

PESTEL ANALYSIS OF THE HEALTHCARE SYSTEM WITH REFERENCE TO THE RIGHT TO HEALTH DURING A PANDEMIC

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Abstract

A pandemic caused by the coronavirus affects all aspects of life of an individual and a society as a whole. It is not only a question of the medical profession, but also of other areas, and especially the need for fundamental human rights. The measures adopted by state bodies are primarily aimed at protecting human health, but the effects and implications they cause limit other rights, so it raises the question of their adequacy. The basic and most important question is how to access health care in such conditions. Therefore, the main aim of the paper is to try to answer the question through PESTEL (P-Political, E-Economic, S-Social, T-Technological, E-Environmental, L-Legal) analysis of the healthcare system of the local community of Pale. Thirty factors of PESTEL analysis were quantified by using the Improved Fuzzy Stepwise Weight Assessment Ratio Analysis (IMF SWARA) method. The results obtained through the total of 70 formed models show that the current state of the observed local community is marked by social and legal factors. This analysis should present a diagnostic test of the current situation and provide a good basis for future actions.

Key words: PESTEL, Law, IMF SWARA, pandemic, economic factors

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ПЕСТЕЛ АНАЛИЗА ЗДРАВСТВЕНОГ СИСТЕМА СА ОСВРТОМ НА ПРАВО НА ЗДРАВЉЕ ТОКОМ ПАНДЕМИЈЕ

Апстракт

Пандемија изазвана присуством корона вируса утиче на све аспекте живота појединца и друштва у целини. То није питање само медицинске струке, већ и других области, а посебно потребе на остварење основних људских права. Мере доносе државни органи усмерене су превасходно на заштиту здравља људи, али ефекти и импликације које оне изазивају ограничавају друга права, па се поставља питање њихове адекватности. Основно и најважније питање је могућност приступа здравственој заштити у таквим условима. Стога, основни циљ рада је покушати дати одговор на постављено питање кроз ПЕСТЕЛ (П– Политички, Е–Економски, С–Социјални, Т–Технолошки, Е–Еколошки, Л–Легислативни) анализу здравственог система локалне заједнице Пале. Извршена је квантификација 30 фактора ПЕСТЕЛ анализе применом Improved Fuzzy Stepwise Weight Assessment Ratio Analysis (IMF SWARA) методе. Добијени резултати кроз укупно 70 формираних модела показују да је тренутно стање посматране локалне заједнице обележено друштвеним и правним факторима. Ова анализа треба да понуди дијагностику тренутног стања и пружи добру подлогу за будућа деловања.

Кључне речи: ПЕСТЕЛ, право, IMF SWARA, пандемија, економски фактори

INTRODUCTION

Human health is of the greatest value to an individual and the community. It is talked about every day, but its importance, unfortunately, is realized only when it is impaired or endangered. Simply put, in layman's terms, health means a condition when a person is not ill, and from the perspective of the medical profession, it is defined as the absence of medically determined and recorded diseases and anomalies. The use of the term health refers to physical, mental, emotional, social and individual health. It is the most important postulate for the individual, but other subjects also have the obligation and interests to deal with the issue of health and exercise the right to health as a fundamental human right. A social community, in local, regional and international frameworks, should take care of people's health and regulate by legal norms the relations that arise or may arise in regular and emergency situations in the field of health and health care. The complexity of health issues, the values that health represents, conflicts of personal, political and general interests have shown that in emergency situations, such as the pandemic, access to health care is called into question.

The subject of this paper is the right to health and health care in Bosnia and Herzegovina during the coronavirus pandemic. The complexity of this issue, in addition to the implications created by the presence of the virus, is influenced by the constitutional, political and social order of life of citizens in this area. The aim is to point out the main aspects of the

right to health of BiH citizens and the problems they face using an example of the local community of Pale. Under the auspices of citizens' health protection activities, individuals and groups satisfy their interest aspirations in ways that are in direct conflict with laws and moral norms. The establishment of the right to health, not only declaratively but also factually, requires the absolute application of all legally defined rules of conduct, and increased ethical and moral responsibility of all those responsible for this issue.

The right to health cannot be observed only as a matter of medical sciences, nor of the field of health care. Likewise, there is not only one field of law and the activity of legislative and executive authorities that regulate the issue of the right to health. The coherence and intertwining of issues in the field of the right to health and general, social and individual interests require coordinated, timely activity of the socio-economic community in order to avoid the consequences of the pandemic. Special attention should be paid to inequalities in the exercise of the right to health care. Health is not just a biological issue. One of the fundamental human rights is freedom of movement, so man is the biggest "culprit" in the process of spreading the virus, and administrative measures at the time of the pandemic relate primarily to this issue. The standard of living, appropriate environment, access to information and the freedom of the media are factors that directly and indirectly affect people's health. It is difficult to clearly determine whether citizens' health depends more on the knowledge and abilities of medical workers or on the structure of the healthcare system. Care for human health should be systematically defined and implemented, and not left to the uncontrolled situation and will of individuals.

The aim of this paper is to analyze the current state of the healthcare system of the local community of Pale through PESTEL analysis. The analysis was formed with the total of 30 factors divided into six groups that were quantified using the Improved fuzzy SWARA method based on the preferences of ten decision-makers from different fields.

In addition to introductory considerations, the paper includes three other standard sections. Section 2 presents materials and methods providing information on the healthcare system of Bosnia and Herzegovina, the right to health in this country, and the steps of the IMF SWARA method and the Bonferroni aggregator used to average the weight values of factors within 70 executed models. Section 3 presents the results, while Section 4 provides a conclusion with model limitations and guidelines for future research.

MATERIALS AND METHODS

Healthcare System of Bosnia and Herzegovina

The political, economic and social organization of Bosnia and Herzegovina has its foundation in the Constitution. Bosnia and Herzegovina is a community of constituent peoples “consisting of two entities: the Federation of Bosnia and Herzegovina and the Republika Srpska” (The Constitution of Bosnia and Herzegovina, 2009, art. 1., item 3.). As a state, the actions of which are based on the principles of democracy, “Bosnia and Herzegovina and both Entities shall ensure the highest level of internationally recognized human rights and fundamental freedoms” (The Constitution of Bosnia and Herzegovina, 2009, art. 2., item 1.). However, the Constitution of Bosnia and Herzegovina does not contain provisions on health and health care. Neighboring countries provide other solutions. In the Republic of Serbia, “Everyone shall have the right to protection of their physical and mental health” (The Constitution of the Republic of Serbia, 2006, art. 68.), and in the Republic of Croatia, “Everyone shall be guaranteed the right to health care in conformity with law” (The Constitution of the Republic of Croatia, 2010, consolidated text, art. 59.). Attempts have been made to compensate the vagueness of constitutional solutions by granting rights to entities that “shall provide a safe and secure environment for all persons in their respective jurisdiction, by maintaining civilian law enforcement agencies operating in accordance with internationally recognized standards and with respect for the internationally recognized human rights and fundamental freedoms” (The Constitution of Bosnia and Herzegovina, 2009, art. 3, item 2.). Currently, three laws on health care are in force in Bosnia and Herzegovina. The Republic of Srpska, the Federation of Bosnia and Herzegovina and the Brčko District have the Law on Health Care. The Laws are entirely symmetrical in terms of their normative provisions, and even certain articles are identical.

There is no administrative regulation of internal relations in health care within Bosnia and Herzegovina, nor at the international level, so, in the 2020 Report on Bosnia and Herzegovina, the European Commission stated the following: “Bosnia and Herzegovina is at an early stage of preparation in the field of consumer protection and public health. No progress was made in the area of consumer protection and public health during the reporting period. The legislation on serious cross-border health threats including communicable diseases is not yet aligned with the EU acquis at all levels of government. In the coming year, Bosnia and Herzegovina should do the following in particular:

- adopt legislation at all levels prohibiting smoking in public places in line with the EU acquis and ratify the protocol to eliminate illicit trade in tobacco, and start to enforce both measures;
- conduct an assessment on the status of communicable diseases,

- further align its legislation with the EU acquis on substances of human origin and on medicines for human use and establish an oversight system in this field with a view to ensuring efficient coordination in the whole country” (Bosnia and Herzegovina 2020 Report accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 350, 2020).

The Law on Health Care defines the principles and measures of organizing and conducting health care, entities responsible for the healthcare of citizens, the rights and obligations of patients in achieving health care, financing health care institutions, and the content and manner of supervising health care institutions. “Health care of citizens is implemented on the principles of equality, accessibility, comprehensiveness, continuity and coordination” (Law on Health Care of the Republic of Srpska, 2009, 2015, art.11.). The laws clearly define human rights and values in health care. “Every citizen has the right to health care with respect for the highest possible standard of human rights and values, i.e. the right to physical and mental integrity and security of their personality, as well as respect for their moral, cultural, religious and philosophical beliefs” (Law on Health Care of the Federation of Bosnia and Herzegovina, 2010, 2013, art. 26.). Entities and districts organize and implement health care in their administrative territories, although “there shall be freedom of movement throughout Bosnia and Herzegovina” (The Constitution of Bosnia and Herzegovina, 2009, art. 1., para. 4). The Bosnia and Herzegovina health care system, organizationally observed, is constituted according to the constitutional and political system of the country, and as such shows considerable shortcomings in its functionality. “The legislative and institutional framework of the healthcare sector in Bosnia and Herzegovina reflects the constitutional order of the country, which is characterized by a complex administrative and territorial organization and a fragmented system of creating and implementing policies” (Analysis of the Legislative and Institutional Framework and Policy on the Prevention of Corruption in Healthcare Sector in BiH, 2019, p. 33).

In the Republic of Srpska, “the Ministry of Health and Social Welfare performs administrative and other professional tasks related to the control and protection of the health of the population” (Law on the Health Care of the Republic of Srpska, Official Gazette of the RS, no. 106, 2009, and no. 44, 2015). In Bosnia and Herzegovina, the Federal Ministry of Health has the same duties and tasks, while in the Brčko District, there is the Department of Health and Other Services. “Therefore, Bosnia and Herzegovina has 13 ministries of health: one in the Republic of Srpska (RS) entity, one in the Brčko

District, one in the Federation of Bosnia and Herzegovina and one in each of ten cantons” (BiH is a country with 13 ministries of health¹). The heterogeneity of the healthcare system in such a small area and the multitude of laws and bylaws lead to different levels of quality of healthcare services, and even different treatment of patients. Declaratively, legal solutions state the principle of accessibility, fairness, solidarity, equality, comprehensiveness, continuity, specialized approach, continuous improvement of quality and efficiency. Theoretically, the institutional framework of the healthcare system is well established, but practice reveals the other side of readiness of the system to respond to challenges. The question is whether everything is set according to given standards since “the COVID-19 pandemic in our country revealed the real state of the healthcare system in Bosnia and Herzegovina. In the Federation, there is an evident lack of human resources both in certain clinical disciplines and in the field of public healthcare, especially in the field of epidemiology” (The voice of public health, 2021). The causes of such a situation are inadequate relationships between professional and administrative workers. “Too much attention is placed on isolated administration and service delivery functions with no link to policy formation/implementation, decision-making and establishment of incentives that could provide for cohesiveness of the health system” (Functional Review of the Health Sector in Bosnia and Herzegovina, 2016, p. 51).

Since the establishment of Bosnia and Herzegovina as a state, there have been no changes in the organization of health care, although in 2005 it was pointed out that “analyses, research and reports show that health care is at a poor level” (Brkić et al. 2005), and later in the media the same statements that instead of patients, health care is on life support. Such a healthcare system needs to undergo changes and its reform is being discussed both in professional circles and in the public.

The general conclusion is that every year more and more money is being allocated to finance growing needs, but that citizens are dissatisfied with the services provided. The system is designed to actually maintain the existing situation and finance the bulky apparatus, without providing services to citizens in the right way (A systemic approach to health care reform, 2020).

So far, the most significant reform attempt is certainly the implementation of the family medicine system since “one of the goals of health care reform in the FB&H is to provide health care to the population as close as possible” (Strategy for the Development of Primary Health Care, 2014, p. 6). The main problem “the healthcare system of Bosnia and Herzegovina is how to improve accessibility, quality, efficiency and sustainability for all citizens, in the context of population decline and aging, ex-

¹ (<https://www.slobodnaevropa.org/a/bih-zdravstveni-sistem-organizacija/30942802.html>)

tremely fragmented insurance and service delivery system, poor financial management, and exodus of healthcare workers” (World Bank Group 2019, Health Care Report).

The healthcare system is a crucial segment of every society, including communities in Bosnia and Herzegovina, but it must be emphasized that it is not autarchic. Its dependence on economic and political or politico-economic factors has given rise to organizational and functional problems due to the political and institutional system of Bosnia and Herzegovina as a state, the unfavorable level of economic development, territorial organization of the healthcare system and uncontrolled personal commercial interest of individuals and parties (political or, it can be said, nationalistic). Healthcare improvement projects in Bosnia and Herzegovina that have been implemented and that are still being implemented have not been sufficiently incorporated into practical application in health care, so it is necessary to intensify the activities of the responsible ones in this sector, so that the right to health takes root not only declaratively, but also effectively. Monitoring, control and audit of the healthcare system, which is particularly dysfunctional and burdened with organizational, financial and personnel problems, should detect the causes that have led to this situation in order to eliminate them in the future and improve the healthcare system. Dealing only with the consequences, which is the case here, and empty politicians’ promises will not bring benefits. Consistency of legal and economic aspects of healthcare development should be a priority in planning and implementing reforms in this sector. This is especially important for emergencies, such as a virus pandemic, which, besides human health and life, destroys the entire system of social values in the present and future, leaving consequences that are hard to ignore. Preventive and proactive actions in building a healthcare system with a legal logistics and economic basis will mitigate or eliminate risks in regular and emergency circumstances.

The Right to Health in B&H

Health as a term is defined in different ways by theorists, practitioners, individuals, society, medical professionals, lawyers, engineers, so, we can say, by every citizen. Everyone approaches this issue in their own way, depending on their knowledge and needs, and its significance undoubtedly comes to the fore only when it is impaired or endangered.

Health is “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition” (Trgovčić, 2018).

In everyday life, health is said to be the greatest wealth and that a healthy person has a thousand wishes, and a sick person only one. The

right to health does not only mean the right of a person to be healthy. It is an inclusive right that includes the right to a healthy environment, social security, work and economic independence, health care, education, information, freedom of speech, freedom of movement, personal integrity, healthy food and water. The scope of the right to health does not concern exclusively biological and social aspects of the individual. Man is a social being who builds a social community with his personal values, and in return, society should preventively and permanently take care of the health of the individual and the health of society as a whole. "Governments have a responsibility for the health of their peoples which they can be fulfilled only by the provision of adequate health and social measures" (Trgovčić, 2018). This right is provided by national, regional and international legal acts².

Bosnia and Herzegovina has accepted international standards related to health and health care, thus undertaking the obligation of equal access to the coverage of health care of the population, without any form of discrimination on any grounds. These are: the Convention on the Rights of Persons with Disabilities, the Convention on Preventing and Combating Violence against Women and Domestic Violence in B&H, the Convention on the Elimination of All Forms of Discrimination against Women and the Convention on the Rights of the Child in B&H.

The Decision on the procedures and the process of harmonizing the legislation with *acquis communautaire*, adopted by the Council of Ministers in 2003, is the beginning of the synchronization of Bosnia and Herzegovina and the regulations of the European Union. In 2008, the Presidency of Bosnia and Herzegovina ratified the revised European Social Charter. Thus, Bosnia and Herzegovina is obliged as a social community "to provide advisory and educational facilities for the promotion of health and the encouragement of individual responsibility in matters of health; to prevent as far as possible epidemic, endemic and other diseases, as well as accidents" (European Social Charter, 1996, art. 11.).

What needs to be emphasized, regarding the low standard of living (poverty) and the economic situation, is that the Charter contains a provision whereby States parties undertake to "ensure that any person who is

² There are numerous Laws of Bosnia and Herzegovina that directly and indirectly protect the right to health: Law on Health Care, Law on Health Insurance, Law on Rights, Obligations and Responsibilities of Patients, Law on the Protection of the Population from Infectious Diseases, Law on Pharmacy, Law on Medicines and Medical devices, Law on Radiation and Nuclear Safety in Bosnia and Herzegovina, Law on Waste Management, Law on Transplantation of Organs and Tissues for Medical Purposes, Law on Protection of Persons with Mental Disorders, Law on Environmental Protection, Law on Water Protection, Law on Forests, Law on Air Protection, Law on Communal Activities, Law on Consumer Protection, Law on Food, Law on Genetically Modified Organisms, Law on the Right to Access Information

without adequate resources and who is unable to secure such resources either by his own efforts or from other sources, in particular by benefits under a social security scheme, be granted adequate assistance, and, in case of sickness, the care necessitated by his condition” (European Social Charter, 1996, art. 13.).

It is clear that the right to health is not only a matter of legal and medical fields, but also a crucial issue of socio-economic relations in Bosnia and Herzegovina. In the Republic of Srpska “Everyone has the right to health care” (The Constitution of the Republic of Srpska, 2005, art. 37.), and in the Federation of Bosnia and Herzegovina, “All persons within the territory of the Federation shall enjoy the right to health care” (The Constitution of the Federation of Bosnia and Herzegovina, 2008, II, art. 2. item 1.), while in the Brčko District, health care is “the competence of the public authorities in the District” (Statute of the Brčko District of Bosnia and Herzegovina, 2010, art. 8.).

Human health, individually and collectively, is most endangered at the time of the emergence of viral infectious diseases, such as the COVID-19 pandemic. The right to health in such situations has a dominant position. The question is whether the healthcare system of Bosnia and Herzegovina can provide timely and sufficient protection with the institutional and legal framework in which it now operates. The activities of all political factors in Bosnia and Herzegovina (they are still the creators of all events in this area) are evident, but the question is whether they are effective and efficient. Since the outbreak of the pandemic until today, about seventy laws, decrees, decisions, orders, instructions, conclusions, manuals and solutions have been passed in order to prevent the spread of the disease (Order on mandatory implementation of measures to respond to the occurrence of diseases caused by the new coronavirus (COVID-19) in local self-government units in the Republic of Srpska, Official Gazette of the RS, no. 23, 2020). All subjects of socio-political life are included. Various restrictions and measures have been imposed, which have even violated other human rights and changed the way of life. Is that pragmatic? We tried to get an answer from professional, responsible persons who are, regarding their education and work tasks, directly involved in creating and implementing the healthcare system. The research was conducted by a survey conceived according to the structure of Pestel analysis.

IMF SWARA Method

The Improved fuzzy SWARA method was developed this year by Vrtagić et al. (2021) and consists of the following steps:

Step 1: After defining all the criteria on the basis of which the decision was made, it is necessary to arrange them in descending order based on their expected significance. For example, the most significant

criterion is placed in the first position and the least significant criterion is in the last position.

Step 2: Starting from the previously determined rank, the relatively smaller significance of the criterion (criterion C_j) was determined in relation to the previous one (C_{j-1}), and this was repeated for each subsequent criterion. This relation, i.e. comparative significance of the average value, is denoted with s_j . An adequate TFN scale that enables the precise and good quality determination of the significance of criteria using IMF SWARA is shown in Table 1.

Table 1. Linguistics and the TFN scale for the evaluation of the criteria in the improved IMF SWARA method

Linguistic Variable	Abbreviation	TFN Scale		
Absolutely less significant	ALS	1.000	1.000	1.000
Dominantly less significant	DLS	1/2	2/3	1.000
Much less significant	MLS	2/5	1/2	2/3
Really less significant	RLS	1/3	2/5	1/2
Less significant	LS	2/7	1/3	2/5
Moderately less significant	MDLS	1/4	2/7	1/3
Weakly less significant	WLS	2/9	1/4	2/7
Equally significant	ES	0.000	0.000	0.000

Step 3: Determining the fuzzy coefficient \bar{k}_j (1):

$$\bar{k}_j = \begin{cases} \bar{1} & j = 1 \\ \bar{s}_j & j > 1 \end{cases} \quad (1)$$

Step 4: Determining the calculated weights \bar{q}_j (2):

$$\bar{q}_j = \begin{cases} \bar{1} & j = 1 \\ \frac{\bar{q}_{j-1}}{\bar{k}_j} & j > 1 \end{cases} \quad (2)$$

Step 5: Calculation of the fuzzy weight coefficients using the following Equation (3):

$$\bar{w}_j = \frac{\bar{q}_j}{\sum_{j=1}^m \bar{q}_j} \quad (3)$$

where w_j represents the fuzzy relative weight of the criteria j , and m represents the total number of criteria.

Bonferroni Aggregator

The Bonferroni aggregator was used (Yager, 2009; Pamučar, 2020; Nedeljković et al., 2021).

$$a_j = \left(\frac{1}{e(e-1)} \sum_{\substack{i,j=1 \\ i \neq j}}^e a_i^p \otimes a_j^q \right)^{\frac{1}{p+q}} \quad (4)$$

In this research, e represents the number of decision-makers, while $p, q \geq 0$ are a set of non-negative numbers.

PESTEL analysis

Further in the paper, the factors of PESTEL (political, economic, socio-cultural, technological, environmental and legal factors) (Yüksel, 2012; Thakur, 2021) in the analysis of the healthcare system of the local community of Pale with reference to the emergency situation caused by the COVID-19 pandemic. The analysis was formed with the total of 30 factors classified into the given six main groups. Table 2 shows all PESTEL analysis factors. These factors affect the functionality of the healthcare system with varying intensity. They are defined according to the organization of the healthcare system in Bosnia and Herzegovina, the environment in which health care takes place, economic trends, legislation and the application of technology.

In conducting the research, medical workers (doctors and nurses), directors of healthcare institutions, secretaries and heads of healthcare services, heads of the Civil Protection Sector, members of the crisis management team of the Municipality for emergency situations, lawyers and social workers were interviewed. In terms of education, they are persons with higher education and specializations in medical, legal, security and organizational sciences. They perform their duties on the territory of the Municipality of Pale, which has 20,000 inhabitants and is territorially located in the central part of Bosnia and Herzegovina, i.e. it borders the FB&H. The citizens receive health care in the Republic of Srpska (Municipality of Pale) and in the Federation of Bosnia and Herzegovina (Sarajevo), and also citizens of one part of the Federation receive health care in the Municipality of Pale. We believe that due to such circumstances, the analysis conducted in this area is representative.

Table 2. Factors of PESTEL analysis

Political factors – P	Economic factors – E	Social factors – S
P1 -Political instability	E1 -Healthcare financing system	S1 -Education, healthcare habits and lifestyle of the population
P2 -Corruption and political influence in the healthcare system	E2 - Population living standard	S2 -Age of the population
P3 -Organization, insurance and comprehensiveness of health care	E3 -Investing in healthcare improvement	S3 -Demographic changes and migrations
P4 -Social and healthcare policy of the executive	E4 -Economic crises (national and international)	S4 -Social health care
P5 -Healthcare quality and safety policy	E5 -Healthcare service prices	S5 -Public opinion and the media in health promotion
Technological factors – T	Environmental factors – EN	Legal factors – L
T1 -Application of technology in the diagnosis and treatment of diseases	EN1 -Healthy environment	L1 -Legal and institutional framework of health care
T2 -Negative impact of technology on health (mobile telephony, Internet, social networks)	EN2 -Competitiveness of the public and private health sector	L2 -Healthcare quality control
T3 -Development and application of new medicines and methods in the treatment of diseases	EN3 -Education, training and expertise of healthcare professionals	L3 -Legal protection of users of healthcare services
T4 -Automation of records of healthcare users and diseases	EN4 -Population awareness of the importance of health and self-care	L4 -Implementation and application of international legal norms
T5 - Electronic communication in accessing health care and providing information about health hazards and measures taken	EN5 - Population healthcare and health improvement projects	L5 - The role and activity of national and international regulatory bodies

RESULTS

This section of the paper presents the results of PESTEL analysis based on the preferences of 10 decision-makers who participated in the research, and these are described in detail above. It is necessary to create 10 special models (for each DM separately) since there are differences in

their preferences. An example of the quantified values of the main factors of PESTEL analysis for the first DM is shown in Table 3.

Table 3. Quantified values of the main factors of PESTEL analysis by IMF SWARA for DM1

	\bar{s}_j			\bar{k}_j			\bar{q}_j			\bar{w}_j			Crisp Value
E				1.000	1.000	1.000	1.000	1.000	1.000	0.234	0.243	0.255	0.243
S	0.000	0.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	0.234	0.243	0.255	0.243
P	2/9	1/4	2/7	1.222	1.250	1.286	0.778	0.800	0.818	0.182	0.194	0.208	0.195
L	2/7	1/3	2/5	1.286	1.333	1.400	0.556	0.600	0.636	0.130	0.146	0.162	0.146
EN	1/3	2/5	1/2	1.333	1.400	1.500	0.370	0.429	0.477	0.087	0.104	0.122	0.104
T	2/5	1/2	2/3	1.400	1.500	1.667	0.222	0.286	0.341	0.052	0.069	0.087	0.069
				SUM	3.926	4.114	4.273						

Based on the results shown in Table 3, it can be noticed that DM1 assigned the greatest importance to the economic and social group of parameters, while e.g. DM2 and DM3 marked a group of legal factors as the most significant and dominant within the healthcare system of the local community of Pale. For the other nine decision-makers, the calculation was performed in the same way based on their assessment of the main factors of PESTEL analysis. After defuzzification and obtaining real values for all factors of PESTEL analysis, the Bonferroni aggregator was applied in order to average the values obtained through 10 different models. After its application, the results are as follows: group of political factors has a value of 0.163, economic 0.220, social 0.143, technological 0.150, environmental factors 0.115 and legal factors 0.190, which is shown in Figure 1.

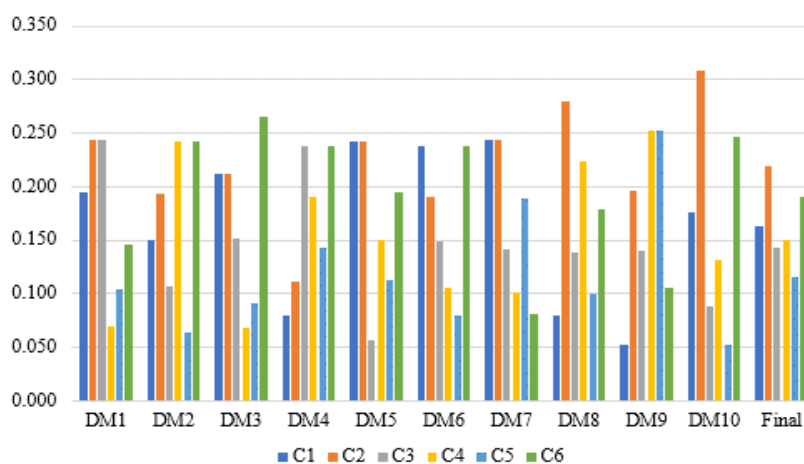


Figure 1. Results of the main PESTEL analysis factors for all 10 DM and their final values

Based on the obtained results shown in Figure 1, it can be noticed that social and legal factors are the most significant within the PESTEL analysis of the Pale healthcare system with values of 0.220 and 0.190, respectively. Environmental factors are the least valuable factors, which means not enough attention has been paid to these factors, although they are very important in every system and an increasing focus is being placed on them. Models for sub-factors are created in the same way, which means that another 60 models were formed, and, within each group, averaging was performed using the Bonferroni aggregator and the results shown in Table 4 were obtained.

Table 4. Results of PESTEL analysis by factors individually

Political			Economic			Social		
C11	0.028	4	C21	0.052	1	C31	0.037	2
C12	0.035	3	C22	0.046	3	C32	0.025	3
C13	0.035	2	C23	0.048	2	C33	0.018	5
C14	0.026	5	C24	0.029	5	C34	0.039	1
C15	0.036	1	C25	0.043	4	C35	0.024	4
Technical			Environmental			Legal		
C41	0.041	1	C51	0.028	2	C61	0.045	3
C42	0.019	5	C52	0.017	5	C62	0.046	2
C43	0.038	2	C53	0.028	1	C63	0.046	1
C44	0.025	3	C54	0.024	3	C64	0.028	4
C45	0.025	4	C55	0.017	4	C65	0.023	5

Table 4 shows that the fifth sub-criterion has the highest value within the group of political factors: healthcare quality and safety policy, while the fourth sub-criterion of social and healthcare policy of the executive has the lowest value. It is important to emphasize that there are nuances in difference in terms of rank for the first three sub-criteria. When it comes to economic factors, the most significant is the healthcare financing system, while the least significant is the economic crises (national and international). From the aspect of social factors, the fourth sub-criterion related to social health care has the highest value, and demographic changes and migrations have the lowest value. The application of technology in the diagnosis and treatment of diseases is the most important technological factor. Education, training and expertise of healthcare professionals is the most significant environmental factor, and three sub-criteria within the group of legal factors have almost identical values: legal and institutional framework of health care, healthcare quality control, legal protection of users of healthcare services.

Figure 2 presents all the criteria of PESTEL analysis, their values and ranks, which show that the highest quantitative value considering all 30 factors belongs to three criteria from the economic group of factors: E1-Healthcare financing system, E3-Investing in healthcare improvement

and E2-Population living standard. In addition, the following the most important factors belong to the group of legal factors and relate to L3-Legal protection of healthcare users, L2-Healthcare quality control and L1-Legal and institutional framework of health care.

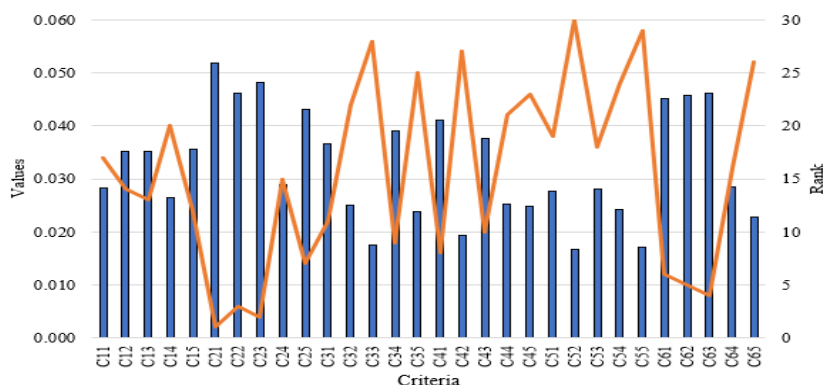


Figure 2. Results of PESTEL analysis with ranks

CONCLUSION

The right to health in local, regional and international frameworks is one of the fundamental human rights since health is of immeasurable value both for an individual and a society as a whole. The terms of health, the right to health and the care of society and community for the health of citizens is defined by legal norms. However, the efficiency of health care is not only in the domain of medical areas, but also depends on economic circumstances/troubles, environment, political events, institutional organization of the healthcare system and emergencies caused by pandemics. The complexity of the social organization of Bosnia and Herzegovina, as a state, is reflected in the complexity of relations in its healthcare system, which has not reached a certain level of development in accordance with international standards nor is it effective in fighting the pandemic. Theoretically, the healthcare system in Bosnia and Herzegovina is well declared, but its pragmatism has been called into question due to the confusion and inconsistency of constitutional and legal solutions. Laws are enacted at the level of BiH, as a state, at the level of entities and at the level of the Brčko District. According to the BiH Constitution, citizens exercise their rights within the entities, even though there is a freedom of movement for persons throughout the country. The COVID-19 pandemic showed all the shortcomings in the functionality of the healthcare system and relations in such a community, which has been currently mitigated by creating over seventy decisions, orders, instructions, conclusions, manuals and solutions. Whether the bodies that enacted these acts have been

authorized and with professional personnel is a question addressed by individuals, medical experts and the media. The measures imposed violated other human rights. It is certain that the right to health and health care is the foundation of the survival of a society, but it is not autarchic and its functionality depends on other factors. By surveying responsible and professional persons in the Municipality of Pale, using PESTEL analysis, the research attempted to detect the causes of this situation and find possible solutions to overcome it. The Municipality of Pale territorially "borders" with the Federation of Bosnia and Herzegovina, so citizens of both territories use the healthcare services of the healthcare system of RS and FBiH. Therefore, we believe that this area is representative for the research and that the results obtained can be evaluated and used within Bosnia and Herzegovina.

The contribution of the conducted research can be observed from at least two aspects: primarily through the analysis of the current state of the healthcare system of the local community of Pale with reference to the overall healthcare system in Bosnia and Herzegovina. Using the PESTEL analysis, it is possible to find out how important and influential these factors are in the current situation. In addition, the integration of PESTEL analysis with the IMF SWARA method has been performed for the first time in the literature, so it can be a significant contribution from a methodological point of view. The results obtained, i.e. the application of the PESTEL-IMF SWARA model has shown that the most influential factors belong to the groups of economic and legal factors. The limitations of this model may be the narrow geographical area of the analysis, the total number of decision-makers, which can be closely related to the directions of future research. They refer to considering a wider geographical area, considering preferences of a larger number of decision-makers, execution of a SWOT analysis, etc. It is clear that health care should be a task for all entities that create a socio-political environment since its value is difficult to measure in material terms, but the consequences of inefficiency of the healthcare system are morally, materially and in the long term huge.

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ПЕСТЕЛ АНАЛИЗА ЗДРАВСТВЕНОГ СИСТЕМА СА ОСВРТОМ НА ПРАВО НА ЗДРАВЉЕ ТОКОМ ПАНДЕМИЈЕ

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Резиме

Велике светске кризе носе неизвесности у оквиру свих сфера функционисања, како пословног, тако и приватног карактера. Услови неизвесности су нарочито изражени у здравственим кризама односно пандемијама. С обзиром да пандемија која траје утиче на све аспекте живота појединца и друштва у целини, потребно је константно вршити одређене анализе. То није питање само медицинске струке, већ и других области, а посебно потребе за остварење основних људских права. Мере које се доносе од стране државних органа усмерене су превасходно на заштиту здравља људи, али ефекти и импликације које оне изазивају ограничавају друга права, па се поставља питање њихове адекватности, а самим тим у ефикасности у управљању кризним ситуацијама. Свакако једно од основних и најважнијих питања за сваког појединца је могућност приступа здравственој заштити у таквим условима. Узимајући у обзир све претходно наведено, чињенично стање, поставља се основни циљ овог рада који се односи на анализу тренутног стања локалне самоуправе са претходно наведених аспеката. Спроведена је ПЕСТЕЛ (П–Политички, Е–Економски, С–Социјални, Т–Технолошки, Е–Еколошки, Л–Легислативни) анализа здравственог система локалне заједнице Пале. Формирани су фактори ПЕСТЕЛ анализе са уравнотеженом хијерархијском структуром, која подразумева шест главних фактора и по пет подфактора у оквиру сваке групе. Консултована је група доносиоца одлука различите структуре која је извршила оцењивање.

вање свих фактора у односу на познавање функционисања датог здравственог система и окружења уопште. Извршена је квантификација 30 фактора ПЕСТЕЛ анализе применом Improved Fuzzy Stepwise Weight Assessment Ratio Analysis (IMF SWARA) методе, која представља нов приступ вишекритеријумског одлучивања. Добијени резултати кроз укупно 70 формираних модела показују да је тренутно стање посматране локалне заједнице обележено друштвеним и правним факторима. Ова анализа треба да покаже дијагностику тренутног стања и пружи добру подлогу за будућа деловања.