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CORPORATE CULTURE OF THE ENTERPRISE AND ITS USE IN PROJECT MANAGEMENT

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The study analyzes the possibilities of using the corporate culture of the enterprise in order to improve strategic management. At the present stage, the organization can not do without the use of elements and capabilities of corporate culture. The concept of "Corporate Culture" is associated with the concept of increasing the efficiency of the enterprise and increasing the innovative and creative activity of personnel. Corporate culture means a system of organizational values embodied in various aspects of its activities (microclimate, atmosphere, leadership and business style, norms and rules, production traditions. Regardless of the presence of special departments, corporate culture in one form or another exists in almost any company with the moment of its formation. The role of corporate culture in strategic management is to penetrate into the little-studied areas of "intuition" or "common sense" at the time of making a strategic decision that increases the chances of the company to succeed and maintain a competitive position. The importance is given to positive aspects of corporate culture application in strategic management at the enterprises.

Keywords: culture, corporate culture, organization, enterprise, efficiency, subculture

The global trend today is the conditions of radical socio-economic transformations and in this regard, corporate culture has become the primary factor affecting the efficiency and competitiveness of modern organizations.

For countries with high development potential, corporate culture is an essential element in understanding the management system as a whole. A detailed analysis of corporate culture as an element of governance can help improve the public and private governance models. As well as the control system in organizations, since in a market economy the professionalism of managers is often at the average level, which does not contribute to the development of both sides of these managerial relations [2, p. 108].

Therefore, we can talk about the importance and relevance of this issue, since the study of corporate culture reveals many very important problems. An organization can be thought of as a complex system that cannot be built without a corporate culture. Thanks to the corporate culture, organizations do not appear as faceless creatures, but differ in their structure. It also ensures long-term success and market dominance.

Corporate culture proper cannot be clearly indicated in the organization's system, it is hidden, it is determined by a special form of this culture, according to the apt expression of a scientist, organizational culture is the "soul" of an organization [2, p. 109].

Any enterprise must create its own image, form its own image, for this you need to define your own goals and values, formulate a quality strategy for the products or services provided, establish civilized rules of conduct and moral principles for employees, create the business reputation of the organization; this list, which

includes many more elements, constitutes the organizational culture of the enterprise, without which the effective functioning of the enterprise will not work.

Corporate culture is a kind of general culture, therefore, it is characterized by the same thing as other types of culture. However, corporate culture is a separate type of culture, since its subject is very specific – organization.

Corporate culture cannot be considered a separate phenomenon either spatially, temporally, or subjectively. This is a mandatory component of all other types of activities, it creates a clear order in other areas, such as political, technological and others. Therefore, it is natural for corporate culture to cover the entire life cycle of an organization; for example: society, enterprise, small group.

When it comes to corporate culture, the questions are those that make up the system of values and opinions of top management of the organization. In addition, corporate culture implies, in addition to people's beliefs, mutual understanding between them, relations between people and the external environment. It rests on the psychology of the formation of practical experience, representing the value guidelines of this experience [3, p. 229].

If the organization is characterized by a favorable moral and psychological climate, then the staff will have confidence that the management trusts the employees, and good relations with employees are the key to the success of the enterprise.

In the developing world, under new conditions, leadership policy is changing, and positions that seemed previously unshakable as rigid discipline, strict hierarchy, ubiquitous control, hyper centralization, depersonalization

of labor, and the slogan “The result is important, not the method,” are gradually losing their relevance. Other positions begin to dominate: self-determination of the worker, expansion of the influence of the individual, orientation on the needs of clients, individualization of work, promotion of initiative and creativity, decentralization.

Corporate culture is a culture of ensuring the orderliness and coherence of the functioning of a social organization. The system of meanings, values, norms and guidelines of corporate culture allows us to ensure the organization of activities for the implementation of the mission and goals of the organization [5, p. 1511].

Equally important is the name of the corporation, the brand of products manufactured, sales, and, consequently, the success of the organization, directly depend on these factors. What kind of reputation an organization has an influence on its attitude to it and determines reliability as a partner, the quality of goods and other provisions that make up the concept of corporate culture. With the development of economic relations, managerial views, organizations begin to be considered in the context of associations, with similar goals, objectives, behavior model, value system and place in the economy, which leads to the emergence and implementation of the term “corporate culture” in management sciences.

In the process of work, the organization creates its reputation and name, which implies: quality control of products and services provided, standardization of work, development of employees’ moral principles, etc. .; it implies a system of methods adopted by the enterprise for achieving goals, as well as the form of relationships in the performance of work, which, in fact, distinguishes a particular company from the rest.

But you need to keep in mind that corporate culture develops and acquires its own specific features under the influence of national culture. Various features of corporate culture, as a rule, depend on the characteristics of national culture, at the same time, many features in different countries are similar, since economic laws are the same for all.

Corporate culture is expressed through the prism of values. Values give rise to norms and rules of behavior, which in turn form the specific behavior of specific groups and individuals.

Corporate culture is relatively free from the goals of the organization, but at the same time there is a connection between them. Different types of corporate culture contribute to

the realization of the same goals, though the effectiveness will be completely different. So, not all goals may be suitable for one or another type of culture.

When corporate culture is understood only in a narrow sense, there is an excess towards the problematic issues of the lower level of production, which leads to the loss of the social level of corporate culture, which is very important at this level, as it leads to the streamlining of life. And also a unified system of corporate culture is breaking, including both the upper and lower levels of functioning of society. Therefore, corporate culture must be understood both in the broad sense – as an indispensable element of the general culture, and in the narrow – as the culture of the company [3, p. 229].

The enterprises distinguish the dominant culture and subculture. The first is a conductor of core, core values. The study of the dominant culture takes place at the macro level, where the corporate culture of the organization actually takes shape.

If we consider quite large corporations, then we are talking about a subculture, it reflects the main problems that arise for employees, as well as ways to prevent problems and eliminate them.

The subculture covers many of the activities in the organization, both geographically and locally, vertically or horizontally. If a certain department of a certain organization has its own culture, unlike the culture of other departments, then we can talk about a vertical subculture. But if the department, which was originally inherent in the specificity of activity (for example: accounting, personnel department), therefore, we are talking about a horizontal subculture.

Theoretically, absolutely any group of people can have their own unique culture, subculture, but most often it is formed within the framework of departments, departments or a geographical location. The subculture consists both of the values of the general culture, and of the auxiliary values specific to this group only.

Large corporations, striving to maximize efficiency, favor the creation of their own corporate cultures, as this has a beneficial effect on the work of employees. Also, the creation of their own corporate culture enables employees to identify themselves with the product/services produced at a particular enterprise and to distinguish “their from others”. So the organization and the employee become important components of the whole, people become more responsible for the quality of products/services. A corporate culture is a controlling

tool, it adjusts the relationships and activities of employees.

Based on the fact that the organization should be effective, it is important that the corporate culture, the strategy of the enterprise, its external and internal environment are consistent. In a market economy there should be a system in which the dominant role is played by: individual initiative, risks, high integration, normal acceptance of the conflict and wide horizontal communication [4, p. 210].

If the above factors are taken into account, then the effectiveness of the organization increases markedly, but the best outcome is the use of market principles in a stable environment.

Efficiency increases when corporate culture implements control, through which risks are reduced, and conflict decreases to a minimum.

Therefore, different organizations have different corporate cultures, which vary depending on the type of work performed, forms of ownership, market place, etc.

In organizations with a strong culture, personnel are confident in what kind of behavior should be in a particular situation, what criteria in work and communication should be followed. Organizational culture can be more ef-

fective than any formal structural control; the stronger the culture of the organization, the less management needs to pay attention to the development of formal rules and regulations to control employee behavior. It will all be in the subconscious of the employee who adopts the organization's culture [4, p. 211].

Thus, the undoubted advantage of corporate culture is that it facilitates the management of the organization, in particular, the development of a control system (implicit obedience / self-control), planning (excluding them from this process / involving more people), motivation and other aspects of the activity.

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PROBLEMS AND SOLUTIONS IN THE DEVELOPMENT OF MANAGEMENT AS A TOOL FOR BUSINESS REGULATION

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The article explores the concept of management, its infrastructure at the present stage of development, the specifics of activities on the territory of our state, highlighting the main problems that have a significant impact on the effectiveness and scale of management development as one of the most important tools for regulating the business sector as a whole. Among other things, there is a disclosure of the essence of all management as a scientific trend, as well as recommendations that are aimed at creating and identifying new factors to improve the performance of management in the Russian business environment, taking into account the influence of various factors. In addition, the experience of management of various organizations is considered with further research of various types of analysis as one of the ways to improve the management of the company. Attention is also focused on the special influence of external expert opinions on the management decisions occurring in organizations, arising on the basis of completely different situations, which are not always able to be taken into account in time to avoid reducing the effectiveness of the head. The weaknesses of management as a tool of business regulation, including its structure, responsibilities, possible obstacles arising on the basis of mistrust and low qualification of employees and management, are considered as a significant management problem. With regard to the experience of subordinates, special attention is paid to the quality of management personnel as a single mechanism for the implementation of the main and primary goals of the organization. According to the modern stage of management development, in addition to the above, the relations and interaction between the Director of the enterprise and the top Manager, which have a direct impact on the entire personnel Department, are studied. As a result, recommendations are given to eliminate these problems and imperfections of management.

Keywords: management, factor, efficiency, business, economics, motivation, management development, regulation, management problems

Management, in the modern sense, is a professional activity in managing people aimed at achieving goals and maximizing profits. Since its inception, management of the organization had to solve many problems and tasks, which were explained by various reasons. But with the advent of problems, their solutions appeared.

First of all, it should be noted that the modern management infrastructure at enterprises in various fields of activity is a combination of many complex organizational structures for management. Their ability to withstand challenges and lead a competitive strategy is ensured by the professionalism of managers. The specifics and problems of modern management can be resolved through the use of a set of strategies and tactics, as well as technologies that increase the level of managerial culture and gain experience to create national schools of Russian management [2, p. 52].

The specifics of managerial activity in Russia allows us to single out approaches in understanding Russian management as a tool for regulating business. The first approach is based on a complete denial of the possibility and necessity of management in Russia, since Western models of governance in our country will not take root. The second approach is based on the idea of using the developed foreign management models, since they can be used in finished form without exaggerating the importance of Russian specifics.

The contradiction of these two approaches does not allow the creation of leading scientific management schools that have global authority. Their absence is one of the main problems of the development of management as an instrument of business regulation [5, p. 156].

In our opinion, the next key problem in the development of management as a tool for regulating business should be recognized as a clear lack of attention to international developments. Over the past decades, management theory in Russia has been largely "tied" to "classical" ideas that emerged by the late 1980s and early 1990s and summarized in world-famous works. Similar works of domestic scientists, the textbooks prepared by them are an exposition of these "classical" ideas and their conceptual processing. However, the achievements of foreign scientists, as a result of which these ideas themselves are already undergoing changes, remain outside the scope of attention. In particular, in recent years, ideas about leadership, organizational crises, managerial risks, corporate communication, etc. have been significantly supplemented and modified. [1, p. 227].

In fact, the theory of management as an instrument of business regulation in the international sense has already quite far "gone" from the "classical" ideas of the last century. It is not a question of overthrowing these ideas, but of a manifold increase in knowledge in comparison with them. However, domestic experts for the

most part do not pay attention to all these new achievements of world science.

Another key problem in the development of management as a tool for regulating business should be recognized as not sufficiently “deep” development of ideas that make up the theory of management in relation to individual sectors of the economy. The number of relevant publications is large, but they contain, as a rule, a brief summary of the above-mentioned “classical” ideas, as well as a description of the specifics of the activities of organizations of a certain profile. However, this is clearly not enough [4, p. 190].

Of much greater interest are, firstly, a detailed (including on a quantitative basis) study of the experience of managing these organizations, and, secondly, the interpretation of the corresponding distinguishing features in the context of the latest general theoretical achievements. The origins of this problem should be seen, first of all, in a strong “attachment” to the aforementioned “classical” ideas.

The solution to this problem may be associated with increased interest in the development of theoretical ideas about management in specific industries. An example is a conceptual analysis, the essence of which is as follows. The basis is taken some general theoretical representation. Further, specific features that relate to this view are determined for organizations of a specific profile. Based on this, a conclusion is drawn about the importance of this view for this industry, the direction of its action, its limitations, etc. are indicated. In particular, the value of individual, most significant developments of the world’s leading experts for managing organizations in this industry is formulated [6, p. 60].

The next problem in the development of management as a tool for regulating business can be considered the lack of opportunities to use the activities of external experts when it is really necessary. An expert attracted from outside could solve a large number of problems, because he gets paid for it and from the outside you can see a lot more problems than from the inside of the enterprise. In the context of Russian reality, many leaders do not see the need to attract outside experts in order to solve certain problems. In our opinion, this is due to fears or distrust of the competence of a consultant or expert. Many managers believe that not all experts can equally effectively solve a particular problem, or are simply afraid of revealing trade secrets. On the other hand, in some situations, experts could solve most of the current problems of the enterprise [5, p. 158].

Also at the present stage, we can note the weaknesses of management as a tool for regulating business, including:

- lack of an independent assessment of the activities of Russian managers;
- low competence of managers and their lack of necessary personal qualities;
- inability to apply foreign practice taking into account the Russian mentality;
- Inability to rationally use financial, technical, human, information resources;
- Poorly developed marketing;
- weak intrinsic motivation;
- Lack of a basis for professional autonomy;
- manager focuses attention and efforts on making short-term profit, which can cause damage not only to the organization, but also to employees, society as a whole.

At the moment, another especially important problem of modern management as an instrument of business regulation is the quality of managerial personnel. In the last few years, a specialty “management” has appeared in many higher educational institutions, but the problem still remains relevant. Since, in order to increase the level of competence aimed at the ability to bring economic benefits to the organization, it is necessary to involve professional managers who have management experience in the actual conditions of a market economy [7, p. 207].

The next problem is the lack of effective interaction between the owner of the companies and the top manager. Another problem of management as a tool for regulating business is the indifference and neglect of problems within the team by managers. There are no training and continuing education programs for employees in low positions, and often there are no adaptation systems for new employees whose task is to get to know the teams, the principles of work in the company and its values. Because of this, problems arise in working with clients when a new employee cannot answer basic questions, does not have information about the enterprise, product, rules and regulations adopted at this enterprise.

Having studied the weaknesses of Russian modern management, we proposed the following measures to improve it:

1. Optimization of the organizational structure, a strict definition of the authority and responsibility of management, a clear statement of the goals of the organization.
2. Determining the strategic development of the organization based on the results of marketing research.
3. Creating a strong organizational culture of the company, creating a favorable social and psychological climate in the team.

4. Improving communications vertically and horizontally by improving the organization's information system and communication channels.

5. The use of modern methods of task planning (intelligence card) and decision making, management procedures, incentive systems.

6. Implementation of regular professional development of employees – training, staff rotation, promotion of creativity and initiative.

7. Paying due attention to the selection of personnel using psychological, professional tests in order to avoid staff turnover.

8. The use of innovation in order to rationalize the use of resources and improve the quality of manufactured goods or services.

9. Focusing attention and strength on the growth of the organization.

10. The fixed frequency of determining dynamic indicators.

Consideration of the actual problems of management as a tool for business regulation allows us to formulate the following solutions:

1. In order to form a new generation of managers who will be versatile in their knowledge of the specialty, it is necessary, with the help of state support, on the basis of higher education institutions, to introduce “managerial schools” that are aimed at providing students with high-quality practical knowledge.

2. In order to stimulate the training and advanced training of managers, it is necessary to introduce a single register with a rating system and cash incentives.

3. The creation of a federal research center, the main goal of which will be the development of a domestic scientific school of management.

Thus, the main problems of modern management in Russia can be attributed to: the problem of the quality of managerial personnel,

the problem of nepotism, the decrease in the requirements for the professional level of specialists, the decrease in the qualification level of middle and senior managers. If the modern generation of young specialists in the field of management can solve these problems, then in the long run this will entail changes that will be aimed at the possibility of bringing economic benefits to society and the country as a whole.

The solution of pressing management problems depends on whether Russia can create a strong and functional domestic management, as this is an objective necessity [3, p. 123].

Despite many problems in the development of management as a tool for regulating business, some of which are discussed in this article, it is worth noting that with a professional and balanced approach, you can always find compromises, find the optimal solution in the situation, avoid many problems in management, and most importantly – increase quality and effectiveness of management in general.

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TREATMENT OF BACTERIAL VAGINOSIS BY NATURAL MEDICINES

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The work was aimed at substantiating the possibility of using biocomposites from natural healing resources of Kyrgyzstan and electroactivated mineral water for the treatment of inflammatory diseases of the genitourinary sphere in women. On three randomized groups of women with bacterial vaginosis, the effectiveness was compared: 1 – an anolyte from highly mineralized chloride calcium-sodium mineral water, 2 – vaginal tampons including dried leaves of Kalanchoe, Hypericum, marigold, juniper fruits, dried sea buckthorn fruits, sage, chamomile, nettle, Melissa, mint, thyme, calendula, citric acid, Chon-Tuz salt, 3 – win candles with clotrimazole. It is shown that the floral-salt composition for vaginal tampons developed on the basis of natural medicinal resources of Kyrgyzstan has antibacterial, anti-inflammatory, anti-allergic and regenerative effects. Electrochemical activation of mineral water makes it possible to obtain an anolyte rich in free chlorine with an acidic medium, with pronounced antiseptic properties, against a number of pathogenic and opportunistic microorganisms. Local application of vaginal swabs and douches with mineral water anolyte in patients with bacterial vaginosis leads to the disappearance of complaints, reduction of microscopic shifts in vaginal smears, normalization of the pH of the environment, which has a positive effect on the reproductive health of women.

Keywords: bacterial vaginosis, anolyte, mineral water, medicinal herb, biocomposite

Treatment of bacterial vaginosis with classical medical methods does not always give the expected result. This is due to the diversity of etiological factors and pathogenetic mechanisms [3]. It is known that many pathogens have lost sensitivity to antibiotics and other antimicrobial drugs [7]. Increasingly, chronic BV is treated with combined treatment, including the local use of non-medicinal products, mineral waters, therapeutic muds and other natural medicines.

In recent years, methods have been developed to increase the effectiveness of the intravaginal action of drugs at the expense of auxiliaries that enhance the absorption of water- and fat-soluble components [8–10]. Phytopreparations and biocomposites used in traditional medical schools of India [4], Iran [1], Brazil [6], have been randomized comparative clinical trials and have proven their effectiveness is not less than in the standard treatment of BV with clotrimazole and chlorhexidine derivatives.

Kyrgyzstan has a wide variety and rich reserves of medicinal plants and other medicinal resources (mineral water, mud, salt, clay, mummy, bee and animal origin products), which have been used since ancient times to treat inflammatory diseases.

We have not met modern works on the use of electroactivated mineral waters and other natural healing resources of Kyrgyzstan for the treatment of gynecological diseases, which served as the basis for the purpose of the study.

The aim of the work is to scientifically substantiate the possibility of using biocomposites from natural medicinal resources of Kyrgyzstan and electroactivated mineral water

for the treatment of inflammatory diseases of the genitourinary sphere in women.

Materials and research methods

The work was carried out in several stages in *in vitro* experiments on bacterial strains and in the clinic on 45 women of reproductive age with bacterial vaginosis aged 19 to 38 years, average age 28.7 ± 2.4 years. By random sampling, the surveyed were divided into 3 representative groups. Electroactivated water (anolyte) from well No. 854 of Cholpon-Ata thermal mineral water Deposit was used for the treatment of 15 women of the main group A in the form of daily douches with a course of 10 procedures. All women received informed consent for treatment with mineral water anolyte. For the treatment of 15 women of the main group B, vaginal tampons with a developed floral-salt composition were used, prescribed for the night No. 10. During this period, patients of the main groups A and B did not receive antibiotics. 15 women of the comparison group received conventional treatment with antibiotics. The study was carried out on the 2nd and 14th day of stay in the sanatorium.

Gynecological status was studied on the basis of examination of the external genitals, examination of the vagina and cervix with the help of mirrors. During the visual examination in women with ectopia of the cervix, the material was taken with sterile Volkmann spoons from the posterior vault of the vagina and the cervical canal. For microbiological cytological examination of the collected scrape prepared smears on slides.

Laboratory methods included:

1. Determination of pH and redox potential (RP) of mineral water, and flower-salt infusion, mucus of the cervical canal on the ionometer.

2-3. Determination of the concentration of potassium and sodium ions on a flame photometer according to GOST standard 23268.6-78 and GOST standard 23268.7-78.

4. Determination of chloride ions according to GOST standard 23268.17-78.

5. Determination of residual chlorine concentration according to GOST standard 18190-72.

6. Antibacterial properties of anolyte were determined on the test culture of *Escherichia coli* and *Staphylococcus aureus* by the standard method (Guidelines for sanitary and bacteriological studies and unification of methods of experimental study of various substances on microorganisms in water. Moscow. – 1981). The same cultures in concentrations of 1 million microbial bodies were used to determine the time of active bactericidal activity of the anolyte.

7. The qualitative assessment of the vaginal microflora included the characteristic of the majority of bacteria morphotypes encountered: gram-positive cocci, bacteroids, lactomorphotype, *Gardnerella* morphotype when stained with Papanicolaou. Previous PCR and ELISA results, if available, were also used.

The results were processed using computer programs of variational statistics for parametric and nonparametric indicators.

Research results and discussion

When developing floristic-salt composition for vaginal tampons, we proceeded from the fact that the total properties of medicinal plants in biocomposites are mutually en-

hanced. Used plants that have anti-inflammatory, regenerative, hemostatic and antioxidant effects, based on the properties described in modern manuals on pharmacology and herbal medicine. An important point is the use of local medicinal raw materials, which in Kyrgyzstan is characterized by ecological purity and great diversity.

The composition of the collection includes: *Kalanchoe* leaves, *Hypericum*, *Marigold*, *Juniper* fruits, *Sea Buckthorn* fruits, *Sage*, *Chamomile*, *Nettle*, *Melissa*, *Mint*, *Thyme*, *Calendula*. To give greater osmolarity, we used natural medicinal salt *Chon-Tuz*, and greater acidity-citric acid. The formulation of the developed floral-salt composition is filed for patenting. When hot water is added, the infusion has a hypertonic concentration, an acidic medium (pH 4.2) and a high redox potential of 600 units.

Table 1 shows the physical and chemical properties of lake Issyk-Kul water and mineral water of the blue Issyk-Kul sanatorium (Well No. 854). The initial data correspond to long-term observations. After electroactivation, the water of lake Issyk-Kul changed its properties and composition: it became chloride-hypochloride calcium-sodium with a moderately acidic environment, the redox potential (RP) increased significantly to +640 units.

Even greater changes occurred with the mineral water of the sanatorium “Blue Issyk-Kul”, it also became chloride-hypochloride calcium-sodium, but the concentration of residual chlorine exceeded 50 mg/l, acidic medium-pH 2.9, with a very high ATS + 1060 units, i.e. it became a strong oxidizer. The total mineralization was not significantly changed.

Table 2 presents the results of the study of bacteriostatic action of the studied agents at different concentrations of microbial bodies.

Table 1
Physical and chemical characteristics of Issyk-Kul lake water and well No. 854 before and after electroactivation

Characteristic	water of Issyk-Kul lake		mineral water sanatorium “Blue Issyk-Kul”	
	Initial index	Anolyte	Initial index	Anolyte
pH	7,2	4,0 *	8,2	2,9 *
RP	-80 units	+640 units*	-140 units.;	+1060 units *
general mineralization	5,8 g/l	5,6 g/l	14,3 g/l	14,1 g/l
concentration of active chlorine	0	30 mg/l *	0	> 50 mg/l *

Note: * – criterion of reliability of differences with the initial level $p < 0,05$.

From the table it can be seen that the developed means have an antibacterial effect against the culture of *E. coli* and *Staphylococcus aureus*. Anolyte of Issyk-Kul lake water suppresses microbial growth at a concentration of 400 thousand microbial bodies per ml. anolyte of mineral water and flower-salt decoction suppresses microbial growth at a concentration of 400 million microbial bodies per ml.

Next, we checked the necessary time for the manifestation of the bactericidal effect of mineral water of the sanatorium "Blue Issyk-Kul" with the same cultures of microorganisms taken in an amount of 1 million / ml, in which it has a bactericidal effect (table 3).

The table shows that the mineral water anolyte has a high speed in relation to the sup-

pression of the studied strains of bacteria, leading to the suppression of growth after 1 minute of contact. The strength of the antimicrobial effect of the anolyte with the above parameters can be compared with the effect of using an anolyte 5% solution of table salt or 0.5% solution of chlorhexidine [2, 5]. This indicates the prospects of its application in sanitation and clinic.

At the next stage of research the microbiological characteristics of vaginal smears and physico-chemical properties of the cervical canal secretion in normal and bacterial vaginosis are given. For sanatorium treatment in the sanatorium "Blue Issyk-Kul" women were sent in the non-acute phase of the disease. However, pathogenic and opportunistic bacterial flora was detected in 58% of observations (table 4).

Table 2

Effect of anolyte of mineral water of the sanatorium "Blue Issyk-Kul" and lake Issyk-Kul, as well as infusion for tampons on *E. coli* and *Staphylococcus aureus*

Microorganisms' strains	Number of microbial bodies in 1 ml	Lake anolyte	Anolyte MV	Infusion for tampons'
<i>Escherichia coli</i>	2,5 billion.	growth	growth	growth
	400 mln.	growth	no growth	no growth
	400 thousand.	p/H	no growth	no growth
<i>Staphylococcus aureus</i>	2,5 billion.	growth	growth	growth
	400 mln.	growth	no growth	no growth
	400 thousand.	no growth	no growth	no growth

Table 3

Bactericidal effect of anolyte of mineral water of sanatorium "Blue Issyk-Kul" and necessary time of its action for manifestation of bactericidal influence

Bacterias' strains	Contact time		
	15 min	5 min	1 min
<i>Escherichia coli</i>	No growth	No growth	No growth
<i>Staphylococcus aureus</i>	No growth	No growth	No growth

Table 4

Vaginal microflora in women with bacterial vaginosis

microflora	Number of patients
I Specific pathogens	
Trichomonas	5
Chlamydias	2
Gardnerella	3
Candida	5
II Non-specific and conditionally pathogenic flora	11
III negative results	19
Total	45

Table 5
Microscopic indicators in women with bacterial vaginosis before and after treatment
(number of cases)

Indicator	1 st group (anolyte)		2nd group (phytotherapy)		3rd group (antibiotics)	
	before	After	Before	after	before	after
“Key” cells in large numbers	5	0,5*	5	1,5*	5	4
White blood cells in moderate and significant amounts	8	1*	9	3*	9	5
Absence or sharp reduction of lactobacilli	6	2*	7	2*	7	4 *
Number of microbes (more than 100 in sight)	5	0*	6	2*	5	2 *

Note: * – criterion of reliability of differences with the initial level $p < 0,05$.

Table 6
Physical and chemical parameters of cervical mucus in the experimental and control group before and after treatment

Indicator	1 st group (anolyte)		2nd group (phytotherapy)		3rd group (antibiotics)	
	Before	After	Before	After	Before	After
pH	$7,6 \pm 0,3$	$5,6 \pm 0,2^*$	$7,5 \pm 0,3$	$6,2 \pm 0,2^*$	$7,4 \pm 0,3$	$6,8 \pm 0,3$
RP	$+77 \pm 36$	$+380 \pm 26^*$	$+102 \pm 31$	$+325 \pm 22^*$	$+79 \pm 34$	$+130 \pm 25$

Note: * – criterion of reliability of differences with the initial level $p < 0,05$.

As can be seen from the table, about a third of the women had specific flora or had previously had specific STIs. In 24.4% of cases, nonspecific or conditionally pathogenic flora was detected. In 19 patients, the tests were negative, which, in our opinion, is due to the previously conducted antibacterial therapy at the pre-sanatorium stage.

Bacterial vaginosis was also confirmed microscopically (table 5).

This was evidenced by the presence of “key” cells up to 30% of observations, leukocytes in a moderate and significant amount up to 60% of observations, the absence or sudden decrease in lactobacilli in 50-80% of the surveyed. A large number of microbes (more than 100 in sight) was observed in the initial smears in 30% of the surveyed.

A comparative characteristic of the action of the proposed drugs and classical antibiotic treatment is given in table 6.

Anolyte led to the normalization of all physical and chemical parameters of cervical mucus. Treatment of bacterial vaginosis with phytotampons also resulted in a significant increase in initially reduced ORP, as well as a moderate increase in initially increased pH. At the same time, in the comparison group of treatment with antibiotics alone, the trends towards normalization were unreliable.

Microscopic examination of vaginal smears confirms that the greatest positive changes were noted in the treatment of bacterial vaginosis with mineral water anolyte, and smaller-with antibiotics, in the treatment of phytotampons microscopic indicators occupied an average position (see table. 5).

Conclusion

1. Developed on the basis of natural medicinal resources of Kyrgyzstan flower-salt composition, including dried leaves of Kalanchoe, Hypericum, Marigold, Juniper fruits, dried Sea Buckthorn fruits, Sage, Chamomile, Nettle, Melissa, Mint, Thyme, Calendula, Citric acid, salt Chon-Tuz has antibacterial, anti-inflammatory, anti-allergic and regenerative effect.

2. Electrochemical activation of the mineral water of Cholpon-Ata Deposit and the water of Issyk-Kul lake allows to obtain anolyte with an acidic medium, rich in free chlorine, with pronounced antiseptic properties, against a number of pathogenic and opportunistic microorganisms.

3. Local application of vaginal swabs and douches with mineral water anolyte in patients with bacterial vaginosis leads to the disappearance of complaints, reduction of microscopic shifts in vaginal smears, normalization of the pH, which has a positive effect on the reproductive health of women.

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THE RESULTS OF THE SCREENING PROGRAM AS THE BASIS FOR TAKING MANAGEMENT DECISIONS IN HEALTHCARE

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The data on the incidence of malignant tumors in the Republic of Kazakhstan and the Almaty region are presented. The analysis of the National Screening Program implementation in the Republic and the Almaty region has been carried out. The proposed activities for the timely detection of oncopathology and reducing the incidence of malignant tumors. Worldwide, there is an increase in the incidence of oncological diseases, each year oncopathology is diagnosed in more than 14 million people, which is associated with an increase in life expectancy and an improvement in the diagnosticating quality. Mortality from oncological diseases in Kazakhstan rates second in the structure of the population mortality after cardiovascular pathology. The detection of cancer through mass screening of the population – screening is the main element in the issue of cancer early diagnosticating. The purpose of screening is the early active detection of asymptomatic cancer and its treatment. For early detection of diseases among Kazakhstanis, the National Screening Program is being implemented, which includes 7 types of preventive medical examinations of target population groups. A tumor diagnosed at an early stage can be cured completely. At the later stages, when there are already symptoms of the disease and the tumor expansion is possible, then the treatment of the disease becomes more complicated. In Kazakhstan, an increase in detectability is noted in the course of screening studies carried out to detect oncological diseases at the early stages. A positive dynamics indicates an improvement in the situation in general and indicates sufficient effectiveness of the screening programs.

Keywords: public health, morbidity, screening, oncopathology, prevention, early diagnosis of cancer

Materials and research methods

Indicators of the oncological service of the Republic of Kazakhstan and the Almaty region, data on the incidence of malignant tumors, the results of the screening program, data analysis, statistical processing of indicators.

Research results and discussion

A set of measures to protect health and prevent the occurrence of diseases is implemented within the framework of the implementation of the State Healthcare Development Program 'Densaulyk' for 2016-2019 by the Ministry of Health of the Republic of Kazakhstan. For early detection of the diseases among Kazakhstanis, the National Screening Program is being implemented, which includes 7 types of preventive medical examinations of the target population groups. These are examinations of the children's population, which are held annually at the age under 18; identification of behavioral risk factors (tobacco smoking, alcohol use, low physical activity, unhealthy diet) – carried out once in 2 years among the population aged 30-70 years; cervical cancer screening is conducted once in 4 years, women aged 30-70 are subject to it; breast cancer screening, which is carried out once in 4 years, is for women aged 40 – 70; screening of arterial hypertension, coronary heart disease and diabetes mellitus is carried out once in 2 years, men and women aged 40 – 70 are subject to it. Coverage of about 25 percent of the cohort subject to is provided. The Government has approved the

Comprehensive Cancer Control Plan, which envisages a phased coverage of the population by screening up to 70 percent within the next 5 years [1].

The annual coverage of screening studies for early detection of cancer is more than 2 million men and women of the target groups aged 30 to 70 years. Further, to prevent infectious diseases in the country, target groups of the population are immunized against 21 infectious diseases. By the end of 2017, the target group coverage was 97%, with the WHO recommendation of 95%.

The growth of knowledge in cancer diseases, the experience gained over the past decades, made it possible to single out four leading lines in the world anti-cancer strategy: prevention, early diagnosticating, treatment and pain management. There is an increase in the oncological diseases' incidence worldwide, each year oncopathology is diagnosed in more than 14 million people, which is associated with an increase in life expectancy and an improvement in diagnosticating quality. [2].

Cancer is one of the leading causes of death worldwide. According to WHO, in European countries cancer mortality ranks second after deaths from circulatory system diseases. Worldwide, 9.6 million people die from cancer annually. By 2030, experts predict an increase in cancer mortality to 13 million [3].

According to the World Health Organization (hereinafter, the WHO), cardiovascular and oncological diseases together caused 71% of deaths in the European countries.

The increase in incidence will occur mainly due to lung and colorectal cancer in men and breast and cervical cancer in women.

The global oncological community is pinning its hopes on cancer prevention. The second most important and promising issue is the early diagnosing of cancer. In the issue of cancer early diagnosis, the main element is the detection of cancer through mass preventive examination of the population – screening. Screening implies the use of various research methods, allowing to diagnose a tumor at an early stage, when there are no symptoms of the disease. The purpose of screening is the early active detection of asymptomatic cancer and its treatment. A tumor diagnosed at an early stage can be completely cured. At the later stages, when there are already symptoms of the disease and the tumor expansion is possible, then the treatment of the disease becomes more complicated.

The success of screening programs aimed at early detection of tumor and premalignancies depends on many factors, such as the biological and clinical features of the tumor process, screening methods, their sensitivity and specificity, selection of screening efficiency criteria, reduction in mortality, increase in life expectancy, reduction in the number of advanced cancer cases and, finally, the relationship between screening cost and efficiency.

There is a consensus around the world that screening research is one of the fundamental principles of early detection of diseases. Circulatory system diseases are an important global public health problem, ranking first in many economically developed countries with economies in transition, including Kazakhstan, in terms of their contribution to morbidity and mortality. Despite the continuous improvement of methods of diagnosis and treatment of cardiac patients, cardiovascular diseases are the main cause of early disability of the population.

In 2008, screening for early detection of diseases of the circulatory system (DCS: arterial hypertension, coronary heart disease) represents about 52% of the mortality structure of the population of Kazakhstan, precancerous and tumor diseases of the breast, cervix (breast cancer (breast cancer) and cervical cancer (RSM) in the structure of malignant neoplasms among the female population occupy 2 and 3 rank places), diabetes mellitus of the second type.

The National Screening Program for early detection of diseases was introduced in 2011. Mortality from malignant neoplasms ranks second in Kazakhstan (12.1%), from which about

17 thousand people die annually. According to the analysis of the current situation of the State Health Development Program “Health” in 2016-2019 for the period of implementation of the program “Healthy Kazakhstan” marked by a low effectiveness of the National Screening Program (detection rate is 3.4% among the adult population, to 16.4% among children), the effectiveness of screening is not monitored, based on the recommendations on the effectiveness of early detection of cancer and their successful treatment.

In Kazakhstan, screening examinations are carried out within the framework of the guaranteed volume of free medical care by health care entities licensed for this type of activity. Most of the oncological diseases occurring in Kazakhstan can be diagnosed in the early stages (tumors of the breast, skin, cervix, esophagus, stomach, liver, colon and rectum, prostate) through screening programs. Accordingly, the reduction of mortality from tumors of this localization can be a reserve for reducing the overall mortality from cancer.

Most of the oncological diseases that occur in Kazakhstan can be diagnosed at the early stages (breast tumors, skin tumors, cervix tumors, esophagus, stomach, liver, colon and rectum, prostate gland tumors) by conducting screening programs. Consequently, the reduction of mortality from tumors of this localization can be a reserve for reducing the overall mortality from oncological diseases.

Early diagnosing of oncology is one of the main goals of preventive medical examination, and it begins with its first stage – filling out a questionnaire, the answers to which can be used to suspect the presence of some malignant tumor. All this allows us to identify oncology at the early stages and to immediately begin treatment.

Annually during the preventive clinical examination, cancer and precancerous diseases are detected in people who are completely free from their manifestations. Detection of oncological diseases at early stages allows to early initiate treatment, which, in turn, will bring good results and increase the chances of recovery [6].

According to the analysis of indicators of oncological service in the republic, it was detected that the incidence rate of malignant tumors was 199.1 per 100 thousand population compared to 207.7 in 2015. The highest incidence rates of malignant tumors are observed in North Kazakhstan (337.8), Pavlodar (302.3), Kostanay (299.8), East Kazakhstan (297.5), Karaganda (289.8) regions, which is explained

by an increase in detectability in the course of screening studies aimed at detection of oncological diseases at the early stages [4].

The mortality rate from malignant tumors according to the Committee on Statistics in 2016 in the republic was 88.79 against 92.0 per 100 thousand people for the same period of 2015 [4].

Currently, the 'Comprehensive Plan for fighting cancer diseases in the Republic of Kazakhstan for 2018–2022,' is implemented in the country, and it is approved by the Decree of the Government of the Republic of Kazakhstan No. 396 dated 29.06.2018. [5]. Road maps and indicators of the of medical assistance quality have been developed as part of the implementation of an integrated model of medical assistance for oncological diseases, and the Coordination Council has been approved.

Based on 2016 results, additional oncological (423), mammology rooms (304), women's (1,725) and men's (756) patient examination rooms in primary healthcare institutions were opened, the actualization of screening programs was suggested considering the opinion of regions and international experts, the number of identified malignant tumor cases increased up to 7.9% due to screening procedures.

The level of equipping with diagnostic devices has increased at the level of primary healthcare institutions in terms of screenings by 7%, with medical and diagnostic equipment at the level of oncological dispensaries – by 5%.

The cohort of oncological patients registered in the dispensary and the number of newly diagnosed cases of malignant tumors tend to increase. Currently, 163,080 cancer patients are registered with oncological institutions (in 2015, -156,280).

Mortality from oncological diseases in Kazakhstan rates second in the structure of the population mortality after cardiovascular pathology. In 2016, 15,763 people died, of whom 48.3% are persons of working age.

Since 2011, timely diagnosing has grown from 49.5% to 58.5% in 2016. As a result, a decrease in the share of neglected cases is observed – late diagnosing fell from 14.4% to 11.1% in 2016. The proportion of newly detected patients with stage I diagnosed increased in 2016 to 21.8% from 19.9% in 2015. Positive dynamics indicates the improvement of the situation as a whole and shows sufficient effectiveness of the screening programs.

The positive dynamics in the context of examination rooms and oncology consulting rooms made it possible to increase the time-

ly diagnosing of cancer. In 2016, 36,998 patients with primary malignant tumors were identified, while the number of cancers detected passively by self-referral decreased to 80.1% and active screening detection increased due to screening to 7.9%, according to the results of routine examination – increased to 12.0%.

The annual coverage by screening studies aimed at the early cancer detection is more than 2 million men and women of the target groups in age from 30 to 70. The proportion of malignant tumors at the early stages is increasing, the relative share of detected breast cancer at stage I-II was 94.6% in 2016 (2015 – 92.9%), the relative share of stage I-II colorectal cancer increased to 82.9% in 2016 (2015 – 81.6%).

In 2016, 2,204 cases of cancer were detected as a result of cancer screenings: breast cancer 895 (stage I – 39.1%), cervical cancer 189 (stage I – 54%), colorectal cancer 475 (I stage – 21.1%), prostate cancer 412 (I stage – 38.8%), esophagus and stomach cancer 221 (I stage – 22.6%), hepatocellular liver cancer – 12.

For raising public awareness on the issues of oncological alertness and early diagnosing of diseases, the ten-day campaigns are held aimed at the prevention of cancer by raising the population's awareness. Oncological specialists in primary healthcare institutions hold 'open doors' days as part of these ten-day campaigns.

3,687 core health schools, 101 anti-tobacco centers, 87 youth health centers are functioning in primary care organizations of the Republic to raise public awareness, the main purpose of which is to teach healthy citizens to preserve health resources and to educate patients in self-control and self-management of their diseases, skills in prevention and early detection of oncological diseases.

The analysis of oncological diseases indicates an increase in cases due to improved diagnosis, and primary detectability. Out of newly diagnosed patients, 5,704 (16%) were diagnosed during preventive examinations of the population, where the share of 80.6-96% of cases contained patients with detected disease stage I and II. Among all localizations during the occupational health examinations, 39.5% of cases accounted for malignant tumors of the cervix, 30.8% – for malignant tumors of prostate gland, 29.8% – for breast cancer.

Breast cancer accounts for 10% of the world's cancer incidence, and there is no population in which the risk of developing breast cancer is really minimal. The risk of developing

breast cancer in women increases with age. About 77% of cases of breast cancer in women are detected after 50 years. In women younger than 30 years, this form of cancer occurs in 0.3% of cases [6].

Thus, in the Almaty region in 2018, the total number of examined was 233,475, of which 47,605 cases were detected as pathological, where 95 cases were malignant tumors. Due to the early detection and improvement in the quality of treatment in accordance with the standards, a decrease in mortality from cancer pathology is observed. The 5-year survival rate in 2018, increased by 1.1% compared with the previous period, due to implementation of the state program on cancer early detection [7].

The incidence rate in Almaty region from 2014 to 2018, decreased from 145.6 to 123.1 cases per 100 thousand people. Mortality from a malignant tumor since 2014 has decreased by 10.9% (in 2014, 58.5 cases per 100 thousand people, and in 2018 – 49.7). The share of early diagnosticating from 2014 increased from 52.7 to 58.9 cases in 2018. The share of late diagnosticating from 2014 decreased from 14.1 to 11.7 cases in 2018. One-year mortality from 2014 reduced from 29.1% to 20.8% in 2018. Of all patients treated from 2014 to 2018, 6-10% are patients with benign and pre-cancerous diseases.

Analysis of the screening work for 2018 in Almaty region indicated that 52,535 women underwent mammography, of which breast cancer was histologically verified in 58 cases. 68911 women underwent cytological screening, in 15 of them cervical cancer was histologically verified. 59,081 hemocult tests were performed for colorectal screening, and colorectal cancer was histologically verified in 23 cases.

Preventive work among the adult population is well managed. In total, in 2018, 287,005 people aged 65 and older, applied for assistance to polyclinic, of which 238,254 passed through patient examination rooms. Patient examination rooms efficiency accounted for 2,920 cases of identified pathologies. [8].

Conclusion

To improve the accessibility of oncological assistance to healthcare institutions pro-

viding oncological assistance to the population of the Republic of Kazakhstan, the efficiency of functioning examination rooms shall be enhanced, the number of which should correspond to the number of existing Primary Health Care Institutions. In the first turn, this is the work with primary medical and sanitary staff, when already at the level of the district physician the first signs of cancer are determined, after which the patient is referred for a more detailed examination to a specialist physician. Training of specialists is also one of the tasks, the solution of which will speed up the stages of the patients' examination and reduce the burden on working oncologists. Various educational events are organized for Primary Health Care specialists on a regular basis, for example, 'Pink Ribbon', during which women at various medical institutions undergo an unscheduled examination of specialists such as a mammologist, oncologist, gynecologist, and self-diagnostics of breast pathologies.

In general, the inculcation of healthy lifestyle to the population, raising non-smoking, no-alcohol abuse attitude in the population is one of the main ways to combat cancer.

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A MEDICO-SOCIAL ROLE OF HOMELESS PERSONS IN THE SPREAD OF TUBERCULOSIS

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To investigate a medico-social role of homeless persons in the spread of tuberculosis in order to develop new methods of prevention. Data on 346 homeless persons with pulmonary tuberculosis were extracted from records of the Bishkek city Tuberculosis Hospital and the Tuberculosis Dispensary and analyzed using Student's t test with an aid of MS Excel program package. The rate of sputum positivity was $76.9 \pm 2.3\%$ in all homeless cases and $80.5 \pm 2.8\%$ in newly diagnosed homeless patients. The rate of chronic forms of tuberculosis such as a fibrous-cavernous form was 36.1% in homeless persons. Treatment completion rate was 82 (38.0%), with a cure rate of 58 (70.7%) and 24 cases (29.3%) considered incurable. Medical attention was most frequently sought by the age group of homeless patients 40-49 years. A high level of morbidity was found in this population cohort. With their level of bacillus carriage, homeless persons present an epidemiologic reservoir of infection which maintains high levels of tuberculosis incidence, prevalence and mortality.

Keywords: pulmonary tuberculosis, homeless persons, incidence, social factors, treatment

At present, the incidence of tuberculosis decreases everywhere, but still remains uneven by countries [10]. Thus, in the US in 2009 the incidence of tuberculosis reached the lowest level in its history – 3.9 cases per 100 000 population, whereas in the Russian Federation according to the data of the Ministry of Health in the same year 2009 it was 82.6 cases per 100 000 [7]. The Kyrgyz Republic is also an endemic area for tuberculosis (95.1-97.4 incident cases per 100 000 population, mortality – 8.6-8.7 deaths per 100 000 population) [5, 6]. The epidemiologic situation causes most concern in such population groups as college students and prisoners, where the prevalence of tuberculosis is much higher than in the country as a whole [2]. Among tuberculosis cases, there is a high proportion of unemployed [7, 9]. However it remains unclear what role in the formation of the tuberculosis infection reservoir is played by the poorest and socially vulnerable population group of homeless persons (persons without fixed abode), which was a reason for undertaking this study [3]. No research on this issue has been done before in the Kyrgyz Republic.

Objectives

The aim of the study was to investigate a medico-social role of homeless persons in the spread of tuberculosis in order to develop new methods of prevention.

Materials and research methods

346 patients with pulmonary tuberculosis were included in the study, who were unemployed and had no fixed dwelling place but re-

ceived in-patient treatment in the Tuberculosis Hospital and ambulant treatment in the Tuberculosis Dispensary in the city Bishkek for the period 2009-2011. Demographic and clinical data of patients were explored. The data gathered were processed on a computer using the application program package Microsoft Excel, with calculation of Student's t test.

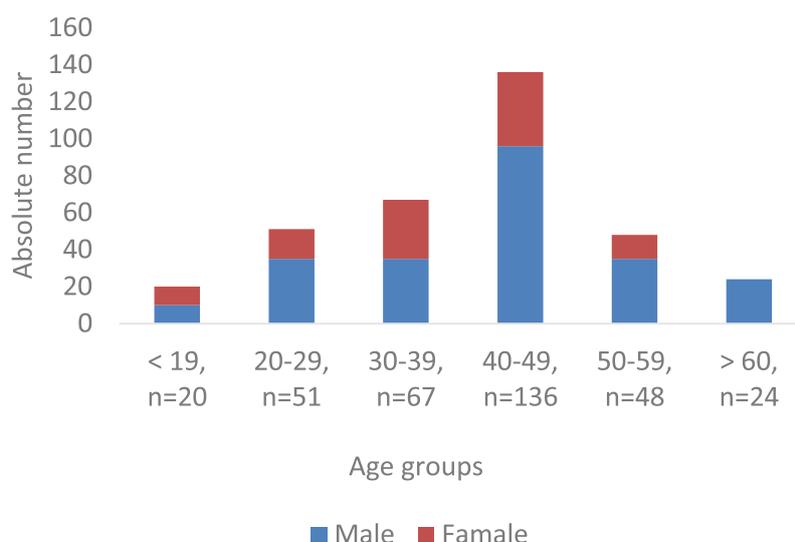
Research results and discussion

The group consisted of 346 patients with pulmonary tuberculosis who had no fixed abode, males predominated over females, with a significant difference ($67.6\% \pm 2.5$ and $32.4\% \pm 2.5$, respectively, $t -9.9$, $P < 0.001$) (figure).

Among age groups, most patients receiving treatment were at ages 30-59 ($72.5\% \pm 2.5$). Patients aged 40-49 years prevailed both over younger patients (30-39 years) ($39.3\% \pm 2.6$ and $19.4\% \pm 2.1$, respectively, $t -5.6$, $P < 0.01$) and over older patients (50-59 years), ($39.3\% \pm 2.6$ and $13.9\% \pm 1.9$, respectively, $t -7.9$, $P < 0.01$), with the difference being significant.

Among study patients, 56.4% were newly diagnosed cases, 112 cases (32.4%) were diagnosed previously with treatment already taken. A fact whether medical attention was sought for the first time or repeatedly could not be established for 39 patients (11.3%) (table 1), who received ambulatory treatment.

Results of sputum test for bacterial excretion were analyzed in newly diagnosed patients and previously treated patients and compared versus tuberculosis patients living in their families serving as a control group (table 2).



Distribution of homeless patients with tuberculosis by sex and age group, n = 346

Table 1

Distribution of homeless patients with tuberculosis as new or past diagnosis, n = 346

	Tuberculosis patients	n	%	$\pm m$	95% CI	P
1.	Newly diagnosed	195	56.4	2.7	51.2-61.6	₁₋₂ < 0.01
2.	Diagnosed previously	112	32.4	2.5	27.5-37.3	₂₋₃ < 0.001
3.	Unknown	39	11.3	1.7	8-14.6	₁₋₃ < 0.001
	Total	346	100			

Table 2

Distribution of homeless tuberculosis patients by results of sputum test in relation to new/previous diagnosis in the Kyrgyz Republic, 2009-2011, n = 346

	Tuberculosis patients	Total	Sputum tested	%	Sputum positive	%	M \pm	95% CI	P
1.	Controls	896	609	68.0	336	55.2	2.0	51.3-59.1	₁₋₂ < 0.01
2.	Newly diagnosed	195	169	86.7	136	80.5	3	74.5-86.9	₂₋₃ < 0.05
3.	Previously diagnosed	112	64	57.1	51	79.7	5	69.8-89.6	₁₋₃ < 0.01
4.	Unknown	39	14	35.9	3	21.4	11		
5.	All homeless patients	346	247	71.4	190	76.9	2.7	71.6-82.2	₁₋₅ < 0.01

Results presented in table 2 show that patients both in the control group and in the homeless group do not always undergo sputum microscopy test (68% and 71.4%, respectively, $P < 0.01$). Every one in 4 patients from the latter group excreted bacillus Kochii with sputum, the frequency being equally frequent both in newly diagnosed and previously treated patients ($80.5\% \pm 3$ and $79.7\% \pm 5.0$, respectively, $P < 0.05$). It should be noted that the rates of positive

sputum test results for pulmonary tuberculosis bacillus in this group was significantly greater than in patients living in their families ($76.9\% \pm 2.7$ and $55.2\% \pm 2.0$, respectively, $P < 0.01$).

Distribution of study patients by clinical forms showed that infiltrative forms of tuberculosis were the most frequent ($56.0 \pm 3.4\%$) including those with destruction of pulmonary tissue (52.4%), and disseminated tuberculosis constituted $7.9 \pm 1.8\%$ (table 3).

Table 3

Distribution of homeless patients with pulmonary tuberculosis by clinical forms, n = 216

Clinical form of tuberculosis	Absolute number			Per cent					
	total	males	females	total		males		females	
				%	m ±	%	m ±	%	m ±
Infiltrative	121	93	28	56.0	3.4	54.1	3,8	63,6	7,3
Fibrous-cavernous	78	86	11	36.1	3.3	50.0	3,8	25,0	6,5
Disseminated	17	13	5	7.9	1.8	7.6	2,0	11,4	4,8
Total	216	172 (79.7%)	44 (20.3%)	100.0		100.0		100.0	

Table 4

Distribution of homeless patients by results of treatment, n = 216

Treatment outcome	Absolute number			Per cent		
	total	males	females	total	males	females
Absent data	6	5	1	2.8	3.4	2.2
Treatment terminated	101	81	20	46.8	46.9	45.4
Death	27	22	5	12.5	12.5	11.9
Completed treatment	82	64	18	38.0	37.2	40.9
of them: cured	58	44	14	70.7	68.7	77.8
incurable	24	20	4	29.3	31.3	22.2
Total	216	172	44	100	100	100

Table 5

Distribution of homeless patients with pulmonary tuberculosis receiving treatment, by results of sputum microscopy test, n = 392

Treatment stages	Patients subject to the test	Patients tested		Smear test results			
				negative		positive	
		n	%	n	%	n	%
Initial stages	132	68	51.5	43	63.2	25	36.8
Maintaining stage	130	26	20.0	18	69.2	8	30.8
Finalization stage	130	18	13.8	13	72.2	5	27.8
Total	392	112	28.5				

The rate of chronic forms of tuberculosis such as a fibrous-cavernous form was 36.1%. In the female population infiltrative forms were more common but chronic fibrous-cavernous type tuberculosis was less frequent. Such patients present on admission with marked blood spitting turning into pulmonary hemorrhage. 9 patients with infiltrative tuberculosis form had concomitant exudative pleurisy, 7 had pneumonia, one had chronic hepatitis and one had meningitis. In the group of patients with fibrous-cavernous tuberculosis pleurisy was recorded in one and pneumonia in 3 patients.

Among homeless patients with pulmonary tuberculosis, 216 received hospital treatment. Data on results of treatment are shown in table 4.

A high percentage of tuberculosis patients terminating treatment can be noticed – overall

46.8%, which was slightly higher for males. 27 (12.5%) patients died during the course of treatment. Treatment was completed in 82 (38.0%) patients, of whom 58 (70.7%) had a cure and 24 (29.3%) were considered incurable.

To test the effectiveness of treatment, the treatment period was divided into stages, because treatment of tuberculosis patients is long-lasting (table 5).

The initial stage is the first 4 months of treatment, the maintaining stage (month 5-6) and the finalizing stage (month 7-8). Sputum microscopy test for carriage of bacilli is obligatory in the course of treatment but often fails to be realized. In the process of treatment, the number of patients receiving this test sharply decreased. At initial stage 51.5% had sputum microscopy, whereas at the completion stage

only 13.8%. Bacteriosecretion decreased with the progress of treatment, but towards the end of the treatment the rate of bacterioexcreters remained fairly high (27.8%).

“... It is generally considered that the risk of acquiring tuberculosis is much higher in socially disadapted persons. But in available literature in phthisiatric areas no definition of socially disadapted groups is given and no substantial evidence is presented for the prevalence of tuberculosis in these groups being higher than in the larger populations.

Regarding individual behavior “social diasadaptation” can be seen as acts of individuals that are forbidden by legal and moral norms, laws of communal life. These include various deviant behaviors: alcoholism, drug abuse, suicide, amoral behavior, child homelessness and neglect, difficult children and adolescents, any violation of social norms” (Doktorova N.P., 2007).

Our study showed that pulmonary tuberculosis occurs at all ages of the adult population group of homeless persons in the Kyrgyz Republic, and the highest tuberculosis detection rate is found for patients aged 40-49 years. Studies on the similar topic report the younger age range of 35-44 years and that without great gender difference (K.A. Smetanina, 2013). Naturally, tuberculosis patients of this age endure the lack of normal social conditions harder and their disease has a more severe course, manifesting itself in the ineffectiveness of treatment – Koch’s bacillus is excreted both by newly diagnosed and previously treated patients due to chronic forms of tuberculosis common in them and the predominance of destructive forms. Considering that pleurisy and meningitis are extrapulmonary forms of tuberculosis it means that the combined pulmonary and extrapulmonary tuberculosis form is rather frequent in homeless persons. The main reason for low cure rate is treatment abandoning (for various reasons such as inclination to vagrancy and falling back into alcoholism and drug addiction, underestimation of one’s own condition patients leave hospital without permission), a high level of advanced forms of pulmonary tuberculosis refractory to modern methods of therapy (V.A. Nikolaev, 2011).

Thus, socially insecure persons (homeless persons without fixed abode) have a high level of pulmonary tuberculosis morbidity. They lead in such conditions as chronic tuberculosis morbidity with pulmonary tissue destruction and a high rate of bacterioexcretion. Compared to normal patients, they have the lowest rates of clinical cure, closure of destructive cavities, release from clinical observation because their bacterioexcretion practically never stops [4]. Besides, in the homeless cohort a high level of patients with

early and late relapses is observed. The severity and clinical features of tuberculosis in homeless persons are mainly explained by their lack of organization and inclination to the vagrant style of life. In conclusion, we will note that the homeless cohort is an infection reservoir of sorts contributing to the growth of the incidence, prevalence and mortality from tuberculosis.

Recommendations

Not to investigate but to improve social and living conditions – special houses, warm doss-houses, better nutrition, vitaminization, continuous monitoring of patient’s behavior at different stages of treatment, airing and disinfection of rooms. To conduct a range of anti-tuberculosis measures (social support of the tuberculosis control program, creation of rehabilitation centers, educational activities and awareness raising). Continuous monitoring should be maintained during treatment of refugees and homeless persons. To use teamwork method and mobile fluorography. To establish specialized hospitals (units), rehabilitation centers and care homes for those who have suffered tuberculosis and those with chronic forms of tuberculosis.

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INFLUENCE OF HARMFUL PRODUCTION FACTORS ON WORKABILITY OF WORKERS

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The data of the sociological survey of 1110 workers of SSMPE in identifying the main, leading (specific and dominant) factors affecting health and life expectancy made it possible to establish that: A third of $35.4 \pm 3.7\%$ of quarry workers believed that a decrease in working capacity is associated with exposure to high concentrations of dust in the air of the working area, intense noise and vibration. At the end of the shift, more than 75% noted marked fatigue, lost strength recovered after the weekend; Half (53.4%) of underground ore workers (SPRU) believed that the working condition is more affected by high dust content of the air and the effects of intense noise and vibration, the severity of labor ($33.5 \pm 2.1\%$), unfavorable microclimate ($13.5 \pm 3.1\%$); Over $39.1 \pm 4.0\%$ of the ore-preparation workers (URPO) assessed their health condition as good and more ($60.9 \pm 10.1\%$) did not get sick again in the past year. The prevalence of people with a "bad" health level ranged from 5% to 26% among workers in the main professions. At the same time, more than $19.6 \pm 7.1\%$ of the respondents for the previous year were ill 3-4 times.

Keywords: harmful factors, workability, noise, vibration, dust, the severity of labor, microclimate

The data of scientific researches show that many industrial enterprises are insufficiently provided with safety devices, sanitary facilities and devices, personal protective equipment at present days [1].

The inadequate state of working conditions, the prevalence of heavy physical work, disruption of working and resting modes, low coverage and poor quality preventive medical examinations, liquidation of health units and dispensaries, and a drastic reduction in sanatorium and spa services are the cause of health problems for workers [2].

The state of working conditions of employees is directly reflected in the indicators of occupational morbidity and disability. Despite the fact that occupational diseases are less common than other major diseases, their social significance is great, since they affect a considerable number of people of working age, often they are hard and cause disability [3].

According to WHO, over 100 thousand chemicals, about 50 physical, 200 biological factors, about 20 unfavorable ergonomic loads can be harmful factors, increase the risk of accidents, diseases, stress reactions, cause dissatisfaction with work. According to the WHO European Center for Environment and Health, in countries with a highly developed industry, only physical stress negatively influence on 10-30% of workers [4, 5].

Thus, the study and assessment of the impact of harmful production factors on the health of industrial workers, including the life expectancy of men as one of the indicators of sustainable development, is actual from the point of view of the main provisions of gender policy (Decree of the President of the Re-

public of Kazakhstan No. 216 of November 14 2006).

Therefore, the purpose of the study is to assess the impact of harmful production factors on the health of industrial workers.

Research results and discussion

The results of the questionnaire survey of 1,110 SSMPE workers made it possible to identify that more than 65.9% of the shift time was spent on basic types of work.

Among $35.4-3.7\%$ of the interviewed mining equipment drivers at the quarry believed that the decline in the quality of labor productivity was due to the high concentrations of dust in the air of the work area and more than a third ($33.1 \pm 4.1\%$) of the interviewed drivers pointed to impact of intense noise and $13.4 \pm 3.9\%$ on the impact of general vibration (Fig. 1).

In underground mines, more than $41.7\% - 6.1\%$ of the surveyed machinists servicing mountain underground equipment believed that the dust factor affects on the working condition. More than a third of the $33.2-6.1\%$ of the fasteners, whose work activity is related to the fastening of the bottom of the mine and the delivery of fastening materials, believed that the severity of labor influences on the working conditions.

An analysis of a questionnaire survey of 440 workers at the concentrator factory revealed that among interviewed machinists of the ore enrichment equipment believed that among the production factors, the air temperature of the cabins (34.4%) and the dust factor (30.27%) have a greater effect on working capacity.

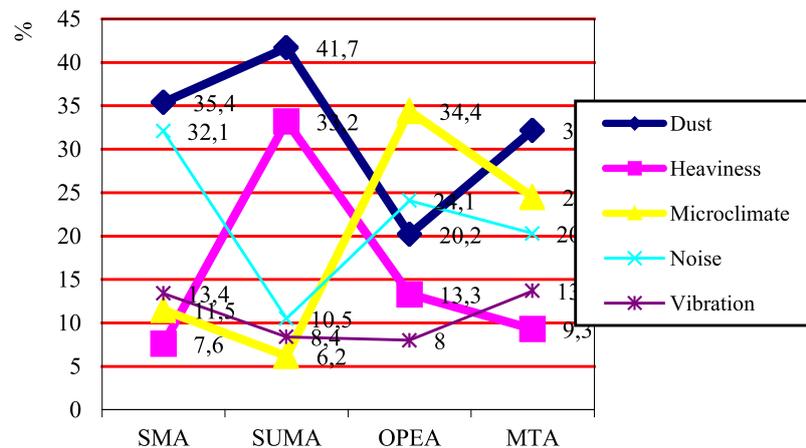


Fig. 1. Subjective assessment of the influence of production factors on work efficiency

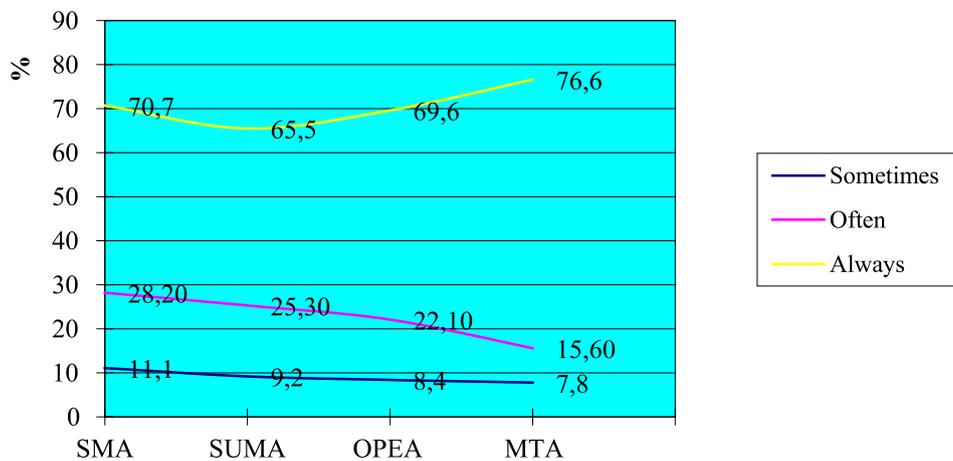


Fig. 2. Assessment of the performance of labor by the SSMPE workers in the forced position of the body

The quality of the performance of production assignments in 35.3% depends on the psychoemotional stress associated with the management of equipment, where work requires focused attention and hearing.

Drivers of heavy haulers, bulldozers, motor graders believe that the working capacity is affected by the dust and gas factor (32.2%), temperature (24.5%) and noise (20.3%).

As can be seen from Fig. 2, the performance of labor operations by miners was mostly accompanied by a forced position of the body.

It should be especially noted that more than 76.6 ± 4.2% of the interviewed ATU drivers and 70.7% ± 3.2% of the quarry drivers, 69.6% ± 2.1% of the machinists of the concentrator factory and 65.5% ± 3.7% of the drivers managing underground equipment

work more than 47.7% of the shifting time in sitting position, with torso turns to the side and forward. More than 70.7 ± 4.0% of drivers managing mining equipment performed production tasks at a fast pace, constantly in the "sitting" position. The rapid switching of the control panel levers is due to the rapid response of the sensorimotor analyzers and motor analyzers.

In the opinion of a third of the surveyed fasteners, the fixing of the intrabillage space was carried out in the standing position, with the body torsions forward and sideways and are associated with a significant postural strain of the muscles of the back and lower limbs.

About 64.5 ± 4.2% of the interviewed electricians noted that their work was accompanied by a forced position of the body during performing repair work using hand tools.

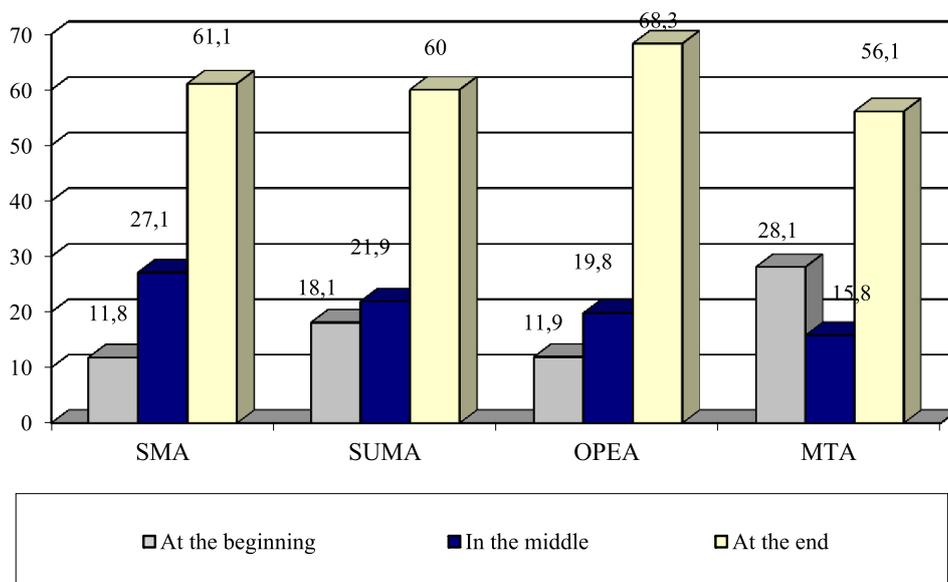


Fig. 3. Assessment of the feeling of fatigue of SSMPE workers during the working shift

In Fig. 3 it is visually shown that about $61.1 \pm 7.2\%$ of the surveyed machinists of drilling equipment, excavator operators, drivers of heavy trucks on a quarry noted that at the end of the shift there was a pronounced fatigue, one third of the respondents ($19.8 \pm 7.3\%$) – in the middle of the shift and only about $11.8 \pm 6.3\%$ – at the beginning of the shift.

Over $60.4 \pm 9.3\%$ of surveyed underground ore extraction miners noted marked fatigue at the end of the working day. In the opinion of half of the surveyors ($56.1 \pm 3.3\%$) sinkers and fasteners, the rapid pace of work with the necessary technical materials led to severe fatigue in the middle and a decrease in overall performance at the end of the shift.

In the opinion of $68.3 \pm 3.3\%$ of the surveyed crushers, screeners, bunkering workers, separators, the labor operations were performed standing, with the body torse forward and to the side and are connected by a significant postural tension of the muscles of the back and lower limbs. That is, the workers of these professions attributed their work to heavy work and believed that the implementation of manual operations is more associated with significant dynamic loads on the muscles of the limbs and trunk.

About a third of the interviewed workers of ATU, namely drivers of heavy trucks and drivers of road machinery, believed that among the unfavorable factors of production, the high nervous and emotional tension of labor ($20.6\% - 5.2\%$) influenced the performance of

production tasks. More than 56% of the interviewed respondents believed that by the end of the shift, overall performance was declining.

When answering the question: “How do you assess fatigue”, about $42.5 \pm 9.9\%$ of the machinists answered that fatigue is associated with high sensorimotor loads, both in the visual and auditory analyzers. The management of underground mining equipment is performed in $62 \pm 8.9\%$ often “sitting” and the load is felt more on the spine $43.2 \pm 3.1\%$.

About a third of surveyed sinkers, fasteners and miners of the cut face noted that performing manual operations is largely due to significant dynamic loads on the muscles of the limbs and trunk.

Despite the general fatigue that felt during the performance of production assignments, more than $68.1 \pm 9.7\%$ of the interviewed SSMPE workers noted that the lost strength is restored in 3-4 hours after the end of work.

The results of the questionnaire survey showed that more than $58.3 \pm 9.7\%$ of the surveyed workers performed production activities at a rapid pace (Table).

Work from 71.7% to 80.8% was performed in standing position, with torso turning forward (from 43.5% to 53.1%) and aside (from 34.6% to 45.4%). The study of technological processes and the nature of labor of workers of the main sections showed that their work is associated with great physical load and nervous – emotional stress.

Assessment of the working capacity of miners of underground mining of polymetallic ores, %

Name of questions	Variants of answers	SMA (n-130)	SUMA (n-360)	OPEA (n = 440)	MTA (n = 180)
Rate of work performance	monotone	10,3 ± 5,2	11,2 ± 5,6	9,7 ± 5,6	15,2 ± 6,2
	fast	59,4 ± 8,4	59,1 ± 8,8	69,2 ± 8,7	58,3 ± 8,6
	very fast	30,3 ± 7,9	34,7 ± 8,5	21,1 ± 7,7	26,8 ± 7,7
Working posture	standing	80,7 ± 6,7	72,4 ± 8,0	80,8 ± 7,4	71,7 ± 7,8
	sitting down	10,2 ± 5,2	16,8 ± 6,7	8,2 ± 5,2	18,8 ± 6,8
	half-sitting	9,1 ± 4,9	10,8 ± 5,6	11,0 ± 5,9	9,5 ± 5,1
Body turns	forward	53,1 ± 7,9	45,5 ± 8,9	43,5 ± 9,4	49,1 ± 8,7
	to the side	35,3 ± 5,8	38,5 ± 8,7	45,4 ± 9,4	34,6 ± 8,3
	backward	12,5 ± 5,7	16,0 ± 6,6	11,1 ± 5,9	17,2 ± 6,5

When identifying the main, leading (specific and dominant) factors that affect health and life expectancy, the following results are obtained:

1) data of socio-hygienic monitoring of 1110 quarry workers revealed that $35.4 \pm 3.7\%$ of the studied people believed that a decrease in working capacity is associated with exposure of high concentrations of dust in the air in the work area, intense noise and vibration. At the end of the shift, more than 75% noted marked fatigue, lost strength recovered after the weekend;

2) more than half of 53.4% of workers in underground mining of ore believed that the state of working capacity is more influenced by high level of dust in the air and the effect of intensive noise and vibration, the severity of labor ($33.5 \pm 2.1\%$), unfavorable microclimate ($13.5 \pm 3.1\%$);

3) one-third ($39.1 \pm 4.0\%$) of the workers of the ore preparation assessed their health condition as good and ($60.9 \pm 10.1\%$) were not sick at all during the past year. The prevalence of people with "poor" health levels ranged from 5% to 26% among workers in the main professions. At the same time, more than $19.6 \pm 7.1\%$ of the respondents for the previous year were sick only 3-4 times.

Medical and preventive measures to improve health.

1. The main purpose of preventive examinations is to prevent individuals, with medical contraindications from working in the specific professions of ore production and the correct employment of people recognized as fit for work.

2. When conducting periodic medical examinations of workers with a shift work schedule, it is necessary to conduct an electrocardiographic survey, as a method to identify

hidden and obvious forms of cardiovascular insufficiency, as well as correct the revealed deviations on time.

3. For the timely diagnosis of bronchopulmonary pathology, it is necessary to conduct spirographic examination.

4. For the prevention of diseases of the upper respiratory tract, it is necessary to carry out alkaline-oil inhalation 12-14 procedures each time, with a break of 1-2 months.

5. For the prevention of dust diseases of the lungs consider the usage of antioxidants (vitamins – A, E, C).

6. To prevent the development of occupational diseases, it is recommended that a complex of therapeutic measures be taken – plant adaptogens, vitamins – antioxidants (A, C, E), a bacterial polysaccharide – prodigiosan or a yeast polysaccharide that have an immunocorrective effect.

7. To reduce the level of stress during the working process, it is necessary to limit the duration of significant static loads, respect the regulated breaks for eating and performing heavy work.

8. For the prevention of gastrointestinal diseases provide for the organization of underground hot meals and special vitaminised drinks.

9. Comply with the receipt of BOB by employees of particularly harmful professions. Keep the existing list of professions eligible for free milk.

10. Organize the psychological relief rooms to relieve psycho-emotional stress and provide relaxation procedures and rooms for cyclic physical exercises to strengthen the musculoskeletal system.

11. To maintain a high level of performance and reduce physical fatigue, it is necessary to correct the rationalization of work and

rest during a shift depending on the category of work severity. A regulated break should be at least 20 minutes of a work shift.

12. The identification of the initial signs of diseases specific to this production, as well as functional disorders, will allow for timely conduction of treatment and preventive measures, especially in a sanatorium, and if necessary, to employ workers for easier technological operations.

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MAN'S MEASURE AS AN ONTOLOGIC PRINCIPLE OF THE ORGANIZATION OF PUBLIC HEALTH AND BASES OF STRATEGY OF SAFETY OF HEALTH (SOCIAL AND PHILOSOPHICAL ASPECTS)

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In article the provision of medicine and its influence on the personality as the operated factor forming outlook and borders of the metaphysical world of the personality is analyzed. Determination of health in aspect of social factors, the subject influencing ontology, incidence, social activity and quality of life, influence on it of new factors, connected with development of technical and technological reality – Hi-Hume is shown, to Hi-Tech environment, and their modulation in a social medical knowledge of aspect of essence and sociocultural specifics of a phenomenon. In medicine the virtual addictions are special category. As it is the deflexion from the norms of social conduct. They are named into nozological unit, which demands correct and healthy-prophylactic actions in the system of public health and education. The strategy of safety of human health is connected with participation and assessment of reflexive mechanisms of the personality in the system of own self-control, inclusiveness in self-control of objects the socio-technical and eco-natural. On the base of principles of man's measure and man's centralization.

Keywords: medicine, health, the personality, social factors, risk factor, Hi-Hume, Hi-Tech, technologies, the operated factors, the technogenic environment, an ecological imperative, values, self-control, human nature

The attention to the person in modern society means strengthening of attention to the problems connected with his health. The analysis of constants of health means that in practical health care world outlook approach to the solution of this problem is relevant. From a position of modern medicine and eco-physiology the research of decrease in influence of the ecological factors adverse on influence and enhancing information risks to health became the independent direction.

There are discussions about the model of medicine, where we discuss the problem of health risks.

So, the medicine is consolidation of factor, which influences on the motivation of keeping health, adaptation to the social and ecological influences in the conditions of the sixth technological structure.

Acceptance of treatment by society as a paradigm of existence and self-knowledge means influence of medicine on the personality more as the operated factor forming outlook and borders of the metaphysical world of the personality. The author investigated ambiguous influence of medicine as the socially important factor changing inner world, health and quality of life of the personality [7]. The essence of a factor is that it develops the physiological systems of resistance to factors of the environment, individual and specific evolution of the person, and provoking associated diseases, influences adaptation mechanisms. In dynamics of individual life it means the choice of a paradigm of existence within dependence of the personality on type

of medical influences. The medicine not physiologically cultivates new diseases, without promoting genetic health of mankind [In the same place. P. 18], affecting working capacity and activity. The tool impact of a factor on formation of the artificial internal circle of the person listed an essence. The factor will transform individual mechanisms of self-control of physiological activity to social activity.

The theoretical and methodological research of the determination of individual and public health in aspect of social factors affecting incidence, social activity and quality of life [5, p. 16-20] is constantly complemented with the new factors which are closely connected with development of technical and technological reality – Hi-Hume, the Hi-Tech-production environment [3, p. 199-200] affecting social texture, though away, the system of values and motivation. The analysis of influences of the virtual reality altering culture forms, a vital rhythm and way, and through them and the personality (its spiritual bases and biosocial essence) – an essence the analysis of influence of permanent factors of the special artificial nature (or lives virtual), also manipulative in relation to consciousness.

The increase of virtual dependences led to standing out in medicine into a special category of virtual addictions of deferent soft. The last – essence is the deflexion from the standards of social conduct [2, p. 81] and practically nozological unit, which demands correct and healthy-prophylactic actions in the system of public health and education.

A common threat to all technological patterns was the exclusion of technology and especially technology from ethical thinking. Reduction of risks in conditions of growing threats of uncontrolled innovative development in previous technological patterns, is possible in transition to the seventh socio-humanitarian technological pattern. It expands the field of reflection over scientific activity by value-related knowledge of the object to the means and operations of the activity, social and unreflexible subjective processes. Such human ontology corresponds to the co-evolution understanding of human, nature, society and its spheres as self-developing reflexive-active environments in which health risks are investigated using the methodology of socio-humanity cybernetics of the third order (cybernetics of self-developing systems). Human ontology of the new seventh technological order corresponds to the coevolution understanding of human-nature relations. It is based not on the ideal of anthropocentrism, but on the idea of coevolution developed by modern science. The joint evolution of nature and humanity can be interpreted as the attitude of equal partners.

As shown in a number of social and philosophical works of a beginning of the century [3; 4], Hi-Tech production functions as the technological environment influencing sociocultural systems and the person in a manipulative way more and more actively. Hi-Tech is information, nano- and biotechnologies – as the high socio-humanistic technologies allocated with sign of nonlinearity and un-equilibriumity a show vulnerability of the person before the own technical creations. Hi-Tech the socio-humanistic technologies of manipulation with consciousness accompanying Hi-Tech – production (advertising, PR, human resource management and knowledge), increase dependence of the person on the equipment and technologies as form new requirements. Generating ideals science- and a technical-centrism, these technologies also destroy them, leading to the crisis phenomena in social life because of crisis of the most human nature, and numerous existential threats which developed for it. The perfection of manipulative Hi-Tech of technologies becomes destructive in relation to knowledge received as a result of real historical and sociocultural experience which finds the secondary importance in comparison with the image of the world introduced by means of technologies. For this reason of the requirement of an ecological imperative in relation to surrounding and to own environments it is very relevant.

Concerning both types of technologies from “the principle of precaution” expert assessment of their environmental safety has to be made [3]. Our way to opinion, violation of the forming role of mechanisms of a reflection of the person in “the system of mechanisms of self-control of objects of the biosphere” [Becomes the main existential threat in the same place. P. 200], including regulation of the spiritual, mentioning the archi-typical bases personality with transformation of human nature in technosystem. Preservation of these bases in the light of a problem of a ratio of modernization and traditions [6, p. 4] in registration of models of spiritual development of society and personality, the creating role is played by maintaining tradition as way of realization of social inheritance of experience of generations.

The process of reflection is instrumental for social and humanitarian technologies, as it is an ideal component of these technologies. Reflection (lat. *reflexio*) – reversion is a form of theoretical activity of the individual, aimed at understanding his own actions and their laws, awareness by the person of his own spirituality. During reflection qualitative transformation of information encoded in neurons in previous stages of ontogenesis takes place. A change in the value system, or existential situation, view reflection as a form of induction of evaluation thinking and human activity. The structure of regulatory channels of its communication with society is investigated through verbal-symbolic tools at the level of functional sphere of the body and is the object of attention of different fields of knowledge about the person.

Since reflection also acts as a model-forming property towards the environment and social environment, in socio-philosophical cognition it is characterized through the concept of vectoricity. Thus, the object of the analysis is the active exercise by the person of his own forces as a creature of the ancestral. The model-forming potential of personality comes from modern definitions of personality as a systemic whole consisting of conflicting qualities, in which reflection is determined by the aims, values, needs of personality and its ability to self-design.

The basic scientific approaches to managing human-based self-development systems should focus on the harmony of causal and teleological (targeted) understanding of the future and development. The high methodological complexity of combining different approaches means that in post-non-classical rational science, the basic approach has to be a trans-disciplinary approach.

Knowledge areas that support governance in this context are currently in the process of being becoming.

The realization of these requirements is effective only on the basis of an interdisciplinary approach to human integrity, which finds its expression in systemic integrative medicine. Modern integrative or connective medicine is characterized by a deep understanding of the essence of diseases, which is connected with the disruption of the unity of the motivational and connective mechanisms of human substrate. This notion of causality eventually determines the state of all functional complexes of the organism and the functional sphere as a whole. The prospects of system integrative medicine in modern idea of the nature of a disease and its social reasons are perspective because proceeds from ideas of disorganization of a multilevel essence of human consciousness (consciousness, sub-consciousness and super-consciousness as over-biological structure) which harmonization leads to recovery. The information-biochemical mechanisms of regulation and adaptation of the human body are evolutionally developed by connective tissue, that initially allows it to develop quite harmoniously, to exhibit plasticity inherent in humans as a biological kinds.

In the context of general life theory [1, p. 1406], the essence of maintaining individual health is that the instinct of self-preservation, the high level of culture, the intuition of raising the threshold of sensitivity of the connective adaptive system to the perception of life information and reducing the load on the connective life support systems of factors of negative impact (speech, pressure, radial, magnetic and other energy) [Ibid. C. 1404], as well as to form an adequate individual response to the old challenges of the man-made environment. Dialogue communication between a doctor and a patient, based on the principle of participatory pre-objective-preventive and personalized medicine, in our opinion, is a social factor and a prerequisite for health design.

Information medicine can be characterized as a necessary addition and development of the field of action of classical medicine in the part where the latter has not indicated its interests, opportunities and directions. Informational medicine is a set of studies at the intersection of medical and information structures, which carries out processes of signal communication at all levels of a living organism both within it and at the level of interaction of these flows with living components of the external world.

This type of medicine uses a mathematical approach and mathematical modeling to create a model for the subsequent study of the specific-scientific signal image of Nature, and in this case, information. The instrumental-staged and system-scientific meaning of the study of information medicine means the development of Nature and a man as quantum systems, as a set of such systems and objects in them, the existence of which is possible only in context interaction. The disease is interpreted according to the information paradigm as an information failure in the body 's systems, and thus information medicine serves as the basis for the psychosocial adaptation and psychophysiological harmonization of human individuality to the spontaneous informatization of society. According to these perceptions, approaches to the grounds of causation are changing. The formation of an intellectual plan of the internal picture of the disease in practice for the study of causality is related to the learning of cultural views on diseases, their causes and mechanisms. Ideas about them from a semiotic point of view, in our opinion, are general methodological. Disease as a subjective reality and a sociocultural phenomenon in its understanding at the same time implies the use of a semiotic approach to causation, indelible only to organizational processes.

In a systematic study of the problem in the medical community, private and general semiotics have already been formed as part of the professional culture and instrumental activities of the medical nurse. This means the systemic effect of a physician 's treatment on a patient with perceptions of the meaning of symptoms as signs of disease, explanatory profilactic conversation during therapeutical and diagnostic activity.

The communication system, as part of culture, promotes the translation of one 's own internal experience for meaningful treatment of external conditions. Revealing the resources of the individual to solve problem situations, helps design the modality in any situation experienced by the individual existentially, to accept the reality of medical and psychological impact during the period of illness. Reality depends on how the individual thinks about it, how it expresses it, and how it seeks to change awareness of the situation.

Relevant ontological transformation of the person is the process which followed a cybernetization of social reality which it is indicated in the analysis of the changing human nature and its prospects [7]. There is a transformation of perceptions of the person depending on

influence anthropo-technological the practical and the transformative potential of the virtual environment on the nature of this person, to grab by technologies of a certain share of its activities and abilities. Other regularity of life takes root into elements of a human substraction. Corellyation of virtual and social space the synergetics which addresses effects of social networks on the Internet perceived as a hyper image [auth.], to identification of space of consciousness with virtual opens. The priority of environmental friendliness, safety for the person and his health as values of the latest time extends to requirements to the social individual and to the organization of health care, its life in the light of implementation of high technologies.

Thus, the organization of health care and prevention of health on the principles of a man's measure and man-centrism in medicine is relevant (as these principles come forward as the base of construction in the organization of health safety's strategy). In the ratio modernization and traditionalism this condition, value and the recommendation for ensuring primary environmental safety of subjects in the conditions of mass effects. It carries practical value in prevention of the influences unilaterally changing social reality of the latest time, human nature on the principles of techno-

centrism. Maintaining social activity of the personality depends on a constructive role of its reflexive mechanisms in a situation of the existing existential threats. The operated factors – the special group systemically determining risks of health in the XXI century.

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EVALUATION OF MEDICAL ASSISTANCE QUALITY MANAGEMENT SYSTEM IN ONCOLOGICAL DISPENSARY

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Health of the Republic of Kazakhstan's population is an indicator of state competitiveness and is one of the important factors of a country's national security. Medical assistance quality is still the world's number one issue in providing medical services. The system of accreditation and quality management in the healthcare system can only exist and be used in conditions of competitive environment, as a stimulus for an institution providing medical services to make it strive to the perfect management of medical services. An integrated system for managing the efficiency and quality of medical institutions requires a smooth operation of all management levels and the coincidence of their interests to ensure the quality of medical assistance at all levels. A strict organization of medical assistance is ensured based on medical technologies and operations standardization, regulation of responsible parties' labor, structure, volume of assistance at all stages of the medical process, the optimal allocation of all types of resources and control over their use are provided. Services quality control is one of the quality management system's elements, therefore, the greater popularity acquires the system based on the systematic approach to management which allows to ensure continuous improvement in any institution functioning.

Keywords: medical assistance quality, accreditation of medical institutions, quality management system, quality management, accreditation standards, efficiency

Research results and discussion

In the Message of the First President of the Republic of Kazakhstan N.A. Nazarbayev to the people of Kazakhstan 'Kazakhstan – 2050. Prosperity, safety and improvement of the welfare of all Kazakhstanis' the need is to improve the level of public health is emphasized which consists of many components of both medical and non-medical nature: 'As we build our society, it is necessary to increase efforts to ensure that our citizens are healthy throughout their lives and that they live in a healthy natural environment' [1].

Health of the Republic of Kazakhstan's population is an indicator of state competitiveness and is one of the important factors of a country's national security.

Medical assistance quality is still the world's number one issue in providing medical services. Services become quality when each employee considers the needs of a particular patient; when safety, effectiveness and timeliness become principles for decisions made by medical personnel to achieve the desired result and comply with contemporary medical advances (definition of the US Institute of Medicine).

The main link determining the quality of medical assistance is accreditation, confirming the compliance of medical institutions with the standards approved by the authorized body. The system of accreditation and quality management in the healthcare system can only exist and be used in conditions of competitive environment, as a stimulus for an institution pro-

viding medical services to make it strive to the perfect management of medical services [2].

Accreditation is the procedure for recognizing the special status and powers of individuals and legal entities for carrying out medical and pharmaceutical activities, as well as for conducting independent expert assessment of the activities of the healthcare subjects under the established accreditation standards. The purpose of accreditation is to continuously improve the efficiency of the medical services concerning the minimum level.

International experience shows that patients' expectations about the ability of the health care system to meet their needs increase in proportion to the increase in the level of technical equipment and training of personnel, the development of medical science, the prevalence of information technology and the effectiveness of organizational decisions. Indeed, in developed countries, investing significant financial resources in health care and continuously improving the organization of medical care, the number of patients dissatisfied with the work of the industry is constantly growing, which entails an increase in the number of complaints about poor quality service and unprofessional actions of healthcare workers [3].

To coordinate and regulate issues related to improving the quality of medical services, medical institutions began to organize an internal audit service. In the Unitary Enterprise based on the Right of Economic Management 'Almaty regional oncology dispensary' (hereinafter, AROD), the internal audit service has

been organized since 2013, by an internal order of the director. The Council for quality management of medical services, which meets once a month has been organized under the auspices of the Internal Audit Service. At meetings, the Council considers problematic issues related to the conditions of medical assistance management and the quality of medical services. The analysis of accounting and reporting documentation is carried out to provide comparative analysis of hospital performance indices for a certain period with indices for the previous working period. The evaluation of the dispensary's activity at large and for each structural unit is carried out by the Internal Audit Service subject to the indicator assessment.

An integrated system for managing the efficiency and quality of medical institutions requires a smooth operation of all management levels and the coincidence of their interests to ensure the quality of medical assistance at all levels. A strict organization of medical assistance is ensured based on medical technologies and operations standardization, regulation of responsible parties' labor, structure, volume of assistance at all stages of the medical process, the optimal allocation of all types of resources and control over their use are provided.

The standards are tools that help professionals in clinical processes and decision making, as well as improve the quality of patient care. [4].

The system of medical care quality evaluation of Unitary Enterprise based on the Right of Economic Management 'AROD' is based on a comparison of the standard with the actual medical assistance provided. The medical assistance quality management system of Unitary Enterprise based on the Right of Economic Management 'AROD' should be considered as an organizational form of management not just as a set of standards, but as a system of rational use of medical institutions resources aimed to provide the proper medical assistance level.

The first level of quality control of medical care analyzes the relationship in the system physician – patient (nurse – patient), which are divided into a large number of individual elements, forming at large, the organizational process. The main role at this level belongs to self-assessment and self-control of each physician, nurse, laboratory technician and others, the second place is occupied by the quality control of medical care, carried out by the head of the department and the head nurse.

Based on daily self-monitoring, a physician (nurse) determines the integral quality factor of the medical assistance provided. With this ap-

proach, the quality of the department's work will be expressed by the averaged assessment of all individual levels of a particular unit, as well as the achievement of final results model.

An independent audit is the most suitable method for self-assessment of the medical institution quality since it is important to establish trusting relationships between the health worker, the administration, and also to relieve respondents from focusing on the guilt feelings and punishments that accompany any inspection.

The second level of medical assistance quality control evaluates the activity of providing medical assistance at the oncological dispensary level, in that the evaluation of the activity consists of an integrated evaluation of the activities of all individual levels, as well as the degree of achievement of the approved model of the dispensary end results. This level of control is exercised by the QC and internal audit service deputy director of the oncological dispensary.

Internal indicators are indices that characterize the effectiveness, completeness and compliance of the medical activities of each structural unit of a medical institution with health standards. During the examination of medical assistance quality, the internal audit service evaluates the feasibility of hospitalization, the quality of medical assistance, postoperative complications, mortality during planned hospitalizations, differences in diagnoses, nosocomial infections and citizens' complaints.

The internal audit service manages complaints from patients and their families, investigates cases of ethics violations and deontology of medical workers, monitors grounded complaints of citizens in the context of the medical institution's departments, and develops measures to systematically reduce the number of complaints about the improper quality of medical services.

Recently, the society has seen many qualitative changes in the health care system, including the introduction of patient-oriented approach, which is based on the principles of respect and focus on individual interests, taking into account his needs, values, as well as the principle of openness and involvement of patients in decision-making processes regarding medical services.

This indicator is the degree of satisfaction with the quality of medical services, it reflects the degree of compliance with the expectations of the patient, his interests, needs and ideas about what should be a health provider organization. Because this measurement parameter

is implemented widely enough, it is possible to realize the optimal development of health provider organizations in the areas that are relevant to the population.

The issue of improving the quality of medical services can also be solved by introducing advanced management systems in medical institutions, in particular, quality management systems based on international standards ISO 9001 [3].

For the consumers and partners, the presence of a certified quality management system in an institution creates confidence that they will acquire service of the quality that was agreed in advance, within specified time limits and in the required volume. Today, an institution's reputation for quality is becoming a decisive factor in its ability to compete in both the domestic and international markets.

Currently, Unitary Enterprise based on the Right of Economic Management 'AROD' is working under the introduced quality management system according to the ISO standard. The quality management system of the dispensary is designed to ensure the quality of the services provided and focus this quality on the consumers' requirements and expectations. At the same time, the main task of the QMS is not to control the result 'at the output', but to create a management model that would prevent the occurrence of errors leading to a decrease in the services quality.

The palliative care department and pain management whose bed capacity makes 20 beds, has been working in the Unitary Enterprise based on the Right of Economic Management since the beginning of 2018. A physician of pain therapy was admitted, who introduced new pain management methods for the first time in Kazakhstan, such as alternative methods of neurolysis blockades and new principles, schemes of pain management. In anaesthesia practice, intravenous ibuprofen was introduced in the intraoperative period. An application for a new endovideoscopic rack was made to the healthcare department of the Almaty region to introduce and expand the capabilities of minimally invasive technologies of all localizations. A two-bed sub-intensive ward has been functioning to improve the throughput of the intensive care unit since the beginning of 2019.

Additional application was made to Almaty regional Healthcare Department for purchasing 'S-arc' device to introduce such new trends as visualization of the majority of the invasive procedures: from relatively simple operations (with respect to visualization requirement) of percutaneous nephrostoscopy type with full

postrenal block, to accurate and complex procedures including tumors chemoembolization of different localizations and for more effective performance of regional blocks, alternative chemical neurolysis epidural block, different neurolysis nerve block anaesthesia, to carry out spinal chemical cold ablation, which were conducted earlier without visualization relying just on a physician's experience.

The Southern area of Almaty region experiences annual growth in oncological patients, in 2016, 7,272 patients were registered, in 2017 – 7,916, in 2018 – 8,473 sick persons. Increase in notification rate of 4.8% is underway, mortality index decreased by 1.6%, and the number of newly diagnosed patients with I – II stage increased by -1.8%. Decrease in the number of newly diagnosed patients with malignant tumor of IV stage has been noted: if in 2017, the absolute number of sick persons was 203, in similar period of 2018, this number was 191.

New sick inspection rooms have been opened in Primary Health Care including BA и CBA: if in 2017 their number was 67, then in the same period of 2018 – 149, 50% increase is noted. 142 persons of middle grade medical staff have been trained on the 'AROD' basis, who work in male and female patient examination rooms.

The salary level tends to increase due to the active application of the quality management system. The average salary of medical staff increased in 2018 by 1.5 times, reaching 165,888 thousand tenge against 91,032 thousand tenge in 2016.

Unitary Enterprise based on the Right of Economic Management 'AROD' uses ISO 9001 standard under the principle: 'Record things you performing, and perform the recorded things'.

The principles of quality management are a comprehensive fundamental rule for guidance and managing the process of continually improving an institution's activities to meet the requirements of all its parties concerned. To ensure the systematic and open functioning, the quality management system relies on eight quality management principles [5]. These principles were defined so that top management could be guided by them to improve the institution's performance.

In many institutions, implemented and certified quality management systems are often formal, not used by top management to solve real problems and do not produce the proper effect to an institution. Perhaps one of the reasons is that institutions initially set a goal to simply receive a certificate, without attaching importance to what practical benefits they can get by implementing a quality management system consciously and purposefully.

If a quality management system is implemented to obtain a certificate, an institution will receive a certificate, but it will still have the same unresolved problems, since, the issues of their identification and subsequent correction are basically not considered. Along with that, many institutions do not consider the fact that one of the eight fundamental principles of the QMS is the principle of continuous improvement.

To date, Unitary Enterprise based on the Right of Economic Management 'AROD' plans to certify the implemented quality management system, demonstrating a dynamically functioning system with a clear focus on improving the institutions' business processes.

As a way to solve many problems related to the quality of services, training, self-study of employees immediately at the workplace are considered. Since, in the process of training, employees acquire new skills and expand their professional knowledge, this contributes to an increase in the efficiency of their work and the quality of the services provided. Naturally, each institution wants to introduce a quality management system using its staff, but there are cases when it is more rational to involve specialists in this field, leading auditors – consultants. The purpose of training and staff development is the development of the health provider organization through the development of its key employees, the ability to form "correct" ways to solve problems by the employees, personnel become change agents in the company, transferring the acquired knowledge to colleagues and subordinates; opportunity for professional development increases employee loyalty [6]. Therefore, when planning activities for the implementation of the QMS, management is recommended to take seriously the issue of evaluating the internal capabilities of an institution and the issues of providing the necessary resources. After all, today there are objective obstacles, such as a shortage of qualified personnel dealing with QMS issues, limited resources of the institutions themselves, poor management and a number of other obstacles. Services quality control is one of the quality management system's elements, therefore, the greater popularity acquires the system based on the systematic approach to management which allows ensuring continuous improvement of any institutions' functioning.

A corporate culture has been introduced in the RSE on REM "AROD" – this is a set of the supported by the organization fundamental values and standards, opinions, ethics, beliefs and expectations that are unprovenly accepted by a majority of employees give people guidelines for their activities and determine the way

of combining and coordination of actions of the managerial staff, structural units and individual employees.

The organization has developed and approved the corporate code of AROD. The main result of successful work on the formation and development of the corporate culture of AROD is the commitment of employees, identification of a person with their organization, expressed in the desire to work in it and contribute to its success.

Key elements of commitment in the RSE on REM "AROD" are:

- integration – the assignment of organizational goals by employees, the unionization of employees around the goals of the organization;
- involvement – the desire of the employee to make personal efforts, to contribute to the achievement of the goals of the organization;
- loyalty – an emotional attachment to their organization, the desire to remain a member

Thus, we have considered one of the important lines outlined in the strategy and policy of the state – the implementation of a quality management system in medical institutions. We also focused on the need to introduce the principles of the QMS, as a proven concept, aimed at improving the management of the internal audit service in an institution.

As a rule, after the introduction of a quality management system in an institution, the policy, organizational structure, process monitoring indices and even the content of the processes, change. To a large extent, the QMS helps to effectively transform management decisions into concrete, documented and justified actions. If an institution does not change anything during the implementation of the quality management system, it can mean either that the strategy itself is written on paper only, without considering the institution's capabilities and environmental realities, or that the QMS is implemented only formally.

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APPLICATION FEATURES OF EXPRESSIVE LEXICON IN CONVERSATIONAL STYLE

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In most cases expressive words are well used in event fiction. Each author tries to use this kind of display facility, creating certain image in its work. Therefore there can be a unilateral image that expressive words are used only in fiction. Expressive words are distinguished in the spoken language, publicistic, conversational styles. Emotion is a step to feel of information, affecting the environment. This is a state of feeling and its short-term demonstration, mental process, which is essential in the spirit and throughout the life. Words "emotion" and "expression" are related to emotional intelligence, i.e. development, which originate from words, occurring through human emotions. Application features of expressive lexicon in the spoken language of Kazakh language are considered in this article. Application of words, expressing emotion and expression, are classified by means of analysis of some comments, prescribed for various purposes in the Internet. Level of their application in positive and negative meanings is analyzed, with review of texts, used in various areas, dialogues and monologues. Strict observance of lexical, syntactic structures in interrelation of words is taken into account during analysis of any opinion. Conclusion on balance of emotionality and expressivity in our language and their difference from each other is made.

Keywords: expressive words, affective words, functional use, style of speech

Language shall be exact, clear, and understandable as a mode of communication in accordance with its function. Moreover, because of expressive activity language is essential to another one (listener, reader, and spectator). Since language acts not only for expression of idea but is means, expressing emotions, feelings and will. An individual, living in any society, cannot be in one position; its internal feeling is fluctuated in case of perception of different information from the outside. One of the methods of this floating internal feeling extraction is joint consumption of emotions and language. As a consequence, emotion is demonstrated at lexical, grammar and phonetic level in language.

Research objective

Group of words, which affect feelings of any individual, are called expressive lexicon. Determination of its phonetic, morphologic, lexical and syntactic means, that it is used as linguistic means, reflecting its self-assessment and attitude to speech content or to it as individual is considered actual. Objective of the work is division of expressive elements and emotional elements in language by means of analysis of emotional nature of statements of any individuals to Internet publishing.

Materials and methods of the research

Emotional lexicon is one of the most important means when people communicate with each other in society. Group of words, called emotional words in linguistics, is essential during communication of people. Therefore they are reflected in spoken language and literary compositions.

Expressive words are well used events in fiction. Expressive words are more distin-

guished in publicistic, speech styles. Application of words with expressive and emotional overtone is also essential. Capability to deliver emotions and expressivity is limited in publicistic works. Nevertheless publicist can clearly describe morality of heroic character, realia of social and political life. Therefore there is opportunity to create an authentic and artistic image in artistic publicistic work. Expressive approaches play key role in strengthening of expressivity and picturesqueness during expression of emotions, ideas. Emotional words are intended for expression of human feelings. Classification of application of linguistic mean, reflecting personal opinion and attitude of the reviewer to speech content or individual to which the word is addressed (addressee) is related to the research methods. Using these means, the reviewer can demonstrate mental and emotional state. Emotion transfers the spoken word as emotional (sensual) expressive (affect) word.

Emotional (emotive-expressive) words as facets (aspect) of the word meaning became one of the topical issues of modern linguistics. For example, scientist B.K. Momynova told about expressive words that: "Figurative or artistic words, expressive words are linguistic categories, certifying stylistic play of each writer. There are a lot of expressive words in linguistic stock, which stipulate fiction style compared to words which are without expression or inexpressive" [1, 12]. The researcher N.A. Lukyanov noted that: "Expression and emotion are interrelated, against this background emotion originated based on expressive, explaining this with second one, expressivity is an artistic device of the sentence, which are apparent on the basis of semantic properties of linguistic units" [2, 47].

V.N. Coller [3, 36] relates expression to functional, pragmatic category and speech level, and expressivity to semantic category, related to language level. Such limitation can be seen in “Dictionary of Linguistic Terms” of O.S. Akhmanova: “Expressivity is all expression ... Expression is prominent artistic property of the word, distinguished from common language and provides it with particular model and emotional coloring” [4, 524]. This category is classified as follows in encyclopaedical linguistic dictionary: “Expressiveness is semantic-stylistic set of symbols of linguistic unity, which is determined by property of linguistic act of communication as means of subjective accuracy speaking as regards content of speech or addressee of the word. Based on activation of expressive mean, combination and language interactions became expressive which can demonstrate mental state of the speaker” [5, 349].

Emotive and expressive words have common and distinguishing features. Particularly, their common features are emotions based on emotive and expressive. Distinguishing features are demonstrated, firstly, in their meaning: emotive words provide involvement, excitement, there is something artistic, expressive in expressive words. Secondly, linguistic level: if emotive words are linguistic element, denoting feelings, emotions, expressive words have accumulated type of semantic-stylistic features of linguistic units. Thirdly, linguistic activity: emotive words are variety of moods, feelings, human impact on being of truth, expressive words reflect private judgement and attitude to content of words of speaker or individual to whom this word was addressed by means of artistic linguistic means. Fourthly, linguistic means: emotional breadth expressed through provided lexicon, and expressivity through all linguistic categories.

Research results and discussion

As you know, emotional lexicon in modern Kazakh linguistics is composed of *emotional* and *expressive* ones. Word “emotion” comes from French word emotion; from Latin *emovere* – amaze, excite. Emotional words are emotions based on feelings. Emotional words are indicative of the richest human feelings.

Expression appears not only during human speech, but in human nature during gestures, physical, facial movements and operation. Distinction between expressive elements and emotional elements in language is explained by the fact that their functionality is separate objective, regardless of their interrelation. Emotion-

al idea and will are on the same level, and there are methods of their application in language. Expression can be perceived emotionally, as in case of expressive idea and will.

It is said in linguistic dictionary: “Emotionality – (Lat. *Emovere* amaze, excite); Fr. emotion – is different mood, feeling, human impact on the surrounding being. Emotional background *lexiconis* application of many meanings, such as love and restraint, anxiety and joy, dishonour and hate, fear and bravery, faith and uncertainty, trouble, fright etc [6, 238]. I.e. formed type of semantic-stylistic features of *linguistic units*. It is used as linguistic tool, reflecting personal judgement and attitude of speaker to content of the word or to individual (addressee) for whom it is intended. It has phonetic, morphological, lexical, syntactic means. Using these means, speaker can demonstrate mental, emotional state. There are feelings with emotions in emotion words. Feeling is mental process expressing and reflecting personal attitude to itself, to other people, surrounding objects and phenomena [7, 25].

Analyzing comments in the Internet, we tried to demonstrate that they are directly related to human psychology and demonstrate impact of mood on common language of speech. If feeling is general concept, emotion becomes moment during formation of feeling, the single concept. And emotions, feelings and will take part in expressivity in language. Will is human ability to manage its behavior consciously. Conscious human thinking is basis of expression. If emotions and feelings prevail in emotional words, a will prevails in expressive words together with (emotionality and feeling).

Expressive overtone is usually expressed in two aspects. Firstly, lexical meaning of the word, initially inclined to expression, and secondly, names and verbs which can have expressive overtone during application. But there is no expressive background in lexical meaning of the word. Each writer tries to use this type of fine art in order to improve linguistic culture of the work, creating a specific image. Application method of the expressive word directly depends not only on common knowledge of the author’s language, but also on exact selection according to its artistic purpose [8, 11]. Such expressive activity of speech is the most different in publicistic, conversational styles, especially in fiction. Classifying analyzed opinions, we divided into the following groups: lexical-semantic groups of emotional judgments, expressing physical, mental or emotional ability of individual, lexical-semantic groups of emotional judgments, used through social names,

lexical-semantic groups of emotional judgments, expressing different behavioral will of individual.

About 150000 comments were analysed during the research. Each comment was assessed in three areas (in case of positive, negative and underestimate, omission). Reflection of classification features takes important place in classification of computer texts, opinions with regard to application, primarily according to their grammatical, lexical personality, on the basis of consistency absence in the group. It is necessary to emphasize that during the analytical work comments are different; most of them use many words which provide mood, internal root, feelings, i.e. emotions. Some comments can be used only in the root, without any additions, and also expressed in state in which the reviewer is. For example: "Wonderful!", "Heh!", "Oh, my God!", "Annoyingly!", there can be a lot of comments in empty position, and they reflect various mood of individual (pity, surprising, joy, offence, sorrow). I.e. due to prepositions, we can see that words have emotional meaning. Number of comments is about 752. Almost all of them are with banter, mockery. Therefore, we suppose that expressive overtone can be in the form of joke, humor, or in form of triumphant meaning, depends on behavior, mood of individual.

In general, what words, which we pronounce, are emotional? Words, which can cause positive or negative reaction in soul of individual, can be called emotional during perception. For example, let's consider one of the comments: "Whether this man looks at the Moon?", "This one became absorbed in conversation", "This is written perfectly, May Allah ennoble your honor!", "Heh, it did not occur to me?" such comments are upper limits of emotionality. In these sentences words "look at the Moon", "become absorbed in conversation", "ennoble honor", "did not occur", "Heh" and semantic phrases (according to semantic meaning of linguistic units) have different impact. They are accepted with certain positive or adverse reaction. It is seen from the examples that expressive-emotional lexicon appeared in a number of different ways:

1) some words have emotional coloring without any additions. For example: dishonor, heh, wonderfully, ah, marvelously, etc. For example: – Wonderfully! Well said!, "Heh, will such day be?!".

2) emotional words, which appeared morphologically, are formed by means of naughtiness, neglect, ignorance, reduction, and other

additions. For example: My brother!, boy, my boy, Brother. Such words are met in several places, even if not so often. Moreover, representing concepts of emotional mood, they also represent mood of individual, view, good and bad relations. They impose additional overtone. We considered them, classifying into the following types: love, approval, arrogance, sympathy, naughtiness, confidence, boasting, surprising, adulation, distrust, accusation, hate, bullying, etc.

Moreover, expressive words are executed phonetically (voice rhythm, pause). For example: "Tisk-tisk, I think you want to disperse accumulated authority in a moment!".

Exclamations and acknowledgements and damnation are emotional words according to their nature. For example: "Blindness, Magpie life, mankurstvo...", "total dominant leavings everywhere" there are expressive-emotional features of additional indirect nature in words "Magpie life", "mankurstvo", "leavings" together with nominative features. Lexical meaning of words appeared by means of emotions can be faded. Their lexical meaning (interjectional word) is determined only in case of substantivisation or in combination of nouns, suffixes, causing verb. For example, "If bring up, thinking only about town fell, longing for vengeance will betray their own, for own fell", "...It seems to have understood central idea of the said..." Words, appearing by means of emotions, do not correspond to grammar principle in group of words. This group of words, standing alone (in the root), cannot answer on any question, i.e. cannot ask questions to them, such as noun, adjective, numeral, pronoun, verb, adverb. Syntactic principle of words grouping cannot be basis for words grouping by means of emotions.

There are number of words, expressing emotional attitude of speaker to subject or phenomenon, in modern Kazakh language, and also in any other languages. Such words are related to category of words in linguistic knowledge, to emotional lexicon, or words with emotional coloring. With the participation of proverbs, phraseological phrases, these judgments are used in various forms. In such comments as: "Probably this is changeable life", "If fall, then fall from cliff", "Who does not want to see, those does not notice a camel", "Rope will be alright with Dzhit" etc., expressive coloring is demonstrated from lexical meaning.

Expressive words are formed from primary word and by means of application of words in variable meaning. If words are divided from primary objective meaning, then different

stylistic meanings are attached to them and they affect sensitivity. Since language is means of development and struggle, it shall be not only understandable, but also effective and attractive [9, 78].

In this area conceptual function of expressive words is especially evident in the language. Emotional words, as mode of communication, cover all areas of human speech, and can be basis of many concepts. Expressive words are formed from primary word and by means of application of words in variable meaning. Words differ from primary objective meaning, which affects feeling, providing different stylistic meaning to the word [10, 19]. Since language is means of development and struggle, it shall be not only understandable, but also effective and attractive. Conceptual function of expressive words is especially evident in the language in this area.

Conclusion

So, it may be said that following results were achieved:

– emotional words are words, expressed through artistic linguistic means, by means of participation of emotions, feelings, and will, which express different impact of individual on the environment. They appear at language level mainly in three aspects (phonetic, lexical, grammar).

– emotional words are apparent in the language on grammar level and in the root and derivative individual. When words, expressed in form of imitation words, appeared in the root, then it has emotive shade by means of word-formative or word-transforming additions. Also some endings, namely, ending of posses-

sive form and some connective words, provide emotional meaning to the attached word.

In general, we can see that there is emotionality and expressiveness in the language, and they have clear differences from each other. No wonder that there is a question for what emotionality and expressiveness are used. Therefore, it is necessary if we want that words were not poor, but impressive, and feelings and ideas were the same. I think that it will be not mistake if we say that functions of expressive words are at high level. Emotionality and expressivity are deeper theoretical and practical categories which be comprehensively analyzed.

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FAKE NEWS RESEARCH: THEORIES, DETECTION STRATEGIES, AND OPEN PROBLEMS

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Fake news has become a global phenomenon due its explosive growth, particularly on social media. The goal of this tutorial is to clearly introduce the concept and characteristics of fake news and how it can be formally differentiated from other similar concepts such as mis-/dis-information, satire news, rumors, among others, which helps deepen the understanding of fake news; provide a comprehensive review of fundamental theories across disciplines and illustrate how they can be used to conduct interdisciplinary fake news research, facilitating a concerted effort of experts in computer and information science, political science, journalism, social science, psychology and economics. Such concerted efforts can result in highly efficient and explainable fake news detection; systematically present fake news detection strategies from four perspectives (i.e., knowledge, style, propagation, and credibility) and the ways that each perspective utilizes techniques developed in data/graph mining, machine learning, natural language processing, and information retrieval; and detail open issues within current fake news studies to reveal great potential research opportunities, hoping to attract researchers within a broader area to work on fake news detection and further facilitate its development. The tutorial aims to promote a fair, healthy and safe online information and news dissemination ecosystem, hoping to attract more researchers, engineers and students with various interests to fake news research. Few prerequisite are required for KDD participants to attend.

Keywords: Fake news, fake news detection, news verification, false news, misinformation, disinformation, social media ACM Reference Format

Fake news is now viewed as one of the greatest threats to democracy and journalism [17]. The reach of fake news was best highlighted during the critical months of the 2016 U.S. presidential election campaign, where top twenty frequently-discussed false election stories generated 8,711,000 shares, reactions, and comments on Facebook, ironically, larger than the total of 7,367,000 for the top twenty most-discussed election stories posted by top major news websites [11]. Our economies are not immune to fake news either, impacting stock markets and leading to massive trades. For example, fake news claiming that Barack Obama was injured in an explosion wiped out \$130 billion in stock value [5, 14].

The generous benefits in fake news activities are one of the motivations for people to initiate and engage in such activities. Consider dozens of “well-known” teenagers in the Macedonian town of Veles who posted fake news for millions on social media and became wealthy by penny-per-click advertising during the 2016 U.S. presidential election [12]. Such stories attach greater importance to fake news detection and intervention as they provide an incentive for individuals to become the next “Macedonian teenagers” in the upcoming elections all around the world. With fake news detection research in its early stages, greater opportunities exist for such malicious individuals to create and spread fake news in the absence of a worry. On the other hand, it has been suggested that fake news is difficult to be recognized by the public, which leads to unintentional engagement in spreading fake news [17]; studies in

social psychology and communications have demonstrated that human ability to detect deception is slightly better than chance, with a mean accuracy rate of 54% in over 100 experiments [8]. Such difficulty is also related to how individuals adjust (or correct) their judgments to fake news when it has already gained their trusts [7].

Facing such grim situation, this tutorial aims to (i) provide a clear understanding of fake news; (ii) attract researchers within general areas of data/graph mining, machine learning, Natural Language Processing (NLP), and Information Retrieval (IR) to conduct research on fake news and its detection and further facilitate its development; and (iii) encourage a collaborative effort of experts in computer and information science, political science, journalism, social science, psychology and economics to work on fake news detection, where such efforts can lead to fake news detection that is not only highly efficient, but more importantly, interpretable [9]. The tutorial contains the following four parts to achieve these goals:

I. Fake News and Related Concepts. We first present two definition of fake news in a broad and narrow way, which enables one to define fake news in terms of three general characteristics: (i) information authenticity, (ii) author intention, and (iii) whether the given information is in form of news. Such characteristics help differentiate fake news from the truth, as well as from several common related concepts, e.g., mis-/dis-information, satire news, and rumors. We will specify why fake news is defined in such ways, what each characteristic

indicates, and how it can be evaluated, quantified, or used to differentiate fake news from related concepts.

II. Fundamental Theories. Human vulnerability to fake news, which can bring in useful clues or further complicate fake news detection, has been a subject of interdisciplinary research [18]. For instance, achievements in forensic psychology such as Undeutsch hypothesis [13] have pointed out the style and quality differences between the truth and deceptive information. Similarly, interdisciplinary research has looked at why individuals spread fake information, considering that the borderline between malicious and normal users becomes unclear – normal people can also frequently and unintentionally participate in fake news activities, e.g., due to their social identity [1] or preexisting knowledge [4]. This tutorial conducts a comprehensive cross-disciplinary survey of literature on such theories. We review more than twenty well-known theories that can contribute to our understanding of fake news and participants in fake news activities [17]. We present and discuss the problems arising as explained by these theories, ranging from the patterns they can reveal, the qualitative and quantitative fake news studies one can conduct based on these studies, to the specific roles they can play in detecting fake news.

III. Detection Strategies. Detecting fake news is a complex and multidimensional task: it involves assessing multiple characteristics of news such as its authenticity, author intention, and its literary form. Furthermore, fake news is formed by multiple components (e.g., headline, body text, attached image(s)), and available information on fake news that can be utilized in predicting fake news sharply increases as it starts to disseminate online (e.g., feedback from users such as comments, its propagation paths on networks and its spreaders). Such components and information can be in the form of text, multimedia, network, etc., corresponding to various applicable techniques and usable resources.

To methodically and comprehensively present the ways to detect fake news, in this tutorial, we will specify how fake news detection can be conducted respectively from four perspectives (i.e., knowledge, style, propagation and credibility) – their corresponding general strategies, targeting fake news characteristic that can be evaluated, components and information that can be utilized, applicable techniques, and some typical approaches.

Generally speaking, fake news detection from a knowledge perspective is a “compari-

son” between the relational textual knowledge extracted from to-be-verified news articles and that of knowledge graphs representing facts or ground truth [2, 6]. The construction of knowledge graphs is an active research area within IR. Such “comparison” is often reduced to a link prediction (or knowledge inference) task, which directly evaluates news authenticity. Style-based fake news detection aims to capture the differences in writing styles between fake and true news, which often relies on NLP techniques and is conducted within a machine learning framework. News style can be extracted from the text [16], images [15], and/or videos within to-be-verified content, enabling one to indirectly evaluate the intention of the creator of news articles. Propagation-based and credibility-based fake news detection both further exploit information provided in news propagation on social media, where the former mainly relies on news cascades or self-defined graphs [14], while the latter emphasizes on exploring the credibility relationships between news articles and entities such as clickbait, publishers, spreaders, comments, etc. [3, 10]. Hence, research tasks involved can be correlated to clickbait detection, opinion spam detection, and the like. Here, graph optimization algorithms often play an important role to solve the target problems.

IV. Open Issues. In the final section of the tutorial, we will present the challenges and open issues that are important but have not been addressed (or thoroughly addressed) in current studies. Such challenges and open issues are three-fold: (i) challenges brought from news characteristics, e.g., the timeliness of news articles demands real-time knowledge graphs that can assure knowledge timeliness; (ii) open issues attached to model explainability; and (iii) open issues attached to model performance, e.g., the completeness of knowledge graphs and cross-domain generalization of style-based approaches. Five tasks, namely fake news early detection, checkworthy content identification, cross-domain/topic/language study of fake news, representation learning for fake news detection, and fake news intervention) will be thus highlighted, with discussions on why these tasks are crucial and potential ways to address each task.

It can be argued that it was precisely in the context of an aggravated informational confrontation involving several international actors of political activity at the state level (Russia, the USA, Ukraine, the EU countries) that “fake journalism” was almost officially legalized in media activities.

At one time, Yu.V. Klyuyev in the monograph "Political Discourse in Mass Communication: An Analysis of Public Political Interaction" [7] convincingly showed that the nature of statements by the media in the current system of media coordinates is determined by many influence factors. But first of all, the fact that the subjects of this process (which are both the media themselves and the journalists working for them) may have a certain position on a particular issue of the public political agenda. It was her who, as the experience of reporting on the events surrounding the Ukrainian crisis showed during the foreseeable period (November 2013 – summer 2015), was defended and will be protected by these entities by hook or by crook. And fake, as a specific format for working with information and its sources, in this way becomes an unexpected and effective tool for political struggle from a purely entertaining, post-modern fun or game of Internet fans.

Many experts and media researchers, as well as political scientists, have already drawn attention to the fact that in the Ukrainian information discourse, in addition to the dominant political theme, there is also a clear priority for using network sources of video information. And those, in turn, attract all available developments related to the IT world as technological assistance. It is difficult to disagree with the same D. Dragunsky, who rightly remarked: "The digital revolution made proving any fact very probable. This is due to both the features of digital editing and the practical immensity of resources. You can give one hundred counterproofs to each proof, and so on. This opens up hitherto unprecedented opportunities for malicious fraud, and for postmodern games, and the difference between the first and second is not always obvious. And further – since the difference between a disinterested game and intentional falsification is not clear, the difference between a fake and a fact as such is gradually erased" [5, p. nine].

The world audience could see a lot of examples of such "fakes" that were used to cover certain political aspects of Ukrainian events since the beginning of their time: from the "picture" of supposedly Russian tanks in Ukraine, borrowed from the popular a computer game, before the mythological fake about the allegedly "crucified by Ukrainian nationalists" boy in the village he had seized. Similar methods of obviously fake origin are rapidly gaining political weight, because they are used most often for provocative purposes with a clear desire to politically aggravate the situation around Ukraine at one stage or another, the development of the conflict.

However, the mass consciousness in the Western world in itself is filled with such convincing fakes that sometimes it seems there is no need to create new ones. In a sense, such a powerful "dream factory" as Hollywood is partly involved in their construction. However, even in this holy of holies of American mass culture, there are still creative individuals who reveal the mechanisms for creating such fakes of a world scale. It's enough to recall the ostrogrotsikovskoy picture director Barry Levinson's "The tail wags the dog (Dodger)", released in 1997, shortly before the Clinton-Lewinsky scandal and the start of the NATO bombing of Yugoslavia. However, it was in this film that all the tricks that were later used in reality by politicians and the media that accompanied them were predicted. In the Levinson film, in order to distract the attention of the American audience from the sexual scandal in which the unnamed President of the United States was involved, specially hired specialists from the world of show business arrange ... a virtual war with Albania. The reason for the promotion of this information trend is the story taken in the pavilions of one of the television studios about allegedly documentary footage of a rescuing refugee fleeing a village allegedly captured by Albanian terrorists. However, it is worth noting one significant circumstance, even if it relates to the sphere of fiction in the film "The tail wags the dog" (the name is so symbolic!). Explicit infofake served as evidence for a political decision. Another thing is that the "war with Albania" was also a grand mystification. The fake format worked and gave concrete results, which the film was perceived by the vast majority of American society.

It is unlikely that the audience of the premiere of this tape in 1997 could have suggested that the director's fiction would turn into a fake reality of the current media environment. It is worth considering the significant difference that distinguishes the information space of the end of the past century from the current one, functioning under conditions of dominance of the principles of show civilization. The availability of wide access to network resources in modern conditions has significantly changed the paradigm of reliability obtained from the virtual space of the Information Network. Surprisingly, but true. Most journalists almost ignore the possibility of falsification or mystification of the information received and "visual" video evidence, thereby opening the gates of the media space for the penetration of fakes of various kinds and meanings.

An example of such a situation is associated with the possible re-enactment of those video-punishments organized by ISIS militants over captured prisoners and hostages. As you know, captured on video footage of brutal massacres distributed exclusively through the Internet. And only then they were reproduced on the air of the largest and most respected television companies, and also posted on the websites of news agencies, which could not but lead to a wave of indignation among the world community and to the requirements of more decisive action in relations of a self-proclaimed Islamic state.

It is significant that the fact of a possible forgery was also detected using the corresponding video in the same network. And again, we have to admit that it is similar, untested for authenticity video information that is rather an illustration in the fake format, the main structure-forming characteristic of which is the deliberate misleading of the audience of this fake. By the way, as recent international political experience has shown, those who posted such videos reached their goal: against ISIS, at least some military actions actually started. However, the question of authorship and the place of creation of such bloody “video fakes” still remains an open question.

The purpose of using this format can be any. But in the context of the current informational confrontation between various subjects of the media space, most often it turns out to be political. As for the meaning of using fakes in a particular political situation, then a certain scientific and expert opposition to them may be to find an answer to the question of who is benefiting from this. In addition, in order to prevent the “fakeization” of modern media space, it is necessary to develop theoretical and practical tools to combat this format. And this, in turn, puts forward on the scientific and methodological agenda the issue of principles for determining the reliability of information received by journalists and the media.

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