direction when calculating scale sums the directions of questions comprising them have been equalized first of all. COPSOQ II has been translated from English with the following Lithuanian version of the questionnaire edited and further translation back into English done by another independent translator provided.

For the accomplishment of research results *SPSS 17.0.1 for Windows* statistics software package has been used by applying Kolmogorov-Smirnov Test as well as assessing the size of asymmetry and excess rate. Data has been presented as average ± standard deviation (M±SD) in case of normal distribution, whereas in case of its absence as average (median) (M(Me)). In order to compare the features of two independent groups with normal distribution unpaired Student test (t) has been applied, whereas in case of its absence *Mann'o Whitney* (U) Test has been used. For the comparison of features attributed to more than two independent groups with normal distribution *One-Way ANOVA* (F) method with multiplex Post Hos comparison by employing LSD criterion has been used, whereas in case of its absence *Kruskal'o-Wallis'o* ($\square^2$) test has been applied.

Pearson's (r) and *Spearman's* (r) correlation methods have been applied for the analysis of interrelations of features according to their distribution.

Significance levels of statistic hypotheses applied: when $p<0.05$ it is significant (*); when $p<0.01$ it is highly significant (**); when $p<0.001$ it is extremely significant (***), whereas when $p>0.05$ (ns) it is statistically insignificant.

Internal reliability of the questionnaire has been assessed by calculating *Cronbach'o Alfa.*

3. Research results

332 nurses of the age 22-71 from two hospitals have participated in the research (the age average equals to 45.20±11.07; median equals to 46 years. Almost all respondents (98.8 %)

have been female and only 1.2 % male. The major part of respondents (93.4 %) have worked as nurses, whereas 6.6 % as nursing administrators/senior nurses.

Nurses have spread according to education as follows: half (50.3 %) of them have acquired higher education (21,7 % higher education with a university degree and 28.6 % higher education with college degree), whereas 49.7 % post-secondary education.

Roughly half (48.5 %) of the nurses surveyed have worked at the departments of therapeutical profile: 25.0 % at surgical, 21.4 % at intensive care/anaesthesiology departments, 5.1 % at admission-emergency help departments. Considering workload taken the majority (74.1 %) of the nurses have worked for 1 shift; 19.0 % for 1.25 shift; 4.2 % 1.5 shift, whereas 2.7 % of respondents worked for less than 1 shift: 1.8 % of them for 0.5 shift and 0.9 % for 0.75 shift.

In order to evaluate psychosocial work environment factors of nurses as well as their influence on stress experienced by nurses *COPSOQ II* has been provided.

The research results have shown that the factors of work speed (71.50±19.13 points) and demand of emotional resources (60.47±20.21 points) have been highly evaluated by nurses compared to other negative psychosocial work environment factors. Accordingly, it has revealed that both intense work speed and demand of emotional resources are sufficiently frequent work environment factors. The lowest evaluation from nurses compared to other negative work environment factors has fallen on the factors reflecting scope of work such as not being able to accomplish one's work (25.23(25.0) points) and the lack of time (38.18(25.0) points); therefore, it has revealed that most frequently nurses have been able to accomplish all their work. The experience of stress at work (43.34±19.54 points) has been evaluated by nurses as the phenomenon of moderate frequency (Table 1).

One's own health (46.84±21.76 points) as well as social support from managers (55.72±27.84 points) have been evaluated by nurses most frequently compared to other positive psychosocial work environment factors. Average values of these factors have shown that most frequently one's own health and support from managers have been evaluated by nurses moderately, whereas the highest evaluation compared to other positive psychosocial work environment factors from nurses has fallen on work meaningfulness (87.76(100) points) as well as the clarity of one's own role (81.06(87.50) points) (Table 1).

Table 1 Evaluations of psychosocial work environment factors in general group of nurses

	Factors	M±D/ M(Me)
Negative	Work speed	71.50±19.13
	Demand of emotional resources	60.47±20.21
	Burnout	46.54±20.04
	Stress at work	43.34±19.54
	Amount of work:	
	is not able to accomplish one's work	25.23(25.0)
	does not have enough time to accomplish one's own work tasks	38.18(25.0)
Positive	Health evaluation	46.84±21.76
	Social support from managers	55.72±27.84
	Reward (evaluation)	56.59±22.71
	Fairness and respect	57.19±24.69
	Quality of management	60.35±23.23
	Predictability (awareness)	63.74±24.19
	Job satisfaction	65.87(66.67)
	Confidence	66.34±21.73
	Clarity of one's own role	81.06(87.50)
	Work meaningfulness	87.76(100)
	Significance of work place:	
	Work place is of high importance	80.05(100)
	Would recommend to a good friend to apply for one's own work place	46.46(50.0)
	Influence:	
	Influences greatly one's own work	66.11(75.0)
	Could influence the work amount imposed	32.08(25.0)
	Development perspectives:	
	Has an ability to learn new things while working	56.93(50.0)
	It is necessary to take the initiative at work	60.32(50.0)

In order to evaluate the main factors of psychosocial work environment in nurses that are the major sources of stress experienced by them the connections of these factors to the stress suffered during work have been analysed. Research results have shown that almost all the factors of psychosocial work environment except the ones of influence and development perspectives could appear as stressors at work as there are statistically significant ($p<0.05$) connections identified. It has been determined that the greatest link could be related to fairness and the lack of respect ($r=-0.36$; $p<0.001$), high requirements for emotional resources ($r=0.35$ $p<0.001$), and insufficient evaluation of the work of nurses ($r=-0.30$; $p<0.001$) (Table 2).

Burnout syndrome among nurses i.e. fatigue and emotional exhaustion has been determined as statistically significantly related to almost all the factors analysed at work environment. More frequent expression of burnout syndrome has been related most greatly with more frequent stress suffering during work ($r=0.63$ $p<0.001$) and insufficient evaluation of the work of nurses (r-0.33; $p<0.001$) (Table 2).

Table 2 Connections among psychosocial work environment factors with stress experienced during work and burnout syndrome

	Factors	Stress		Burnout	
		r	**p**	**r**	**p**
Negative	Stress			**0.63**	**<0.001**
	Work speed	0.18	0.001	0.18	0.001
	Demand of emotional resources	**0.35**	**<0.001**	0.31	<0.001
	Amount of work:				
	Inability to accomplish one's own work	0.23	<0.001	0.32	<0.001
	Lack of time	0.16	0.004	0.19	0.001
Positive	Work meaningfulness	-0.13	0.023	-0.21	<0.001
	Predictability (awareness)	-0.25	<0.001	-0.30	<0.001
	Reward (evaluation)	**-0.30**	**<0.001**	**-0.33**	**<0.001**
	Clarity of one's own role	-0.22	<0.001	-0.30	<0.001
	Quality of management	-0.20	<0.001	-0.31	<0.001
	Social support of managers	-0.20	<0.001	-0.23	<0.001
	Job satisfaction	-0.20	<0.001	-0.29	<0.001
	Confidence	-0.25	<0.001	-0.29	<0.001
	Fairness and respect	**-0.36**	**<0.001**	**-0.38**	**<0.001**
	Health	-0.25	<0.001	**-0.40**	**<0.001**
	Influence:				
	Has great influence on one's own work	-0.08	ns	-0.10	ns
	Could influence work amount appointed	0.02	ns	0.02	ns
	Development perspectives:				
	Has an ability to learn new things while working	-0.03	ns	-0.12	0.037
	It is necessary to take initiative at work	-0.01	ns	-0.08	ns
	Significance of work place:				
	Work place is highly significant	-0.21	<0.001	-0.24	<0.001
	Would recommend to a good friend to apply for one's own job position	-0.25	<0.001	-0.23	<0.001

ns - non-significant correlation

While analysing the evaluations of psychosocial factors depending on the age of nurses statistically significant ($p<0.05$) factors of *the clarity of one's own role* (under 47 years old 78.13(75.0) points and 84.22(87.50) points for 47 year olds and over: U=11066.0; p=0.001), *work meaningfulness* (under 47 years old 85.61(100) points and 90.08(100) points for 47 year olds and over: U=12215.0; p=0.048), and one's own health (under 47 years old 50.15±23.18 points and 43.28±19.57 points for 47 year olds and over: t=2.92; p=0.004) evaluation differences have been identified: older nurses have evaluated their role clarity as well as work meaningfulness considerably better than younger nurses; however, older nurses have evaluated their health much worse (Table 3).

Older nurses have evaluated their work place importance considerably better than their younger colleagues (under 47 years old 74.42(75.0) points and 47 year olds and over 69.84(75.0) points: U=11691.5; p=0.014) (Table 3).

Table 3 Differences of psychosocial work environment factors depending on age of nurses

	Factors	Under 47 n□172	47 and over n□160	t/U	p
Negative	Work speed	70.78±18.15	72.27±20.15	-0.70	0.483
	Demand of emotional resources	61.41±20.23	59.45±20.21	0.88	0.379
	Burnout	47.82±20.47	45.16±19.53	1.21	0.226
	Stress	44.33±19.65	42.27±19.42	0.96	0.336
	Amount of work:				
	Inability to accomplish one's own work	25.87(25.0)	24.53(25.0)	130920.0	0.420
	Lack of time	39.53(25.0)	36.72(25.0)	12806.5	0.258
Positive	Meaningfulness of work	85.61(100)	90.08(100)	12215.0	**0.048**
	Predictability (awareness)	61.70±23.38	65.94±24.92	-1.60	0.112
	Reward (evaluation)	57.85±22.62	55.23±22.80	1.05	0.295
	Clarity of one's own role	78.13(75.0)	84.22(87.50)	11066.0	**0.001**
	Management quality	59.88±22.51	60.86±24.04	-0.38	0.703
	Social support from managers	53.71±27.87	57.89±27.74	-1.37	0.172
	Job satisfaction	65.51(66.67)	66.25(66.67)	13547.0	0.739
	Confidence	66.64±20.77	66.02±22.79	0.26	0.794
	Fairness and respect	57.34±22.86	57.03±26.59	0.11	0.910
	Health evaluation	50.15±23.18	43.28±19.57	2.92	**0.004**
	Influence:				
	Has great influence on one's own work	62.65(75.0)	69.84(75.0)	11691.5	**0.014**
	Could influence work amount appointed	33.58(25.0)	30.47(25.0)	12403.5	0.107
	Development perspectives				
	Has an ability to learn new things while working	56.54(50.0)	57.34(50.0)	13635.0	0.881
	It is necessary to take initiative at work	59.88(50.0)	60.78(50.0)	13468.0	0.723
	Significance of work place:				
	Work place is highly significant	74.42(75.0)	86.09(100)	10140.0	<**0.001**
	Would recommend to a good friend to apply for one's own job position	48.69(50.0)	44.06(50.0)	12719.5	0.223

Research results have shown that the evaluation of such psychosocial factors as *work speed* and *demand of emotional resources* depend on the work place of nurses: nurses from intensive care/anaesthesiology profile departments as well as nurses who work at the departments of admission-emergency help have evaluated work speed considerably worse than the nurses who work at therapeutic and surgical profiles especially compared to the nurses of therapeutical profile (therapeutic (1) 68.56±19.87 points, surgical (2) 71.54±20.87 points, ITA (3) 76.06±15.05 points and admission-emergency help (4) 80.15±11.74 points: F=3.87 p=0.010: $p_{1:3}$=0.006, $p_{1:4}$=0.017); however, the work of nurses from the departments of intensive care-emergency help profiles has been considerably less related to emotional demand compared to other departments (therapeutic (1) 61.41±19.78 points, surgical (2) 61.75±22.12 points, ITA (3) 54.93±18.95 points and admission-emergency help (4) 68.38±15.38 points: F=2.93; p=0.034: $p_{1:3}$=0.024, $p_{2:3}$=0.036, $p_{3:4}$=0.013) (Table 4).

The nurses from the departments of intensive care/anaesthesiology profile have evaluated *the influence to their own work* considerably higher compared to the nurses of therapeutic and surgical profile (therapeutic (1) 33.39(25.0) points, surgical (2) 35.54(25.0) points, ITA (3)

24.65(25.0) points and admission-emergency help (4) 33.82(25.0) points: χ^2=7.86; p=0.049: $p_{1:3}$=0.027, $p_{2:3}$=0.007). *The lack of time* has been emphasized considerably in a more frequent manner by the nurses from the departments of surgical profile especially compared to the nurses from the departments of intensive care/anaesthesiology profiles as well as the nurses from the departments of admission-emergency help (therapeutic (1) 39.98(25.0) points, surgical (2) 44.58(50.0) points, ITA (3) 31.34(25.0) points and admission-emergency help (4) 27.94(25.0) points: χ^2=9.54; p=0.023: $p_{2:3}$=0.007, $p_{2:4}$=0.040). The necessity of taking the initiative at work has been considerably more emphasized by the nurses who work at the departments of admission-emergency help compared to the nurses of therapeutic, surgical, and intensive care/anaesthesiology profiles (therapeutic (1) 60.40(50.0) points, surgical (2) 60.84(50.0) points, ITA (3) 55.28(50.0) points and admission-emergency help (4) 77.94(75.0) points: χ^2=13.40 p=0.004: $p_{1:4}$=0.003, $p_{2:4}$=0.003, $p_{3:4}$=0.001) (Table 4).

Table 4 Differences in evaluations of psychosocial work environment factors depending on work place of nurses

	Factors	Profiles				F/□²	p	p					
		Therapeutic	Surgical	ITA	Admission-emergency help								
		n□161	n□83	n□71	n□17								
		1	2	3	4			1:2	1:3	1:4	2:3	2:4	3:4
Negative	Work speed	68.56±19.87	71.54±20.87	76.06±15.05	80.15±11.74	3.87	**0.010**		0.006	0.017			
	Demand of emotional resources	61.41±19.78	61.75±22.12	54.93±18.95	68.38±15.38	2.93	**0.034**		0.024		0.036		0.013
	Burnout	45.57±20.13	48.64±20.00	46.48±19.84	45.59±21.17	0.44	0.724						
	Stress	41.15±19.14	47.44±21.45	44.72±17.63	38.24±18.47	2.43	0.065						
	Amount of work:												
	Inability of accomplish one's own work	27.95(25.0)	23.80(25.0)	21.48(25.0)	22.06(25.0)	4.43	0.219						
	Lack of time	39.98(25.0)	44.58(50.0)	31.34(25.0)	27.94(25.0)	9.54	**0.023**				0.007	0.040	
Positive	Work meaningfulness	86.49(100)	85.69(100)	91.73(100)	93.38(100)	5.85	0.119						
	Predictability (awareness)	63.12±25.61	60.99±23.21	65.49±22.61	75.74±18.47	1.93	0.125						
	Reward (evaluation)	57.07±22.09	56.17±23.70	56.16±23.52	55.88±22.15	0.05	0.987						
	Clarity of one's own role	81.44(87.50)	79.97(75.0)	81.16(87.50)	82.35(87.50)	0.68	0.877						
	Quality of management	60.71±22.96	57.68±22.84	62.32±25.57	61.76±17.38	0.57	0.636						
	Social support from managers	55.75±28.09	50.90±27.25	58.80±28.77	66.18±21.09	1.93	0.124						
	Job satisfaction	64.39(66.67)	65.87(66.67)	69.96(66.67)	62.75(66.67)	6.07	0.108						
	Confidence	66.23±20.48	64.01±23.46	67.43±22.71	68.26±20.00	1.14	0.335						
	Fairness and respect	57.38±25.90	55.57±21.85	57.39±26.52	62.50±18.22	0.38	0.765						
	Health evaluation	44.57±20.10	47.29±22.77	49.30±21.95	55.88±28.68	1.89	0.130						
	Influence:												
	Has great influence on one's own work	64.13(75.0)	62.95(75,0)	72.18(75.0)	75.0(75.0)	8.52	**0.036**		0.018		0.019		
	Could influence work amount appointed	33.39(25.0)	35.54(25,0)	24.65(25.0)	33.82(25.0)	7.86	**0.049**		0.027		0.007		
	Development prospects:												
	Has an ability to learn new things while working	56.21(50.0)	53.92(50.0)	60.21(50.0)	64.71(50.0)	3.19	0.364						
	It is necessary to take initiative at work	60.40(50.0)	60.84(50.0)	55.28(50.0)	77.94(75.0)	13.40	**0.004**			0.003		0.003	0.001
	Significance of work place:												
	Work place is highly significant	79.50(100)	80.12(100)	79.58(100)	86.76(100)	1.26	0.739						
	Would recommend to a good friend to apply for one's own job position	43.79(50.0)	46.69(50.0)	54.93(50.0)	35.29(25.0)	6.22	0.101						

ITA – intensive care and anaesthesiology profile

Research results have shown that the nurses with longer work experience (both general and in the latter department) tend to evaluate the clarity of *one's own role* (respectively r=0.22; p<0.001 and r=0.20; p<0.001), *one's own work meaningfulness* (respectively r=0.17; p=0.001 and r=0.13; p=0.019) as well as *the significance of work place* (respectively r=0.26; p<0.001 and r=0.18; p=0.001) considerably better; however, *health* (respectively r=-0.29; p<0.001 and r=-0.27; p<0.001) and *the ability to influence the work amount appointed* (respectively r=-0.11; p=0.038 and r=-0.12; p=0.034) have been evaluated much worse by them than by the nurses with less work experience. The nurses taking greater workload have expressed better *satisfaction with their work* compared to those nurses who take less workload (r=0.15; p=0.006) (Table 5).

Table 5 Influence of workload and work experience of nurses on evaluation of psychosocial work environment factors

	Factors	Workload		Overall experience		Experience At the department	
		r	p	r	p	r	p
Negative	Work speed	0.05	ns	0.04	ns	0.01	ns
	Demand of emotional resources	-0.02	ns	-0.08	ns	-0.07	ns
	Burnout	0.05	ns	-0.02	ns	-0.04	ns
	Stress	0.02	ns	-0.08	ns	-0.09	ns
	Amount of work:						
	Inability to accomplish one's own work	0.03	ns	-0.10	ns	-0.08	ns
	Lack of time	0.04	ns	-0.05	ns	-0.04	ns
Positive	Work meaningfulness	-0.04	ns	0.17	0.001	0.13	0.019
	Predictability (awareness)	0.01	ns	0.03	ns	0.06	ns
	Reward (evaluation)	-0.07	ns	-0.05	ns	0.00	ns
	Clarity of one's own role	-0.04	ns	0.22	<0.001	0.20	<0.001
	Quality of management	0.01	ns	-0.01	ns	0.08	ns
	Social support from managers	-0.04	ns	0.02	ns	0.05	ns
	Job satisfaction	0.15	0,006	0.02	ns	0.02	ns
	Confidence	-0.03	ns	-0.01	ns	0.09	ns
	Fairness and respect	-0.08	ns	-0.01	ns	0.01	ns
	Health evaluation	-0.03	ns	-0.29	<0.001	-0.27	<0.001
	Influence:						
	Has great influence on one's own work	0.05	ns	0.17	0.002	0.07	ns
	Could influence work amount appointed	-0.02	ns	-0.11	0.038	-0.12	0.034
	Development prospects:						
	Has an ability to learn new things while working	-0.08	ns	-0.05	ns	0.00	ns
	It is necessary to take initiative at work	-0.07	ns	0.00	ns	-0.05	ns
	Significance of work place:						
	Work place is highly significant	0.03	ns	0.26	<0.001	0.18	0.001
	Woud recommend to a good friend to apply for one's own job position	0.01	ns	-0.04	ns	-0.10	ns

ns-statistically insignificant connection

4. Conclusions

Nurses have been facing inevitable changes in psychosocial work environment at their work environment. Such usual work environment factors as work requirements, work control, and social support have been intensifying. Moreover, such psychosocial work environment factors as fairness, insecurity concerning work as well as changing roles and responsibility have been experienced. Almost all psychosocial work environment factors of nurses are the main sources of stress experienced except for influence and development perspectives; there have been statistically significant connections ($p<0.05$) identified. The strongest stress experienced at work is related to fairness and the lack of respect ($r=-0.36$; $p<0.001$), high demand of emotional resources ($r=0.35$; $p<0.001$), insufficient evaluation (reward) of the work of nurses ($r=-0.30$; $p<0.001$). The burnout syndrome in nurses i.e. fatigue and emotional exhaustion is also statistically significantly related to almost all the work environment factors analysed at work. More frequent display of burnout syndrome is related greatly to more frequent stress experienced during work ($r=0.63$; $p<0.001$), worse health ($r=-0.40$; $p<0.001$), the lack of fairness and respect ($r=-0.38$; $p<0.001$), and insufficient evaluation of the work of nurses ($r=-0.33$; $p<0.001$).

With the reference to data from research done it could be stated that psychosocial work environment factors increase the risk to deteriorative psychological state as well as influence the stress suffered by nurses.

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Assessment of the quality of studies by the students of health sciences. Lithuanian case

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Abstract:

Background. The aim of the study is to evaluate the satisfaction of students who have graduated from the health sciences studies with the quality of studies and to identify the main factors that caused the satisfaction with studies. Methods. A survey was conducted in May 2017 using a quantitative research strategy. The questionnaire consisted of 3 parts: career perspective, study quality, and student activity (awareness and participation). Students (n=160) who were completing their bachelor degree in health science studies at a Lithuanian university participated in the study. Results. Summarizing all the categories that determine the quality of studies, some criteria can be distinguished that correlate most strongly with the quality of studies. These criteria are: teachers inspire interest in their subject (r = 0.659), teachers encourage formulation of questions that require research, solve real problems (r = 0.649), studies promote my self-expression, reveal various abilities (r = 0.633), teachers devote sufficient time to creative self-study tasks (r = 0.615), teachers explain the material of their subjects comprehensibly and consistently (r = 0.614). Conclusions. Students are generally satisfied with their studies.

Keywords:

Health sciences, quality of studies, study process

1. Introduction

Managing quality in a healthcare setting is clearly not all about monitoring systems and regulation, but also concerns health care workers' values, training and personal behaviours (Farr, Cressey, 2015). The fact that professional attitudes and behaviors that increase the quality of health care are still being formed during studies cannot be ignored. Thus, the quality of health care begins with the quality of higher education.

If students are viewed as consumers of higher education, their satisfaction is important to institutional success, both because effective institutions should have satisfied customers and because satisfaction supports the recruitment of additional customers (Thomas, Galambos, 2004). Evaluation of the studies by students, which has been done in universities and higher educational centers, is one of the common evaluation methods designed to evaluate study quality and educational performance (Beran, Rokosh, 2007). Such evaluations can improve teaching quality and increase educational promotion in the universities (Tazakori et al, 2008). Quality evaluations may raise better information and awareness about the study programs, may raise weaker points and parameters of the programs. Ultimately, the evaluation may lead to execution of improvement of the program, fulfillment of its objectives, utility of its degree and reliability of academic and research work in the program (Kosar et al, 2015).

However, it is important to use multi-dimential scales (Rezaei et al, 2018). Different scales and inventories can be used for quality evaluation, however findings of Whitworth et al (2002) indicate that comparing evaluation data across different courses or demographical characteristic might not produce valid overall effectiveness rankings.

The aim of the study is to evaluate the satisfaction of students who have graduated from the health sciences studies with the quality of studies and to identify the main factors that caused the satisfaction with studies.

2. Methods

A survey was conducted in May 2017 using a quantitative research strategy.

Research instrument. The questionnaire consisted of 3 parts: career perspective, study quality, and student activity (awareness and participation).

Sample. 197 students who were completing their bachelor degree in health science studies at a Lithuanian university were invited to participate in the study. 160 students agreed and were enrolled in the study. All departments from the faculty are represented (Figure 1).

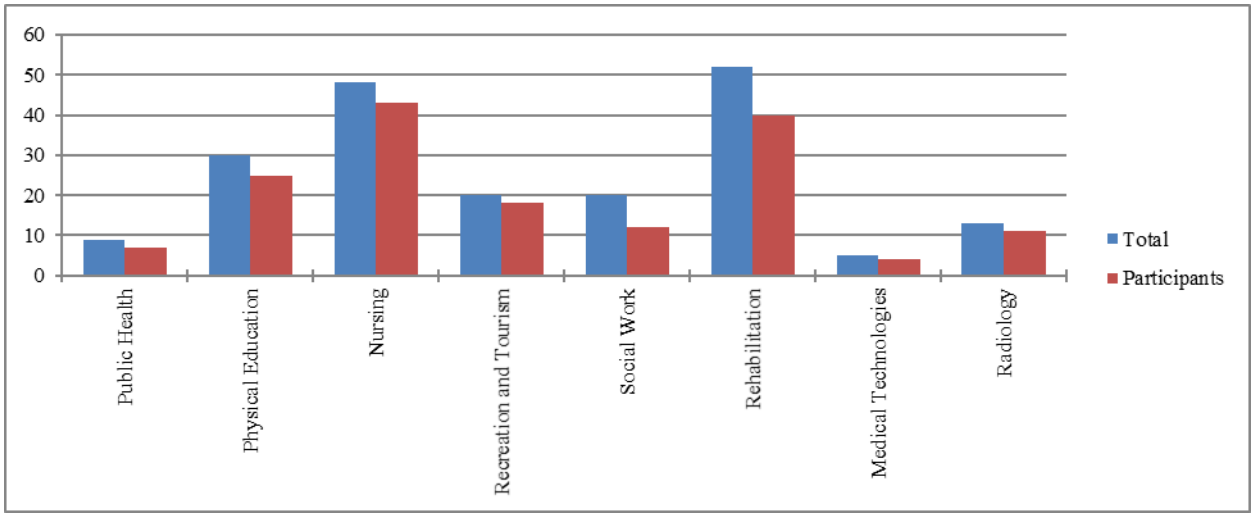

Figure 1. Number of graduates and study participants

The recommendations not to compare results acros the courses, study programms, etc. werre followed.

3. Results

Career perspective.

When evaluating respondents' plans after graduation, graduates usually intend to choose a job directly related to the specialty acquired, as well as to choose Master studies.

Even 87.5% of students appreciate the study practice and think that it helped to understand the peculiarities of future professional activity. It should be noted that the study practice not only helped to better understand the peculiarities of future professional activity. A weak (0.207), but statistically significant ($p = 0.009$) and linear functional relationship was established when analyzing the relationship between study practice and general satisfaction with studies. This link shows that those students who value their study practice are more satisfied with all their studies.

When assessing how students evaluate the compliance of the study program with their expectations, it was found that more than two-thirds of respondents say that studies meet their expectations (Figure 2).

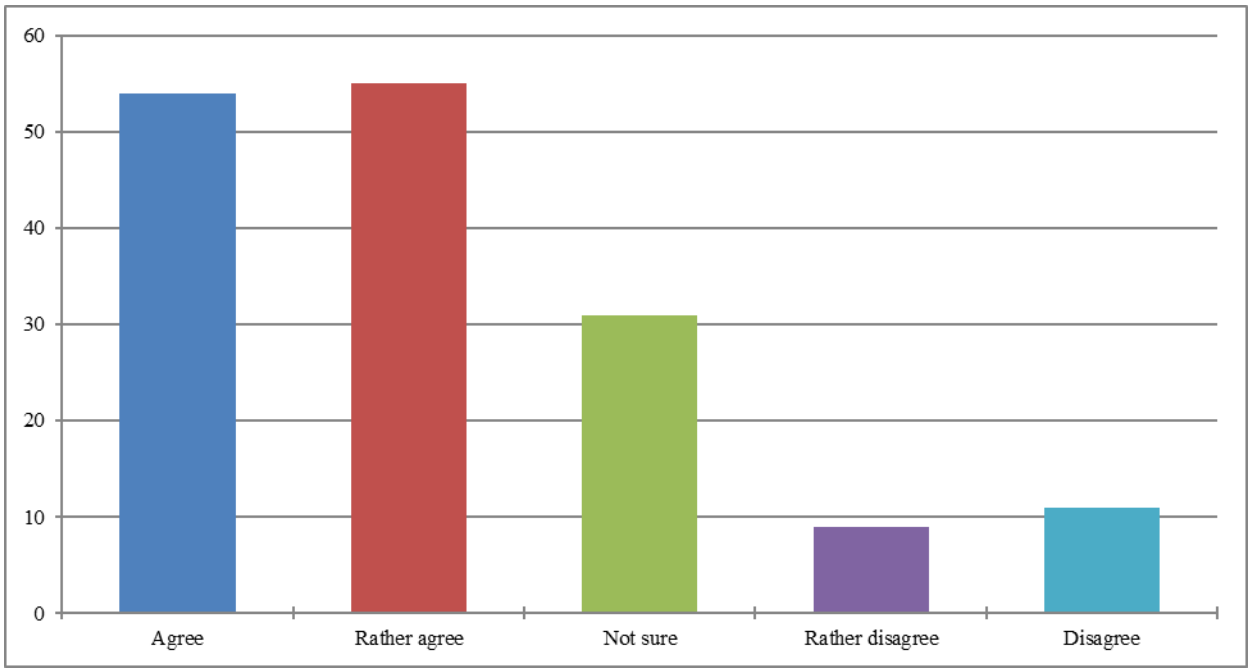

Figure 2 Compliance of the study program with student expectations

The study revealed trends in the correspondence of studies to student expectations and satisfaction studies. When analyzing these variables, strong (0.646), statistically significant (p = 0.000) and linear functional correlation were determined. This correlation shows that those students who consider the study program to meet their career expectations also appreciate their studies in general.

The analysis of the aspects of interest recommended by the graduates showed that the most important are the skills and qualifications acquired after the completion of the study program and career and post-study opportunities (Figure 3).

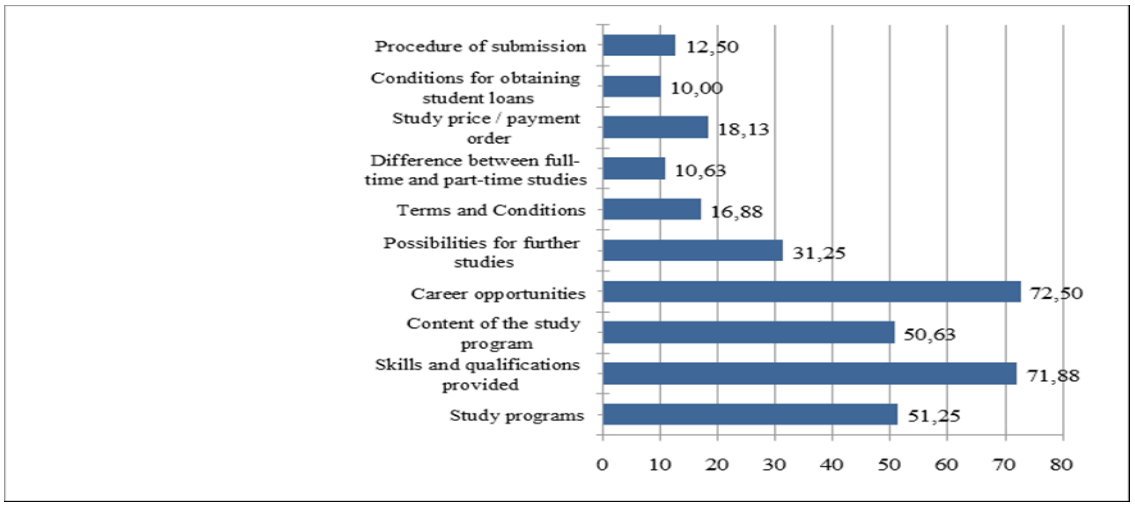

Figure 3 Graduates advise students to be interested in (%)

Study quality

When analyzing how students evaluate the quality of their studies, it was found that two-thirds of the research participants are satisfied with the quality of studies (Figure 4). However, it should be noted that there are a large number of doubtful students.

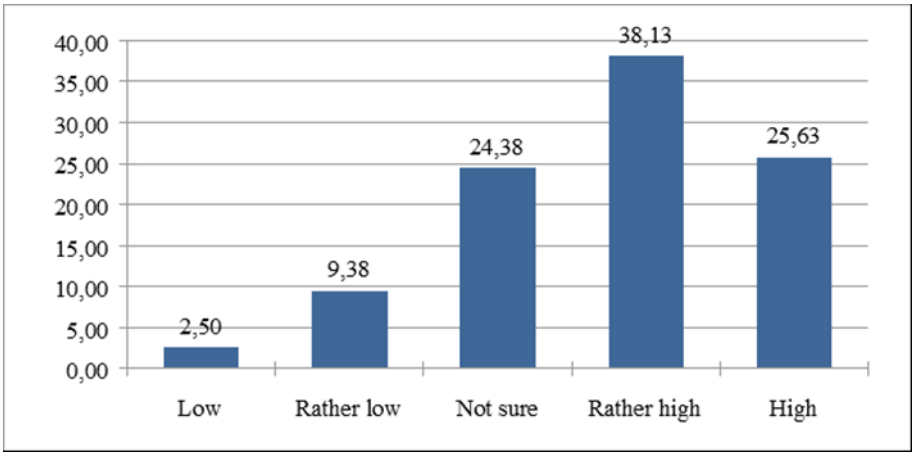

Figure 4 Student opinion about study quality (%)

Study quality was assessed by analyzing different categories:

- lecturers,
- learning outcomes,
- academic support,
- study infrastructure,
- university external relations,
- opportunities for personal development.

The evaluation criteria were in the form of statements (statements form) and evaluated in scales from 1 to 10, where 1 stands for the worst rating, and 10 for the best. Cronbach's alpha coefficient was calculated to estimate the reliability of subscales and the overall reliability of the study quality scale. The subscales' Cronbach's alpha ranged from 0.862 to 0.923, and Cronbach's alpha of the entire scale was 0.962. Based on the fact that Cronbach's alpha of the subscales and the entire scale are greater than 0.7, the scale and the results obtained are considered to be reliable.

It was further analyzed how students evaluate individual categories of study process and how satisfaction with study quality correlates with different factors of the study process, such as teacher activity, student achievement assessment, academic support and study organization, study infrastructure, university external relations, and the opportunities of personal development .

Lecturer's activity

In analyzing the assessment of teacher activities, mean ranks range from 6.98 to 7.53 (out of 10 possible). It is best appreciated that lecturers explain the subject matter in a comprehensible and consistent way (Figure 5).

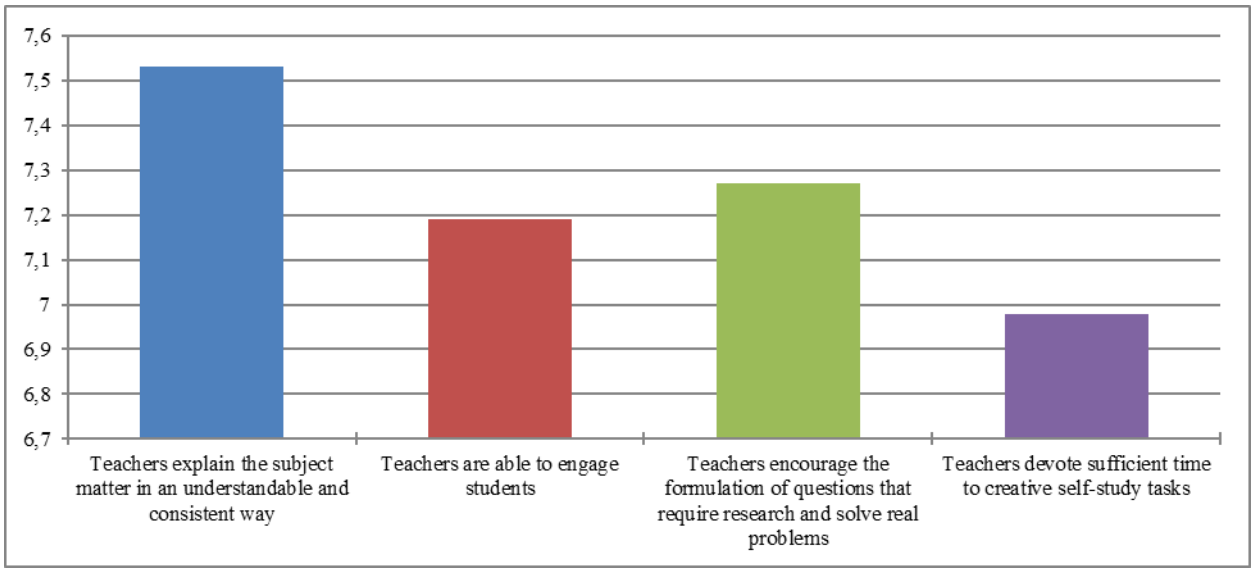

Figure 5. Evaluation of lecturer performance (mean ranks)

When analyzing how satisfaction with the quality of studies is related to the study process organized by the teacher, a strong, statistically significant and linear functional relationship was revealed in all cases (Table 1). This means that the ability of the teacher to interest the subject taught, the understanding of the material taught in the subject, the promotion of creative tasks, and the solution of real problems directly lead to greater student satisfaction.

Table 1. Correlation between the study process organized by the teacher and student satisfaction with studies

Criterion	Pearson r	p
Teachers properly and consistently explain the material they teach	0,614	**0,000**
Teachers are able to interest the student in their subject	0,659	**0,000**
Teachers encourage to raise the issues that require research, to solve real problems	0,649	**0,000**
Teachers devote sufficient time to creative self-study tasks	0,615	**0,000**

Evaluation of study results. In the context of the assessment of achievements, students appreciate the clarity of the criteria for assessing learning outcomes (Figure 6)

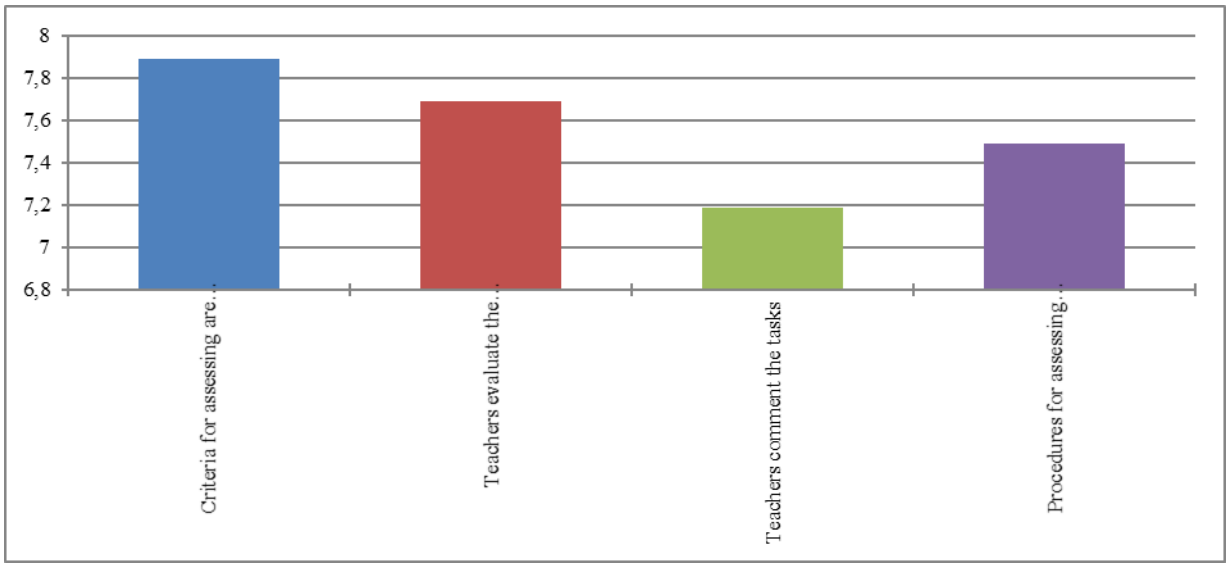

Figure 6. Assessment of study results (mean ranks)

When analyzing how satisfaction with the quality of studies is related to the assessment of student achievements, in all cases a moderate, statistically significant and linear functional relationship was established (Table 2). This means that the objectivity of the teacher in assessing student achievements, clear assessment criteria and the feedback given by the lecturer lead to greater student satisfaction.

Table 2. Correlation between student achievement assessment and study satisfaction

Criterion	**Pearson r**	**p**
Criteria for assessing learning outcomes are clear and known in advance	0,404	**0,000**
Teachers immediately evaluate the tasks performed	0,390	**0,000**
Teachers comment in detail the tasks performed	0,442	**0,000**
Procedures and grades for assessing learning outcomes are objective	0,502	**0,000**

Academic support

In the academic support category, students value the opportunity to consult with the staff of the university on the organization of studies and to consult with teachers on the issues of professional career (Figure 7).

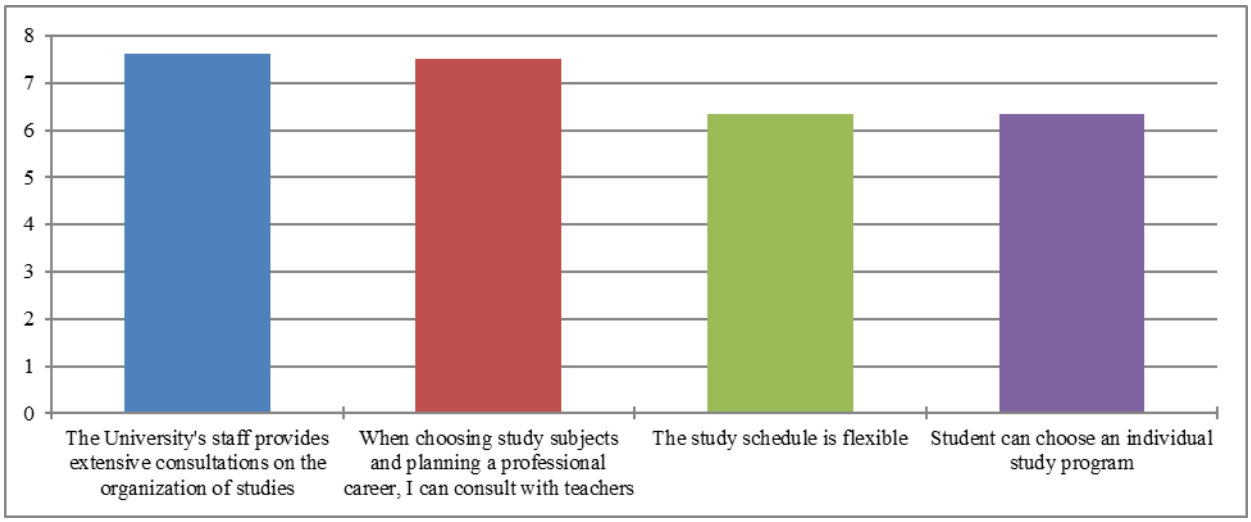

Figure 7. Evaluation of academic support (mean ranks)

When analyzing how satisfaction with the quality of studies is related to the academic support received by students, in all cases a moderate, statistically significant and linear functional relationship was revealed (Table 3). This means that the opportunity to consult with the teaching staff in the choice of study subjects and in planning their professional career, the possibility to consult with the staff of the university on the organization of studies and the possibility to choose the study schedule flexibly leads to higher student satisfaction.

Table 3. Correlation between academic support and student satisfaction

Criterion	Pearson r	p
The University's staff provides extensive consultations on the organization of studies	0,528	**0,000**
When choosing study subjects and planning a professional career, I can consult with teachers	0,549	**0,000**
The study schedule is flexible	0,518	**0,000**
Student can choose an individual study program	0,498	**0,000**

Study infrastructure

The analysis of student opinion on the infrastructure of study infrastructure revealed that access to information technologies (computers, the Internet) was best assessed. The library funds, auditoriums, and equipment (Figure 8) received a slightly lower rating.

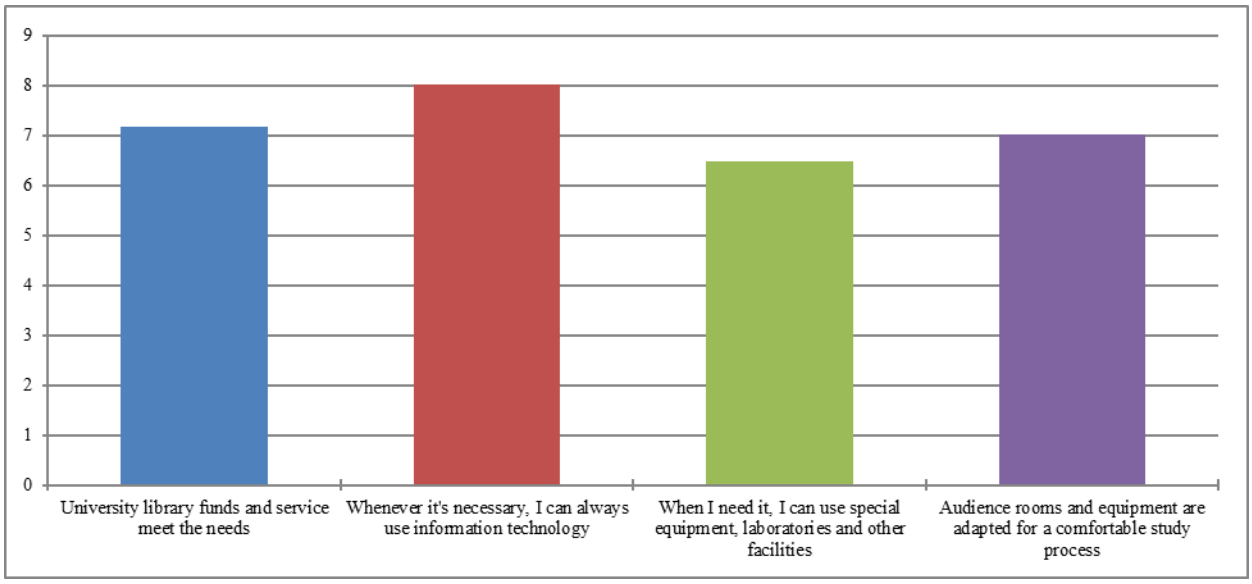

Figure 8. Assessment of Study Infrastructure (mean ranks)

When analyzing how satisfaction with the quality of studies is related to the academic support received by students, in all cases a moderate, statistically significant and linear functional relationship has been established (Table 4). This means that access to special equipment, auditoriums adapted for convenient learning, and sufficient library funds influence student satisfaction with the quality of studies.

Table 4. Correlation between study infrastructure and student satisfaction

Criterion	**Pearson r**	**p**
University library funds and service meet the needs	0,435	**0,000**
I can always use information technology whenever necessary	0,409	**0,000**
When I need it, I can use special equipment, laboratories and other facilities	0,487	**0,000**
Audience rooms and equipment are adapted for a comfortable study process	0,480	**0,000**

University's external relations

Students appreciate the University's cooperation with social and business partners, opportunities to participate in study practice in companies and organizations, as well as the opportunities to get involved in research projects of public interest and to participate in international exchange programs (Figure 9).

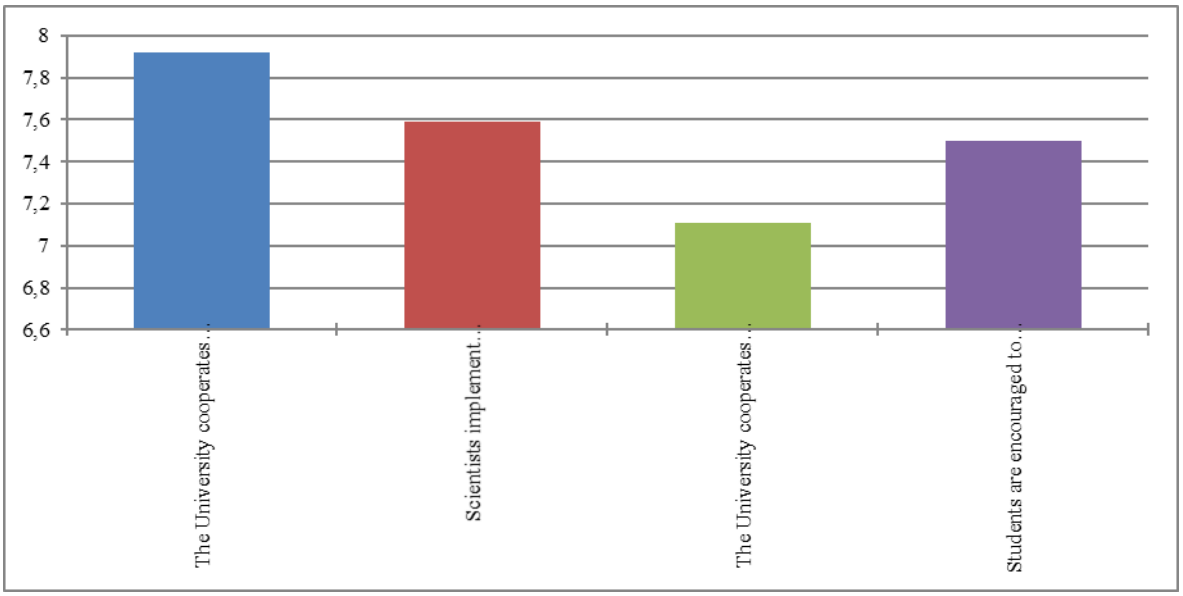

Figure 9. Assessment of university's external relations (mean ranks)

When analyzing how satisfaction with the quality of studies is related to the external relations held and developed by the university, in all cases a moderate, statistically significant and linear functional relationship was established (Table 5). The most significant influence in this category is student participation in the quality of studies in international exchange programs and the opportunity to engage in public projects of public interest.

Table 5. Correlation between university external relations and student satisfaction

Criterion	Pearson r	p
The University cooperates with social and business partners	0,353	**0,000**
Scientists implement projects of public interest and involve students in them	0,495	**0,000**
The University cooperates with foreign partners and foreign lecturers read lectures	0,383	**0,000**
Students are encouraged to participate in international exchange programs	0,490	**0,000**

Opportunities for personal development

Students also appreciate the opportunities for personal development during their studies. It is especially important for students that they have acquired experience of communication and cooperation during their studies, have learned to better understand other people's interests and attitudes, and studies have helped to gain self-confidence (Table 10).

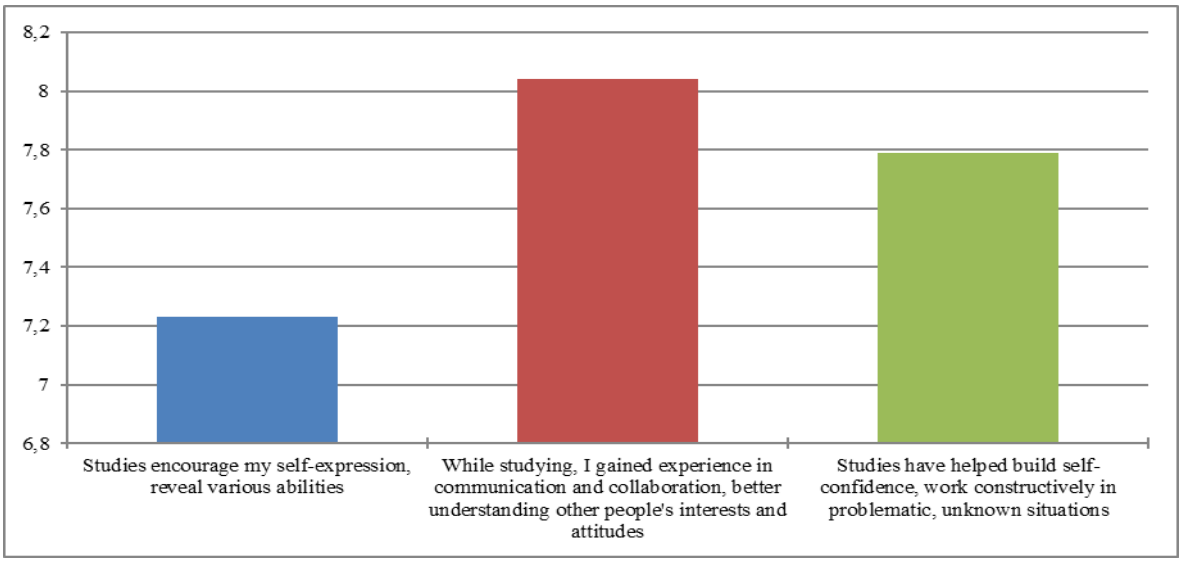

Figure 10 Assessment of personal development opportunities (mean ranks)

Analyzing how students' personal development opportunities are related to their satisfaction with the quality of studies, a strong, statistically significant and linear functional relationship was established in all cases (Table 6). Thus, studies that strenghten self-expression, communication and collaboration experience, and self-confidence are considered qualitative.

Table 6. Correlation between students' personal development opportunities and their satisfaction with studies

Criterion	Pearson r	p
Studies encourage my self-expression, reveal various abilities	0,633	**0,000**
While studying, I gained experience in communication and collaboration, better understanding other people's interests and attitudes	0,520	**0,000**
Studies have helped build self-confidence, work constructively in problematic, unknown situations	0,586	**0,000**

When examining the categories assessed, it is generally noted that students appreciate the assessment of personal development opportunities and objective achievements (Figure 11). When evaluating individual criteria, the highest average score is distinguished:

- While studying, I gained experience in communication and collaboration, better understanding other people's interests and attitudes (8.04; sd = 2.206);
- If necessary, I can always use information technology (8.02; sd = 2.29);
- The University cooperates with social and business partners. There are study practices organized in partner institutions / companies (7.92; sd = 2.056);

- Criteria for assessing learning outcomes are clear and known in advance (7.89; sd = 2.100)

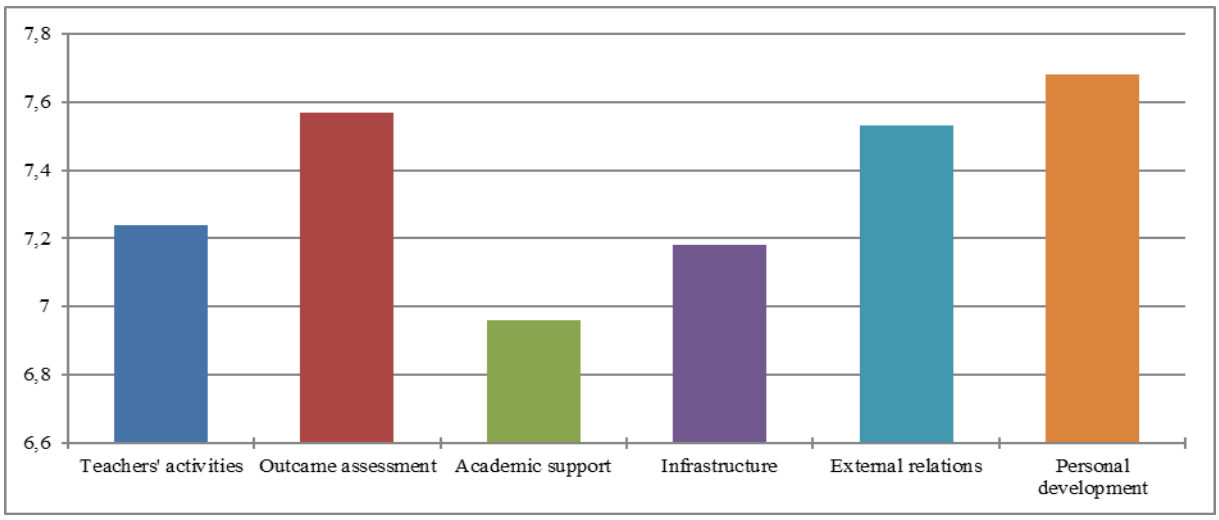

Figure 11. Evaluation of study quality categories (mean ranks)

Summarizing all the categories that determine the quality of studies, some criteria can be distinguished that correlate most strongly with the quality of studies. These criteria are:

- Teachers inspire interest in their subject (r = 0.659),
- Teachers encourage formulation of questions that require research, solve real problems (r = 0.649),
- Studies promote my self-expression, reveal various abilities (r = 0.633),
- Teachers devote sufficient time to creative self-study tasks (r = 0.615),
- Teachers explain the material of their subjects comprehensibly and consistently (r = 0.614).

Since statistical correlation does not always express a causal relationship, in order to reveal the functional dependence of study quality on other variables, a multivariate linear regression model has been developed that can be applied to the study quality prediction. Model Equation:

Study quality =

β0 + β1 *teaching activities

+ β2 *assessment of student achievement

+ β3 *academic support

+ β4 *study infrastructure

+ β5 *University external relations

+ β6 *opportunities for personal development

$R^2 \geq 0.25$ is usually required. If $R^2 < 0.25$, it is highly doubtful whether the linear regression model is suitable. Methodological literature states that in this case, more independent variables should be searched for, in which the regression equation would improve model eligibility indicators (Janilionis, 2011). In the descriptive study, $R^2 = 1.000$ ($p = 0.000$), so the selected model dimensions explain 100 percent. dependent variance variance.

4. Student activity (awareness and participation)

When examining student activity, it was assessed whether they had previously expressed their opinion on the quality of studies, the ways in which they did so, and whether they received feedback. Students' knowledge of the decisions and rights of students in higher education was also studied.

4 out of 5 students have previously commented on the quality of studies (during their studies). The majority of students expressed their opinion by filling in an anonymous questionnaire, some participated in discussions with lecturers or representatives of faculty administration, some opted to express their opinion directly to the teacher (Fig. 12).

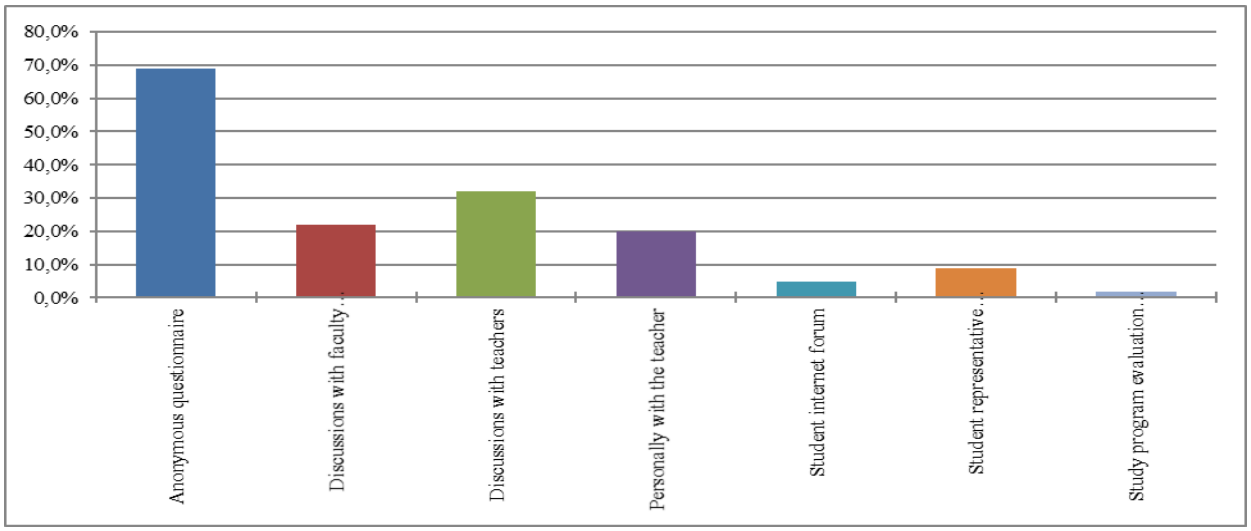

Figure 12 Expression of opinion about study quality during studies

When evaluating ways of expressing such an opinion, students said that an anonymous questionnaire (44.4%) and discussions with faculty administration representatives (33.8%) were the most acceptable.

In the assessment of student participation and activity, the areas that students think should be improved at the university were analyzed. Students believe that the quality of studies, the

social environment of studies, i.e dormitories, food, leisure facilities, etc., student research activities and student participation in discussions and surveys on quality assurance in studies are the most demanding (Figure 13).

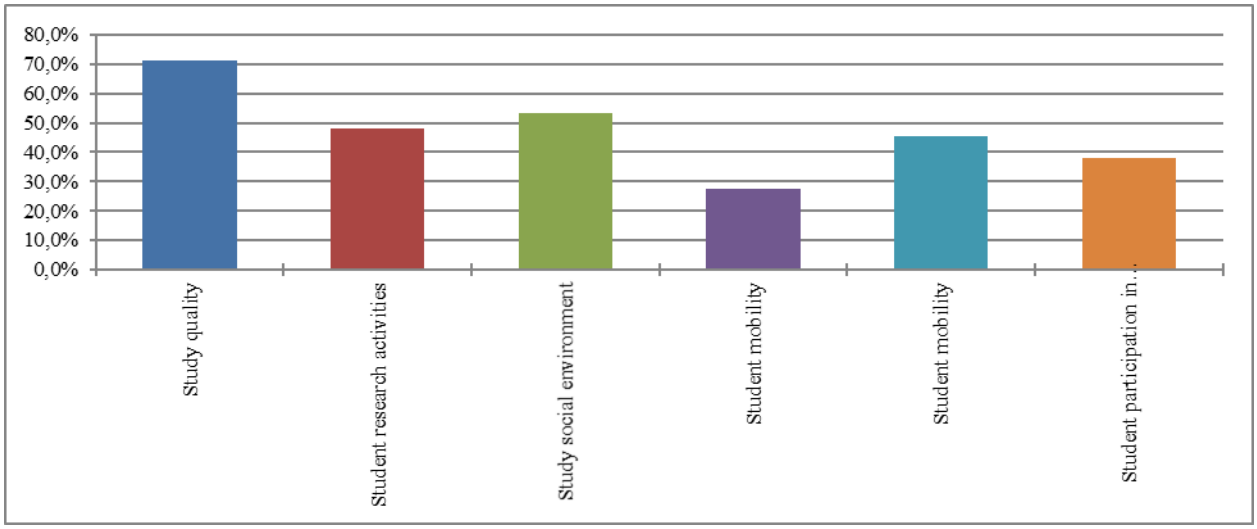

Figure 13 Student opinion about university areas that need to be improved

It was found that only about half of the respondents know their rights at the university. The majority of students know that they can offer their final thesis topic or can choose from several offered, as well as know that they can leave for academic leave without losing their status as a student and that they can pause and renew their studies according to the procedure set by the Senate (Figure 14).

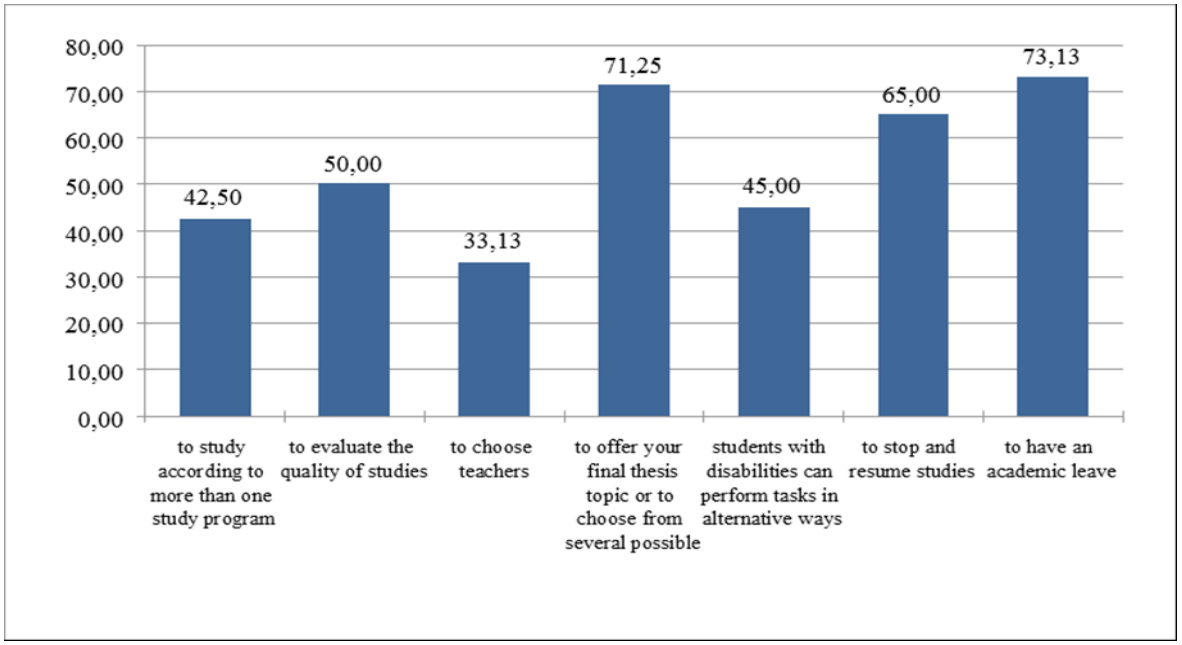

Figure 14. Students' knowledge of their rights (%)

When evaluating the sources used by students to search for information, the website of the higher school is most often used. 60 percent of research participants were looking for information about studies in it (Figure 15).

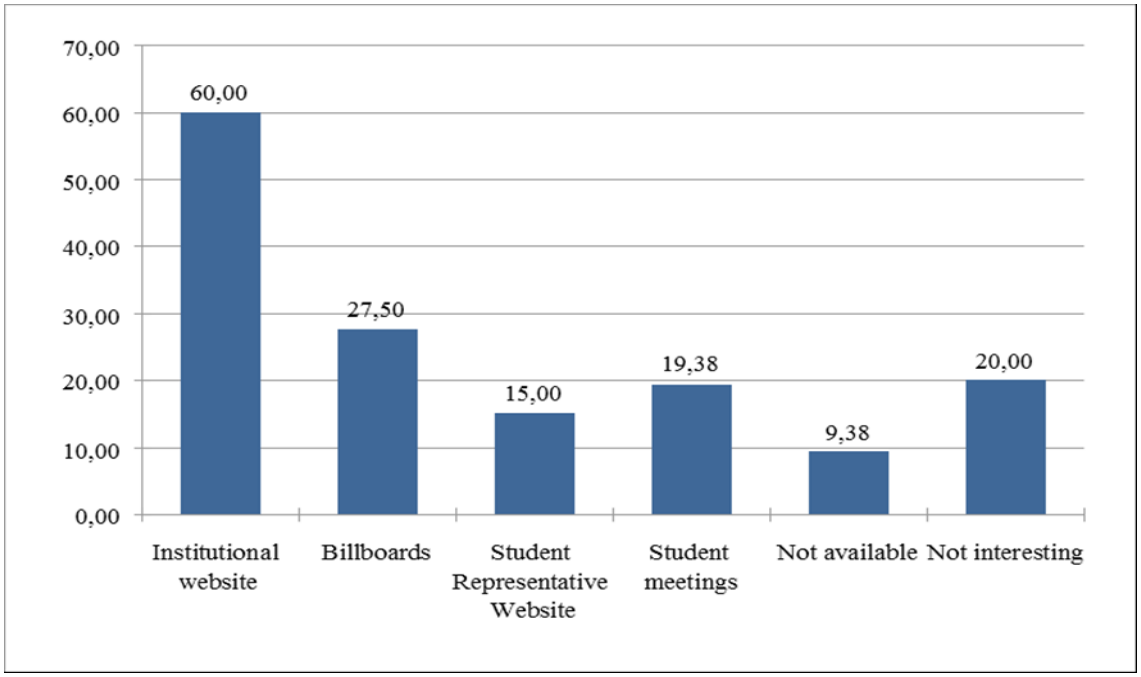

Figure 15 Best Available Techniques for Getting Information (%)

5. Conclusions and recommendations:

Study practice not only provides an understanding of professional reality, but also strongly correlates with general satisfaction with studies. Therefore, additional attention should be paid to this area. One of the possible activities is mentor training.

Satisfaction of students' expectations strongly correlates with positive assessment of studies. However, experience shows that students and teachers do not always know each other's expectations of the study subject and the study process. It is recommended that the introductory lectures discuss the expectations of students and teachers and take them into account when organizing the study process, as far as the possibilities and the provisions of the study program allow.

Students are generally satisfied with their studies, but the average rating for individual categories is less than 8 (out of 10).

The best-rated statements among students are not those that are most correlated with the quality of studies. Increased attention is required to train the trainer programs.

The categories used in the regression model explain 100 percent of the study quality composition. Therefore, there is no need to search for new categories. Existing activities in the categories need to be improved and additional assessment criteria included on the scale.

Taking into account that students mainly search for information about studies on the website of the higher education institution, it is recommended to use this instrument effectively.

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Women‘s awareness about epidural anesthesia during childbirth

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Abstract:

Pain during childbirth can affect the emotional state of a woman. Epidural labor pain relief can facilitate the condition of the pregnant woman before and during childbirth. The promotion of this method of preventing and evaluation the knowledge of women about it could improve the childbirth process itself. **Research purpose** was to analyze the awareness of women about epidural anesthesia during childbirth. **Research methods**. Quantitative research was performed (n=80). **Research results**. A positive correlation was revealed between the knowledge about epidural anesthesia during childbirth and emotional state. Women who were satisfied with their knowledge of epidural anesthesia rated the satisfaction of staff performance, satisfaction of maternity expectations, satisfaction with epidural anesthesia, and general knowledge of childbirth more positively. Knowledge about epidural anesthesia and emotional birth was most appreciated by women who referred their sources of information as doctors or midwives than those whose source of information was nurses or non-hospital staff. Women who did not feel fear of an epidural labor anesthesia favored their delivery expectations, overall knowledge about giving birth, a sense of autonomy during childbirth than those who were afraid of this procedure.
Conclusion. Women's awareness of epidural anesthesia during childbirth positively correlates with emotional state during the labor.

Keywords: awereness, childbirth, epidural anesthesia, labour

1. Introduction

Pain management plays important role for the quality of healthcare. Hospitals stand to lose reputation as well as profit if pain is poorly managed. Patient satisfaction with care is strongly tied to their experiences with pain during hospitalization. Relieved pain can affect the psychological state of the patient and family members (Wells, Pasero, McCaffery; 2008).

One of the most severe forms of pain that women experience throughout their lifetime is labor pain (Gari et al, 2017). During pregnancy, many women give some thought to how they will be able to cope with labor pain and the availability of pain-relieving methods. While some women go natural, many decide to have an epidural anesthesia (Barakzai et al, 2010). Epidural anesthesia works by numbing pain nerves as they enter the spinal cord. It provides almost complete labor pain relief (90%–95%) if administered timely. Once the medication has worn off, feeling in the affected areas will return. Epidural anesthesia is effective and can almost always relieve pain better than other medications (Minhas et al, 2005; National Health Services, 2015).

Elimination of pain during labor gives psychological comfort, which allows a woman to avoid stress. Feeling of stress can cause premature birth (Lilliecreutz et al, 2016). Increased knowledge of epidural anesthesia results a lower sense of fear before delivery. Psychological attitudes before childbirth can influence the course of the entire childbirth (Andersson et al, 2016).

Medical personnel perform complex activities when preparing a woman for epidural anesthesia. Reliable and respectful relationships between medical workers and women are an important aspect in the positive assessment of the whole process of childbirth. Personnel communication with women allows avoiding many uncertainties that may arise from the lack of knowledge about epidural anesthesia (Karlström et al., 2015). The relationship between medical staff and women allows women better understand expectances from the childbirth process and creates the confidence in medical staff (DeBaets et al, 2017). However, satisfaction with the work of staff can be influenced by the satisfaction of women with their knowledge. The evaluation of the work of the medical staff is not only dependent on the technically correct activities, but is also influenced by the emotional preparation of the woman, in this case the knowledge of the epidural anesthesia during the childbirth (Bašarinaitė et al, 2014).

Thus the purpose of the purpose was to analyze the awareness of women about epidural anesthesia during childbirth.

2. Research methods

In order to reveal women's awareness of epidural anesthesia during childbirth, the study was conducted at Klaipėda City Hospital in April - August 2017. The study was carried out with the authorisation of Klaipeda University Research Ethics Committee. The study included women who had been subjected to epidural anesthesia during childbirth, who gave birth on their own through the natural birth paths. Excluded are complications that have ended with maternal and / or neonatal health problems. The study did not include women whose childbirth ended with a Cesarean surgery, who did not agree to participate, and who did not return the questionnaire.

The method of quantitative research was chosen for the research by conducting a questionnaire survey. The questionnaire consisted of the questions for revealing the sociodemographic data, sources of information on epidural anesthesia during childbirth, assessment of the process of labor, staff work, and a sense of fear.

Research data was analyzed using IBM SPSS Statistics package v.23. The descriptive statistics and correlation (Spearmen correlation criteria) analyses were applied.

3. Results

The analysis of respondents' demographic data revealed that the majority of women in the study were aged 18-25 years - 36 participants (45%), 26-32 age group consisted of 31 (38.8%) respondents, and there were 13 women (16.3%) in 33-40 year group. It was found that 42 (52.5%) respondents had given birth once, 30 (37.5%) respondents twice, and 8 (10.0%) respondents three and more times. In general, participants learned about epidural anesthesia from a anesthesiologists, nurses, midwifes, internet, relatives or friends (Figure 1).

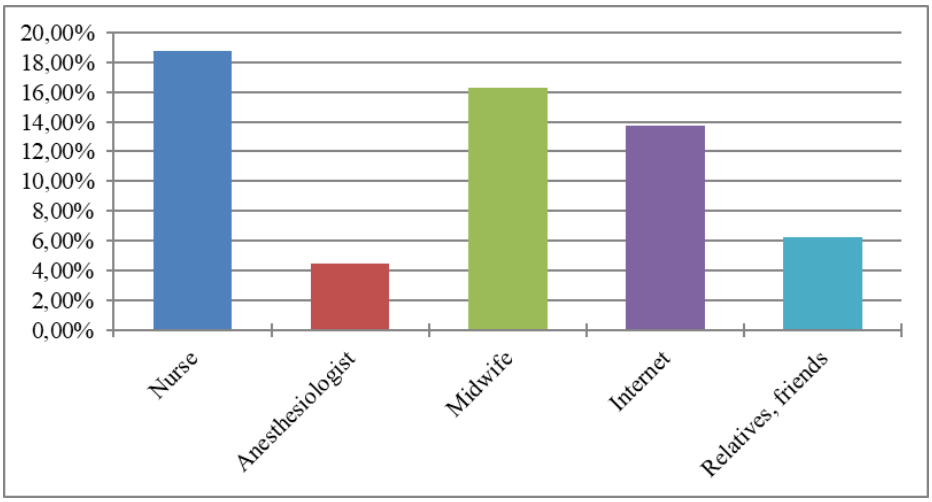

Figure 1. Sources of information about the epidural anesthesia

38 women (47.5%) responded positively to the question whether they had enought knowledge about epidural anesthesia during childbirth, 10 (12.5%) women answered negatively, and 32 (40%) women responded partially. 31 (38.8%) participants said that their knowledge of epidural anesthesia led to a better emotional state before childbirth, 49 (61.3%) participants thought that this knowledge did not affect their emotional state. Answers to the question whether respondents felt fear of epidural anesthesia were evenly distributed - 40 (50.0%) of the participants felt fear and 40 (50.0%) - not.

When analyzing the opinion of the research participants on their emotional state during childbirth, it was found that most women were satisfied with the work of the staff, the majority of the respondents confirmed that the delivery was as expected, the participants were satisfied with the performed epidural anesthesia. Participants in the study thought they could make their own decisions and felt no fear (Figure 2).

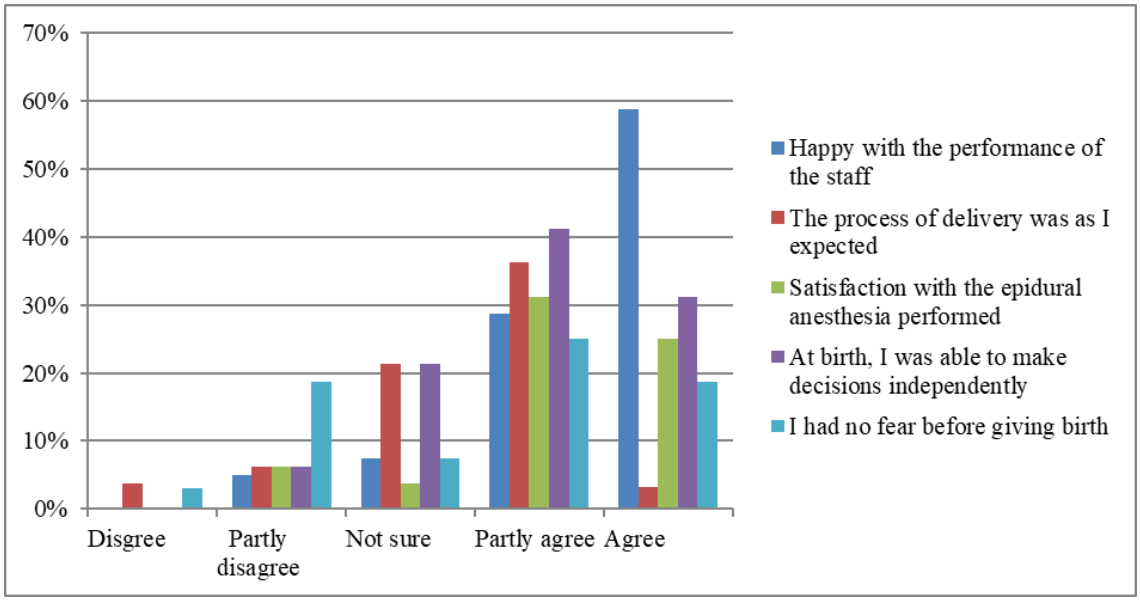

Figure 2. Emotional state during the childbirth

When evaluating respondents' awareness of epidural anesthesia, it was found that most women did not agree that the main cause of fear before childbirth is the lack of information about the chosen way to relieve pain. Almost half of the women who participated in the study knew well what would happen during childbirth and knew they would not have pain if they were using epidural anesthesia. While choosing an epidural anesthesia, most women did not know or were not sure about the possible complications. However, he knew that epidural anesthesia could affect the well-being of both the woman and the child (Figure 3).

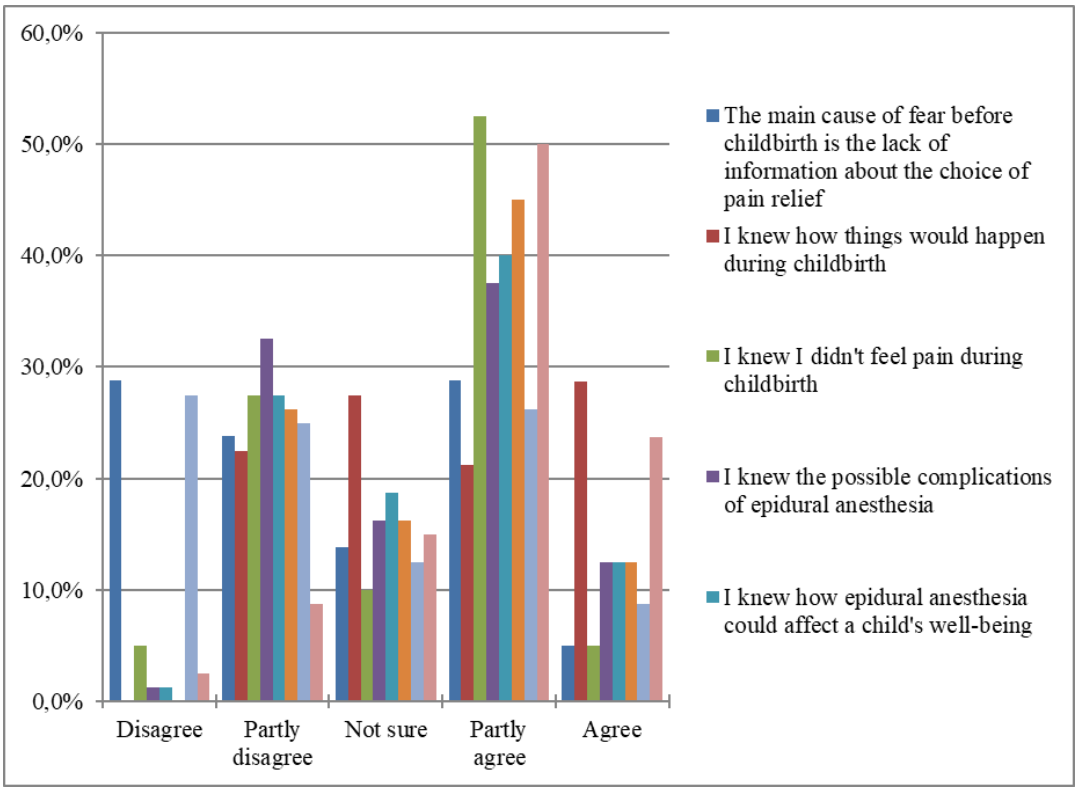

Figure 3. Women knowledge about epidural anesthesia

A positive correlation between maternal age and number of deliveries was found (r = 0.714; p <0.001). The correlation between women's age and job satisfaction is statistically significant (r = 0.260; p <0.05). The age of the respondents is statistically positively correlated with satisfying epidural anesthesia (r = 0.249; p = 0.026). Positive correlation is observed between respondents' age and compliance with birth expectations (r = 0.264; p <0.05). There was no correlation between the feeling of fear before childbirth and age (r = 0.110; p = 0.331). Statistical analysis shows that there is a positive correlation between the age of the participants and the knowledge about the progress of the birth (r = 0.266; p = 0.017). Age has a close connection with women's emotional pre-natal preparation, but the same cannot be said about the relationship between age and knowledge of epidural anesthesia. For example, the correlation was not found when analyzing the knowledge about the possible complications of epidural anesthesia (r = 0.072; p = 0.528), knowledge of the influence of epidural anesthesia on the child (r = 0.150; p = 0.184) and the female (r = 0.138; p = 0.224).

There is a statistically significant positive correlation between the number of deliveries and the expectation of childbirth (r = 0.310; p = 0.005). The number of births correlates positively with the satisfaction of women with epidural anesthesia (r = 0.223; p = 0.047). Respondents

who have had more births prefer epidural anesthesia. There is a positive correlation between the number of births and the feeling of self-sufficiency during childbirth (r = 0.227; p = 0.043). However, the correlation was not detected between the number of deliveries and the satisfaction of the staff performance (r = 0.215; p = 0.056). A positive correlation was found between the number of births and the knowledge of pain during labor (r = 0.344; p = 0.002). Although a positive correlation was observed between the number of births and the knowledge of the impact of epidural anesthesia on the time of delivery (r = 0.222; p = 0.048), the correlation was not detected between the number of births and the knowledge of the impact of epidural anesthesia on the fetus (r = 0.111; p = 0.327), knowledge on the impact of epidural anesthesia on the uterus (r = 0.101; p = 0.371), on the impact of epidural anesthesia on foot motility (r = 0.212; p = 0.059).

There was a statistically significant positive correlation between female satisfaction with staff work and general knowledge about the course of labor (r = 0.373; p = 0.001). Respondents who are satisfied with the work of medical staff are more satisfied with the process of giving birth. Positive correlation between respondents' satisfaction with the work of staff and knowledge of pain during childbirth (r = 0.253; p = 0.023). A statistically significant positive correlation was found between satisfaction with staff performace and knowledge of complications of epidural anesthesia (r = 0.378; p = 0.001). The higher level of assessment of women giving birth to medical staff not only influences the knowledge about the complications of epidural anesthesia, but also correlates positively with the knowledge about the impact of epidural anesthesia on the fetus (r = 0.264; p = 0.018), knowledge of the impact of epidural anesthesia on the uterus (r = 0.334; p = 0.002), and knowledge of the effect of epidural anesthesia on foot motility (r = 0.275; p = 0.014). Negative correlation was found between female job satisfaction and knowledge of the impact of epidural anesthesia on delivery time (r = -0.067; p = 0.555).

There was a statistically significant positive correlation between female expectations and general knowledge about the course of labor (r = 0.561; p = 0.000). Positive correlation is observed between the correspondence of maternity expectations and the knowledge of pain during labor (r = 0.354; p = 0.001), knowledge of complications of epidural anesthesia (r = 0.309; p = 0.005), knowledge of the influence of epidural anesthesia on the child (r = 0.347; p = 0.002), and knowledge of the impact of epidural anesthesia on a woman (r = 0.279; p = 0.012).

There is a statistically significant positive correlation between respondent satisfaction with epidural anesthesia and general knowledge about the course of labor (r = 0.392; p <0.001). A

statistically similar correlation can be seen between the epidural anesthesia of women and the complications of epidural anesthesia ($r = 0.460$; $p < 0.001$), and between epidural anesthesia and the impact of epidural anesthesia on the child ($r = 0.461$; $p < 0.001$). Statistically reliable positive correlations are also observed between the participants' satisfaction with epidural anesthesia and the knowledge of the impact of epidural anesthesia on the woman ($r = 0.352$; $p = 0.001$). There was a statistically significant positive correlation between female self-sufficiency during childbirth and general knowledge of the course of labor ($r = 0.576$; $p < 0.001$).

4. Conclusions

1. In most cases, a positive correlation was found between the emotional state at birth and the amount of knowledge about epidural anesthesia, i.e. the greater the knowledge about epidural anesthesia, the more positive is the assessment of the emotional state at birth.

2. Satisfaction with the performance of medical staff leads to a bettere satisfaction with the process of giving birth.

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Blood donors' opinion on nurse communication

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Abstract:

Increasing life expectancy and decreasing birth rates are key factors for an aging population. As the number of young and healthy blood donors tends to decline, blood centers will face a lack of blood components in the future. The authors of this study assume that nurse communication during blood donation can be one of the factors contributing to the quality of this healthcare process and blood donors' satisfaction. In order to analyze the opinion of blood donors on nurses' communication skills, a quantitative study was carried out in 2018. 156 non-remmunerated blood donors answered questions about their expectations for nurses' communication skills before the blood donation and evaluated the experience answering the questions after the donation. The main expectations of blood donors for communication skills of nurses were telling the truth, the nurse's openness, and sincerity. Donors also expected that they would be warmly welcomed, and the nurse would be friendly, non-irritable or rude. No significant differences were found according the sociodemographic data of the respondents. After analyzing the opinion of blood donors about the communication skills of nurses, the results of the research showed that respondents evaluated the communication skills of nurses high enough - the mean of all statements of the statements ranged from 4.17 to 4.58. Respondents appreciated that they were warmly welcomed and the nurse was friendly. Taking into the account high expectations for nurse communication we could summarize the study and state that nurse communication during blood donation is one of the factors contributing to the quality of this healthcare process and blood donors' satisfaction.

Keywords: blood donors, communication, communication skills, nurse

1. Background

Increasing life expectancy and decreasing birth rates are key factors for an aging population. As the number of young and healthy blood donors tends to decline, blood centers will face a lack of blood components in the future. Meanwhile, the need for blood components is increasing rapidly as transfusions of blood components are usually performed for the elderly. Such a tendency may cause a significant shortage of blood components in the near future (Zeiler et al, 2014).

Every year, for many reasons, many people around the world need blood transfusions. About 44,000 blood donations are needed in the United States per day. Despite the strategies developed by various organizations such as the Red Cross and the World Health Organization (WHO), the issue of safe blood remains relevant worldwide (Anwer et al, 2016).

According to the World Health Organization, almost 92 million blood transfusion procedures are carried out in the world every year. Blood supplies are needed in the event of accidents, during scheduled operations, in the treatment of severe chronic illnesses or in the case of severe births. There is a persistent shortage of blood in the world, and huge efforts are being made to promote blood donation, educate people that the blood donation procedure is safe and blood will be used for noble purposes (WHO, 2016). Approximately 108 million blood units are collected every year in the world, half of which comes from developed countries. Economically developed countries have 9 times more blood donations than low-income countries. According to WHO standards, each country should collect at least 1 percent of the total population of blood to meet blood transfusion needs (Mauka et al., 2016).

Not only researchers but also various national and international institutions and organizations (including the European Commission, the European Parliament, the World Health Organization) emphasize the importance of voluntary, non-remmunerated blood donations. It is scientifically justified that individuals who donate blood or blood components for non-monetary compensation do not have the motivation to hide their lifestyle, risk factors, and health status. As a result, the World Health Organization has obligated all states to prepare blood components only from the blood of non-remmunerated donors from 2020 (Skarbalienė, Bikulčienė, 2016).

In order to make non-remmunerated blood donors permanent, it is necessary to understand the motives and conditions that encourage people to be donors. There is currently a generally

accepted point of view that the blood donation act is very difficult to understand and, despite pure altruism, other factors also influence the behavior of blood donors (Boenigk et al., 2011).

The authors of this study assume that nurse communication during blood donation can be one of the factors contributing to the quality of this healthcare process and blood donors' satisfaction. Although there have been studies in the world on communication in healthcare, studies to reveal the impact of nursing communication skills on the blood donation process are lacking. Therefore, such research would be relevant and important.

2. Methodology

In order to analyze the opinion of blood donors on nurses' communication skills, a quantitative study was carried out in 2018. Quantitative research method was used in the study. The study was carried out at a blood center.

Non-remmunerated blood donors who visited blood center for the donation were invited to participate in the research (n = 156). The study included blood donors aged 18-57 - an average age of 29.67 ± 9.70 years (median 28 years). According to gender, the subjects were similarly distributed - 48.7% of women and 51.3% of men. (Table 1).

Table 1. Respondents' demographics and the numbers of blood donations

Indicators	N (%)
Age, years[a]	29.67±9.70
Gender	
Female	76 (48.7%)
Male	80 (51.3%)
Education	
Studying in process	45 (28.8%)
High	26 (16.7%)
Higher (non-university)	21 (13.5%)
Higher (university)	43 (27.6%)
Other	21 (13.5%)
Marital status	
Single	81 (51.9%)
Married	67 (42.9%)
Divorced	8 (5.1%)
Number of donation	
1st time	25(16.0%)
Not the 1st time	131(84.0%)
Number of donation[b]	8.47(5)

mean ± SD;

mean (median)

The questionnaire was used for data collection. It consisted of 3 parts: Part I - demographic data; Part II - blood donor expectations for nurses' communication skills; Part III - Blood donors' opinion about nurses' communication skills and professionalism. Part II and III of the research instrument were made by modifying the Self-assessment of communication skills and professionalism (Pereira, Puggina, 2014). It includes 10 statements about different communication skills and professional aspects of nurses. Statements are on a scale consisting of: interpersonal skills, presentation of information, sincere communication, and professionalism. Blood donors rated each of these statements on a 5-point Likert scale from 1 (totally disagree) to 5 (totally agree).

Blood donors completed Part I and Part II of the questionnaire before donating blood and Part III after the blood donation procedure.

The reliability of the scales was assessed and Cronbach's Alpha of the "Expectations of blood donors for communication skills and professionalism of nurses" scale was 0.853, Alpha of the "Blood donors' opinion about nurses' communication skills and professionalism" scale was 0.901, and the Alpha of overall scale was 0.864. Therefore the study instrument is considered to be reliable.

3. Results

3.1. Expectations of blood donors for nurses' communication skills

While analyzing the respondents' statements, which reflected the importance of the communication competence of nurses in blood establishments, it was found that nurses' communication competence for respondents is important - the averages of all statements ranged from 3.86 to 4.72 points.

It was very important for the respondents that the nurses would tell the truth; the nurse would be open, sincere, tell the donors all the things they should know (4.72 ± 0.72); that the donors would be warm welcomed; the nurse would be friendly, not irritable and rough (4.65 ± 0.65); that the nurse would explain what donors should know about potential problems, how and why this happened and what could be expected later. The least score (3.86 ± 1.03) was collected by the statement "It is important for me that the nurse would let me tell the things I want, would listen carefully, would ask questions, etc". However, the assessment of this statement is almost 4 - this is in line with the assumption that the statement is important as well (Table 2).

Table 2. Expectations of blood donors for communication of nurses

Statements	Mean±SD
I expect nurse telling me everything; being truthful, upfront and frank; not keeping things from me that I should know	4.72±0.72
I expect nurse to greet me warmly; call me by the name I prefer; being friendly, never crabby or rude	4.65±0.65
I expect nurse to explain what I need to know about the possible problems, how and why they may occurr, and what to expect next	4.53±0.73
I expect nurse to treat me like I'm on the same level; never "talking down" to me or treating me like a child	4.49±0.73
I expect nurse to discuss options with me; ask my opinion; offer choices and let me decide what to do; ask what I think before tell me what to do	4.42±0.80
I expect nurse to explain she is going to do and why	4.38±0.84
I expect nurse to use words I can understand when explaining my problems and treatment, and to explain any technical medical terms in plain language	4.24±0.95
I expect nurse to encourage me to ask questions; to answer them clearly; never avoid my questions	4.12±0.92
I expect nurse to show interest in me as a person; not to act bored or ignore what I say	3.97±0.99
I expect nurse to let me tell my story; to listen carefully; to ask thoughtful questions; not to interrup me while I'm talking.	3.86±1.03

There was no significant difference between the first-time donors' and non-first-time donors' expectations for nurses' communication skills. The results showed that nurses' communication skills are important for all blood donors (first-time donors and non-first-time donors) (Figure 1).

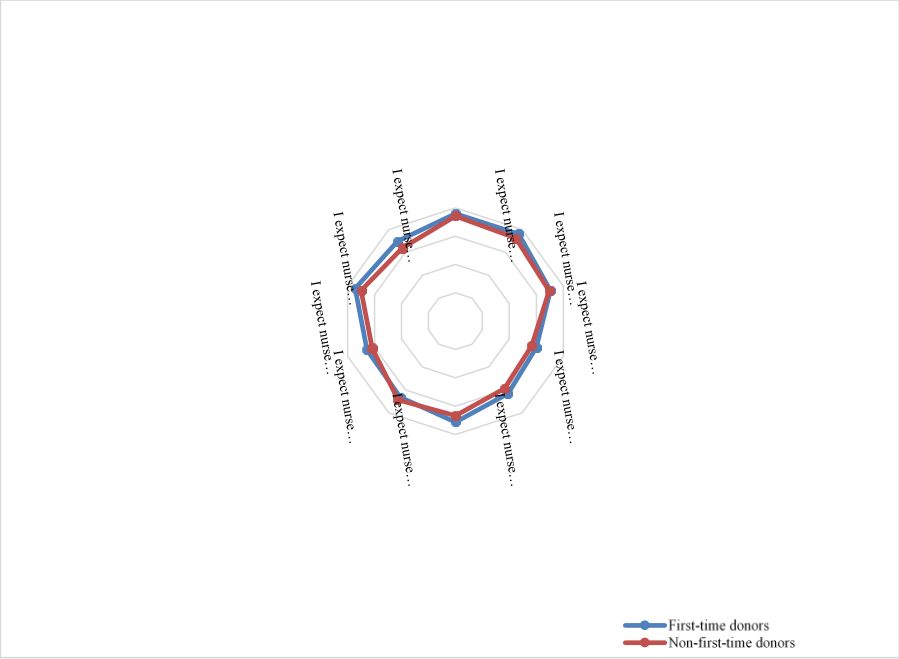

Figure 1 Expectations of blood donors for communication skills of nurses

Expectations of the youngest blood donors (18-24 years) were significantly higher than those of 25-44 year-olds. They were more concerned about the nurse's explanation of what they should know about possible problems, how and why this happened and what could be expected later (18-24 (1) 4.64 ± 0.62, 25-44 years (2) 4.39 ± 0.84, 45-60 years (3) 4.57 ± 0.44: H=5.73; p=0.057: p1:2=0.041, p1:3=0.548, p2:3=0,092) (Table 3).

Table 3. Expectations for nurses' communication skills depending on the age of the blood donors

Statements	18-24 years	25-44 years	45-60 years	H	p	$p_{1:2}$	$p_{1:3}$	$p_{2:3}$
	n=69	n=74	n=13					
	1	2	3					
I expect nurse telling me everything; being truthful, upfront and frank; not keeping things from me that I should know	4.78±0.73	4.72±0.61	4.46±1.13	3.72	0.156	0.103	0.109	0.549
I expect nurse to greet me warmly; call me by the name I prefer; being friendly, never crabby or rude	4.71±0.46	4.62±0.70	4.46±1.13	0.18	0.916	0.709	0.772	0.924
I expect nurse to treat me like I'm on the same level; never "talking down" to me or treating me like a child	4.55±0.63	4.42±0.83	4.54±0.66	0.58	0.747	0.456	0.953	0.725
I expect nurse to let me tell my story; to listen carefully; to ask thoughtful questions; not to interrup me while I'm talking	3.97±0.95	3.68±1.14	4.31±0.48	4.41	0.110	0.142	0.302	0.068
I expect nurse to show interest in me as a person; not to act bored or ignore what I say	4.03±1.00	3.85±1.02	4.38±0.65	3.47	0.176	0.266	0.286	0.077
I expect nurse to explain she is going to do and why	4.42±0.79	4.30±0.92	4.62±0.51	1.28	0.527	0.450	0.563	0.312
I expect nurse to discuss options with me; ask my opinion; offer choices and let me decide what to do; ask what I think before tell me what to do	4.48±0.78	4.34±0.86	4.62±0.51	1.71	0.426	0.256	0.807	0.358
I expect nurse to encourage me to ask questions; to answer them clearly; never avoid my questions	4.17±0.94	4.04±0.91	4.31±0.86	1.78	0.410	0.287	0.701	0.277
I expect nurse to explain what I need to know about the possible problems, how and why they may occurr, and what to expect next	4.64±0.62	4.39±0.84	4.57±0.44	5.73	0.057	0.041	0.548	0.092
I expect nurse to use words I can understand when explaining my problems and treatment, and to explain any technical medical terms in plain language	4.28±1.04	4.14±0.91	4.62±0.51	4.29	0.117	0.129	0.409	0.075

The analysis of men's and women's expectations for nurses' communication skills did not reveal significant differences (Table 4).

Table 4. Men's and women's expectations for nurses' communication skills

Statements	Female	Male	U	P
	n=76	n=80		
I expect nurse telling me everything; being truthful, upfront and frank; not keeping things from me that I should know	4.70±0.83	4.75±0.59	2972.5	0.730
I expect nurse to greet me warmly; call me by the name I prefer; being friendly, never crabby or rude	4.70±0.61	4.60±0.69	2808.0	0.303
I expect nurse to treat me like I'm on the same level; never "talking down" to me or treating me like a child	4.50±0.9	4.48±0.68	2871.5	0.492
I expect nurse to let me tell my story; to listen carefully; to ask thoughtful questions; not to interrup me while I'm talking	3.74±1.06	3.98±0.99	2656.5	0.154
I expect nurse to show interest in me as a person; not to act bored or ignore what I say	3.92±1.07	4.03±0.91	2923.0	0.661
I expect nurse to explain she is going to do and why	4.33±0.86	4.43±0.82	2821.	0.385
I expect nurse to discuss options with me; ask my opinion; offer choices and let me decide what to do; ask what I think before tell me what to do	4.43±0.82	4.41±0.79	2973.0	0.788
I expect nurse to encourage me to ask questions; to answer them clearly; never avoid my questions	4.09±0.96	4.15±0.89	2965.5	0.778
I expect nurse to explain what I need to know about the possible problems, how and why they may occurr, and what to expect next	4.53±0.70	4.54±0.76	2947.0	0.698
I expect nurse to use words I can understand when explaining my problems and treatment, and to explain any technical medical terms in plain language	4.36±0.93	4.13±0.96	2575.5	0.072

3.2. Blood donors' opinion about nurses' communication skills

The results of the study showed that respondents evaluated the communication skills of nurses high enough - the averages of all statements were from 4.17 to 4.58. The most appreciated, that the respondents were warmly welcomed, the nurse was friendly, was not rude (4.58 ± 0.57), the respondents were told the truth, the nurse was open, sincere, did not hide the things the respondents had to know (4.49 ± 0.65) (Table 5).

Table 5. Blood donors 'opinion about nurses' communication skills

Statements	Mean±SD
A nurse greeted me warmly; called me by the name I prefer; was friendly, never crabby or rude	4.58±0.57
A nurse told me everything; was truthful, upfront and frank; not kept things that I should know	4.49±0.65
A nurse treated me like I'm on the same level; never "talked down" to me or treated me like a child	4.43±0.72
A nurse discussed options with me; asked my opinion; offered choices and let me decide what to do; asked what I think before telling me what to do	4.36±0.77
A nurse explained what she was going to do and why	4.29±0.81
A nurse discussed options with me; asked my opinion; offered choices and let me decide what to do; asked what I think before telling me what to do	4.33±0.76
A nurse showed interest in me as a person; not acted bored or ignored what I say	4.27±0.81
A nurse let me tell my story; listened carefully; asked thoughtful questions; not interruped me while I was talking	4.26±0.81
A nurse used words I can understand when explaining my problems and treatment, and explained any technical medical terms in plain language	4.36±0.70
A nurse encouraged me to ask questions; answered them clearly; never avoided my questions	4.17±0.86

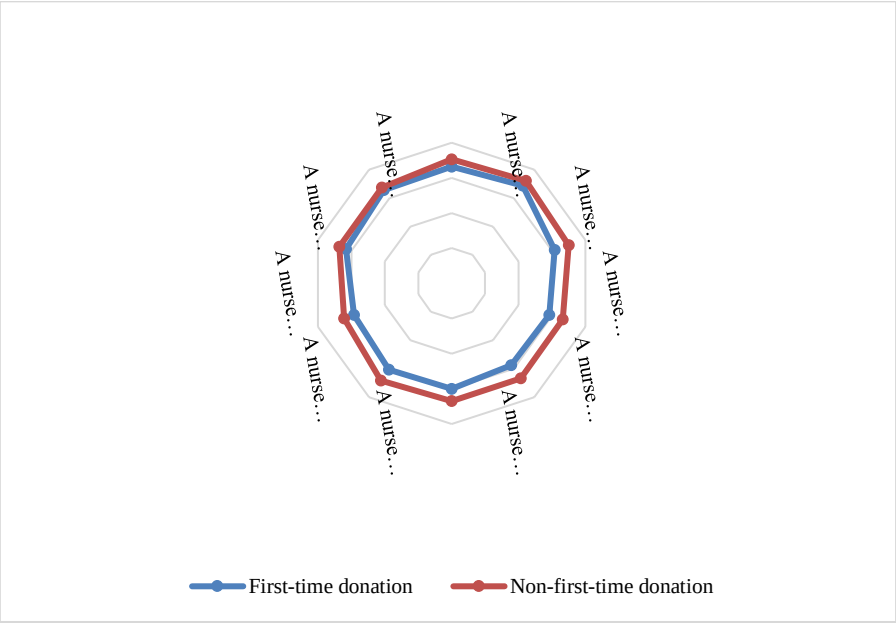

Figure 2. Opinion of nurses' communication skills depending on the number of blood donation

Non-first-time donors appreciated the communication skills of nurses much better than the first-time donors. Statically significant differences were found in these statements:

- A nurse treated me like I'm on the same level; never "talked down" to me or treated me like a child (4.50±0.65 vs 4.08±0.95: U=1248.0; p=0.034),
- A nurse let me tell my story; listened carefully; asked thoughtful questions; not interruped me while I was talking (4.32±0.76 vs 3.92±1.00: U=1257.0; p=0.046),

- A nurse showed interest in me as a person; not acted bored or ignored what I say (4.34±0.76 vs 3.88±0.97: U=1190.0; p=0.018),
- A nurse explained what she was going to do and why (4.35±0.77 vs 4.00±0.91: U=1276.0; p=0.049),
- A nurse discussed options with me; asked my opinion; offered choices and let me decide what to do; asked what I think before telling me what to do (4.42±0.73 vs 4.04±0.89: U=1235.0; p=0.031) (Figure 2.).

Respondents aged 45-60 evaluated discussing options, asking for the opinion, offeringed choices, and letting to decide what to do significantly better than those aged 25-44 (18-24 years (1) 4.38±0.79, 25-44 years (2) 4.27±0.78, 45-60 years (3) 4.77±0.44: H=5.43, p=0.066: p1:2=0.313, p1:3=0.099, p2:3=0.018) as well as encouraging to ask questions (18-24 years (1) 4.25±0.86, 25-44 years (2) 4.03±0.88, 45-60 years (3) 4.62±0.51: H=6.26, p=0.044: p1:2=0.103, p1:3=0.191, p2:3=0.023) (Table 6).

Table 6. Evaluation of communication skills of nurses depending on the age of donors

Statements	18-24 years	25-44 years	45-60 years	H	p	$p_{1:2}$	$p_{1:3}$	$p_{2:3}$
	n=69	n=74	n=13					
	1	2	3					
A nurse told me everything; was truthful, upfront and frank; not kept things that I should know	4.48±0.68	4.50±0.65	4.54±0.52	0.01	0.996	0.928	0.971	0.978
A nurse greeted me warmly; called me by the name I prefer; was friendly, never crabby or rude	4.57±0.56	4.55±0.60	4.77±0.44	1.55	0.462	0.968	0.221	0.239
A nurse treated me like I'm on the same level; never "talked down" to me or treated me like a child	4.38±0.75	4.42±0.72	4.77±0.44	3.45	0.179	0.752	0.067	0.089
A nurse let me tell my story; listened carefully; asked thoughtful questions; not interruped me while I was talking	4.17±0.91	4.26±0.74	4.69±0.48	4.33	0.115	0.807	**0.048**	**0.045**
A nurse showed interest in me as a person; not acted bored or ignored what I say	4.26±0.78	4.20±0.88	4.69±0.48	4.06	0.131	0.818	0.058	0.050
A nurse explained what she was going to do and why	4.38±0.81	4.16±0.83	4.62±0.51	5.05	0.080	0.080	0.441	0.066
A nurse discussed options with me; asked my opinion; offered choices and let me decide what to do; asked what I think before telling me what to do	4.38±0.79	4.27±0.78	4.77±0.44	5.43	0.066	0.313	0.099	**0.018**
A nurse encouraged me to ask questions; answered them clearly; never avoided my questions	4.25±0.86	4.03±0.88	4.62±0.51	6.26	**0.044**	0.103	0.191	**0.023**
A nurse explained what I needed to know about the possible problems, how and why they may occurr, and what to expect next	4.43±0.65	4.19±0.86	4.54±0.66	3.87	0.144	0.096	0.547	0.160
A nurse used words I can understand when explaining my problems and treatment, and explained any technical medical terms in plain language	4.42±0.72	4.26±0.70	4.62±0.51	4.00	0.135	0.128	0.461	0.093

Donors men and women fairly equaly assessed nurses' communication skills, i.e. no significant differences were found (Table 7).

Table 7. Evaluation of nurses' communication skills depending on the gender of the donors

Statements	Female	Male	U	p
	n=76	n=80		
A nurse told me everything; was truthful, upfront and frank; not kept things that I should know	4.53±0.62	4.46±0.67	2906.5	0.589
A nurse greeted me warmly; called me by the name I prefer; was friendly, never crabby or rude	4.61±0.54	4.55±0.59	2920.0	0.617
A nurse treated me like I'm on the same level; never "talked down" to me or treated me like a child	4.41±0.73	4.45±0.71	2951.0	0.723
A nurse let me tell my story; listened carefully; asked thoughtful questions; not interruped me while I was talking.	4.25±0.85	4.26±0.78	3006.5	0.897
A nurse showed interest in me as a person; not acted bored or ignored what I say	4.28±0.83	4.26±0.81	2983.0	0.826
A nurse explained what she was going to do and why	4.22±0.79	4.36±0.82	2696.0	0.183
A nurse discussed options with me; asked my opinion; offered choices and let me decide what to do; asked what I think before telling me what to do	4.39±0.77	4.33±0.78	2871.0	0.507
A nurse encouraged me to ask questions; answered them clearly; never avoided my questions	4.17±0.90	4.18±0.82	2988.5	0.845
A nurse explained what I needed to know about the possible problems, how and why they may occurr, and what to expect next	4.38±0.75	4.28±0.78	2794.0	0.337
A nurse used words I can understand when explaining my problems and treatment, and explained any technical medical terms in plain language	4.43±0.68	4.29±0.72	2700.0	0.185

The analysis of expectations and evaluations of communication skills of nurses revealed that skills such as truth-telling, openness, sincerity, things that the donor should be aware of (expectations 4.72±0.72, evaluation 4.49±0.65: Z=4.09, p<0,001), and explanation what donor needs to know about the possible problems, how and why they may occurr, and what to expect next (expectations 4.53±0.73, evaluation 4.33±0.76: Z=2.69, p=0.007) expectations were significantly higher than evaluation of the situation. On the other hand, letting donor tell the story, listening carefully, asking thoughtful questions, not interrupting (expectations 3.86±1.03, evaluation 4.26±0.81: Z=3.97, p<0.001) and showing the interest (expectations 3.97±0.99, evaluation 4.27±0.81: Z=3.08, p=0.002) were evaluated higher than expectations. Other evaluations of nurses' communication skills were in line with expectations (Figure 3).

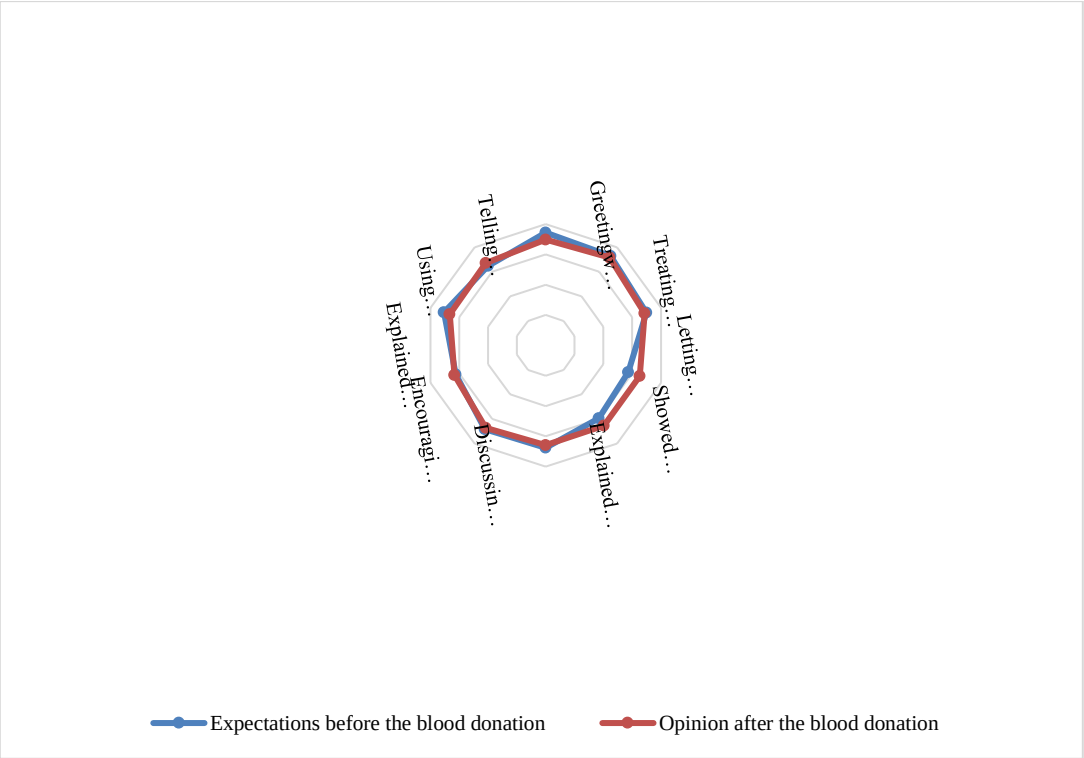

Figure 3. Communication skills of nurses: expectations and evaluation

4. Conclusions

The main expectations of blood donors for communication skills of nurses were telling the truth, the nurse's openness, and sincerity. Donors also expected that they would be warmly welcomed, and the nurse would be friendly, non-irritable or rude. No significant differences were found according the sociodemographic data of the respondents.

After analyzing the opinion of blood donors about the communication skills of nurses, the results of the research showed that respondents evaluated the communication skills of nurses high enough - the mean of all statements of the statements ranged from 4.17 to 4.58.

Respondents appreciated that they were warmly welcomed and the nurse was friendly.

Taking into the account high expectations for nurse communication we could summarize the study and state that nurse communication during blood donation is one of the factors contributing to the quality of this healthcare process and blood donors' satisfaction.

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Nurses role in educating self-care after hysteroscopy

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Abstract:
After hysteroscopic operation, patients can relax from the symptoms, but they can also experience new symptoms that are caused by the treatment. The nurse is responsible for ensuring that the patient‘s healing process is as smooth as possible. Often, a postoperative period means adapting to a new treatment regime or it could be a change in lifestyle. However, nurse must ensure patient education so that women can be heard effectively in the same way that they are ready to take care of themselves. The aim of the study was to analyze the role of nurses in self-care after hysteroscopic surgery. Quantitative study was performed. The sample consisted of 98 patients. A large proportion of women have indicated that they have appropriate information about self-esteem after hysteroscopic surgery. Not only oral information provided by nurses after an operation was important to patients, but they also felt the need for written information to be obtained. Most women said that the nurse provided the necessary information about self-esteem after surgery. Therefore, the role of nurses in giving patients information is evaluated positively. Women feel the need to get information from nurses about self-esteem after a hysteroscopic operation, and the role of nurses in educating is evaluated positively.

Keywords:
Hysteroscopy, role of nurses, training

1. Introduction

Hysteroscopy is a minimally invasive intervention that can be used to diagnose and treat many uterine and cervical problems. Given its safety, efficacy, and accuracy in diagnostics, hysteroscopy has become a standard in gynecology practice. Over the last few decades, optical technologies have been improved and new surgical accessories have been invented that have dramatically improved vision resolution and surgical techniques in hysteroscopy. Many hysteroscopic procedures have replaced old invasive methods. New devices and methods will continue to grow, and the prospects for improvement seem unlimited (Cicinelli et al, 2007).

Due to its greater accuracy in diagnostics and treatment, hysteroscopy has become increasingly attracted to doctors as an alternative to diagnostics and therapy (Lynch, LeFort, 2016). Hysteroscopy is proven to be an easy, accessible, and commonly performed operation (Petrozza, Attaman, 2017). The most common indication for hysteroscopy is abundant uterine bleeding, postmenopausal bleeding, but it is also used to treat infertility. Hysteroscopy is also performed to remove polyps, fibroids, myomas, and take small samples of tissue (biopsy) (Lynch, LeFort, 2016; Petrozza, Attaman, 2017).

After general anesthesia, the hysteroscope is inserted into the uterus using a saline solution (NaCl) or a sugar solution (sorbitol), which helps to see the visual cavity of the uterus. Following the examination of the uterine cavity, several different measures can be inserted through the hysteroscope to treat uterine fibroids, severe menstrual bleeding, or polyps (Erian et al, 2017). Postoperative healing time is very fast. Almost all patients on the same day are given outpatient treatment.

After treatment, patients may relax from their previous symptoms, but they may also experience new symptoms caused by treatment. The nurse is responsible for allowing the patient to go through the healing process as smoothly as possible. Often, the postoperative period means adapting to a new treatment regimen or lifestyle change. However, the nurse must ensure patient education so that patients are prepared to take care of themselves and not be hospitalized again for the same problem or complications due to weak self-care (Petrozza, Attaman, 2017; Allen, Barber, 2017; Deroian et al, 2016).

There is currently a lack of research on the role of nurses in providing post-operative self-care information. In order to assess and improve the quality of care provided, it is very important to investigate the quality of healthcare. Patient satisfaction is an important indicator of quality

of care. And in order to improve the quality of nursing care, nurses need to know what factors improve patient satisfaction (Kokanali et al, 2014).

Thus the aim of the study was to analyze the role of nurses in educating self-care after the hysteroscopic surgery.

2. Methods

The study was conducted in Klaipėda City Hospital (Lithuania) in 2017. Respondents were women over 18 years of age after hysteroscopic surgery (n = 106). Respondent characteristics are presented in Table 1.

Table 1. Sociodemographic characteristics of respondents

Parameter	N (%)
Age	
18-25 years	8 (7.55)
26-33 years	14 (13.21)
34-41 years	21 (19.81)
42-51 years	34 (32.08)
52-65 years	29 (27.35)
Living area	
Urban	72 (67.92)
Rural	34 (32.08)
Number of hysteroscopy	
First time	69 (65.09)
Non-first time	37 (34.91)

In addition to information on demographic data, data on patient information needs, awareness of hysteroscopic surgery information and self-care were collected, as well as data on how patients evaluate information from nurses. The Likert scale was used to collect data.

3. Results

Responding to information needs, a majority of women said they were well informed about the role of nurses in post-operative care. 92% of respondents fully agreed or agreed with this statement. 88.7% of women wished to receive oral information, and 80.4% of respondents said they would like to receive information on self-care in written form before leaving for outpatient treatment.

Many respondents said that

- the nurse provided information on when to remove the vaginal swab (92.8%),
- the nurse provided information on possible vaginal bleeding during the postoperative period (91.8%),
- the nurse provided information on pain management techniques during the postoperative period (88.7%),
- the nurse provided information on possible postoperative complications (88.6%),
- the nurse provided information on when to start the sport after hysteroscopy (74.2%),
- the nurse provided information on when I can bathe in a bath after hysteroscopy (85.6%),
- the nurse provided information on postoperative wound care (89.7%).

In response to questions about the information provided by nurses, most women answered that:

- the information provided was understandable (93.8%),
- self-care information provided after surgery was sufficient (90.8%),
- knows where to go if there are abdominal pains at home (92.8%),
- knows where to go if bleeding from genitals (91.7%) comes home
- knows the contacts that could be contacted in case of questions (90.8%).

4. Discussion and conclusions

The results of the study revealed that women have a great need to be awared about self-care, which is why medical staff play a great role in educating of self-care in postoperative period. The study revealed that women had an interest in getting oral information but felt that written information about posoperative self-care at home was also needed. These results coincided with a survey conducted by US scientists to analyze whether patients need brochures for outpatient treatment. It was found that many patients (70.2%) read the information back home and appreciated it (Bester, 2016). A similar study was also conducted in the UK. A study was carried out of patients' need for written information related to self-care after hysteroscopic surgery. 93% of respondents replied that they would benefit from written information (Amezcua et al, 2011). Another study conducted in Lithuania aimed to identify the patients’ need for

information before and after gastrointestinal surgery. Researchers sought to determine the form in which patients would like getting the information. Most respondents (71.2%) felt that information should be provided in written, a smaller proportion of respondents (17.3%) replied that oral information was sufficient for them, while the remaining patients (11.5%) said they would like to receive information written and oral (Šakienė et al, 2014). It is therefore important to note that it is important for patients to receive not only oral information about self-care but also in a written form.

The study revealed that patients appreciate the information provided by nurses about self-care during the postoperative period. However, it should be noted that the research on the role of nurses in educating and training of patients and the provision of information on self-care during the post-operative period is quite limited. However, research has been found that the assessment of the information provided to patients in surgical departments was positive, and most patients supported the statement that they were clearly informed about how to act after the surgery and how to relieve the pain (Zagurskienė, Misevičienė, 2008). In the UK, respondents were asked whether the nurse provided information on possible postoperative complications. More than 70% of respondents said this information was provided (Amezcua et al, 2011). Savickiene et al. found that the majority of respondents (87.9%) agreed that the nurse provided the necessary advice and instructions on self-care. The ability of nurses to inform patients of issues of concern to them exceeded patient expectations and met their information and service needs (Savickienė et al, 2009). It can be assumed that the activities of nurses in the provision of information to patients about postoperative care are positively assessed.

Thus it can be concluded that patients need to be awared about the self-care after the hysteroscopic surgery. They appreciate oral information, and the information in the written form for outpatient treatment may bring the added value. Nurses play significant role in educating patients during the post-operative period and information provided is understandable and sufficient.

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