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ON THE EFFECTIVENESS OF SIMULATION MODELS FOR THE PRODUCTION OF AFFORDABLE PRODUCTS FOR CONSUMERS IN THE DOMESTIC AND INTERNATIONAL MARKETS

Abstract: In the article, the authors analyze the effectiveness of the software developed by them for forming the technological process of production of import-substituting products and determining the specific reduced costs, which allows calculating the statistical parameters of the effective technological process of production of high-quality products in various forms of production organization, and the software developed by the authors for calculating the receipt of funds from the technological process of production of quality products guarantees light industry enterprises to obtain stable TA and prevent them from bankruptcy providing them with financial stability.

Key words: financial stability, stability, profitability, profit, demand, availability, quality, demand, competitiveness, import substitution, Union of Federal, regional and municipal branches of government; innovation, economic policy, industrial policy, assortment, assortment policy.

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Introduction

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Simulation modeling today is becoming an increasingly mature technology of computer modeling, due to which there is a steady growth of applications of this method in a variety of areas related to management and decision-making of an economic, organizational, social and technical nature.

Imitation modeling involves the creation of a logical and mathematical model of a complex system. In imitation modeling, the logical structure of the modeled system is adequately displayed in the model, and the processes of functioning and the dynamics of interaction of its elements are reproduced (imitated) on the model. Therefore, the construction of a simulation model includes a structural analysis of the modeled system and the development of a functional model that reflects the dynamic portraits of the modeled system.

Another important specific feature of simulation as a type of simulation is that the method for studying a computer model here is a directed computational experiment, the content of which is determined by the analytical research and the corresponding computational procedures implemented both at the stage of strategic planning of the experiment and at the stage of processing and interpreting its results.

In the industrial field, simulation technology has been and is used quite widely; Currently, there is specialized software for simulation modeling in a number of industries: medicine, telecommunications, aviation and astronautics, electronics, textiles, pharmaceuticals, publishing, railways, government organizations.

For discrete simulation, automated systems are used that are invariant to the subject area, based on the description of processes (processdescription), in particular, the ARENA simulation package.

Simulation modeling is considered as a methodology and tool for solving problems of analysis and design of production systems and helps to avoid costly errors caused by the implementation of

extremely intuitive solutions; develop processes to deal with dead ends and uncertainties caused by randomness and variability in systems; discover hidden reserves and eliminate inhibiting factors in existing implementations and internal processes; to strengthen relationships with consumers by improving the quality of shoes and the speed of their manufacture.

For a detailed study of technological processes, process diagrams were built in the IDEF3 notation, with the help of which the process of developing technological processes for the production of footwear is described.

IDEF3 is a method that allows a technologist to describe a situation when processes are executed in a certain sequence, as well as to describe objects that participate together in one process. The IDEF3 dataset description technique is part of structural analysis. IDEF3 complements IDEF0 and contains all the necessary data for building models, which are further used for simulation analysis.

IDEF3 diagrams, which are then exported to simulation models for their subsequent "playback" and optimization, are shown in Figures 1-5. All diagram objects contain additional descriptions (equipment, auxiliary materials, performance standards), which can be automatically generated into a report, in essence, which is a flow chart of the operation. An example of a chart report is shown in Table 1.

Replacing a real experiment with simulation modeling allows you to reduce the costs necessary for conducting research. In addition, in some situations, experiments on real systems are often impossible due to the complexity of economic systems. The possibility of integrated use of the model developed in the BPWin CASE system and the corresponding dynamic model in the ARENA simulation system allows for a detailed analysis of the business process and obtain a set of indicators for analyzing its effectiveness. The developed simulation models of business processes for assessing their effectiveness are presented in the next chapter.

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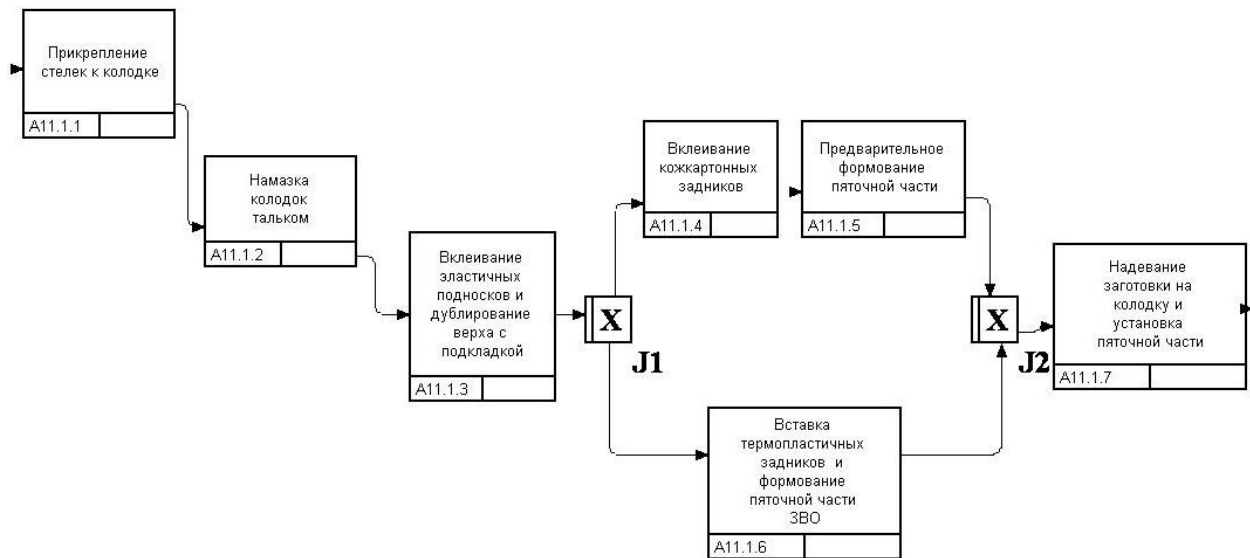


Figure: 1 - IDEF3 diagram of the block "Preparatory operations prior to forming"

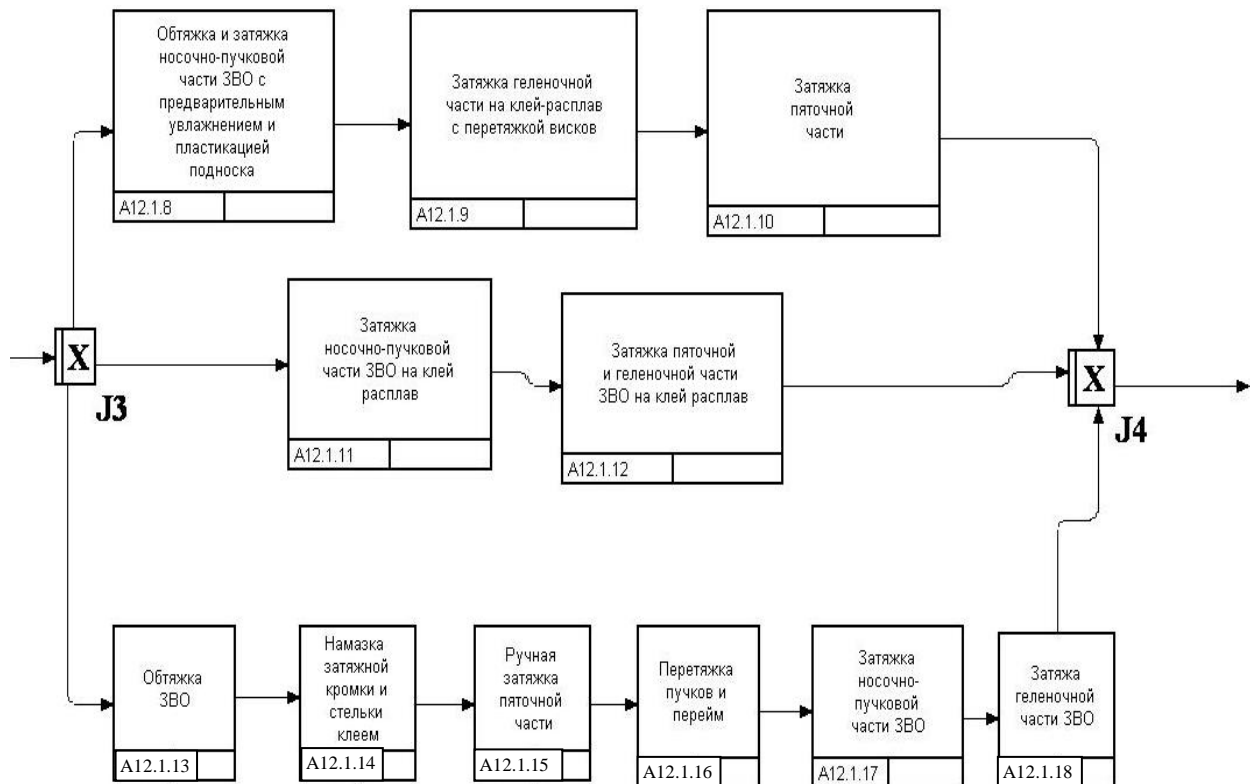


Figure: 2 - IDEF3-diagram of the block "Forming the shoe upper on the last"

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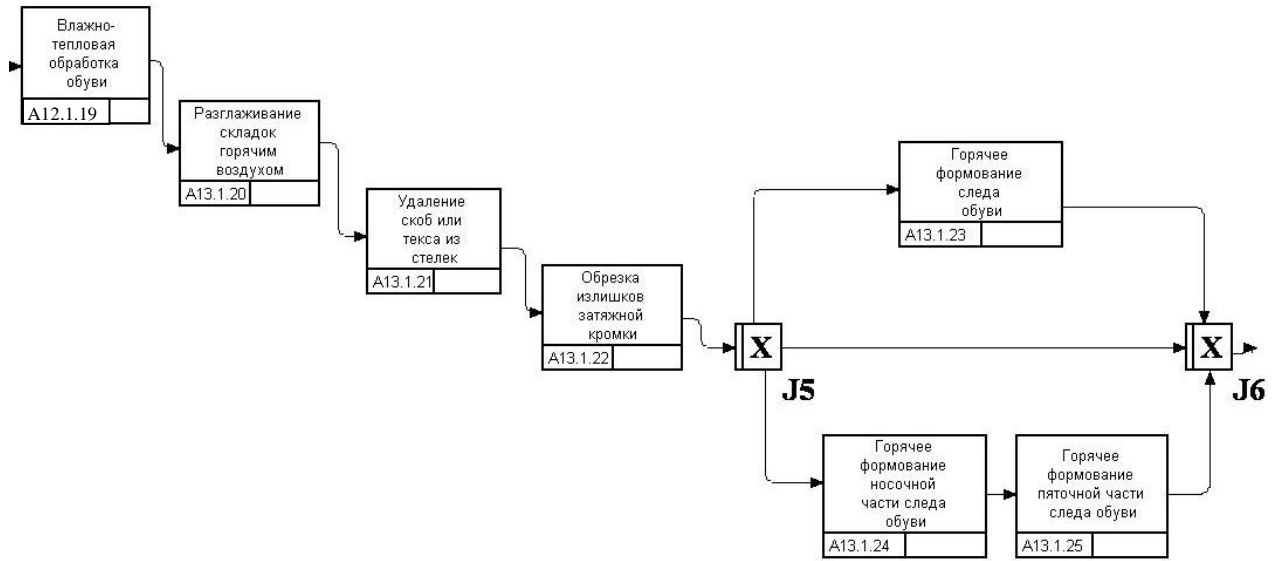


Figure: 3 - IDEF3 diagram of the block "Processing of a tightened shoe upper blank"

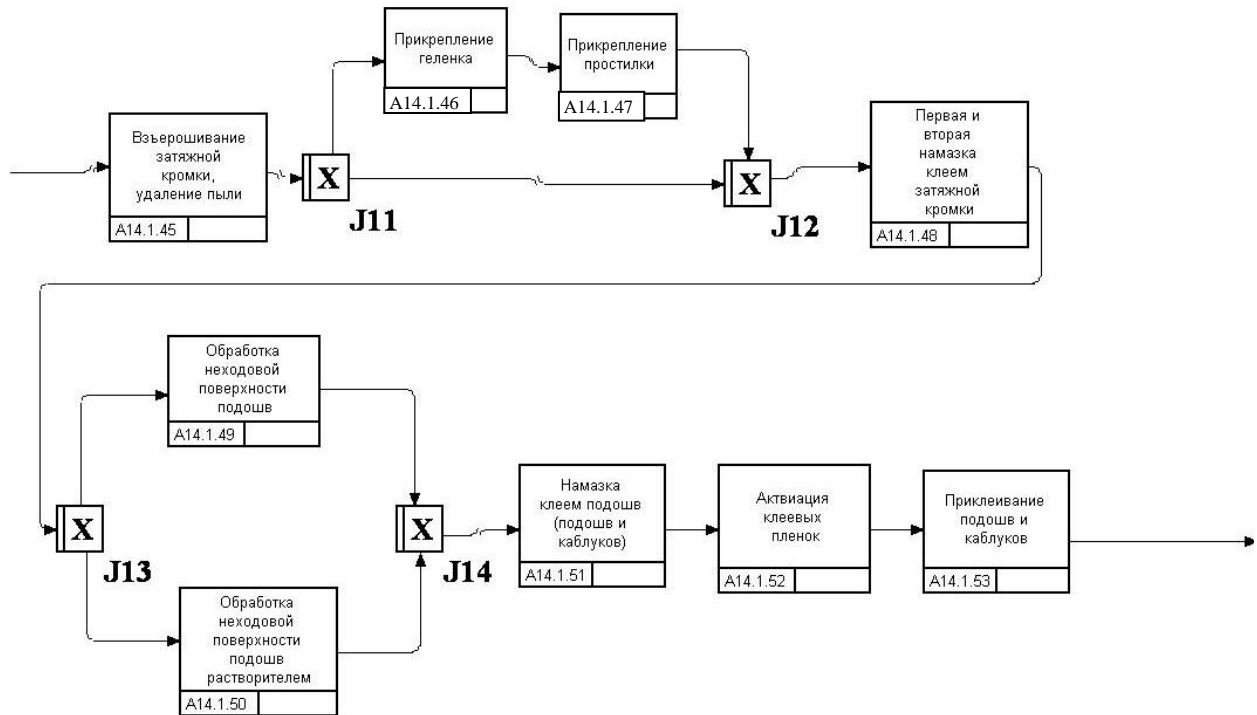


Figure: 4- IDEF3-diagram of the block "Preparing the track and attaching the details of the bottom of the shoe"

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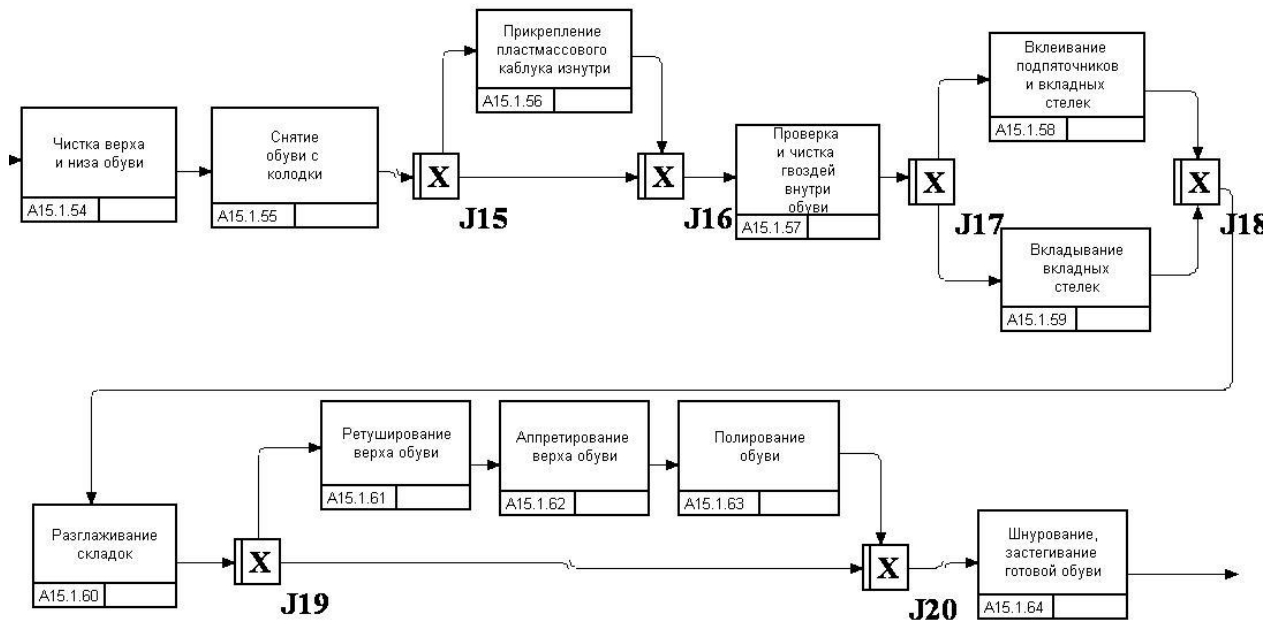


Figure: 5- IDEF3 diagram of the "Shoe finishing" block

Table 1 - Report on the IDEF3 diagram of the "Preparatory operations preceding molding "

ActivityName:	Preparatory operations prior to forming
ActivityName:	Attaching the insoles to the last
Facts:	The operation is performed with three to five brackets or nails at the locations of the plugs. In open shoes, the insoles are pre-fitted
Objects:	Insole, block, staple wire 1.07□0.63 mm or machine tightening nail No. 12-15
Description:	Equipment: PPS-S, PDN-1-O, 04054 / R1
ActivityName:	Spreading talcum powder
Facts:	Pads are coated with talcum powder in the toe and heel
Objects:	Block, brush or sponge, grease, paraffin, talc
Description:	It is allowed to dust the pads with talcum immediately before covering the top blanks
ActivityName:	Bonding elastic toecaps and overlapping top with lining
Facts:	Elastic toe caps are coated with glue on both sides, and for unlined shoes - on the side of the mastic application. The sock is inserted between the top and the lining at a distance of 3-4 mm from the edge of the tightening edge
Objects:	ZVO, elastic toe cap
Description:	equipment: A2000, S1100V
ActivityName:	Bonding leather-cardboard backs
Facts:	Gluing of leather and molded leather-cardboard backdrops is done with latex, casein, dextrin, CMC and PVA adhesives
Objects:	Leather-cardboard back, ZVO
Description:	table ST-VZ
ActivityName:	Inserting thermoplastic heels and molding the heel of the ZVO
Facts:	Thermoplastic backdrops are heated immediately before gluing and molding the heel of the ZVO. Forming of the heel part with inserted thermoplastic backing is carried out at a punch temperature of 100-120 degrees, forming plates of 80 degrees, a punch pressure of 300-400 kPa for 15-30 s
Objects:	Thermoplastic backing, ZVO, punch
Description:	Equipment: G504 CF, G30 / 4G
ActivityName:	Pre-molding of the heel
Facts:	Punch temperature no more than 80-90 degrees
Objects:	ZVO with inserted leather-cardboard back, punch
Description:	Equipment: ZFP-1-O, 02231 / R12, 02201 / P2

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ActivityName:	Putting the workpiece on the last and installing the heel
Facts:	For centering the workpiece on the last
Objects:	ZVO, last with attached insole
Description:	Equipment: PDN-1-0; 02015 / P5 or manually on a support stand using tightening pliers and a hammer

The choice of shoe manufacturing technologies according to the criterion of the greatest efficiency.

The development of the best option for the technological process involves the solution of technical, economic and organizational problems in specific production conditions. At the same time, the selected technological process must ensure that all requirements for the quality of the product are met, its manufacture in the specified quantity and within the specified time frame. The development of such a technological process is a complex task and requires a systematic approach. The solutions to the problems of optimization of complex technological and technical systems are characterized by significant specificity due to the applied orientation of the solutions obtained; lack of information about the mechanisms occurring in the system of phenomena or processes; a significant number of optimality criteria and factors that are involved in optimization and modeling.

The procedure for choosing the best technology is a multicriteria problem, the solution of which is based on the desire as the best to choose the admissible vector, which is located closest to all other admissible vectors to some "ideal" (not admissible) vector or a set of "ideal" vectors.

An important step in solving this problem is the choice of such a technological process, the implementation of which, at given prices for the range of shoes and production volumes, will allow the company to get the maximum profit.

The existing choice of a technological process is carried out by an expert according to several, from his point of view, main parameters, for example, labor intensity, productivity, reduced costs, the level of individual production costs, equipment cost, etc. However, the existing list of indicators includes both quantitative and qualitative indicators. The efficiency of the selected variant of the technological process should be assessed not by one, but by several criteria. The transition to the mathematical formulation of the problem of choosing the best option and, therefore, to

the only optimality criterion is performed using the target programming method.

In general, any technology has different characteristics. Let there be a set of criteria f_1, f_2, \dots, f_m , each of which is desirable to maximize on the set of possible solutions X . In accordance with the target programming methodology, we assume that a non-empty set U is given in the criterion space R_m , which is called the set of ideal vectors. Moreover, it is considered that this set is unattainable, i.e. the equality $U \cap Y = \emptyset$, where Y means the set of possible vectors, i.e. $Y = f(X)$.

In addition, a metric is specified on the criterion space R_m , i.e. such a numeric function $\rho = \rho(y, z)$, which assigns to each pair of vectors y and z of the criterion space a certain non-negative number, called the distance between the vectors y and z .

In accordance with the target programming method, the chosen (best, optimal or most satisfactory) solution is declared $x^* \in X$ for which the equality holds:

$$\inf_{y \in U} \rho(f(x^*), y) = \min_{x \in X} \inf_{y \in U} \rho(f(x), y) \quad (1)$$

meaning that the vector $f(x^*)$ corresponding to the best solution x^* should be located from the set of ideal vectors at the minimum possible distance.

In this case, the choice of the metric is carried out from the parametric family:

$$\rho_a^{(s)}(y, z) = \left(\sum_{i=1}^m a_i |y_i - z_i|^s \right)^{\frac{1}{s}} \quad (2)$$

where $s \geq 1$ and $a = (a_1, \dots, a_m)$; $a_i > 0$ for all $i = 1, 2, \dots, m$.

By varying the vector of parameters a , the "unequal value" of the criteria is taken into account, giving greater importance to the component of the vector of parameters that meets the criterion of greater "value".

When comparing technologies according to three unequal criteria, the metric takes the form:

$$\rho^{(3)}(y, z) = \left(a_1 \cdot |y_1 - z_1|^3 + a_2 \cdot |y_2 - z_2|^3 + a_3 \cdot |y_3 - z_3|^3 \right)^{\frac{1}{3}} \dots \quad (3)$$

For four criteria:

$$\rho^{(4)}(y, z) = \left(a_1 \cdot |y_1 - z_1|^4 + a_2 \cdot |y_2 - z_2|^4 + a_3 \cdot |y_3 - z_3|^4 + a_4 \cdot |y_4 - z_4|^4 \right)^{\frac{1}{4}} \dots \quad (4)$$

In a particular case, when technologies are compared by two parameters $s = 2$ and $a_i = 1$, $i = 1, 2, \dots, m$, i.e. the criteria are equivalent, the Euclidean metric is obtained:

$$\rho^{(2)}(y, z) = \sqrt{(y_1 - z_1)^2 + (y_2 - z_2)^2} \dots \quad (5)$$

Information about the relative importance of the criteria is appropriate θ_{ij} identify at the beginning and

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compare the technologies taking into account the importance factors of the criteria. The theory of the relative importance of criteria is based on the following definition, which implements the idea of compensation, in which low indicators according to one criterion (or according to several criteria at once) are compensated by a high indicator according to another criterion (or simultaneously according to some other criteria). Let i and j be two different criterion numbers. The i -th criterion f_i is more important than the j -th criterion with given positive parameters w_i and w_j , if for any vector $y = (y_1, y_2, \dots, y_n) \in R_m$ the relation holds $y' \succ y$ where $y' = (y_1, y_2, \dots, y_n)$, and:

$y'_i = y_i + w_i$; $y'_j = y_j + w_j$; $y'_s = y_s$, for all $s = 1, 2, \dots, m, s \neq i, s \neq j$.

The numbers w_i and w_j are used to quantify the degree of relative importance; for these purposes, the ratio $\frac{w_i}{w_j}$, which varies from zero to infinity.

Let the i -th criterion be more important than the j -th criterion with positive parameters w_i and w_j . Positive number $\theta_{ij} = \frac{w_j}{w_i + w_j}$ is called the coefficient of relative importance for the specified pair of criteria.

As $\theta_{ij} = \frac{1}{\frac{w_i}{w_j} + 1}$ and attitude $\frac{w_i}{w_j}$ is in the range

from zero to infinity, then the coefficient of relative importance always satisfies the inequality (normalization condition): $0 < \theta_{ij} < 1$. It shows the share of the loss by the least important criterion in comparison with the sum of the indicated loss and the increase by the more important criterion. If the coefficient θ_{ij} is close to unity, this means that with a relatively small increase according to the more important i -th criterion, large losses appear according to the less important j -th criterion.

When $\theta_{ij} \rightarrow 0$ losses according to a less important criterion are insignificant, their appearance is due to the receipt of a significant increase according to a more important criterion, i.e. the degree of importance of the i -th criterion is relatively low. This position is reflected in the low value of the coefficient of relative importance. If $\theta_{ij} = 0.5$, then the value of the loss according to the less important criterion is equal to the value of the increase according to the more important criterion. This technique greatly simplifies the procedure for finding the best solution.

Distance is taken as a metric $\rho_a^{(s)}(y, z)$, $s \geq 1$, with a vector $a = (1, 1, \dots, 1)$ having the same components, since the relative importance of the criteria θ_{ij} taken into account earlier at the stage of using information about the importance of the criteria, and the origin of coordinates $0 = (0, 0)$ is taken as the ideal vector.

As a result, formula (2) will take the form:

- for two criteria:

$$\rho^{(2)}(y^{(i)}, 0) = \sqrt{\bar{y}_1^2 + \bar{y}_2^2}; \quad (6)$$

- for three criteria:

$$\rho^{(3)}(y^{(i)}, 0) = \sqrt[3]{\bar{y}_1^3 + \bar{y}_2^3 + \bar{y}_3^3}; \quad (7)$$

- for four criteria:

$$\rho^{(4)}(y^{(i)}, 0) = \sqrt[4]{\bar{y}_1^4 + \bar{y}_2^4 + \bar{y}_3^4 + \bar{y}_4^4}, \quad (8)$$

Where \bar{y}_i - modified values of criteria.

However, it should be pointed out that the information situation that arises when solving the problem of choosing the best option for a technological process differs from the information situation that takes place in mathematical statistics in the variety and form of assigning the initial information. In this situation, it is necessary to take into account the multidimensionality of the space of indicators of the processes under study with objectively existing uncertainty in assessing the impact of each specific indicator on the efficiency of the process as a whole.

Thus, the considered approach allows, taking into account the production program, to compare the promising options for combining technologies and equipment, to choose the most effective one and, on this basis, to form a flexible technological process to ensure the operation of multi-assortment flows.

For the implementation of the task, software has been developed, with the help of which the effectiveness of the technological process is assessed, thereby making it possible to improve the quality of organizational and technological solutions and stabilize the level of competitiveness of the footwear produced.

Simulation modeling and parameter calculation technological processes

The functional modeling method allows you to examine existing business processes, identify their shortcomings and build an ideal model for the enterprise. However, the problem often arises of optimizing specific technological processes, studying the influence of various parameters on a particular technological process. In this case, the functional model may not be enough. To optimize technological processes, it is advisable to use the method of simulation.

Simulation allows you to build and "play" models. As a result of "playing", you can get statistics of the ongoing processes as it would be in reality. Typically, simulation models are built to find the optimal solution under resource constraints when other mathematical models are too complex.

Tables for calculating and combining the number of workers are used as the initial data for simulating the flow of shoe assembly.

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The Arena simulation model includes the following basic elements: sources and sinks (Create and Dispose), processes (Process) and queues (Queue). Sources are elements from which information or objects enter the model. The rate at which data or objects arrive from a source is usually given by a statistical function. A sink is a device for receiving information or objects. The concept of a queue is close to that of a data warehouse - it is a place where objects await processing. The processing time of objects (performance) in different processes can be different. As a result, some processes can accumulate objects waiting for their turn. The type of queue in the simulation model can be specified. A queue can be similar to a stack - the objects that came last in the queue are the first to be sent for further processing (LIFO: last-in-first-out). An alternative to the stack can be sequential processing, when the first objects that come first are sent for further processing (FIFO: first-in-first-out). Processes are analogous to work in a functional model. In the simulation model, the performance of the processes can be specified.

Arena has a set of tools for building models, which include a tool palette, a set of guides, etc. The Arena tool palette appears (Fig. 4.62), which contains two types of Flowchart and Data modules.

Modules of the Flowchart type (including Create, Dispose and Process) are used to display flows of

objects and can be transferred to the workspace of the drag & drop model. Modules of type Data (for example, Queue) cannot be placed in the workspace of the model and are used to set the parameters of the model. The parameter editing window appears at the bottom of the model when the focus is on a module of type Data.

To set properties, a module of the Flowchart type must be double-clicked on it and set the parameter values in the dialog that appears. To set the properties of the Resource module (of the Data type), click on it once on the toolbar and enter the parameter values in the lower window. To play the model, go to the Run / Go menu. The simulation models based on the above initial data are shown in Figures 6 - 17.

The presence of an instrumental environment for the simulation of production systems allows organizing an experiment on a model of the projected system with various input parameters, monitoring the process of the system's functioning with the subsequent assessment of the simulation results. Conducting a series of experiments allows you to improve the quality of management decisions and predict their consequences.

Combined use of the BPwin CASE-tool for building a functional model and the Arena simulation system allows you to most effectively optimize the technological processes of manufacturing leather goods.

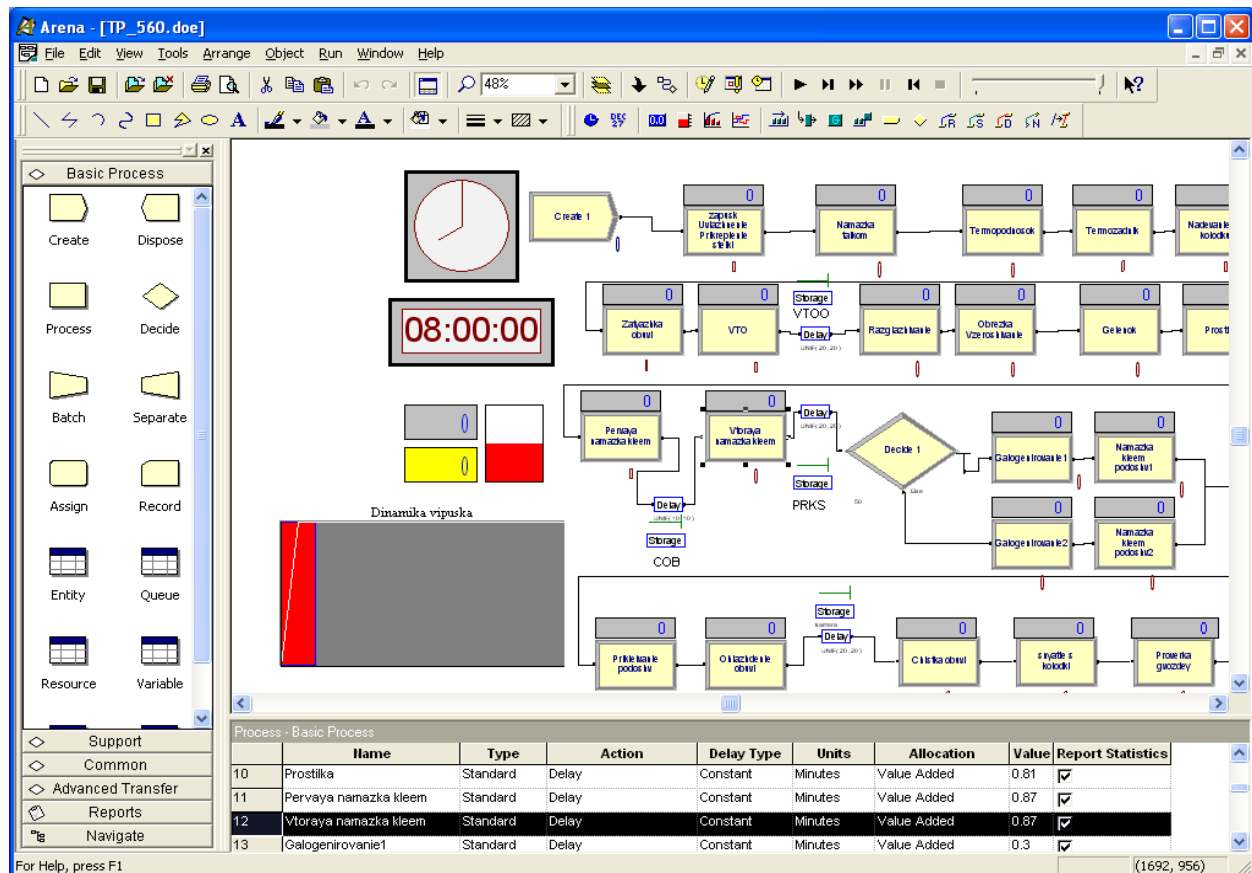
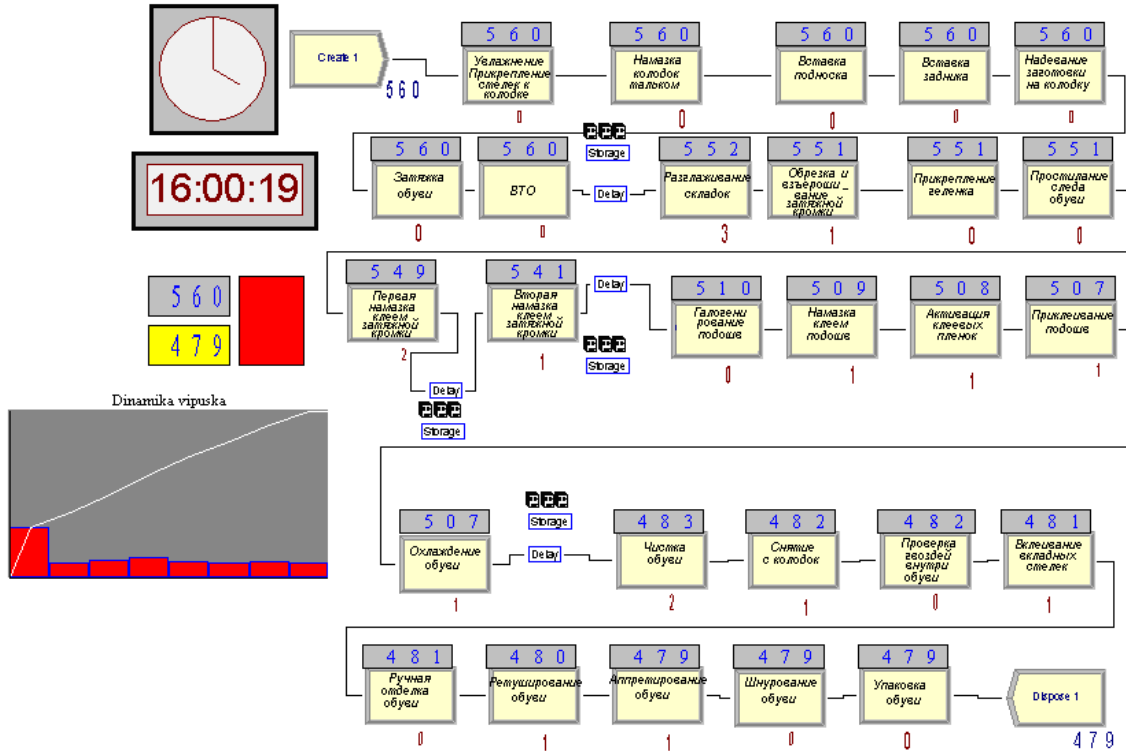


Figure: 6- General view of the program window and tool palette

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Release per shift 560 pair
 Labor intensity 19.4 minutes
 Average time shoes are out of process (WTO, drying of adhesive films, cooling) 70 min
 The maximum number of shoes at the same time under processing 125 pair
 Unfinished production 81 pair
 Shift duration 480 minutes



**Figure 7. -Simulation model of the shoe assembly technological process (option No. 1).
 Release 560 pairs / shift**

Release per shift 560 pair
 Labor intensity 19.4 minutes
 Average time shoes are out of process (WTO, drying of adhesive films, cooling) 70 min
 The maximum number of shoes at the same time under processing 131 pairs
 Work in progress 70 pairs
 Shift duration 480 mi

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JIF = 1.500	SJIF (Morocco) = 5.667	OAJI (USA) = 0.350

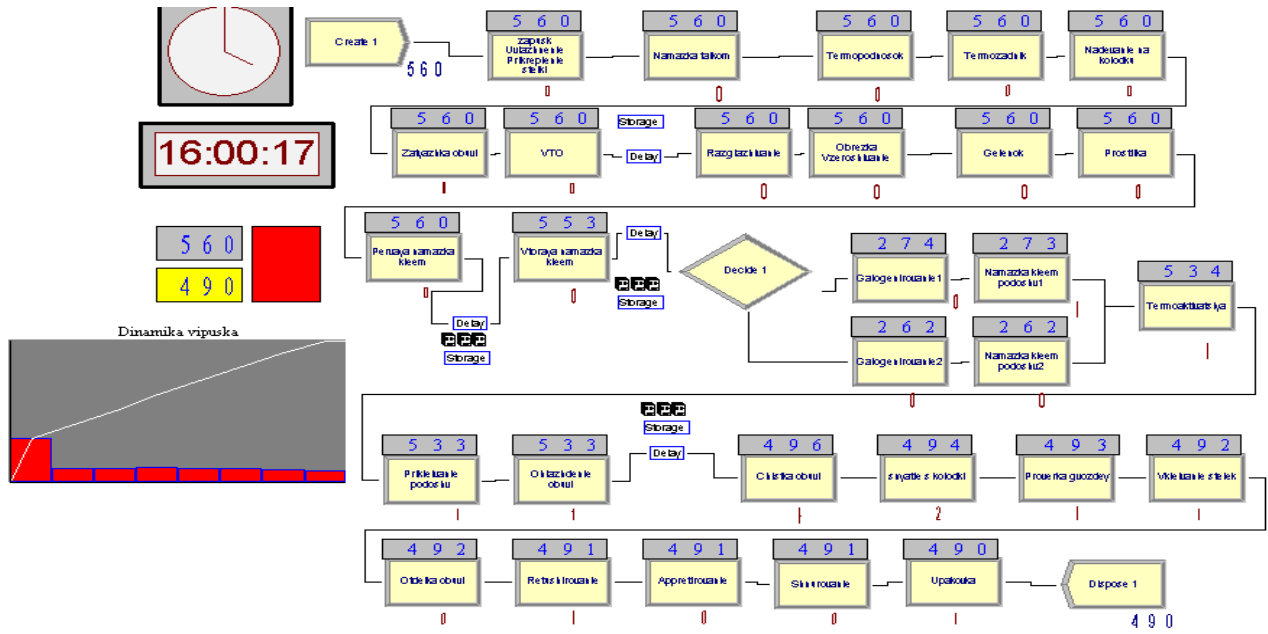
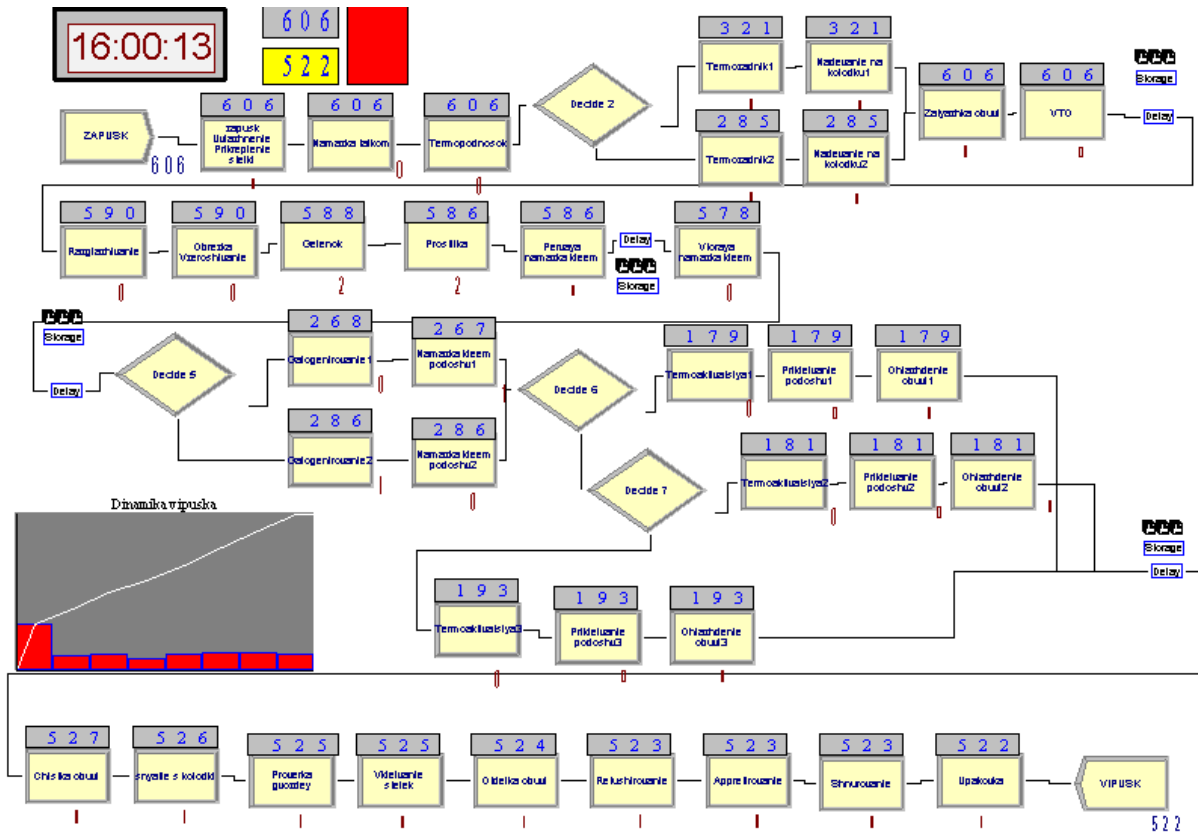


Figure: 8 - Simulation model of the technological process of shoe assembly (option No. 1) with additional equipment. Release 560 pairs / shift

- Release per shift 606 pair
- Labor intensity 19.4 minutes
- Average time spent on shoes outside the process (WTO, drying of adhesive films, cooling) 70 minutes
- The maximum number of shoes at the same time under processing 137 pair
- Work in progress 84 pairs
- Shift duration 480 min

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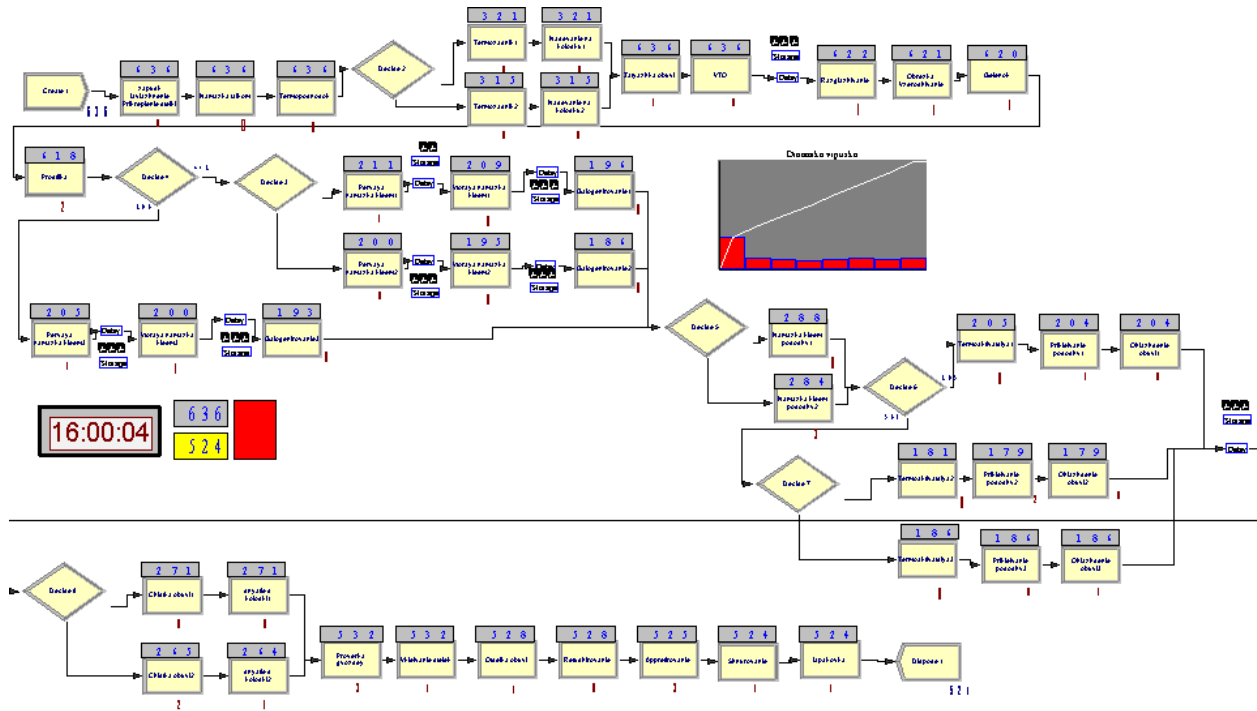


**Figure: 9 - Simulation model of the technological process of shoe assembly (option No. 1).
Release 606 pairs / shift**

- Release per shift 636 pair
- Labor intensity 19.4 minutes
- Average time shoes are out of process (WTO, drying of adhesive films, cooling) 70 min
- The maximum number of shoes at the same time under processing 143 pairs
- Unfinished production 112 pair
- Shift duration 480 minutes

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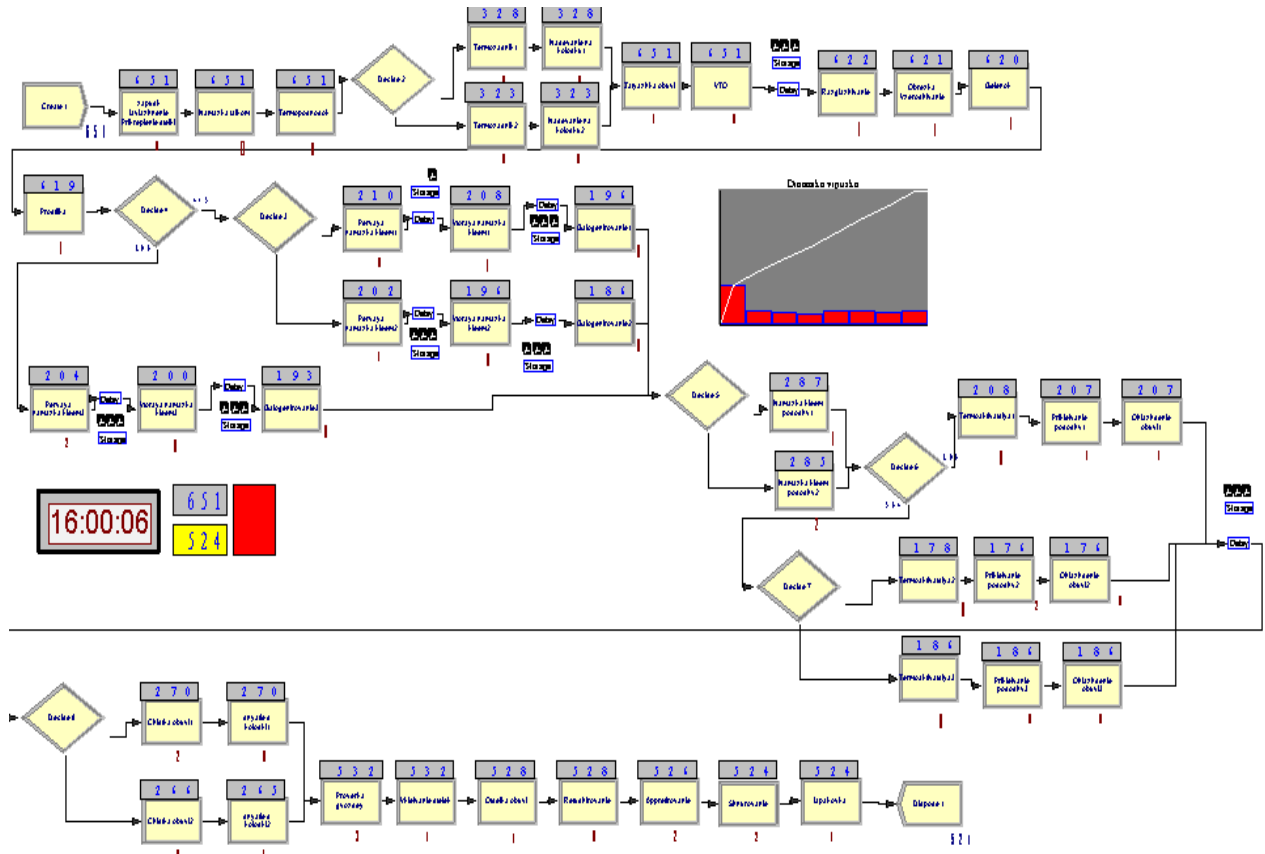


**Figure: 10 - Simulation model of the technological process of shoe assembly (option No. 1).
Release 636 pairs / shift**

Release per shift 651 pair
 Labor intensity 19.4 minutes
 Average time spent on shoes outside the process (WTO,
 drying of adhesive films, cooling) 70 min
 The maximum number of shoes
 simultaneously being processed 143 pairs
 Unfinished production 127 pair
 Shift duration 480 minutes

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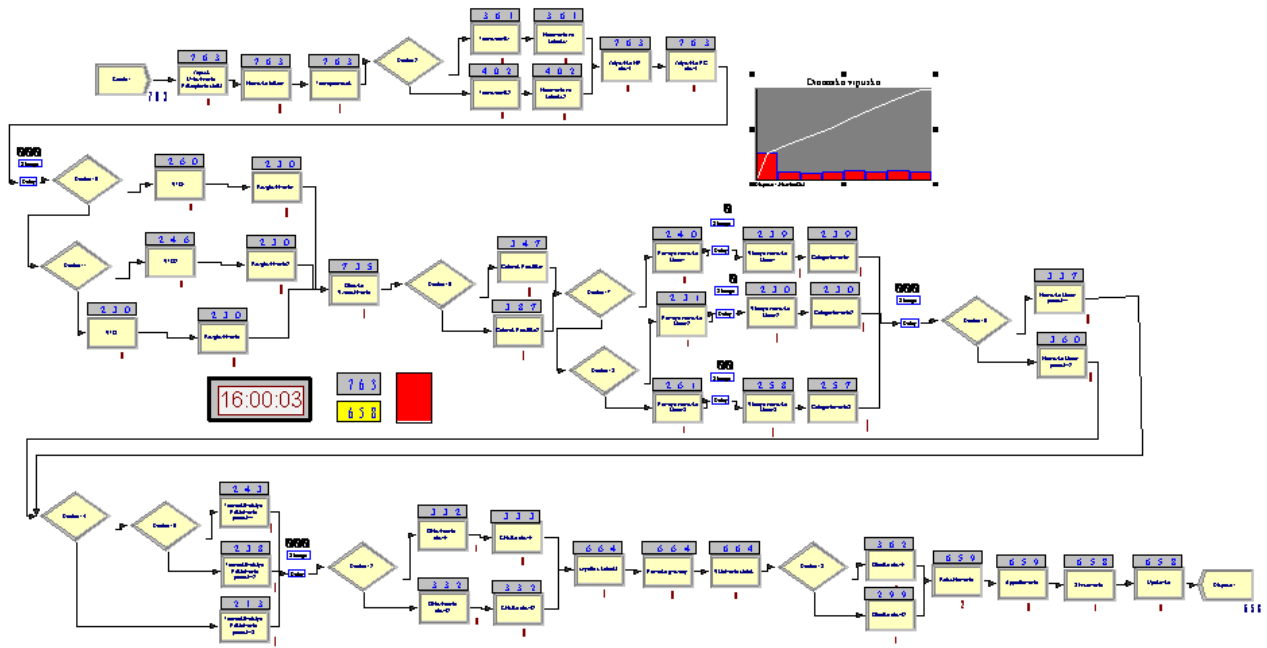


**Figure: 11 - Simulation model of the shoe assembly technological process (option No. 1).
Issue 651 pairs / shift**

Release in shift 763 pairs
 Labor intensity 19.4 minutes
 Average time shoes are out of process
 (WTO, drying of adhesive films, cooling) 55 minutes
 The maximum number of shoes at the same time
 processed 146 pairs
 Unfinished production 105 pair
 Shift duration 480 minutes

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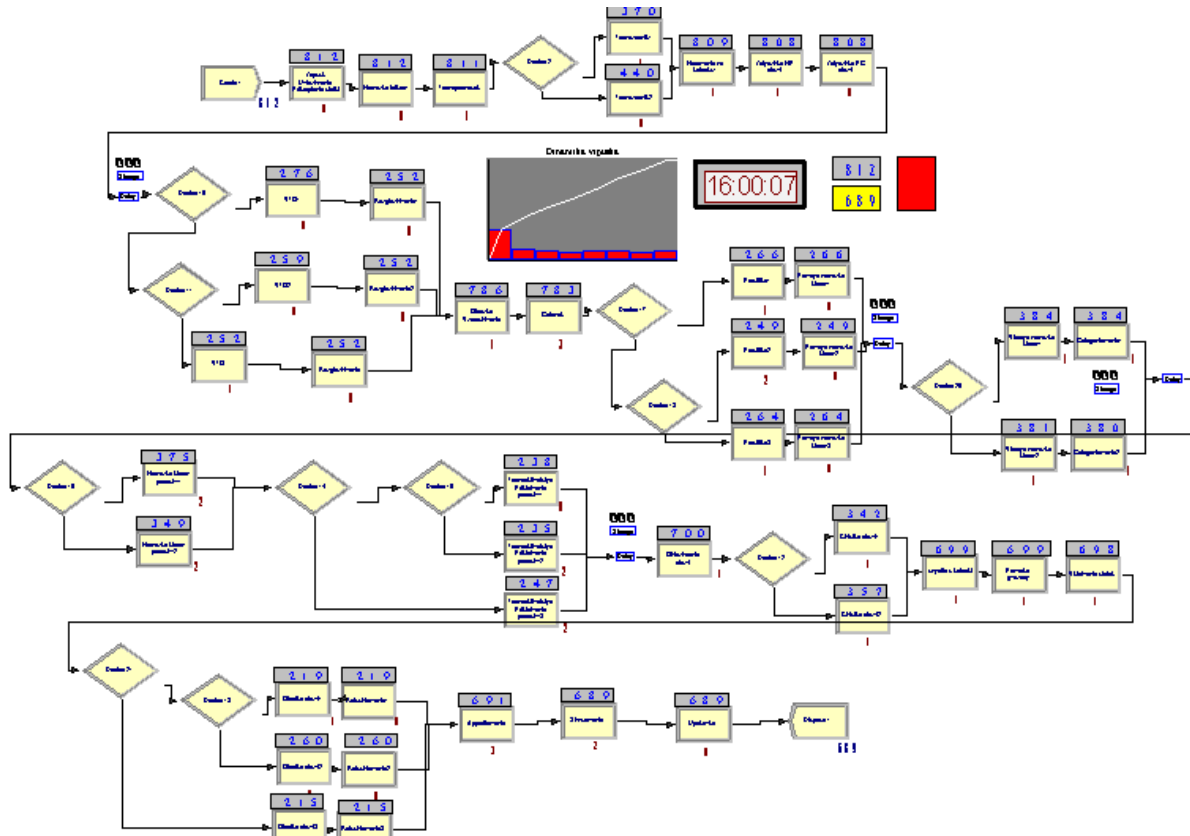


**Figure 12 Simulation model of the shoe assembly technological process (option No. 1).
Release of 763 pairs / shift**

- Release per shift 812 pair
- Labor intensity 19.4 minutes
- The average time spent on shoes outside the process (WTO, drying of adhesive films, cooling) .
- The maximum number of shoes at the same time
under processing 146 pairs
- Unfinished production 123 pairs
- Shift duration 480 minutes

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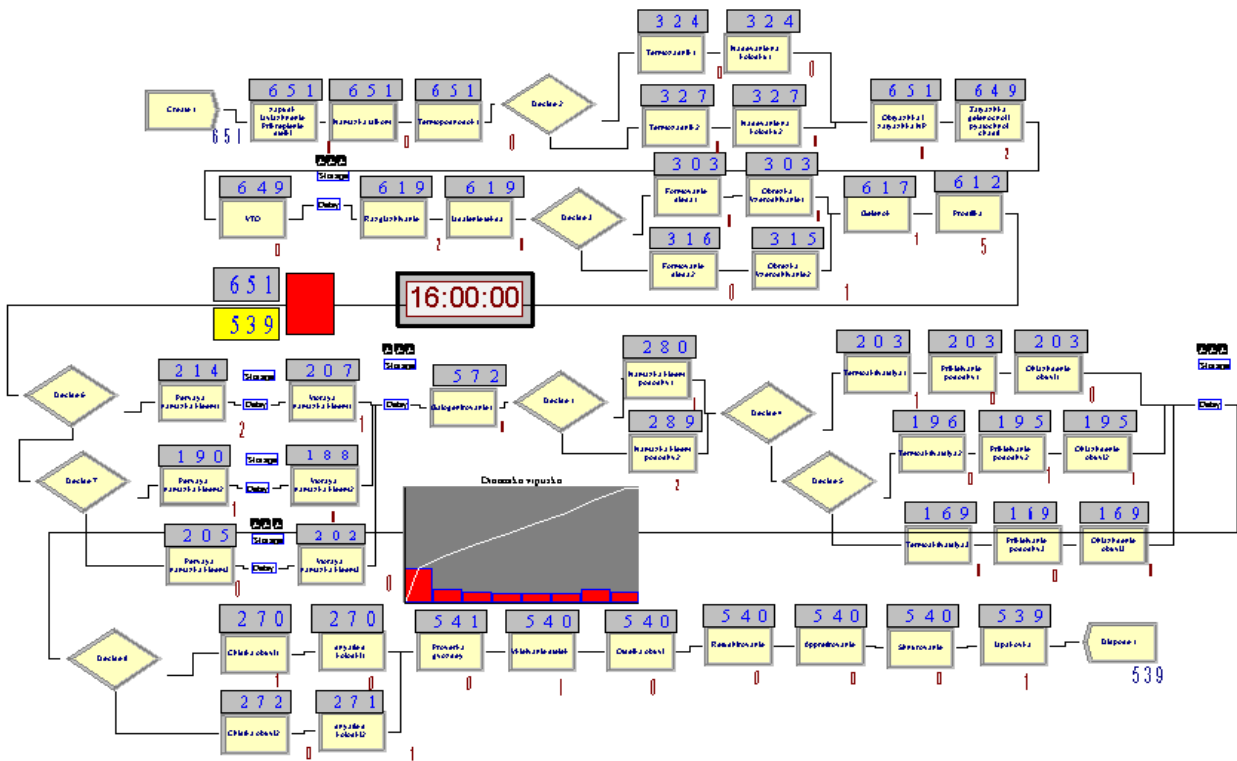


**Figure: 13- Simulation model of the technological process of shoe assembly (option No. 1).
Release 812 pairs / shift**

Release per shift 560 pair
 Labor intensity 20.51 minutes
 Average time shoes are out of process
 (WTO, drying of adhesive films, cooling) 70 min
 The maximum number of shoes at the same time
 under processing 120 pairs
 Work in progress 89 pairs
 Shift duration 480 min

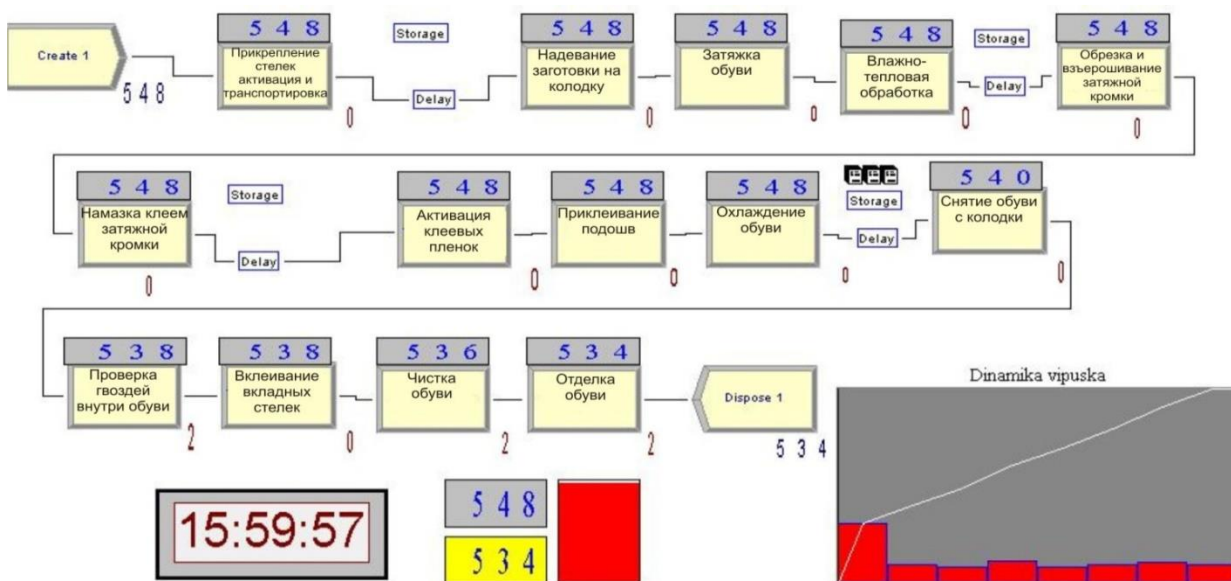
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**Figure: 16 - Simulation model of the shoe assembly technological process (option No. 2).
Issue 651 pairs / shift**

Release per shift 548 pair
 Labor intensity 13.9 minutes
 Average time the shoes are outside the process (WTO, drying of adhesive films, cooling) 85 min
 The maximum number of shoes being processed at the same time 135 pair
 Work in progress 14 pairs
 production of 14 pairs The duration of the shift is 480 minutes.



**Figure: 17 - Simulation model of the shoe assembly technological process (RINK-system).
Release 548 pairs / shift**

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	GIF (Australia) = 0.564	ESJI (KZ) = 8.997	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 5.667	OAJI (USA) = 0.350

Release per shift 657 pair
 Labor intensity 13.9 minutes
 Average time the shoes are outside the process (WTO, drying of adhesive films, cooling) 72 min
 The maximum number of shoes being processed at the same time 121 pair
 Work in progress 60 pairs Shift duration 480 min

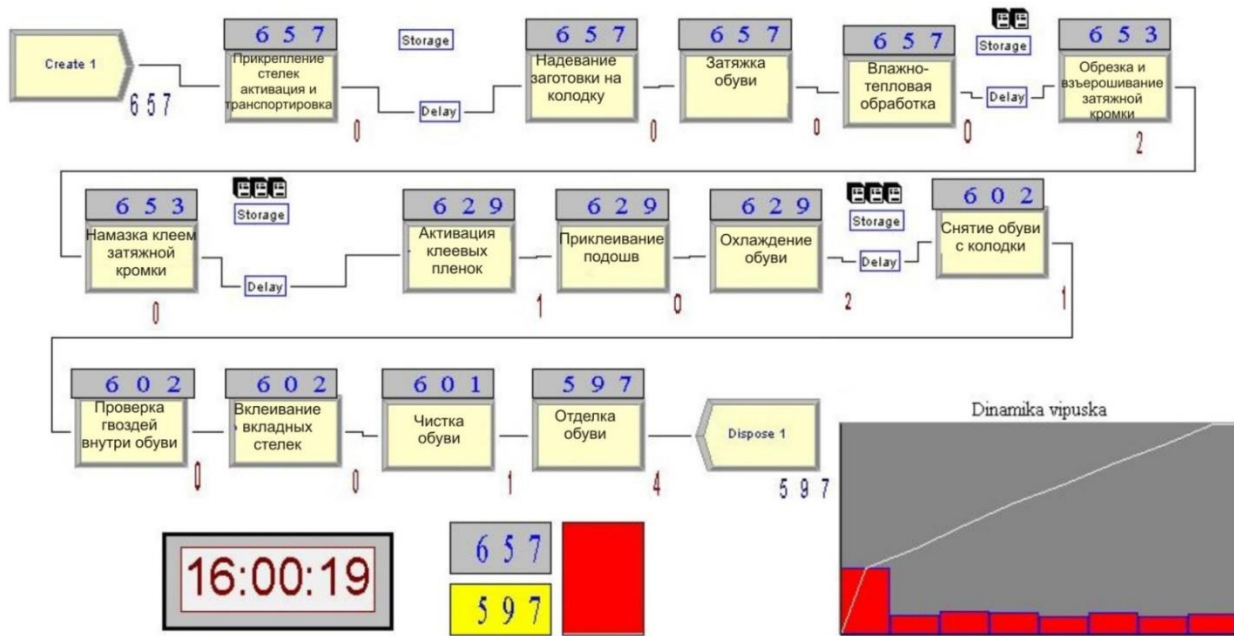


Figure: 18 - Simulation model of the shoe assembly technological process (RINK-system). Issue 657 pairs / shift

In the process of manufacturing leather goods, in relation to the objects of labor, certain chains of operations are performed for which the normative characteristics are known. In this case, the operation can be considered as a segment of the technological route, measured in units of standard labor intensity. Several operations can be combined into a generalized operation, which is presented as a single operation during management. Like an operation, a technological route has a beginning and an end. The time taken by the objects of labor from the beginning of the technological route to the end is called the technological cycle. The planned location of objects of labor on the technological route, being in the process of processing at some operation, can be

determined by the amount of labor costs calculated from the beginning or from the end of the technological route. Let's designate the technological cycle time $TЦ$,

We will put the X-axis in correspondence with the technological route of manufacturing the product, along which we will postpone the conditionally spatial coordinate of finding the objects of labor as the value of "accumulated labor intensity" (Fig. 19). A generalized operation corresponds to a certain interval of the X axis, for example, the j-th generalized operation corresponds to an interval $[x_j^H; x_j^K]$.

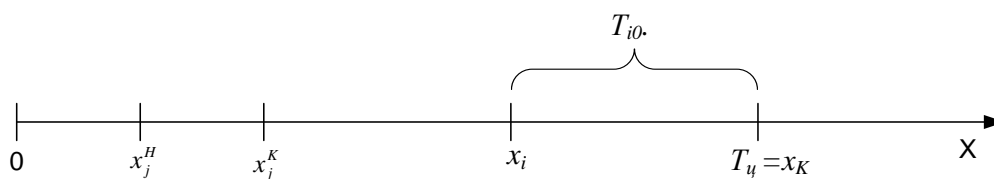


Figure: 19- X-axis showing the route of the product

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JIF = 1.500

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SJIF (Morocco) = 5.667

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Let some object of labor "move" along the technological route. The law of its motion is described by the equation $x = x(t)$. This law fully characterizes the process of processing objects of labor on the technological route.

The purpose of simulation modeling of production flows is to identify bottlenecks, ensure the fulfillment of production targets at the best technical and economic indicators, which is possible with a rhythmic and reliable production of products to meet demand.

The developed simulation models allow carrying out experiments for the designed technological process. During the modeling process, some parts are queued, since the processing time for different technological operations differs. At any time, you can stop the process and look at the places where the specified equipment cannot cope and the queue is significant, therefore, it is necessary to reorganize the process by increasing the amount of equipment or changing the number of workers. With the help of simulation, it is possible to determine the amount of work in progress, determine the maximum number of products simultaneously in processing, and determine the time that shoes are out of the process.

In the simulation models presented in Figures 4.62 and 4.63, an example of a technological process for assembling shoes with the release of 560 pairs per shift is considered. After the launch of the model, it turned out that in the operations "Treating the soles with a solvent" and "Spreading the soles with glue" there is a delay in parts, leading to an increase in work-in-progress and the appearance of additional costs for the production of this model. After the introduction of an additional piece of equipment, work in progress decreased by 11 pairs, and the number of shoes in processing increased at the same time.

Based on the simulation results, it was revealed that a significant delay in the technological process occurs in walk-through machines at the operations of wet-heat treatment, drying of adhesive film and cooling of shoes. With the conveyor organization of production, queues are formed mainly in the operations "Inserting a backdrop and pre-molding of the heel part", "First and second spreading with glue of the lingering edge", "Sawing shoe tracks", "Attaching a shank", "Treatment of soles with a solvent", "Spreading of soles with glue", "Activation and gluing of soles", "Shoe shine". To increase the rhythm of the technological process, to eliminate queues at these operations, additional units of equipment were introduced into the technological chain, indicated on the simulation models by the "Decide" blocks. [20]

In the technological process of assembling footwear when using the RINK-system of production organization, where most of the preparatory operations are performed outside the work-in-process flow and the time spent on processing the footwear is reduced, which makes it possible to reduce the cost of all types of energy used in the production process, reduce labor intensity and thereby contribute to the receipt of additional profits by saving resources.

A brief description of the model and features of its manufacture (fig. 20)

Option 1: men's closed shoes made of smooth chrome-tanned leather, heel and toecap - thermoplastic, two-process tightening, molded thermoplastic elastomer sole (organization of production using a conveyor).

Option 2: men's closed shoes made of smooth chrome-tanned leather, back and toecap - thermoplastic, three-process tightening, molded thermoplastic elastomer sole (organization of production using a conveyor).

Option 3: men's closed shoes made of smooth chrome-tanned leather, back and toecap - thermoplastic, two-process tightening, molded TPE sole (production organization without a conveyor).

Calculation of a comprehensive performance indicator shoe assembly technological process.

Consider the multi-criteria problem of choosing the best technological process. The first group of criteria to be minimized includes: "labor intensity", "wage losses per unit of capacity, rubles", "specific reduced costs per unit of capacity, rubles", "work in progress", "technological cost". The second group of criteria to be maximized includes: "labor productivity of 1 worker, pairs / shift", "workload factor of workers, %", "release per shift, pairs" (Tables 2 - 4).

In the conditions of a real shoe enterprise, the criteria for the importance of technological process indicators can take different values. In each specific case, their value is determined by expert methods.

The choice of the best technological process is carried out under the condition of the same significance of the criteria given in Tables 5 - 9, and provided that one set of criteria is more important than the other, for example: the criterion "technological cost" is more important than the criterion "labor intensity" with a coefficient of 0.5 ($\theta_{51} = 0.5$) and the criterion "work in progress" is more important than the criterion "unit reduced costs" with a coefficient of 0.3 ($\theta_{43} = 0.3$).

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a)



b)



c)

**Figure: 20 - Model sketches:
a) option 1; b) option 2; c) option 3**

Table 2 - Summary table of technical and economic indicators of options for technological processes of shoe assembly

Options technological process	Release per shift, steam	Labor intensity, min	Estimated amount workers, people	Labor productivity 1 worker, couples / shift	Load factor workers, %	Loss of wages per unit of power, rub.	Specific reduced costs per 100 pairs, rub.	Unfinished production, steam	Technological cost price for a pair of shoes, rub.	Number of operations in the technological process

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Option 1 (using conveyor)	560	19.35	22.58	25.28	71.47	5.74	4610.96	70	28.18	31
Option 2 (using conveyor)	560	20.95	24.44	22.91	71.89	6.21	5037.50	89	30.97	33
Option 1 (Rink system)	548	13.9	15.84	37.59	76.73	2.93	3531.46	fourteen	21.49	nineteen

Table 3 - Summary table of technical and economic indicators of the shoe assembly technological process (option 1) taking into account the production program

Short description model and features its manufacture	Release per shift, steam	Labor intensity, min.	Estimated amount workers, people	Labor productivity 1 worker, couples / shift	Load factor workers, %	Loss of wages per unit of power, rub.	Specific reduced costs per 100 pairs, rub.	Unfinished production, steam	Technological cost price for a pair of shoes, rub.	Number of operations in the technological process
Closed-toe shoes for men made of smooth chrome-tanned leather, thermoplastic heel and toecap, two-process tightening, molded thermoplastic elastomer sole (organization of production using a conveyor)	560	19.35	22.58	25.28	71.47	5.74	4610.96	70	28.18	31
	606		24.43		70.51	6.02	4835.99	84		
	636		25.64		68	6.77	4911.94	112		
	651		26.23		66.04	7.4	4974.93	127		
	763		30.76		73.62	5.15	4411.85	105		
	812		32.73		74.71	4.87	4290.87	123		

Table 4- Summary table of technical and economic indicators of the shoe assembly technological process (option 2) taking into account the production program

Brief model description and features its manufacture	Release per shift, steam	Labor intensity, min	Estimated number of workers, people	Labor productivity 1 worker, couples / shift	Worker load factor, %	Loss of wages per unit of power, rub.	Specific reduced costs per 100 pairs, rubles	Work in progress, steam	Technological cost per pair of shoes, rub.	Number of operations in the technological process

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Men's closed shoes made of smooth chrome-tanned leather, thermoplastic heel and toe, three-process tightening, molded thermoplastic elastomer sole (organization of production using a conveyor)	560	20.95	24.44	22.91	71.89	6.21	5037.5	89	30.97	33
	606		26.45		69.6	6.93	5339.14	109		
	651		28.41		67.7	7.57	5391.36	112		

The origin of coordinates $0 = (0,0)$ is taken as an ideal vector. Euclidean distance is used as a metric with a vector $a = (1,1)$ having the same components, since the relative importance of the criteria was taken into account earlier.

Thus, according to Table 5, three variants of the technological process with a set of technical and economic indicators (n-dimensional vectors) were obtained, for which an assessment of their effectiveness is required:

- Y1 = (19.35; 5.74; 46.11; 70; 28.18)
- Y2 = (20.95; 6.21; 50.37; 89; 30.97)
- Y3 = (13.9; 2.93; 35.31; 14; 21.49) and
- Y'1 = (25.28; 71.47; 560)
- Y'2 = (22.91; 71.89; 560)
- Y'3 = (37.59; 76.73; 548)

Criteria "labor intensity", "specific reduced costs per unit of power, rubles." are subject to minimization. In accordance with the above conditions, we recalculate the possible vectors. As a result, we get:

Initial values of the criteria for the first group:

1	2	3	4	five
19.35	5.74	46.11	70	28.18
20.95	6.21	50.37	89	30.97
13.9	2.93	35.31	fourteen	21.49

Initial values of the criteria for the second group:

1	2	3
25.28	71.47	560
22.91	71.89	560
37.59	76.73	548

Modified values of the criteria for the first group:

1	2	3	4	five
23,765	5.74	34,833	70	28.18
25.96	6.21	41,811	89	30.97
17,695	2.93	14,793	fourteen	21.49

As a result, we get the following efficiency values:

A) according to the initial criteria		B) according to modified criteria	
P1 =	71.81079	P1 =	70.62705
P2 =	90.10926	P2 =	89.5294
P3 =	36.00756	P3 =	23.75512
P'1 =	44.57601		
P'2 =	44.57613		
P'3 =	44,00828		

from which, according to the method of target programming, it follows that vector No. 3 is the best, i.e. The technological process with the above initial parameters is preferable, although in the first and second cases the output of the process will be the same result.

Technological processes for assembling footwear (option No. 1, No. 2), taking into account the

shift program (Tables 4.9 and 4.10), were evaluated according to the criteria: "estimated number of workers, people", "loss of wages per unit of capacity, rubles", "specific reduced costs per unit of capacity, rubles.", "work in progress, steam", "workload factor of workers,%" ($\theta_{31} = 0.5, \theta_{34} = 0.5$).

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For a process using two-way tightening and similar criteria values:

		1	2	3	4	five
1	560	22.58	5.74	46.11	70	71.47
2	606	24.43	6.02	48.35	84	70.51
3	636	25.64	6.77	49.12	112	68
4	651	26.23	7.4	49.75	127	66.04
five	763	30.76	5.15	44.12	105	73.62
6	812	32.73	4.87	42.91	123	74.71

Modified criteria values:

		1	2	3	4	five
1	560	47.025	5.74	46.11	58,055	71.47
2	606	47.47	6.02	48.35	66,175	70.51
3	636	46.82	6.77	49.12	80.56	68
4	651	46,135	7.4	49.75	88,375	66.04
five	763	52.19	5.15	44.12	74.56	73.62
6	812	53.72	4.87	42.91	82,955	74.71

Based on the results of evaluating the effectiveness, the following complex values were obtained:

A) according to the initial criteria B) by modified criteria

P1 = 82.23031	P1 = 78.40344
P2 = 90.87589	P2 = 81.1405
P3 = 114,142	P3 = 88.26741
P4 = 128,1872	P4 = 93.53851
P5 = 108.6204	P5 = 87,12891
P6 = 125,1194	P6 = 92.7091

from which it follows that the technological process with a shift program of 560 pairs of footwear production will be effective, despite the fact that, according to table 4.9, the single indicators of this

option are "mechanization coefficient", "wage losses" and "Specific reduced costs per 100 pairs, rub." not the most preferred.

For a technological process using a three-way tightening and similar criteria values:

		1	2	3	4	five
1	560	24.44	6.21	50.37	89	71.89
2	606	26.45	6.93	53.39	109	69.6
3	651	28.41	7.57	53.91	112	67.7

Modified criteria values:

		1	2	3	4	five
1	560	48,165	5.74	46.11	69,685	71.47
2	606	48.025	6.02	48.35	81,195	70.51
3	651	48,055	7.4	49.75	82,955	66.04

A) according to the initial criteria B) by modified criteria

P1 = 95.24282	P1 = 83.1536
P2 = 111.7995	P2 = 89.6516
P3 = 114.3124	P3 = 89.50895

The considered approach allows, on the basis of the production program, to form promising options for technology and equipment, to choose the most efficient one and, on this basis, to create technological

systems for this particular multi-assortment flow, to identify opportunities for improving the flow, eliminate bottlenecks, minimize equipment

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downtime, which is one of the conditions designing flexible technological processes.

The reliability of the calculations for assessing the effectiveness of technological processes by methods of target programming for various technological and organizational solutions is confirmed by calculations of indicators of economic efficiency: cost, profit and profitability, etc.

The most generalizing indicator characterizing the use of fixed assets is capital productivity, which is determined by the ratio of the volume of sales to the value of fixed assets.

In connection with the improvement of the technological process and forms of organization of production: the absence of capital costs for some types

of equipment, the conveyor and their reduction for the building, the return on assets increased by 21%.

The reorganization of the technological process and the absence of a conveyor reduced the installed capacity from 108.46 to 57.6 kW, which led to a reduction in electricity consumption for technological needs. The decrease in production area ensured a decrease in annual lighting costs from 39,152.16 to 29,918.16 rubles. The volume of shoe storage facilities and the volume of work in progress were halved.

The results of calculating the cost of a calculation unit (100 pairs) for the options of the technological process are shown in Table 5.

Table 5- Calculation of the cost by options of the technological process

Name indicator	Unit of measurement	Indicator value		
		option 1 (using a conveyor)	Option 2 (using a conveyor)	option 1 (Rink system)
1. Release, steam	steam	560	560	548
2. Number working workers	people	36	39	25
		thirty	33	nineteen
3. Development 1 working	steam	15.52	14.29	22.21
1 worker		18.61	16.87	29.34
4. Average monthly salary 1 working	rub.	9484.60	8808.78	13213.22
1 worker		8641.17	7922.28	13052.31
5. Cost of one pair	rub.	517.49	519.91	515.22
6. Profit	rub.	75.73	73.31	78.01
7. Profitability	%	14.64	14.10	15.14
8. Costs per 1 ruble of marketable products	cop.	73.93	74.27	73.60
9. Capital productivity	%	8.08	7.63	9.26

Cost reduction occurs for the following items:

- basic and additional wages for production settlements with the OESN;
- fuel and electricity for technological needs;
- equipment maintenance and operation costs;

- general production costs.

According to table 5, the calculation of the cost reduction for each model is made, the results are summarized in table 6

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Table 6 - The results of calculations to reduce the total cost as a result of the implementation of organizational and technical measures

Option technological process	Decrease amount full cost, rub.
Option 1 (using a conveyor)	2.42
Option 2 (using a conveyor)	Baseline
Option 1 (Rink system)	4.69

The economic calculations carried out confirm the feasibility and legitimacy of the use of a multi-criteria method for assessing the effectiveness of technological processes. The proposed method, in comparison with the standard calculation of the total cost of making shoes, is less laborious and allows at

the main stages of developing a new assortment (technical task, design documentation, prototype) to reduce the time of expert work while maintaining the required depth and validity of engineering conclusions.

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POLITICAL SCENE AND POLITICAL CULTURE IN THE CLASH OF GENERATIONS: ANALYSIS OF EARLY PARLIAMENTARY ELECTIONS ON FEBRUARY 9, 2020 IN AZERBAIJAN

Abstract: Although the early parliamentary elections of February 9, 2020 were announced under the banner of reforming the inert political system in which key players and rules were protected for nearly 30 years, they were still marred by irregularities and unequal opportunities. In the results of the election, the bulk of the old parliament returned and nothing seemed to have changed on the visible side of the political scene. However, this election revealed the “under-layer streams” of the political system, some ending and emerging trends of the political scene. In the article, we study the trends of the political system, the dynamics, causes and dialectics of these trends in the context of the political culture of politicians and the people. The main focus here is that the political scene, which has been static for decades and whose actors and political culture have not undergone any renewal, is exhausted in public opinion and the new generation with ideological differences is faced with the need to organize from scratch.

Key words: election, voter, post-Soviet, political culture, political opinion.

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Introduction

Early parliamentary elections were held in Azerbaijan on February 9, 2020. In terms of the mechanism, executors and principles, these elections were no different from the previous ones. [38; 32]. The country's ruling and opposition political forces, their approaches to elections, expectations, principles of action and strategies have not changed. Even the apathetic attitude of the population towards the elections remained the same. However, these elections were a unique event in the country's political life, an undeniable expression of a turning point. These elections showed that nothing can and will not remain the same, and revealed the social, natural, objective and dialectical reasons for the current situation. [34]. These natural bases are associated with the fact that the active part of the country's population is a new, different generation. Now, a change in the political scene, of the players and the rules of the game is inevitable. But how should this change be and at what level? Both in the government and in the opposition,

the demand for change on the part of society and its inevitability is understood logically, expressed in the language of approval. But in fact, both poles play according to the instinct of self-preservation. The government seeks to maintain its position through “rejuvenation” - personnel change (which it presents as “reform”), while the opposition recognizes [28] the depletion of traditional forces in public opinion and encourages new young politicians to cooperate [26]. It is often forgotten that digesting several people and persistence of the same leaders with the same set of rules and the same system of relationships does not reflect a society that has changed in 30 years. Not only the active and young part of Azerbaijan, but also the middle and older generation are clearly tired of the participants in the political scene, who have not changed in 30 years, who have lost their trust and political resources, of their accusations against each other. The candidates witnessed this while communicating with voters during the election campaign. Personal contact with voters revealed real

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public opinion, which is not reflected not only in traditional media, but also in social networks. Because the traditional media is controlled by political power and politicized. On social media, groups with an active political culture demonstrate political attitude and accordingly, social media becomes a political battleground for rivals. However, the campaign and elections showed that these groups and their supporters make up about five percent of the population. Given that 90-93 percent of the population did not vote as an expression of distrust of democracy and the entire political scene, the Institute for Democratic Initiatives, which monitored the most interested constituencies, estimated voter turnout at about 20 percent [23]. According to opposition and independent candidates and their observers, 7-10 percent of voters turned up, and more than 96 percent of those who came supported independent candidates who did not belong to the party. Thus, it is obvious that about 95 percent of the population that has been lost by the existing political forces is a social base. As we have seen, public opinion, along with all communities and generations, ignores the political scene inherited from the 1990s and demands new strength. The new generation does not bear the burden of various political and ideological focus positions and the sins, mistakes and mistrust of the past. Although, their 'innocence' has an advantage over the older generation, objective and subjective, natural and artificial restrictions on the possibilities of organization, at least, by changing the political scene on the opposition front in accordance with the public challenges prevents legitimization.

Methodology

Because the current theoretical framework for electoral research is largely based on the electoral cultures and practices of established democratic systems, electoral imitation in authoritarian systems and the electoral institution that serves them, as Dalton and Klingeman put it, transcend the boundaries of "old theory" [11] and are difficult to explain on the base of those theories. Therefore, the study is not based on any specific theoretical election models. Historical chronological and retrospective analysis was initially used in the study. It is necessary to understand the current players, especially the public opinion, under the historical conditions in which the current situation is built, and the dynamics of the formation of these conditions are. The systematic approach also takes the lead at all stages of the study.

The elements of the system are government, opposition, public opinion, political culture, candidates and voters. The study also examines the role of the political psychology of the electorate. My personal candidacy in the elections, as well as my observation of the election campaign of dozens of candidates whom I personally know in the government, in the opposition and as independent

candidates and who are friends with me on social networks, have become invaluable data for this research. Through my role as a candidate in this election, my one-on-one conversations with hundreds of voters, meetings with constituency groups, obstacles that I personally encountered from the executive branch, and my unconventional electoral strategy, which began with competing with other candidates and ended with a joint struggle (to prevent election fraud and obtain facts of violations of the law, launch a post-election complaint mechanism, publish facts of election fraud and our protest against the results, and file lawsuits), have become invaluable methodological contribution to this study [22]. As a competitive candidate during the election campaign and as a political scientist, I analyzed a large number of platforms, as well as learned the demands, problems, behavior and beliefs of the electorate. [44]. After the elections, I studied the impressions and opinions of candidates and observers, systematized all this information.

Background - retrospective analyze of elections

The first parliamentary elections of the 3rd republic of Azerbaijan were held in 1995. The reason for the postponement for 4 years was the Nagorno-Karabakh conflict and coups d'etat in its context, the decision of the political leaders who came to power to work with the obedient parliament of the Soviet era. These elections were held during the presidency of Heydar Aliyev, who came to power in 1993, reached an agreement with regional and global centers of power, and took full control of political power. Since then, the institution of parliament and parliamentary elections in Azerbaijan had a "mission" to maintain the status quo and strengthen the institution of the presidency in such a way as to make the president and his government absolute. This mission was incompatible with democratic elections, especially since the problem of the legitimacy of political power was growing. However, even in the first parliamentary elections, when Heydar Aliyev did not doubt his legitimacy, the list of deputies for election was predetermined by the head of state, was under his direct control and depended on his principled position, which also corresponded to the principle of Soviet quotas. At that time, the quota system was somewhat different from the Soviet one. That is, if in Soviet times there was a quota for workers and peasants, then in the post-Soviet period there was a quota for opposition and neutrals. However, in the post-Soviet period, as in the Soviet period, there was a quota for writers, poets, artists, that is, for the cultural elite, which has public authority outside of politics. A notable problem in the parliamentary elections that began in 1995 (which were supposed to maintain the status quo and provide internal political guarantees to strengthen the regime) was setting a precedent of

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including the opposition on the government's secret list. Later, secret dialogues between the government and the opposition - struggle, games and actions within the opposition generated by this unofficially adopted electoral quota - were accompanied by fragmentation and weakening of the opposition, imitation of some of them in the "pro-government opposition". The opposition either took part in it or remained on the sidelines, boycotting the elections in general and calling for the inaction of the elections (in accordance with normal democratic consciousness, instead of recognizing the voter as a source of political power and activating it, an attempt was made to form an opinion based on insufficient voter turnout in international circles and to prove the illegitimacy of the election results), which plunged people into apathy, and as a result, the political system became an arena where political power could operate as comfortably as possible. One of the main reasons for this was that the opposition, throughout its entire activity, was focused not on people who are the source of political power, but on internal and external political actors, opponents and international political circles. It was a trace of Soviet political culture that existed for 30 years in the post-Soviet period. A special role was played by psychological pressure both on the opposition and on public opinion in order to create an "invincible" image of power in society since the time of Heydar Aliyev. The death of Heydar Aliyev in 2003 and the nomination of his son Ilham Aliyev for the presidency mobilized the opposition on the eve of the elections, uniting it into the Our Azerbaijan Bloc and reasoning voter turnout. However, the violent crackdown on protests against the October 15 presidential election resulted in the arrests of more than 100 activists and the deaths of two people, as well as, continued support from a number of international organizations, including the Council of Europe [49; 15], as well as regional and global powers [41], negatively affected both public opinion and political activity. Thus, these facts not only increased the distrust of the possibility of democratic changes in public opinion, but also created an image of oppositional political activity in general, which did not produce results at the public level, and failed, also was dangerous at the individual level.

The ruling party, led by the president, won a landslide victory in the parliamentary elections of the first convocation in 1995 based on a majoritarian electoral system: 60 members of the NAP (New Azerbaijani Party - the ruling party led by Heydar Aliyev), 56 neutral members, 4 members of the Popular Front Party, 4 members of the ANIP and 9 members of 7 different parties. Of these, 27 were elected through proportional representation in multi-member constituencies, while the rest were elected through the majority system in single-member constituencies. The neutrals, mainly from the fields of literature, art, science, and education - were elected

with government support, thus were loyal to the government. Since some parties are in open coalition with the government, the term "pro-government" political parties has emerged in public opinion. It was argued that the elections were undemocratic and were rigged by official structures, and that the opposition was admitted to parliament on a pre-drawn list with a certain quota, entering into a secret dialogue with the authorities. It should be noted that this situation became one of the reasons for quarrels and disagreements in the opposition, created negative precedents, laid the foundation for mistrust in the electoral institution and blocked the possibility of its democratization.

Parliamentary elections of the second convocation were held in 2000. As a result, 83 NAP members, 31 neutral members, 8 Popular Front Party members, 2 ANIP members and 9 members from 5 parties, that of 26 of them were elected in multi-member districts under the proportional system, and the rest in single member districts under the majority system.

In 2003, Heydar Aliyev died after a serious illness, and his son Ilham Aliyev was elected president. In the October 15 presidential elections, the opposition formed a coalition and nominated a single candidate. On the eve of these elections, the opposition's struggle with the ruling party was the culmination of the 27-year rule of the NAP. At the end of election day, the opposition declared victory and called on their supporters to protest, claiming that the election results were rigged by the authorities. Brutal crackdown on protesters during marches on 16th October, the absence of an opposition candidate among the protesting crowd on election morning, the death of two people, including one child, and the arrest of more than 100 people, followed by the support of Ilham Aliyev by regional and global powers and European institutions through the adoption of the election results, left people in the square alone, wanting democratization. It can be said that the events of October 16, 2003, the actions and positions of local and foreign political actors in these events became a turning point in the direction of increasing political apathy in society and strengthening power [31]. Later, the enrichment of the Azerbaijani economy with oil revenues, the growth of the bureaucratic structures and the strengthening of its resources of pressure allowed the government to take full control of the electoral institution, weakened and divided the opposition. After that, the government easily made the desired changes to the electoral system, the principles of formation and work of electoral commissions.

After amendments to the electoral system in 2005, all deputies began to be elected under the majoritarian system. In the parliamentary elections of the third convocation held in the same year, 63 NAP members, 44 neutral representatives, 5 Musavat Party members and 12 people from 10 parties were elected.

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It should be noted that this result was obtained in the context of processes within the opposition and between the authorities and the opposition. Thus, animosity between some of the leading opposition parties in the last elections and in the previous presidential elections intensified, there was some division, and several MPs represented in the previous elections entered parliament with a different party affiliation and with a more loyal position towards the government. Representatives of parties claiming to be the rival of the ruling party did not enter parliament. [24]. The government presented these forces to society and international organizations as "constructive opposition" and "radical opposition". Opposition outside parliament did not accept the opposition, which broke away from it and managed to get into parliament, as a real opposition. One of the reasons for this was that these individuals and political parties did not vote or protest against any bills and resolutions submitted by the government and the NAP during one or even several parliamentary sessions.

In 2010, elections to the Milli Mejlis of the 4th convocation were held in a similar way and ended. There were no significant changes in the composition. However, a tradition of apolitical businessmen entering parliament began to form. Rival political forces complained to the CEC about the election fraud. The 2015 elections did not differ significantly from the previous ones [40]. Even these changes in the composition of parliament were minor. An important political fact was the decision of rival political forces to boycott the elections, stating that they were convinced that the elections would be rigged anyway. The decision to boycott was previously made by these forces in a joint statement in the 2008 presidential election. Opposition's boycott tactics and their calls for the population to boycott the elections, pushed both, the opposition and the public to give up the struggle, to accept the defeat unequivocally, to hold elections as a completely free arena for the government, and to abandon the institution of elections in public opinion and to face political apathy.

Reform policy and early parliamentary elections

Despite the strengthening of the constitutional and real power of the president, the lack of political resources in parliament and its complete control by the executive branch, the composition of the parliament was an expression of the division of real power and the measure of this division. Thus, the dynamics of the struggle for political and economic resources within the government created an appropriate composition in parliament. After the 2015 parliamentary elections, Mehriban Aliyeva's power factor was further strengthened, the institution of vice president was established in 2016 with an amendment to the constitution, and in 2017 Mehriban Aliyeva was appointed First vice president. After that, a dual power

emerged within the executive branch, especially in the presidential administration: the struggle between the head of the presidential administration and the first vice president became more open and severe. As a result of this struggle, key members of the administration (who were also assistants of the president) were fired, followed by the head of the presidential administration. In society, Mehriban Aliyeva's team was called "reformers", and Ramiz Mehdiyev's team was called "the old guard". In the parliamentary elections to be held in November 2020, both the "old guard" and businessmen, nicknamed "pocket deputies of Ramiz Mehdiyev", were expected to be replaced with new cadre. It should be noted that the changes in the executive branch were presented by the government as a timely reform, and as a reform, there was a change of cadre, not rules and principles. Senior officials, who had already grown stronger and became oligarchs, were replaced by younger technocrats studying abroad (but it was obvious that the new team's human resources were weak). Following these fundamental changes in the executive branch, the decision was made to hold early parliamentary elections, despite the next parliamentary elections scheduled for November 2020. It was stated that the reforms carried out by the president cannot continue in the current parliament, that the current parliament is inefficient and that new forces are needed. The question, which came to the agenda at the end of November 2019, was formalized in a few days. Thus, parliament was dissolved on November 28, and early parliamentary elections were scheduled for February 9, 2020.

Public confidence in the early elections

In particular, the removal from office of the head of the Presidential Administration Ramiz Mehdiyev and his team, who have played a key role in managing and maintaining power for almost 30 years, has instilled confidence in the society that reforms will take place. Thousands of young people have run for municipal elections (December 23) since these resignations. Municipal elections were a test of the government's intention to carry out political reforms and open the doors of the elite to society [3]. The municipal elections, like the previous ones, were marred by allegations of total falsification and irregularities, and the opposition and independent activists considered their result illegal. It was a resource in promoting a boycott propaganda of the opposition, which boycotted the last elections and did not support participation in the early parliamentary elections. It should be noted that a few weeks after the announcement (December 5) of the parliamentary elections, that is, during the nomination of candidates for the parliamentary elections, violations in the municipal elections and the debates on the results of these elections dealt a mortal psychological blow to chance of voter turnout.

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Election conditions. Opportunities. A new element in the elections

The public, in addition to the restrictions imposed by the government, entered the campaign environment by observing the animosity and attacks of the two main opposition parties against each-other. The boycott tactics of the Popular Front Party and the ReAL's determination to run in elections were among the main themes of the growing rivalry between the two parties after the release of ReAL leader Ilgar Mammadov, who mainly attracted the attention of European institutions. In fact, none of the politically preventive changes that were supported by all opposition forces and which were important for democratic elections were implemented by the government. Thus, the prerequisite was the existence of an electoral law, an electoral institution, an electoral mechanism that would ensure the elimination of political monopolies, opening the doors of the elite to society, what could be adequate to the declared reform. Because the electoral law and electoral mechanism, as David Schultz said, are not neutral, even if they are obliged to apply the democratic principle enshrined in the constitution with respect to the source of power. Usually they can serve to preserve political advantages, depending on the degree of freedom of society, the dominant role of the individual, political party, tribe or class. In short, the reform of the electoral system, that is, the necessary changes in the electoral legislation, the principles of organizing electoral commissions, the resignation of personnel claimed for electoral fraud, and the release of all political prisoners was envisaged.

However, unlike in previous elections, the government's tactic in the stage of registering candidates was different. There were not any artificial obstacles to registering candidates and the process was further simplified. Unlike previous elections, the ruling party did not allow party members to run on their own. Thus, the NAP decided to represent the party with only one candidate in each constituency according to the party list. The elimination of obstacles to candidates, on the one hand, prompted young political activists to join the process, because it gave some hope of opening, and on the other hand, it created a chaotic abundance of candidates in a society which did not have democratic electoral traditions. Many neutral, mostly non-political, active and passive candidates were registered. Such candidate chaos caused some confusion and sometimes irony in society. The role of executive bodies in the growth of candidates was also felt. A similar situation developed in the municipal elections on the eve of the parliamentary elections. It looked as if a long list full of passive candidates, with candidates following the main competing candidates with the same last name or first name, was necessary to confuse the electorate.

This factor was necessary for the ruling political force not only on election day, for some manipulative steps during the election campaign, but also to restrict election campaigning based on the abundance of candidates.

General characteristics of candidates

On the one hand, the softening of the candidate registration process, on the other hand, the opportunities created by the majoritarian elections have resulted in a majority of independent candidates and a large number of non-politicians. A total of 1637 candidates were registered in 125 constituencies. 316 of them withdrew their candidacy, and 1321 continued to compete. 77.5% of candidates were independent candidates, 82% of them presented their candidacy in person.

If we want to classify sociologically the candidates who joined the electoral process, they can be divided into the following groups:

1. Serious politicians, who were pushing to be elected. The political spectrum of these candidates can be divided into the following categories:

1.1. Politicians without ideology and 30 years of experience. Most of these politicians have electoral experience, but the overwhelming majority do not have a particular vision or ideological direction. For a long time, their political debates have focused on the authoritarian rule of the ruling political group and the spectrum of attitudes toward power within the opposition. On the other hand, the leading political parties in power and opposition have defined the rules of the game and political themes as a mass party (NAP declares its 700,000 membership, APFP and Musavat Party consider themselves parties of the movement uniting all ideological poles in the traditions of the National Liberation Movement) without ideology, whose main goal is political power, because of the claim to represent the whole society. While it could be seen that the platform of several candidates at the party leader level in these elections served a specific ideological context, their agenda was a struggle beyond ideological perspectives.

1.2. Left-wing youth. In the last years of the existence of the USSR, the Social Democrats opposed the collapse of the empire and were considered by public opinion as the modern successors of the Communists. For this reason, they (the most famous of them later worked for NGOs as political experts) lost its active political arena during independence. After the Social Democrats, left-wing political orientation has begun to flourish in the past few years in the predominantly right-wing Azerbaijani political environment after a break of 25-30 years. Unlike other activists, left-wing youth do not make demands on human rights and the solution of Nagorno-Karabakh conflict. Their propaganda of the Soviet era and the spread of Leninism shows that this trend is not the result of the rise of the left-wing in Europe, but the

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result of Russia's work with the youth in recent years, especially in the education system. [36; 27].

1.3. Right-wing youth. Among them are classical liberals, neoliberals and nationalists. Liberals are mainly educated in Europe and America and are influenced by Western political schools. Some of them have been imprisoned for political reasons in the past. These are representatives of different political parties or independent candidates who entered into a temporary alliance with representatives of different political poles in electoral blocs. The main ideological support of the right-wing in Azerbaijan is nationalism, which maintains the relevance because of historical and ongoing geopolitical processes, especially Russian imperialism, the occupation by Armenia and the threats of Iran. However, the foundations of Azerbaijani nationalism were laid by the school of Akhundov's enlightenment and are in a synthesis with Europeanism.

1.4. Independent intellectuals of the middle generation who have no party affiliation, but have promising political intentions. Until now, these people were unable or unwilling to join the closed political elite of government and opposition. They are outside the political arena because of the barriers created by the political system for the emergence of a new political force. However, they are on social networks and play an important role in shaping public opinion.

2. Influential non-political figures applying for election. Among them are well-known doctors, teachers, cultural figures and journalists. They do not interfere in political affairs and declare that they will contribute to legislative activity in their fields

3. Entrepreneurs running for elections. The voters who support them are those who try to solve their problems on a personal level and are not interested in politics

4. Candidates who do not hope to be elected and are participating for trading purposes. Their expectation from the process is to sell the voter support they can get to one of the strongest candidates. They participate in the election campaign and spend time and investment, since they take into account the possibility that the voter's vote has a certain value (in the case of relatively democratic elections). Democratic elections provide these traders with an open platform, and the political culture of a poorly educated voter becomes fertile ground for such candidates

5. Those who view the election campaign as an opportunity for self-promotion of professional or future political activity

6. Candidates from parties who are on the candidate list for an election and do not enter into serious competition process. This is mainly done in order to show the presence of party cadres. However, due to the lack of party support or personal potential (cultural or financial), they do not lead the process and mainly help their leaders in the election campaign

7. Random persons who are included in the list of candidates for the elections and do not join the campaign. This is done in order to split the votes of a strong opponent, creating some kind of misunderstanding on election day (with the same last name, with the same region, etc.)

The problem of the political platform of candidates

Many of the candidates did not present the platform at all, while some presented their flyers towards the end of the campaign, focusing on the challenges and promises made by various candidates throughout the campaign. Those who represented the political platform from the very beginning of the elections did not turn it into a system based on a certain ideology. With the exception of one or two people, the overwhelming majority (including young people proudly declaring their ideological orientation) did not offer a political program. With the exception of ReAL Party (not registered at the period of election), all the traditional political parties in the political arena, including the ruling NAP, did not come up with their own political programs. The campaigns, challenges and promises of the vast majority of candidates actively participating in the election campaign, including most politicians with many years of electoral experience, are mainly focused on the district and at the local social level. As if the candidates will be elected to a municipality that deals with local infrastructure, environmental and social problems and has an appropriate budget. Some find their place in parliament for legislative work dedicated to some concrete sphere or, if they are lawyers, for drafting laws. In short, with the exception of rare cases, there were no speeches that had an ideological concept and its programmatically presentation on a political platform, discussing the appropriate strategic line. In fact, the political elite [33; 8] and its candidates, who must lead the political culture and value system of society, democratic thinking and participation, have shown that they cannot play a leading role in this case. Following are the causes of the problem:

The lack of democratic electoral traditions led to a further decline in the political culture of all parties.

1) Deterioration of the social situation of the population, growth of social demands

2) The failure of the municipal system, the indifference of the executive power to local people and additional difficulties created by corruption for residents. That is, expectation from the deputy a solution to the accumulated social problems of the municipality and executive authorities

3) The limited political power of parliament and the inability of parliamentarians to play a political role does not create a real requirement, such as a duty to provide a political vision for candidates. On the contrary, the existence of such a vision has long been

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a mild prohibition by the government for members of Milli Majlis

4) The absence of party factions in parliament and their traditions of political and ideological struggle. Adoption of laws in parliament under the control and dictate of the executive branch

5) Becoming of the right-wing into the only ideological pole in Azerbaijan due to the threats emanating from the communist past of the left-wing and imperialist claims of Russia. The stability of this situation does not provoke ideological discussions in society. Deideologization caused by these and other national and global trends

The problem of political apathy of voters

Voter's attitude to elections is formed, first of all, by belief in the institution of elections and the dependence of the election result on his will. It can be said that the apathy of voters in Azerbaijan is mainly related to the distrust of voters in the elections. This mistrust has developed and grown over almost 30 years of political history.

The fact that parliament is formed entirely on the basis of a list prepared in advance by the government and that electoral fraud is an obvious game is an indisputable fact in public opinion. That is, the first factor is the voter's unconditional distrust of the desire of the political power to hold democratic elections and the legitimate and transparent activities of its respective structures and election commissions. It should be noted that the electoral system, rules and criteria have been formed over the years to protect the hegemony of the ruling party [7; 1]. However, although the distrust of the Azerbaijani voter in the electoral institution is a sufficient factor in his political apathy, it is not the only factor.

The second factor is public distrust of the limited powers of the Milli Mejlis and the deputies, the quality of their activities for citizens [50]. An authoritarian regime and the lack of the rule of law, have also increased the distrust of the legislature. The amendments to the Constitution maximized the institution of the presidency and violated the principle of separation of powers. Ministers became oligarchs, and local executives became local feudal lords. Deputies who are considered active tend to play the role of advocates for government activities, forging personal interests with the executive to expand business opportunities. In this case, it is difficult for a deputy to defend the interests of citizens before the executive authorities who are partners in corruption. Thus, the deputy has obligations not to citizens, but to the political leadership, which can be traced not only in the activities of the deputies, but also in their speeches of representatives of political power [30]. In political science, a citizen's trust in a legislative institution and the deputy can theoretically be presented separately from each other [25]. Because this theory is based on the existing practice in

democratic systems, and therefore the attitude of the electorate to the institution and to the deputy is studied by different polls as a subject of different levels. In our case, the system does not create conditions for the differentiation of the citizen's attitude to the institution and to the representative, as well as the need for the representative to win the confidence of the citizen from whom political will has been taken away. As a result, the attitude towards the institution and the representative is interconnected, one generates the other.

The third factor is public distrust of the political system as a whole, including the opposition. Endless confrontation within the opposition, especially the inability of public opinion to forgive the transfer of power by the leading opposition force a year after it came to power in 1992, as well as the continuation of decades of party leadership, the lack of dynamism and democracy within the party, on the contrary, disappointment of public opinion caused by the elimination of influential cadres from these parties as a result of undemocratic competition exacerbated the problem of the legitimacy of the opposition.

The factors described above reflect the result in the political culture of voters, in their expectations from the deputy or in their distrust of him. According to Barry, "democracy forms a civic culture" [4]. When I was running as a candidate, more than 90 percent of voters expressed no confidence in the elections. This was stated by most of the candidates on social networks. Some openly said: "The deputy is for himself, we don't need a deputy". This response was the essence of no confidence in the elections and reflected the opinion of the majority. The content of the appeals to the candidate also showed that the voter does not need a deputy. People need executors who solve their personal problems, at best, infrastructure issues, because in practice they do not see the power of the law and the legislature in solving the accumulated social problems. If the law does not work, if decisions depend on the will of the executors, then either the deputy is not needed as a legislator, or the voter expects him to deal with social or infrastructure issues.

Total distrust of the political system, its institutions [13; 14] and actors [16; 21; 48], which was created and strengthened in voters, made them possible to distance oneself from politics. This has become the biggest challenge for a new generation and independent candidates who want to attract the electorate to the polls in order to prevent electoral fraud and get them out of political apathy. The anger that had accumulated over the years against deputies and officials was directed at active candidates who shared the same social fate as themselves. The voter complained to all candidates he met about officials and deputies with whom he could not meet, and said: "You are all like that". These elections showed that the results that I have observed so far, even in 1999,

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when I conducted a survey of leading politicians from 11 political parties [20], have not changed in 20 years, but have strengthened. Thus, political parties are separated from society, and people are outside the political activities of political groups. The entire struggle of political forces was waged with each other, and they did not need to report to the people. In turn, society has learned to ignore them. The main problem mentioned by all opposition groups and independent activists who want change is that society is ignoring politics and the political system.

One of the biggest obstacles to getting voters out of apathy and involving them to participate in elections is the habit of not showing up at the polls over the past decade thanks to opposition boycott decisions as well. According to political theory, one of the main factors ensuring a massive voter turnout is the activity of political forces aimed at mobilizing voters [42; 9; 39; 47; 6]. The lack of voter turnout on election day, the population's ignore the political system, and political apathy are seen in the interests of a number of political forces, starting with the ruling party. In last several elections, leading opposition forces have traditionally boycotted the elections, arguing that voter turnout was in the government's interest to show that the elections took place. The "secret" list of deputies is published in the media by the opposition leader a few days before each elections. The fact that this list, inaccessible to the highest positions of power, somehow reached the opposition leader some days before elections, and the fact that the list accurately reflects the composition of parliament after the elections raises many questions and confirms that neither the government nor the traditional the opposition is not interested in voter turnout. As in 2015, Jamil Hasanli, the chairman of the National Council, which decided to boycott these elections, presented to the media a list of candidates for the parliamentary mandate a few days before the elections: "there is no need to wait for the election day, February 9, because there are no elections in the country". He "proved" to the society the pointlessness of coming to the polling stations, saying: "Please, 12 days before election day, check out the list of deputies who will be "elected" on February 9" [51; 46].

Election environment

As a result of legislative changes in 2008 and 2010, the period allotted for the election campaign was reduced from 60 to 23 days.

No free airtime was allocated on Public Television for candidates' speeches. On the contrary, prices were inflated. For the vast majority of candidates it was impossible to get access to this price, and for the rest it was pointless. In general, the campaign took place on social media, especially Facebook, as media prices were high. 75% of television appearances focused on government candidates [23]. Some candidates have also taken

advantage of the YouTube channel. The electoral environment was practically absent outside of social networks. Even the placement of candidates' posters was accompanied by severe restrictions and obstacles. All this made it extremely difficult for candidates to activate and mobilize voters. The active part of society on social networks, especially on Facebook, is mainly public figures, representatives of the middle class. The social network in which young people are active is Instagram. Due to the fact that the majority of voters are outside the Facebook arena, and the campaign environment is on Facebook, voters were also outside the campaign environment.

On the other hand, the competitive field created for the candidate by television appearances and debates [10] also shapes the voter's expectations of the candidates and the criteria for comparing them. The loss of this opportunity led to a decrease in the quality of voter assessment, further rising of manipulation and the candidate's ability to avoid the basic required presentations (platform, program and strategy, ideological principles, reasoned discussion skills, etc.). While there are opportunities to reach out to voters through social media video ads and even live broadcasts, very few candidates have used them, and most of them have not developed appropriate political platforms. The election period stimulates the formation of an electoral culture, a democratic political culture of the voter (as well as politicians), in particular, the development of political cognition and ideas about the political and legislative obligations of parliament and candidates [2]. Therefore, such a restriction on the election campaign should have had a negative impact on the quality of citizens' demands and choices, as well as on voter turnout on election day.

Joint action of candidates in many constituencies

The softening of the nomination process has given candidates some hope that there is a political will to hold democratic elections. However, numerous reports that local executive bodies unlawfully interfered in the election campaign in favor of the ruling party and involved local governments in this work soon made it clear that the elections would be falsified in election day. Shortly thereafter, some of the candidates withdrew their candidacy under pressure from the executive branch. Despite the same pressure and uneven playing field, the candidates, who said they were fighting to the end, focused their fierce competition with each other on jointly fighting irregularities and electoral fraud. In other words, the struggle of candidates in some constituencies has turned into a joint struggle for fair elections. It was necessary to jointly instruct and systematize observers to observe the electoral process in order to prevent fraud, and if this was not possible, to gather facts, file a joint complaint after the election and make it public.

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One of the main reasons for this was the lack of organizational support of the vast majority of candidates in the face of state resources in the hands of the ruling party. In the constituencies where such unions were created, the chairpersons of the constituencies and precincts, who had many years of experience in organizing electoral fraud, faced difficulties in carrying out “traditional” actions. These difficulties also arose for the Central Election Commission after the elections in connection with the facts collected by the candidates who filed a complaint and their joint activities, which they disclosed and disseminated on social networks. The CEC canceled election results in 4 constituencies and invalidated the results at 328 polling stations in 54 constituencies [29]. However, most of the allegations of grave irregularities that must lead to the annulment of the election results were ignored and the courts did not satisfy the plaintiffs’ complaints. 236 candidates, including 11 political parties and independent candidates, signed a joint statement that they will not recognize the officially announced election results [43]. Members of the International Election Observation Mission, including the OSCE Office for Democratic Institutions and Human Rights, the OSCE Parliamentary Assembly and the Parliamentary Assembly of the Council of Europe, issued a joint statement reflecting a negative opinion [5].

The role of the February 9 elections in renewing the political scene

According to the official election results, 70 NAP members, 41 neutralities, 3 members of the CSP, 6 members from 6 different parties were elected to parliament. One member of the unregistered ReAL Party was able to enter parliament as a neutral candidate. There was no difference between the resigned parliament of the 5th convocation and the new parliament, neither in terms of political composition, nor in terms of key persons. Thus, people who were demanded by public opinion to leave (former Soviet cadres who angered the public with their speeches and were not recognized by society because of their inaction, despite almost 30 years of experience in parliament) were re-elected to parliament. In many districts, previous deputies expelled by local residents during the election campaign were re-elected. Therefore, “Why was the parliament dissolved?”, “If the same people return to parliament again, why are early parliamentary elections needed?” questions were on the agenda after the elections.

In this election, there were many independent candidates, their observers and active volunteers who helped the candidates. By exposing in detail election fraud, portraying lawlessness and sharing it on social networks, they clearly demonstrated the already well-known crisis of electoral and legal institutions. They also showed the public the real situation with the

social base of political groups, the problem of the legitimacy of both the ruling party and the opposition. This fact also exposed the political collapse of traditional political forces. The existence of a new generation of politicians, albeit disorganized, is another fact. In short, the ruling political party NAP, which has been a political monopoly for 30 years, and the traditional opposition (the Popular Front and ANIP in the 1990s and the political forces that emerged from them) have already lost their place in the public consciousness. These elections severely damaged the fortresses created by the government and traditional opposition for more than 25 years before new generations, and opened the doors of the political arena for society. They showed the government, opposition and society that the political system was about to break the 30-year monopoly of power that emerged 30 years ago and lost its legitimacy.

Conclusion

The early parliamentary elections on February 9, 2020 clearly showed that society has undergone natural changes and that new generations are its locomotive, and the political arena, which has been static and closed to society for decades, not only represents this society, but is also separated from it. It turned out that society has long lived its own destiny, and political forces are in relations with each other. People who were not connected to the political system (did not even have the right to do so) and for decades were de facto banned from political activity turned into an island where the inhabitants have changed and which no longer hears or accepts the words of politicians.

Thus, it can be said with confidence that the biggest indicator of the situation of the political system in these early parliamentary elections is the problem of the legitimacy of the ruling and opposition political forces. The political apathy of people, their lack of control over the electoral institution and even their absence in elections are confirmed by scientific literature as the main features of the internal policy of authoritarian regimes and the result of their purposeful activities [35]. The problem of the legitimacy of decades of authoritarian rule is also natural and has a scientific basis as an inevitable consequence [18; 19]. Political apathy is a deliberate choice of authoritarian regimes. As a result, (loss of control over the government, ineffective and corrupt governance), illegitimacy and growing anger become the biggest problem. Since the political apathy of the people is in the interests of an authoritarian government, the problem we are studying is the problem of the legitimacy of the opposition, mistakes in reaching it, and the role of the opposition in the political apathy of the people.

Azerbaijan's political opposition has been weakened by deficiencies in principles of action, openness to manipulation by government, and

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isolation from society. But these mistakes also contributed to the political apathy of society. One of them is that the opposition political forces do not work properly with society; in general, at the center of their political activity is not society, but the political system, focusing all their attention and energy on their rivals. Second, because they did not hold parliamentary elections during their rule, they did not give people the first experience of forming a democratic parliament. If they had such experience, they would recognize their first flaw, develop a political and electoral culture and lay the foundation for a democratic parliament in the country, which would make it difficult for the ruling party to consolidate the direction or content of subsequent processes. Third, political deals, concessions and agreements that run counter to transparency, fairness and the law allow lawlessness to grow and become more and more absolute. Thus, in the event of these violations in the first parliamentary elections, the opposition recognized the results of the elections and contributed to the legitimacy of this trend. One of the main problems created by the opposition is that people understand that the results of all elections are determined in advance by political will. It is clear that in both 1995 and 2000, the opposition agreed to a certain quota at the direction of the government (of course, the government was forced to allow a certain amount of opposition to parliament, given the internal and external conditions and its unlimited possibilities in that time). Thus, the opposition helped to make the dominance of the political will of the government absolute in the public consciousness, that is, to force the society to admit its weakness and defeat in the face of the government. In the following period, internal and external conditions became more favorable for the government, and it did not allow its rivals to enter parliament. After that, the loyal opposition, which the government calls "constructive", enters parliament, and we observe the boycott tactics of the opposition, which no longer help, but rather alienate citizens from the electoral institution, making the field more comfortable and hassle-free for the government.

In order to strengthen and protect the barrier between the society and the opposition, the power controlled the society and its resources, contributed to the strengthening of intrigue within the opposition and undermined the credibility of the opposition.

A nation in political apathy is a great force that does not listen to politicians. Early elections showed the potential of the people as a great player, which in fact is not politically and ideologically headed by any political force. One thing became clear to everyone:

the existing political forces in the political arena either do not exist in public opinion, or have exhausted their possibilities to convince people in any situation. The emergence of new forces is a historic necessity, and as an important outcome of the February 9 elections, it prompted calls for a new generation of politicians.

On the eve of the elections, when polarization and contradictions between the two clans within the government intensified, the monolithic nature of the government began to disappear. Antagonism within the government initiated the process of removing certain forces of the political elite from power. The government presented this process as "rejuvenation" or even "reform" in response to the demands of social dynamics and the challenges from the people. People who had lost all confidence in the political system as a whole had certain hopes and expectations in connection with the resignation of Ramiz Mehdiyev and his team, who were the main figures in the government. At the same time, early parliamentary elections became a test of the political government's promises to carry out reforms, the last chance to win people's confidence that the government will move towards democratic changes, at least softening the regime. The loss of this opportunity has put the government, as well as the opposition, in a situation of irreversible illegitimacy. The very fact of losing this latter opportunity has become a serious political result for public opinion, government, opposition and even international actors interested in the region.

Representatives of the generation that came into politics with the National Liberation Movement - the leading cadres of traditional political parties - continue to carry their original ideological identity. That is, they are trying to express a broad ideological umbrella based on an independent and sovereign national statehood. For the past thirty years, the closure of the political scene has prevented the emergence of the rival ideological poles. In these elections, independent representatives of the right and left, especially liberal and feminist ideologies, entered into chaotic and disorganized political activity. The elections not only presented the society with a new generation with bright ideological poles, but also revealed their need for organization. This need has forced competing independent candidates in some constituencies to temporarily organize a fight against electoral fraud. It was clear to each candidate that it was impossible to achieve results in the next elections by continuing their political activities individually [37]. Public opinion already has challenges to these new forces to create new political parties on an ideological basis.

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REFLECTION OF DEMONOLOGY IN ART AND LITERATURE IN ENGLAND DURING THE RENAISSANCE AND ENLIGHTENMENT

Abstract: *Sorcery and sorcerers of all kinds have always occupied a significant place in the life of the people of England, which is reflected in the development of not only history, but also literature and philosophy, reflecting man's centuries-old belief in supernatural forces and the fight against them if these forces were the servants of Satan. Ironically, belief in and struggle against unclean power reached its climax during the Renaissance and Enlightenment, and it was the Renaissance that "brought to life stormy waves of irrationalism and fear" [1], giving the world the Inquisition, and "the reverse side of Renaissance" was the heyday of demonomania, which has gone down in human history as a "witch hunt". [2, pp. 134-135].*

Key words: *demonology, witch hunt, irrationalism, sorcery, supernatural forces, plays, works of literature, black magic.*

Language: English

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Introduction

Sorcery and sorcerers of all kinds have always occupied a significant place in the life of the people of England, which is reflected in the development of not only history, but also literature and philosophy, reflecting man's centuries-old belief in supernatural forces and the fight against them if these forces were the servants of Satan. Ironically, belief in and struggle against unclean power reached its climax during the Renaissance and Enlightenment, and it was the Renaissance that "brought to life stormy waves of irrationalism and fear" [1], giving the world the Inquisition, and "the reverse side of Renaissance" was the heyday of demonomania, which has gone down in human history as a "witch hunt". [2, c. 134-135]. The starting point in the history of the "witch hunt" is Pope Innocent VIII's bullfight "Summis desiderantes affectibus" (1484), which officially confirmed the existence of witches and called for all means to combat them, including the Inquisition. The guide to action was the treatise of German inquisitor theologians G. Institoris and J. Sprenger "The Hammer of Witches" ("Malleus Maleficarum" - 1486), which caused a powerful wave of witchcraft all

over Europe: from 1450 to 1550 about one hundred thousand "devil's servants" were burned in Germany alone. [3, c. 166.] The people of Albion kept up with the continent in their zeal to end "evil". The intensification of the fight against dark power can be traced back to English law: under Act 1542, witchcraft was punishable by prison, and Act 1563 already introduced the death penalty for major damage caused by witchcraft. With James I's accession to the English throne, the fight against witches became more fierce: in 1604, a law was passed under which all those suspected of sorcery (automatically accused), regardless of the amount of damage caused, were sentenced to death.

A great contribution to witch hunting in England was made by extensive literature on black magic: the book "The Discoverie of Witchcraft by R. Scot" (1584) and "A Discourse of the Damned Art of Witchcraft" by W. Perkins were particularly popular. King James I contributed to the purification of the country from witches: in 1597, while still on the throne of Scotland, he wrote the book "Daemonologie" which has been republished twice. His belief in the existence of witches was undeniable,

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and his arguments and proof are undeniable. English playwrights couldn't help but respond to the topic that is so important in society. Witches and sorcerers are frequent characters in plays from the late 16th and first half of the 17th century. The American researcher L. Barber proposed a classification of English plays of this period into 4 categories, reflecting, in general, the main trends in the interpretation of sorcery in them [5, p. 20]. The first category includes plays that present witchcraft as white magic: good wizards, fairies, alchemists, witch doctors and sorcerers act in them. Not only do they not do harm, but on the contrary, they often help the characters in the plays to get out of their predicament and find happiness. In the genre it is a comedy. The second category includes mainly historical plays whose heroes turn to black magic in order to change the course of historical events, reflecting the notion that unclean power was the most important mechanism for successfully achieving ambitious political and military goals. [6, c. 97-98]. Henry VI by W.Shakespeare – is a prime example of this. Before the decisive battle with the English army, Jeanne d'Arc appeals to the evil spirits for help: "You, my spirits, are my patrons, who have flown from the depths of the underworld, bring France back to victory!" [7, p. 173]. By denying her patronage, they doomed her to defeat and captivity.

In the second part of this play, Duchess Gloucester is ready to "summon from the abyss of the underworld spirit" [7, p. 204] in order to enthrone her husband to the English throne. The 3rd category includes plays in which witches, without being directly involved in the development of the plot, create the necessary background and atmosphere. In addition to decorative, witches are given the role of observers, commentators and even judges of the main characters' actions, as we see in Shakespeare's Macbeth. [8] Hecate: "...Macbeth is a villain. Without your witchcraft ideas. You are not the reason he fell into a vice. And he is soulless and cruel" [8, p. 57] Watching the struggle of "good and evil" in the souls of the protagonists, witches voiced the outcome of this struggle: "evil is good, good is evil.» [8, c. 6] . In the plays of the 4th category, witches act as the main characters and the whole action of the play agrees on them, but the distinctive feature of these works is that witches live in modern society with all its realities. Despite the seriousness of the theme, these plays are characterised by a somewhat ironic tone of narrative, which is reflected both in the farcical presentation of a number of scenes and in their genre: tragicomedy or comedy. T. Middleton's tragicomedy The Witch fits perfectly into this category, whose name indicates the main character. And although the action has been moved to Ravenna, the interpretation of the theme of witchcraft and the witch herself clearly fit into the context of modern English reality. The witch's name is Hecate (the ancient Greek goddess of the night, hell and witches), as is the main witch in Macbeth. She is

120 years old. She lives by witchcraft, fulfilling quite everyday orders of "clients" in the field of love and sex: her spells and potions, depending on the request, can enchant the object of love, or cause impotence. This is the order that starts the acquaintance with Hecate, who sets the play immediately in a farcical tone. Middleton's "Witch" is full of black magic paraphernalia and entourage: there is a witch's coven - under Hecate 4 - and incest - Hecate's son is her lover, and an obligatory werewolf cat sawing on a violin and turning into an evil spirit when Hecate leaves in Act 3 for the flight. All the ingredients of witchcraft potions are abundantly represented: fried rats and pickled spiders, the flesh of an unbaptized infant, the blood of a bat, the mass of various impurities: tritons, dwarves, satires, centaurs, fauns, etc., all boiled, floated and rotated around a cauldron boiling on fire. The witches in the play are vicious and vindictive, considering themselves almighty in dealing with ordinary mortals. But their intrigues fail and they suddenly appear helpless and ridiculous - the authors thus seem to reduce the degree of fear of unclean power . As in most plays in this category, the play itself was directed to Middleton by real events: it was at this time that English society was following with interest the divorce proceedings of Lady Francis Howard and the Earl of Essex, which involved the use of witchcraft to deprive the plaintiff of his potency. [10]. The literature reacted instantly to topical events and incidents, including successful "witch hunts", which provided rich material for updating the theatre repertoire. Almost all of the above works were created directly from the materials of the largest witch trials in 1621 and 1633, and the heroine witches' prototypes were real persons, contemporaries of playwrights. The authors left important evidence of the power of the British people's belief in witchcraft and their involvement in the 'witch hunt', revealing also some of the mechanisms of this 'hunt'. And although artistic interpretation of events in the plays does not allow us to call them "documentary", they are undoubtedly a kind of "chronicles" of events reflecting the objective realities of the society of that era. These plays are objectively close in the category in which they were placed by L. Barber . The tragicomedy "The Witch of Edmonton" was based on events that took place in the village of Edmonton, near London, in early 1621. Elizabeth Sawyer, a resident of the village, was accused of witchcraft and harming her fellow villagers. She confessed her atrocities and was sentenced to death by a court on 19 April 1621. This story aroused great public interest and inspired many writers. Throughout the country, songs and ballads were sung about Mother Sawyer's witchcraft and evil spirits that helped to spoil her neighbours. In the same year, the priest's pamphlet was published "The wonderful discoveries of Elizabeth Sawyer, Witch by Henry Goodcole in which he described his visit to the defendant and a conversation with her in the prison

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cell. The leading authors of those years wrote the play "The Witch of Edmont" and in the summer of 1621 have already presented it to the troupe "Servants of Prince Charles". A couple of months later, the play was performed to great acclaim at the Kurtina Theatre in London, and in December 1621 it was performed in front of James I (the last performances of this play took place at Shakespeare's Stratford-on-Avon Theatre in 2014). Success was guaranteed by both the theme and the brilliant work of the authors. The psychology of crime and criminals, revealing the motives that pushed the young Christian into the arms of Satan. And the motives were: poverty, loneliness, social humiliation, hostility and anger towards her neighbours: "persecution and hatred is as if leper" [11, p. 505]. Desperate and driven by a desire to avenge her suffering, she falls into satanic networks: "It doesn't matter if you are a witch or not, if your neighbour thinks you are" [11, p. 506]. Her whole appearance is realistic: old, miserable, dirty, doomed to poverty and rejection - no romanticisation of dark forces. There is no doubt that the authors of the early 17th century believed in the connection between their heroine and the forces of evil, but in their attitude to her there is a clear sympathy and humanism, which, according to some historians, "elevates the Edmont Witch to the level of the great plays of the Elizabethan era". [12]. The second play, representing "real witches" in real life, is the comedy "The Last Lancashire Witches" by playwrights R. Broome and T. Geywood, based on materials the last of the most sensational witch hunts in England in 1633, Lancashire County, especially the Pendel Forest area, has long been notorious as a place of activity for dark forces. In 1612 two high-profile witch cases were already attracting the attention of the whole of England: one of them, 'About the Witches of Pendel', resulted in the arrest and trial of 16 'witches' - one died in a cell before being sentenced, ten were hanged and one was sentenced to civil execution. This story, for a number of reasons, was not reflected in the dramaturgy then. But a new case of Lancashire witches in 1633 blew up all of England. A huge number of people were involved in the process: the accused, i.e. the "witches" themselves, the victims of their witchcraft, witnesses, clerics, specialists in black magic and justice workers. Interestingly, in both cases, in 1612 and 1633, the main witnesses were children: in 1612. - A 9-year-old girl, Jenneth Davis, who "noticed" her grandmother, mother, sister and neighbours in witchcraft, and in the 1633 trial, the 10-year-old Edmund Robinson. In both cases, the verdict of the accused was "guilty". The revelation of the witches in 1633 began with Edmund Robinson telling his father and then the judges about a meeting with the witches on All Saints' Day on 1 November 1633. He went out in the evening to get the cattle and saw two greyhounds on the way: suddenly one of them turned into an old woman, in whom he immediately

recognized a resident of their village, the other turned into an unknown teenager. The werewolves grabbed Edmund and, having already turned into horses, carried him somewhere. They stopped at a house where witches gathered for a coven, among whom he recognized many villagers, recognizing several neighbours who were not in harmony with his family. The boy's memory has kept all the details of his meeting with the witches, but he could not remember how he got out of there: according to his father, he was found in a state of oblivion near the cattle grazing site. Elder Robinson did not hesitate to bring his son's story to justice, and repression began in the area: 60 potential "witches" were arrested, of whom the boy identified 18. At the end of the Lancaster trial, all 18 were found guilty. Rumours of this massive revelation of Satan's accomplices reached London and the king himself became interested in the case as he ordered the criminals and both Robinsons to be taken to London for further investigation. After a meticulous interrogation in which Charles I took part, and a thorough medical examination of the accused in order to identify the devilish marks, the unexpected conclusion was that the accusation was false. This conclusion was soon confirmed by the principal witness, who admitted that he had written the whole story out of fear of being severely punished by his father for being late to meet the flock. Justice was done, but the pseudo witches were not released: the Honourable Judges, afraid of this result in stirring up the people of England, confident of their guilt, decided to put them back in their cells. [13, c. 57-68]. The Lancashire witch trial was so topical, dramatic and exciting that the company "Servants of His Majesty", without waiting for its completion, ordered playwrights T. Gaywood and R. Broome to write a play on his material urgently. Already on 29 July 1634 Lord Chancellor received a petition from the head of the troupe with a request before the premiere of "Lancashire Witches" to prohibit other troupes to play plays about witches [14, page 27]. The premiere took place just a month later on the stage of the Globe, where His Majesty's Servants were playing in the summer period. In winter, the play was repeatedly and with constant success shown at the Blackfriars theatre - according to contemporary reviews, it was the nail of the season [15]. In 1634, the play was published as a separate edition with a prologue addressed to the Earl of Dorset by T. Gaywood, which stressed the play's relevance and modernity: [we are forced from our own nation. To ground the scene that's now in agitation/ 16, c. 217]. It is significant that the authors chose the genre of comedy to interpret such serious and not very funny themes at that time. All scenes connected with witches are solved in comic and farcical keys. Satanic servants plunge society into the darkness of chaos and lawlessness, turning life upside down and creating "monstrous misery", destroying traditional connections and relationships: In the Seelie

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family, the son commands the father, the groom gives orders to the master's son, the daughter honours the mother, the maid dictates her own terms to the master's daughter, and the governess and governess decide to get married and manage the house and the former owners themselves [16, p.]. 145]. Peace and harmony in Lancashire are restored only by exposing the witches and arresting them. The playwrights used all the means from the arsenal of comedy that had accumulated by then: puns, clowning, fights, jokes, music, songs, dances and various stage effects, including "flying witches". At the same time, all the characters in the play with their experiences and fears, the village life of the villagers is portrayed in a very realistic way. The genre of comedy selected by the authors, with its entertaining attributes, should not mislead the authors' views on witchcraft and witches. The play is neither ironic nor satire on witchcraft. There is no doubt in the playwright's conviction about the reality of witchcraft and witchcraft and the guilt of the heroines, given that the verdict justifying the Lancashire 'witches' had not yet been passed by the time the play was written, as evidenced by the epilogue: 'While the right court awaits the witches...'

["...while the Witches must expect their due. By lawfull justice...16, p. 217], and when issued, was not made public. Nevertheless, the play is a comedy and carries a definitely optimistic message, and not just because the authors believe that the court will be 'right'. The genre of comedy itself, chosen by playwrights, the atmosphere of fun and laughter created in the traditions of folk and laughter culture and permeating comedy, was designed to help the audience free themselves from an irresistible fear of the power of hell - after all, it was this fear that led to hysteria, fanaticism and a cruel "witch hunt". With laughter, the authors seem to challenge a person's fear of "...all that is sacred and forbidden" Overcoming this fear, laughter clarified human consciousness and revealed the world to him in a new way" [17]. The topic of witchcraft, "witch hunting", did not leave English literature and drama with the execution of the last witch; it has continued and continues to inspire the authors. Hundreds of works have been written on this topic since then, but it is indicative that the real processes in the context of "witch hunts" reflected in the aforementioned plays of the early 17th century do not leave English writers alone.

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THE ROLE OF PROFESSIONAL SOCIALIZATION OF YOUTH IN FAMILY AND THE IMPACT OF PEDAGOGICAL CONDITIONS ON ITS OF ENSURING

Abstract: The following article is aimed at dealing with the questions of professional socialization of young people in a family, the role of pedagogical conditions in ensuring professional orientation, self-determination and self-development of the rising generation. Furthermore, there are studied and analysed the issues of pedagogical support and accompaniment which have a significant place in creating stable conditions for youth to socialize professionally and determine their professional orientation and adaptation within the framework of the notion of family.

Key words: professional socialization, professional orientation, pedagogical conditions, self-determination, self-development, adaptation.

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Introduction

The volatility and variability of society and the professional and labour sphere exacerbate the task of preparing a mobile subject that has the ability to freely choose activities, methods and forms of its implementation, and more broadly - the ability to self-determination in an open society. However, there is still an imbalance in the number of studies devoted to professional self-determination, vocational guidance of young people. Inadequate professional self-determination of a person is the reason for his dissatisfaction with the profession, and, often, with life in general, and consequently, this phenomenon may lead to negative consequences within a family, since a family is an integral part of a society. Bearing in mind that a person faces the problem of choosing a professional and life path at an age when he or she may not fully realize all the long-term consequences of decisions made in youth [1], the risk of inadequate professional self-determination can be very high.

The meaning of self-determination implies the ability of a person to build himself, his individual life strategy, the ability to constantly rethink his own essence [2]. The essence of self-determination is the

search and finding of personal meaning in the chosen, mastered and already performed activity, as well as in the very process of self-determination [3]. The ability for self-determination is a fundamental part of the integral structure of the personality, which presupposes the readiness and ability of a person to independently develop guidelines and methods of their activities (intellectual, communicative, aesthetic and etc.). Self-determination principles include:

- recognition of the presence of certain inclinations and abilities that form the basis of a person's individuality;
- in the process of self-determination, the foundations are laid for understanding their individuality, for personal growth;
- the need to develop basic universal abilities in the process of self-determination;
- the process of self-determination is built on the basis of a person's vigorous activity, taking into account his individual abilities, experience and age characteristics [4].

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Self-determination is a process that begins with a person's awareness of himself as a person and passes through almost his entire conscious life, that is, it is continuous. That is why professional self-determination is only part of this process. For the successful implementation of the tasks of professional self-determination, students need certain knowledge about themselves, their intellectual capabilities, inclinations and abilities [5]. It is also necessary to be able to objectively assess personal requests and needs, to correlate one's personal qualities with the requirements of professional work and psychological characteristics of work.

Observing the notion of professional socialization of young people in family, we can understand that not every teenager or youngster is able to fully realize him or herself within the framework of professional socialization and orientation either in a society or in a family, no matter how many people are there in both of those groups of individuals, as in many cases they lack in psychologically mature readiness that is important to be an autonomously thinking individual. Creation a favourable atmosphere for children's independent development, it is when they can themselves study their surrounding world, when they can dive into what they are interested in, when they learn on their own what is beneficial, necessary and what is not, especially during the period of their making choice of future profession, since making such decision, a youngster does not make an ordinary choice, but he or she chooses him or herself. In the creation of such an atmosphere, and some other skills in the young the role of efficient pedagogical conditions, support and mentoring is rather crucial.

The transition to specialized training makes the problem of self-determination urgent for both the student and the teacher. First of all, this happens because it poses before each student the problem of choosing a training profile, and because it leads to the need to change the structure and content of the educational process. The essence of these changes lies in the implementation of a student-centered approach to learning, which considers knowledge as a means of contributing to the personal growth of students [6]. In knowledge there is a certain internal potential that gives acceleration to the self-development of the individual, the processes of independent generation of personal meanings of education. The main sense is produced by the subject of cognition when the necessary conditions are created for the inclusion of his personal structures that regulate, manage, develop a person's mental activity, defining his behaviour as a personal attitude to the values of culture, family, knowledge, experience, life and professional goals [7]. One of these necessary conditions are considered to be pedagogical conditions which can aid the young generation in ensuring their professional socialization, orientation and adaptation not only in a society, but also in a family that is an integral part of every society.

Indeed, pedagogical support, the accompaniment of a mentor are truly essential to students as to the rising generation so that they can develop in themselves independently the skills of self-determination, professional self-orientation and self-development.

Materials and methods

In the process of studying the issue of professional socialization of youth there were applied a range of different materials of different authors so as to allude to their works while research. In this part we discovered that socialization includes three interrelated processes: general socialization, professional-role socialization (a person's mastery of professional role functions, norms, relationships), professionalization (a certain degree of mastering a professional activity, specialty, professional skill). Some researchers attribute general socialization to the primary socialization, which an individual undergoes in childhood and as a result becomes a member of society. Secondary socialization implies that an already socialized individual is included in new sectors of the objective world, in this regard, secondary socialization acts as "the acquisition of specific role knowledge, when roles are directly or indirectly related to the division of labor" [8]. The essence of socialization A.V. Mudrik reveals as follows: "Socialization is the development of a person throughout his life in interaction with the environment in the process of assimilating social norms and cultural values, as well as self-development and self-realization in the society to which he belongs" [8]. In this regard, in solving the issue of a person's own place in society, the attitude of young people to the choice and acquisition of a profession is extremely important. Professionalism is a stage of socialization, which is a continuation of professional - role socialization. It is the result of mastering a certain skill and professionalism in practical activities. For a particular person, a profession is a socially fixed area of his possible labour actions, a source of existence and a means of personal self-realization.

Professional role socialization is a time-stretched process that consists of the following stages:

- professional guidance on a wide range of employment of people and their professions; - formation of professional intentions;
- choice of profession;
- consolidation of professional choice;
- active and conscious mastery of the profession;
- productive creative labor activity in the acquired profession;
- striving to expand their professional range through additional education;
- setting to achieve a high level of professional excellence;
- striving for promotion;
- readiness to master a related profession;

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– active development of a new profession;
– adaptation to a new profession in the event of a forced change of the previous one; – transfer of professional experience to colleagues and youth.

Another no less complex factor standing in the way of developing a system of continuous professional socialization of the younger generation is that, for objective reasons, their implementation is called upon to implement not only representatives of various levels of education (preschool, primary, secondary and higher), but also various agents of socialization (parents, employees of various institutions, representatives of the media, etc.). Among the factors complicating the solution of the posed problem, it should also be noted that the development of the theoretical foundations for the design and implementation of the above stages of the system of professional socialization of young people is carried out by teachers of various levels of education, representatives of different sciences (philosophy, sociology, cultural studies, psychology, didactics, economics, etc.) without sufficient mutual coordination.

A way out of the indicated and other difficulties in solving the problem posed, obviously, should be sought in a number of directions. First of all, on the basis of the achievements of the above and other sciences, it is necessary to determine the polytheoretical prerequisites and conceptual provisions, to design on their basis a system of professional socialization of youth. To experimentally test the effectiveness of such a system, organize educational, scientific and production complexes, which include, on the basis of autonomy, coordination and observance of the principle of unity and continuity of pedagogical and organizational actions, educational, scientific and industrial institutions. To begin the coordination of pedagogical actions, we will give a brief description of the directions of pre-labour professional socialization of young people, including the period of a person's life before the start of independent labour activity in the profession received. We hope that this characteristic will become the basis for coordinated actions of the family, educators, enterprises and members of the public in the professional specialization of the younger generation.

Professional self-determination is a person's choice of the sphere of labour activity on the basis of free expression of will; finding personal meanings in the chosen, mastered or already performed work activity, as well as finding meanings in the very process of self-determination [5]. Among the pedagogical tasks aimed at optimizing the professional self-determination of students and called by various researchers, two stand out: the development of subjectivity (including the ability to set goals, self-confidence, the level of general internality, the value of one's own "I") and the development of the value sphere of the individual. At

the same time, the reverse determination is also obvious: professional self-determination has, undoubtedly, a subject-developing essence and affects the state of the value sphere of the individual.

We understand the pedagogical support of the professional self-determination of the young as a system of coordinated pedagogical activity of the subjects of an integrated educational environment, aimed at creating conditions for the development of self-knowledge, self-acceptance and self-realization of students, as well as providing assistance in solving individual problems related to professional self-determination. At the same time, the student should be perceived by the "accompanying" teacher as a potentially successful subject of his own life, an active subject of self-development, which provides him with self-confidence as a subject of future professional activity.

Literature review

In the process of research there were analysed a number of questions referring to the works of the following authors who deeply studied the issues of the professional socialization of the rising generation indifferent circumstances including family and society as well. These issues were discussed by such scientists as Golovakha Y.I., Pryajnikova Y.u., Klimov Y.A., Chistyakova S.N., Dautova O.B., Mudrik A.V., Vershlovskiy S.G., Simanyuk E.E., Besedina I., Razuvayev S.G., Jukovskaya T.V., Vasilyuk F.Y., Ananyev B.G., Baldwin A.L., Dweck C.S., Florence M., Giddings F.H., Hurrelman K., Mead M., Meloni J., to works of whom we alluded while our research.

Results

The main results of the research revealed that the most important category when discussing the mechanisms of personality self-determination is believed to be "choice". If, in the mainstream of a socio-psychological approach, professional self-determination is presented as a process of step-by-step decision-making, through which a combination is possible between a person's preferences and the needs of society as a result of the division of labor, it is clear that every time such a decision is made for an individual is nothing more than a choice.

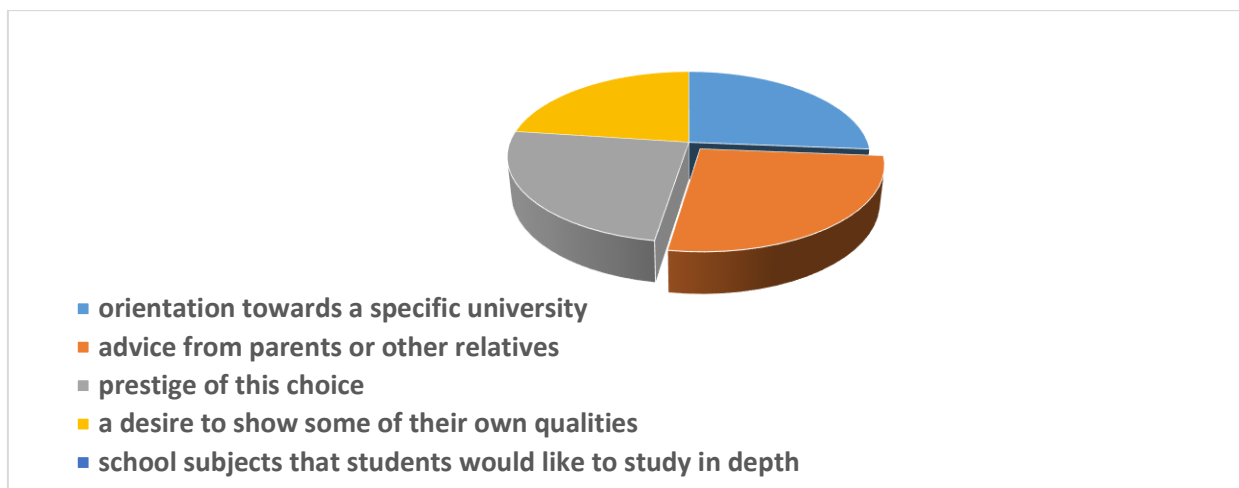
According to S.G. Vershlovsky, the continuity of education as a factor in personality development is not reduced to a mechanical combination of stages (school, university, postgraduate, etc.), does not regulate its activity from the outside, but is formed by a problem situation. It is based on the "collision" of the possibilities of choice expanding under the influence of education with the non-standard living conditions of people at different stages of their activity, in different social and professional groups [9]. S.N. Chistyakova considers choice to be the central link in the process of self-determination, while

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the choice is made on the basis of the value orientations of the individual, mastered and consolidated in situations of choice [10]. This definition can be supplemented with other data regarding university students: professional self-determination is a synthesis of personal, professional and social meaning in a student's specific choice of his

place and role in the life of society, as an act of manifestation of free will - internal freedom [11]. Other authors also point out that the ability to make decisions, the willingness to take responsibility for one's own choice and reflect on the results obtained characterize a person as a subject of professional self-determination.



Pic.1.

According to the results of our research, the priority in choosing the field of future professional activity are:

- orientation towards a specific university (or its faculty), technical school, college, a conscious desire to continue education exclusively in this educational institution (31%);
- advice from parents or other relatives (31%);
- the obvious promise or prestige of this choice (29%);
- a desire to show some of their own qualities and abilities (27%);
- school subjects that students would like to study in depth in the process of continuing their education (21%).

In the works of A.G. Asmolov, F.E. Vasilyuk et al., The choice is interpreted as an individual strategy of the subject, aimed at transforming an uncertain significant situation and consisting in "designing" or identifying alternatives, criteria for their assessment and preference for one of them and its concretization as a future goal of life. F.E. Vasilyuk writes: "A person chooses not one of two objects or even motives. He chooses himself. The choice is made by the personality, forms it" [12]. It is generally recognized that the ability to make choices and be responsible for them is inherent in the psychologically mature, autonomous personality.

One cannot but mention the phenomenon of youth infantilism, which is recorded by modern research, which consists in flight from choice and decision-making in general. Commentators of this

phenomenon are inclined to explain it by the unwillingness of young people to bear the burden of responsibility for their actions and life in general. It is obvious that teaching students to make a choice, to be responsible for it, literally organizing the training of the ability to consciously choose, while providing everyone with the conditions for exercising the right to choose, expanding the range of objects of choice - a separate task in the pedagogical support of students' professional self-determination. It is also apparent that the choice should not be imposed, it can only be based on a person's voluntary decision. Correct help of the teacher to students is needed in acquiring the experience of choice - their own or on the basis of observation, gaining knowledge about making a choice by others, in the choice of cultural meanings, types of activities, leisure content, etc. Such assistance may be the best precisely in the conditions of a multi-level educational complex in view of its multifunctionality and multi-subject nature, significantly expanding the professional and cultural context of professional socialization and self-determination of students.

Discussions

One of the most important components of the process of implementing profile education is psychological and pedagogical support for the process of self-determination of students [13]. Psychological and pedagogical support is understood by us as assistance to the formation of a personality capable of making an independent and conscious decision about

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choosing a life and professional strategy through the implementation of a personality-oriented approach to learning. The system of psychological and pedagogical support includes the interaction of teachers and psychologists at the pedagogical councils of the school, the organization and conduct of psychological and pedagogical consultations, psychological classroom hours with students, a psychological lecture hall for parents of students, etc. Psychological and pedagogical support is provided to students at all levels of education and consists in a consistent joint solution of problems that arise in students at a given age stage of their development in relation to the process of self-determination.

Achievement of the goal is closely related to the creation of conditions for socialization and professional and personal formation of student youth, consisting in the development of personality in the process of receiving general education and ensuring its readiness for competent performance of professional activity. At the same time, a very important psychological and pedagogical aspect is the optimal ratio of the personal, social and professional development of future specialists. In this regard, in solving the issue of a person's own place in society, the value attitude of young people to the choice and acquisition of a profession is extremely important. For a person can determine and assert his place and role in the transformation of society only through his work associated with a particular specialty. Professionalism is a stage of socialization, which is a continuation of professional - role socialization. It is the result of mastering a certain skill and professionalism in practical activities. For a particular person, a profession is a socially fixed area of his possible labor actions, a source of existence and a means of personal self-realization.

Conclusion

Providing the individual with the freedom to choose the content and level of education, ensuring the

variability and flexibility of educational programs, the multi-level educational system enables a person to find the most acceptable way in terms of duration and end result to obtain a particular profession and qualification. Such a system presupposes preferential conditions for graduates upon admission to a university, allows a student to interrupt their studies at any stage, having received completed education in 1-2 profiles. At the same time, a situation of choice that constantly confronts a student when moving from one level to another, competitive selection when entering a higher level stimulates the development of motivation, creativity and professional self-awareness of students.

The possibility of choosing the level of professional education and its trajectory, methods of educational activity, forms of control of educational results, forms of independent work also contribute to the development of these personal properties, but most importantly, the opportunity and the need for choice intensify the development of students' self-awareness. Professional self-awareness is considered a system-forming psychological substructure of a specialist's personality and a leading one. a condition for professional development, and the development of a person's professional self-awareness is the central determinant of her professional self-determination.

The efforts of the teaching staff of vocational educational institutions should be aimed at ensuring the professional stability of students, at actively mastering the profession they receive, at ensuring the creative return of young specialists from the first days of their independent production activity. For further professional socialization, the collectives of production institutions are called upon to create conditions for the creative self-development of young specialists, to support them in achieving professional excellence and subsequent professionalization.

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DOES BACTERIAL VAGINOSIS CAUSE INFLAMMATORY DISEASE OF THE PELVIS ORGANS?

Abstract: As it is known, pelvic inflammatory disease (PID), infection and inflammation of the female genital tract, lead to serious reproductive diseases, including infertility and ectopic pregnancy. This article discusses issues related to bacterial vaginosis and its relationship with pelvic inflammatory disease, as well as with a number of other sexually transmitted infections. The topic of this research was studied on the basis of the methods and analyzes of foreign scientists-specialists, given in the article.

Key words: bacterial vaginosis (BV), pelvic inflammatory disease (PID), endometritis, sexually transmitted infections (STIs), chlamydia infections, gonococcal infections, lactobacilli.

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ВЫЗЫВАЕТ ЛИ БАКТЕРИАЛЬНЫЙ ВАГИНОЗ ВОСПАЛИТЕЛЬНОЕ ЗАБОЛЕВАНИЕ ОРГАНОВ МАЛОГО ТАЗА?

Аннотация: Как известно, воспалительные заболевания органов малого таза (ВЗОМТ), инфекция и воспаление женских половых путей, приводят к серьезным репродуктивным заболеваниям, включая бесплодие и внематочную беременность. Данная статья рассматривает вопросы, касающиеся бактериального вагиноза и его связь с воспалительным заболеванием органов малого таза, а также с рядом других инфекций, передаваемых половым путем. Тема данного исследования изучена на основе методов и анализов зарубежных ученых-специалистов, приведенные в статье.

Ключевые слова: бактериальный вагиноз (БВ), воспалительное заболевание органов малого таза (ВЗОМТ), эндометрит, инфекции, передающиеся половым путем (ИППП), хламидийные инфекции, гонококковые инфекции, лактобациллы.

Введение

Бактериальный вагиноз (БВ) - это сложное изменение микрофлоры влагалища, которое связано с ВЗОМТ. Роль БВ в этиологии и патогенезе ВЗОМТ недостаточно изучена. Наша

цель состояла в том, чтобы тщательно изучить данные, касающиеся взаимосвязи между БВ и ВЗОМТ. Несколько исследований обнаружили связь между БВ и цервицитом, эндометритом и сальпингитом. Кроме того, похоже, что некоторые

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организмы, ассоциированные с БВ, связаны с ВЗОМТ, а другие - нет. Однако исследований, демонстрирующих независимую связь между БВ-ассоциированными организмами и ВЗОМТ, немного. Кроме того, причинно-следственная связь между БВ и ВЗОМТ не установлена. Необходимы проспективные исследования для дальнейшего определения роли БВ в ВЗОМТ, с особым вниманием к отдельным БВ-ассоциированным организмам.

Воспалительные заболевания органов малого таза (ВЗОМТ) - это инфекция и воспаление верхних отделов половых путей женщины, включая трубы и яичники (сальпингит) и слизистую оболочку матки (эндометрит), которые могут вызвать серьезные репродуктивные последствия, включая бесплодие, хроническую тазовую боль и внематочную беременность. К сожалению, диагностика ВЗОМТ часто затруднена, поскольку признаки и симптомы различаются, могут быть легкими или отсутствовать, и, как правило, основаны на клинических данных. Таким образом, многим женщинам диагноз может не диагностироваться. Воспалительное заболевание тазовых органов обычно возникает, когда микроорганизмы поднимаются из нижних отделов половых путей в верхние отделы половых путей. В этиологию ВЗОМТ вовлечены различные организмы, включая гонорея, хламидиоз, микоплазма, а также анаэробные и аэробные бактерии, обычно связанные с «бактериальным вагинозом» (БВ). Хотя хламидийные и гонококковые инфекции верхних половых путей изучались, в целом, этиология и патогенез нехламидийных и негонококковых ВЗОМТ до конца не изучены.

Состояние БВ характеризуется дисбалансом микрофлоры влагалища и возникает, когда концентрация лактобацилл, продуцирующих перекись водорода, снижается и они замещаются анаэробными и факультативными аэробными бактериями, включая микоплазму. Распространенность заболевания широко варьируется, по сообщениям от 7% до 51% в зависимости от популяции пациентов. Бактериальный вагиноз и БВ-ассоциированные микроорганизмы были идентифицированы среди женщин с цервицитом и ВЗОМТ. Однако роль БВ как этиологической причины ВЗОМТ до конца не изучена. Основная цель этого исследования состояла в том, чтобы всесторонне проанализировать данные о взаимосвязи между БВ, ВЗОМТ и последствиями после ВЗОМТ. Мы дополнительно описываем методологические проблемы исследования БВ и ВЗОМТ, включая разнообразие микробной этиологии и диагнозов.

МЕТОДЫ

Наш первичный поиск литературы проводился для выявления оригинальных

научных статей с 1950 по 2012 год, в которых изучалась роль БВ в ВЗОМТ. Термин «бактериальный вагиноз» был объединен с «воспалительным заболеванием органов малого таза». Всего получено 210 статей. Дополнительные поиски проводились с использованием терминов «бактериальный вагиноз» и «эндометрит», «инфекция верхних отделов половых путей» или «сальпингит». Исследования были рассмотрены на предмет актуальности и в дальнейшем ограничены определенными исследованиями. Дополнительные статьи были идентифицированы с помощью списков библиографии с ссылками. Наконец, были исключены исследования среди беременных женщин, исследования после аборт, истории болезни, исследования среди женщин, зараженными ВИЧ и обзорные статьи. В результате было получено 17 исследований, в которых изучалась связь между БВ и ВЗОМТ.

БВ В НИЖНЕМ ПОЛОВОМ ПУТИ

Возможность того, что БВ передается половым путем и связан с цервицитом, предполагает потенциальную роль БВ при ВЗОМТ, поскольку микробы, инфицирующие шейку матки, могут подниматься в верхние отделы половых путей. Марраццо и другие ученые в исследовании 424 женщин с БВ обнаружили, что у 15% был цервицит. Кроме того, цервицит был связан с факторами, которые отличались от других заболеваний, передающихся половым путем (ЗППП), но соответствовали факторам риска БВ, включая отсутствие продуцирующих H2O2 лактобацилл. Точно так же исследование 100 женщин показало, что БВ и цервицит в значительной степени связаны с уменьшением количества видов лактобацилл. Однако это исследование не смогло напрямую связать БВ с цервицитом. В исследовании 297 женщин, посещавших клинику ЗППП, цервицит был связан с БВ.

БВ и ВЗОМТ

Бактериальный вагиноз-ассоциированные бактерии и микоплазма, как было показано, вызывают повреждение яйцевода. У людей было обнаружено, что БВ ассоциирован с эндометритом и сальпингитом. Таким образом есть возможная роль БВ в ВЗОМТ. Тем не менее, микробы, такие как гонорея и трихомониаз, часто коинфицируют пациентов с БВ, как было показано, увеличивают риск возникновения гонококковой и хламидийной инфекции. Лактобациллы производят продукты, включая молочную кислоту и бактериоцины, что предполагается для предотвращения избыточного бактериального роста, и поэтому важны для защиты организма от инфекций, передаваемых половым путем (ИППП). Поскольку у женщин с БВ концентрация лактобацилл снижена, они могут подвергаться повышенному риску заражения

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ИППП. Микробные продукты, связанные с бактериальным вагинозом, могут также изменять иммунитет слизистых оболочек, изменять местные цитокиновые ответы, что приводит к повышенной восприимчивости к ИППП и, возможно, к увеличению риска бактериального подъема. Эти исследования показывают, что БВ может играть прямую роль в патогенезе ИППП путем изменения иммунитета слизистых оболочек к патогенам. С другой стороны, данные последующего наблюдения за гинекологической инфекцией показывают совместное возникновение БВ и гонококковой и хламидийной инфекции, но нет связи между исходным БВ и возникшей гонококковой и хламидийной инфекцией. Таким образом, неясно, могут ли анаэробы и факультативные бактерии вызывать ВЗОМТ, способствуют ли они распространению инфекции гонореи и трихомониоза, или же они восходят как следствие инфекции гонореи и трихомониоза. Это усложняет определение временной связи между БВ и ВЗОМТ.

Мы обнаружили, что исследования, изучающие роль БВ в ВЗОМТ, были неоднородными и использовали различные определения для диагностики ВЗОМТ и БВ. Исследованию воспалительных заболеваний органов малого таза часто препятствуют методы диагностики, которые часто основываются на клинических признаках, таких как боль в области таза, и являются неспецифическими. Визуальный осмотр маточных труб с помощью лапароскопии считается золотым стандартом диагностики ВЗОМТ; однако этот метод является инвазивным, субъективным и не так широко используется. Биопсия эндометрия является альтернативой лапароскопии с чувствительностью от 70% до 89% и специфичностью от 67% до 92%. Таким образом, хотя эндометрит является хорошим маркером сальпингита, не у всех женщин с эндометритом есть заболевания маточных труб.

В нескольких исследованиях изучалась роль БВ при эндометрите или клинически подозреваемом ВЗОМТ. На сегодняшний день проведено только одно проспективное исследование. Было сообщено, что среди 1179 женщин, участвовавших в последующем исследовании гинекологических инфекций, не было увеличения риска развития вторичного ВЗОМТ или гистологического эндометрита в течение 3-летнего периода среди женщин с БВ, диагностированным после поправки на хламидиоз и гонорею. Однако острое носительство пигментированных анаэробных грамотрицательных палочек было связано с ВЗОМТ. Поскольку бактериальные колонки различаются у женщин с БВ, и вполне вероятно, что не все БВ-ассоциированные бактерии являются патогенными, это может объяснить

нулевые результаты. Фактически, дальнейший анализ в этой когорте показал, что женщины с наибольшим ростом кластера БВ-ассоциированных микроорганизмов пигментированные и непигментированные анаэробные грамотрицательные палочки были значительно более склонны к заражению. Некоторые из этих БВ-ассоциированных организмов не распознаются окрашиванием. В исследовании 117 женщин с клиническим подозрением на ВЗОМТ было обнаружено, что БВ не был независимо связан с гистологическим эндометритом. Однако анаэробные грамотрицательные палочки (*M. hominis*, *Peptostreptococcus*, *G. vaginalis* и *Mobiluncus*) были значительно связаны с эндометритом, независимо от хламидиоза и гонореи. В исследовании 278 женщин с полной гистологией эндометрии из исследования эволюции ВЗОМТ и клинического здоровья, обнаружили связь между БВ и острым эндометритом, независимым от хламидиоза и гонореи. Подобно этим исследованиям, наблюдались значимые ассоциации между дифтероидом эндометрия, грамотрицательными палочками с черным пигментом, анаэробными грамположительными кокками и острым эндометритом. Все 3 исследования были проведены в аналогичных группах населения с использованием одних и тех же критериев для диагностики БВ и эндометрита. В совокупности эти поперечные исследования неизменно показывают связь между БВ и эндометритом.

Поскольку БВ является полимикробным заболеванием и не все микробы могут быть патогенными, может быть оптимальным изучить взаимосвязь между отдельными бактериями, ассоциированными с БВ и ВЗОМТ. В исследовании 50 женщин из исследования эволюции ВЗОМТ и клинического здоровья, обнаружили, что привередливые бактерии, под названием *Leptotrichiasanguinegens amnionii* (62%), *Atopobium vaginae* (54%), *Ureaplasma urealyticum biovar 2* (32%), *Ureumaplasmapar* (32%) и БВ-ассоциированные бактерии (28%) были обычными среди женщин с негонококковым, нехламидийным эндометритом. В этом небольшом исследовании не было контрольной группы для изучения связи между этими бактериями и ВЗОМТ. Были исследованы бактериальные флотипы у 45 женщин с сальпингитом и 44 женщин контрольной группы, которые хотели перевязать маточные трубы. Бактерии не были обнаружены с помощью полимеразной цепной реакции (ПЦР) ни у одного из пациентов контрольной группы (0/44) без сальпингита, но были идентифицированы у 24% (11/45) пациентов с сальпингитом.

В целом большинство исследований с использованием разных групп пациентов и

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различных диагностических критериев показывают, что БВ часто выявляется среди женщин с ВЗОМТ. Однако поперечные исследования не могут определить, предшествовала ли патологическая флора влагалища ВЗОМТ или БВ опосредует проникновение других микробов в верхние половые пути. Таким образом, нет убедительных доказательств того, что БВ может независимо вызывать ВЗОМТ. Несколько перекрестных исследований, в которых учитывались важные факторы, влияющие на результат, обнаружили значительную связь между БВ и острым эндометритом. Однако крупное проспективное исследование не смогло подтвердить эти результаты. Необходимы дополнительные проспективные исследования, чтобы установить взаимосвязь между БВ и ВЗОМТ. Исследования должны принимать во внимание такие важные факторы, как *S. trachomatis*, *N. gonorrhoeae* и раса. Кроме того, поскольку микрофлора влагалища может изменяться со временем, забор проб следует проводить несколько раз в течение всего периода исследования. В будущих исследованиях следует сосредоточить внимание на BV-ассоциированных организмах, а не на более широком определении BV, поскольку кажется, что некоторые, но не все организмы BV являются патогенными.

РЕПРОДУКТИВНАЯ ЗАБОЛЕВАНИЯ ПОСЛЕ БВ

Хотя хламидиоз и гонорея широко изучались при ВЗОМТ, мало того, что известно о роли БВ в развитии репродуктивных осложнений после ВЗОМТ. Ни в одном исследовании не изучались напрямую бесплодие или внематочная беременность после БВ-ассоциированного ВЗОМТ. Однако ВЗОМТ вызывает повреждение фаллопиевых труб, что приводит к бесплодию трубного фактора, и несколько исследований показали, что БВ ассоциируется с трубным бесплодием. Поскольку большинство исследований было проведено среди женщин, подвергшихся экстракорпоральному оплодотворению, их нельзя обобщить. Тем не менее, кажется, существует связь между БВ и бесплодием трубного фактора, хотя временность не может быть определена. Проспективные исследования среди женщин с ВЗОМТ, ассоциированными с БВ, необходимы для определения этой взаимосвязи.

МИКРОБИОЛОГИЧЕСКАЯ ЭТИОЛОГИЯ И ДИАГНОСТИКА БВ

Варибельность или отсутствие симптомов вместе с разнообразием микробиоты влагалища у женщин с БВ создают трудности в диагностике БВ. В клинической практике некоторые критерии являются золотым стандартом диагностики БВ. Для положительного диагноза БВ по критериям

исследователя Амзеля необходимы 3 из следующих 4 критериев: (1) однородные жидкие белые выделения; (2) наличие ключевых клеток при микроскопическом исследовании; (3) уровень pH выше 4,5; и (4) положительный «тест на запах». Альтернативой, обычно используемой в исследованиях, является окраска по критериям исследователя Грама, интерпретируемая с использованием относительной концентрации лактобацилл, грамотрицательных и грамположительных палочек и изогнутых грамотрицательных палочек (*Mobiluncus*). Окрашивание по Граму отличается высокой надежностью и воспроизводимостью и хорошо коррелирует с клиническими признаками. Однако для этого требуется высококвалифицированный персонал, и, хотя это золотой стандарт научных исследований, он обычно не используется в клинической практике. Кроме того, этот метод не позволяет обнаруживать организмы, которые нельзя окрашивать по Граму, такие как уреоплазмы и микоплазмы.

Ограничения клинически диагностированного БВ привели к поиску других методов диагностики. Молекулярные методы открывают новые возможности для диагностики БВ. Независимые от культивирования исследования с использованием ПЦР, амплифицированной из вагинальных мазков, выявили ряд новых бактерий, связанных с БВ. Было обнаружено, что ПЦР-обнаружение комбинации БВ или фило типа имело чувствительность 99% и специфичность 89% по сравнению с критериями исследователя Амзеля, а также чувствительность 96% и специфичность 94%. В этом исследовании *G. vaginalis* был плохим предиктором БВ, потому что он также часто обнаруживался у женщин без БВ. Это говорит о том, что ПЦР-обнаружение или более из этих требовательных бактерий может быть лучшим предиктором БВ по сравнению с критериями Амзеля. Тем не менее, молекулярные методы могут помочь в идентификации и лучшем понимании вагинальных сообществ, связанных с БВ. Поскольку воспалительные реакции различаются в зависимости от присутствующих микробов, эти методы могут выявить подгруппы женщин с самым высоким риском воспаления верхних отделов половых путей.

ВЫВОДЫ

Бактериальный вагиноз - распространенное и сложное заболевание, которое остается малоизученным. Исследования показывают, что БВ может играть роль в серьезных репродуктивных осложнениях. Установлено, что бактериальный вагиноз связан с цервицитом, эндометритом, сальпингитом и бесплодием по причине трубного фактора. Тем не менее, некоторые факторы ограничивают текущие

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исследования, изучающие роль БВ в ВЗОМТ и последствиях для репродуктивного тракта, и должны быть учтены при планировании будущих исследований. Во-первых, исследования носили в основном кросс-секционный характер, и лишь немногие из них контролировали другие ИППП, что затрудняет определение того, может ли БВ независимо вызывать ВЗОМТ или ВЗОМТ-ассоциированные последствия. Во-вторых, поскольку БВ является состоянием не одного патогена, а сложным изменением вагинальной экосистемы, необходимы исследования с использованием молекулярных методов для обнаружения отдельных бактерий, ассоциированных с БВ, для дальнейшего определения взаимосвязи между БВ и отдаленными последствиями. Наконец, поскольку признаки и симптомы ВЗОМТ и БВ широко

различаются и часто протекают бессимптомно, необходимы более точные маркеры обоих. Клинически диагностированный БВ может пропускать некоторые потенциально патогенные микробы, а молекулярные методы дороги и пока не используются в клинических условиях. Бактериальный вагиноз часто встречается у женщин с ВЗОМТ. Однако существует только одно проспективное исследование, которое не подтвердило эту взаимосвязь. Необходимы дополнительные проспективные исследования, чтобы определить, могут ли БВ-ассоциированные организмы независимо вызывать ВЗОМТ. Хотя кажется, что БВ ассоциируется с бесплодием, временность никогда не определялась. Кроме того, бесплодие никогда не исследовалось после БВ-ассоциированного ВЗОМТ.

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FACTORS RELATED TO THE EFFICIENCY OF TREATMENT BY A DOCTOR-DERMATOVENEROLOGIST AND THE RECOMMENDED TREATMENT OF GONORRHEA

Abstract: This article examines issues related to sexually transmitted diseases in general and sexually transmitted infections in particular based on the study of issues related to gonorrhoea and gonococcal infection. The article also examines the factors that relate to the method of effective treatment of gonorrhoea, in which the knowledge and awareness of the doctor about the recommended treatment regimen for human infectious disease caused by gonococcus plays an important role.

Key words: sexually transmitted diseases, sexually transmitted infections (STIs), gonorrhoea, gonococcal infection, recommendations, treatment regimen.

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ФАКТОРЫ, СВЯЗАННЫЕ С ЭФФЕКТИВНОСТЬЮ ЛЕЧЕНИЯ ВРАЧА-ДЕРМАТОВЕНЕРОЛОГА И РЕКОМЕНДУЕМОЙ СХЕМЫ ЛЕЧЕНИЯ ГОНОРРЕИ

Аннотация: Данная статья рассматривает вопросы, связанные с венерическими заболеваниями в целом и инфекциями, передающимися половым путем в частности на основе изучения вопросов, касающихся гонорреи и гонококковой инфекции. Также в статье изучаются факторы, которые относятся к методике эффективного лечения гонорреи, в чем важную роль играет знание и осведомленность врача о рекомендуемой схеме лечения инфекционного заболевания человека, вызываемое гонококком.

Ключевые слова: венерические заболевания, инфекции, передающиеся половым путем (ИППП), гоноррея, гонококковая инфекция, рекомендации, схема лечения.

Введение

Как известно, венерические заболевания – это бактериальные или вирусные инфекции, передающиеся как половым, так и не половым путём. Как правило они поражают половые

органы человека, но нередко провоцируют перебои в работе сердца, лёгких, нервной системы. Подобные болезни известны с давних времён, античные прародители медицины Гален и Асклепий безуспешно пытались создать лекарства

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от венерических заболеваний, описывая похожие симптомы в своих трудах. Само название «венерический» происходит от латинского слова «венус», то есть «любовь» или богиня любви Венера. Ежедневно более одного миллиона человек приобретает инфекцию, передаваемую половым путём. По оценкам ВОЗ ежегодно более 500 миллионов человек заболевает одной из четырех болезней, передаваемых половым путём: хламидиозом, гонореей, сифилисом и трихомониазом. Более 530 миллионов человек имеет вирус, вызывающий генитальный герпес. Более 290 миллионов женщин имеет инфекцию, вызванную вирусом папилломы человека. Большинство инфекций, передаваемых половым путём, протекает бессимптомно. Некоторые венерические заболевания могут повышать риск приобретения ВИЧ в три и более раз. Инфекции, передающиеся половым путём, могут передаваться от матери ребёнку. Лекарственная устойчивость, в частности, гонореи представляет значительную угрозу для уменьшения воздействия инфекций, передаваемых половым путём во всём мире.

Гонорея – инфекционное заболевание человека, вызываемое гонококком.[1] Гонококковая инфекция – одно из наиболее древних и распространенных инфекций, передающихся половым путем. Еще Гиппократ описывал обильные гнойные выделения из уретры. Позже знаменитый врач Гален назвал это заболевание гонореей, что означает «истечение семени».[2] Гонорея, известная также как гонококк, была распознана в качестве причины выделений из мочеиспускательного канала у мужчин и из влагалища у женщин с момента ее открытия в 1879 году. В большинстве случаев гонококки поражают лишь слизистую оболочку мочевых путей и половых органов. У мужчин поражение мочевых путей и половых органов обычно проявляется клинически, а уретрит развивается более чем в 80% случаев. У женщин гонорея чаще поражает шейку матки и может вызвать появление выделений, однако в 50% случаев заболевание протекает бессимптомно.[3]

Очевидно, что гонорея является одной из наиболее распространенных инфекций, передаваемых половым путем (ИППП). Ежегодно в мире регистрируется около 60 млн случаев этого заболевания, однако среди ИППП гонорея занимает далеко не первое место. Особенности гонорейной инфекции (патоморфоз) в настоящее время, возможно, отчасти обусловлены бесконтрольным употреблением антибиотиков. Редко встречается свежая острая гонорея; в основном заболевание протекает подостро или торпидно, переходя в хроническую форму и выявляясь случайно при медицинских осмотрах; при обнаружении гонореи можно

диагностировать и другую урогенитальную инфекцию, например трихомониаз или хламидиоз. Участились случаи резистентности гонококковой инфекции к антибактериальным препаратам, особенно к антибиотикам пенициллинового ряда и др.

Рекомендуемая схема лечения неосложненной гонореи со временем изменилась из-за появления устойчивости к противомикробным препаратам. Мы оценили необходимость знания врачом рекомендаций по лечению неосложненной урогенитальной гонореи у подростков и взрослых с использованием двойной терапии цефтриаксона и азитромицина.

Методы

Мы проанализировали данные опроса от 1357 врачей первичного звена, практикующих не менее 3 лет, которые проводили скрининг, диагностику и лечение венерических заболеваний или болезней, передающихся половым путем. Полученные результаты

Среди вариантов лечения одним цефтриаксоном, одним азитромицином, обоими этими препаратами или спектиномицином плюс левофлоксацин, 64% врачей правильно предпочли цефтриаксон плюс азитромицин. Знания о рекомендуемой двойной терапии уменьшались с увеличением годов практики, от 74% среди врачей с 3–9 годами практики до 57% среди тех, кто практикует 24 года. Знания о двойной терапии также снижались с повышением социально-экономического статуса пациентов.

Опрос включал вопросы по консультированию, скринингу, алкоголю, физической активности, гипертонии, вирусу папилломы человека, вирусу иммунодефицита человека и заболеваний, передающихся половым путем (ЗППП). Обследование также содержало стандартные общие и демографические вопросы, которые включаются ежегодно, например, источники, используемые для продолжения медицинского образования. Группа в основном набиралась на рабочем месте у врачей (84%), а также через онлайн методы опроса с дополнительной проверкой на рабочем месте (16%).

Анализ

Основным результатом, представлявшим интерес, было знание медработником рекомендованной схемы лечения гонореи. Это было измерено с помощью вопроса «Какая из следующих схем является лучшим вариантом в случае 18-летнего мужчины с гонококковым уретритом?» Вариантами ответа были:

- однократная доза цефтриаксона 250 мг внутримышечно

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- однократная доза азитромицина 1,0 г перорально
- оба из них
- однократная доза спектиномицина 2,0 г внутримышечно плюс левофлоксацин 500 мг перорально в течение 7 дней

Другие проанализированные переменные включали специальность врача; пол врача; годы практики; возраст врача; количество практикующих врачей; регион практики; оценка финансового положения большинства пациентов в практике респондента и др.

Полученные результаты

Средний возраст респондентов составлял 45 лет, а средняя длительность практики - 15 лет. В целом, 64% врачей сообщили, что лучшим вариантом лечения 18-летнего мужчины с гонококковым уретритом была двойная терапия цефтриаксоном и азитромицином. Это колебалось от 60% акушеров-гинекологов до 69% врачей семейной медицины. Доля пациентов, сообщивших о монотерапии цефтриаксоном, составила 19%. Доля не уверенных в этом составила 13% для акушеров-гинекологов по сравнению с 2–6% для других специальностей.

Знания о рекомендуемой двойной терапии неосложненной урогенитальной гонорее уменьшались с увеличением годов практики: от 74% среди врачей со стажем от трех до девяти лет до 57% среди врачей с опытом работы 24 года. Знания о рекомендуемой двойной терапии снижались с более высоким социально-экономическим статусом пациентов: от 72% среди врачей, оказывающих помощь пациентам в основном из бедных / ниже среднего уровня доходов, до 53% среди врачей с в основном пациентами с высоким уровнем дохода. Пол и специальность врача показали статистически значимые различия в одномерном анализе, но различия были пограничными статистически значимыми при многомерном анализе. Анализ подгруппы показал, что женщины-врачи значительно чаще, чем врачи-мужчины, сообщали о двойной терапии в подгруппе семейной медицины и внутренней медицины, но не в подгруппе педиатра и акушера-гинеколога.

Обсуждение

Наши результаты показывают, что знания врачей о рекомендуемой схеме лечения неосложненной урогенитальной гонорее с использованием двойной терапии цефтриаксоном и азитромицином снижались с увеличением годов практики врача и более высоким социально-экономическим статусом пациентов. В предыдущих исследованиях оценивалась приверженность медицинских работников рекомендациям по лечению ЗППП по лечению

гонорее. Использование цефтриаксона в сочетании с азитромицином или доксициклином увеличилось с 61% до 81%. Среди случаев гонорее, зарегистрированных в течение 6 месяцев после предупреждения о состоянии здоровья, использование цефтриаксона и азитромицина или доксициклина составило 87% в целом и 73% среди случаев, зарегистрированных частными лицами. Результаты нашего исследования согласуются с более ранними исследованиями, но мы расширяем результаты, показывая, что знания врачей первичной медико-санитарной помощи варьируются в зависимости от годов их практики, социально-экономического статуса пациентов. Наш вывод о снижении осведомленности врачей о двойной терапии гонококков при более высоком социально-экономическом статусе пациентов может быть объяснен тем фактом, что медицинские работники с пациентами с более высоким доходом, вероятно, заботятся о меньшем количестве пациентов с гонореей. Сильной стороной нашего исследования является то, что мы оценили знания врачей о рекомендуемой двойной терапии гонококков напрямую с помощью опроса, а не с использованием административных данных или медицинских записей, на которые может повлиять полнота документации или сбор данных. Еще одним преимуществом является то, что мы исключили врачей, которые обычно не предоставляют услуги по лечению заболеваний, передающихся половым путем (ЗППП). Есть потенциальные ограничения. Во-первых, сценарий нашего случая был основан на лечении пациента-мужчины. Акушеры-гинекологи принимают только женщин, что может объяснить более высокую долю ответивших, что они не уверены в схеме лечения. Во-вторых, образец исследования не может быть репрезентативным для всех врачей первичной помощи. Маловероятно, что тенденции, наблюдаемые с увеличением количества годов практики и социально-экономического статуса, которые сохранялись даже после учета нескольких потенциальных смешивающих переменных, можно объяснить систематической ошибкой выборки. В-третьих, мы не оценивали знания практикующих медсестер и помощников врача, которые лечат пациентов с гонореей. В-четвертых, мы не выяснили, что врачи предпочитают лечить пациентов с использованием альтернативных схем второй линии (например, цефиксима вместо цефтриаксона). В-пятых, обнадеживает то, что две трети врачей поняли, что комбинация цефтриаксона и азитромицина предпочтительнее любого другого препарата по отдельности. Однако выбор этой схемы среди предоставленных ограниченных вариантов ответа не гарантирует ее использования у такой же доли пациентов,

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поскольку мы не оценивали другие недавно рекомендованные схемы, такие как цефтриаксон плюс доксициклин, или продолжающееся использование ципрофлоксацина или других фторхинолонов. Наконец, мы спросили о предпочтениях врачей, которые не всегда могут быть реализованы на практике.

Наше исследование помогает выяснить факторы, связанные со знанием и осведомленности врача с рекомендуемой схемой лечения гонореи. Потенциальные препятствия на пути к соблюдению рекомендаций включают в себя неосведомленность, незнание, отсутствие согласия и инерцию предыдущей практики. Необходимы дальнейшие исследования для выявления основных причин различий в знаниях врачей с годами практики, социально-экономического статуса пациентов, включая понимание причин двойной терапии и детерминант выбора врача. Также необходимы исследования по использованию других схем лечения гонореи. Из-за опасений по поводу возникновения устойчивости к противомикробным препаратам важно улучшить понимание и уровень осведомленности врача и соблюдение режима двойной терапии гонореи.

Выводы

Знания о рекомендуемой схеме лечения гонореи уменьшались с увеличением лет практики и более высоким социально-экономическим статусом пациентов.

Гонорея является вторым заболеванием, которое в настоящее время регистрируется во многих государствах, вызывая угрозу репродуктивному здоровью населения. По оценкам, ежегодно регистрируется 820 000 новых гонококковых инфекций. Рекомендуемая схема лечения гонококковой инфекции первого ряда со временем изменилась из-за появления устойчивости к противомикробным препаратам. С 1993 по 2010 годы большинство врачей-дерматовенерологов рекомендовали цефтриаксон, цефиксим или ципрофлоксацин, офлоксацин или левофлоксацин в качестве первичной схемы для лечения неосложненных гонококковых инфекций шейки матки, уретры или прямой кишки у подростков и взрослых. Если не исключена хламидийная инфекция, при лечении хламидиоза рекомендовалось применение азитромицина или доксициклина. В 2012 году двойная терапия цефтриаксоном плюс азитромицин или доксициклин рекомендовалась независимо от результатов теста на хламидиоз (цефиксим больше не рекомендовался в качестве первичной схемы рекомендаций). С 5 июня 2015 года стала рекомендоваться двойная терапия цефтриаксоном и азитромицином. В контексте рекомендаций по ведению неосложненной гонореи за последнее десятилетие мы оценили знания врачей первичной медико-санитарной помощи о рекомендуемой схеме лечения неосложненной урогенитальной гонореи с использованием двойной терапии цефтриаксоном и азитромицином в отличие от монотерапии цефтриаксоном или азитромицином.

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EPIDERMAL PARASITIC SKIN DISEASES AS A NEGLECTED CATEGORY OF DISEASES RELATED TO POVERTY

Abstract: Epidermal parasitic skin diseases (EPCD) are a heterogeneous category of infectious skin diseases in which the interaction of the parasite and the host is limited to the top layer of the skin. The six main EPCDs are scabies, head lice (brain, body and pubis), tungiosis, and cutaneous larva migrans associated with hookworm disease. This article summarizes current knowledge about EPCD and shows that these diseases are widespread, polyparasitism is widespread, and significant primary and secondary morbidity occurs, as well as the fact that poverty contributes to the presence of reservoirs for animals, ensures constant transmission, promotes the use of atypical methods spread of infectious agents and increases the likelihood of infection. This leads to an extremely high prevalence and intensity of EPC infection among populations with limited resources.

Key words: epidermal parasitic skin diseases (EPCD), scabies, pediculosis, tungiosis, chronic skin larva migrans (CMCL).

Language: Russian

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ЭПИДЕРМАЛЬНЫЕ ПАЗАРИТАРНЫЕ КОЖНЫЕ ЗАБОЛЕВАНИЯ КАК ПРЕНЕБРЕГАЕМАЯ КАТЕГОРИЯ БОЛЕЗНЕЙ, СВЯЗАННЫХ С БЕДНОСТЬЮ

Аннотация: Эпидермальные паразитарные кожные заболевания (ЭПКЗ) представляют собой гетерогенную категорию инфекционных кожных заболеваний, при которых взаимодействие паразита и хозяина ограничивается верхним слоем кожи. Шесть основных ЭПКЗ - это чесотка, педикулез (головной мозг, тело и лобок), тунгиоз и кожная мигрирующая личинка, связанная с анкилостомозом. В данной статье обобщаются современные знания об ЭПКЗ и показывается, что эти заболевания широко распространены, широко распространен и полипаразитизм, и возникает значительная первичная и вторичная заболеваемость, а также то, что бедность способствует наличию резервуаров для животных, обеспечивает постоянную передачу, способствует использованию нетипичных методов распространения инфекционных агентов и увеличивает вероятность заражения. Это приводит к чрезвычайно высокой распространенности и интенсивности заражения ЭПКЗ среди населения с ограниченными ресурсами.

Ключевые слова: эпидермальные паразитарные кожные заболевания (ЭПКЗ), чесотка, педикулез, тунгиоз, хроническая мигрирующая кожная личинка (ХМКЛ).

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Введение

Известно, что эпидермальные паразитарные кожные заболевания (ЭПКЗ) распространены во всем мире и известны с древних времен. Несмотря на значительное бремя, вызываемое ЭПКЗ, эта категория паразитарных заболеваний широко игнорировалась научным сообществом и поставщиками медицинских услуг. Это подтверждается тем фактом, что в недавнем издании справочника по борьбе с инфекционными заболеваниями, справочника по вмешательствам в области общественного здравоохранения, упоминается только один вид ЭПКЗ (чесотка). Особое значение имеют шесть видов ЭПКЗ: чесотка, педикулез (головные вши, тельца и лобковые вши), тунгиоз (болезнь песчаных блох) и хроническая мигрирующая кожная личинка (ХМКЛ). Они либо распространены в условиях с ограниченными ресурсами, либо связаны с серьезными заболеваниями. В этой статье мы сосредотачиваемся на этих заболеваниях, обобщаем существующие знания об эпидемиологии и заболеваемости в условиях ограниченных ресурсов и сосредотачиваемся на взаимодействии между ЭПКЗ и бедностью. Отсутствие доступа к медицинской помощи и неправильное поведение при обращении за медицинской помощью - вот причины, по которым ЭПКЗ часто прогрессирует без лечения и почему в группах населения с ограниченными ресурсами тяжелая заболеваемость является обычным явлением. Продолжающаяся неконтролируемая урбанизация во многих развивающихся странах делает вероятным, что ЭПКЗ останется главным паразитарным заболеванием для людей, живущих в крайней нищете. Термин «малообеспеченное население» применяется для обозначения типичной ситуации с ограниченными ресурсами в странах с низким уровнем доходов, в отличие от социально-экономических характеристик богатых сообществ в странах с высоким уровнем доходов. Выражения «страна с жарким климатом» и «страна с холодным климатом» используются, когда мы говорим о климатических ограничениях на возникновение ЭПКЗ.

В качестве источника ссылок использовались «паразитарные кожные заболевания», «чесотка», «педикулез», «тунгиоз», «кожная мигрирующая личинка» и их синонимы. Обыски производились без ограничения по времени. Кроме того, мы использовали ссылки, полученные авторами во время предыдущей работы над ЭПКЗ. Были рассмотрены и проанализированы статьи на английском, французском, португальском и испанском языках, где были предоставлены количественные данные, дизайн исследования

был продуман, и исследование проводилось в условиях ограниченных ресурсов в стране с низким уровнем доходов. Из 95 статей, определенных по этим критериям, 50 были отобраны и процитированы в списке литературы.

Шесть основных видов ЭПКЗ значительно различаются по своим биологическим и эпидемиологическим характеристикам и жизненным циклам. Чесотка вызывается клещом (*Sarcoptes scabiei*), педикулез - вшами, тунгиоз - песчаными блохами (*Tunga Penetrans*) и хроническая мигрирующая кожная личинка (ХМКЛ), связанная с анкилостомозом - личинками нематод. Несмотря на то, что ХМКЛ и тунгиоз являются самопроизвольными заболеваниями, паразиты могут сохраняться в течение нескольких месяцев и вызывать долгосрочные последствия. Чесоточный зудень и вши непрерывно размножаются и вызывают постоянные симптомы, если заражение остается без лечения. При ЭПКЗ взаимодействия паразитов с хозяином ограничиваются роговым слоем, верхним слоем эпидермиса, в котором эктопаразиты частично или полностью завершают свой жизненный цикл. При других паразитарных кожных заболеваниях, таких как лейшманиоз, лоаз или онхоцеркоз, также поражаются другие слои дермы. В то время как чесоточный зудень и вши завершают свой жизненный цикл внутри или на поверхности эпидермиса, блохе проникающей нужен хозяин только для производства яиц, и она завершает другие стадии своего развития вне хозяина. Напротив, личинки анкилостомы животных, которые проникли в эпидермис, оказываются в биологическом тупике и не могут развиваться дальше.

Эпидемиология

Чесотка, педикулез на голове и лобковый педикулез встречаются во всем мире, но педикулез корпорический встречается только в странах с холодным климатом и практически отсутствует в тропиках. Хроническая мигрирующая кожная личинка (ХМКЛ) очень редко встречается в промышленно развитых частях мира, но повсеместно присутствует в развивающихся странах. Тунгиоз географически ограничен Карибским регионом, странами Африки к югу от Сахары и Южной Америкой. За исключением эпидемических обстоятельств, данные об ЭПКЗ не регистрируются, поэтому нет достоверной информации о распространении болезней в мире, изменениях заболеваемости во времени и пространственном распределении в эндемичных районах. Предполагается, что во всем мире существует 300 миллионов случаев чесотки,

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и гораздо больше людей подвергаются риску в любой момент времени.

В плохих условиях практически все люди постоянно подвергаются риску заражения головными вшами, то есть несколько миллиардов человек во всем мире. Поскольку тунгиоз и ХМКЛ ограничены в климатических и пространственных условиях, число людей, подвергающихся риску, меньше, но все же достаточно, чтобы заслужить внимание. Распространение ЭПКЗ нерегулярно, а заболеваемость и распространенность варьируются в зависимости от исследуемой территории и населения. Например, исследование в городском сообществе Бангладеш с ограниченными ресурсами показало, что практически все дети в возрасте до 6 лет заболевают чесоткой в течение 12 месяцев. В сельской деревне в Объединенной Республике Танзания общая распространенность составила 6%, в сельских и городских районах Бразилии 8–10% и в сельских районах Индии 13%. У египетских детей распространенность оценивалась в 5%, но в общинах австралийских аборигенов распространенность в этой возрастной группе приближалась к 50%. Из 5–9-летних детей, живущих в лагере для перемещенных лиц в Сьерра-Леоне, 86% были заражены чесоткой. Во время пика передачи распространенность тунгиоза среди детей, живущих в бедных сельских и городских общинах в Бразилии и Нигерии, достигла более 60%. Напротив, в общинах с высокими доходами в тех же странах распространенность тунгиоза ограничивается единичными случаями, которые обычно возникают, когда люди посещают местные пляжи. Ситуация аналогична для ХМКЛ, с распространенностью среди детей до 15% в сезон дождей и частотой 1,840 случаев на 10 000 человек в год. ЭПКЗ обычно демонстрирует значительные сезонные колебания встречаемости заболеваний. В тропиках циклические изменения особенно очевидны при тунгиозе и ХМКЛ; Распространенность тунгиоза наиболее высока в засушливый сезон, а ХМКЛ - в сезон дождей. Факторы, ответственные за тяжелое бремя ЭПКЗ в общинах с ограниченными ресурсами, сложны и не выяснены. Было высказано предположение, что скученность, частые перемещения населения, плохая гигиена, отсутствие доступа к медицинскому обслуживанию, неадекватное лечение, недоедание и социальные отношения способствуют высокому уровню распространения чесотки в этих условиях. Однако есть косвенные свидетельства того, что крайняя бедность и ее экономические и социальные последствия играют ключевую роль.

Тунгиоз - это парадигматический пример этой сложной сети причинно-следственных

связей. Болезнь песчаных блох представляет собой зооноз, поражающий широкий спектр животных, основными резервуарами которого являются свиньи, собаки, кошки и крысы. В условиях ограниченных ресурсов бездомные собаки и кошки являются обычным явлением, а почва часто засоряется органическими отходами. Крыс привлекает, если не собирают мусор, не удаляют сточные воды должным образом и неправильно хранят пищу. Риск заражения высок, если ноги не защищены обувью и носками либо потому, что люди не могут себе их позволить, либо если ношение обуви не является частью местных обычаев. В сельском и коренном населении внутренних районов Бразилии с ограниченными ресурсами передача блохи проникающей происходила почти исключительно внутри помещений. Жилые дома в этих местах обычно не имеют твердого пола или земля покрыта грубым бетоном или битой плиткой с множеством щелей, что обеспечивает идеальную среду обитания для развития блохи проникающей вне хозяина. В городской среде она распространяется в трюбах, где дороги и тропы не вымощены, территория засорена мусором, а дворы состоят из песка или грязи.

Атипичные пути передачи в условиях ограниченных ресурсов - еще одна эпидемиологическая характеристика ЭПКЗ. Когда белье сушится на земле, вместо использования веревок для белья, существует высокий риск заражения фекалиями собак и кошек, содержащими личинки анкилостомы. В условиях ограниченных ресурсов высокая частота поражений ХМКЛ в верхней части тела, включая лицо, вероятно, отражает этот конкретный тип передачи. Другой эпидемиологической особенностью в плохих условиях является наблюдение, что недостаточная санитария является значительным фактором риска чесотки. Мы предполагаем, что плохая санитария характерна для бедных домохозяйств и что плохая гигиена сама по себе не увеличивает вероятность заражения чесоткой. Интересно, что в сельских районах Египта высокая распространенность чесотки была связана с тем, что домохозяйства получали воду из ручного насоса, социально-экономическим статусом, а не недостаточной гигиеной. В условиях с ограниченными ресурсами чесотка обычно не является заболеванием, передаваемым половым путем, хотя это кажется обычным способом передачи в странах с высоким уровнем доходов.

Бедность также играет роль в динамике передачи головных вшей. У детей, живущих в бедных городских кварталах на северо-востоке Бразилии, уровень заражения в значительной степени зависел от дохода домохозяйства: чем

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ниже доход семьи, тем больше у ребенка случаев головных вшей за единицу времени. В странах с высоким уровнем доходов дети всех социально-экономических групп подвержены одинаковому риску заражения педикулезом. В группе населения с ограниченными ресурсами определенные группы подвергаются особенно высокому риску приобретения заболеваний и тяжелой заболеваемости. Это могут быть девочки и женщины (заражение головными вшами), дети (заражение головными вшами, чесотка, ХКМЛ, тунгиоз), пожилые люди (чесотка, тунгиоз), бездомные (чесотка, педикулез, педикулез).

Заболеваемость

Хотя заболеваемость, связанная с ЭПКЗ, значительна, систематическая оценка тяжести течения болезни все еще отсутствует. Предполагается, что ЭПКЗ может представлять собой значительную субъективную нагрузку. По патофизиологическому признаку патологию можно условно разделить на две модели: воспаление и зуд. При тунгиозе преобладающая заболеваемость является результатом сильного воспаления, окружающего очага поражения, а также вторичной бактериальной инфекции.

Суперинфекция усиливает воспалительный процесс. Стойкое воспаление и суперинфекция часто приводят к долгосрочным последствиям, т.е. вторичным заболеваниям, таким как нагноение, изъязвление, гангрена, некроз окружающих тканей, деформация и потеря ногтей, что может также привести к инвалидности.

Вши являются переносчиками целого ряда патогенных бактерий, таких как *Rickettsia prowazekii* (возбудитель эпидемического сыпного тифа), *Borrelia recurrentis* (возбудитель возвратного тифа), *Bartonella quintana* (возбудитель чумы), и могут вызывать серьезные вторичные заболевания в результате опасных для жизни инфекций. Головные вши могут пассивно переносить стафилококки, стрептококки, и они переносят их из инфицированных поражений на другие участки кожи. Заболеваемость, связанная с зудом (кожным зудом), лучше всего изучена при чесотке, поскольку это настолько частый симптом, что пациенты почти постоянно чешут свои поражения. Неоднократное расчесывание пораженного участка вызывает раздражение и обнажение кожи, создавая тем самым входные двери для патогенных бактерий.



Рис.1 Патология пятки, ассоциированная с тунгиозом

Изнурительное воздействие стойкого зуда неоднократно подчеркивалось при различных неинфекционных заболеваниях, но еще предстоит это оценить по отношению к ЭПКЗ. В нейрофизиологии известно, что хронический зуд приводит к постоянному возбуждению

специализированных волокон А и С в коже. Как следствие, соседние болевые волокна трансформируются в зудящие волокна, что в конечном итоге приводит к сенсibilизации спинномозговых нейронов. Аналогичные последствия можно ожидать и в ЭПКЗ. Поскольку

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зуд усиливается ночью, следует ожидать нарушения сна. Недавно изменения сна были подтверждены у 84% пациентов с ХМКЛ и у 72% пациентов с чесоткой. Также было показано, что тунгиоз вызывает значительные нарушения сна.

Одним из аспектов заболеваемости, которое часто пренебрегается, является психологическое воздействие ЭПКЗ. Поскольку поражения на коже можно увидеть невооруженным глазом, в случае ХМКЛ и тунгиоза даже на расстоянии, факт заражения человека эктопаразитами не остается незамеченным и может стать источником психического напряжения и страданий. Нездоровый аспект кожи при ЭПКЗ и постоянное расчесывание поражений могут повлиять на самооценку и повлиять на способность к социальной адаптации.

Контроль

Несмотря на то, что некоторые характеристики должны были вмешиваться против распространения и увеличения уровня заболевания ЭПКЗ, меры контроля предпринимались редко. Во-первых, диагностика ЭПКЗ относительно проста и обычно может быть установлена пациентом с высокой степенью уверенности. Во-вторых, пять из шести основных ЭПКЗ можно эффективно лечить с помощью местных инсектицидов, акарицидов или перорального ивермектина. В-третьих, поскольку существует значительное совпадение пространственного распределения ЭПКЗ и поскольку эти заболевания объединяются в схожие группы населения, вмешательства против различных ЭПКЗ могут проводиться одновременно. Помимо этого, меры по сокращению бедности среди уязвимых групп населения могут стать универсальным подходом к сокращению распространенности и заболеваемости ЭПКЗ, потому что эта категория болезней неразрывно связана с крайней бедностью.

Будущие цели и стратегии

Поскольку серьезные пробелы в знаниях в настоящее время затрудняют расчет глобального бремени ЭПКЗ, важно систематически оценивать частоту заболеваний и уровень заболеваемости. Это приведет к корректировке глобального бремени забытых болезней, поскольку существующие данные показывают, что EPSP оказывает более существенное влияние на здоровье, чем считалось ранее. Рассмотрение ЭПКЗ как связанного семейства инфекционных кожных заболеваний будет иметь смысл по-разному: они имеют тенденцию группироваться в одних и тех же популяциях, у них одинаковые животноводческие резервуары и пути передачи, и

для достижения прогресса в борьбе с ними необходимо устранять их комплексно.

Во-первых, следует поощрять тщательные эпидемиологические исследования. Нам срочно нужны надежные данные о пространственном распределении, заболеваемости, распространенности, сезонных колебаниях, кластеризации различных ЭПКЗ в одной и той же популяции и о факторах риска развития тяжелого заболевания. Во-вторых, необходимо сочетать клинические и эпидемиологические методы для определения первичной и вторичной заболеваемости, связанной с ЭПКЗ. Связь поражений кожи с патогенными микроорганизмами, особенно стрептококками группы А, требует углубленных исследований. Необходимо тщательно изучить возможную связь между ЭПКЗ, пиодермией и изнурительными последствиями, такими как постстрептококковый гломерулонефрит.

Поскольку ЭПКЗ неразрывно связаны с бедностью, маловероятно, что их удастся искоренить, пока люди продолжают жить в крайней бедности. Поскольку распространенность, интенсивность заражения и заболеваемость взаимосвязаны, за сокращением распространенности, вероятно, последует снижение заболеваемости. Необходимо проводить различие между разработкой мероприятий, направленных на удовлетворение потребностей бедных людей и методами их реального охвата. В случае ЭПКЗ меры контроля будут успешными только в том случае, если сообщества привержены своему участию, а члены сообщества активно участвуют в процессе планирования, реализации и выполнения.

Выводы

Эпидермальные паразитарные кожные заболевания - это больше, чем просто раздражение кожи или переносимые неприятности. Они оказывают существенное влияние на здоровье людей, живущих в крайней нищете. ЭПКЗ широко распространены, полипаразитизм является обычным явлением, а существенное первичное поведение и недостаточное поведение при обращении за медицинской помощью являются причинами, по которым ЭПКЗ часто прогрессирует без лечения.

Неравенство и пренебрежение, кажется, являются основными движущими силами, которые удерживают бремя болезней на недопустимо высоком уровне. Заинтересованные стороны в сфере здравоохранения и лица, принимающие политические решения, должны признать, что эпидермальные паразитарные кожные заболевания ослабляют здоровье и

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заслуживают гораздо большего внимания со стороны медицинских работников, чем уделялось до сих пор. Продолжающаяся неконтролируемая урбанизация во многих развивающихся странах

делает вероятным, что ЭПКЗ может остаться основным паразитарным заболеванием для людей, живущих в крайней нищете и, к сожалению, индикатором пренебрежения обществом.

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CHARACTERISTIC OF THE SCHOOL'S WORKING SYSTEM FOR CAR ACCIDENT PREVENTION

Abstract: Author tried to define what is the school's system of road accident prevention? It can be considered as the established order of the content of educational and educational activities at all its levels, including the participants and their relationship in a purposeful process. In the system of work, it is important to interact with families, schools and public organizations for the prevention of road accidents among schoolchildren.

Reducing the number of road traffic accidents is facilitated by the setting by the school of the following objectives:

- increasing the level of security of road users through improving knowledge and skills;
- improving the optimal methods of teaching correct behavior on the street-road network in general education and preschool institutions;
- improving the material and technical equipment of the training base;
- participation in the organization of large-scale propaganda work among road users.

Thus, the study allowed us to conclude that the problem of preventing road traffic accidents among schoolchildren is relevant and a large share of responsibility in creating a system of such work bears a modern school.

Key words: system, work, schoolchildren, safety, large-scale work, material equipment.

Language: English

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Introduction

All schools carry out a complex of systematic work on the prevention of child road traffic injuries and the study of traffic rules among schoolchildren. This is an obligatory part of the general educational work of an educational institution. The system of this work should involve the so-called horizontal communications (participants from the educational institution itself) and vertical communications (employees of state and public organizations involved by the school administration for extracurricular and extracurricular work). Such networking allows for preventive work not only at the school level, but also at the district, city, oblast level and even at the state level.

An example of network interaction in the school work system: System for studying traffic rules - School administration - Parents-employees of the State Traffic Safety Inspectorate.

First, let's answer the question: «What is the system of work of the school for the prevention of road accident?» It can be considered as the established order of the content of educational and educational activities at all its levels, including the participants and their relationship in a purposeful process. We can talk about the main purpose of the system, which is to ensure, in practice, a comprehensive consideration of all factors affecting the prevention and prevention of road accident, in creating the necessary conditions and mechanisms that contribute to increasing efficiency in

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the process of performing tasks in the interests of society and the state.

Efficiency can be achieved only on the basis of comprehensive work at school in different directions and with all subjects of the educational process: with teachers, students, parents, government and public organizations.

The road safety work system is aimed at developing the following personal qualities of students:

- Independence in making the right decisions;
- Being proactive in promoting the integrity of traffic rules.
- Studying the rules of the road, as an element of saving your life;
- Development of attentiveness and politeness in the relationship of road users.
- Broadening your horizons about traffic rules problems
- Fostering a negative attitude towards traffic violations

And also on the formation of students' readiness to act in extreme situations on the roadway.

In addition to the inclusion of training sessions in the educational process, a systematic and purposeful test of knowledge is required. Ideally, knowledge testing has three main functions:

- controlling, which reveals the state (presence, absence, degree of assimilation) of all types of learning outcomes.

- teaching, consisting in the ability of the teacher to organize the test in such a way that it would benefit every student.

- upbringing, consisting in teaching students to systematic work. Checking makes it possible to develop a critical attitude to their work, helps to correctly assess their strengths, fosters willpower, responsibility, hard work, etc., the ability to organize their time.

As you know, the methods of testing knowledge are considered as methods of interactive activity of the teacher and students, during which the assimilation of educational material and improvement, further formation of skills and abilities occurs.

To achieve the greatest efficiency, it is necessary to comprehensively apply knowledge testing methods, carry out their correction, which makes it possible to regularly and objectively identify the dynamics of the formation of a system of knowledge and skills of students. Each control method has its own advantages and disadvantages, area of application, none of them can be universal and the only one capable of diagnosing all aspects of the learning process. Only a correct and pedagogically expedient combination of all types contributes to the improvement of the quality of the educational process [1].

To prevent road accidents and study traffic rules in schools, resource support is used, such as:

• Stands, corners, wall newspapers on road safety in the school building.

• Visual material: board games on traffic rules; posters, illustrations, video clips on traffic rules, road signs.

• Technical means: computers with training programs, tests, traffic rules games.

• Special equipment for studying traffic rules: a mechanical model of a traffic light, a set of road signs, a diagram of a neighborhood with the designation of all streets, intersections, roads.

• Educational and methodological complex: textbooks, teaching aids, programs for the study of traffic rules, punched cards with tests for pedestrians and cyclists.

• A platform for traffic rules equipped on the school grounds.

And it is also recommended to practice in educational institutions:

• Conducting thematic matinees, rulers, contests, competitions, quizzes, etc. according to the rules of the road.

• Broad discussion in the school media of each case of violation of traffic rules by children and bring it to the attention of parents.

• Teachers of primary grades conduct daily two-three-minute reminders about observance of traffic rules, draw children's attention to weather conditions.

• Registration of a safe route for children "Home - School - Home"

• Creative association of students for the study of traffic rules (drawings, posters, essays, joint work of children with their parents, theatrical performances).

• Constant contact of the school administration with the traffic police inspector.

• Working with parents on traffic rules in various forms: meetings, conferences, joint game programs, etc. [2].

It must be remembered that the regulatory framework, documents on traffic rules are constantly changing and supplemented, therefore, it is necessary to correct the tasks for use in the classroom, especially when studying terms and concepts. Learning according to the old rules of traffic rules, which is very dangerous for the life and health of children. An example of the old rule: «When crossing the street, look to the left, and when you reach the middle, look to the right.» This rule poses a threat, because children, being on the roadway, can behave unpredictably, get scared, step to the side and get hit by a car. It is better to explain correctly this way: «Before crossing the road, stop and look in both directions, when you are convinced of safety, cross the carriageway with a quick step strictly at a right angle, constantly monitoring the situation» [3].

We also drew up a work plan for the school to prevent child road traffic injuries for the 2019-2020 academic year.

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School work plan

1. Design of a stand, a corner for road safety, prevention of road accidents involving children, school transport area. - *Before starting training.*

2. Development of a safety scheme for the route to school. - *At the first parent meeting.*

3. Conducting lessons, class hours, extracurricular activities on the subject of road safety. - *According to the school work plan.*

4. Carrying out self-analysis on the study of road safety, prevention of road accident, testing the knowledge of students. - *At the beginning of the first quarter.*

5. Contest of creative works «The road without danger». - *By the day of the traffic police.*

6. Organization and holding of the «Day of Legal Knowledge» with the invitation of the traffic police and police department. - *During a year.*

7. Carrying out «five minutes» on road safety and road accident prevention - *Weekly.*

8. Organization and holding of meetings of students, parents with traffic police officers - *As necessary.*

9. Development of cards for registering traffic safety violations by children received from the traffic police for students of educational institutions, providing reports to the traffic police when violations are detected

10. Reports from class teachers on the implementation of the road safety training program and preventive measures taken. - *At the end of each quarter.*

11. A general school parent meeting dedicated to the organization of the safe behavior of children on the roads - *3 times a year.*

12. Conducting preventive conversations with children before the start of school holidays. - *Before the onset of holidays.*

13. Conducting a review-competition of methodological developments, open events on road safety among teachers of educational institutions. - *According to the plan of educational work of the school.*

14. Drawing competition «Pedestrian and Driver» - *September, May.*

15. A school-wide parent meeting dedicated to the organization of the safe behavior of children on the roads with the invitation of the traffic police inspector. - *2 times per year.*

16. Promotion "Driver, look around!" (Letter to driver) - *October.*

In the system of work, it is important to interact with families, schools and public organizations for the prevention of road accidents among schoolchildren. It is necessary to carry out the prevention of road accident from preschool age. It is assumed that the following conceptual provisions should be the main pedagogical principles of road accident prevention:

- ensuring a high quality of knowledge of traffic rules as the basis for children's road safety can only be achieved through systematicity and continuity;

- the content of the studied road safety issues, implying their mandatory repetition at all stages of school education, should be organized using the spiral deployment technology (concentric learning system) [9];

- taking into account age characteristics is of particular importance from the point of view of psychological and pedagogical characteristics of a person. "In elementary school - training for pedestrians. At the level of basic general education - acting as bicycle riders. At the stage of secondary education - basic training (as a result - the successful passing of a theoretical exam for drivers of categories "A" and "B" "[3]. The mechanism of road safety formation is aimed at developing children's understanding:

- the importance of their correct behavior on the road;

- sense of responsibility in solving problems related to ensuring transport security;

- problems and dangers that may be associated with the roadway and vehicles.

There is a distinction by age of the specifics of the formation of safe behavior on the roads [8].

Psychological specificity of the formation of the mechanism of safe behavior of children on the roads/

The period of personality formation. *Principles of educational influence Purpose - means Younger school age Poorly developed sense of danger.*

Principle of interaction "*Children - road environment*".

The principle of age safety. *A conviction must be formed in the strict observance of traffic rules; increased need for security*

Adolescence *A mechanism for safe behavior on the road has already been developed.* The ability to be aware of one's choice is formed and responsibility for one's decisions develops. The principle of *self-organization, self-regulation and self-education.*

The principle of social security. *It should be reminded through visual means of possible ways of fixing attention and negative consequences if they are ignored.* The ability to *independently predict the development of events, make decisions* [10].

In order for a teacher to be able to access and correctly convey the necessary knowledge to students, special training of teachers is required: advanced training courses are held, methodological assistance is provided, an information base of materials for lessons is being developed; a compilation of methodological recommendations is created within the framework of academic disciplines of all classes for the study of traffic rules, issues of studying traffic rules are considered at meetings of methodological associations of teachers.

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Extracurricular activities are an addition to the basic means of developing sustainable skills for safe behavior in children.

Schools are constantly "developing measures to improve legal awareness and the formation of law-abiding behavior of road users" aimed at preventing road accidents [4].

We must not forget that all the current irresponsible participants and violators of traffic rules are schoolchildren who were not fully trained in the past, with whom there was no purposeful preventive work in their time.

The most realistic way is "finding a reserve of study time by reducing the time on other life safety topics without prejudice to their study, as well as using other classroom hours" [5].

Thus, the conditions for the formation of a conscious and responsible attitude of citizens to safety problems on the road will be met, i.e. "A general culture of life safety, motives and skills to follow the norms and rules of safe behavior, law abidance and the ability to manage one's behavior not only in normal but also in extreme situations" [6].

Each school needs new books, teaching aids, methodological developments that would ensure not only the transfer of knowledge, but also productive conditions for the social education of schoolchildren, the formation of a culture of life safety and internal security in them.

The conclusions are obvious:

1. Starting from preschool age and ending with a university, it should become compulsory, continuous, accessible and targeted training in the rules and road safety.

2. The number of study hours should be increased due to the importance of the problem being solved.

3. The new concept of road safety is changing the content of the curriculum.

4. It is necessary to strengthen the psychological and pedagogical component in the study of the behavior of road users.

5. A deep understanding is required, and not a mechanical memorization of traffic rules, there must be a conscious observance of them.

6. Fostering mutual respect among road users [7].

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FEATURES AND CAUSES OF VIOLATIONS OF TRAFFIC RULES AMONG SCHOOLCHILDREN

Abstract: Statistics show that the number of victims of road traffic accidents is increasing every year. More than 68 people die every year, more than 1461 are injured in the Kyrgyz Republic. It should be noted that children become victims of road accidents, die as a result of accidents, some minor children remain disabled. The public, parents are sounding the alarm to ensure their children are safe on the roads of the country. The education of discipline and responsibility in children when behaving on the streets, in public transport, and especially on the roads, is becoming relevant. The issue of ensuring a culture of safe behavior for children acquires special meaning for employees of educational institutions, from school to student block. The subject of the research is the activities of educational institutions aimed at preventing road traffic accidents among schoolchildren and students. The object of the research is road traffic accidents involving children, causes and features.

Key words: children, safety, death, injury, injury, schools, prevention, public transport.

Language: English

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Introduction

The successful work of the school system to ensure road safety and the prevention of child road traffic injuries is one of the important tasks of all subjects of interaction of this system: a teacher, parents, students, administrative bodies, traffic police departments, the entire community.

According to A. Koval: “childhood trauma is damage to the developing human body, which is the least trained to resist this kind of misfortune [1].

The numbers of child injuries as a result of road traffic accidents are very high, “in general, in Kyrgyzstan, about ten thousand children die from car crashes every year (45% of all deaths)” [2].

Children's injuries are “one of the urgent problems of health care and the Ministry of Emergencies, occupying a significant (up to 25%) share in the total morbidity of children” [3].

Of all types of injuries, the greatest danger to the health and life of people is road traffic injuries.

A road traffic injury is “a fatal or non-fatal injury caused by an accident on a public road involving at least one moving vehicle.” The term “road traffic injuries” is “the aggregate of injuries sustained under certain circumstances in the same population groups over a certain period of time (month, quarter, year, etc.)”. Road traffic injuries “ranks third in mortality among people aged 5 to 44, second only to coronary heart disease and depression” [4].

Traffic injuries are often accompanied by injury and death. These injuries and injuries are characterized by the greatest severity, high mortality, long-term treatment in hospitals (over 30 days), and large material costs. Adults and children receive a significant number of road traffic injuries in road accidents and road accidents. When making them, 4 factors can be distinguished: driver, car, pedestrian, road. In each incident, at least two of them are active. The most important factor is the person: the roles of driver and pedestrian are paramount.

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There are many causes of road traffic injuries among children, the main one being inappropriate behavior on the roads. It was found that two age categories give a larger percentage of RTIs: children under 7 years old and schoolchildren from 10 to 14 years old [5].

Almost 11% of the total number of road traffic accidents are accidents committed by drivers who are intoxicated. The probability of an accident increases depending on the dose of alcohol by 3-50 times. And, as a consequence, a child (passenger or pedestrian) can often become a victim of such an accident. In road traffic accidents, almost 80% of children receive serious craniocerebral trauma; others - fractures of the limbs, collarbone, hip. Many may have multiple bruises: face, head, abdomen, legs. And 15% of injuries lead to the death of children [6].

To reduce the number and severity of road traffic injuries of children, it is necessary, first of all, to expand the range of preventive measures: from individual conversations to collective measures of influence on traffic offenders. Recently, a system of administrative, compulsory and prohibitive measures of influence on traffic participants has developed.

But it is impossible to eliminate road accident only by administrative methods. More acceptable and effective measures can be implemented by educational institutions (training in traffic rules and safety; training in solving situations, extracurricular and extracurricular activities with the participation of public and state structures) [7].

The main type of road accidents involving children is pedestrian collisions; their share was 39% of all road accidents involving minors. Every third of them is injured when crossing the carriageway along pedestrian crossings.

The situation with the accident rate of young passengers remains unfavorable - 36% of the total number of accidents involving children. The main reason for these incidents is the violation by drivers of the rules when transporting children - only half of the underage passengers were transported using special child restraints and seat belts.

In every sixth road traffic accident, children participated as cyclists: 38 accidents, of which 38 minors were injured. The analysis of accidents showed that over half of all children injured in road accidents are students of general education institutions aged 7 to 14 years (53%) [8].

The number of accidents involving minor drivers of motor vehicles increased by 61%. These accidents have the most serious consequences [9].

Feeling disciplined and organized on the roads should become as necessary a habit as maintaining a healthy lifestyle and daily routine. A person of a safe type of behavior can be brought up only with competent and systematic work of the school team, the functioning of all components, both external and internal, in network interaction [10].

Work with parents should be carried out by the school not only with the aim of equipping them with elementary knowledge of traffic rules, the danger of their violation, but also the formation of psychological and pedagogical knowledge about the upbringing of children.

At the moment, in order to improve the system of work, the school should establish new strong ties in promoting road safety with traffic police officers and parents, and the dissemination of experience in the prevention of traffic rules in the school can serve as an excellent addition to the results of the work of other institutions.

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THEORETICAL PROBLEMS OF UNDERSTANDING THE ESSENCE OF OPERATIONAL INVESTIGATIVE ACTIVITIES

Abstract: *The theoretical basis for the development of any direction of scientific activity, the purpose of which is to know the problems and ways to overcome them, is a well-founded system of principles and their concepts. The presence of such principles and concepts in the theory of operational investigative activities should decipher the main investigative relationship in the system of ORD and between the elements of the structure of its component. The logical validity of theoretical definitions, their clear and easy-to-understand content, and unified form make it possible to implement their main communicative functions without any problems.*

Key words: law, criminal procedure, operational measures, operational investigative activities, priority tasks of operational investigative activities, criminal procedure legislation.

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Introduction

The presented conclusions of theoretical problems allow us to clearly identify the directions for the long-term development of understanding the priority tasks of the ORD as a component of the theory of the legal system, while expanding the boundaries of the content of the logic of perception and basic concepts. The main concept in the system of constructing a logical understanding of the theoretical aspects of operational activities is the content characteristics of operational activities, which are the mechanism for implementing operational activities.

The importance of understanding the semantic content of the definition of "operational activities" is determined by the existence of existing conditions that need clarification:

1. the Dynamics of the development of theoretical aspects of forensic tactics and its subsection tactics of operational investigative activities has determined the need for their clear interpretation and perception by the norms of criminal procedure legislation. Based on this, the generally applicable term "operational activities" was formulated. At the same time, the applicant draws

attention to the fact that this was only a generally applicable term that does not contain a legal interpretation and unified content. In the activities of law enforcement agencies and special services of the Kyrgyz Republic, the term "operational measures" as a legal category was first designated in the Law "on operational search activities" and a number of other legislative acts regulating the activities of law enforcement agencies. But not one of the legislative acts did not attempt to formulate the content of the definition of "operational search activities". As a result, law enforcement agencies in practice faced problems with the interpretation of this term and its interpretation in practice. This very clearly indicated the need for a unified legal interpretation and application of the well-founded definition expressed in the development.

2) operational science, in contrast to legislation, has not faced such a problem. this term and its content have been formulated in It for a long time, although it has been used in various interpretations. The theorist of Soviet intelligence P. A. Sudoplatov on this occasion noted "Operational work is life, not its continuation, to live operational work and not

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understand what you are doing is like living in vain" [1].

I. Klimov in his arguments about the nature of operational measures came to the following conclusions. "In some cases, the ORM is associated with the cognitive side of the ORD, aimed at searching, detecting and recording information of interest to operational devices, in others - with the active side, aimed at implementing the received operational search information" [2].

Summarizing the arguments of the above scientists, we come to the logical conclusion that a unified legal interpretation of the term "operational measures" is necessary for the uniformity of its practical application.

3) the Theoretical analysis of the nature of the essential content of operational activities is carried out fairly regularly, the result of these studies are formulated definitions that reflect the General parameters of the characteristic features of the term under consideration. In this regard, it is necessary to determine the main direction in the cognitive activity of the essential nature of operational search activities, while formulating the scientific and legal content of the definition under study. Analysis and theoretical understanding of the definition of operational measures was carried out in the works of scientists of the Russian Federation, V. G. Bobrov, N. S. Zheleznyak, SI. Zakhartsev, V. V. Dyukov, V. I. kannsky, A. M. Efremon, A. G. Lekar, B. II. Omelin, D. V., L. Yu. Shumilov, including in the Kyrgyz Republic, theoretical scientists K. By Kydyrbaeva, O. D. Kim, A. By Jakubikova, T. I. By Sayfutdinov.

As a result of studying the works of these theoretical scientists, the author has identified various opinions on this issue and approaches that have their own arguments in the legal formulation of the definition of "operational search activities". The applicant, investigating the nature of the author's definitions of scientists, does not consider them absolute and exhaustive, while giving priority to one of them. The reason for this is the presence of many individual views and, as a result, the methods that determine the development of the concept of "operational activities".

The author made an attempt to impartially study the opinions of scientists presented in the process of theoretical analysis of the definition of "operational measures" and identify the main individual features of the subject of the dissertation research. Investigating this issue, the applicant came to the conclusion that the most optimal in its completeness and effectiveness of the analysis of the problem of the definition of "operational measures" is the method of "topology", which makes it possible to analyze a lot of existing logically based opinions on this issue and on this basis indicate the limits of the logical justification of the scientific problem. In the course of the dissertation research of the conceptual apparatus of operational

activities, the applicant identified the first mention of the legal definition of "operational search activities" in a scientific study by one of the theorists of operational activities A. G. Lekar [3].

The author believes that these theoretical studies can be considered basic and applicable as basic concepts.

A. E. Chechetin in one of the textbooks defined ORM as "based on the use of special means and methods in combination with public means and methods of action of an operative employee of the internal Affairs bodies, aimed at solving individual tasks of fighting crime" [4].

The study of the characteristic features of the presented definition suggests the following conclusion that the basic element in this case is the direct actions of the subject of operational search activity in the law enforcement practice of their powers.

The following features are identified as distinctive features in the content of operational activities:

1) Interdependence of operational activities based on the principles of combining tacit means and methods with vowels;

2) Authorized subject within its competence – a representative of the operational Department;

3) Focus on specific functional tasks in the fight against crime.

The characteristic feature of operational activities presented in the first paragraph, indicated in the definition, is a continuation of the content of operational activities, i.e. public and secret methods and means of operational work. This feature is the feature that clearly distinguishes operational activities from other actions carried out by authorized representatives of law enforcement agencies within their competence, namely, organizational, investigative, special, and administrative functions.

The author focuses on the fact that his position on this issue is on the side of the formulation of tacit means and methods. This position is justified by the fact that the characteristics of operational activities are based on a direct understanding of their content in practical use and only their combination with public means and methods.

As a result of the analysis of theoretical research of scientists and the practice of subjects of operational activities, the author comes to the conclusion that the formulated feature was used only in half of the presented definitions that formulate the definition of operational activities, which is perceived by the author as a clear belittling of its functional significance. At the same time, there is a pluralism in the essential content of existing definitions among theoretical scientists dealing with operational issues.

As a polemic, it can be assumed that the formulation of the definition of operational activities should include not means and methods, but other

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internal content - forces and means. At the same time, analyzing the scientific literature and their practical experience of operational work, the applicant comes to the conclusion that during the implementation of operational activities, as a rule, other subjects of operational activity are also involved. These include confidants and non-staff assistants, based on their competence.

The author notes the fact that in practice, such a component as methods of operational work is unreasonably excluded from the conceptual content of the definition – operational measures.

The analysis of legislative consolidation as one of the components of the content of operational measures, in the author's opinion, is logically justified, since it indicates a sign of their legal content. The list of operational activities set out in article 7 of the law "on operational search activities" of the Kyrgyz Republic summarizes the fact that, only those are operational activities that are included in the definition of the article itself, other practical actions of subjects of operational work carried out in the course of operational activities cannot be defined as operational activities.

Analyzing this provision, the author found another characteristic feature, which is contained in at least half of the presented definitions of operational measures, their semantic content consists in specific restrictions on the current legal norms, the production of operational measures. D. V. Rivman and I. K. Khrabrov were the first to consider and introduce this feature into the definition, drawing attention to the fact that, along with the legislative norm, operational measures have the presence of "strict procedural, tactical and space-time restrictions" [5].

The author believes that this explanation is quite controversial because the specified attribute is not applied to all operational activities, and the frequency of its application is not significant, and is usually limited to cases declared by the norm of the constitutional law. The main part of the declared operational activities does not contain regulations on the order and time of their implementation, so the given feature does not affect them in the context of the concept under study [6].

Analysis of the scientific literature has shown that theorists studying this trait, in its definition, approach from individual personal positions, which are often diametrically opposed to the opinion of their opponents [7]. One group of scientists claims that operational measures are implemented on the basis of the grounds and procedure provided for by operational legislation, their opponents believe that the rules of conduct are laid down in departmental regulations, or in the order established by law and by-laws [10].

The logical and most acceptable definition of a characteristic feature of an operational event is the requirement of its compliance with regulatory legal acts. The presented definition of a feature of an operational event in its content part is naturally considered as a prerogative, since it is a continuation of the principle of legality [8]. It is clear that the implementation of operational measures should be regulated in the aggregate by the relevant law and existing regulations, and therefore, the position of certain theorists that operational measures should be regulated only by certain acts, which is laid down in the definitions formulated by them, is not justified [9].

Theorists of operational search activity carefully analyze the definition of operational activities proposed by S. I. zakhartsev, where He examines and formulates the distinctive features that are the basis of the proposed definition.

S. I. zakhartsev in his research notes that operational measures are a component of the system of operational search activities. However, the results of our further research led to the conclusion that this feature is not applicable to the definition of an operational event and it should be removed from the definition because it is very problematic to give it a distinctive characteristic.

The logic of the author's reasoning is that, in addition to operational activities, there are a number of other structural elements that are a component of operational activities. This includes information, organizational support, management activities, and operational production.

In connection with the presented argument, it can be assumed that the analyzed feature is not distinctive from other components of the operational activity system.

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POSSIBILITIES OF OPTIMIZING THE INTERACTION BETWEEN THE INVESTIGATOR AND THE INQUIRY BODIES DURING THE OPERATIONAL SUPPORT OF THE INVESTIGATION

Abstract: *The authors, in the analysis of the tactical features of the interaction between the investigator and operational officers, comes to the conclusion. That this type of interaction is the most widespread and important for the successful disclosure and investigation of crimes requiring operational support of the investigation for the investigation, since the process of obtaining information that is significant for the investigation is almost entirely based on operational search activities, planning and subsequent implementation of operational and tactical combinations that contribute to optimization the investigation process.*

By their nature, the essential content and the mechanism of practical implementation, the proposed organizational forms of joint activities are procedural, since they are based on the norms of criminal procedure legislation, and therefore, they can be characterized by the presence of interdependent and supplemented procedural relations between the investigator and the body of inquiry.

When planning the investigation of a crime and organizing interaction, it is tactically correct to pay attention to the planning and development of joint operational tactical combinations when conducting operational support or ensuring the investigation in cases of this category. Since very often there are problems of the legality of the admission of evidence obtained in an operational way and their subsequent transformation into procedural evidence.

According to the results of the study, the authors come to the conclusion that the disclosure, investigation and consideration of cases requiring operational support and support, of course, are organizationally complex, and the nature of the criminal manifestations does not allow the preliminary investigation bodies to properly organize work with them, to fill the organizational, tactical and methodological gaps.

Key words: *efficiency, activity, investigation, body of inquiry, tactics, law, disclosure, procedural evidence, legislation, complexity.*

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Introduction

The procedure for transforming the results of the ORD into evidence and their subsequent use in criminal procedure evidence is one of the most pressing problems [1].

The complexity of the implementation of ORD in these cases is due to a number of legal, methodological, organizational, and technical problems: 1) the problem of tactics of operational search activities; 2) the Problem of communicating the results of the ORD, in the process of preliminary investigation; 3) the Problem of understanding the content of the results, the problem of raising them to the status of evidence in a criminal case [2].

In theoretical research and practical recommendations, the classic form of subjective interaction in the course of an investigation is defined, as a rule, by the joint activities of the subjects of the investigation and the bodies of inquiry that directly provide operational support for the investigation. These two categories are the main subjects of criminal proceedings in accordance with the content of article 34. article 37. of the criminal procedure code of the Kyrgyz Republic.

However, according to paragraph 1 part 1 article 37 of the criminal procedure code of the Kyrgyz Republic [3], to the investigative bodies and internal Affairs bodies of the Kyrgyz Republic, and the operational divisions of individual departments are an integral part of the internal Affairs bodies, therefore, because of the specific competences and operational capacities of the staff of these units should interact with investigators in the investigation of crimes requiring operational support.

Practice shows that during the investigation of cases requiring operational support or support, the practical interaction of the subjects of the investigation, with employees of operational units providing operational support of the investigation, is implemented through procedural rules in the form of [4]:

- 1) to clarify all the circumstances that are subject to proof and establish the facts significant in the case;
- 2) in cases where special investigative actions are required, the subject of the investigation makes a request to the investigating judge, with subsequent notification to the Prosecutor (paragraph 2 of article 212);
- 3) Implementation of the investigator's decision to detain a person who has committed a crime or misdemeanor for the purpose of actually restricting freedom of movement (clause 1, clause 2, article 98);
- 4) to ensure the conduct of investigations and special investigative actions (paragraph 3 of article 98);
- 5) to establish the location of the suspect or wanted subject, a separate order is issued (paragraph 1 of article 239).

During the analysis of the practical activities of employees of operational divisions, it was found that all the above-mentioned forms of organizational interaction are used in the investigation of cases requiring operational support or support [5].

According to the author, all these forms of interaction are relevant and meaningful, but due to the specifics and tasks of the police DEPARTMENT, the content of the last of the overpowered forms of interaction organized as part of the investigation of a crime deserves more careful attention. The presented form of interaction between the subject of investigation and the bodies of inquiry is laid down in the content of operational support of the investigation in the form of the definition of clause 1. clause 2. p. 239 of the UPU of the Kyrgyz Republic: "if the location of the suspect or accused is unknown, the investigator entrusts the search to the investigative bodies", for which the investigator issues a separate resolution [3].

The practical implementation of interaction in the form under consideration is initiated from the moment when operational officers actually receive the investigator's decision to search for the accused or suspected subject or the decision to suspend (resume) pre-trial proceedings, and stops from the moment when the wanted subjects are identified and detained. Both in the theory of criminal procedure and in the practice of operational investigative activities, the definition of "search" has different semantic meaning, but the same in content [6].

The author interprets the content of the definition of "search" in the expanded scope of interpretation as a search activity intended for the purpose of establishing and collecting evidence relevant to the investigation related to the case under investigation.

Within the limits of a specific understanding of the content of "search", this is the practical establishment of the subject, object, significant for the investigation of authentic characteristics [7]. At the same time, it is important to clearly understand that the definition of "search" in its content has a set of all special investigative actions designated by the norms of the criminal procedure code and operational search measures laid down in the framework Of the law "on ORD".

In the analyzed parity norms, the definition of the term is interpreted in a strictly narrow specialized format, due to the fact that the object of the search is specified, namely the suspect or accused [8].

From the conceptual content of the definitions of paragraph 1. article 98. paragraph 1. article 239 of the criminal procedure code of the Kyrgyz Republic, we can proceed to the conclusion that the main initiator of the search process is the subject of investigation, namely the investigator himself, including in cases where the search is entrusted to the investigator, employees of operational divisions of the Ministry of internal Affairs, the investigator is burdened with the

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function of constantly monitoring the process using existing official competencies and procedural actions (performing investigative actions, issuing orders, requests, requirements).

Within the framework of the form of organizational interaction analyzed by the author, specialized services for combating extremism and illegal migration are obliged, by virtue of their competence and legal authority, to monitor and manage the activities of the operational search services of their Department. The speed and effectiveness of the search for a subject of interest, both for the investigation and for operational search activities, almost completely depend on the clarity of planning the organizational interaction of the subject of investigation with special operational units. The implementation of this provision is fully facilitated by the full and constant exchange of investigative information collected by the investigator in the course of the investigation, and by special operational services in the process of operational support for the investigation of a crime [9].

A clear illustration of the quality of practical interaction of the subject of the production of the investigation with operational services in identifying persons suspected of committing a crime and in the implementation of investigative activities is an example of materials of criminal cases investigated UVD of Osh. 4.01.2016 G. unknown persons with the use of firearms was an assault on the crew of private security of Department of internal Affairs of Osh city, in which killed two police officers. During the attack, two AK-74 assault rifles, 8 magazines with ammunition for the machine gun, and a portable Motorola radio station were stolen. A criminal case was opened on this fact. In order to solve this crime, an investigative task force was created, which included employees of the Department for combating extremism and illegal migration of the Ministry of internal Affairs of the Kyrgyz Republic. Through the mass media, residents of Osh and Jalal – Abad regions were informed that the criminals who committed the specified crime fled the scene in a gray DAEWOO car. A few days later, the internal Affairs bodies received a telephone message from residents that a burnt-out car of the specified brand was found in a field at a distance of 45 km from Osh in the Nookat district. Employees of the ECC restored the license plates of the car, which made it possible to identify the car and, through its owner, identify the suspects in the murder of police officers-Abdullayev Hamidillo Pazylovich, born in 1970, a resident of Osh, and his relatives.

During the search for Abdullayev H., information was received that he and two other people, presumably his relatives, had left the region. As a result of operational activities within the borders of Osh and Jalal – Abad regions of the Department for combating extremism and illegal migration of the

interior Ministry of the Kyrgyz Republic were detained and prosecuted an active member of an underground cell of REO "Hizb-ut-Tahrir" - Abdullayev Khamidilla of Pozlovice, born in 1970, resident of Osh, St. Papan No. 52. Together with him, they were brought to criminal responsibility under art. 299-2 CC KR Raimzhanov Rustam Uktamzhanovich, born in 1989, living in Osh region, Kara-sui district, Kyzyl - Kyshtak village, Akhmedov Yadgorbek Murodilovich, born in 1979, living in Osh region, Kara-sui district, Kara-Suu village, Ashimov Rahmatilla Khozhakhunovich, born in 1986, resident of Osh region, Kara-sui district, shark village.

The above example clearly shows that the effectiveness of well-thought-out interaction between the subject of investigation and specialized units in the form of operational services is very high and in the current conditions of combating crime is developing not only in practice, but also in the norms of current procedural and operational legislation. However, only the results of special investigative actions obtained in compliance with the requirements of the criminal procedure can be used. In this case, article 223. article 260 of the criminal procedure code of the Kyrgyz Republic implies that listening to conversations is carried out on the basis of the decision of the investigating judge, by considering this issue by the investigating judge with the participation of the Prosecutor, investigator, person of the bodies of inquiry in a court session at the place of special investigative actions, and the term of validity of the decision of the investigating judge may not exceed two months. 228 of the criminal procedure code of the Kyrgyz Republic [3], the penetration and inspection of premises or other property, as the same is carried out on the basis of a judicial decision which provides in cases of operational necessity, the possibility of conducting the special investigation solely on the basis of the petition of the investigator before the investigating judge and notify the Prosecutor, and in cases not related to procedural restrictions, in accordance with the law of the Kyrgyz Republic "About operational search activities», by departmental or judicial authorization. Summarizing theoretical and practical materials in the study of optimization of operational support and support of crime investigation, the author comes to the conclusion.

That the legal nature and quality of organizational interaction, the subject of investigation with the bodies of inquiry, during the investigation, is achieved both by the implementation of criminal procedure norms that underlie the legal basis of interaction, and in the whole list of restrictions laid down in the basis of the requirements of other legal acts regulating investigative and operational work [1].

In this case, we are talking About the law "on ORD", the content of which is currently in quite

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serious contradiction with the current criminal procedure code.

According to the author, these contradictions, taking into account the requirements of the legislation and the results of studying the materials of investigative and operational practice, are [10]:

1) Practical implementation of the plan of organizational interaction within the competence and legal powers of the subjects of investigation;

In this case, we mean the fact that the subject of the investigation is not authorized in relation to operational bodies to demand the execution of investigative and other actions that go beyond the responsibilities of operational departments, including the execution of orders the execution of which is imputed by law only to the subject of the investigation;

2) the Existence of procedural rules involving the secrecy of the investigation and production operational activities in respect of non-disclosure of investigative information, the investigator and operational staff, as well as tactics and characteristics of production MPAS, including circumstances of the crime established in the proceedings of the investigation, the subject of investigation in the pretrial stage;

2) there is a practical need for joint planning and regulation of all stages of the investigation when organizing interaction between the investigator and the subjects of operational activities at the place and time, as well as ways to consolidate evidence based on the results of joint activities;

3) in particular cases, there is a need for constant and timely receipt of the collected investigative information and mutual exchange of available results in the framework of interaction on the production of investigative and special actions in accordance with the requirements of criminal procedure.

At the same time, the forms of information exchange in each specific case should be determined by the heads of investigative bodies and operational divisions [2], who, taking into account the requirements of the CPC and the specified Instructions on the procedure for providing the results of operational search activities to the inquirer, inquiry body, investigator, Prosecutor or court, set its scope and limits, and the range of employees allowed to confidential information is set depending on the nature of their investigative and operational search activities.

Of course, the subjective qualities of the interacting parties, i.e. their professionalism, experience, communication culture, and sociability, are also important for organizing effective interaction between services. According to the author, a characteristic feature of high-quality interaction between investigation subjects and operational employees is that when solving complex issues related to the investigation, combined forms of interaction are

used in combination with different types of organizational activities.

The interaction effect occurs when the interacting parties to solve a common problem use various techniques, methods, tools and methods in the practical implementation of their personal activities. At the same time, all subjects of interaction should correlate the results of their activities with the ultimate goal, which is to form a high-quality, sufficient evidence base and timely, objective investigation of the crime event. This should determine the assessment of the subjective actions of the interacting parties, and ultimately the achievement of the intended results of the activities of all participants in the interaction.

Investigative and operational practice related to the investigation of crimes that require operational support or support has revealed a number of characteristic features and conditions that affect the effectiveness of organizational interaction between the subject of investigation and the subjects that provide operational support to the investigation:

1) Filtration, preventive, and preventive measures organized to protect against possible manifestations of all forms of criminal activity;

2) Moral, moral foundations, established domestic relations and social division of the population;

3) Regional natural conditions and features of the ethnic composition of the locality in which operational search actions are performed;

4) Motivation, purpose and methods of action of criminal subcultures, features of their tactics and their supposed capabilities;

5) the Mentality, degree of intelligence and psychological characteristics of members of an extremist group, the level of religious fanaticism, the ability to social adaptation.

Investigative and operational practice in cases requiring operational support in the investigation of crimes confirms the fact that the subjects of interaction during the investigation of crimes are investigators and operational employees of the body that identified signs of the crime event under investigation. As well as special subjects represented by employees of specialized departments of the Ministry of internal Affairs of the Kyrgyz Republic. This circumstance caused the bounds of personal competences of the participants in the investigation under the category of criminal cases and the specifics of performance of functional duties by the subjects of interaction for the investigation of crime, in terms of production, operational support of the investigation [4].

Analysis of investigative and operational practices allows the author to draw the following conclusion. The lack of proper cooperation in investigation of crimes in this category, between the investigator and operative officer, leads to the fact that the number of criminal cases had not been timely

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revealed facts not admissible impact on participants in criminal proceedings as well, with suspects, accused, and other persons interested in the outcome of the case, which led to the country witnesses and victims of false testimony or significant changes in their testimony as in the course of the investigation and the trial.

The author comes to the conclusion that the law enforcement practice does not regulate clear

restrictions on conducting joint investigative actions during the interaction of the investigator and the bodies of inquiry on the operational support of the investigation. They are based on jointly planned operational and tactical combinations, techniques and methods of investigation within the framework of organizational interaction.

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ON THE ISSUE OF RELIGIOUS EXTREMISM: CONCEPT, ESSENCE AND PROBLEMS

Abstract: The article provides a characteristic of religious extremism and indicates the essence and problems of this phenomenon. The relevance of the topic is that, in recent years, there has been a tendency for an increase in the total number of registered crimes of an extremist orientation, in connection with which it is necessary to increase the level of ensuring the observance of individual rights, as well as the constitutional position of the state. The presence of extremism and the similarity of the main reasons for the emergence of extremist activity in Central Asia and in many parts of the world are described. It is believed that it is the presence of such problems that makes it necessary to analyze the current state of the fight against religious extremism. At the same time, attention is focused on the study, the features of the substantive part of the structural elements, qualifications, the initiation of criminal cases, the organization of interaction of the investigator with operational workers and other services within the framework of international cooperation. To effectively counter the manifestations of religious extremism, localization and liquidation of its consequences, it is necessary to clearly understand the parameters of the characteristic features of its manifestation.

Key words: religious, extremism, Central Asia, region, law, crime, terrorism, social factor.

Language: English

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Introduction

The political and social changes that have taken place in the territories of the post-Soviet states have common characteristic parameters characterized by a surge in organized crime and extremely radical forms of its manifestation, manifested in drug trafficking, arms trade, extremism, and terrorism. In Central Asia, the manifestation of extremism, including its religious component, was the response of the common people to those political and social phenomena that practically all strata of society faced and which, in terms of their inner content and, most importantly, their purpose, were absolutely incomprehensible. A spiritual and ideological crisis almost always leads to the appearance of an ideological void, which can be filled with ideas of an extremist nature [1].

These manifestations did not bypass the Kyrgyz Republic as well, being a single component of the

criminal legal concept of organized crime, extremism, and terrorism. Extremism still has social prerequisites, expressed in the response of a simple society with a certain protest component, which, incidentally, is a characteristic feature for the whole of Central Asia. Passive perception of negative manifestations against society, and the awareness of the need to have more rights, freedoms, opportunities, in the end, prospects, at a certain stage, grew into an active form of protest manifestations, which at a certain moment needed to be given a criminal legal assessment due to their transformation into an extremely radical form of manifestation. Just the manifestation of extremism at the economic and household level, sometimes even without a criminal connotation, unexpectedly for all law enforcement agencies began to manifest itself in a stable «extremist activity» that acquired a pronounced

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organized character and challenged the state and the law.

Having carefully studied the scientific literature, historical documents, we come to a logical definition of this phenomenon, «extremist activity» is an activity carried out with all forms of participation, individuals, organizations, legal entities, including states, expressed in an attempt on rights and freedoms, religious, moral, moral, traditional foundations of society, an individual citizen or on the constitutional principles of the state, and falling under the content of the criminal law”[2].

Extremist activity only becomes such when it moves from the simple formation of intent to commit this action in the form of ideas, beliefs, intentions to the stage of their implementation [3].

At present, the entire Central Asian region is characterized by its own endemic forms of manifestation of extremist activity. First of all, it is a pseudo-political or white-collar, a characteristic feature of which is veiled personal or party selfish interests under the ideas and interests of parties, committees, or the interests of society. Very often this form of «extremist activity» is accompanied by manifestations of corruption. The next form of manifestation is the «national chauvinist», as a subspecies of «fascism and xenophobia» features, the implementation of which is clearly traced in an extremely radical form of manifestation of the national component expressed in exclusivity, superiority, intolerance to others. Not excluding specific actions to physically destroy their opponents. Another form of manifestation of «extremist activity» is of particular interest. «Fanatically – religious», in its inner content and characteristics, despite the supposed similarity, has nothing to do with religion because of its perverse and aggressive interpretation of the basic basic concepts of any traditional religious movements or their directions. It is also necessary to note the fact that the «fanatical – religious» form is constantly in acute ideological confrontation with all generally recognized religions, despite their orientation and beliefs. It should be noted that the «fanatical – religious» form is not endemic; manifests itself not only in Central Asia. This form has an almost unlimited distribution area in Europe, America, the Middle East, etc., in other words, this form manifests itself everywhere, extremely aggressively and radical. Another form of «extremist activity» is extremely interesting, «ecologically – fatal» characterizing the essence of this form and is embedded in its definition. This form is characterized by extremely ill-considered, extremely aggressive, cruel in their consequences and total coverage of sacrifice forms of manifestation. The main ultimate goal of this form is as many victims as possible, more coverage from the perspective of the spread of consequences, and of course more of the consequences themselves.

«Religious extremism» is the most aggressive, cruel form, the characteristic indicators of which are maximum spread, scale of influence, depth of consequences. It is thanks to these parameters that «religious extremism» acquired the status of a global threat for all mankind. Contrary to the commonly held opinion that the center of origin of precisely «religious extremism» is the states where «Islam» is widespread, the analysis of this problem suggests the opposite. The world owes the emergence of «religious extremism» in the form in which it exists at the moment to the European states, namely Northern Spain and the south of western France where the «Basques» («Euskadi Ta Askatasuna») with weapons in their hands and many victims at the beginning defended its cultural, religious, national authenticity. But even after they received autonomy, they still continue extremist activities. Moreover, even for the Basques themselves and their leaders, it is currently not entirely clear what they are really fighting for. In Central Asia, according to many historians and criminologists, a fertile ground for the emergence of «religious extremism» was the «Basmach movement» of the peoples of Asia, first against Tsarist Russia and later against Soviet Power. And it is social, in the broad sense of this meaning, contradictions (way of life, traditions, moral and ethical foundations, religion, language) that became the foundation for the formation of the initial manifestations of «religious extremism» in the states of Central Asia. Subsequently, various wars in the Middle East, Afghanistan, Chechnya, and Syria became a huge impetus to reanimate «religious extremism». Representatives of non-traditional radical Islamic movements, «Wahhabis», «Salafis», fundamentalists of various kinds, as well as representatives of «ISIS», «Hizb ut-Tahrir al-Islami» and many others began to arrive in the Central Asian states from the territory of these states. In the Kyrgyz Republic, everyone is guaranteed freedom of religion, individually or jointly [4]. But, any religion claims to be exclusive, so conflicts always arise.

A general analysis of the statistics of the Ministry of Internal Affairs of the Kyrgyz Republic on crime and the current socio-political situation by regions indicates an increase in the number of extremist crimes, namely, an outburst of religious extremism. So, for example, from 2010 to the present, the investigating authorities have identified 2369 extremist crimes.

In 2010, 101 crimes of an extremist orientation were detected, in 2011 -158 (an increase from the previous year was 56.4%), in 2012, 195 crimes were revealed (an increase of 23.4%), in 2013 - 234 (growth by 20%), in 2014 - 283 were identified (growth by 20%), in 2015 - 360 were identified (growth from the previous year was 27.2%), in 2016 - 441 were identified (growth from the previous year was 22, five %). Over the entire period of 2017, -597 (441 for 12

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months of 2016) crimes of an extremist nature were established [5].

The logical pattern of determining the characteristic parameters of the content of «religious extremism» is determined by the order of manifestation of social factors:

- 1) Economic instability leads to social tension.
- 2) Social tension in the search for comforting and encouraging religious teachings of a marginal and destructive nature, which, as a rule, have a pronounced aggressive character [7].
- 3) Aggressive, offensive fundamentalism logically leads to radicalism.
- 4) A sharp surge of radical manifestations initiates situational extremism.
- 5) In turn, terrorism is a radical form of extremism [8].

It is quite difficult or even impossible to draw clear boundaries between them, all of the above factors are characterized by the presence of an individual goal of scientific research. It is possible to determine a specific priority component in the development of religious extremism only from the position of probability or assumption. The individuality of the states of Central Asia in the context of the state structure, political system and situation, peculiarities of traditions, mentality, led them to the fact that the manifestation of «religious extremism» in the territories of these states is individually and endemic in nature [9]. It is the characteristic individuality of the manifestations of «religious extremism» that determines the importance for each of the Central Asian states of finding their own approach to its manifestations, prevention, and counteraction. This fact confirms the individuality of the approach of the law enforcement agencies of these states in countering «religious extremism», the

development and implementation of their own methods of combating its manifestations. That, in turn, does not prevent the states from searching for joint actions within the framework of interstate agreements, treaties, and joint organizations such as «SCO», «CSTO», «EAEU».

A. Satorzoda, in his speech at a regional conference dedicated to the events of the civil war in Tajikistan, expressed his definition on this issue: In modern society far from precise scientific definitions, the concept of «radicalism» is constantly confused with a concept of «religious extremism» that is completely different in its essential definition. Replacing one semantic content with another. With all the similarity in the general semantic content, this does not accurately explain their individual meaning, but, the main order and way of their implementation [6].

Radicalism differs from extremism by the presence of a clear motivated idea, while extremism is the implementation of what is conceived by means of certain methods, and very often without any semantic component, i.e. action for the sake of action.

In conclusion, we can summarize such conclusions that, without exception, all manifestations of extremism in their substantive essence are aimed at changing the state system, infringing on and completely ignoring civil rights and freedoms, while masking their destructive actions by turning to religion [10].

In order to effectively counter the manifestations of religious extremism, localization and liquidation of its consequences, it is necessary to clearly understand the parameters of the characteristic features of its manifestation as, in various forms, religious, nationalistic, regional.

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STUDY EFFECT THE TEMPERATURE OF PREPARATION AND ANNEALING ON TiO₂ CHARACTERIZATIONS

Abstract: The characterizations of TiO₂ nanoparticles which prepared on FTO conductive glass bases using the hydrothermal method with different temperatures (140,160,180) for 4 h, were studied after and before annealing. The XRD patterns were appeared that the samples preparation an increase in the intensity of the peaks and a decrease in the width of the FWHM peaks was observed due to the increase in temperature as well as an increase in the grain size as the distance between the grains decreased. UV-VIS tests demonstrated optical properties, including absorption and transmission. The increase in temperature effect at the absorption edge. It was shifted towards higher energies, that is, in its preferred direction. FESEM images were showed change an increase in the density of the substance upon increasing the temperature.

Key words: TiO₂, Hydrothermal, Nanorod, Crystallographic properties.

Language: English

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Introduction

TiO₂ is one of the most common titanium compounds and is often used in many applications[1]. There are many nanostructures of titanium dioxide, including spheres, nanoparticles, and nanotubes[2].

TiO₂ exists in three different crystal stages: the rutile phase, the anatase phase, and the orthotic phase[3]. As in Fig. (1.1) both rutile and ananase have a (tetrahedral crystalline) structure, but they belong to different stages[4-6]

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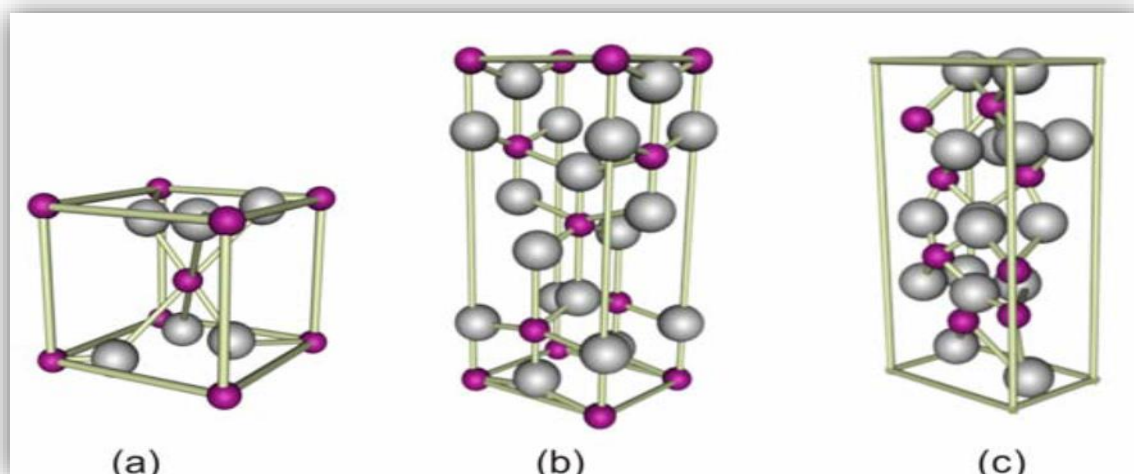


Fig. (1.1): unite (a)rutile (b)anatase (c)brookite .Grey and red spheres represent oxygen and titanium[5]

Hydrothermal Method: The Hydrothermal method was used for the first time by the British geological scientist Sir Rudrell [7]. This method is considered suitable for the environment because the reaction takes place in a closed system conditions, and it was defined as (any chemical reaction that is not homogeneous, either aqueous or aqueous, above room temperature at a pressure higher than the atmospheric pressure, and it takes this The method takes several hours to complete with the help of the microwave to collect a variety of oxides and hybrid materials.

EXPERIMENTAL

1.Preparation of Titanium tetraizobutoxide (TTB)

Two portion of titanium(IV) chloride (BDH company) ($TiCl_4$) was reacted with eight parts of butanol. Titanium (IV) chloride was put into round three neck flask. Butanol was add drop by drop with applicate of the magnetic stirrer without a heating until the end of butanol and disappeared of the fog. The oiled yellow solution was obtained

2. Preparation of TiO_2 by hydrothermal method:

In a glass container, the solution consisting of (12.5) ml of distilled water is mixed with (12.5) ml of hydrochloric acid at a concentration of (35.4%) and left for 15 minutes, then placed (0.3) ml of TTB and left for 25 minutes. Mixing is done with a magnetic stirrer in Teflon, the FTO is placed at a certain angle, and then the solution is added to cover the sample, leaving a distance from the top where this portion is conductive for the measurement. Then the autoclave container is tightly closed and placed in the oven at temperatures of (140.160.180) ° C for four hours , then the hydrothermal reactor is cooled down to room temperature. Then the samples were washed with distilled water and left to dry. Then some of the samples were annealed at a temperature of 400 ° C for half an hour. These samples classified as S1,S2,S3,S4,S5 and s6 as the table 1.1

Table 1.1 Classification of samples Preparation

Preparation Temperature	Before Annealing	After Annealing
140 °C	S1	S2
160 °C	S3	S4
180 °C	S5	S6

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RESULTS AND DISCUSSION

1.XRD Analysis

XRD spectroscopy was used to determine the crystal size and crystal structure of titanium dioxide prepared by the hydrothermal method that is deposited on FTO conductive glass slides. The main peaks of the glass slides FTO (110) and (200) at $2\theta=(27.5)$ and $2\theta=(37.2)$ This corresponds to [102]

Fig. (1.2) shows the pattern of a TiO_2 preparation samples S1,S2,S3,S4,S5 and S6. These were indicated that the crystal structure of these films were the anatase phase which has a clear and high crystallization nature. Diffraction peaks denote (101), (004), (200), (213) (204) anatase phase (quadrangular) at $2\theta = (26.56), (37.91), (51.57), (61.64)$ and (65.61) . These results are in accordance with the card profile (JCPDS-04-0477).

Unit cell lattice constants ($a=b=3.541 \text{ \AA}$) and ($c=9.4836 \text{ \AA}$) this value are in very good

approximation to standard value ($a=b=3.7484 \text{ \AA}$) and ($c=9.5124 \text{ \AA}$) and this corresponds to [8,9]. By demonstrating numbers S1, S3, and S5, we refer to new peaks that increase the temperature of the composition from 140°C to 160°C and 180°C . Also, when comparing these samples with annealed samples S2, S4 and S6, we observe the effect of annealing on them as it will affect the change of surface shape upon annealing with a temperature of 400°C . The atoms will have more activation energy for diffusion, thus it will allow the lower energy atoms to move to the appropriate location in the crystal structure and thus the crystals will grow in their preferred direction and then the crystal fusion process will start to form larger granules and within the grain boundaries, the oxygen defects will decrease. An increase in temperature leads to an increase in the size of the profile and an increase in the size of the granules, and thus an increase in roughness, an increase in the intensity and a decrease in the width of FWHM also shows us an increase in the overall stress and strain due to the annealing temperature [10-12]

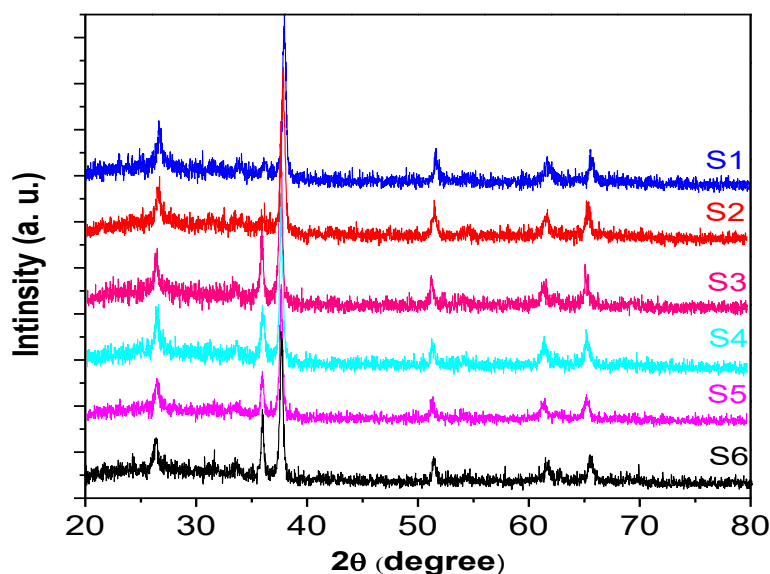


Fig. (1.2) XRD patterns for TiO_2 for S1, S2, S3, S4, S5 and S6 samples

Table (1.2). Data on thin TiO_2 films at different temperatures with annealing and without annealing

T(K)	Sample	D (nm)	$\delta \times 10^{-3}$ (nm ⁻²)	$\epsilon \times 10^{-3}$
140	S1	25.22	1.57	1.37
	S2	24.2	1.7	1.43
160	S3	27.97	1.27	1.23

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	S4	24.33	1.68	1.42
180	S5	28.26	1.25	1.22
	S6	27.25	1.34	1.27

The crystal size is calculated by Scherer's equation and it is found that the average crystal size is in the range (24.2-27.25 nm) as shown in Table (1.2) as well as stress and strain were calculated, as shown in Table (1.2).

2. Optical Properties

The optical properties of synthesis samples were studied by UV-VIS spectroscope. These properties include the absorbance and reflectivity measurements. Depending on reflectivity, energy band gaps were calculated of the synthesis samples.

The Absorption Measurement

Figure (1.3) shows the absorption spectrum of TiO₂ thin films prepared on FTO glass substrates using a different temperature hydrothermal method, with annealing and without annealing. As the absorption spectrum of S1 and S2. The absorption edge shifted from 390 nm to 400 nm. Also it has been shifted towards the red direction due to annealing and this corresponds to [15].

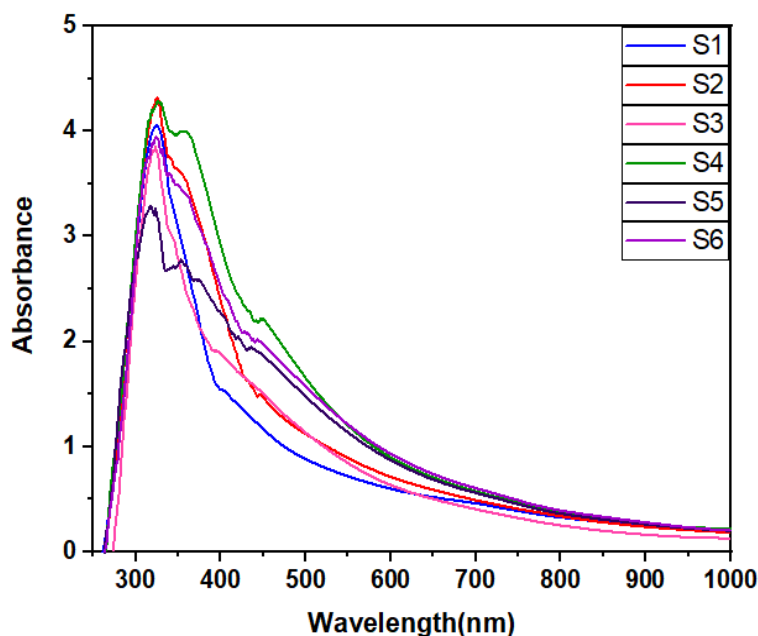


Fig. (1.3) represents the absorbance spectrum for TiO₂ for S1, S2, S3, S4, S5 and S6 samples

The same situation is clearly shown in the S3, S4, S5 and S6 samples shown in Fig. (1.3) where the absorption edges are slightly moved across the long wavelength (370 nm-450 nm). This is a consequence of the increase in the temperature of preparation and annealing [13,14].

c. Transmittance (T) Measurement

Optical transmittance spectra of a thin film TiO₂ prepared by the hydrothermal method deposited on FTO glass substrates at different temperatures. As a

function of wavelength ranging from 390-1000 as shown in the figure (1.4), it has been observed that the permeability decreases with annealing possibly due to the decrease in the energy gap with annealing. As it showed the highest permeability at 77% and decreased to 62%. This is the reason for the effect of temperature on the surface roughness, increased grain size, and increased dislocation defects. This increases the absorption and reflection of the film

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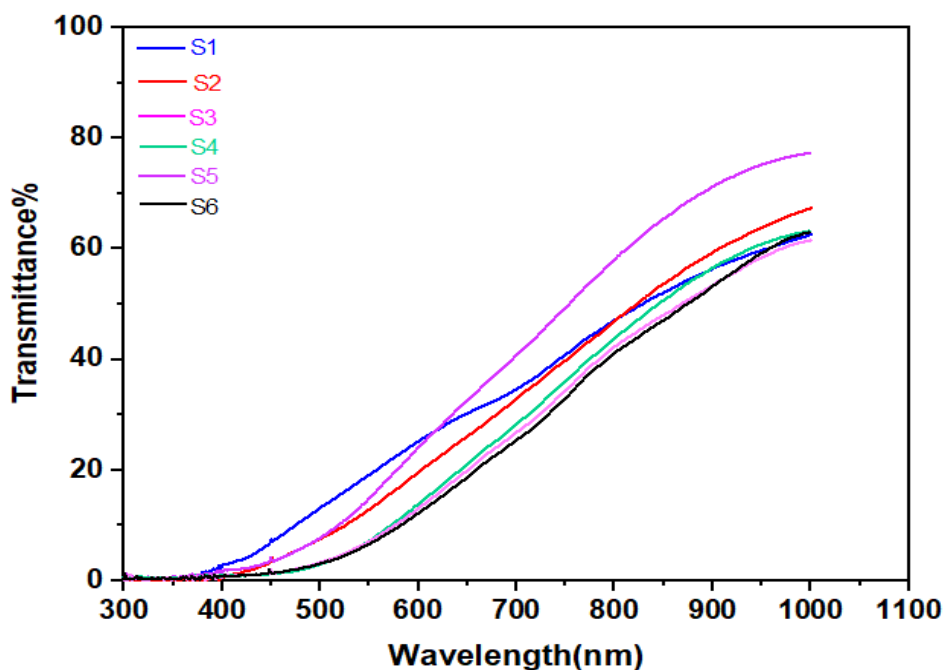


Fig. (1.4) Transmittance spectra for TiO₂ for S1, S2, S3, S4, S5 and S6 samples

3. FESEM Measurement

Figure (1.5) explain the FESEM images for TiO₂ samples. There was a difference between the samples in terms of density nanorod and this is due to the increase in temperature in addition to the annealing temperature and the effect of the temperature on the increase in the size of the grains and thus the surface increase significantly

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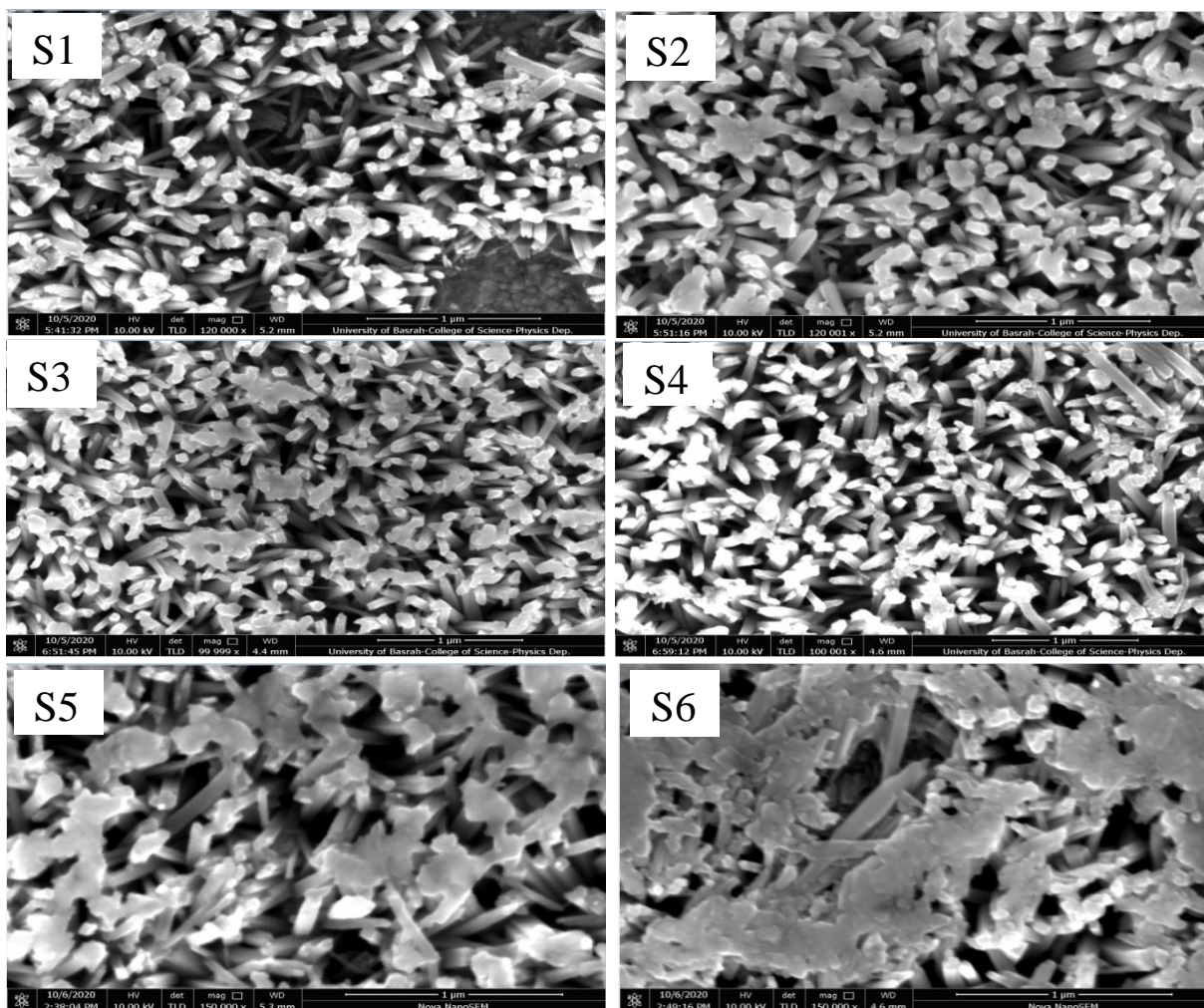


Fig. (1.5) FESEM to the TiO₂ samples

Conclusion

The characterizations of TiO₂ nanorod were changing according to change of temperature of preparation and annealing. From the XRD diffraction pattern it can be concluded that the crystal size decreases, the distance between the crystals decreases.

While the width of FWHM decreases due to these reason. The absorption edge has been shifted towards higher energies, due to the effect of temperature as it points towards the red region. FESEM examinations showed an increase in the diffusion density of nanorod result of increasing the preparation temperature from 140° C , 160° C to 180° C .

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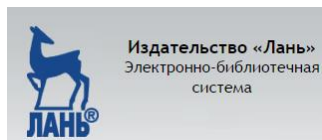
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