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PATIENTS SATISFACTION WITH DIAGNOSTIC RADIOLOGY SERVICES AT RADIOLOGICAL DEPARTMENT OF BRČKO HEALTH CENTAR

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ABSTRACT

Aim: The satisfaction of proffering radiological health care considerably contributes to the improvement and quality of health care in health care institutions, especially in the extraordinary situations, such as the viral Coronavirus disease infection where patients are being treated under special conditions. Very often, the problem regarding the understanding among the patients and the healthcare workers can occur. The primary purpose of the research is to determine the contentment of infected Covid-19 patients with the provided service of the radiological diagnostics department.

Methods: The study was conducted at the Public Health Institution „Brčko District Health Center" (Dispensary for lung diseases) and TBC (ATD). The number of participants was 700. The questionnaire consisted of 19 questions. Laschinger's customised and standardized questionnaire called HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems), a questionnaire about the patient's contentment with the quality of health care, was used for the purpose of research analysis**(1)**. The Pearson correlation coefficient and the ANOVA test were used for statistical data processing.

Results: The given results have shown that the patients rated the quality of health care with a number 4 which indicates that they are somewhat satisfied with the provided quality. When asked about level of adequate care during their imaging, patients were less satisfied with nurses and technicians in comparison to the medical radiology engineers.

Conclusion: The obtained results can contribute to a better understanding of patients as well as the improvement of health systems in the form of new health care reforms, as well as to make progress in educating health workers how to communicate with patients.

Keywords: SARS-CoV-2 virus, radiological diagnostics, satisfaction with the provided health care, quality of health care.

INTRODUCTION

Throughout the historical medical development, a significant number of epidemiological epidemics and pandemics have been depicted, but neither of them had the influential scale that was portrayed during the current SARS- CoV-2 virus pandemic. Considering the current situation, there have been many structural changes in the health care, regarding the organization of health care system as an entity, all the way to small organizational structures included on all three levels of health.

The simplest we can say when regarding the contentment is that it presents a review of estimated expectations among the patients and reality of service as well as how it is being provided. The valuation of satisfaction relates to the subjective experience of the provided care. Since the subjective emotions are hardly visible or measurable, they are harder to analyze. What is good for one patient may be bad for another **(2)**.

Majority of patients do not contain an appropriate knowledge when it comes to evaluating the quality of radiological health services provided during the Covid-19, so the evaluation of quality relates to the previous experience that is not related to the pandemic ailments. In most of the cases, patients tend to compare their new experience to the previous one, so we manage to have a combination of patient's expectations before the examination, during the examination and while summarizing the impressions after finding a solution to a problem that led up to a doctor's visit. If the experience that the patient has during a diagnostic test

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is pleasurable or it even surpassed their expectations, patients will rate that as a good service. On the other side, we have experiences that do not meet patient's expectations and thus the service is regarded as inadequate **(3)**.

SARS- CoV-2 virus disease occurred in November of 2019 in a Chinese town Wuhan **(4)**, after which the Chinese authorities announced a greater number of patients having pneumonia and SARS-CoV-2 was claimed to be the main cause. Huanam Seafood Wholesale Market, a wholesale market of marine and other animals, is stated to be the source of disease. The hardworking Chinese doctors managed to isolate the causative agent in humans, thus discovering the SARS- CoV disease, which was renamed to SARS- CoV-2. By analyzing this unpleasant event ,World Health Organization published in January that the risk of coronavirus is becoming global **(5)**. The virus is spreading to all of the European Union countries, new crisis points are emerging and the first case of coronavirus in Bosnia and Herzegovina was registered in March. The first case in the area of Brčko District was recorded on 23rd of March, 2020 **(6)**.

Since epidemiology struck our economic systems, the main type of defense has encouraged the production of health care system. Creating the resistance against ailment, health care workers had found themselves to the first line of defense against Covid-19, while at the same time exposing themselves to the possibility of contagion. Besides the dangers of infection, health care workers are exposed to physical fatigue, long working hours, psychological pressure and professional burnout.

Taking into consideration the legal basis, according to Article 111., Law of Health Care in the Federation of Bosnia and Herzegovina, and according to Article 111., Law on Health Care in Brčko District, measures that are not determined by laws and bylaws may be taken, such as measures of mobilization and engagement, organization and schedule of working hours, change of position and the working conditions of individual health care institutions and private health care workers while these circumstances persist **(7, 8)**.

Due to the epidemiological characteristics of the virus, the entire world is facing the newly formed situation. Encountering with the virus asks for a systematic protection, including the health care workers to the first line of defense, which demands of them to be prepared for situations that were experienced never before. Keeping in mind the new epidemiological standards and norms, the health care providing structure itself needs to be changed. During the adaptation of the health care system, as well as the radiological systems, it is necessary to alter the already existing norms by changing the working hours, work place, getting adjusted to the protective equipment as well as to accessing patients. All of these factors are influencing the quality of the radiological service, since the medical workers are expected to the same level of envolment while providing medical and radiological services, regardless of any additional problems that Covid provides.

While working with patients who were positive to Covid, the health care workers and medical radiology engineers are being classified as those who first come into contact with the virus during the diagnostics and admission of patients. At the public health care „ Brčko District Health Center", lung X-rays were conducted on the daily basis. Due to the unknown situation and the measures made by the local crisis headquarters, large crowds in front of the health facilities were made. In accordance with the decisions of the crisis headquarters, the number of people indoors was limited and because of that majority of patients waited at the entrance, forming queues that were several meters long. Considering all the above, it is important to conduct a study regarding patient's contentment during the newly formed situation **(9)**.

Organization of work in the Brčko District Health Center – Dispensary for Lung Diseases and TBC (ATD)

The work in the Dispensary for lung diseases was projected for the radiological diagnosis of positive Covid-19 patients from the triage point , patients from the hospital isolation ward (Department of Lung Diseases and Tuberculosis), possibly infected Covid-19 patients (adapted departments of gynecology and psychiatry). The process of describing the medical record is done according to defined schedule of specialist doctors who are located at the hospital's Departments of Lung Diseases and Tuberculosis and Internal Department **(10)**. The medical record is issued in written form in the Dispensary for Lung Diseases (ATD), and the same is given to patient's escort. The reason behind this type of work organization is reducing the movement of patients throughout the hospital and providing measures to prevent the spread of the virus **(11)**. The patients who are coming for the triage receive a radiological diagnostics referral for the Dispensary for Lungs Diseases, while it is necessary that they have laboratory results that confirm the Covid-19 infection. After the radiological treatment, the radiographic record of the lungs, with described medical record, patients return to the triage ambulance for any additional reference for hospitalization or an outpatient follow-up, regarding the radiological record **(11)**.

It is necessary for the patients coming from the hospital isolation ward to announce their visit to the Dispensary for Lung Diseases. The patient arrives in an ambulance, accompanied by the medical nurse and the (driver it is necessary that the escort has adequate protective equipment according to the degree of protection stated in the Chart 1. [9] . After radiological processing of the patient, the image is submitted in electronic form to the specialist to read the image and write a specialist finding, which is further being forwarded for the treatment of the patient **(11)**.

The research problem is the newly formed situation packed with unknowns regarding the patients as well as the protection from the virus which presents an additional problem for the organization of the radiological ward. In addition to the standard radiological protec-

tive equipment and the organization of radiology department, besides radiation protective measures, there are also new protective measures against the spread of viral diseases. Unconscionable patients represents an additional problem by not grealizing the seriousness of the current epidemiological situation, and by doing so they are refusing to wear protective masks, or they place them below their nose and mouth, endangering health of other patients and medical radiology engineers.

It is very important how the patient is approached when provided radiological services, precisely by making native radiographs of the lungs, as well as how patients are approaching the overall situation.

In accordance with pandemic, X-rays were made, which are considered to be the golden standard for diagnosis for majority of respiratory diseases. Following that standard, it is important to mention the way medical radiology engineers are treating the patients; whether they provide the necessary service, treat the patients equally, how they perceive patient's reactions and certify if patients are truly satisfied with the service provided by the medical radiology engineers of the Health Center Brčko.

Besides the quality of diagnostic procedure, it is of great value to provide adequate approach to all patients. In the time of pandemic, where every second is important for service offering, it is very important to get the patient's feedback, to establish their contentment and rate the quality of work which is the aim of this research paper.

Aims of research

- Determine the patient's contentment with the provided service at the Department of Radiological Diagnostics.
- Examine the relation of healthcare workers and medical radiology engineers to the positive Covid-19 patients.
- Surveying patient's satisfaction with the services provided by medical radiology engineers.

Working hypotheses

- Patients are satisfied with the radiological service provided by medical radiology engineers at the Health Center Brčko.
- Patients are noticing the impact of Covid-19 pandemic when being provided with the radiological services at the Health Center Brčko.
- Quality of provided radiological services by medical radiology engineers is at a high level.

Null hypothesis

- Patients are not satisfied with the radiological service provided by medical radiology engineers at the Health Center Brčko.
- Patients are not notcing the impact of Covid-19 pandemic when being provided with the radiological services at the Health Center Brčko.
- Quality of provided radiological services by medical radiology engineers is not on a high level.

PATIENTS AND METHODS

Study Design and Patients

The research was conducted at the Public Health Institution „Health Center Brčko District", Dispensary for Lung Diseases and TBC (ATD). The research was previously approved by the Ethics Committee PHI „Health Center Brčko". The number of research participants was 700 (n=700). The research was conducted during the months of May, June and July, 2021.

When arriving to their X-ray appointments, the anonymous and voluntary nature of the questionnaire, aim of research (which is already stated in the questionnaire) was desribed orally to the patients.

Materials and Methods

The reseach was conducted through the use of anonymous questionnaire which consisted of 19 questions, six of which regarded the sociodemographic information of the participants (name and surname, age, sex, highest level of education, work status, health insurance) and the remaining 13 questions were done according to a Likert-type scale (1- strongly disagree, 2- disagree, 3- neither agree or disagree, 4- agree, 5- strongly agree). Laschinger's customised and standardized questionnaire called HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems), a questionnaire about the patient's contentment with the quality of health care, was used for the purpose of research analysis **(1)**.

The American HCAHPS questionnaire is the first national questionnaire that represents a standardized questionnaire about patient's contentment, having the aim of measuring the perception of quality of received service in comparison to the hospital experience after the patient's discharge, which is taken as the comparative questionnaire about the quality of provided health care. This type of questionnaire is a multinational type of development project within the European Union program, a representative of the RN4CAST working group in the field of health care quality. The health care quality indicator is divided into three groups, which include nursing care, medical care and the hospital environment.

PSNCQQ (Patient Satisfaction with Nursing Care Quality Questionnaire – is the quality evaluation of nursing care. The Polish version of the patient satisfaction questionnaire contains 19 items, measured by the Lickert scale of 1 to 5. The indicators are divides into three groups, first one being associated with the quality of care and service, second one related to health care and the third one associated with willingness to recommend the health institution to family and friends **(13)**. The questionnaire used for the survey contains:

Five research questions related to the communicative abilities of medical workers (introduction, admission of patients, informing patients about the upcoming interventions and examinations, partially or completely, in an understandable manner

- Five research questions that portray the quality of health care procedure (expertise and interest of the healthcare worker's for patient's needs, desires and possibilities).
- One research question relates to indicator of quality and they refer to patient's rights which are protected by legal grounds (right access to information).
- Two of the research questions relating to environmental quality (amount of secured peace, silence and expertise, recommendation of the health institution).

Statistical analysis:

The collected data is stored in a database created in the commercial program Microsoft Access. Standard methods of descriptive statistics (intermediate value and standard deviation) were used in statistical processing. After determining the nature of the distribution of the obtained results with the help of distribution histogram, the normality of the distribution was tested by the Pearson test. All observed differences in numerical variables were tested by variation analysis (ANOVA). All P values are two-sided. The significance level was set to Alpha= 0.05, i.e. level $p < 0.05$.

Table 1. Personal protective equipment used in contact with patients positive on Covid-19 **(12)**.

Degree of protection	Protective equipment	Scope of application
First degree	Disposable surgical cap	Triage
	Disposable surgical mask	General outpatient department
	Work uniform	
	Disposable latex gloves and disposable – insulating clothes (if needed)	
Second degree	Disposable surgical cap	Outpatient febrile department
	Protective medical mask (N95)	Insulating ward
	Work uniform	Nonrespiratory diagnostic tests of potential patients
	Disposable protective medical clothing	Imaging of potential patients
	Disposable latex gloves	Desinfection of surgical instruments of potential patients
	Protective goggles	
Third degree	Disposable surgical cap	During procedures such as tracheal intubaction, trachectomy, bronchobroscopy, gastroendoscopy... the patient can expand the secretion from the lungs of the respiratory system, blood or other body fluids
	Protective medical mask (N95)	
	Work uniform	
	Disposable protective medical clothing	
	Disposable latex gloves	
	Full – face protective respiratory device or air purifying respirator	When the personnel is performing the autopsy or the surgery of the infected/possibly infected patients
		When the personnel is performing the NAT – TEST for Covid 19

RESULTS

The research was conducted on 700 participants, 339 (48.43%) were men and 361 (51.57%) were women. The participant's arithmetic mean age is 48 years, ranging from 18 to 98 years. Most patients are between the age of 25-49, i.e. 343 of them (49%). Based on their level of education the majority of participants, 322 (46%), have secondary education. The majority of admitted patients have their health insurance, 688 (98.29%) of them. The number of respondents being employed is 432 (62%).

Patient's satisfaction with the quality of health care was assessed with 13 questions. The number of questions related to communicative skills was five. When asked whether the nurses were listening to the patients, 337 (48.14%) responded with always. 439 (62.71%) of the respondents claimed that medical radiology engineers expressed a great level of kindness towards the patients. The majority of participants, i.e. 464 (66.29%), consider that medical radiology engineers have portrayed compassion and care for their current

well-being. 427 (61%) of respondents believe that male and female nurses have treated them with kindness.

Based on 434 (62%) respondents, nurses/ technicians have shown compassion and care for the patient's health status.

During examination and stay at the hospital, the medical worker is obliged to inform the patient, in a written or an oral form, about the technique and type of examination. During the stay at the health center, 367 (52.43%) of respondents have received a written or an oral notice about the examination procedure (Table 5).

When asked whether they would recommend this health center to friends and family, 261 (37.29%) of the respondents have said yes. As a parameter of satisfaction during the examination, 170 (24. 28%) respondents rated this health center with a score of 10 (Table 6).

Table 2. General demographic data on respondents

Parameters	Groups of respondents	Number of respondents (%)
Gender	Male	339 (48.43%)
	Female	361 (51.57%)
Age	18 – 24	49 (7%)
	25 – 49	343 (49%)
	50 – 64	145 (20. 71%)
	64 and above	163 (23.29%)
Health insuirance	Possess health insuirance	688 (98.29%)
	Do not possess health insuirance	12 (1,71%)
Level of education	No school education	63 (9%)
	Basic education	138 (19.72%)
	Secondary education	322 (46%)
	Associate education	61 (8.71%)
	University degree	82 (11.71%)
	Masters degree	25 (3.57%)
	Doctorate degree	9 (1.29%)
Employment status	Employed	432 (62%)
	Unemployed	268 (38%)

Table 3. Survey results related to research questions regarding communication skills of medical workers

Number of participants (%)	Extremely dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Extremely satisfied	Total
During your stay at the health center, how often the nurses listened to you carefully?	9 (1.29%)	30 (4.29%)	111 (15.86%)	213(30,43%)	337(48.14%)	700 (100%)
The medical radiology engineer treated you kindly?	1 (0.14%)	26 (3.71%)	70 (10%)	164(23.43%)	439(62.71%)	700 (100%)
The medical radiology engineer had shown compassion and care for my health state?	1 (0.14%)	19 (2.71%)	55 (7.86%)	161 (23%)	464(66.29%)	700 (100%)
Nurse/tehnician treated me with kindness?	1 (0.14%)	36 (5.14%)	76(10.86%)	160(22.86%)	427 (61%)	700 (100%)
Nurse/ technician had shown compassion and care for my health state?	2 (0.29%)	24 (3.43%)	62 (8.86%)	178(25.43%)	434 (62%)	700 (100%)

Table 4. Results of surveys related to research questions linked to the quality of healthcare procedures

Number of respondents (%)	Extremely dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Extremely satisfeid	Total
In general, how would you rate your overall mental and emotional health during the Covid-19 pandemic?	24 (3.43%)	59 (8.43%)	196 (28%)	289(41.29%)	132(18.86%)	700 (100%)
During your stay at the health center, how often did you come for radiological examinations?	72 (10.29%)	86(12.29%)	183(26.14%)	197(28.14%)	162(23.14%)	700 (100%)
How long have you been waiting for an appointment?	516(73.71%)	51 51.29%)	42 (6%)	69 (9.86%)	22 (3.14%)	700 (100%)
Did the medical radiology engineer express expertise and professionalism?	0 (0%)	8 (1.14%)	45 (6.43%)	112 (16%)	535(76.43%)	700 (100%)
Nurse/technician had shown expertise and professionalism?	0 (0%)	12 (1.71%)	57 (8.15%)	120(17.14%)	511 (73%)	700 (100%)

Table 5. Survey results related to quality as well as the patient's rights protected by legal grounds

Number of respondents	Extremely dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Extremely satisfied	Total
During your stay at the health center, did you receive written information about symptoms or health problems you need to pay attention to after leaving the health center?	20 (2.85%)	21 (3%)	104(14.86%)	188(26.86%)	367(52.43%)	700(100%)

Table 6. Survey results related to the quality of environment

Number of respondents (%)	Extremely dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Extremely satisfied	Total
Would you recommend this health center to you friends and family?	8 (1.14%)	22 (3.14%)	158 (22.57%)	251 (35.86%)	261 (37.29%)	700 (100%)

	1	2	3	4	5	6	7	8	9	10	Total
Using any number from 1 -10, where 1 is the worst health center and 10 is the best health center, how would you rate this health center during your stay for the radiological examinations?	2 (0.29%)	4 (0.57%)	15 (2.14%)	30 (4.29%)	50 (7.14%)	99 (14,14%)	104 (14.86%)	112 (16%)	114 (16.29%)	170 (24.28%)	700 (100%)

DISCUSSION

Patient's satisfaction with the provided health services is one of the criteria that indicates the level of achieved quality and therefore it should be evaluated by the perception of customer services [14]. A great number of factors such as the objective, psychological, social and demographic factors are influencing the quality of the provided health care. In addition tothe already mentioned factors, patient's satisfaction is affected by the attitude of the individuals, but also by the means of work organized within the health care institution, which indicated that the satisfaction of patients is the result of all of mentioned factors. Patients acquire the level of satisfaction with health services in addition to general characteristics (education, intellectual abilities, material and psychophysical status, etc.) and through interactions within community where experiences are exchanged, opinions are formed and impressions are gained **(15)**.

Keeping track of quality of health care helps us improve our work. Using the experiences of patients during a visit to health institution we obtain data that help us identify the advantages and disadvantages of healthcare and thus encourage changes that will improve the quality of health care. Using the questionnaires about quality and contentment of patients when visiting health care institutions, we receive information based on which we will get the opportunity to set up new standards and also to improve the current situation. Whether this is going to be achieve by improving the level of communication of healthcare personnel with patients or their family members, treatment of the patient itself, pain control or receiving therapy, rating the level of satisfaction with the service itself, hygiene, privacy, information about procedures as well as many others diagnostic and therapeutic procedures. By using the previously mentioned methods, it is possible to prevent the problem before it becomes a threat to the healthcare system **(16)**.

When working with patients at the department of medical radiology, the biggest advocate for patient's rights are the medical radiology engineer and nurses/ technician. During their work with patients, healthcare workers are communicating daily with patients, exchanging their opinions and experiences and by doing so they are advocating reforms that would improve the current situation and lead up to changes that will help improve healthcare. On the contrary, we need to keep in mind the unfavorable situation caused by the SARS- CoV-2 virus and the conditions in which healthcare workers are operating in.

Guided by the current epidemiological situation caused by the SARS-CoV-2 virus, the conditions in which personnel members are working at and the situation in which patients had found themselves, we have reached the following data. For easy reference of the results, we divided the data into four groups, according to which we would analyze them. The first group of questions related to the communicative abilities of the health workers. When asked how often did nurses/ technicians carefully listen to you during your visit to the health institution, the majority of patients was extremely satisfied by the reaction of nurses/ technician 337 (48.14%), while on the other hand 9 (1.29%) patients expressed extreme dissatisfaction. Observing the overall results, half of the participants share the opinion that they are satisfied by the treatment of nurses towards them. When asked whether medical radiology engineer that is the nurse/technician treated them respectfully, the answers were divided. The majority of patients stated that nurse in relation to medical radiology engineer did not behave kindly (dissatisfaction), which in proportions is 26 (3.71%) : 36 (5.14%) in favor of nurse/technician, while the proportion for kindness (satisfaction) is 164 (23.43%) : 160 (22.86%), and extremely satisfied 439 (62.71%) : 427 (61%) in favor of medical radiology engineers. On the contrary, participants opinion was divided when asked whether the nurse/technician – medical radiology engineer had expressed care and concern for their health state. A small number of respondents consider that nurse/ technicians did not express care and concern, which can be expressed in proportion of 1 (0.14%) : 2 (0.29%) extremely dissatisfied and 19 (2.71%) : 24 (3. 43%) dissatisfied, while the proportion of satisfied patients is 161 (23%) :178 (25.43%), and extremely satisfied 464 (66.29%) : 434 (62%). Based on this example we can see difference in the opinion among patients where bigger number of patients is exceptionally satisfied with the behavior of medical radiology engineers in relation to nurses/technicians and still the ratio of satisfied patients went to the favor of nurses/technicians.

The second group of questions related to the quality of provided care to the patients. The first question related to the mental and emotional state during the pandemic, since the approach towards the patients changed because of the pandemic (wearing of protective mask, visor, gloves and disposable gear to prevent the spread of coronavirus infection). When we summarize the data, the majority of patients, 289 (41.29%), claim they are satisfied with their current psychological (mental and emotional) state, but it also important that a certain number of patients is dissatisfied or extremely dissatisfied which in proportion is 24 (3.43%) : 59 (8.43%). Visits to health institutions were basically including radiological examinations. The majority of respondents came for the examinations more often due to the checking of their health state, that is, their disease progression. Since the category of coronaviruses is related to diseases of respiratory systems and lungs, the course of the disease and the invasion of the patient's lungs were monitored. We will follow up this question with another one form which we can have insight into the invasiveness of the disease itself. The question related to the urgency of admission to a health institution and 516 (73.71%) of patients had an urgent admission for diagnostic processing (native lung imaging, radiographic record). When we consider this information, it is clear to us that the most relevant indicator of the course of coronavirus disease is directly associated to the respiratory system, which makes imaging of lung tissue necessary. The last two questions related to the professionalism and expertise

in the relationship between nurses/technicians, medical radiology engineers and patients. Patients are of the opinion that both nurses/technicians and medical radiology engineers have displayed expertise in their field of profession, but they gave slight advantage to medical radiology engineers, more precisely, according to surveys 4% were in favor of medical radiology engineers. During their visit to health institutions patients have the right to be informed – according to the Constitution of Bosnia and Herzegovina and the Entities, all patients are given the right to be informed in writing or orally **(17)**. Consequently, we asked patients whether they received a written or oral explanation and whether they were informed about the course of the medical act. Majorty of patients agreed with the statement and during their visit, 367 (52.43%) of them were informed about manner and procedure of performing a medical diagnosis examination, while 20 (2.85%) patients were uninformed. Accordingly, we can agree that the majority of healthcare workers were following legal norms, but due to lack of time, overcrowding and attempts to prevent further spread of the virus, some patients were deprived of their rights, but we can also emphasize that during physical examination in the Covid clinic, all patients were explained the procedure of imaging as well as the reason why it is required.

The last group of questions consisted of two questions regarding the quality of relations in the environment. The first question related to the recommendation by which patients will praise or objurgate the attitude and way of working in the radiology department at the Health Center. A number of patients expressed dissatisfaction during their visit to the health center, while most patients have expressed satisfaction and were willing to recommend it to others, which would help to raise the subjective sense among the people. The proportion of extremely dissatisfied and dissatisfied patients is 8 (1.14%) : 22 (3.14%), neither satisfied nor dissatisfied patients, 158 (22.57%), stated that they will consider recommending the health center, while those satisfied or extremely satisfied that were in proportion of 251 (35.86%) : 261 (37.29%), were more than ready to recommend the health center to their friends and family. When researching the subjective feeling, we gave a chance for the patients to express their opinion on a scale of 1-10. The data was presented in the Figure 1., to make them as relevant as possible.

The examination of subjective perception regarding the quality of health care has not yet been conducted in our country, and accordingly we cannot make a comparison with previous experiences. Besides that, we need to emphasize that this type of research has been conducted in Poland and Canada **(18)**, where patients in Poland rated their satisfaction with provided quality of health care with 4.06, while patients in Canada rated it with 4.04. Based on our research, the average score for provided health care was 4.23, which in essence, represents a higher score compared to more economically and medically developed countries. Although this points to better health care provided by our healthcare professionals, it should be noted that this stems from the multidimensional and more complex nature of health care quality, but it also combines with the fact that many respondents do not have enough knowledge to objectively assess key elements, as well as the needs of the patients.

Although the compared research was conducted at a time when the SARS-CoV-2 virus did not have its impact on the provision of health care, it should be noted, that even in these situations, our patients are significantly more satisfied with the quality of healthcare workers, in comparison to more developed countries, whose research was not affected by the above mentioned virus.

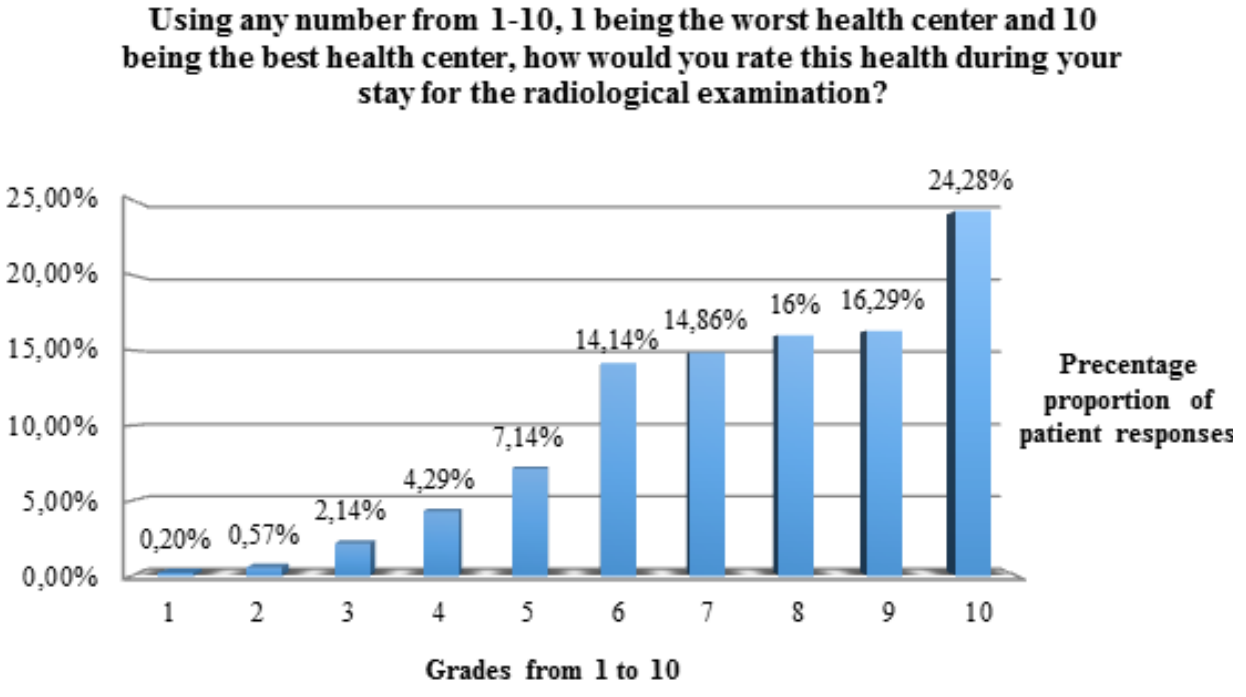

Figure 1. Rate of the health enter on a scale 1-10.

CONCLUSION

Patients are satisfied with the provided radiological health care at the Department of Medical Radiology at the Brčko District Health Center.

During the pandemic caused by the SARS-CoV-2 virus, patients did not notice inadequate medical care and therefore they did not express dissatisfaction with the provision of health care in these extraordinary circumstances.

The health care provided by medical radiology engineers during the reception, imaging and data processing, did not show a decline in quality, despite the extraordinary circumstances caused by the viral disease.

Despite additional efforts (wearing protective medical equipment, in addition to standard radiology) during their work with patients, health care workers in the medical radiology department did not influence the provision of quality not even the way in which they approaching the patients as well as their loved ones.

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