

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-dimensional 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).

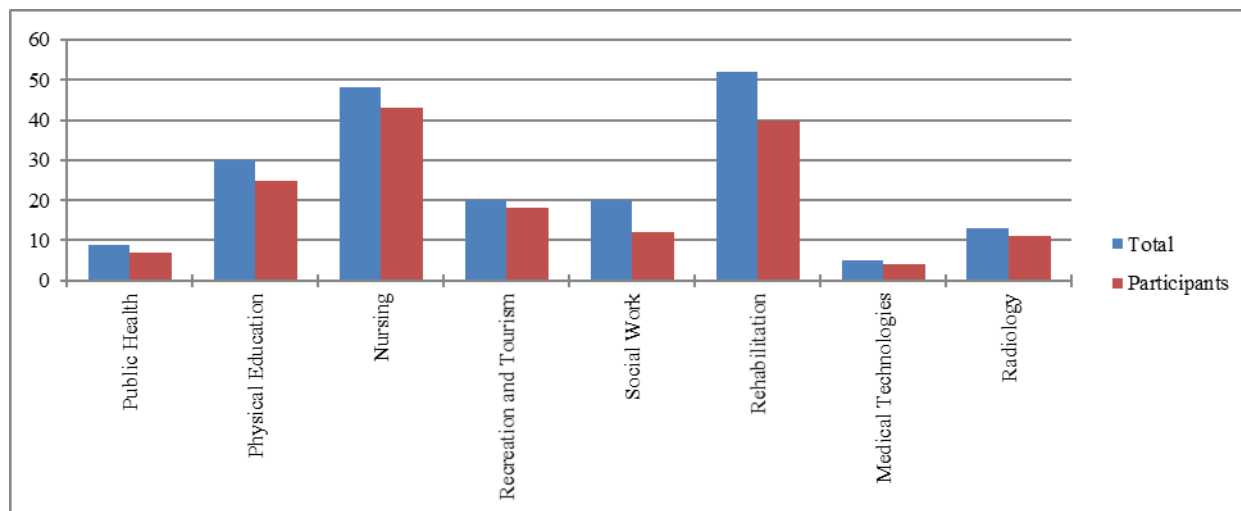


Figure 1. Number of graduates and study participants

The recommendations not to compare results across the courses, study programmes, etc. were 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).

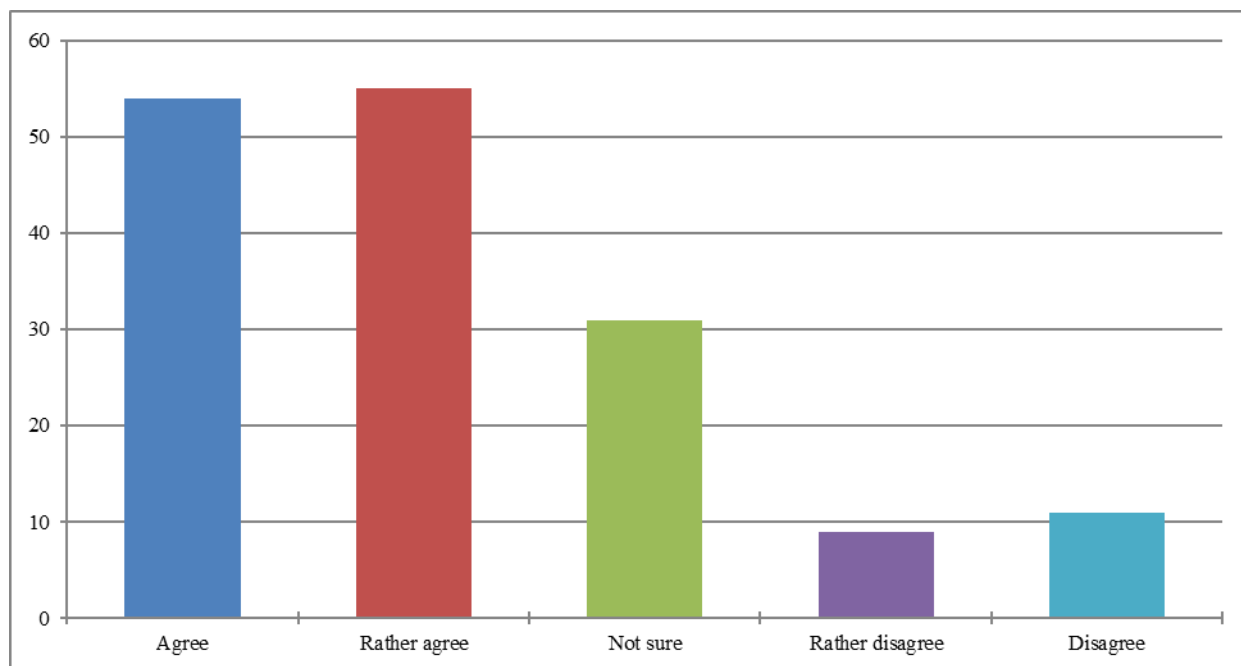


Figure 2 Compliance of the study program with student expectations

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).

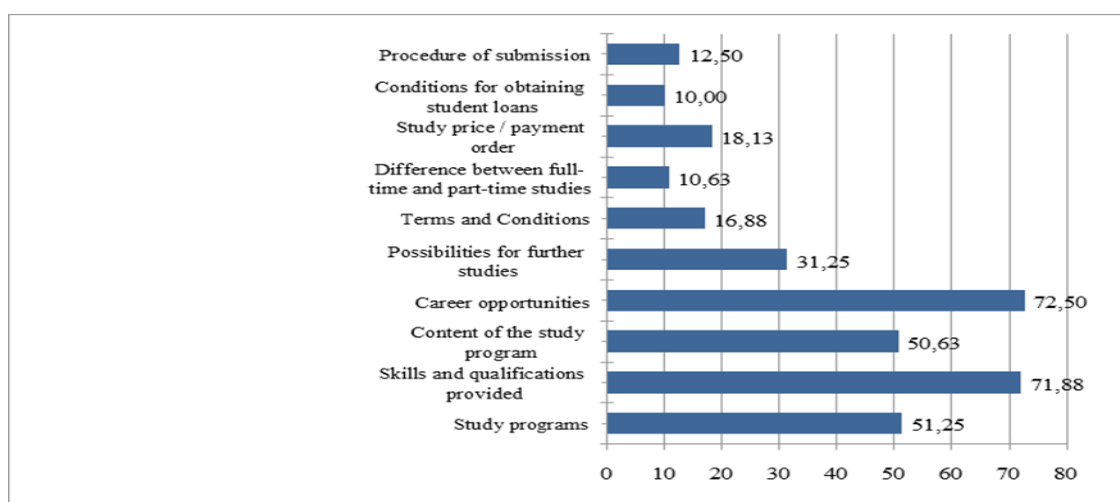


Figure 3 Graduates advise students to be interested in (%)

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.

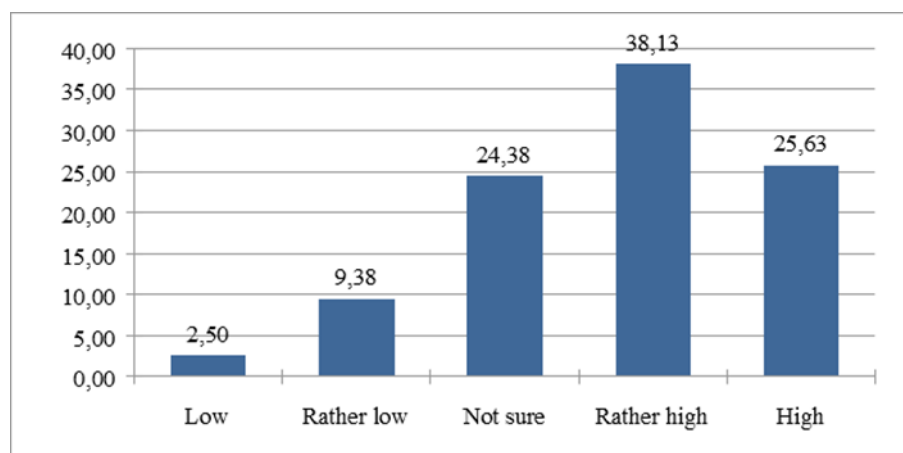


Figure 4 Student opinion about study quality (%)

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).

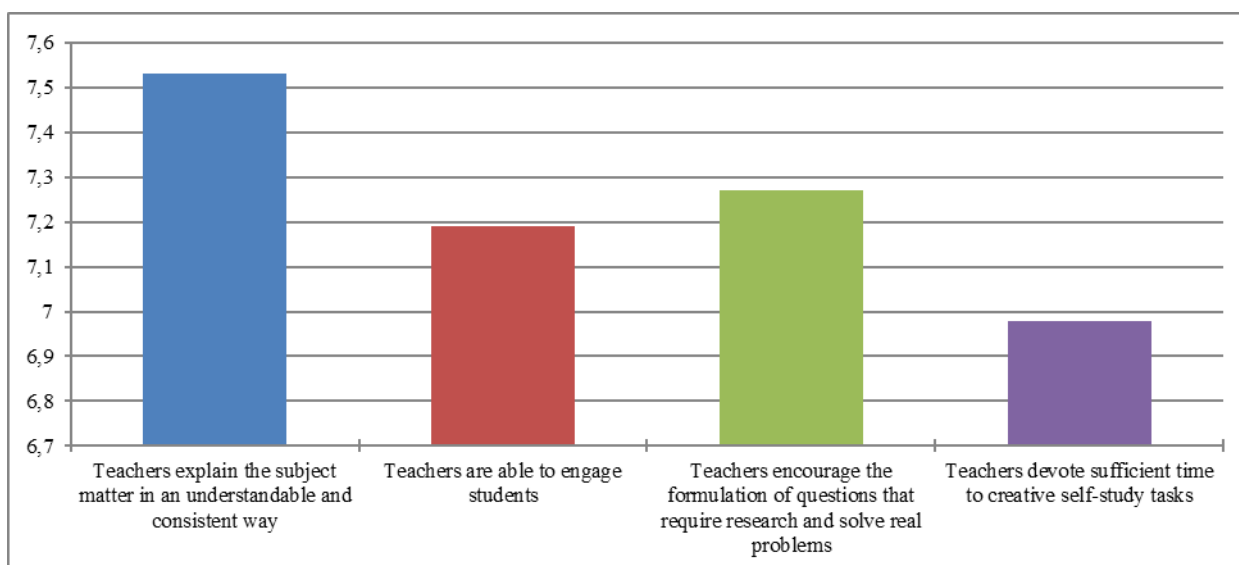


Figure 5. Evaluation of lecturer performance (mean ranks)

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)

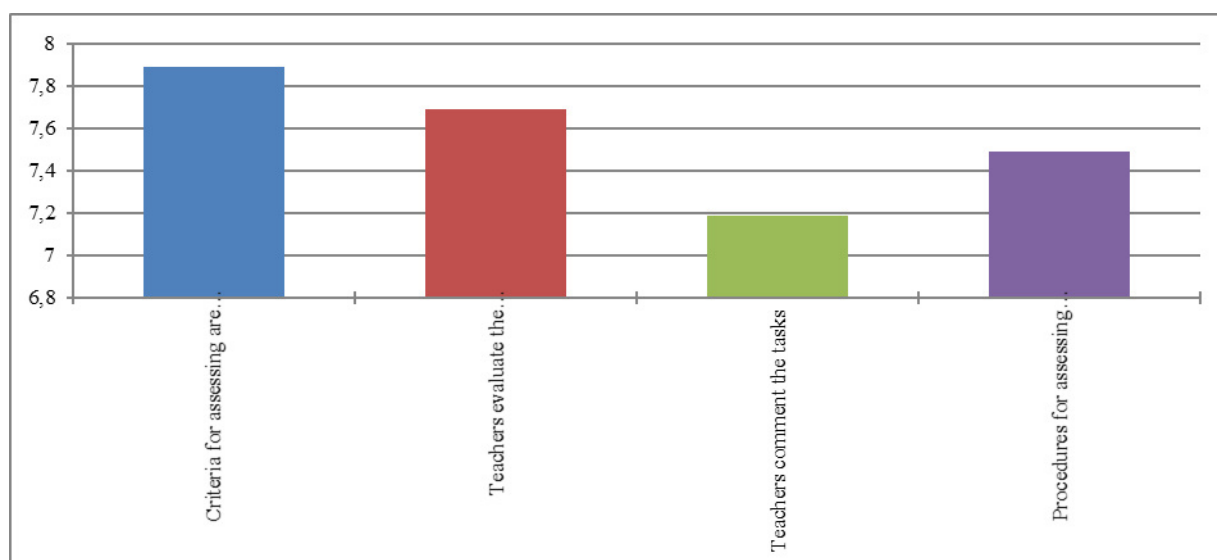


Figure 6. Assessment of study results (mean ranks)

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).

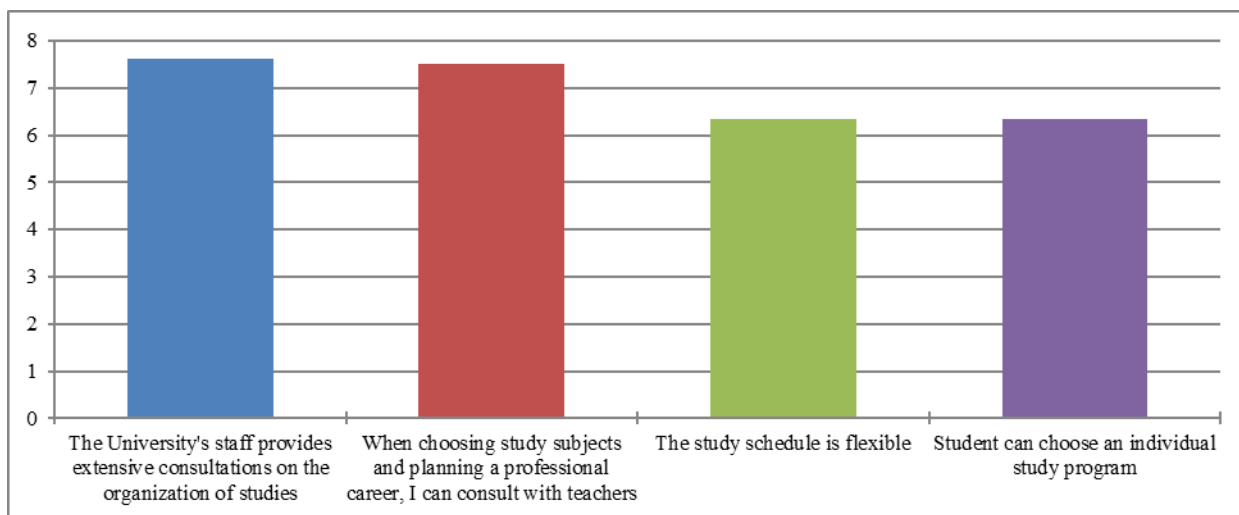


Figure 7. Evaluation of academic support (mean ranks)

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.

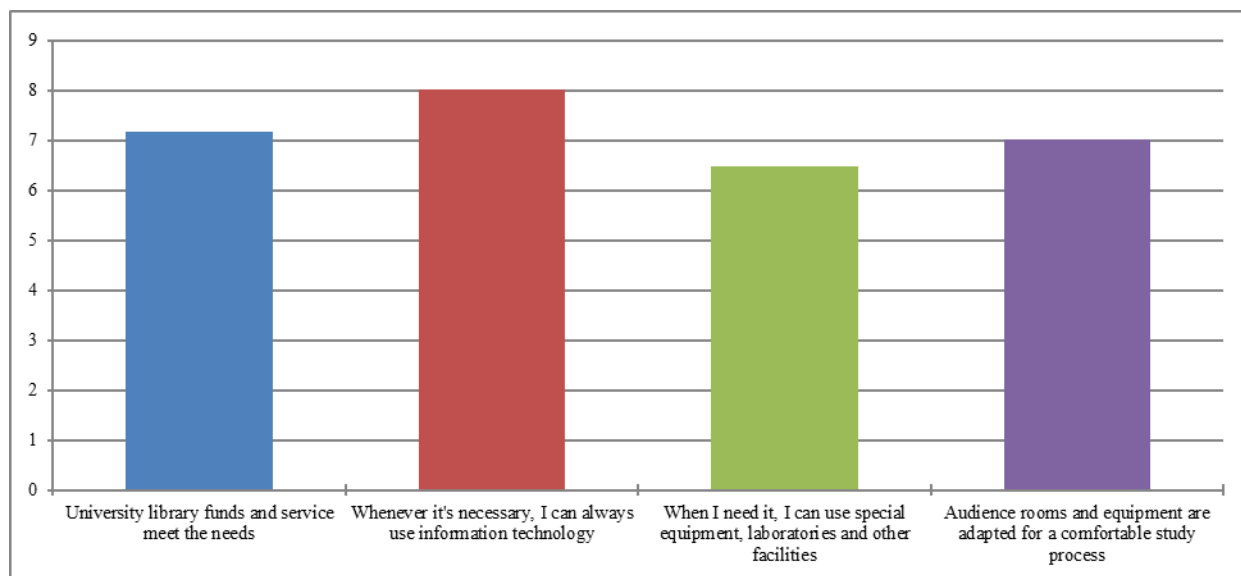


Figure 8. Assessment of Study Infrastructure (mean ranks)

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).

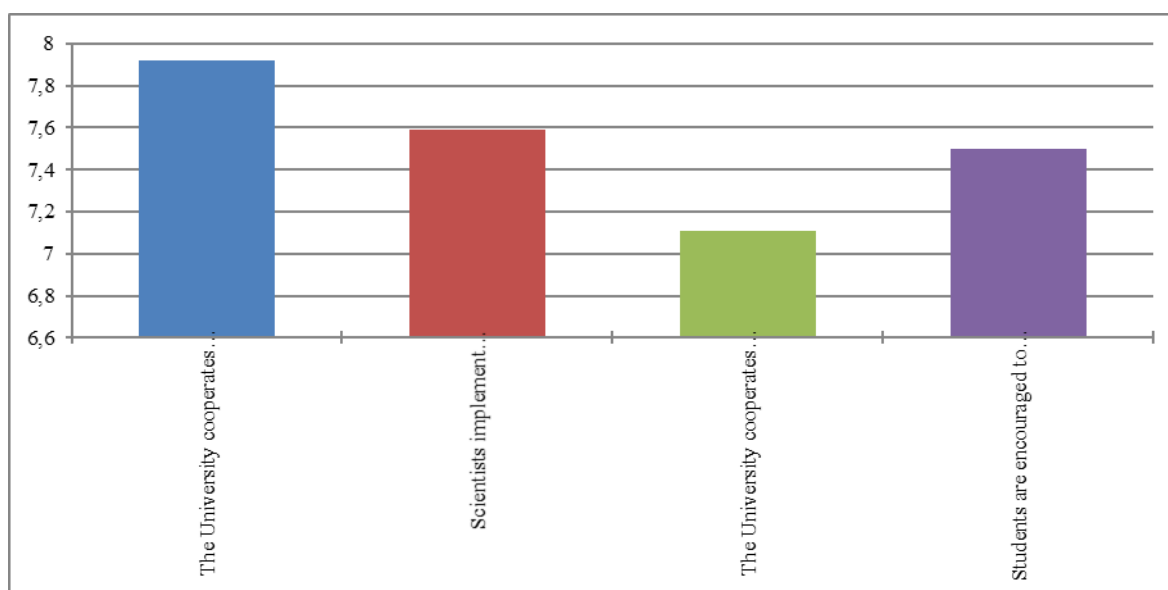


Figure 9. Assessment of university's external relations (mean ranks)

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).

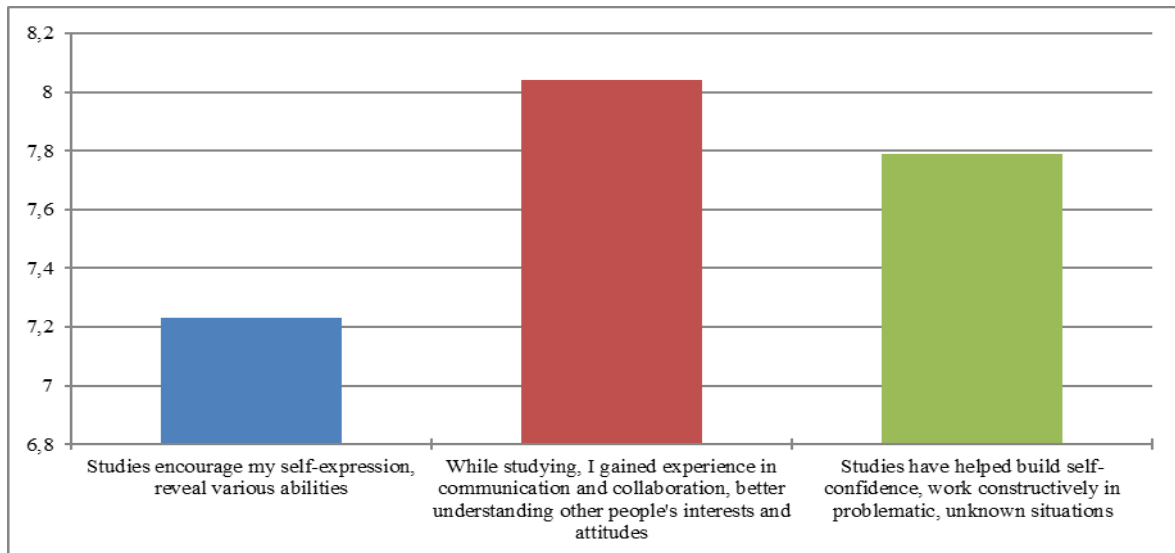


Figure 10 Assessment of personal development opportunities (mean ranks)

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 strengthen 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)

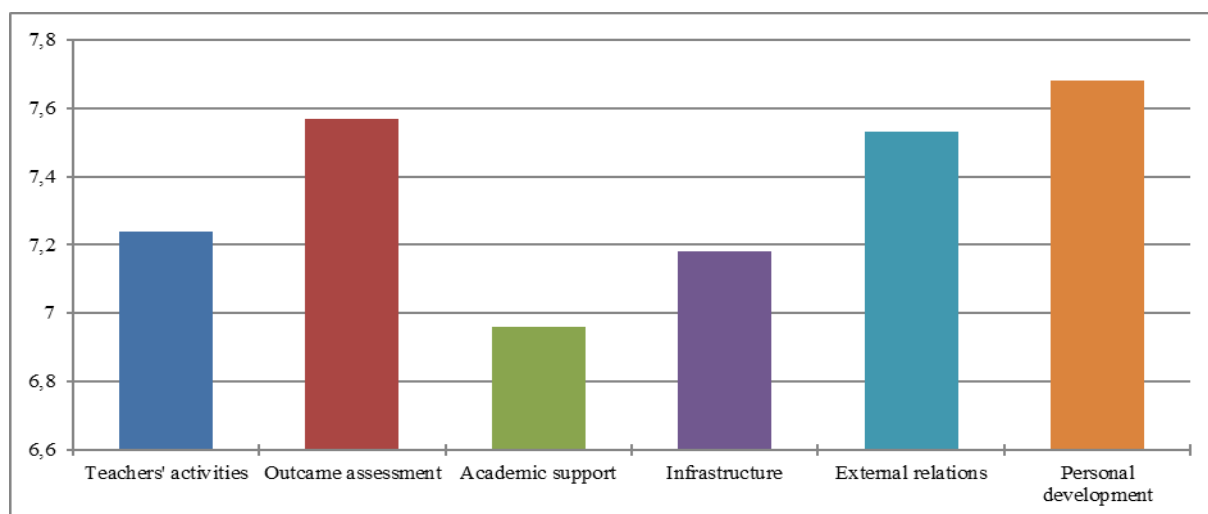


Figure 11. Evaluation of study quality categories (mean ranks)

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:

$$\begin{aligned}
 \text{Study quality} = & \\
 & \beta_0 + \beta_1 * \text{teaching activities} \\
 & + \beta_2 * \text{assessment of student achievement} \\
 & + \beta_3 * \text{academic support} \\
 & + \beta_4 * \text{study infrastructure} \\
 & + \beta_5 * \text{University external relations} \\
 & + \beta_6 * \text{opportunities for personal development}
 \end{aligned}$$

$R^2 \geq 0.25$ 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).

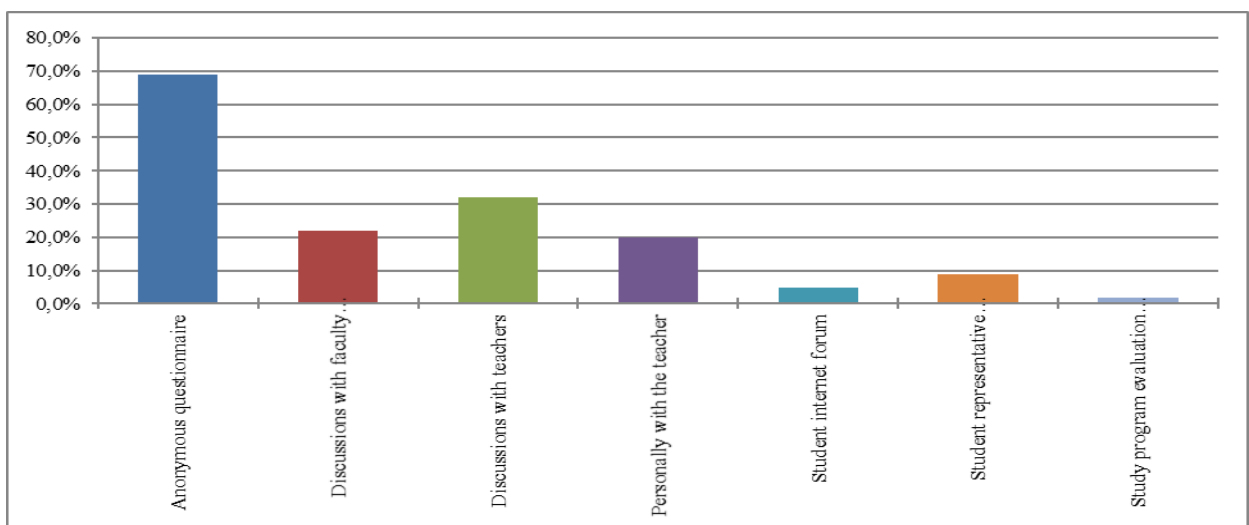


Figure 12 Expression of opinion about study quality during studies

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).

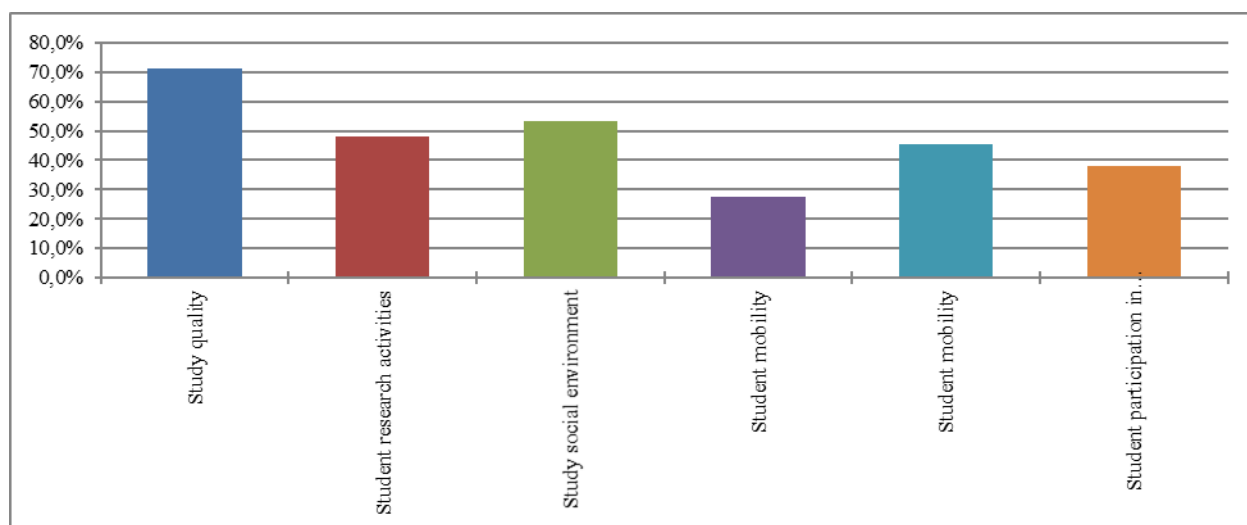


Figure 13 Student opinion about university areas that need to be improved

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).

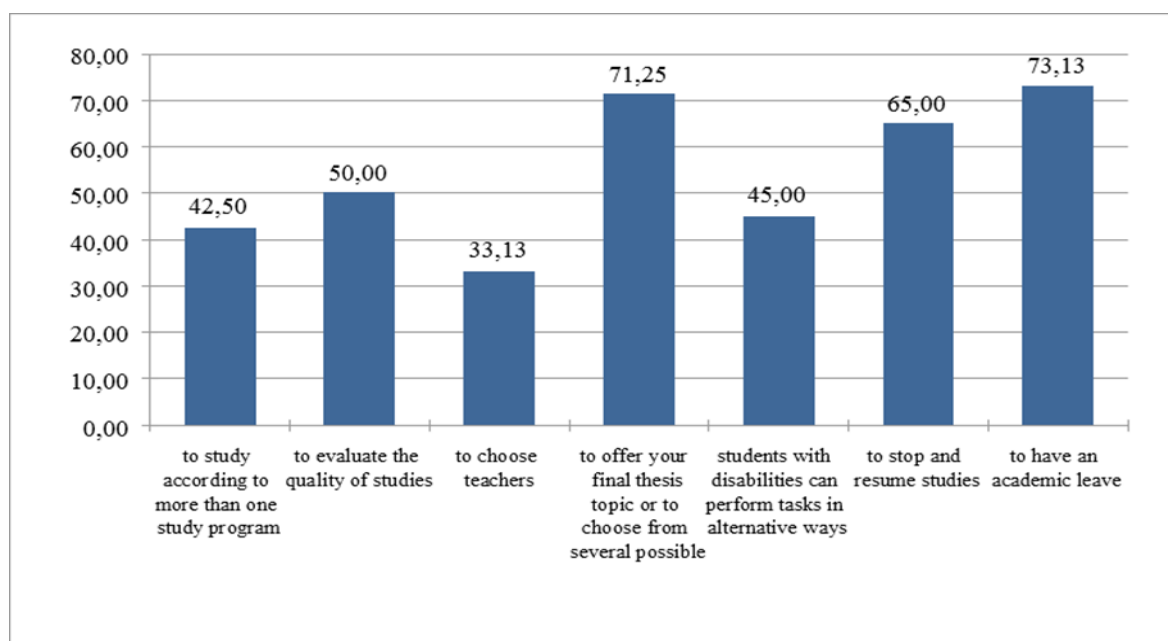


Figure 14. Students' knowledge of their rights (%)

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).

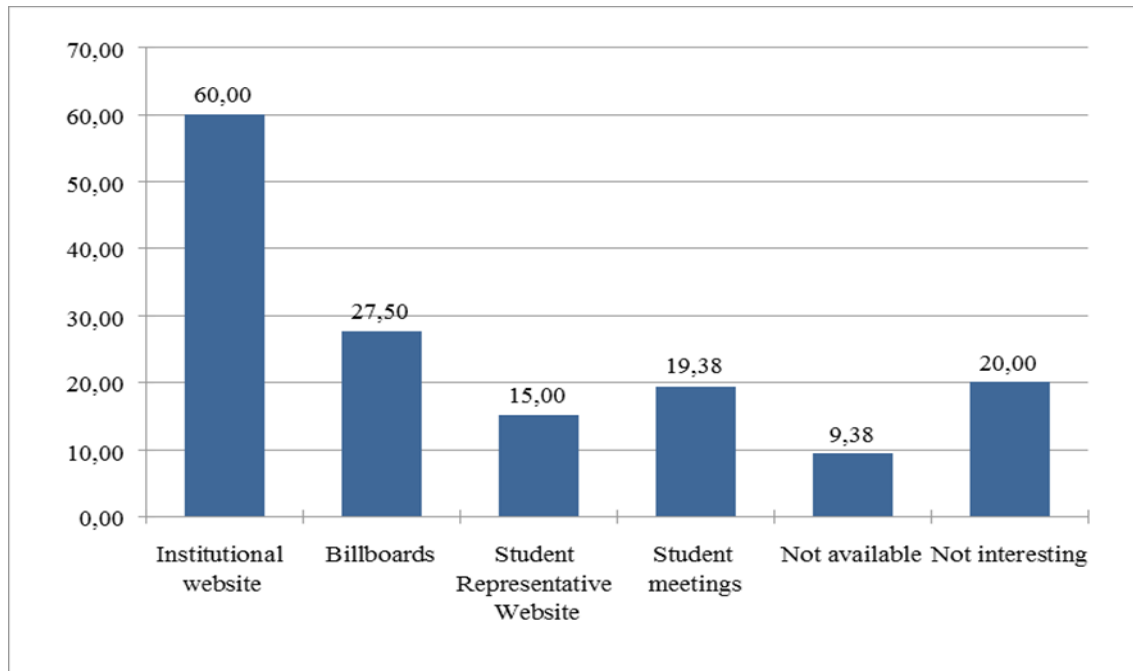


Figure 15 Best Available Techniques for Getting Information (%)

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.

6. References

- Beran, T.N., Rokosh, J.L. (2007). Instructors' perspectives on the utility of student ratings of instruction. *Instrumental Science*. 37(2): 171-184. doi: 10.1007/s11251-007-9045-2.
- Farr, M., Cressey, P. (2015). Understanding staff perspectives of quality in practice in healthcare. *BMC Health Service Research*, 15: 123. doi: 10.1186/s12913-015-0788-1
- Kosar, H., Tariq, R.H., Kashif, N. (2015). A Survey Study of Students' Opinion about Quality of Education. *Arts and Social Sciences Journal*, 6:099. doi: 10.4172/2151-6200.1000099
- Rezaei, M., Ghartappeh, A., Kajbaf, M.B., Safari, Y., Mohammadi, M., Sharafi, K. (2018). Validating "Students' Opinion Questionnaire" and "Student's Evaluation of Educational Quality Questionnaire" in Relation to Teacher Evaluation Using Criterion Method. *Education Research in Medical Science*. 7(1):e81406. doi: 10.5812/erms.81406.
- Tazakori, Z., Akherbeen, K., Abedi, A., Mowla'ii, B. (2008). Correlation between four forms of academic evaluation at medical university. *Journal of Health Care*. 10(4): 13-188.
- Thomas, E.H., Galambos, N. (2004). What Satisfies Students? Mining Student-Opinion Data with Regression and Decision Tree Analysis. *Research in Higher Education*, 45: 251-269. doi: 10.1023/B:RIHE.0000019589.79439.6e
- Whitworth, J.E., Price, B.A., Randall, C.H. (2002). Factors That Affect College of Business Student Opinion of Teaching and Learning. *Journal of Education for Business*, 77: 5, 282-289. doi: 10.1080/08832320209599677