

## EVENT REPORT FORM

Project title	Strengthening Capacities for Higher Education of Pain Medicine in Western Balkan countries
Project acronym	HEPMP
Project reference number	585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP
Coordinator	University of Belgrade
Project start date	October 15, 2017
Project duration	36 months

Event	First course primary health care: Acute pain - significance and treatment
Type of event	WP3 (Development of LLL courses and interventional pain medicine courses) 3.4. Delivering of LLL courses of pain medicine in primary health care centers of PCs
Venue	Online - ZOOM platform
Date	16.06.2021.
Organizer	Faculty of Medicine University of Tuzla
Reporting date	July, 10 <sup>th</sup> , 2021
Report author(s)	Jasmina Smajic

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

*This project has been funded with support from the European Commission.  
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## EVENT DESCRIPTION

### with special reference to goals and outcomes

<b>Number of participants at the event</b>	65
<b>Participants (organisations)</b>	PHCC Kalesija, PHCC Tuzla, PHCC Teocak, PHCC Lukavac, PHCC Tesanj, PHCC Sarajevo, UCC Tuzla
<b>Event description:</b>	
<p>The main objective was to develop LLL course about acute pain management and deliver it to health care professionals in Primary health care centers in Tuzla canton, but there were also participants out of Tuzla canton. After the development of the training material, selection of trainees, and accreditation of the course by The Chamber of Doctors in Tuzla Canton, the course was held for the purpose to give basic education regarding acute pain management considering that undergraduate studies do not include modules of pain medicine.</p> <p><b>Objectives of the course:</b></p> <ul style="list-style-type: none"> <li>- Teach participants about consequences of inadequate pain treatment</li> <li>- Teach participants to explain the difference between nociceptive and neuropathic pain</li> <li>- Point out the importance of pain as the fifth vital sign and the pain intensity estimation</li> <li>- Pain intensity estimation methods</li> <li>- Learn about the importance of acute pain treatment and prevention of chronic pain syndrome</li> <li>- Learn how to treat some specific pain syndromes</li> </ul> <p><b>Description of activities</b></p> <p>After drafting the educational material, five lecturers were selected who, each from the field for which it was delegated, wrote the material and made a presentation. The educational event is accredited as a first category seminar with the highest number of KME points. The accreditation notice was sent by e-mail, the pdf version of which is attached to this document. A flyer was prepared in which the program of the meeting was presented, as well as the decision on accreditation. The flyer was posted in digital format on the official website of the University of Tuzla, the Medical Chamber of the Tuzla Canton, the Association of Doctors of Anesthesiology and Resuscitation in the Federation of Bosnia and Herzegovina. In addition, the flyer was sent as a call to potential participants. Due to the epidemiological situation, the seminar was held online through the ZOOM platform. The link for registration and access to the platform is posted on the flyer that was published. The date of the seminar was June 16<sup>th</sup> , 2021. from</p>	

17:00.

The seminar started at 17.00 with the registration of participants. The coordinator of the team of the University of Tuzla addressed the audience and greeted them. She presented the goals and tasks of the project as well as the activities implemented by the team of the University of Tuzla. She emphasized the importance of the participation of the Faculty of Medicine in Tuzla in this project, as well as the importance of the topic being covered. She emphasized the importance of the project and the implementation of activities for educating health workers on the topic of pain, which is very important but often insufficiently understood.

In the first lecture, the topic was Stress response to painful stimulus. It was pointed out at the outset that pain is probably one of the oldest and most universal forms of stress and one of the earliest sufferings of mankind. It accompanies many diseases and conditions and despite the efforts and the fact that it is as old as humanity itself, pain is neither sufficiently understood nor can it be fully controlled. Pain is one of the most common symptoms we encounter on a daily basis in medical practice. It helps maintain organ function and organization as a whole, but it also disrupts sleep, makes it difficult to move, impedes work, and causes suffering. Pain can reduce and weaken the quality of life, so it is very important to discover its cause, put the transmission of painful stimuli, pathophysiological events within the organization, and choose the best way to treat pain. Claude Bernard (July 12, 1813 - February 10, 1878) was a French physiologist and physician who studied the secretion (excretion) of the digestive organs, the role of the liver in glycogen metabolism, the effects of carbon monoxide and curare on living organisms, disorders in the body in diabetes, etc.

Pain, which is caused by an unpleasant (harmful) stimulus, is a stressor that can jeopardize homeostasis. The body's adaptive response to pain involves physiological changes, which are beneficial and potentially salvage in life in the early stages. If the adaptive response is continued, harmful and life-threatening effects may occur. The initial physiological changes that occur in the body after pain stimuli relate to pain transmission, which includes four phases: transduction, transmission, perception, and modulation. The perception of environmental stimuli as threatening, or frightening varies from person to person; therefore, the same fear-based stressor that triggers a stress response in one person may be harmless to another. Fear of the worst possible outcome (e.g., unemployment, bankruptcy), fear of social discomfort, fear of pain, or fear of failure activates the amygdala, part of the limbic system of the brain. The amygdala responds to fear or danger by initiating an immediate sympathetic response, and soon after a neuroendocrine response, in an instinctive attempt to restore homeostasis and promote survival. In the initial phase of the acute stress response, the amygdala signals to the brainstem to release sympathetic adrenergic catecholamines, norepinephrine, and epinephrine. Once released into the bloodstream, catecholamine neurotransmitters increase heart rate, blood pressure, and

respiration; vasoconstrictive arterioles; and stimulate sweat secretion and pupil dilation. Importantly, this short-lived sympathetic response is pro-inflammatory, acting to destroy antigens, pathogens, or foreign intruders; Adrenoceptor antagonists have been shown to inhibit stress-induced inflammation and cytokine production by blocking the pro-inflammatory effects of norepinephrine.

Non-adaptive cognitive assessments or beliefs about the threatening nature of potential stressors may promote an excessive physiological response to stress that is likely to initiate, worsen, or prolong the pain experience. It is important that pain itself is a potential stressor, and an unadjusted perception of pain as threatening or frightening can cause an excessive physiological response to stress, thus continuing chronic pain and disability. The sympathetic nervous system (SNS) is involved in the body's immediate response to emergencies, including severe and acute pain; his reaction to pain or fear is known as the 'fight or flight' response. When activated, SNS stimulates brain stem cells that control the descending mechanisms of pain to release norepinephrine, serotonin, and endogenous opioids into the spinal cord. SNS deals with the regulation of vascular tone, blood flow and blood pressure, because the sympathetic nerves have stimulating effects on the heart (improves circulation) and the respiratory system (increases oxygen intake). Pain therefore increases pulse, blood pressure and respiratory rate. If these physiological responses are prolonged, especially in individuals with poor physiological reserves, this can lead to ischemic changes.

The sympathetic system is associated with a fight or flight reaction, and parasympathetic activity is indicated by the epithet of rest and digestion. Homeostasis is the balance between two systems. At each effector, the target double innervation determines the activity. For example, the heart receives connections from both the sympathetic and parasympathetic divisions. One causes an increase in heart rate, while the other causes a decrease in heart rate.

After an interesting lecture on the history of pain, a lecture on pain in family practice followed. The sympathetic nervous system (SNS) is involved in the body's immediate response to emergencies, including severe and acute pain; his reaction to pain or Pain is a subjective, uncomfortable feeling that each person experiences in their own way. Pain is a symptom that should not be ignored. Pain is often the first symptom that instructs a patient to seek medical attention. Pain is a normal, physiological, defensive response to mechanical, chemical, or temperature stimuli In addition to sensory pain, it also affects the emotional and cognitive components. Chronic pain is defined as pain that is present every day for more than 3 months or 50% or more days over 6 months or longer than the expected recovery period. It has no warning function that acute pain has. Complete physical examination in patients with risk factor: infection, immunosuppression, earlier malignant disease, unexplained weight loss, worsening of pain despite initiation of therapy. To assess the intensity of pain we use we use: visual-analog scale, verbal scale, numerical scale, facial expression scale (most common in children and

people with cognitive impairment). Pain therapy can be pharmacological and

non-pharmacological measures (short-term rest, physical therapy, exercises, life activities ...). The challenge of family physicians in treating pain: choice of therapy, analgesic abuse and addiction, easy availability of over-the-counter medications, inadequate cooperation with the patient, patient requirements for parenteral therapy. Key recommendations in pain therapy:

1. The route of administration of the drug in outpatient work:

- Oral (optimal route of administration)
- Parenteral (in patients who vomit, have diarrhea, nausea, or are dehydrated, and in an uncooperative patient)

2. Begin therapy with a single low-dose analgesic

3. Titrate slowly to avoid side effects

4. Combination therapy has a synergistic effect whereby a greater analgesic effect is achieved in relation to the max. doses of one drug

5. Insist on non-pharmacological measures

The third lecture was on the topic of pleural pain. Characteristic: sudden, intense sharp, stabbing or dull sensation when inhaling and exhaling. Worsening: deep breathing, coughing, sneezing or laughing. Location of inflammation of the pleura near the diaphragm, the pain may spread to the neck or shoulder. Pleural chest pain is caused by inflammation of the parietal pleura and can be caused by a variety of causes. PLEURAL PAIN IS NOT THE SAME AS THORACIC PAIN. Pleura visceralis (pulmonalis) - passes into the pleura parietalis at the lung root and they build a space- cavum pleurae- which does not normally exist because both leaves of the pleura adhere to each other and slide on each other. The pleura visceralis covers the entire lung except the hilus and the place where the ligaments bind. pulmonale, and located on the facies medialis of the lung. It enters the fissurae oblique and fissurae horizontalis separating the lobes of the lungs. PLEURA PARIETALIS- is divided into three parts: pleura costalis, mediastinal pleura and pleura diaphragmatica. The differential diagnosis of acute pleural chest pain is extensive and includes a number of life-threatening conditions in the patient. Clinical suspicion plays a major role in the selection of tests and the interpretation of results. Pleural pain is associated with pleural damage and is clearly localized and coincides with the site of the pleural lesion because the parietal pleura is innervated mainly by intercostal nerves. Pleural pain can spread to the abdomen and ipsilateral shoulder.

This was followed by a lecture about abdominal pain. The abdominal cavity is the part of the body in which many organs are located, and in addition it is a region through which large blood and lymph vessels pass. Given all the organs and organ systems found in it, it is not uncommon for abdominal pain to be often present,

requiring exact evaluation and detection of their origin. Abdominal pain is one of the most important diagnostic challenges for any physician.

The imperative is the correct interpretation of difficulties, a stratified systemic approach and sometimes a prompt response.

Visceral pain originates from the autonomic nerve fibers of the innervated abdominal organs and represents mainly a sensation of stretching and contraction of the muscles, rather than cutting, tearing, or local stimulation.

Visceral pain is typically vague, dull, and associated with nausea. It is difficult to localize and is usually observed at the site of embryonic placement of the affected structure. The structures of the upper digestive tract (stomach, duodenum, liver, and pancreas) cause pain in the upper abdomen.

Formations of the middle part of the digestive tract (small intestine, proximal colon, and appendix) cause periumbilical pain.

Parts of the hindgut (distal colon and genitourinary system) cause pain in the lower abdomen. Somatic pain comes from the parietal peritoneum innervated by somatic nerves, which respond to stimuli in an infectious, chemical, or other inflammatory process. Somatic pain is sharp and well limited.

Reflected pain is pain that is felt in a place far from the source and results in the conversion of nerve fibers in the spinal cord. Common examples of reflected pain are scapular pain due to biliary colic, groin pain due to renal colic, and shoulder pain due to diaphragm stimulation by blood or infection.

Peritonitis is an inflammation of the peritoneal cavity. The most serious cause is perforation in the GI tract, which creates an immediate chemical inflammation accompanied by infection with intestinal microorganisms.

In the last twenty years, the management in the approach to abdominal pain has changed a lot. Particular attention is paid to patients with occult pathology and patients with expected adverse treatment outcomes.

Even at the end of all implemented measures, treatments, diagnostic procedures and examinations by various specialists, the etiology of pain often remains unclear. In 40% of patients, the origin of abdominal pain was never determined.

Lastly, there was a very interesting lecture on the cranial neuralgia. The lecture began with definition of cranial neuralgia as peripheral nerve disease accompanied by paroxysmal pain with no anatomical changes. Dominant place:

trigeminal neuralgia. Much less often: glossopharyngeal, intermediate neuralgia, and occipital.

Trigeminal neuralgia is paroxysmal onset of severe, sharp, and short-lived pain in the innervation region of the trigeminal nerve. One of the strongest neuropathic pains.

Glossopharyngeal neuralgia occurs as episodes of strong, sharp, stabbing pain in the area of innervation of the IX cranial nerve. It is less common than trigeminal neuralgia. It is often mistaken for similarities attacks of pain and localization.

Frequency - general population 0.5 / 100,000 inhabitants.

Intermedial neuralgia - Hunt's syndrome, neuralgia of facial nerve, neuralgia chordae tympani, rare, it affects a small sensory branch of the facial nerve. Paroxysmal, of strong intensity localized in the internal structures of the ear and it spreads towards the parietal-occipital area or the area innervating by V nerve.

It occurs spontaneously or is provoked by pressing on the ear canal, swallowing or speaking. Disorders of sensation in the mouth, tinnitus and dizziness during the onset of pain. History, neurological examination and neuroradiological processing (MRI of the brain and MR angiography). Th: antiepileptics, surgical treatment under local anesthesia, intersection of the nervus intermedius.

After the presented topics, a discussion was opened and the lecturers answered the participants to all the questions asked regarding pain and its treatment. Also, the participants were recommended to download educational material in the form of presentations in pdf format from the HEPMP website. The seminar ended with solving an exit test of knowledge, filling out an evaluation questionnaire and awarding certificates to participants.

The exit test of knowledge was analyzed, which gave an overall insight into the knowledge of the participants after the lectures. By evaluating the course by the educator, it was assessed that the expected outcomes were achieved:

- health professionals (doctors, nurses ...) have gained new knowledge about pain
- Health professionals are ready to implement pain monitoring as a routine skill.

The evaluation questionnaire was also analyzed, and the results are given in the appendix to this document. Interest in the course was extremely high, which was shown by a large number of listeners – 65.

Over 70% of them are highly educated, doctors by structure. The group of listeners was very heterogeneous, and it consisted of general practitioners, specialists, nurses, pharmacists and students. The participants gave high marks to the choice of training topics, the content of the training program, the methods used, the duration and organization of the training. Participants in the evaluation questionnaire stated that the teaching was easy to understand. Each of the lecturers was individually graded by the participants, and the grades were between 3 and 5. Participants rated that the lecturers were prepared for the lectures.

Participants were also given the opportunity to leave a personal comment on the evaluation questionnaire, which a large number of them did. The comments were related to remarks, suggestions and praises, but also the proposal of topics in the next program of continuous education.

Participants rated the overall impression of the seminar with an average score of 4.81 (out of 5).

All lectures have been recorded and the entire seminar is available online at <https://cme.ba/course/hepmp4/>.

## Attachments

<b>Agenda (pdf)</b>	Leaflet Different aspects of pain (pdf)
<b>Attendance sheet (pdf)</b>	Annex 4 - HEPMP-attendance list Tuzla (pdf)
<b>Photos (jpg)</b>	4 (jpg)
<b>Quality control (pdf)</b>	Accreditation by The Chamber of doctors in Tuzla Canton (pdf); Annex 6- HEPMP-Event evaluation list; Output test
<b>Deliverable (pdf)</b>	Leaflet Different aspects of pain (pdf) <a href="https://cme.ba/course/hepmp4/">https://cme.ba/course/hepmp4/</a> <a href="https://www.facebook.com/watch/live/?v=1649793338544294&amp;ref=watch_permalink">https://www.facebook.com/watch/live/?v=1649793338544294&amp;ref=watch_permalink</a>
<b>Presentations (pdf)</b>	01 HEPMP Project., Smajić J. pdf 02 Stress response to painful stimulus, Smajić J. pdf 03 Pain in family medicine practice, Hrustic S. pdf 04 Pleural pain, Umihanic S.pdf 05 Abdominal pain, Pasic F pdf 06 Canial neuralgia, Hodzic R.pdf
<b>Other personal remarks</b>	



## Organisation details

<b>Invitation sent to</b>	Health centers of the Tuzla Canton
<b>Date of event material release</b>	May 25 <sup>th</sup> , 2021
<b>Date of participants list's finalisation</b>	June 16 <sup>th</sup> , 2021
<b>Date of agenda finalisation</b>	June 08 <sup>th</sup> , 2021
<b>Number of participants (according to the participants list)</b>	65
<b>Comments</b>	

### Problems encountered during the event preparation phase

Please add your comments, if any:

Due to the current epidemiological situation due to the coronavirus pandemic, it was not possible to hold the seminar live but online via the web platform.

### Strengths and limitations of the event (please include comments received)

<b>Strengths of the event and contributions or activities by participants</b>	Participants of the seminar have learned the methods of acute pain assessment as well as different modes of treatment with an emphasis on multimodal approach to treatment. It is recognized that inadequate and inadequate acute pain treatment can lead to a chronic treatment that is difficult to cure.
<b>Suggestions for the improvement</b>	After improving the epidemiological situation, organizing live seminars
<b>Any further comments</b>	

## Evaluation details

### Results of evaluation of the general organisation of the event

Description	
<p>The participants highly rated the choice of educational topics, the content of the education program, the method used, the duration and organization of the education.</p>	
Table(s)/Figure(s)	
8/25/2021	Različiti aspekti bola - Google obrasci
<p>8. Posebne primjedbe, sugestije i pohvale</p> <p>14 odgovora</p> <p>Programski sadržaj vrlo aktuelan, predavaci izuzetno predani</p> <p>Nema</p> <p>Zahvaljujem se na odlicno organizovanoj i korisnoj edukaciji</p> <p>Sve pohvale, odlična predavanja</p> <p>Sve pohvale za predavače.</p> <p>No</p> <p>Odličan rad</p> <p>Fantasticna organizacija i odabir tema. Cestitke predavacima na jasnim i konciznim prezentacijama</p> <p>Pohvala za izbor tema edukacije</p>	

### Results of evaluation of general working communication

### Description

Participants in the evaluation questionnaire stated that the teaching was easy to understand,. Each of the lecturers was individually evaluated by the participants, and each received an average rating of between 3 and 5. The participants evaluated that the lecturers were prepared for the lectures.

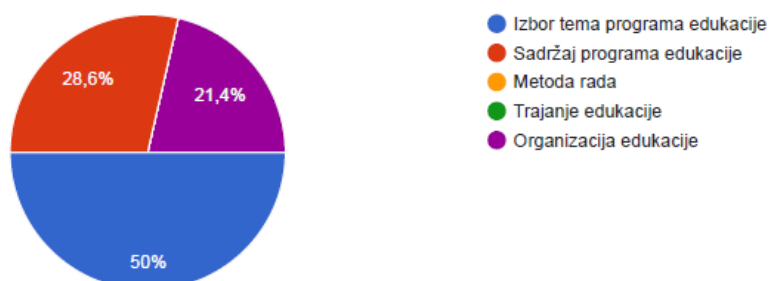
### Table(s)/Figure(s)

8/25/2021

Različiti aspekti bola - Google obrasci

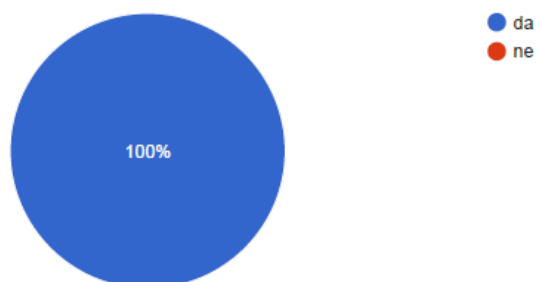
4. Ocjenom 1 do 5 ocjenite slijedeće aspekte održanog programa edukacije

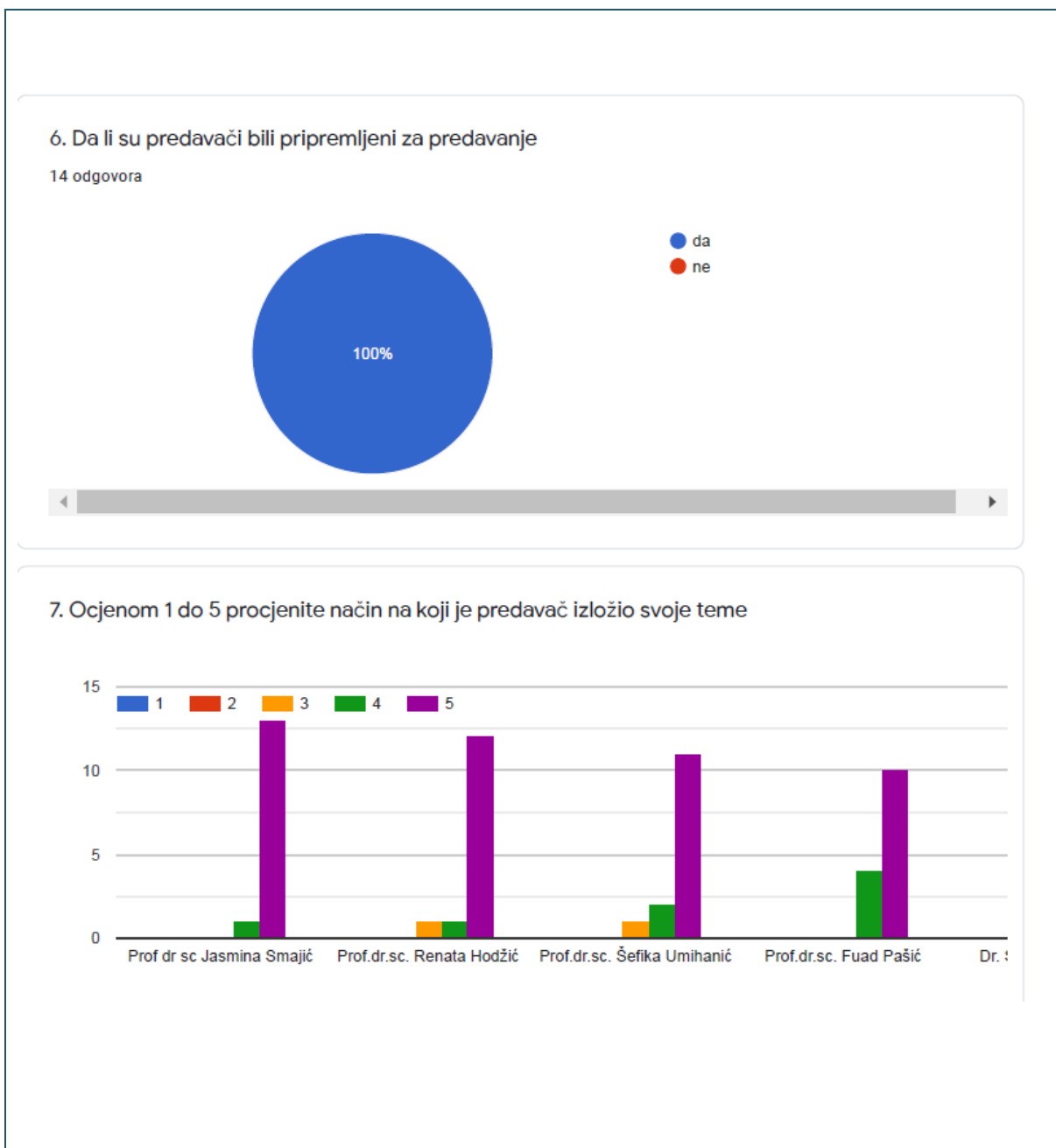
14 odgovora



5. Da li je predavanje bilo lako za razumjevanje

14 odgovora



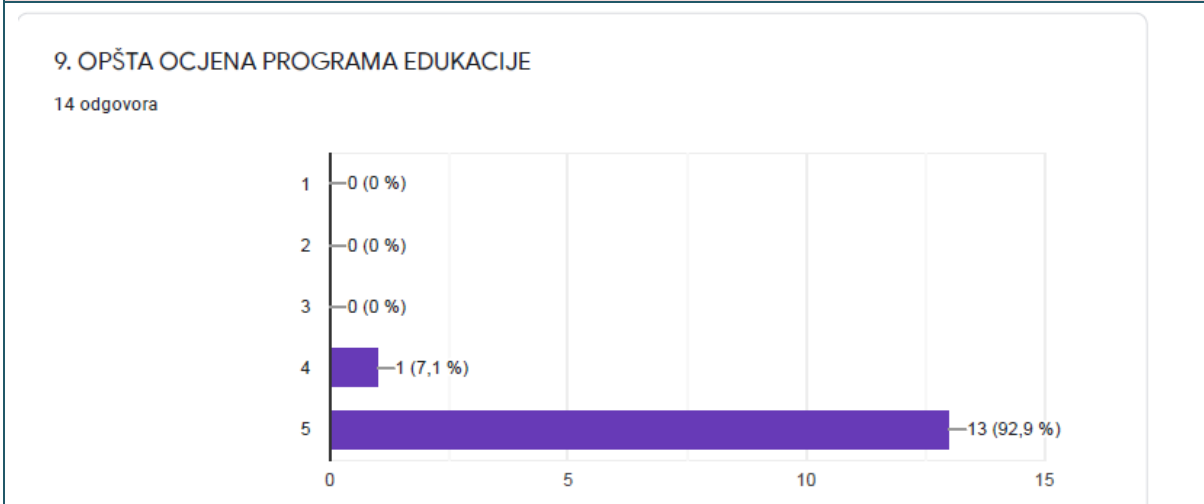


### Results of evaluation of overall success of the event

#### Description

The participants rated the overall impression of the held seminar with an average score of 4.81 (out of 5).

**Table(s)/Figure(s)**



Please indicate your suggestions for further event's improvement:

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Location, date

Tuzla, July 10<sup>th</sup>, 2021

Signature

