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TYPES, CAUSES AND TREATMENT METHODS OF MASTOIDITIS.

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Abstract: Mastoiditis is an infection of your mastoid process, or the large bone behind your ear. Middle ear infections cause most cases of mastoiditis. Healthcare providers treat mastoiditis with antibiotics. More serious cases require surgery. Mastoiditis was once a common, serious illness. Now, thanks to antibiotics and vaccinations, it’s considered a rare condition.

Key words: Mastoiditis, mastitis, squamitis, osteitis, petrositis, vestibulometry.

Mastoiditis (mastoiditis) - purulent inflammation of the mucous membrane and bone tissue of the mastoid. The disease develops as a complication of acute purulent otitis media and chronic otitis. The following forms of mastoiditis are distinguished: 1) primary mastoiditis - inflammation of mastoid cells that is not associated with the development of acute purulent otitis media; 2) secondary mastoiditis: a) simple mastoiditis developed in acute purulent otitis media, including vertex-neck (Betseld) mastoiditis; b) atypical mastoiditis - mastoiditis developed before the perforation of the eardrum and recurrent mastoiditis. Zygomatitis, squamitis and petrosites are special forms of mastoiditis. Mastoiditis often develops in the pneumatic structure of mast cells. Etiology. The development of mastoiditis is caused by microbes that provoked acute purulent otitis media (streptococcus, staphylococcus, pneumococci, intestinal and diphtheria bacilli, mycobacterium tuberculosis, filterable viruses, oral cavity spirochete, S. Pneumoniae, H. Influenzae, M. catarrhalis, S. pyogenes, S. aureus or mixed microflora). Pathogenesis. The following factors contribute to the spread of the inflammatory process to the cells of the mastoid barrier: 1) high virulence of the pathogen that causes inflammation; 2) weakness of general and local immunity of the body; 3) insufficient treatment of acute purulent otitis media and delay in paracentesis surgery; 4) pathological separation in the cells of the tympanic cavity and mastoid septum is not released into the external auditory canal; 5) diabetes, anemia, tuberculosis, kidney diseases, etc. Pathologoanatomical changes Pathologoanatomical changes developed in inflammation of the mastoid cyst depend on its clinical stages: 1) in the exudative stage of the disease, mucoperiosteum in the mastoid cells, that is, the mucus and mucoperiosteum of the mastoid cells (bone inflammation of the membrane develops. As a result of impaired blood circulation in the mucous membrane, redness and swelling, accumulation of serous, purulent and purulent exudate mixed with blood are observed in the cells of the mastoid tissue; 2) inflammation of bone tissue - osteitis develops during the alteration stage. The inflammatory process spreads to the bone barriers between the cells of the sucker-like tissue and erodes them; 3) in the stage of mastoid empyema, the bone barriers between the cells of the mastoid are eroded and a common space filled with purulent discharge is formed. The process of bone tissue erosion can spread to the dura mater of the brain in the area of the middle and back pits of the skull and lead to the

development of intracranial complications. Clinical signs. In the 2-3rd week of acute purulent otitis media, the patient's condition suddenly worsens, body temperature rises, headache, and inflammatory changes appear in the blood and urine. The area of the nipple is swollen and painful when palpated, the fold behind the ear is flattened, and the auricle bulges outward. The patient complains of swelling behind the ear, pain, discharge of pus from the ear, increased body temperature, ringing in the painful ear and low hearing, headache. In otoscopy, it is seen that a large amount of thick pus is flowing from the ear, consistent with a stroke; after the external auditory canal is cleaned, it soon fills up again with pus.

Sometimes pus can flow out not only through the hole in the eardrum, but also through the eroded posterior bony wall of the external auditory canal. An important otoscopic sign of mastoiditis is a noticeable hanging of the back-upper wall of the external auditory canal (Schwartz's sign). This sign occurs as a result of the inflammatory process developed in the cells of the mastoid septum, as a result of pressing the front wall of the mastoid septum and the entrance to the cave with pathological separation. In a number of cases, a fistula is formed in this area, and pus flows into the external auditory canal through the fistula and is an absolute sign of mastoiditis. In some cases, for example, when the opening of the tympanic membrane is closed, the drainage of pus from the tympanic cavity is disturbed, or the entrance to the septal cavity is closed, the pus from the patient's ear may stop. . Sometimes, as a result of the erosion of mast cells and bone tissue, pus accumulates under the periosteal membrane, leading to the development of a subperiosteal abscess; in this case, due to the swelling of the skin behind the ear, the fold behind the ear is flattened, and the auricle bulges forward. In addition, pus can spread on its own to the area of the outer wall of the antrum or to other areas. For example, when pus spreads from the inner surface of the apex of the mastoid to the fascia of the neck, the apex is neck (Betsold's) mastoiditis, when it spreads to the outer wall of the apex of the mastoid, it is Orleans. mastoiditis, when it spreads to the inner side of the biventricular muscle, it is defined as a deep abscess of the neck, that is, Mure's mastoiditis. When the inflammatory process spreads to the base of the cheekbone of the temporal bone, it is called zygomatitis, when it spreads to the temporal part, it is called squamitis, and when it spreads to the petrous part, it is called petrositis. the tumor spreads from the apex of the mastoid to the pubic bone area. Due to sharp pain when turning the head to the side, the patient bends the head to the inflamed side. Sometimes, as a result of the spread of pus from the neck cavity to the chest cavity, the patient may develop mediastenitis. In zygomatitis and squamitis, reddening of the skin of the inflamed area, swelling and local pain are observed. Three signs of Gradenio (purulent discharge from the ear, trigeminitis - severe pain spread along the trigeminal nerve fiber and partial paralysis or paralysis of the muscles supplied by the distal nerve fiber) are observed in petrositis. In case of mastoid inflammation, otoscopy often reveals reddening and swelling of the back upper part of the tympanic membrane.

In the development of latent mastoiditis, the age of the patient, the state of general and local immunity, the virulence of the microbe, the specific anatomical structure of the mast cells, and the mistakes made in the treatment are important. Such mastoiditis is often painless and almost always accompanied by inflammation and erosion of bone structures of the mastoid. Diagnosis is based on patient complaints, disease onset, anamnesis data, examination of the external ear, palpation, otoscopy, microotoscopy, acumetry, audiometry, vestibulometry, radiography, computer tomography, MRI, tympanopuncture, paracentesis, anthropuncture, clinical and bacteriological examinations. is placed. It is not difficult to make a diagnosis in late mastoiditis with clear clinical signs. In cases where the disease is accompanied by hidden, unclear symptoms, all its objective

symptoms are taken into account when making a diagnosis. In X-rays of the temporal bone according to Shumsky or Shuller, images of inflamed and healthy ear lobes are compared; on the inflamed side, the x-ray image shows that the air storage condition of the caverns and cells of the mastoid septum is reduced, the bone barriers between the cells are eroded, and a cavity filled with pus and inflammatory tumors is formed. it seems that If necessary, CT and MRI examinations are conducted, and their results are also taken into account when making a diagnosis.

Sometimes it is necessary to distinguish mastoiditis from the following diseases: 1) in inflammation of the lymph nodes behind the ear, pathological changes are not detected in the tympanic membrane, the tympanic cavity and the upper back wall of the external auditory canal, the patient's hearing ability does not change. 2) external auditory canal abscess, which has turned into an abscess, is accompanied by swelling behind the auricle. But the tympanic membrane does not change, the patient's hearing is preserved, and the ear pain increases when the auricle is pulled, when the earlobe is pressed, when the lower jaw bone moves, and when chewing. If in chipmunk, otoscopy reveals a narrowing of the tympanic part of the external auditory canal, in mastoiditis, it is observed that the bony part is narrowed and the upper back wall hangs down. In external auditory canal, the swelling area in the area of the mastoid septum leaves a fingerprint when pressed, and in mastoiditis, there is no fingerprint, but the swelling area hurts when pressed. 3) with phlegmon of the temporal bone area, the patient develops trismus and pathological changes in the oral cavity, the patient's hearing does not change, the hanging of the upper-back wall of the external auditory canal is not observed during otoscopy, the tympanic membrane does not change and there is no pus in the middle ear. 4) in deep phlegmon of the neck, no pathological changes are detected in the ear, the patient's hearing ability does not change, no pathological changes are detected in the cells of the sucker's barrier in the X-ray. 5) neuralgia of the small occipital nerve is accompanied by sharp pain and increased sensitivity of the skin behind the ear. The pain increases when the patient turns his head down or to the side; the pain is located between the flexors of the head and the trapezius muscles, that is, at the exit point of the cervical nerve fiber. The patient's body temperature is normal, no inflammatory pathological changes are detected in the blood. In otoscopy, it is determined that the tympanic membrane has not changed, and there are no changes in acumetry and audiometry examinations.

Treatment. A patient with mastoiditis is treated with conservative and surgical methods in the otorhinolaryngology department. Conservative treatment consists of etiopathogenetic and symptomatic measures, which are used locally and generally: 1) Medicines that constrict blood vessels in the nose while tilting the head back to the side in order to improve the function of the nasal cavity and auditory tube. drips; 2) warm compresses with semi-alcohol are applied to the ear area, the external auditory canal and the ear drum cavity are cleaned of purulent discharge, and medicinal solutions are injected into them through the eardrum; 3) Antibiotic therapy: depending on the patient's condition and microflora's sensitivity to antibiotics, one or two antibiotics are administered intramuscularly or intravenously. Antibiotics such as lincomycin, ceftriaxone or others dissolved in 0.5-1% novocaine and injected under the skin of the nipple area 1-2 times a day in a lymphotropic method give a positive result. 4) Calcium chloride, calcium gluconate, dimedrol, tavegil, suprastin, zyrtec, claritin, telfast (120-180 mg) tablets can be prescribed as hyposensitization measures; 5) As a hyposensitization, detoxification and anti-inflammatory agent, 1% calcium chloride solution is injected intravenously at the rate of 40-50 drops per minute (at the rate of 7-10 mg/kg for children, up to 400 ml for adults);

In cases where the above-mentioned conservative treatment measures do not give a positive result, one of the surgical operations to open the mastoid barrier cells (antrotomy, antromastoidotomy or mastoidectomy) is performed without delay. A patient with subperiosteal abscess, cervical mastoiditis, petrositis, zygomatitis, squamitis, and intracranial complications is urgently admitted to the hospital, and within the first 2-6 hours, antrotomy or antromastoidotomy is performed, if necessary, and posterior cranial cavities should be opened and inspected. The surgery to open and clean the cells and cavity of the mastoid is called antromastoidotomy, and in children under three years old, it is called antrotomy. Surgical removal of the mastoid along with its apex is called mastoidectomy. Sometimes it is necessary to open all the cells of the mastoid (periantral, perifascial, angular, apex, cheek, etc.) and take the entire mastoid apex. . This type of surgery is called an extended antromastoidectomy. During surgery, first, the apex, periantral, perifascial, and corner cells of the mastoid tumor are opened, and with the help of a sharp spoon, they are cleaned of eroded bone fragments, pus, and inflammatory tumors. Then the edges of the wound area on the bone are smoothed using a bone spoon. After the wound area is washed with an antiseptic solution and dried, a plug soaked in a hypertonic solution is placed on it and treated in an open manner.

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Still life composition of different objects work in the background of the country.

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Annotation

In this article, information is collected on the composition of a still life composed of various materials against a contrasting background. A still life composed of contrasting colors can be a little complicated, but if it is done properly and drawn according to the rules, it can be a real work of art. Basically, such types are drawn in higher education institutions. In this type of still life, more attention is paid to the color technique. Through this article, I have written my knowledge and skills on still life on a country background. The main goal is to be able to show correct placement, correct coloring, and color harmony.

Keywords: Contrast, background, composition, color technique, still life, geometric objects, achromatic, chromatic grayscale, cylindrical object.

Аннотация

В данной статье собрана информация о композиции натюрморта, составленного из различных материалов на контрастном фоне. Натюрморт, составленный из контрастных цветов, может быть немного сложным, но если он выполнен правильно и нарисован по правилам, то может стать настоящим произведением искусства. В основном такие типы рисуются в высших учебных заведениях. В этом виде натюрморта больше внимания уделяется цветовой технике. В этой статье я изложил свои знания и навыки в области натюрморта на деревенском фоне. Основная цель состоит в том, чтобы показать правильное размещение, правильную окраску и цветовую гармонию.

Ключевые слова: Контраст, фон, композиция, цветовая техника, натюрморт, геометрические объекты, ахроматика, хроматическая градация серого, цилиндрический объект.

Correct placement of the still life on the paper surface, careful pencil drawing of objects, determining the proportions, finding the character and coloring. Making a painting taking into account the nature of color and color relationships and lighting characteristics. Follow a methodical sequence

It would not be wrong to say that studying its laws, methods and technology is one of the most important tasks in painting. It is natural that knowledge about achromatic and chromatic colors is included among such prerequisites. All colors in nature that our eyes can see can be conditionally divided into two: achromatic and chromatic colors. Colors from white to dark black belong to achromatic colors (white, gray, dark, black, dark black), and the rest belong to chromatic colors (red, yellow, blue, etc.). relations: the lightness of the background is determined in relation to the lightness of the objects on the surface and to each other. First of all, the general color of the items in the set is covered. If we get the general relations wrong, we will not be able to show the accuracy of the pencil drawing, the light and shadow in the voluminous forms of the next individual objects, the accuracy and truthfulness of the image, materiality and breadth. The work should be carried out from shadow to light, on top of that, it is necessary to give the shadow areas as thin and thin a layer of paint as possible, and to cover the light with a much darker layer of dark

paint and clear strokes. while describing its appearance, its structural construction and proportions may be overlooked.

A still life composed of geometric shapes. The mutual location of things, the direction of the desired edge is easily determined in nature, and the image is easily built on paper with the help of vertical (vertical), horizontal (horizontal) lines of nature. With the help of a long pencil, it is possible to check the perspective angles of the device, the aspect ratios, and the places where they stand on the plane of the table. To do this, you can check the perspective direction of the edges by holding the pencil vertically, horizontally or at an angle with an outstretched hand.

Chromatic colors, in turn, are conditionally divided into two, warm and cold colors. Warm colors include fire, sun, red, yellow, golden colors that remind of the color of hot things. Cold colors are blue, blue, violet, reminiscent of the color of ice, air, water. Green and purple colors can sometimes be warm and sometimes cool. Because green is a mixture of yellow and blue. Purple is a mixture of red and blue. As you can see, these colors are formed from a mixture of warm and cold colors. When mixing, if the amount of warm color is more than the amount of cold color, the resulting color can go into the warm color range, and if the amount of cool color is more, it can go into the cool color range. Similarly, violet is considered warm when it has more red, and cool when it has more blue. So, in the training session, color-it is important to clearly show the light-shadow ratio of objects and objects in the composition, as well as the color ratio.

The naturalness of colorsgetting it right in an image is a much more difficult task. This can be achieved through hard work, fine taste and excellent observation. In order to learn to distinguish the degrees of hunger and satiety of things in a still life, to understand the unity of color in it, it is of great importance to depict a still life in one color. Painting in this way makes it much easier to move on to color rendering of difficult still lifes later. The method of writing in one color is called "grizail".

Painting in the grisaille method is a preparatory stage for the transition to the method of working with different colors, which provides an opportunity to learn the ways of using a brush and the properties of watercolor paints. After learning how to depict several still lifes with this technique, it will be much easier to work with still lifes with all kinds of colors. In the grisaille technique, shadow, penumbra, reflexes are covered with suitable paints in the desired color at once, (paint as much as possible without repeating the application) it is necessary to move the paint smears in the direction of the form. For example, if a cylindrical object is rubbed in different random directions, it is difficult to show the circularity of this shape.

Still lifes are often placed in rooms. But sometimes it is necessary to describe it in the heart of nature. In such a case, it is important to analyze and understand the color characteristics of a still life before working on it. Because the light coming from the window gives cold colors to the still life placed inside the room. On the contrary, the shadows falling from the objects appear warm. Outdoors, outdoor subjects are the opposite, where the shadows may appear cold and the highlights warm. Observing such situations carefully and then carefully describing them will have an effect on the quality of the work.

Contrast (ing, Russian "contrast") means a sharp difference between two objects.

It should be noted that the emphasis is on the concept of sharp difference. A simple distinction is not understood here.

Let's take color contrast for example: There are 2 colors here. Be bold and be bold. We notice the difference between these colors. There is a difference in colors, but the contrast is poor. We do not say that the contrast is there or not, but that the contrast is strong or weak. It is true to say so. Because contrast here also refers to the word "difference".

There are no ready-made paints that determine the exact color of things in nature. But a mature artist can depict anything, taking into account their characteristics, perceiving the interaction of colors and their appearance. In order to achieve such attractiveness and realism in the image, the artist needs to know the ratio of colors, the different shades of one color between the colors. helped to take into account. For example, in order to depict the fire color red as burning more strongly, the shadow of the objects around this color is given in blue, green, bluish shades. In order for there to be complete similarity between what is being drawn and the image, there must also be similarity in their color ratios. To achieve this, it is necessary to deeply study the basics of color science and repeatedly refer to these issues in the practical work process. In order to depict still lifes with various paints (watercolor, gouache, watercolor), it is recommended to carry out the above-mentioned experiments, to get to know the technological features of paints, and to do many exercises to master the methods of their use. will be done.

Summary:

In conclusion, it can be said that this article is a collection of instructional pictures and necessary information for students of fine arts and engineering graphics. The article shows the rules of still-life work and grayscale work, which are made up of sharply different colors.

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Historical geography of the region Naxshab of the early medieval period

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Abstract: In the early Middle Ages, the geographic and political boundaries of Nakhab region, which connects South Uzbekistan with neighboring countries, toponyms, hydronyms, ethnonyms of the country, changes in the natural environment and processes related to it, the routes of caravan routes, the geographical location of the population, the reasons for the development or crisis of cities and other settlements are covered in this article based on scientific sources and data.

Key words: Tokharistan, Eftali, Southern Sughd, monument Qala'i Zahoki Moron, Erkurgan, Kongyrtog, Olatun railway station, steppe Jom, Chaganiyan, Turkic khanate, monument Shulluktepa, Bahram Chubin, monument Kokhna Fazli.

Today's historical research, in obtaining important results of political, economic and social importance, research in the historical geographical direction is becoming important. Historical geography, which is considered an important component of the science of history, is becoming important in determining the geographical and political boundaries of historical and cultural lands, the reasons for their change, in making scientific conclusions by comparing ancient place names - toponyms, hydronyms, ethnonyms with the current situation, in clarifying the changes in the natural environment and related processes, the routes of caravan routes, the geographical location of the population, the reasons for the development or crisis of cities and other settlements.

In the years of independence in our country, great progress was made in studying the historical geography of the early medieval period of the southern regions of our country. Among the important researches created during this period, it is necessary to mention the fundamental researches dedicated to the Great Silk Road, the works analyzing the works of travelers of the early Middle Ages.

Thus, during this period, the issue of historical geography of Sugdiyana and Tokharistan began to be studied on a new basis, using written sources and archeological data.[1:24] During this period, the scientific knowledge related to the subject under consideration increased significantly. This was a major breakthrough in the study of the subject in question.

The fact that the city of Naxshab in Lower Kashkadarya was one of the residences of the ruler of the Ephthalites led to an increase in the political status of Southern Sughd (the oasis of Kashkadarya). The roads leading from Bukhara and Samarkand Sughd to trade cities in Southeast Iran, Afghanistan and India have passed through the oasis area, and the study of the routes of these caravan routes was important in clarifying the characteristics and boundaries of the location of properties and spaces in South Sughd, as well as the historical geographical location. Therefore, we will briefly touch on them.[2:223]

The roads from Samarkand and Bukhara converged in the large city of Lower Kashkadarya, Naxshab (in the early Middle Ages, after the old city on the site of Erkurgan became a ruin, the center of the oasis moved to the city of Naxshab, where the monument of Qala'i Zahoki Moron was located). In Chinese sources belonging to this period (Beishi) it was called Noshebolo. From this city, they went to the middle reaches of Amudarya (Kelif, Kerki, Burdaliq) or via Subah, Huzor, Temir Darvoza to Termez. [3:74]

One of the main roads leading from Samarkand to the south passed through the present-day Kokdala steppes and the northern slopes of Kongyrtog. In the early Middle Ages, there were

few settlements in this area, mainly the winter residences of nomadic herding tribes, and wells, which were of great importance as important stops on the Samarkand-Naxshab road. At the same time, the information we collected during the study of the ancient roads in the oasis shows that in the steppes between Samarkand and Naxshab, fortifications in the form of large fortifications appeared already in the early Middle Ages. An example of this is the Hazorbuqa and Karatepa monuments located 20 km west of Kokdala. 1.5-2 km from the Samarkand-Karshi railway. [4:103] Hazorbuqa and Karatepa monuments located in the west, near the Olatun railway station, were built in the 70s of the 20th century by academician studied by A.S. Sagdullaev. According to opinion researcher O'. Mavlanov, this is a monument was founded in the III-IV centuries. These monuments were also important as winter residences of local herdsmen and important intermediate stops on the Samarkand-Naxshab trade route. The geographical location of these places became important in determining the location, winter residences and pastures of pastoral tribes. [5:98]

The road connecting Samarkand with the international trade centers in the south passed through the Kashkadarya oasis since ancient times. The most important and actively used of them was the Samarkand-Nasaf route. The road from Samarkand to Nasaf through the Jom steppe is divided into several branches here. One direction joined the road from Bukhara and led to Termiz via Subah, Kindik village, Temir Darvoza. The village of Kindik is three days' journey from Nasaf and Kesh, where the trade route from Samarkand through Kesh joins the Nasaf-Termiz trade route. From Samarkand, through Nasaf, they also went to the Amudarya villages (Kelif, Kerki, Amul). [6:233]

From Samarkand, there was also a middle road leading to the Iron Gate and Chaganiyan (Surkhan oasis) through the Jam desert - Chirakchi - Huzar (Guzar) route. Preserved monuments with the names of Oltinboshtepa and Chandaraktepa on the right bank of the middle stream of Kashkadarya it helps clarify the direction.

In Southern Sughd, along the road system leading to the cities of Kelif and Kerki on the left bank of the Amudarya, nine days from Bukhara, craft centers such as Navkad-Kuraish, Altintepa and many villages flourished between Kasbi and Bazda, Iskifagn, Kesh and Naxshab. Research on the historical-geographic location of the finds and monuments confirms that the economic development of the main part of these monuments was primarily organized by agriculture.

Even in the early Middle Ages, transit trade routes connecting Bukhara and Samarkand, the two largest cities of the Turkic Empire with Khurasan and India, passed through the Kashkadarya oasis. The towns and villages along these roads were important in defining the historical geographical boundaries of the oasis. Therefore, it is appropriate to consider these directions.

During this period, many sources provide information about Nasaf, which was considered the capital of the oasis. A new city was founded in Lower Kashkadarya after the Arab invasion of Naxshab in the early Middle Ages. The local people called this city Naxshab, the Arabs named it Nasaf according to their pronunciation. The developed period of the city corresponds to the X-XII centuries. The city of Nasaf (this city became a ruin after the Mongol invasion), according to archaeological research, situated 8 km from Karshi. It was on the site of the Shulluktepa monument in the northwest. In the early Middle Ages, the internal trade route connecting the two main cities of the Kashkadarya oasis - Nasaf and Kesh - passed along the left banks of the Kashkadarya. [7:191]

In particular, Chandaraktepa (beginning of the 9th-13th centuries) was considered an important place that controlled the traffic in Kashkadarya. Zuhratepa, Qamaytepa, Oltintepa, Kishmishtepa and other monuments were studied in this direction.

During this period, the Bukhara-Nasaf route (30 farsakhs) passed through Karachun, Miyankal, Maymurg, and the caravans covered it in 4 days. [8:56]

In Nasaf, the road from Bukhara branched off and it was possible to go to Balkh in the following directions: Nasaf - Subah - Kindik village - Temir Darvoza - Termiz - Balkh or Nasaf - Kelif - Balkh.

To the west of Nasaf are the villages of Kasbi (4 farsakhs) and Bezda (6 farsakhs), which in the early Middle Ages were located on the western borders of the Naxshab estate. [9:56-63] Kasbi is mentioned in Armenian sources as a strong fortress. It is recorded in the sources that Bahram Chubin, one of the famous generals of the Sassanid era, conquered the lands of the Turkic Khanate and subjugated all the "land of the Kushans" from Balkh to the Caspian. [10:86-90]

The city of Bezda, located in the western part of Naxshab, was also one of the important possessions of Southern Sughd. Although there are not enough water sources, it is reflected in the sources that farming has developed in the estates around Bazda, and that the population irrigates crops with well water. The city of Bazda was founded at the beginning of AD. During the period of the Turkish khanate, it was considered one of the important fortifications on the western borders of the Naxshab estate. The distance from Naxshab to Bezda was 40 km. The ruins of this city were on the site of the Kokhna Fazli monument.[11:96-100]

The cities of Kasbi and Bezda, due to their favorable geographical position, played an important role in the system of caravan routes from Bukhara to other trading cities of Termiz, Balkh and Khurasan. [12:1-6] The sources contain information about the caravan route from Bukhara through Kasbi to Termiz, through Bezda to Kelif crossing and Termiz (among which there were intermediate destinations such as Jiken, Old Rabat, Said Well, Bezda, Horan Rabati, Bukhara Village, Khorezm Village and Balkhan). The caravans covered the distance from Bukhara to Bezda in 4 days, and the Bukhara-Kelif road in 5 days. This route greatly shortened the route of trade caravans, saving time and travel costs [13:128-131].

Kashkadarya, which is the main water source of Southern Sugdiyana, and the cities of Kesh, Nakshipa (Ksenipa), Naxshab, Subah in the basin of Guzordarya, which is its left tributary, played an important role in the internal and external economic relations of the oasis. According to the researches, at the beginning of AD, the roads leading from Erkurgan along the right bank of Kashkadarya through monuments such as Beshtepa, Oratepa, Koziboy tepa, Shahri-Khaibar or Karabayr tepa, Payshanba tepa, and the roads leading to Guzor oasis through Nasaf (Shulluktepa), Kafirtepa, Qal'ai Zahoki Moron were used. [14:135-138] During this period, the road connecting Kesh, the capital of Eastern Kashkadarya, with Nakshipa (Yergorgan) became the main link in the internal road system of the oasis.

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Historical-demographic processes in the world in the era of globalization and its impact on urbanization.

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Keywords: Global, Globalization, Urbanization, City Headquarters, Innovation Centers, Modular Manufacturing Centers, World Loading and Unloading Points, Retirement City, World City, Trade and Culture Center, Information Center.

Abstract: This article analyzes the rapid development of the world's pace of life in the process of globalization, historical-demographic processes, positive aspects of globalization, and the fact that there are a number of serious problems, its impact on urbanization, and the fact that there are different views in science about the positive and negative aspects of globalization.

Today, humanity is living in a time of complex conflict, which is changing rapidly and is completely different from the times experienced in the past history.

Nowadays, it is becoming common for people in other regions of the world to be immediately informed about the events happening on the other side of the earth. Thanks to the Internet connection, the news happening in the world is received anywhere on our mother planet.

This period is called by experts the age of high technologies, general information or ideas. But in science and practice, this idea has taken a firm place with the term globalization. As noted by Professor N. Joraev, the term globalism is becoming more and more important in the next hundred years. The concept of "global" from the point of view of the dictionary meaning means "general" from the French language, and "globe-earth" in Latin. So, the concept of globalism, in both senses, includes "planetary", "all-planetary", "all-human", "worldly" problems, issues of "all-planetary" importance and perspectives of global development, which are directly related to the life and destiny of mankind. takes [1:408-409]. Globalization means, first of all, an incomparable acceleration of the pace of life" [2:111] So, the essence of the globalization process is the excessive expansion and complexity of communication and interdependence between people and countries. [3:6].

Thus, the rapid development of the pace of life on the world scale showed that along with the positive aspects of globalization, it also has a number of serious problems [4:1492-1495]. It is accepted to call a certain part of them "global problems of the present time" in science. There are different views in science about the positive and negative aspects of globalization.

The positive aspects of globalization accelerate the convergence of the national and cultural life and economy of peoples and states, create favorable opportunities for their development[5:135-138].

In a broad sense, economic interdependence, globalization of information, and interdependence from the point of view of security are some of the characteristics of the globalization of today's world.

Logan and Moloch, the world's leading experts in this field, divide cities that have emerged as a result of international economic influence on urbanization processes into five types. City Headquarters Apartments, Innovation Centers, Modular Production Centers, World Loading and Unloading Points, Retirement City.

According to experts, "Globalization" in a broader sense is the growth of national and regional problems into global problems and the formation of a new economic and economic natural and biological environment.

Globalization processes in the world, as in other areas, have positive and negative effects on the appearance of world cities and lifestyle[6:1-6]. Although various proposals and recommendations are given by experts to find solutions to the problems caused by globalization, fundamental proposals in this area are still missing.

Economic globalization creates an opportunity for the complexity of the urban system, for it to have a new place in the development of society. This process has both positive and negative effects on cities. Large cities-due to globalization[7:121-123] megacities are taking the position of global cities. "These megacities make up the main share of the gross domestic product of their countries. In particular, about 30 megacities of the Organization for Economic Co-operation and Development [8:96-100] (OECD) account for 10-50% of the GDP of those countries[13].

Among them, Copenhagen leads with 49.6% of Denmark's GDP. The cities of Dublin, Brussels, and Budapest account for 42-47% of the GDP of their countries. Vienna, London, Paris, Stockholm and Tokyo share 28-34% of the state GDP of the national GDP"[12]

Cities that are becoming global are being called by different names. In particular, J. Gottmann uses the terms "Megapolis", P. Hall, J. Friedman "World city", S. Logan and G. Molotch "headquarters", M. Kostels "Information city", S. Sastsen "global city" and terms are becoming popular today[14:145].

• In the center of the globalization process is the acceleration of information and information technologies, the development of social-political and economic structures on a global scale, and the international importance of the financial market. Saskia Sastsen in her book "Global City: New York, London, Tokyo" describes global cities as the center that produces political solutions for the global economy, the main point where financial and specialized service firms that influence the economy are located[15]. The following characteristics of the global city can be distinguished from the opinions of the above researchers:

• Size of the city (population);

• International role as a trade and financial center; the development of various service areas;

• Importance as an information center, development of information functions;

• It plays an important role as a national and world center, the location of government organizations;

• Existence of international organizations and importance of international functions, location of headquarters of multinational corporations, offices of international companies;

• Its role as a national and world trade center;

• The fact that it is a highly developed activity center;

• Leadership as a center of culture and art;

• • The role of major international transport connections;

• Growth of social and economic disparities[16].

The analysis shows that modern urbanization processes are progressing in an integral connection with globalization processes.

With the incomparable influence of globalization[9:128-131], the processes of urbanization are accelerating, small towns are relatively expanding, and big cities are getting bigger. As a result, during the 20th century, it was observed that the pace of the urban situation on the world scale accelerated.

The rapid development of the economy, the revolutionary penetration of modern technology into the production sector, the rapid development of transport and communication, the wide spread of population migration at the international level, and other factors accelerate the urbanistic processes and sharply differentiate the urban lifestyle from the rural life. brought

Urbanization [11:73-76] is a historical process that represents the way of life associated with the development of cities, and the amount of cities in the accumulation of population within the territory and regions, and the determination of their size and size indicates the place of cities in various aspects of community life [12:26-28].

The development of cities is characterized by the development of social and economic spheres of the society and the improvement of the standard of living and lifestyle of the population.

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THE DEVELOPMENT OF PROBLEMS OF THE RIGHT OF SELF-GOVERNMENT IN UZBEKISTAN.

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Key words: Right to self-governance, Organization of self-governance organization, basics of self-governance activities, territorial, organizational, financial and economic bases, operation of self-governance organizations, guarantee of self-governance, Nature of guidelines, management powers.

Abstract: In this article consideres the development of the problems of the right to self-government in Uzbekistan is carried out in two directions, including the first direction is related to the theoretical foundation of the new branch, its subject, methodology (method), and the determination of its source, the set of norms of the right to self-government is part of the law of the Republic of Uzbekistan that the right to self-government is formed as a branch, the principles, institutions and norms of the right to self-government are components of this system.

The development of the problems of the right to self-government is related to the development of law, legislation, and legal science in Uzbekistan to a certain extent.

The development of the problems of the right to self-government is carried out in two directions.

The first direction is related to the theoretical foundation of the new network, its subject, methodology (method), and its source. So far, research materials on this problem have been published, monographs and dissertations have appeared. But even though research is still in its infancy, each[2:69] new work is moving toward defining the status of the self-government network.

Legal norms that strengthen and regulate social relations that arise in the process of organizing self-governing organizations and their activities are called self-governing right norms.

The complex of norms of the right to self-government creates the right to self-government as a branch of the law of the Republic of Uzbekistan [9:128-131]. The principles, institutions and norms of the right to self-government are components of this system.

Usually, legal norms arise as a result of law-making activities of the state and its organizations. The rules of conduct, which are stated in the normative documents of self-management organizations that are not included in the system of state authorities [3:73] and are binding on everyone, make up a large part of the norms of the right to self-management. The Law of the Republic of Uzbekistan "On Self-Governing Organizations of Citizens"[1] strengthens the right of self-governing organizations and their officials to make decisions on matters under their control (Article 16).

The characteristic of the norms forming the right to self-governance is that [4:1492-1495], the right to self-governance is at the same time a complex branch of law that includes the norms of the main branches of law, such as Constitutional (state) law, civil law, financial law, etc.

In order to understand the characteristics of the norms of the right to self-government, it is necessary to classify them as follows:

- ✓ legal norms on the object of legal regulation, that is, on the rule of regulated relations:

- ✓ self-management in the system of public power (concept, principles, functions of self-management);
- ✓ the basics of self-management activities (local, organizational, financial and economic basics);
- ✓ operation of self-management organizations and the subjects of their powers, guarantee of self-management;
- ✓ is divided into provisions that strengthen the responsibility of self-management organizations and their officials.
- ✓ According to the nature of the guidelines, they are:
- ✓ management powers (norms, which determine what self-governing organizations should do, for example, permits that determine work in this field);
- ✓ to binding norms (guidelines on what to do);
- ✓ is divided into prohibition norms (prohibition norms that determine what should not be done).

The last two norms can be explained as follows: self-governing organizations , their [5:135-138] officials are accountable to the population, listen to the reports of the heads of district, city and regional hokims on issues within the sphere of activity of self-governing organizations [6:1-6] is necessary. In these norms, which are called binding, the obligations of the state towards the self-governing organizations and the obligations of the subjects of the right of self-governing are defined[7:121-123]. Norms restricting the right to self-governance, prohibiting interference in the activities of self-governing organizations are prohibitive norms.

In the right to self-government, the provisions announced in the Constitution of the Republic of Uzbekistan [15:29] and expressed in the Law "On Self-Governing Organizations of Citizens" can be singled out:

- Self-governing organizations are established in towns, villages, villages, as well as in neighborhoods of cities and districts throughout the territory of the Republic of Uzbekistan (Article 105). Self-governing organizations determine their status and the status of their organizations independently (Articles 8, 11, 12, 13, 14);

- reporting and responsibility of self-governing organizations and officials to the population (Article 29);

- citizens and legal entities (officials of institutions located in the relevant territory) must fulfill the decisions of the self-governing organizations within their powers; Non-implementation of decisions of self-governing organizations of citizens[13:26] and their officials or their decisions cannot be annulled by state organizations [14:69] and officials, these decisions can be declared invalid only by a court decision (19- substance).

Legal institutions included in the network of the right of self-government consist of a group of norms that regulate social relations of a kind related to various aspects of self-government[10:396-400]. Institutions of the right to self-government include: territorial bases of self-government; self-governing organizations and their officials [11:73-76]; issues of local importance and powers of self-government organizations, elections of self-government organizations [11:26-28] and local referendum, property of self-government organizations and so on.

Thus, the legal institution in the right of self-government consists of a set of legal norms that regulate a certain range of interrelated social relations and form a separate, independent group within the subject of the right of self-government.

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INITIAL LEGAL BASIS OF THE ORGANIZATION OF CITIZENS' SELF-GOVERNMENT BODIES IN UZBEKISTAN.

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Basic words: Bodies of self-government of citizens, neighborhood, city, village, village assembly of citizens, neighborhood assembly of citizens, chairman (elder) of the assembly of citizens, advisers, council of the assembly of citizens, assembly of citizens the inspection commission **.**

Abstract: In this article, with the honor of independence, comprehensive measures have been implemented in the field of restoration and further development of neighborhood authority in Uzbekistan, restoration of neighborhood values has been raised to the level of state policy, citizens' direct implementation of people's power, direct participation in state and community affairs. It has been considered that one of the tools of public participation, the main task of which is to ensure citizens' independent activities in solving issues of local importance, and the adoption of a number of decisions and decrees in this field.

With the honor of independence, extensive measures were taken in the field of restoration and further development of the authority of the neighborhood, as in all areas. Restoring neighborhood values has risen to the level of state policy.

One of the means of direct implementation of people's power, direct participation in state and community affairs, the main task of citizens is to ensure independent activities of citizens in solving issues of local importance.

The Law of the Republic of Uzbekistan "On Self-Governing Bodies of Citizens"[1] (April 22, 2013) specifies the legal status of self-governing bodies of citizens. According to this law, citizens' self-government bodies are:

gathering of citizens of the neighborhood in the city, village and village;

council of the citizens' assembly, commissions on the main directions of the citizens' assembly;

inspection commission of citizens' meeting;

an administrative commission established in the cases provided for by law in towns, villages and villages located far from the district center and difficult to reach.

Self-government bodies of citizens are not included in the structure of local government bodies. Self-government bodies of citizens enjoy the rights of a legal entity, have a model seal and must be registered with local government bodies.

About 10,000 citizen self-government bodies are active in Uzbekistan[4:1492-1495]. The election of citizens' assembly bodies and their officials is carried out by secret or open voting on the basis of general equal and direct suffrage, ensuring the guarantees of citizens' electoral rights established by law. The assembly of citizens is the highest body of self-government and has the right to represent the interests of the population and make decisions on its behalf in the relevant territory[5:135-138]. People who have reached the age of 18 and live permanently in the territory of the town, village, village, and neighborhood will participate in the meeting of citizens. The new version of the law "On Citizens' Self-Governing Bodies" specifies the powers of the township,

village [6:1-6], village assembly of citizens and the assembly of citizens of the neighborhood in the city.

The chairman (elder) of the citizens' assembly, his advisors, the main directions of the citizens' assembly, to implement the decisions of the citizens' assembly and to carry out the current activities of the citizens' self-government bodies during the interim period of the citizens' assemblies[7: 121-123], a council of the citizens' assembly will be established, consisting of the chairmen of the commissions and the responsible secretary of the assembly.

The audit commission is established to check the financial and economic activities of citizens' self-governing bodies. The administrative commission is established to consider cases related to administrative offenses within the scope of its powers.

In order to coordinate the activities of the self-government body of citizens [8:96-100], the council of elders of the republic, as well as regional, district, and city coordination councils for citizens' self-governance may be established.

The process of deepening democratic reforms in the system of local self-government in our country [9:128-131] is one of the most urgent tasks. Naturally, local self-government bodies ensure the participation of citizens in state administration and the implementation of public control, while closely helping to increase the efficiency of local administration.

After the independence of Uzbekistan, the legal democratic state took part in the path of building a democratic state and the development of market relations. The problem of creating a legal state and civil society is closely related to the establishment of state power, the competent authorities of state power and the authorities of state power [10: 396-400]. These bodies form the people with the source of power.

Establishment and development of self-government of citizens, formation of its legal basis, fair citizenship in Uzbekistan's transition to democratic principles (principles) in the organization of society and the state and their activities A lot of work was done in the field of legislation and at the constitutional level [11:73-76] to establish the society. After all, only in the conditions of self-management, a sense of common interest and responsibility arises among citizens, citizens not only learn the methods of solving their own affairs, but at the same time take responsibility for solving the most important vital issues. also feels. In addition, citizens who have learned the lesson of self-governance can think objectively and competently about state policy.

In the Law "On Self-Governing Bodies of Citizens" adopted on April 22, 2013, self-governance and independence of citizens are guaranteed by the Constitution and laws of the Republic of Uzbekistan (Substance 1) , it is emphasized that self-government bodies are not included in the system of local state authorities (Substance 8).

Article 5 of the law specifies the main principles of the activities of citizens' self-government bodies: legitimacy, priority of human rights, freedoms and legal interests, democracy, transparency, social justice, independence in solving issues of local importance, public[12 :26-28] based on mutual assistance, social partnership, customs and traditions.

The fact that self-government is defined as a component (element) of the political system of society in Uzbekistan, together with the interests of individuals and the state, local interests are also recognized and guaranteed, which means that the local population (in cities, towns, villages and other places) population) is related to solving issues of direct provision of life and activities. At the same time, all these interests (society, state interests and local interests) are considered equal[3:59].

In this respect, the importance of self-management is manifested in various forms. It is a form of people's power; method of exercising civil rights; it can be defined as an organizationally and functionally separate institution in the system of society and state administration.

Let's briefly consider the importance of this institution. Self-government is a form of people's power. Along with state power, self-government represents the only people's power in Uzbekistan. Self-governing bodies in the exercise of their rights to institutions that directly express the will of the people (participation in elections and other events for self-governing bodies), as well as self-governing bodies and rely on their managers.

Creation, annexation, division and change of neighborhood is carried out by local state authorities at the initiative of citizens' self-government bodies ("Citizens' self-government bodies" Article 6 of the Law on Taking into account that the idea of rights and freedoms realized through self-management of citizens is diverse, in the Constitution of the Republic of Uzbekistan, this institution is interpreted on the basis of mutual relations with the individual [13:113].

On September 2, 1993, the Law of the Republic of Uzbekistan "On Citizen Self-Government Bodies" was adopted, on April 19, 1999 and April 22, 2013, additions and amendments were made to this Law.

The law developed and clarified the system of self-government of citizens. Thus, this Law became the most important source of the right to self-government and the legal basis for its development.

In 2004, the Law of the Republic of Uzbekistan "On electing the chairman of the citizens' assembly and his advisers" was adopted. The norms of the right to self-government are stated in the decrees of the President of the Republic of Uzbekistan and government decisions. For example, the decree of September 12, 1992 "On the creation of the Republic "Mahalla" fund" [2]; Decree of February 23, 1998 "On support of citizens' self-government bodies"; Decree of January 23, 1999 "On increasing the role of citizens' self-management bodies in providing targeted social assistance to the population"; Resolutions of the Cabinet of Ministers of April 19, 1999 on "Neighborhood Watchman" public structures, "On conciliation commissions under citizens' self-governing bodies" and other documents.

The volume of legal norms and guidelines has increased tremendously as a result of the growing importance of relations regulating the network of self-government rights. Now the number of citizens' self-government bodies in the Republic has reached 10,000, and the norms in this field are constantly improving. This situation also creates the need to develop legal regulations in the field of self-government from all sides[14:67].

Thus, the number of regulatory documents regulating self-management has increased significantly. In addition, relations between the norms of different branches of law, which differ from each other in terms of the subject and method of legal regulation of affairs in the field of self-governance, have become more intense and complicated. Perhaps, in the future, codification and incorporation of legal regulations applicable in the field of self-government may be necessary. This process also creates the need to form a separate legal branch of the right to self-governance of the Republic of Uzbekistan.

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THE ANCIENT BATHS OF SHAHRISABZ

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Key words. Middle East, bathhouse, qayim, zabbal, waqqos, saqqah, greenhouse, steam room, alkaline water.

Abstract. Oriental baths occupy a special place in the lifestyle of the people of these countries. They are widely known from historical accounts and travelers' own descriptions that baths in the Muslim East, unlike European baths, functioned as a place of purification, recreation, and spiritual center. The Shahrisabz bathhouse was built in the traditional style of a medieval bathhouse. It was built in the XIV-XV centuries.

Oriental baths represent a special part of the material and artistic culture of Middle Eastern countries. They are widely known from historical records and travelers' own descriptions: "The number and quality of baths served as a measure of the city's prosperity and were certainly recorded in the descriptions of medieval authors [1].

In the East, baths were built in Syria in the 5th century BC, and Muhammad a.s. he is believed to have seen the bathhouse and recommended that it be built as a public household facility in all areas of the caliphate. Baths in the Muslim East functioned as a place of purification, recreation, and spiritual center, unlike European baths[2].

According to A. Metz, public baths were widespread in Persian cities as early as the 5th century. They were built during the reign of King Balash (484-488), then King Kubod. In the Middle East, such structures were very common during the early Islamic period. But from the end of the 10th century, their number began to decrease. At that time (X-XIX centuries), the staff of the bath consisted of at least five people: a bath attendant (hammomi), an attendant (qayim), a person who prepares dung (zabbal) for heating the bath, a guard (waqqas) and a seller of drinking water (saqqah) [3] .

Here, public baths were not only hygienic, but medical procedures were also carried out, they were like a men's club, where they socialized over tea, discussed news, and made profitable deals. The architectural decoration of the bathrooms is of particular interest. Al-Masudi states that the wonderful animal al-Anqo, man, is often found in the bath the image of a bird with a face, an eagle's beak, two wings and arms can be found.

All these features were characteristic of many baths of Central Asia. About the medical procedures carried out in them in the 10th and 11th centuries, Abu Ali Ibn Sina notes, in particular, that this included not only healing massage, but also treatment with various herbs, infusions, etc.

In the work "Protecting Health", he gave various recommendations on the construction and decoration of baths, the composition of medicinal infusions, etc. In particular, he recommends that a good bathroom should have moderate temperature, light, a spacious dressing room, and pictures of "good work, immaculate beauty, lovers and beloveds, gardens, galloping horses, and wild animals" to maintain a healthy spirit [4].

In the 10th and 11th centuries, the Taraz bathhouse was closer in layout and architecture to the classical baths of Central Asia, and was a multi-chamber structure with a single heating system through underground fire channels. In the greenhouse, the heat release of the body partially stops, its temperature rises to 38°-39°. Oxidation process and metabolism in the body increases. Due to

strong sweating, the excretion of metabolic products in the body increases, and the functioning of the kidneys becomes easier. Under the influence of hot air, skin capillaries open and blood vessels expand, improving blood circulation. People with heart disease, atherosclerosis, aneurysm, hypertension, as well as children they are not allowed to use the greenhouse (steam room).

According to the information given by A.L. Kun, the second of the 19th century in Shahrizaz, there were 14 houses, 7 caravanserais and 2 baths. The Shahrisabz bathhouse was built in the traditional style of a medieval bathhouse. It was built in the XIV-XV centuries.

The bathhouse in Shahrisabz is believed to belong to the XVIII-XIX centuries, that is, the times when Shahrisabz begs ruled. But it is possible that this bathroom is much older than that. According to local information, the bath is 700 years old[5:123]. According to the structure and construction history of the bath, this building was built much earlier than the baths in Samarkand and Bukhara. Shahrisabz bath was famous for its "pain cure" at the end of the 19th century and the beginning of the 20th century. That is why the line of visitors to this bath is not interrupted. The bathroom is rectangular and extends slightly from south to north. Usually, in a building with a right-angled view, it is not possible to build a dressing room and other auxiliary rooms in any corner.

The total area of the bathroom is 22.5x15 meters. The buildings are placed in three rows across and four rows along the length of the building. At the entrance there is a simple and relaxing room, the relaxing room has a moderate temperature adapted to acclimatize the body to the high temperature. The bather usually passes from this place to the central courtyard, which is a square room with side-by-side chamfered open chambers and deeply carved niches. To the south is a laundry room with three more rooms, hot and cold water supply.

Correspondingly, there is a large water basin, which is connected to the laundries by Windows [6:1492-1495]. Water is brought to the containers from a well located in the southeast corner of the building. Under the building there were dense networks of 35-50 cm cross-section, through which smoke for heating moved. Laying marble stones on the floor and platforms of the building developed. The main rooms are covered with a shield dome. Such cases make it possible to say that the bathhouse is ancient, but not earlier than the 15th-16th centuries. In Shahrisabz there is another bath apart from this bath which has not reached our time [7:1-6]. Among the older population, there is general information that this bathhouse is located near the Bek Horde, only people connected to the Horde can enter it, and it is heavily guarded. The structure, period of construction and other necessary information are not found in historical sources either.

The baths have a dressing room, a large tea room, a massage room in the middle, and surrounding washrooms, which are covered by large and small domes. There were hot and boiling water in the pools made of brick and stone. The lower part of the rooms (poly) is heated with hot air. Moved from room to room [8:96-100] (the rooms became increasingly warm in the rooms of TOMOH). The gutters for the drainage of all the sewage of the bathhouse were made, and the surface of the ponds for fresh water and ash water (alkaline water) was covered with special water-resistant compounds ("dirt").

The walls are plastered with ganch, decorated with glazed ceramic rivets. All rooms of the bathroom had their own function. The central hall is preceded by three drawing rooms for washing the feet and acclimatizing to the heat. There were three rooms behind the central hall, a soap room. On the east and west sides of the hall were two deep massage rooms. The bathhouse in Shahrisabz was probably decorated in its time. The design and interior fittings of the Shahrisabz bathroom are carefully thought out. In order to preserve heat, it is made deep.

Shahrisabz baths are known for their "healing" properties as elsewhere, and people are known to come to Shahrisabz baths from various places for treatment.

In August 2014, under the leadership of A. Rayimkulov, the Institute of Archeology of the UZFA and the Amir Temur Museum of Material and Cultural History of Shahrisabz city conducted archaeological control and archaeological excavations in Shahrisabz city in August 2014. During the conducted research, 50-55 m east of the Shahrisabz city farmer's market, the remains of a 14th century bath were found (coordinates 39°3'14.49'N; 66°49′42.30°E). 4 rooms of the bathroom have been preserved. The structure was made of bricks on the basis of the perfect foundation prepared by the architects of that time.

In the construction of the bathroom, square bricks with dimensions of 24x24x4.5 cm, 24.5x24.5x5 cm, and 25x25x5 cm were used. The lower part of the washrooms in the bathroom has been preserved, that is, the existing part of the underfloor devices that allow hot air to circulate in the heating of the bathroom.

Bricks of this size were used in the construction of the Zarafshan and Kashkadarya oasis monuments in the first half of the 14th century, and they help to determine the period of construction of this bathhouse. Ancient baths built in the Middle Ages [9:121-123] were discovered in Afrosiyab in Samarkand, in the monument of Ahsiket in Namangan region, in the monument of Kuva city in Fergana region, in Bukhara and in Khorezm. In the 16th century built baths still exist in the cities of Karshi and Shahrisabz.

In the city of Shahrisabz, the remains of another bath belonging to the period of Amir Temur were discovered in 2002 on the south side of the Dorussaadat architectural complex. But the remains of the bath from the first half of the 14th century have not been found so far. Therefore, the discovery of the remains of this bath from this period is very important in the study of the architecture this period.

Archeological observation works were carried out in the southern part of Dorussaadat architectural complex by scientific staff of the Institute of Archeology of UZFA and the Amir Temur Museum of Material Culture of Shahrisabz city [10:128-131]. As a result of the research, the remains of Amir Temur and the Timurid era buildings were discovered. The southern walls of the preserved building were 30 m long, and the eastern walls were 10 m long. As a result of our research in this monument, we discovered wall parts preserved at a height of about 1 m from the 5-room 15th-15th century brick bathroom area, the place of heating chambers that passed under the floor, many majolica and mosaics, the place of pieces of ceramic vessels and the incense urn. was studied. Based on the archeological findings, it can be said that the building was built at the same time as the Dorussaadat architectural complex, and was active until the end of the 19th century. Later, the bathhouse, which became a ruin, merged with the cemetery, where local residents were buried until the 50s of the 20th century. It can be seen that Amir Temur, along with the construction of the Timurid monastery, took into account the construction of architectural structures aimed at improving the social lifestyle of the local population and purification for pilgrims in its territory. From the researches of the bathhouse of the Timurid period, we will be able to realize how rich architectural solutions it has [11:73-76], and the high decoration of the Uz period was used in its construction.

In the Middle Ages, baths had a special place in the social life of the population. The traveler Al-Muqaddasi wrote that in Bukhara you will find "beautiful baths, wide streets, fresh water and beautiful buildings" [12]. Baths were built along the busy shopping streets, in the bazaars and near the madrasa and X mosques of Narshahi. This is confirmed by the following information

given in the century. Minister Abdulmalik Samani Ahmed Al-Utbi "built a very good mosque near the Khan's bathhouse, in front of the madrasa, and organized the decoration of this area"[13].

The bathroom has a traditional structure typical of Eastern architecture. Heating of the baths and reservoirs was carried out through underground flues from the firebox at the southern end of the building. Marble tiles are laid on the floor of the bathroom. Halls are lit only through holes in the zenith of the domes. The interior is richly decorated. Regarding another feature of the construction of the bathhouse, our research revealed that many baths were built in front of the madrasa building, next to the mosque, which was very convenient for the madrasa residents, visitors to the mosque, and the residents of the surrounding areas. This relationship was widespread as early as the 10th century. For example, during the Samanid period (10th century) in Bukhara, a bathhouse was built in front of a certain madrasa, and the vizier Ahmed Al-Utbi built a mosque next to it[14].

In the 18th century, the palace, given as a madrasa by Arslon Khan, was transferred to the endowment of this educational institution together with the bathhouse. Similar examples were found in the architecture of the XIX-XIX centuries. For example, in the 18th-18th centuries, in front of the Ulugbek madrasa, before the construction of the Abdulaziz Khan madrasa in 1552, Khoja Ahror It is known that there was a bathhouse [15], or another example, in 1566-1567, in front of the khan's bathhouse built by Abdullah Khan II, he also built the magnificent Modarikhan Madrasah [15].

By the 17th century, the type of Central Asian baths was already developed. They are many similar structures in the Middle East like, the underground is heated by a system of combustion channels their reserves are cleaned of ash and mud once a year. Fire channels are laid only by the washing part. The locker rooms were heated only by the hot air that entered there.

Later, the bathhouses were a multi-domed structure dug slightly into the ground, where a multi-domed ablution block, dressing room, hearth, and fuel store stood out. The main purpose of such baths was to gradually increase the temperature of the bathing halls, entering each building with its own name.

Located near mosques, bazaars and madrasahs in community centers and a highly-visited public institution, bathhouses brought great income to their owners. Therefore, high state officials and priests did not hesitate to build and buy such structures or give them to waqf property.

The first baths of Central Asia have not been preserved, but their architecture is known to us from archaeological data. According to him, the type of such buildings was not formed immediately and went through several stages of formation. For example, in terms of architectural function, five baths of the 19th and 10th centuries located in different parts of the ancient settlement of Samarkand-Afrosiyab It was very similar to the structure of the buildings of the 18th-18th centuries. In the 18th-18th centuries, the Kyr solution mainly had the following composition: lime, ash, grape molasses, egg, rice straw and swamp reed ash, reed fluff for stickiness. This mixture was prepared by the craftsmen themselves, and some masters slightly changed the composition and proportions of the solution.

Differentiation of the order of baths in different regions of Central Asia was presented by V.L. Voronina. According to his research, the Central Asian baths have a similar composition of buildings and the only aspect of heating - underground channels is owned.

So, the bathrooms differed somewhat in plan structure. From the rest room of the chor-hara (four runs), which became a dressing room in the 20th century, they could go to the lyungi-room, where they gave the "lungi" belt. In Bukhara, this room was called the Persian poi-shui first,

followed by the number of the intermediate room poi-shui, that is, the first and second rooms for washing the feet, respectively. Acclimatized to the warmth of these rooms, the guest moved to the high-domed main hall with a sofa in the central part of the miyan-sarai. This sofa, as well as the sofas on the sides of this hall, served as massage beds. From the octagonal main hall, narrow corridors led to a hot room with high and moderate temperature washrooms and an ugly room. These washrooms are connected to hot and cold water tanks, respectively, drawn through a window in the wall. Some of the baths had small latrines, as well as small mosques on the sides, often with mihrabs facing west.

As for decoration, according to V. L. Voronina, he believes that medieval baths "lost their decoration. And only rare information speaks of a desire to decorate them, or he believed that "no one was interested in the appearance of buildings (baths)."

According to the book miniature of the 18th-18th centuries, "The entrance to the bath from the street was created with special care in the form of a small front portal." According to a number of miniatures ("Khwarazmshah Fakhr al-Razi in the bath" - Khairat al-Abror, Herat, 1491-1492, even Sultan Ali Mashhadi, Windsor, Royal Library, etc.), it can be concluded that the buildings were originally decorated in different ways[16] . The floors of the baths, as in the buildings preserved to this day, are covered with marble, the panels are decorated with hexagonal majolica tiles and are decorated with elegant floral patterns along the perimeter, and the walls are covered with elegant murals. Vegetal nature, the base of the lantern in the center of the dome is decorated with a line of epigraphic decoration, the openings of the lantern are set with grills.

It should be noted that there were also rich ethnographic traditions associated with the performance of a number of rituals when visiting the baths.

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EMPLOYMENT AND LABOR RESOURCES OF URBAN AND RURAL POPULATION OF KASHKADARYA REGION IN THE YEARS OF INDEPENDENCE.

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Key words: Kashkadarya region, population of the region, urban population, rural population, number of women, number of men, social sphere, infrastructure, working population, population employed in the national economy, labor department, monetary income of the population, labor resources.

Abstract: In this article, the issue of population employment in the cities and villages of the Kashkadarya region during the years of independence is analyzed over the years. Comparisons and comparisons with other regions and previous years are made and specific conclusions are drawn.

President Sh. Speaking, Mirziyoev said, "Kashkadarya region takes a leading place in the development of our country. It is not easy to be the leader of Kashkadarya, a region with more than 3.5 million inhabitants. The land of Kashkadarya is rich, the soil is fertile, and the people are hardworking. It's only necessary to unite them, work together and work honestly»[1]. The head of state noted that this year, an additional 360 billion soums will be allocated from the republic's budget to improve the social sphere and infrastructure in Kashkadarya. Also, 100 million dollars of preferential funds will be directed from the funds of international financial institutions. Today, 350,000 people are in need of work, and it is important to attract them to entrepreneurship, handicrafts, and homemaking based on the new neighborhood system [4:1492-1495]. was recorded.

The population of the province in 1999 was 2166.3 thousand people, of which 1061.5 thousand were men and 1104.8 thousand were women. Out of that, the urban population was 553.1 thousand people, 265.5 thousand men, 287.6 thousand women, 1613.2 thousand rural residents, 790.4 thousand men, 822.8 thousand women. In 2000, there were 2212.7 thousand people, of which 1084.2 thousand were men and 1128.5 thousand were women. Out of that, the urban population was 561,700 people, 269,600 men, 292,100 women, 1651,000 rural people, 807,300 men, 843,700 women. In 2001, there were 2294.7 thousand people, of which 1104.3 thousand were men and 1149.4 thousand were women. Out of that, the urban population was 563,700 people, 270,600 men, 293,100 women, 1690,000 rural people, 828,100 men, 861,900 women. In 2002, the population was 2294.7 thousand people, of which 1148.9 thousand men and 1145.8 thousand women. Out of that, the urban population was 572,500, men 286,900, women 285,600, rural population 1722,200, men 862,000, women 860,200.

In Kashkadarya region, the number of working-age population in 1999 was 982.2 thousand people, in 2000 it was 999.5 thousand people, in 2001 it was 1045.5 thousand people, in 2002, 2003 it was 1102.3 thousand people. The population employed in the national economy was 753.1 thousand people in 1999, 725.0 thousand people in 2000, 736.2 thousand people in 2001, 750.7 thousand people in 2002, and 770.5 thousand people in 2003. The number of unemployed persons registered in labor offices was 1489 people in 1999, 1900 people in 2000, 2098 people in 2001, 2002 1782 people. In 2003, there were 1616 people. As of 1999, there were 753,100 people employed in the economy in the province, of which 131,400 people worked in state enterprises

and organizations, and 621,700 people in non-governmental organizations. In 2000, it employed 725,000 people, including 126,200 people in state enterprises and organizations, and 598,800 people in non-state organizations [2].

In 1999, the total working age population of the region was 928.3 thousand people, and in 2002 it was 1 million 115.8 thousand people. From this, in 1999, the working age population was as follows in the districts. 108.4 thousand people in Shahrisabz district, 105.8 thousand people in Karshi city, 93.9 people in Chirakchi district, 87.5 thousand people in Yakkabog district, 85.1 thousand people in Qamashi district, 81.9 thousand people in Koson district, 73 in Karshi district ,2 thousand people, Kitab district 69,5 thousand people, Guzor [5:135-138] district 55,4 thousand people, Kasbi [6:1-6] district 49,2 thousand people, Mirishkor district 35,3 thousand people , 33.8 thousand people in Nishan district, 28.9 thousand people in Dehkanabad district, 20.4 thousand people in Mubarak district.

By 2002, this indicator was 131.5 thousand people in Shahrisabz district, 122.0 people in Chiraqi district, 110.6 thousand people in Karshi city, 93.5 thousand people in Kitab district, 88.5 thousand people in Yakkabog district, 87.0 people in Qamashi district. thousand people, 85.1 thousand people in Koson district, 85.1 thousand people in Karshi district, 65.2 thousand people in Guzor [9:128-131] district, 64.1 thousand people in Kasbi [8:96-100] district, Nishan District 46.5 thousand people, Dehkanabad district 45.6 thousand people, Mirishkor district 43.1 thousand people, Mubarak district 38.6 thousand people.

In 1999, the monetary income of the population amounted to 106,031 million soums, and the expenses amounted to 81,142 million soums. Of this, per capita income is 49.4 soums, and expenses It was 37.8 soums.

In 2002, the monetary income of the population was 334,564.0 million soums, and the expenses were 295,282.9 million soums. From this, per capita income was 176.1 soums, and expenses were 129.5 soums[2].

In 1999, the salary of employees working in economic sectors amounted to 7935.7 thousand soums, of which the salary of employees working in financial and state insurance institutions was 7957.5 thousand soums, the salary of employees in the industrial sector was 8181.4 thousand soums, the salary of employees in the field of science and scientific service was 4352 0,000 soums, wages of construction workers 7,375,100 soums, wages of transport workers 5,083,200 soums, management office workers 7,120,000 soums, communication workers 6,057,400 soums, housing, communal services, household service workers salary 6937.5 thousand soums, agriculture and forestry workers salary 4319.0 thousand soums, trade and general catering workers salary 6377.2 thousand soums, education workers salary 6511.0 thousand soums, culture and the salary of art workers was 5,545,000 soums, and the salary of health, physical education, and social welfare workers was 5,691,000 soums.

These figures show that by 2002, the salary of employees working in economic sectors amounted to 15,485.5 thousand soums, of which the salary of employees working in financial and state insurance institutions was 32,365,0 thousand soums, the salary of employees in the industrial sector was 41,215,0 thousand soums, science and scientific service [7:121-123] the salary of employees in the field is 14660.0 thousand soums, the salary of employees in the construction sector is 26315.0 thousand soums, the salary of employees in the field of transport is 20644.6 thousand soums, the employees of management offices are 27060.0 thousand soums, the communication employees are 28197, 4

1,000 soums, housing, communal services, household service workers salary 13,580.0 thousand soums, agriculture and forestry workers 8,176.2 thousand soums, trade and catering workers 16,821.6 thousand soums, education employees' salary was 14086.0 thousand soums, culture and art employees' salary was 12448.0 thousand soums, healthcare, physical education, social welfare employees' salary was 15124.0 thousand soums.

The number of working population in 2004 was 1 million 195.8 thousand people, in 2006 it was 1295.8 thousand people. The number of children of preschool age (under 6 years) was 435.8 thousand in 2004 and 443.7 thousand in 2006 [2].

The number of people employed in the economy was 796,400 in 2004, 821,700 in 2005, and 850,000 in 2006. The number of unemployed people registered in the Labor Department was 2,271 in 2004, 2,532 in 2005, and 2,781 in 2006.

Labor resources of the region in 2004 were 1 million 199.6 thousand people, by 2006 it was 1 million 301.4 thousand people. In 2004, the number of working-age population in the districts was 141,000 in Shahrisabz district, 131,000 in Chirakchi district, 119,700 in Karshi city, 101,300 in Koson district, 99,000 in Kitab district, 95,100 in Yakkabog district. thousand, 93.1 thousand in Qamashi district, 92.7 thousand in Karshi district, 70.4 thousand in Guzor district, 69.0 thousand in Kasbi district, 50.2 thousand in Nishan district, 49.2 thousand in Dehkhanabad district, 46.3 thousand in Mirishkor district , in the Mubarak district, there were 41.6 thousand people.

By 2006, this indicator was 1 million 301.4 thousand people. Of this, 151,000 people live in Shahrisabz district, 141,900 people in Chiraqi district, 128,900 people in Karshi city, 108,600 people in Koson district, 107,100 people in Kitab district, 106,500 people in Yakkabog district, 101 thousand in Qamashi district, 100.9 thousand in Karshi district, 76.4 thousand in Guzor district, 75.0 thousand in Kasbi district, 54.5 thousand in Nishan district, 53.7 thousand in Dehkhanabad district, 50.5 thousand in Mirishkor district, 45 in Mubarak district made up 4,000 people.

In 2004, 796,400 people were employed in the economy [10:396-400], of which 177,900 were employed in state enterprises and organizations, 618,500 people were employed in non-state enterprises and organizations. By 2006, 850,000 people worked in economic sectors, 182,000 people worked in state enterprises and organizations, and 668,000 people worked in non-state enterprises and organizations.

The population of Kashkadarya region in 2011 was 2 million 777.8 people, of which 1390.8 thousand men and 1387.0 thousand women. The population of the city is 1203.9, men are 602.7 thousand, women are 601.2 thousand, rural population is 1573.9 thousand, of which men are 788.1 thousand and women are 785.8 thousand.

In 2014, the population of the region was 2960.6 thousand people, of which 1487.7 thousand men and 1472.9 thousand women. The population of the city is 1275.2, men are 641.4 thousand, women are 633.8 thousand, rural population is 1685.4 thousand, of which men are 846.3 thousand and women are 839.1 thousand.

In 2011, the working population was 1,564,1 people, and in 2014, it was 1,690,6 thousand people. The population employed in the economy was 1003.7 thousand people, in 2014 it was 1108.5 thousand people.

According to preliminary data, the number of cocktail resources in the Kura region for the months of January-December 2017 was 1784.6 thousand people on average, or 57.2% of the total population.

As part of labor resources, the number of economically active population is 1296.6 thousand people of the total labor resources (72.6%), as well as the number of economically inactive population (27.3%). There were 488,000 people

The share of the economically active population in the total population was 41.6%.

The largest number of economically [11:73-76] active population was observed in Chirakchi (156.7 thousand people) and Shakhrisabz (142.1 thousand people) districts.

The lowest indicators of the number of economically active population correspond to the districts of Mubarak (30.4 thousand people) and Mirishkor (49.9 thousand people) came According to preliminary data, the number of people employed in the economy for the period of January-December 2017 amounted to 1218.0 thousand people, which increased by 9.8% compared to 2016.

The main part of the employed population is rural, forest and fisheries (28.1%), industry (8.4%), trade (10.3%), education (8.3%) and construction (13.9%) contributed.

In January-December 2017, the employment rate of the economically active population (the ratio of economically active population to the number of economically active population) was 93.9%. The share of total jobs in the non-state sector reached 84.3%, and in the same period of 2016 it was 83.9%[2].

The number of unemployed people determined based on the method of counting the unemployed population in need of employment approved by the decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 106 of May 24, 2007 [12:26-28] was 98,100 people in January-December 2017 and the rate of unemployment in relation to the number of economically active population was equal to 7.6%.

The average monthly nominal salary in December 2017 amounted to 1826.3 thousand soums and increased by 7.0% compared to December 2016. The average monthly nominal salary for the months of January-December 2017 amounted to 1342.9 thousand soums and increased by 9.0% compared to the corresponding period of 2016.

In the 3rd quarter of 2021, the average monthly salary in Kashkadarya region is 2317271 soums, by sectors, including 3610188 soums in industry, 2758462 soums in construction, 2203550 soums in trade, transportation and storage 3257075 soums, living and dining 1450917 soums, information and communication 302 0521 soums , financial and insurance activities amounted to 6236468 soums, education 1975692 soums, health care 1710814 soums, art 2100653 soums, other areas 2378393 soums[3]. So, effective work is being done in Kashkadarya region to improve the social sphere and infrastructure.

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SELF-GOVERNANCE OF CITIZENS IN UZBEKISTAN LEGAL BASIS OF AUTHORITIES.

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Key words: Citizen self-management bodies, state administration, state power, neighborhood, village, village, law, legislative documents, subordinate documents, social class, sphere of authority.

Abstract: In this article, no matter how democratic the independence of self-government is, it cannot be absolute independence, because self-government must exist and operate within the system of public power relations within a single state, certain independence in solving local issues cannot be denied, but it is a single state it is shown that it cannot be carried out outside the direction of economic, social, ideological policy.

The Law of the Republic of Uzbekistan "On Self-Governing Bodies of Citizens" defines the status of self-governing bodies in the state administration system [1] (Article 8) and states that self-governing bodies of citizens do not belong to the system of local government bodies. This rule, which is based on the interaction of self-governing bodies and their officials with state bodies and their officials, provides that the structure, designation, scope of authority of self-governing bodies are determined independently, without the intervention of the state, in a way that meets local interests.

Different opinions about the nature of self-government, its interaction with state power not reported. No matter how democratic the self-governance independence is, it cannot be absolute independence, because self-governance exists within the system of public power relations within the framework of a single state and, in fact, solves local issues. a certain independence cannot be denied, but it cannot be transferred outside the direction of the economic, social, ideological policy of the single state. Is it possible to imagine the vital interests of people outside the interests of the state and the daily work of the residents of towns, villages and neighborhoods? In Article 13 of the Constitution of the Republic of Uzbekistan (revised in 2021) [2], the state itself declares that "a person, his life, freedom, honor, dignity and other inviolable rights are the highest value".

Self-government cannot be outside the relations of the state system and - Power cannot be completely independent from the State. Most of the objective principles inherent in the current state of self-government in the state mechanism indicate that the interests of the state cannot be opposed to local interests, because these interests cannot conflict with each other[3:22]. Both state interests and local interests are actually common interests of the country. In Article 8 of the Law "On Self-Governing Bodies of Citizens", the provision that these bodies are not included in the system of state authorities, in our opinion, is an attempt to separate self-governing bodies from state bodies, to emphasize the social nature of self-governing bodies. This rule is more of a political nature than a clear legal reality

It is very difficult to express it in language. In the first article of the law, self-government of citizens is guaranteed by the Constitution and laws of the Republic of Uzbekistan, based on their own interests, historical [4:1492-1495] characteristics of development, as well as national and spiritual values , local customs and traditions. The rule that it is independent activity in solving issues is also a proof of this opinion.

At the same time, there are some problems[5:135-138] and complications in the relationship between the state and self-government. Independence and centralization, self-management and state power are incompatible concepts, moreover, mistakes and shortcomings made by state bodies and officials in the implementation of public policy in the field of self-management complicate the relationship between them, and as a result, some difficulties arise.

Unfortunately, it should be noted that mandatory requirements for legislative activities are not always followed[6:1-6]. As a result, some laws in this field do not comply with the Constitution and laws of the Republic of Uzbekistan. For example, it is self-evident that efforts to regulate issues of local importance, which are the competence of self-governing bodies, the procedure for determining the forms of direct participation of the population in solving local issues, and the rules for conducting elections for citizens' self-governing bodies [7:121-123] are frequent shortcomings in the field of management legislation. The nature and content of the deficiencies found in the laws in this area is self-management contradicting the rules on the independence and initiative of the bodies, which creates additional difficulties in the way of establishing and improving these bodies.

Self-government has a number of characteristics characteristic of state power: among others, there is a separate apparatus that exercises power in its territory, their activities continue continuously and universally, they are based on laws and regulatory documents, they control the administration in a specific area [8:96-100] implements, makes a decision to collect a voluntary fee from the population, forms its own budget. At the same time, the self-governing territory [9:128-131] is a state is the territory, and the population living in it are citizens of this country. Several other circumstances should be taken into account: the status of self-government is determined by the state in the Constitution of the Republic of Uzbekistan and laws adopted by state authorities; their status is protected by state authorities; local affairs are resolved independently, but in the direction of a single [10:396-400] state policy; the decisions of local self-government bodies must be executed by all relevant persons and institutions; some powers of the state may be transferred to self-governing bodies, etc.

In addition, self-governing bodies do not have the right to exercise their legislative authority [11:73-76]. The absence of the right to legislate for one's territory to replace general laws on these issues is an important criterion that distinguishes self-government from state power. Self-governing bodies can issue normative documents that describe the rules of action of a general nature [12:26-28], of course.

But these documents, by their nature, are bylaws, not laws. Lack of strict classification and mutual subordination in their system when justifying the non-state character of self-governing bodies; that they do not act on behalf of the state; to resolve issues of local importance [13:26] based on the development characteristics of their territory; to organize their material and financial basis in self-management property and budget; they are shown as proof of such signs as being very close to the population.

Thus, it should be noted that the self-governing authority [14:62] consists of a unique system of power relations, and the tasks of local self-governing are carried out through its own apparatus. It is a type of social and at the same time public power (power over society) and operates within the framework of self-management structures. This activity is carried out by self-governing bodies on behalf of the local structure and on the basis of legal norms. Self-governing power can be defined as a form of social relations that corresponds to the norms that determine the status of a local structure.

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A place of enlightenment and spirituality

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Key words: Hero of Uzbekistan, People's poet of Uzbekistan, State specialized boarding school, "Spring, mother, woman's hymn in the work of Abdullah Oripov", "The symbol of the great in the work of Abdullah Oripov", "The youngest talented poet of the year", State award named after Zulfiya, "The year the youngest talented poet", Temur's connoisseur", "Love Life" Republican pageant.

Abstract: In this article, in order to perpetuate the name of the Hero of Uzbekistan, People's Poet of Uzbekistan Abdulla Oripov, and to select talented students for in-depth study of the native language and literature among the students, and to further develop their talent, the State Specialized Boarding School named after Abdulla Oripov was established in the city of Karshi, all the activities held at the school Spiritual and educational activities are organized with the focus on students' creativity and the importance of school as a spiritual institution is shown. and abode of enlightenment.

Decision No. 312 of the Cabinet of Ministers of the Republic of Uzbekistan dated May 24, 2017 in order to perpetuate the name of the Hero of Uzbekistan, People's Poet of Uzbekistan Abdulla Oripov and to select talented students for in-depth study of the native language and the science of literature among young students and further develop their talent[1]. Based on the order[2] and decisions of the Minister of Public Education of the Republic of Uzbekistan No. 176 dated May 25, 2017, the State Specialized Boarding School named after Abdulla Oripov was established in Karshi. This boarding school is equipped with the latest technologies

It has a modern [4:1492-195] educational building, a dormitory, a kitchen, a gymnasium and an activist hall for 210 seats. A huge statue of the poet stands in front of the boarding school building in a large and magnificent square named after Abdulla Oripov. On the first floor of the building, the Abdulla Oripov Museum is operating.

Currently, 161 talented and creative students are studying in this boarding school, which was accepted on the basis of competition. Among them there are students from Tashkent, Samarkand, Surkhandarya region.

All the spiritual and educational events held at the school are organized with the focus on the students' creativity. Competitions of creative [5:135-138] works dedicated to important dates are regularly held. For example, dedicated to the birthdays of the great thinker Alisher Navoi and the king and poet 3.M. Babur, "A great wisdom in every line", "Spring, mother, woman's hymn in the work of Abdullah Oripov", "The symbol of the great in the work of Abdullah Oripov", as well as Uzbek literature According to the dates of birth of prominent figures [6:1-6], the competitions of creative works held in the fields of poetry, prose, dramaturgy, music, and visual arts have given good results and are increasing the love for creativity among students. Since the establishment of the boarding school, many achievements have been made.

In 2018, the 8th-grade student of the boarding school, Omonova Sevinch, participated in the republican stage of the "Youngest Talented Poet of the Year" contest and took the proud 1st place.

In 2019, Alisherova Ezoza, a 10th grader, took part in the International Symposium [7:121-123] held in Japan based on the "Sakura science program" program, showing her artistic performances in Japanese, leaving a great impression on everyone. Uzbek,

Ezoza, who is fluent in English, Russian, Japanese, and Tajik languages, was awarded the Zulfiya State Prize by our country's president in March 2019.

In 2019, the 10th grade student Abdurayimova Mashhura won the 1st place in the poetry section of the famous "Why do I love Uzbekistan" competition and was able to participate in the republican stage. In August 2019, Mashhura took the 3rd place in the Republic contest "The Youngest Talented Poet of the Year" held in the city of Jizzakh.

In the competition dedicated to the birthday of Sahibqiron Amir Temur in the city of Shahrisabz and Yakkabog district by the administration of Kashkadarya region, 8 students of the boarding school were awarded the 1st degree diploma, certificate and motivational prizes "Temur's tuzuklari bilimdoni". They won the proud 1st place in the contest "The team that performed the national anthem of the Republic of Uzbekistan the best" held in the province.

Boarding school students won the "Zakovat" intellectual game republic tournament held by the Ministry of Public Education of Uzbekistan in 2019 and were awarded the "Zakovat" statuette. With "diploma" and souvenirs

In April 2020, 9th-grade student Omonova Sevinsh took the proud 2nd place in the "Love Life" republican competition, and 11th-grade student Rakhmatullaeva Nastarin was awarded a "Diploma" for her active participation.

Poetry collections "Kashkadarya bayozy", "Mitty star glitters", "Yana bahor keldi" were published in order to support the creativity of talented students of the boarding school [8:96-100]. Also, creative students Omonova Sevinch, Bobonazarov Ibrat, Abdurayimova Mashhura, Narsillaeva Maftuna, Ismatillaev

Lochinbek, Begamova Sadokat, Hamraeva Sevinch, Ravshanova Malika, Alisherova E'zoza, Sevinch Nurmatova, Ezoza Yoldosheva, Salomova Dilobar's works were published.

Well-known linguists, literary scholars, famous poets and writers of our republic at the initiative of the Writers' Union of Uzbekistan, as well as the regional Writers' Union. Sirojiddin Sayyid Minhojiddin Mirza, Ghairat Majid, Rustam Musurmon, Ashurali Joraev, Salim Ashur, Akhmadjon Meliboev, Khal Muhammad Hassan, Khumayun Akbar, Kazakhboy Yoldashev, Fakhriddin Hayit, Nurboy Jabbarov, Mahmud Toir, Ikram Atamurod, Farugat Khudoykulova, Saydi Umirov, Luqman Borikhan. , Jabbor Eshonqul, Sirojiddin Rauf, Norqabil Jalil, Enakhon Siddiqova, Ma'mura Zohidova, Bakhtiyor Genjamurod, as well as in accordance with the contract concluded with Karshi State University, N. Shodmonov, B. Bakhriddinova of the "Uzbek Linguistics" and "Literature" department of the university, "Skills lesson" was held at a high level with literary and linguist scholars such as N.Musulmanova, Sh.Kahhorova, honorary teachers, oasis creators.

"Motherland and Independence [9:128-131] hymn in Abdullah Oripov's poetry" devoted to the life and work of Abdulla Oripov in the series "Uzbekistan - My Country" in cooperation with the regional television and radio company, "The incomparable role of Abdulla Oripov's work in human spiritual maturity", "Abdulla Oripov In the memory of contemporaries", "Abdullah Oripov's special role in the translation of Uzbek literature" were prepared and aired programs with the participation of school teachers and students. Also, "Uzbekistan 24", "Sevimli", "Youth", "Enlightenment and Spirituality", "My country" , "Uzbekistan", "Dunyo Buylab" TV channels,

boarding school activity and talent programs about students were given. 24 of 2018 of the Cabinet of Ministers of the Republic of Uzbekistan

Paragraph 57 of the "Measures program for the comprehensive development of tourism in Kashkadarya region" approved by March decision No. 24/338 [3], starting from May 9, 2019, the "Golden Word" international literature festival dedicated to the memory of Abdulla Oripov will be held once a year The 1st International Literature Festival was held on May 8, 2019, in cooperation with the Kashkadarya Regional Government, the Regional Department of the State Committee for Tourism Development of the Republic of Uzbekistan, and the State Specialized Boarding School named after A. Oripov. Sengeli Bilgi, president of the international literary organization "Kibatek" in Turkey, Leyla Isik, vice-president of the organization, Epitasio Tongohan, president of the international literary organization "Pentasi V" in the Philippines, employee of the Intercontinental Culture Association of India, writer Solomiya Karoli, Italian poet, writer took part in the festival events. and bloggers Katirino Davinio, Claudio Preziosi, Toshmat Temirov, editor-in-chief of "Dostlik" and "Elchi" newspapers in Tajikistan, Zebiniso Sattorova, professor of Kurgantepa State University named after Nasir Khusrav, Hasan Goyib, member of the Writers' Union of Tajikistan, Maisara Saparova, reporter of "South Kazakhstan" newspaper, "Chimkent" in Kazakhstan Erkinoy Sultonovalar, the chairman of the creative association, Shahnoza Jalilova, reporter of "Elchi" newspaper, and poetess visited.

Among the guests, Sengeli Bilgi, Epitasio Tangohan, Katirina Davinio, Claudio Preziosi and Hasan Ghayib spoke and gave their gifts to the boarding school students.

Boarding school Good school participating in the project d took the proud 2nd place in the republic and was awarded with a "Diploma" and a valuable gift from the Ministry of Public Education of the Republic of Uzbekistan.

Cooperation with all creative schools established in our republic is well established. On April 24-27, 2018 and April 27, 2019, the teachers and students of the boarding school actively participated in events dedicated to the birthday of the famous poet Muhammad Yusuf. In April 2018, H. Olimjon and Zulfiya school management in Jizzakh visited our school. Also, the teachers of our school went to this school [10:396-400] and shared their experience[13].

In one article, Abdulla Oripov asked the journalist "How do you imagine Uzbek literature in the 21st century as a famous poet of our nation?" answered the question: "You know very well the saying of one of our great teachers, Abdulla Qahhor, that "Uzbek literature will be a great literature in the future." If I interpret this quality in my own way, this literature will be truly folkloric, bright as a rainbow, bright as a diamond, clear as a crystal, beautiful in all respects, truly artistic literature. It will be such an art of words that the people of the world will see the words of an Uzbek before themselves, and this is an "Uzbek miracle". I am sure that the future of literature and art, which has the possibility of development [12:26-28], will be bright."

The days have come when the poet said with confidence! Today, foreigners are more and more interested in the works of poets, Uzbek literature, and classic works of art. We witnessed this clearly at the International Literature Festival held at our school.

In fact, creative schools founded on the initiative of the head of our state, Sh. Mirziyoev, are literally a product of New Goya. This idea envisages the noble goal of raising the spirituality of our people, our nation to higher heights, bringing honor to the name of the Motherland like the great ancestors. After all, it is inevitable that a good goal will bring good results.

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PLACE OF LITERATURE AND ENLIGHTENMENT

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Key words: Hero of Uzbekistan, People's Poet of Uzbekistan, Specialized boarding school, "The Youngest Talented Poet of the Year", "Zakovat", "Love Life", International Literature Festival, "Web Design", " Computer graphics", "Creation and processing of audiovisual works", "Visual and digital arts", "Creative club", "Acting skills", "Music magic" clubs.

Abstract: In this article, in order to perpetuate the name of the Hero of Uzbekistan, People's Poet of Uzbekistan Abdulla Oripov, and to select talented students for in-depth study of the native language and literature among the students and further develop their talent, Abdulla in Karshi The state specialized boarding school named after Oripov was established, the activities of the school in educational, spiritual, educational and scientific method fields were analyzed.

In order to perpetuate the name of the Hero of Uzbekistan, the People's Poet of Uzbekistan Abdulla Oripov and to select talented students for in-depth study of the native language and the science of literature among young students and to further develop their talent, the Ministers of the Republic of Uzbekistan Decision No. 312 of May 24, 2017 [1]. Based on the order[2] and decisions of the Minister of Public Education of the Republic of Uzbekistan No. 176 dated May 25, 2017, the State Specialized Boarding School named after Abdulla Oripov was established in the city of Karshi. Today, 191 students are studying at this educational institution, 50 teachers and employees are working. During the past 3 years of activity[11:73-76], the educational institution has given many first positive results. According to the instructions and tasks set during the visit of the Honorable President Sh. Mirziyoyev on January 29, 2018, a number of measures were taken to increase the creative ability of students and develop educational efficiency [10:396-400] - events have been developed. To date, about 20 students have achieved positive results in Science Olympiads. 12 students participated in contests and contests such as "The Youngest Talented Poet of the Year", "Zakovat", "Love Life", and 52 students participated in various regional competitions. students won. Alisherova Ezoza, a 10th grade student of 2019, participated in the international symposium held in Japan. In the same year, Alisherova was awarded the State Prize named after Ezoza Zulfiya. In the 2019 "Prosperous School" project, the school won in the republic [4:1492-1495]. In order to support the creative abilities of students, more than 10 poems of students were published under the names "Mitti styzn zhilolari", "Yana bahor keldi", "Vatan bakhsti", "Happy children". In October 2019, 2020, a republic-wide scientific-practical conference on the topic "Uzbek language and its current issues", famous linguist and literary scholars[12:26-28], writer and poet, journalist, science[5:135-138]] and a creative meeting with artists and "Skills lessons" were held at a high level. In 2019, the 1st International Literary Festival "OLTIN SOZ" was held and scientists and artists from 8 countries of the world[6:1-6] visited it. Today, 26 skilled specialists of their profession are teaching students at the educational center. 3 of them are excellent people in public education, 1 is a holder of the "Fame" medal, and 1 is a doctor of science. Of course, a newly planted sapling goes through special hardships to grow. In addition to the science clubs at the school of creativity [7:121-123], in order to enable students to acquire modern professions, "Web design", "Computer graphics", "Creation and processing of audiovisual works" ", "Visual and digital art", "Creative club", "Acting skills", "Music magic" clubs are active [3].

Every year, on the eve of Abdulla Oripov's birthday, it has become a tradition to publish the poems of creative students. In 2018, "Followers of Abdullah Oripov", in 2019 "Spring has come again...", in 2021 "Song of Jilgalar", and in 2022 "Glows of Dwarf Stars" was published.

In addition, poems of creative students of this school [8:96-100] were published in the publication "Bouquet from the Garden of Creativity" published by the Agency of Presidential Educational Institutions.

Pupils actively participate [9:128-131] in the science Olympiads held every year and take pride of place.

Tolaganova Maftuna, Hamidov Ramazon, Kholboyev Khushnud, Torayeva Gulsevar, Sobirova Dilnavo, Allanazarova Sevinch, Abdiyeva Sevinch, Choliyev E'zozbek, Badalova Shakhnoza are among them.

In 2021, our student Hamrayeva Sevinch participated in the Uzbek Literature Days International Literature Festival held in Egypt. His poems were published in foreign publications.

In May 2022, Norkulova Marjona visited Italy, and in November-December 2022, Torayeva Gulsevar visited Japan. Of course, such students successfully passed the specified tests and interviews and achieved high results.

In October 2022, the students of the Abdulla Oripov School of Creativity took a proud 2nd place in the Republican tournament organized by the Agency of Presidential Educational Institutions and "Zakovat" (a total of 26 teams participated: Presidential, creative and specialized schools) . Each of them was awarded with a diploma and an expensive gift (laptop).

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UDK543.421

SEPARATION AND PHYSICOCHEMICAL ANALYSIS OF IODINE CONTAINED IN HAUDAK GROUND SALT WATERS ON THE BASIS OF STARCH.

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Abstract: Khaudak (Uzbekistan, Surkhandarya Region) groundwater contains high concentrations of various salts, and iodine ions are present in the form of potassium iodide. They are first oxidized under the influence of special oxidizers. Free iodine was precipitated by forming a complex on the basis of starch and its composition was observed using the scanning electron microscopy (SEM) method. According to it, it was proposed that a complex compound with starch iodide was formed.

Key words: Khaudak underground brines, Uzhkyzil underground brines, iodine, petroleum waters, potassium iodide, potassium iodate, hexamethylenediamine, scanning electron microscopy, infrared spectroscopy.

Introduction: Iodine can be considered as one of the most important and important industries in the world. Nowadays, the demand for it is increasing all over the world, because the importance of iodine in medicine, that is, in human life, is very important, its reserves are few, and most of the existing reserves are scattered in the form of compounds in the ground, ocean and sea water. and focusing on the processes of concentration and separation as one of the important productions is recognized as one of the urgent problems of today.

Literature review. A relatively high iodine content is also characteristic of saline underground oil waters. Groundwater is widespread in nature, and the concentration of iodine in a multicomponent solution of salts is slightly higher than in the normal composition. Iodine reserves are concentrated in 20 mines in the territory of the CIS countries. All these deposits are iodine-bromine (16) and iodine (4) deposits, according to the contribution of underground water. Deposits of iodine and iodine-bromine waters have been explored in Russia, Azerbaijan, Turkmenistan, Uzbekistan and Ukraine. The total proven reserves of groundwater containing iodine are equal to 1 million m3 / day, with an average iodine content of 30 mg/l. The reserve of Turkmenistan is 40% of all reserves of the CIS in 4 deposits of iodine-bromine waters; Russian reserves - 6 mines (34% of CIS reserves); Azerbaijan - 6 mines (22%), Ukraine - 1 mine (3%), Uzbekistan - 3 mines (1%).[1]

The amount of iodine in sea mud is ten times higher than in water and reaches 0.002-0.01%, and in oil-related waters it reaches 0.01%; Chilean saltpeter deposits contain about 1% iodine. The concentration of iodine in phosphorites reaches 280 mg/kg, and in lignites up to 6 mg/kg. Table salt obtained from sea water contains 0.1 mg of iodine/kg of salt, rock salt - 0.25 mg/kg, potassium salts - up to 0.06 mg/kg. In addition to the reasons mentioned above, the lack of iodine in salt deposits is due to the lack of ability of iodide ions to isoform the position of chlorine in the crystal lattice [2].

The annual production of iodine in the world is 30 thousand tons. Production figures for the United States were weak, but accounted for about 5% of global production. Of the world iodine production, Chile (66%) and Japan (32%) are the largest producers [3].

Bound waters are promising for iodine production if the iodine content is at least 10-18 mg/l. In the development of iodine extraction technology based on iodized groundwater containing iodine compounds, it is necessary to justify a number of scientific solutions in the following directions: - determination of the optimal technological parameters of the kinetics of iodine ions and the oxidation mechanism during drilling. -water in an acidic environment; selection of oxidizing agents and determination of optimal process conditions for precipitation of iodine from iodine concentrates, as well as development of molecular crystalline iodine separation technology [4, 5].

In the territory of our republic (Uzbekistan), a number of industrial iodine underground waters were found, mainly in the Fergana, Bukhara-Karshi and Surkhandarya artesian basins and on the Ustyurt plateau. They are characterized by increased concentrations of iodine, cesium, rubidium, strontium and bromine. Calcium iodate, potassium iodate and potassium iodide refer to iodine-containing compounds that are added to animal feed and salt to prevent medical diseases due to the lack of iodine and iodide ions in the body [6].

In the Surkhandarya artesian basin, 3 deposits of hydrogen sulphide and iodine waters were identified and studied, their formation is also related to oil deposits and oil-bearing rocks: Uchkizil, Khaudag, Kakayti and Ortabuloq - objects containing iodine and bromine. The amount of iodine in the waters of the Surkhandarya basin is 17.4-24.34 mg/l, bromine 313.2-426.4 mg/l, pH 5.1-6.7, temperature 39 - 76°C, and mineralization 142.9-283.0 g/l depending on the deposit. Kattakum-2 well of Khaudag field, Uchkyzil underground salt water deposits, Kakayti and Ortabulok underground salt water deposits according to the type of anion: bicarbonate, sulfate, chloride and according to the cation: calcium-magnesium - the concentration of sodium cations is high. According to the content of iodine and bromine, these waters are industrial waters [7].

The elemental composition of hydrothermal groundwater was studied. According to it, the salt water of Kattakum-2 well of Khaudag mine was determined using SEM (scanning electron microscopy) (scannedelectron EVO MA 10), and the composition of films was determined using EDX (OxfordInstrument) energy dispersive element analyzer (Table 1).

Table 1

Chemical composition of dry salt obtained from underground water.

№	Element	Weight, %	Sigma, weight, %
1	O	30.52	2.09
2	Na	6.23	0.61
3	Mg	3.38	0.47
4	Cl	41.79	1.66
5	Ca	15.86	1.10
6	Br	0.61	0.63
7	I	1.61	1.43

The results of the analysis of the scanning electron microscope with an energy dispersive elemental analyzer showed that the elements I2 and Br2 were 1.61 and 0.61 percent, respectively, for the spectrum of sample 52.

The results of the analysis of the scanning electron microscope with the energy dispersive elemental analyzer showed that the elements I_2 and Br_2 were 1.61 and 0.61 percent, respectively, for the 52nd spectrum of the obtained sample (Fig. 1).

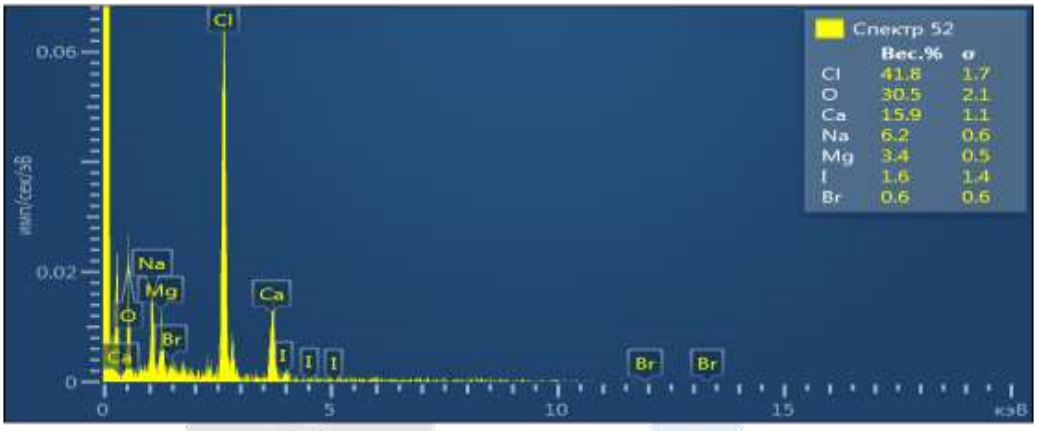

Figure 1. Elemental analysis of salt extracted from the brine of the Kattakum-2 well in the Khaudag field [8].

The fact that the concentration of iodine in nature changes depending on the conditions shows that it is one of the important things to pay attention to its isolation even in the case of complex compounds. For example, a sample of the pyrroloperylene-iodine complex was subjected to a dry nitrogen purge at TGA below 25 mL/min. The ramp rate was 10 °C/min to 650 °C. A weight loss corresponding to the volatilization of iodine is seen, followed by complete sublimation of the organic part [9]. Iodine complex compounds in the form of biocides are used in medicine for a wide range of procedures [10].

The concentrations of various salts in the composition of Uchkyzil and petroleum waters are very high, and the iodine ions present in it are in the form of potassium iodide, from which 10 ml of 0.02 N solution was obtained. Oxidation was carried out by adding 1 ml of 0.2 N solution of FeCl3 to this solution at room temperature. As a result, a reddish solution of iodine was formed. An equivalent amount of aqueous solution of hexamethylenetetramine was added to the liberated iodine. As a result of the reaction, a reddish-brown cloud was formed and settled. The composition of the precipitate obtained was examined using the infrared spectroscopy method (Fig. 2).

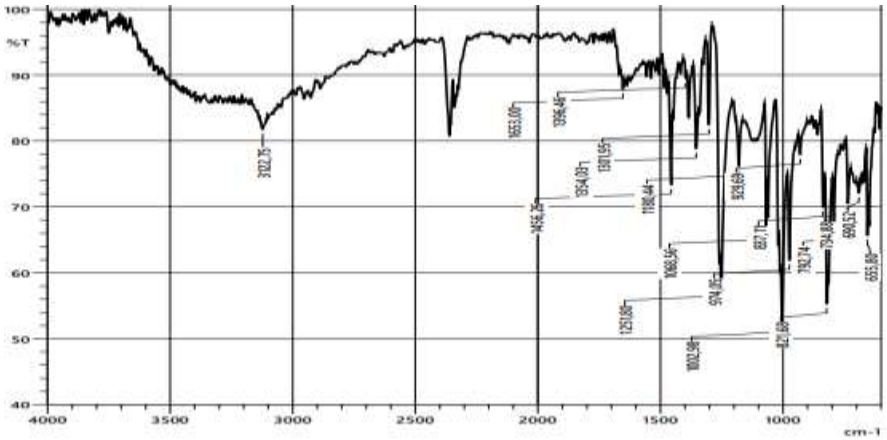

Figure 2. IR spectrum of urotropin precipitate of oxidized KI solution

The same experiment was carried out in Uchkyzil underground salt water, i.e. instead of KJ solution, salt water was used, and the IR spectrum of the resulting precipitate was obtained (Fig. 3).

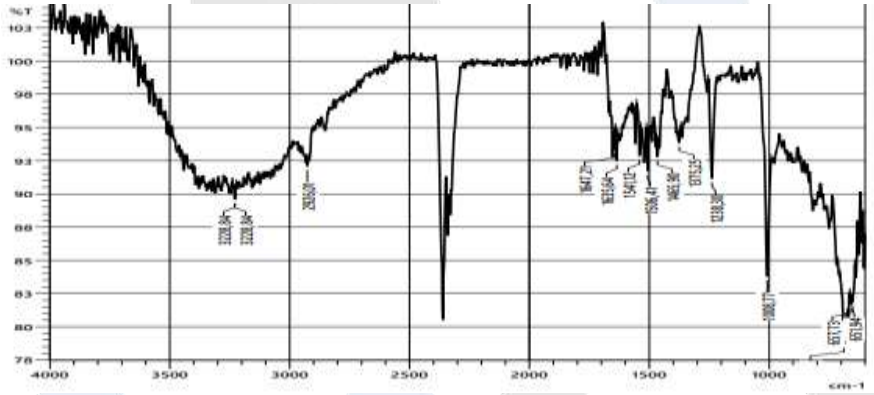

Figure 3. IR spectrum of urotropin precipitate formed by oxidizing KI contained in the trident water

In this picture, the bands of symmetric valence vibration of groups in almost the same area as the spectra of Fig. 2 taken above, as well as the vibration of iodine anion groups, are observed. From these indicators, it was suggested that a coordination compound with hydrogen iodide was formed in the compound [11].

Experimental part. The essence of the proposed method for separating iodine in the form of a complex compound by precipitation of highly mineralized (Khaudak underground) water is that it is obtained from a salt water source, contains iodine and various anions and cations with a very high concentration. 670 ml of water was placed in a flat-bottomed flask, and in order to oxidize the contained iodine ions, 35 ml of a 0.2 normal solution of iron (III) chloride salt corresponding to the content of iodine was added and slowly mixed with a stirrer at room temperature, and as a result, in a short time, the entire the surface of the solution turned pale yellow, i.e. the color of oxidized iodine, and 15 ml of 1% starch paste solution was added to it, and the reaction was continued by stirring at room temperature. The general mixing process, i.e., 0.2 hours is spent on oxidation and precipitation. The mixing process was carried out at low speed.

After mixing, the iodine complex formation process between the oxidized iodine salt water and starch goes to the end, and the total solution is kept in a calm state for 3 hours, occupying the entire volume of the container, until the sediments are formed. No special conditions or temperature are required for this precipitation during 3 hours, it is left under normal conditions at room temperature. After the precipitate forms and sinks to the bottom of the vessel, the clear part on top is expelled through the separator. The remaining dark black sediment, i.e. iodine concentrate (1-1.5% of the total solution level) was passed through a filter and dried at a relatively low room temperature, i.e. in the range of 20-30 0C. The precipitate was in the form of a complex flocculate precipitate, and it spent a little more time passing freely through the filter.

Analysis and results. Figure 4 shows the image of the complex elemental composition of the iodine absorption in salt water obtained by the scanning electron microscopy (SEM) method.

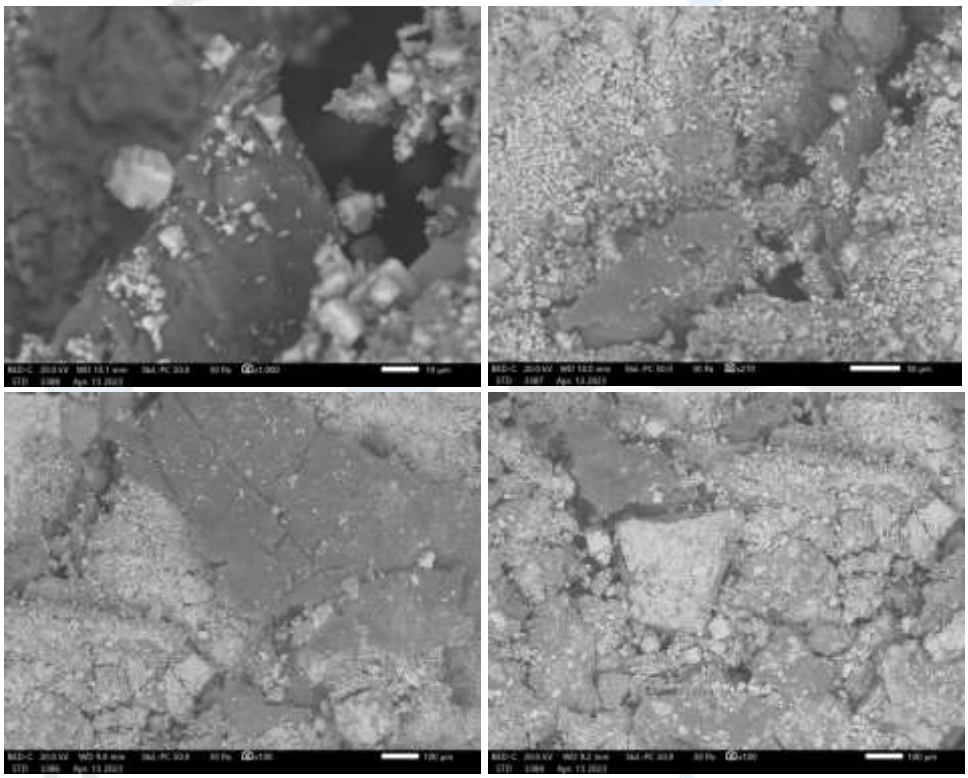

Figure 4. SEM images of iodine-starch complex

According to the analysis of the amount of iodine in the initial salt water sample (Khaudak underground salt water), 723 mg of dry complex was separated from 670 ml of salt water, and it was determined that 0.98% of it consists of iodine. The amount of iodine in the initial sample was 21.32 mg/l, and 10.575 milligrams and 49.6% were separated by precipitation in a complex manner (Fig. 5).

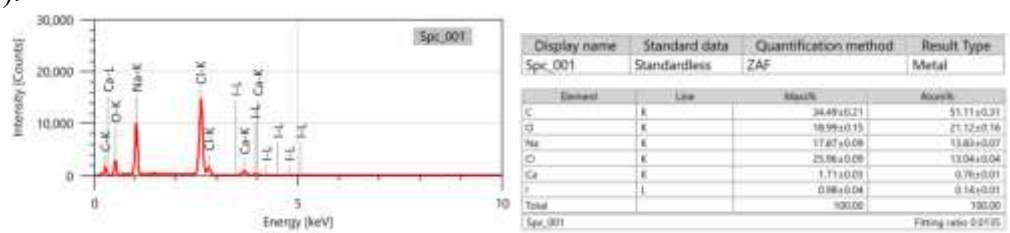

Figure 5. Elemental composition of iodine-starch complex SEM image.

Conclusion. As a result of the conducted research, the complex precipitation of iodine in the content of underground saline waters with the participation of starch was isolated. When analyzing the composition and quantity of the iodine precipitate extracted by the synthesis method using scanning electron microscopy and elemental analysis methods, it can be seen that almost half of the iodine contained in the original Haudak brine has been absorbed. When forming the iodine-starch complex, it is possible to obtain sufficient information by varying the ratio of salt water and reagents, and by changing the amount of iodine in the solution.

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OPPORTUNITIES FOR FORMING SPIRITUAL COMPETENCE IN HIGH SCHOOL STUDENTS

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Abstract. In this article, high school students learn about the content, opportunities, stages of formation of professional competence, qualities of professional competence, directions of professional competence, self-development through the textbooks "Individual developed work program", "Turkey" the development of spiritual competence, the spiritual competence presented in the "Education" textbooks, the spiritual competence of students-youth are discussed.

Key words: spirituality, competence, spiritual competence, professional competence, qualities of professional competence, formation of personal spirituality, "Education" textbooks, spiritual competence of students, self-development , value chain, basic competencies.

Enter. Development of an interactive system for diagnosing the development of students' moral competence with the help of information and communication technologies is gaining importance. In economically developed countries, it is necessary to acknowledge the creation of a set of qualities specific to the requirements of the present time in future specialists.

Today, it is important to organize spiritual and moral education processes in general education schools based on the effective application of the model of spiritual competence, by developing a sense of belonging to social and political situations in students. is enough. On the other hand, in the development of the moral competence of the graduates of the general education school, it is of particular importance to expand the forms of social manners specific to the requirements of the present time, to educate high moral qualities by establishing social sociability and competence in students.

The main part. In the period of new development of Uzbekistan, to increase the effectiveness and effectiveness of spiritual and educational work, to further expand their scope and scale, to strengthen the sense of belonging to the reforms being implemented in the hearts of young people, to work in the direction of propaganda and education. organization on a scientific basis, increasing the effectiveness of scientific and methodical research in this field, and introducing a permanent monitoring system aimed at strengthening the stability of the socio-spiritual environment is being paid great attention. Decree of the President of the Republic of Uzbekistan No. PF-80 of January 28, 2022 "On the Development Strategy of New Uzbekistan" for 2022-2026, Decree of the President of the Republic of Uzbekistan dated May 11, 2022 "2022 — To create the moral and moral image of our students in the Decree No. PF-134 on the approval of the national program for the development of public education in 2026 and other regulatory and legal documents related to this activity , serves to a certain extent the implementation of tasks such as the development of spiritual competence in them.

To date, attention is paid to the reforms implemented in the education system in our country based on a special approach. Therefore, today in general education institutions, all conditions are being created for the development of students in all aspects. Also, one of the most important tasks of our research is to implement the possibilities of forming spiritual competence in students of 10-11th grade of general educational institutions. After all, in the 10-11th grades, students learn their mutual communicative relations, solidarity, friendship, mutual support, rules of etiquette, as well as social etiquette norms

in differentiation relationships. , it is of particular importance that they express their spiritual and positive attitudes in the process of socialization. At the time when 16-17-year-old students are starting an independent life, it is necessary to guide them correctly, to find their place in life, and to form active citizenship positions. It is desirable to develop the ability to put into practice the knowledge acquired by them. More than 60% of our country's population is made up of our youth. Taking this into account, we are all equally responsible for the education of our students and their development as morally perfect people. It is necessary to increase the activity of parents along with pedagogues-teachers in the development of spiritually mature young people. We use the rich scientific heritage of our ancestors to achieve this goal. The spiritual heritage they left us has been serving us for centuries, and is helping our young people to become well-rounded individuals. In addition, we also pay special attention to the development of spiritual competence within the framework of our research topic. Youth reforms have been raised to the level of state policy. On January 19, 2021, under the leadership of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, the head of our state said at a video selector meeting on the issues of fundamental improvement of the system of spiritual and educational affairs and strengthening the cooperation of state and public organizations in this regard: If the body of society is the economy, then its soul and spirit is spirituality. As we decide to build a new Uzbekistan, we rely on two strong pillars. The first is a strong economy based on market principles. The second is the rich heritage of our ancestors and national values. strongly emphasized that "spirituality".

There are various interpretations to describe the concept of "Spirituality", in the explanatory dictionary "Spirituality: Basic Concepts": "Spirituality (Arabic, meaning, set of meanings) - with material life A generalized definition is given in the form of "a social phenomenon that always goes side by side, is an integral part of the life of a person, people and society".

Competence is a term that expresses the level of a person in a certain field, having knowledge that allows one to make a correct judgment about a certain situation. Competence is a complex set of personal characteristics and conditions, which embodies knowledge, skills and experience in a certain field. Competence allows a person to express an opinion on certain issues, to participate in the development of certain decisions or to make decisions on his own. In modern science, professional competence is widely used in researches related to scientific, management, pedagogical, didactic, methodical, socio-psychological competence. Management competence is determined by the presence of knowledge and skills related to this field, practical experience in management activities. "Competence - knowledge, suitability for the profession, competence, experience, instilling in leadership activities."

In the 60s and 70s of the last century, a new direction of research in education appeared. The word "competence" comes from the Latin meaning "to achieve, to do correctly". In other words, it is the subject's personal ability to set a goal and achieve it, to effectively organize external and internal reserves, to solve certain professional issues of the subject.

In general, the terms "competence" and "competence" are not analyzed in the same way by pedagogues. Competence-oriented education The general meaning of the term "competency" proposed by the American linguist M. Homeke (1956) from the University of Massachusetts was formed. At the symposium held in Bern (1996) under the program of the Council of Europe, it is noted that "competence" is included among concepts such as ability and skill.

Although the content of the concepts "competence" and "competence" are aimed at the same goal, they differ in essence. These concepts entered the use of pedagogy and psychology in the 60s of the last century, and appeared in the 70s and widely entered the theory and practice of professional training of students. Competence-oriented education was proposed by American linguist N. Chomsky (1965, University of Massachusetts). The general meaning of the term "competence" was formed. At the symposium held in Bern (1966) under the program of the Council of Europe, the concept of "competence" was included among concepts such as "training", "competence" - "ability", "skill". In the Balonia Declaration (1999) of the Ministry of Education of European countries, the competent approach was recognized as the conceptual basis of educational reforms. Based on the above-mentioned points, today students and young people are given all kinds of conditions and benefits for acquiring their professions at a high level in the future and using them in practice.

According to B. D. Elkonin: "competence means instilling knowledge, suitability for the profession, competence, experience, and responsibility in the field of leadership. To be a master of one's field means to know the secrets of one's field in depth"[1].

Competence is deep knowledge of a field, awareness of many things, used to describe the final results of education in one's specialty, while some scientists used it to express various characteristics of a developed person. According to research, the solution of pedagogical tasks goes back to the trinity of "thinking, acting and thinking". The teacher's model of professional competence is reflected on the basis of the compatibility of his theoretical and practical training level.

For today's young pedagogue, to go to foreign countries and exchange experience or to invite foreign specialists to educational institutions of Uzbekistan for the purpose of exchange of experience, all this prepares the ground for improving the professional competence of today's modern teacher. It should be noted that the term "spiritual competence" is not mentioned separately in the scientific-pedagogical literature related to the existing field. However, it is necessary to clarify the essence of the concept of "spiritual competence" in connection with the research subject. A special hypothesis was put forward that the answer to the solution of the problem can be determined by analyzing the basic competencies.

Through the textbook "Education" intended for high school students, we identified the following moral competence (Fig. 1):

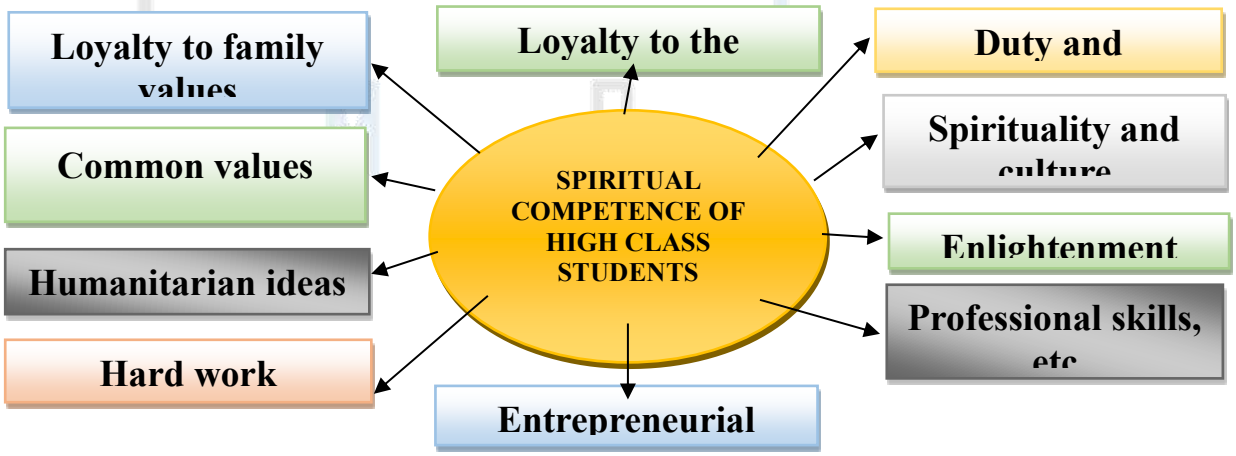

Figure 1. Spiritual competence presented in the "Education" textbook (10th grade).

[1] Эльконин Б.Д. «Понятие компетентности с позиции развивающего обучения» М. 2002 г.

The role of social institutes in instilling the mentioned spiritual and moral qualities in students is of particular importance. All public organizations are working tirelessly to further increase the activity of social institutions. Our goal is to identify the factors of socialization of students and increase the scope of opportunities for their development. 16-17-year-old students should be occupied by instilling creative ideas into their minds, preventing any destructive ideas from coming into their minds. In order to fill the ideological gap, we need to teach them social etiquette. Spiritually mature people cannot be deceived by any spiritual threats, destructive ideas, or false information. A morally perfect person is a person who has his own position in any situation and can make the right decision after looking at the most optimal option. We also aim to train such mature individuals in the process of socialization for our society.

During our observations, we studied the "Education" textbooks intended for high school students. The spiritual competence given in the textbooks is included in the topics. In it, it is explained through the methods of pedagogical influence, and examples are given by example. Pupils and young people who mastered the BKM given through this textbook and methodical manuals will become a perfect person with their place and position in the society as a well-rounded person in the future, will serve the interests of the Motherland and the people.

Summary. Spiritual issues are covered in Islamic sources in a wide way. The use of these resources in the formation of spiritual competence among students increases the effectiveness of our expected results. The issue of spirituality is always the most important aspect of our agenda. That is why, first of all, it is necessary to raise the spirituality of young people, to fill the spiritual gap in them, in every way. When we talk about Islamic manners, we are talking about the manners that are considered to be the best among all the world's wealth, the beautiful and exemplary manners that parents cannot give their children as a gift. The idea of Islamic manners derived from divine sources is closely related to divine teachings, goals, and ideals. The main idea of etiquette is to ensure that the human race achieves the happiness of two worlds. A Muslim man lives in harmony, cooperation and good relations with all beings in this world with his manners. And in the world of the hereafter, he will enjoy the reward of his manners. In order to understand this truth, it is enough to thoroughly understand the content of the verses of the Holy Qur'an about the desire and will of God to create man.

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Teachers Awareness and Practices of Stem as Correlates of Preschool Children's IntellectualDevelopment

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Abstract: It is important to our society to have schools producing students who are able to move the society forward by contributing positively to the economy through the use of some relevant skills from the field of STEM. Owing to the unprecedented development of technology and therefore of society in recent years, the need for education systems worldwide to modernize the methods and means used is a matter of necessity. Against the traditional, primitive and conventional way of content delivery been used by teachers, the use of pedagogical practices that is more practical oriented and centralize teaching learning activities to children and the one which can help in improving learning ability ultimately for societal development becomes imperative. Hence the study investigated Teachers Awareness and Practices of Stem as Correlates of Preschool Children's Intellectual Development. Three research questions were answered and four hypotheses were tested. The study adopted correlational survey research design. The population of the study comprises all preschool teachers in Oyo Town. Proportionate stratified random sampling was adopted to select 10 schools each from public and private preschools. Simple random sampling technique was adopted to select 100 preschool teachers. Three self-designed instruments were used to elicit responses from the participants. The instruments were validated and tested for reliability. The finding of the study revealed that, preschool teachers are to some extent aware of STEM (WA=) and also the extent to which teachers practice STEM is fair (WA=). It was recommended based on the findings that, there should be proper awareness for preschool teachers on the need to familiarize themselves with STEM which is considered as a global trend. Also, although the level of practice of STEM by teachers is fair, Periodic training and retraining of preschool teachers should be done by the government and private school owners.

Keywords: Awareness, Practices, Science, Technology, Engineering, Mathematics

Introduction

It is important to our society to have schools producing students who are able to move the society forward by contributing positively to the economy through the use of some relevant skills from the field of STEM. Hence, the use of pedagogical practices to disseminate information and also which can help in improving learning ability ultimately for societal development becomes imperative. For this to happen, there is need for us to introduce the practices to the children since they are in the formative stage. Considering the purpose of pre- primary education in Nigeria, the National Policy on Education (2013), stated that the education for the children of this stage shall be to effect a smooth transition from the to the school; prepare the child for the primary level of education; provide adequate care, supervision and security for the children while their parents are at work; inculcate social, moral norms and values; inculcate in the child the spirit of enquiry and creativity through the exploration of nature, the environment, art music and use and the use of toys; develop a sense of co-operation and team spirit; stimulate in the child good habits, including

good health habits; and teach the rudiments of numbers; letters, colours, shapes forms, etc through play. Most of the policy statements dictate that we produced children who have most skills for society development.

The above purpose of pre-primary education can be achieved through the use of play way method and STEM pedagogical approach. This pedagogy allows the children of this level construct their knowledge from exploration made from both in and outside the classroom environment. Florida Department of Education (2022) describes STEM as deliberate integration of Science, Technology, Engineering and Mathematics and their practices to create child- centered learning environment in which child investigate and find solutions to problem. The ability of pre-primary pupils to find solution to a particular problem make them the construct of their knowledge which permit the such learning to be permanent. It is obvious that STEM is the major instrument which society can use to drive development towards herself. Most European countries have realized many benefits from the use of STEM pedagogy in their various schools.

There is connectivity between STEM and the preschoolers because the major work they do here is play. Punjab Colleges (2020) supported this when he says science is a play and natural youthful curiosity that form the basis of this innovative learning - STEM. Play is the work of children, learning is taking place during child's work and knowledge is being constructed. With this pre-primary pupils' work, knowledge developed can be used to solve many problems facing the society. A field of study which has the ability to initiate and make productive use of available resources to solve the needs of society is the demand of all nations. The use of STEM pedagogy for the early years assists them to become innovative thinkers that can move, shake and change the world. As important as this method of learning , one need to examine critically the level at which pre- primary school teachers take cognizance of it and keep the pupils on the lane in order to develop them towards the need of the society.

Early years are curious, they want to know answers to many questions raised and this curiosity serves as the bedrock of STEM, therefore it is important to promote the skill at this stage of life. It has been discovered that during exploration of the environment and toy materials, children try to figure out things to satisfy their curiosity. Free play is important for the exploration therefore teachers should encourage the children to embark on it both in and outside the classroom. The four areas of knowledge that combine to form the acronym of STEM may let some people think that the pedagogy is meant for those who want to go for careers emanated from the field. Knowledge of STEM allows for critical thinking and problem-solving skills. Persistence and coming up with creative solutions are other skills from STEM as described by Engineering for kids (2019). The skills learn from STEM are useful to tackle the challenges of 21st century, such as climate change and unknown problems (Paper pinecone 2020).

Teachers' ability to comprehend and practice the STEM pedagogy will give the children the ability to develop the skills that will make them effective in this 21st century. It is good to use STEM in early childhood class because the brain of the child at this stage is capable to take in new information. Teachers can handle the class by using allowing the pupils to build things of their interest using available materials in the locality, play with water and sand, visit a local science museum, explore the environment, play indoor at STEM learning area (Engineering for Kids 2019). The use of open-ended materials for the pupils to explore and the use of open- ended questions (what and why) encourage the pupils to develop natural curiosity. Teachers in early childhood class need to go for training and retraining of STEM education so as to equip them for effective use of the method.

Going through the goals of Basic Education in the National Policy on Education (2013), it was stated that Government would like to: provide the child with diverse basic knowledge and skills; develop patriotic young people equipped to contribute to social development and in the performance of their civic responsibilities; inculcate values and raise morally upright individuals capable of independent thinking, and who appreciate the dignity of labour; inspire national consciousness and harmonious co-existence irrespective of differences in endowment, religion, ethnic and socioeconomic background; and provide opportunities for the child to develop manipulative skills that will enable the child function effectively in the society within the limits of the child's capacity. The only way to achieve these goals is to create an avenue for training and retraining of the basic education teachers and this will give them the competency of using STEM in early childhood class. Teachers should create a smooth relationship with the parents so that the knowledge of STEM gained by the pupils in the school will continue at home.

STEM skills to be developed in early years according to Center for Energy Workforce Development (2021) stated as:

1. Problem Solving: This skill gives the ability to proffer appropriate solution to a given problem as quickly as possible.
2. Creativity: This is looking at a problem through many approaches to arrive at solutions, it involves the ability of being highly creative or "out-of-the-box" STEM accommodates mistakes and failed attempt because it is the belief that it give chances for deeper learning.
3. Inquiry Skills: In solving problem in STEM, the use of hands-on and active participation is needed. Pupils should be given the chances of looking for solution to problems so as to equip them on how to make decisions based on available fact in future.
4. Math and Science Skills: These are the bedrock of STEM which must be used in the pursuit of solutions. There are so many useful skills we can learn from these two areas of knowledge. The skills of measurement, spatial sense, number sense, patterns formation, guessing, objectivity, curiosity and others are the skills pupils are exposed to.
5. Engineering Design Thinking: This skill can only be achieved if enough play materials are provided for pupils in preschool classes, the pupils can build things of their choices.
6. Critical Thinking: To become an independent thinker, ability to analyze information, evaluate designs, reflection on your thinking, synthesizing new ideas and proposing creative solution are the skills are necessary.

Collaboration: Team work usually solve big challenges, so it is of high important to develop this in children and let them know that many time big challenges may be solve by an individual. It teaches perseverance, tolerance and respect for other people's opinion.

Children holistic development is necessary to make them live successful and contribute happily to the society, this development includes intellectual or cognitive, physical, social and emotional. Intellectual development is refers to the way a child think, explore, and figure things out. It is the development of knowledge, skills, problem- solving and dispositions which assist a child to think about and understand the world around him. Qamar (2022) states that intellectual development is the ability to think and process things reasonably. Children are in their formative years, then the parents and teachers need to be warm, caring and responsive to allow for proper intellectual development. Absence of strong affectionate and caring relationship may slow children's curiosity and lead to poor holistic development (Omotuyole &Ige 2016). Parents and teachers need to work on intellectual development of children at this early years because it is gives solid foundation for their future success and life long learning.

There are many works from scholars on STEM and its benefits to the populace, so also much have been done on child development but much have not been done on the use of STEM for the intellectual development of children in early years. This paper therefore, investigates teacher's awareness and practices of STEM toward intellectual development of children in early years. The study will assists the educational stakeholders to make provision of materials needed for early years so as to develop STEM skills necessary for successful living in 21st century.

Research Questions

Research Question One: What is the level of teachers awareness of STEM?

Research Question Two: What is the level of utilization of teachers as regards STEM?

Research Question Three: What is the level of intellectual development of the preschool children on content related to STEM?

Hypotheses

HO1: There is no significant relationship between teachers' awareness of STEM and the intellectual development of preschool children

HO2: There is no significant relationship between teachers' practice of STEM and the intellectual development of preschool children HO3: There is no significant relationship among various levels of teaching qualification and

(a). teachers awareness of STEM (b). Teachers practices of STEM

METHODOLOGY

The study adopted correlational survey research design. The population for the study comprises all preschool teachers in Ijebu Ode Local Government. Multistage random sampling was adopted for the study. Proportionate stratified random sampling was to select 10 public and 10 private schools. Simple random sampling was adopted to select 100 preschool teachers selected from 20 (10 public and 10 private) schools (i.e. 5 preschool teachers in each selected school). Hence, a total of 100 respondents participated in the study. Three self-designed instruments were used to elicit responses from the participants. The first instrument titled 'questionnaire on the awareness level of preschool children on STEM (QALPCS)' comprises 2 sections. Section A enlists the demographic information of respondents (Locale and gender) while section B contains 10 statements that seek respondent's views on the subject matter. The second instrument titled 'teachers class observation schedule on the practice of STEM (TCOSPS)' comprises 2 sections, Section A reveals the demographic information of respondents (Qualification and School type) while section B contains 10 statements that seeks respondent's views on the subject matter. The third instrument is children's classroom intellectual development assessment scale (CCIdAS). The two instruments were subjected to validity by giving copies out to some experts in the department of early childhood education, language experts and experts in test and measurement. Highlighted corrections were made and the instruments were adjudged valid. The reliability of the instruments was ascertained using cronbach alpha reliability technique. The reliability index of (α=0.83) and (α=0.81) were calculated for (QALPCS) and (TCOSPS) respectively. The method of data analysis adopted for the study was descriptive statistics (frequency count, simple percentage, mean and standard deviation) and inferential statistics (ANOVA and PPMC).

ANSWERING RESEARCH QUESTIONS

Research Question One: What is the level of teachers' awareness of STEM?

Table 4.1 Descriptive Table Showing the level of teachers' Awareness on STEM

S/N	Items	Fully	Aware	Fairly	Not	Mean	SD

		Aware		**Aware**	**Aware**		
1	STEM is a multi-discipline approach to teaching even at the early years education program	30 (30)	66 (66)	4 (4)	_	3.60	0.56
2	STEM education is a teaching approach that combines science, technology, engineering and math	45 (45)	42 (42)	12 (12)	1	3.28	0.71
3	STEM is designed to encourage discussions and problem-solving and practical skills for through collaborations	35 (35)	63 (63)	2 (2)	_	3.61	0.53
4	STEM education integrates concepts that are usually taught as separate subjects in different classes and emphasizes the application of knowledge to real-life situations	44 (44)	38 (38)	16 (16)	2 (2)	3.22	0.59
5	A lesson or unit in a STEM class is typically based around finding a solution to a real-world problem and tends to emphasize project-based learning.	24 (24)	76 (76)	_	_	3.70	0.44
6	It motivates and inspires young people to generate new technologies and ideas. With a focus on practice and innovation, students get to learn from inquiry-based assignments	39 (39)	50 (500	8 (8)	3 (3)	3.41	0.74
7	STEM education gives an understanding of concepts and encourages knowledge application.	37 (37)	47 (47)	12 (12)	4 (4)	3.30	0.81

	To keep it short, its aim can be formulated in two simple actions: explore and experience						
8	Technology prepares young people to work in an environment full of high-tech innovations	46 (46)	27 (27)	21 (21)	6 (6)	2.00	0.81
9	Mathematics in STEM enables people to analyze information, eliminate errors, and make conscious decisions when designing solutions	41 (41)	46 (46)	11 (11)	2 (2)	3.35	0.73
10	The STEM approach to education fosters creativity and divergent thinking alongside fundamental disciplines	39 (39)	32 (32)	21 (21)	8 (8)	3.00	0.95
Weighted Average Mean= 3.2 (80%) Aware							

The table above revealed that teachers are aware of STEM education and the level of teachers awareness of STEM is fair (WA=3.2). The detailed explanation is as follows; teachers are aware that; A lesson or unit in a STEM class is typically based around finding a solution to a real-world problem and tends to emphasize project-based learning (π=3.70), STEM is designed to encourage discussions and problem-solving and practical skills for through collaborations (π=3.61), STEM is a multi-discipline approach to teaching even at the early years education program (π=3.6), STEM motivates and inspires young people to generate new technologies and ideas, with a focus on practice and innovation, students get to learn from inquiry-based assignments (3 π=.4), Mathematics in STEM enables people to analyze information, eliminate errors, and make conscious decisions when designing solutions (π=3.35), STEM education gives an understanding of concepts and encourages knowledge application. To keep it short, its aim can be formulated in two simple actions: explore and experience (π=3.30), STEM education is a teaching approach that combines science, technology, engineering and math (π=3.28), STEM education integrates concepts that are usually taught as separate subjects in different classes and emphasizes the application of knowledge to real-life situations (π=3.22), The STEM approach to education fosters creativity and divergent thinking alongside fundamental disciplines (π=3.00), Technology prepares young people to work in an environment full of high-tech innovations (π=2.00)

Research Question Two: What is the level of utilization of teachers as regards STEM?

Table 4.2 Descriptive Table Showing the level of teachers' Utilization of STEM

The table above revealed that teachers to some extent practice STEM Education in the class

S/N	Items	Excellent	Good	Fair	Poor	Mean	SD
1	Teachers ability to guide and provide limited information and corrections when learners make mistakes	30 (30)	66 (66)	4 (4)	_	3.2	0.56
2	Teachers ability to ask questions and encourage independent thinking	45 (45)	42 (42)	12 (12)	1	3.02	0.71
3	Teachers ability to encourages learners to learn skills and apply their knowledge by taking part in a project	35 (35)	63 (63)	2 (2)	_	3.1	0.53
4	Teacher ability to facilitate and encourage learners to take full control of their projects from start to finish	44 (44)	38 (38)	16 (16)	2 (2)	3.02	0.59
5	Teachers ability to give opportunity to learners to analyse and evaluate a problem that is posed to them.	24 (24)	76 (76)	_	_	3.07	0.44
6	Teachers ability to give tasks that spark curiosity and prompt reflection to children	39 (39)	50 (500	8 (8)	3 (3)	3.04	0.74
7	Teachers ability to provide for opportunities for practical activities where learners can use their hands e.g. designing a concept or creating and building something themselves	37 (37)	47 (47)	12 (12)	4 (4)	3.1	0.81
8	Teachers ability to present maths and science activities which should be relevant to their current project, relate to real-world scenarios and ultimately serve a purpose	46 (46)	27 (27)	21 (21)	6 (6)	2.7	0.81
9	Teachers ability to present STEM activities taking cognizance of different age ranges, abilities, group sizes and interests	41 (41)	46 (46)	11 (11)	2 (2)	3.20	0.73
10	Teachers ability to incorporate Digital literacy in STEM class	39 (39)	32 (32)	21 (21)	8 (8)	2.70	0.95
Weighted Average Mean= 3.0 (75%)							

(WA=3.0). The detailed explanation is as follows; teachers to some extent guide and provide limited information and corrections when learners make mistakes (π=3.2), Teachers are able to encourage learners to learn skills and apply their knowledge by taking part in a project (π=3.1), Teachers ability to provide for opportunities for practical activities where learners can use their hands e.g. designing a concept or creating and building something themselves (π=3.1), Teachers ability to present STEM activities taking cognizance of different age ranges, abilities, group sizes and interests (π=3.2). However, teachers did not perform well in the following aspects asking

questions and encourage independent thinking, encouraging learners to take full control of their projects from start to finish, facilitating and encouraging learners to take full control of their projects from start to finish, presenting maths and science activities which should be relevant to their current project, relate to real-world scenarios and ultimately serve a purpose, and lastly, incorporating Digital literacy in STEM class

Research Question Three: What is the level of intellectual development of the preschool children on content related to STEM?

Table 4.3 Showing the level of Intellectual development of the Preschool Children

Actual Score	Aggregate	Frequency	%	Mean Score	SD	Remark
0-12.5	0-49%	10	10	21.9	3.469	Poor
12.6-13.75	50-55%	24	24			Fair
13.8-17	66-69%	30	30			Good
17.5-25	70% and above	36	36			Excellent
Total	**100**	**100**				

Table 4.5 shows that the intellectual development of preschool children in relation to STEM content is adequate (mean = 21.9). The detailed analysis is as follows: learners who scores are between 0-12.5 were rated poor with a frequency of 10 which accounted for 10% of the sampled population, learners with scores ranging from 12.6-13.75 were rated fair with a frequency of 24 which accounted for 24% of the sampled population, learners with scores ranging from 13.76-17 were rated good with a frequency of 30 which accounted for 30% of the sampled population, and learners with scores ranging from 17.5-25 were rated excellent with a frequency of 36 which accounted for 36% of the sampled population.

HYPOTHESES TESTING

HO1: There is no significant relationship between teachers' awareness of STEM and the intellectual development of preschool children

Table 4.4: Summary of PPMC Showing the Relationship between Teachers' Awareness of STEM and Intellectual Development of Pre-school Children

Variable	N	Mean	Std.d	r	Sig.	Remark
Awareness of STEM	100	15.617	3.622	0.031	0.833	Not Significant
Intellectual Development	100	12.400	4.549			

Table 4.3 shows that there is no significant relationship between teachers' awareness of STEM and the intellectual development of preschool children ($r = 0.03$; $p>0.05$). Therefore hypothesis

one is not rejected. This implies that the level of awareness of STEM does not influence the intellectual development of learners on STEM content knowledge. This finding is supported by the finding on the descriptive table on teachers awareness. Which reveal that teachers to some extent are aware of STEM.

HO2: There is no significant relationship between teachers' practice of STEM and the intellectual development of preschool children

Table 4.5 Summary of PPMC Showing the relationship between teachers' practice of STEM and the intellectual development of preschool children

Variable	N	Mean	SD	R	Sig	Remark
Practice of STEM	100	37.16	10.38	0.34** 0.00	Significant	
Intellectual development	100	43.25	16.51			

The table above revealed that there is significant positive relationship between teachers' practice of STEM and the intellectual development of preschool children ($r=0.34^{**}$;$P<0.05$). Hence, hypothesis 1 is rejected. The implication of the finding is that although
teachers to some extent practice STEM while teaching, and the little practice teachers engage in with the children have positive influence on the learners.

HO3: There is no significant relationship among various levels of teaching qualification and (a). teachers awareness of STEM

Table 4.6: Summary of ANOVA showing the Relationship among various levels of teaching qualification and teachers awareness of STEM

Variables	N	Mean	Standard Deviation	Df	F	Sig.	Remark
O'level	7	28.3	3.51	3,66	0.447	0.720	Not significant
N.C.E	59	22.10	3.90				
B.Ed/B.A/Bsc/Equivalent	24	21.07	2.30				
No indication	10	23.00	2.08				
Total	**100**	**21.93**	**3.47**				

Table 4.7 shows that there is no significant relationship among various levels of teaching qualification and teachers awareness of STEM ($F(3, 66) = 0.45$; $P> 0.05$). Therefore, hypothesis 3a will not be rejected. This implies that, teachers fair level of awareness of teachers on STEM is not attributed to their qualification.

HO3: There is no significant relationship among various levels of teaching qualification and (b). teachers Practice of STEM

Table 4.7: Summary of ANOVA showing the Relationship among various levels of teaching

qualification and teachers Practice of STEM

Variables	N	Mean	Standard Deviation	Df	F	Sig.	Remark
O'level	7	28.3	3.51	3,66	0.447	0.720	Not significant
N.C.E	59	22.10	3.90				
B.Ed/B.A/Bsc/Equivalent	24	21.07	2.30				
No indication	10	23.00	2.08				
Total	**100**	**21.93**	**3.47**				

Table 4.7 shows that there is no significant relationship among various levels of teaching qualification and teachers Practice of STEM (F (3, 66) = 0.45; P> 0.05). Therefore, hypothesis 3b will not be rejected. This implies that, teachers fair level of practice STEM is not attributed to their qualification.

Summary of Findings

- Teachers are aware of STEM education and the level of teachers awareness of STEM is high
- There is significant positive relationship between teachers' practice of STEM and the intellectual development of preschool children
- The intellectual development of preschool children in relation to STEM content is adequate
- There is no significant relationship between teachers' awareness of STEM and the intellectual development of preschool children
- There is significant positive relationship between teachers' practice of STEM and the intellectual development of preschool children
- There is no significant relationship among various levels of teaching qualification and teachers awareness of STEM
- There is no significant relationship among various levels of teaching qualification and teachers Practice of STEM

Discussion of Findings

Measuring the impact of a STEM curriculum on early development is difficult, but STEM education has been shown to be a predictor of future academic achievement. For example, a study by researchers at the University of California Irvine found that early math skills were the most consistently predictive measure of future academic success among kindergarten to fifth grade students.

The benefits of STEM education are not limited to a student's academic career, however. Efforts in the US to improve STEM education have largely been driven by demand from the private sector, where employers have complained about a lack of qualified candidates for technology-focused jobs. The US Bureau of Labor Statistics (BLS) projects 5 percent growth in non-STEM occupations between 2018 and 2028, while the number of STEM-related jobs will grow almost 9 percent, expanding by 10.6 million positions.

The findings on the Mathematics section hint that teachers integrate this STEM field in their classroom on a satisfactory level. The instruction of mathematics is indeed extremely significant

for preschoolers, as it provides valuable knowledge and skills for their future life, such as computational skills. Despite of the teachers' positive view on pre-school mathematics, it is broadly admitted that teachers misunderstand the process of teaching math. According to Katsikas, & Gritzalis (2017), teachers often link mathematics education with keeping students occupied with math activities and simply using the names of mathematical concepts in their verbal interactions. Although, this type of math education is inadequate, since it does not help children develop mathematical thinking. The letter "M" in STEM is mostly used to define the instruction of mathematical units, as found in the preschool curriculum of Cyprus. Amongst those units, teachers highlight the usefulness of geometry and numeracy and operations. Undoubtedly, the "meaning of the number" (Alexandros & Argyris, 2007) is concretely important for children, as it is the foundation for mathematical reasoning and comprehending complex numerical models (Verschaffel, Greer, Torbeyens, 2006). Additionally, the instruction of geometry in early years is considered necessary for the development of useful skills such as spatial reasoning (Papic, & Mulligan, 2007) and "visualization" (Bishop, 2006), which is linked to STEM education through the field of Technology. Teachers believe that units of measurement and algebra are less useful for children this age. However, according to Rogers (2012), there should be included measurement activities in pre-school mathematics, since they provide children the ability to compare objects and understand the use of metric systems. Regarding the instruction of algebra teachers consider that it is less useful, although it is necessary for the children to get acquainted with repeating patterns given that they are capable of developing complex patterning concepts and this expands their cognitive skills (Papic & Mulligan, 2007).

Recommendations

- There should be proper awareness for preschool teachers on the need to familiarize themselves with STEM which is considered as a global trend
- Although the level of practice of STEM by teachers is fair, Periodic training and retraining of preschool teachers should be done by the government and private school owners
- Qualifies, experienced and professional preschool teachers, who understands the dynamic nature of children and who is ready to adjust to global trends as regards child learning and development should be employed to

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ЗНАЧЕНИЯ ИМЕН СУЩЕСТВИТЕЛЬНЫХ В УСТНОЙ И ПИСЬМЕННОЙ РЕЧИ

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Аннотация: В данной статье рассматриваются факты о смысловых значениях имен существительных в устной речи. Имя существительное, как главный компонент речи.

Ключевые слова: Категория части речи, русский язык, самостоятельные части речи, служебные части речи, имя существительное, модальные слова, устная речь, письменная речь.

Категория частей речи в русском языке является основной в морфологии. Известно, что делятся они на четыре класса: самостоятельные, служебные, модальные (или вводные) слова и междометия. К первому относится и имя существительное. По большому счету, его можно рассматривать в качестве главного языкового понятия.

Наша лексика содержит в себе великое множество слов, обозначающих предметы, будь это люди, животные, какие-то вещи или вещества. Все это существительные. Кроме того, есть еще отвлеченные понятия, включающие личностные характеристики, скажем, честность, доброта, зависть; сон, беготня, танец, отдых. Такие существительные тоже имеют значение предметности и отвечают на вопросы «кто?» или «что?».В

Все эти слова называют одушевленные и неодушевленные предметы, обладают такими морфологическими категориям, как род, число, падеж. В соответствии с этим они разделяются на три рода (мужской, женский, средний), изменяются по числам (единственное и множественное), а также по шести падежам.

Существительное как часть речи имеет начальную форму в виде именительного падежа единственного числа: кукла, девочка, мороз, радость, сахар.

В русском языке на каждые 100 слов приходится 40 имен существительных. Они составляют 40 % всего лексического состава. Это означает, что почти каждое второе слово представляет собой предмет или понятие, отвечающие на вопросы «кто?» или «что?». Потому сложно переоценить роль имени существительного в речи.

По большому счету, без этой грамматической единицы не было бы полноценного общения. Ведь в предложении, как правило, возникают связи между предметами и отношения между ними, поэтому практически в каждом из них есть существительное, а нередко и не одно. О значении этой части речи прекрасно сказал известный языковед В.Г. Ветвицкий, определив ее как «дирижера грамматического оркестра», за каждым движением которого следят все «оркестранты» – зависимые слова, которые наследуют его форму и согласуются с ним.

Большую роль играет и многозначность существительных, и использование их в качестве средств языковой выразительности (метафоры, эпитеты, сравнения), и наличие у многих не только прямого, но и переносного значений.

Данная категория этой части речи в предложениях выполняет важнейшую функцию в формировании предикативной основы. Так, существительное может выступать в качестве единственного главного члена в назывном предложении. Ярким примером служит цитата А. Блока: «Ночь. Улица. Фонарь. Аптека…»

Роль имени существительного в речи этим не ограничивается. В качестве сказуемого оно может быть выражено в форме именительного падежа в так называемых

двухкомпонентных предложениях: «Моя сестра – студентка», а в формах косвенных падежей используется как распространитель следующих значений:

-объектного («Маша заполняет дневник»);

-субъектного («Девочке было светло и радостно»);

-определительного («Кабинет шефа достаточно просторен»);

-обстоятельственного («Мы все собрались у проходной»).

Благодаря тому что, существительное имеет категории рода и числа, оно обладает способностью сочетаться с различными формами согласуемых с ним слов: красивое(ые) платье(я), красивая(ые) картинка(и), красивый(е) цветок(ы).

В зависимости от особенностей выражаемого значения эта часть речи подразделяется на несколько групп, среди которых можно выделить единичные (горошинка, соломинка), вещественные (молоко, мед, серебро), собирательные (листва, пески, зверьё). Но, пожалуй, самые многочисленные и распространенные в употреблении слова – существительные, входящие в число конкретных и отвлеченных понятий.

Само словосочетание «конкретные существительные» уже достаточным образом определяет содержание группы. Это понятия, называющие различные предметы, а также явления реальной действительности. Одна их особенность заключается в том, что слова из категории конкретных существительных прекрасно сочетаются с любыми числительными – как количественными, так и порядковыми, так и собирательными: два малыша, второй малыш, двое малышей; два карандаша – второй карандаш.

Вторая особенность – способность образовывать формы множественного числа: малыш – малыши, карандаш – карандаши. Названия каких-нибудь абстрактных понятий тоже представляют собой солидный слой русской лексики. Эти слова – существительные, именующие или обозначающие какие-то отвлеченные понятия, действия или состояния (борьба, радость), качества или свойства (нравственность, добро, желтизна).

В отличие от конкретных имен абстрактные употребляются только в одной форме числа – или только единственного (тишина, блеск, смех, зло), или только множественного (будни, каникулы, выборы, сумерки). Также их невозможно сочетать с количественными числительными. Не скажешь: три тишины, два блеска. Некоторые из отвлеченных существительных можно употребить с наречиями много – немного, мало – немало, сколько: «И много-много радости детишкам принесла!», «Доставил немало неприятностей», «А сколько было счастья!»

Иногда, чтобы обозначить какое-то конкретное проявление отвлеченных качеств, можно использовать форму множественного числа в таком виде: мороз – грянули январские морозы, глубина – достигли океанских глубин, красота – любовались красотами природы и т.д.

Если попытаться проанализировать лексикон среднестатистического россиянина, можно сделать вывод о популярности тех или иных используемых в нем слов. Чаще всего употребляются, так сказать, бытовые существительные. В речи любого человека будут звучать названия домашней утвари (ложка, нож, вилка, кастрюля, сковорода и т.д.), продуктов питания (хлеб, молоко, колбаса, макароны и др.), слова, связанные с трудовой деятельностью, транспортом, учебой.

Чтобы определить, насколько часто используется в речи то или иное название (наименование, понятие), ученые-филологи создают специальные словари. В некоторых из

них представлены только существительные, поэтому на основе изучения таковых можно сделать определенные выводы. Такие словари называются частотными.

В одном из подобных списков из тысячи приведенных существительных наиболее часто встречались следующие слова: год, человек, время, дело, жизнь, день, рука, работа, слово, место.

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FEMALE IMAGES IN THE WORKS OF A. CHEKHOV AND A. KAKHKHAR

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Abstract: If we look at the literature of all peoples, then the image of a woman has existed since ancient times. We will witness that it has risen to a culminating level. This article provides information about the image of a woman in the works of A. Kahor and A.P. Chekhov.

Key words: female character, heroine, courage, plot, female character.

The question of the interaction of A.P. Chekhov with the previous literary tradition is perhaps one of the key ones in Czech studies, and there are undoubtedly reasons for this. It would not be an exaggeration to say that Chekhov in the history of Russian literature a truly unique mission - to connect two centuries, two eras (or, on the contrary, to mark their watershed). And the point here is far from being only the years of life, the point is completely special inclusion of the previous tradition in his artistic arsenal: the finest balancing on the verge of an ironic rethinking of dramatization, it seemed would, recognizable motives and images; not immediately obvious shift of the usual angle.

Various forms of Chekhov's communication with previous literature have repeatedly become the subject of research attention. However, it romantic traditions were not so often in the field of view of literary critics. Chekhov's relationship with specific authors, whose work on certain stages was in the mainstream of romanticism, were repeatedly considered what cannot be said about a comprehensive analysis of Chekhov's perception of romantic poetics. Chekhov's female images attracted critics and scientists during the life of the writer and continue to attract until now. There are many reasons for this: this is interest to the characterology of the writer as a whole, and the desire to project onto the artistic Chekhov's practice is his interest in the topical women's issue. But most importantly, perhaps in the fact that it is in female images that the most obvious is found the ultimate concentration of contradictory, seemingly incompatible traits, thoughts and aspirations; the same masterful Chekhovian balancing on the subtlest semantic frontier.

But in the limit, the heroine can also be a representative of the infernal world,a creature of lower demonology and, accordingly, incur damage to the hero, and even death. Be that as it may, at first the heroine shows her best hypostasis to the hero - he must to recognize in her an ideal beloved, involved in the secrets of another (ideal) world, but and, of course, in the best traditions of romanticism, with external beauty. Subsequently, deception may be revealed: the heroine is not involved in the ideal, but, on the contrary, infernal world; her beauty is an illusion, she is ugly. Similar dual image (a beautiful sorceress and an ugly forest witch) is present, for example, in Ludwig Tieck's fairy tale "Runenberg"; in a German romantic tradition of Aksakov's story "Walter Eisenberg" is the image of Cecilia, in a certain moment from a tender lover turning into an evil fury, possessing or some magical properties.

Returning to Chekhov, the following should be noted. Often in his stories there are recognizable, external, if not clichéd, elements romantic poetry. As a rule, these are repeating elements of the landscape - moonlight, a pond, the moon reflected in a pond, the sounds of music; portrait of the hero, classical romantic postulates. There is an irony in this usage. tonality, however, the range of techniques for the embodiment of irony in Chekhov is more than wide1Let's get

specific. In the story "Ariadne" (1895), a parodic reduction in the image of a romantic there is no hero - it can rather be a light irony created by an underlined a heap of "romantic situations": "After this conversation, I did not sleep all night, I wanted to shoot myself. In the morning I wrote five letters and tore them all to shreds, then sobbed in Riga, then took money from his father and left for the Caucasus without saying goodbye. The effect is aggravated by the obvious contrast between the main character-narrator and his rival Lubkov, who adheres to opposite romantic views (however, he is recreated almost with more irony): “Poetry itself by itself, and the lover by himself. It's the same as in agriculture: the beauty of nature by itself, and the income from forests and fields by itself "

To the image of women in Uzbek literature even in the early years of the 20th century to address, to create various images of female characters in our prose works began to appear. For example: the character of Zebi in the novel "Night and Day",We can also cite Gulnor and other characters from the novel Kutlug Khan.In addition, Unsin in the story "Horror" by Abdulla Qahhor, "One thousand and one There are different stories such as Mastura, "Wives", "Maston" in the "Jon" story we can see the interpretation of the images of women in the character. Although this in all the works, the image of women did not rise to the level of leading characters although not, it serves to reveal the intended purpose of the work to one degree or another did In creating the image of women, its full performance is the talent of the writer and related to life experience.

The literary scholar O. Sharafiddinov wrote the following about Abdulla Qahhor's language skills: "Abdullah Qahhor's language is a big world in itself. Once a person enters this world, he becomes a prisoner of its incomparable beauty, thanks to this world, the elegance, clarity, color, meaning of our mother tongue, the so-called Uzbek language, can express any delicate feeling, any complex experience. He admires the power he gets. The words used by Abdulla Qahhor, the sentences created by him reflect the richness of our language and are reflected like a rainbow. The writer achieved this through tireless work."

Abdulla It is natural that the artistic skill of any artist is determined by the artistry of his works in his native language. After all, the linguistic capabilities of the native language are definitely evaluated, analyzed and interpreted based on the level of the works created by the artist. Abdulla Qahhor looked at the language of artistic work, including the language of his stories, with great responsibility, and in this regard he endured all the hard work. As a proof of this, he said the following words: "In order to convey an idea or imagine something to a reader, he needs an open, fluent and simple language that does not confuse a person's head. Just as a person who takes a picture tries to be beautiful and agreeable to the picture and violates his natural state, if a writer tries to write beautifully and "admiring" in vain, the simplicity and naturalness of the language necessary for a literary work is violated. writer When every reader is reading a book, the most important thing for him is that the work is clearly, simply and clearly explained. In his stories, Abdulla Qahhor describes all the events openly, which easily and quickly penetrates the heart of the reader. It is true that it is much easier to get into the heart of the student through art. But real creative people should choose the right way when choosing a topic. The path chosen by him should be focused on the most pressing issues of society's life.

The content of the writer's stories is clear, short, and fluent, so he differs from other writers. For example, the story "Horror", which describes the past, is also short, but all the details are used in it. First of all, he knew very well that this or that example of artistic creativity is not just for fame or prestige, but is the result of hard work and tireless research. He deeply studied and

mastered the story-writing skills of great Russian writers such as N.V. Gogol, A.P. Chekhov, who are recognized and recognized in world literature.

The writer's stories attract a person to himself, and the person who reads them becomes eager to read them again and again. Because it is written based on reality. A life story can undoubtedly attract every reader. The writer put the life of that time in his stories.In holy hadiths, mothers and women are always praised: "Your good deeds are those who treat your women well. I am better to my family than you. "Only good people honor women, and only bad people abuse women."

But humanity is created in such a way that we can't always say positive attitudes towards women. Changes in society, people's worldview, and differences in opinions cause different manifestations of this problem.

As can be seen from the above, Abdulla Qahhor looked at the language of artistic works, including the language of his stories, with great responsibility, and in this regard, he endured all the hard work. He did not spare himself in the work done in this direction, he set great demands on other artists, he always prioritized the simplicity and naturalness of the artistic language and fought for it. The proof of this can be the series of stories that we analyzed and the following words that he said: "To express an idea or imagine something to the reader, a clear, fluent and simple language is needed, which does not confuse a person. Just as the person taking a photograph tries to make the picture beautiful and agreeable and violates his natural state, so the writer tries to write beautifully and "admiring" in vain, so the simplicity and naturalness of the language necessary for a literary work is violated.

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RESULTS OF RETROPERITONEOSCOPIC SURGERY IN PEDIATRIC UROLOGY

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Abstract.

The article presents the results of treatment of 28 children with various diseases of the upper urinary tract (hydronephrosis, solitary cyst of the kidney, urolithiasis, calculus of the middle third of the ureter, non-functioning kidney against the background of reflux nephropathy), operated on by endovideosurgical retroperitoneal access. The follow-up period after surgery ranged from 1 to 3 years. A comparative analysis of the results of treatment with a group of patients operated on by laparoscopic and open approaches was carried out.

Keywords: endosurgery; pediatric urology; retroperitoneoscopy; laparoscopy; children; diseases of the upper urinary tract.

In modern surgery, open surgical interventions have already ceased to meet the level of development of medicine due to their high trauma and are increasingly giving way to endovideosurgical technologies. Given their minimally invasive nature, this direction is especially attractive in pediatric urology.

Endovideosurgical operations for diseases of the upper urinary tract are mainly performed by laparoscopic access (LD), there are isolated reports on the use of retroperitoneoscopic access (RD) in children [1–4].

The presence of a natural cavity and a wide working space for the location of trocars makes laparoscopic interventions convenient and widely used in urology. However, transperitoneal access is associated with the risk of mechanical and thermal damage to the abdominal organs, the possibility of developing urinary peritonitis due to the ingress of blood and urine into the abdominal cavity, as well as difficulties in performing the operation in patients with adhesive disease. In this regard, of great interest is the retroperitoneoscopic method, which allows to avoid complications associated with opening the abdominal cavity. The researchers also emphasize that for a urologist, retroperitoneoscopic access during surgical interventions on the organs of the retroperitoneal space is more familiar, all instruments are inserted along the shortest path through the lumbar region directly into the retroperitoneal space without opening the abdominal cavity, which indicates its high physiology [5, 6].

Nevertheless, the general principles of retroperitoneoscopic operations are still insufficiently covered in the domestic literature, there are no convincing data on the effectiveness of these interventions, as well as clear recommendations regarding indications and contraindications for them in various urological diseases in children. All this, in our opinion, determines this direction as promising in pediatric surgery and requires further research.

The purpose of the study is to improve the results of treatment of children with diseases of the upper urinary tract, using retroperitoneal access to perform endovideosurgical operations.

Material and methods

The work is based on the results of surgical treatment of 108 children with various diseases of the upper urinary tract in the Department of Elective Surgery and Urology - Andrology of the Morozov Children's City Clinical Hospital for the period from 2008 to 2016. The main group consisted of patients operated on by endovideosurgical retroperitoneal access, in total 28 children (15 (60.7%) boys, 13 (39.3%) girls) aged 9 months to 17 years (mean age 7.6 ± 5.5 years). For a

comparative analysis of the results of treatment with retroperitanic access, 2 control groups were involved: the 1st comparison group consisted of patients operated on by laparoscopic access - 50 children (30 (60%) boys, 20 (40%) girls) aged from 8 months to 17 months. years (mean age 7.5 ± 5.4 years). The 2nd comparison group included patients operated on with the traditional open approach (OD), 30 clinical cases in children (16 (60%) boys, 14 (40%) girls) aged 10 months to 17 years (mean age 7 .6 ± 5.4 years). All three groups of patients were comparable in age composition.

For the purpose of diagnosis, all children in the clinic underwent a comprehensive examination both in the preoperative and postoperative periods, including the use of clinical, laboratory and instrumental research methods (ultrasound, radiological, radioisotope). At the same time, the algorithm for examining patients was traditional according to the principle from simple to complex.

According to nosological forms, patients of the main group were distributed as follows: with hydronephrosis - 6 (21.4%), solitary kidney cyst - 11 (39.3%), non-functioning kidney due to reflux nephropathy - 6 (21.4%), urolithiasis, calculus of the middle third of the ureter - 5 (17.9%). According to the diseases, patients underwent endovideosurgical retroperitoneal pyeloplasty (6), resection of kidney cysts (11), nephroureterectomy (6), ureterolithotomy (5).

The structure of patients by age and previous surgical interventions in the comparison groups was similar to that in the main group.

In the group of retroperitoneoscopic operations, 2 patients had a history of ventriculo-peritoneal shunt for hydrocephalus.

Open operations were performed using the traditional Fedorov lumbotomy approach. The entire volume of operational actions did not differ from standard methods.

LD and the surgical technique are described repeatedly in the manuals on endoscopic surgery, so we will not dwell on this in detail.

Surgical interventions by retroperitoneoscopic access were performed with the patient in the healthy side position. A roller was placed under the lower back, which created an inclination of the frontal axis of the body, which increased the distance between the costal arch and the iliac crest and thereby somewhat expanded the boundaries of the retroperitoneal space. A 1.5 cm incision was made in the skin and subcutaneous fat midway between the 12th rib and the iliac wing at the level of the posterior axillary line. The muscles were stratified in a blunt way with the jaws of the clamp. The transverse fascia was dissected, the fatty tissue of the retroperitoneal space and Gerota's fascia were opened. To create a working space in 10 cases, a self-made dissector balloon was used - a finger was cut off from a sterile rubber glove, put on the end part of a 10-mm trocar, and hermetically fixed with a thread. The balloon was inflated in the retroperitoneal space with air using a pear or Janet syringe. In 4 observations, the working space was formed using a tupfer. In 14 surgical interventions, a manual method was used to create a primary working cavity using the index finger. The first 10 mm trocar with optics and CO2 insufflation was inserted into the created cavity, thus expanding the working space. Then, under visual control, a second 5 mm trocar was placed in the costovertebral angle. The third manipulation trocar was placed along the anterior axillary line. The projection of its introduction depended on the zone of surgical interest in the retroperitoneal space. The surgical techniques used in retroperitoneoscopic interventions did not differ from the methods of open and laparoscopic operations.

When analyzing the results of treatment, the following indicators were evaluated, reflecting the degree of aggressiveness of surgical interventions: the duration of the operation, the amount of

blood loss, the need for narcotic analgesics after the operation, the terms of rehabilitation (activation) of the patient in the postoperative period, the length of the patient's stay in the hospital after the operation, the presence or absence of intraoperative and postoperative complications.

results

The duration of surgical interventions by retroperitoneoscopic approach was 125.6 min (45–220), by laparoscopic access – 125.1 min (60–215), OD – 93 min (50–140). Thus, statistical analysis showed that the duration of retroperitoneoscopic operations significantly exceeds that of open interventions ($p < 0.05$). At the same time, the duration of operations in the groups of transperitoneoscopic access and retroperitoneoscopic access did not differ statistically significantly ($p > 0.05$).

We noted that at the initial stages of mastering endovideosurgical interventions by retroperitoneal access, the operations proceeded longer than during subsequent ones. Thus, the first retroperitoneoscopic resection of a solitary kidney cyst lasted 105 minutes, and the last one included in the work - 45 minutes, i.e., as experience is gained and new technical approaches are introduced, the duration of endovideosurgical retroperitoneal interventions gradually approaches the duration of open operations.

In all cases of endovideosurgical operations, blood loss was minimal. The volume of blood loss during retroperitonescopic interventions was more than 3 times less compared with open operations ($p < 0.05$). At the same time, the volume of blood loss in the groups of transperitoneoscopic access and retroperitoneoscopic access did not have statistically significant differences ($p > 0.05$).

When performing retroperitoneoscopic operations, we did not note intraoperative complications; there were also no cases of transition to open surgery. In the group of laparoscopic interventions, in 1 (2%) patient with an intrarenal dorsally oriented pelvis of the kidney during pyeloplasty, conversion had to be performed due to insurmountable technical difficulties and the inability to achieve the goal of the operation with the chosen approach.

In the postoperative period, anesthesia was performed with narcotic and non-narcotic analgesics. Since 2010, in open, laparoscopic, and retroperitoneoscopic operations, epidural anesthesia has been resorted to with the introduction of a microfluidic local anesthetic (solution of naropin at an age dosage) into the epidural space through a catheter for 1–2 days, depending on the type of surgical intervention. In the groups of retroperitoneoscopic and laparoscopic operations, non-narcotic analgesics were additionally used for pain relief for more than 1-2 days after the operation. After open interventions, all patients required the use of narcotic analgesics for 1–2 days after surgery, then pain relief was carried out with non-narcotic analgesics for up to 4–5 days.

Significantly earlier activation of patients is associated with a less pronounced pain syndrome. After retroperitoneoscopic and laparoscopic operations, the activation of patients occurred on the average on the 2.4th day. The average period of activation of patients after open surgery was significantly longer and amounted to 3.7 days.

Accordingly, the length of stay of patients of the main group in the hospital after surgery was reduced. The average number of bed-days of hospital stay of patients after retroperitoneoscopic surgery was 5.9 days, after laparoscopic surgery - 5.8 days, after open surgeries - 11.8 days.

These data clearly show that the postoperative period after retroperitoneoscopic and laparoscopic operations is much easier compared to open interventions: pain is less pronounced, the patient is more active and the duration of hospital stay after surgery is shorter.

There were no postoperative complications in the main group. In the group of laparoscopic interventions, urinary leakage was found in 1 (2%) case after pyeloplasty, which served as an indication for the installation of a puncture nephrostomy. In the group of open operations, suppuration of the postoperative wound was noted in 2 (6.7%) children. In the groups of endovideosurgical interventions, healing of trocar wounds by primary intention was observed in 100% of cases, wound suppuration was not observed.

The results of endovideosurgical retroperitoneal operations for diseases of the upper urinary tract were studied in terms of 1 to 3 years in 22 patients. For comparison, 30 patients were examined after laparoscopic operations and 25 after lumbotomy at the same time.

During examination, all patients with hydronephrosis who underwent pyeloplasty by retroperitoneoscopic access showed positive dynamics according to ultrasound data in the form of a reduction in the renal collector system, improvement in intrarenal blood flow, and parenchymal growth. There were no cases of recurrence of the disease and the need for repeated interventions. In the group of laparoscopic interventions, hydronephrosis recurrence was noted in 1 child who had severe bacterial-fungal pyelonephritis in the postoperative period. The patient successfully underwent repeated open pyeloplasty 6 months later.

The results of using retroperitoneoscopic access for resection of kidney cysts were studied over a period of more than 1 year in 8 patients. For comparison, 12 patients were examined after laparoscopic operations and 10 after open interventions. When analyzing the results of the study in the compared groups, there were no cases of cyst recurrence and the need for repeated interventions. After 6 months, with a control ultrasound, the residual cavity of not more than 50% of the initial size of the cyst was determined in 2 patients operated on for OD, and was absent in all patients of the main group and the LD group. In 1 year after the operation, ultrasound involution of the residual cavity was already observed in all patients of the three groups.

When examining patients who underwent ureterolithotomy, there were no complications in the main group and comparison groups. After nephroureterectomy in children of all three groups, we also did not reveal any deviations from the norm.

After lumbotomy, in addition to a distinct scar in the lumbar region, varying degrees of severity of skin sensitivity disorders can be observed. This is due to the fact that small sensitive nerve branches are crossed during access. In our observations, a violation of skin sensitivity below the scar was detected in 2 (8%) patients who underwent open surgery. In patients of the main group and the group of laparoscopic operations, such violations were not observed.

In the long-term period, the formation of a keloid scar was found in 2 (8%) patients operated on for OD. In the main group and the group of laparoscopic interventions, keloid scars were not observed.

After retroperitoneoscopic and laparoscopic operations, a good cosmetic effect was noted - a year after surgery, postoperative scars were barely noticeable white-pink spots after trocar accesses. In the group of traditional interventions, postoperative scars a year after the operation were a smooth, whitish line of lumbotomy access.

Thus, according to our data, the use of endovideosurgical retroperitoneal operations significantly improves the results of surgical treatment of patients compared to traditional

interventions, while the results of retroperitoneoscopic interventions are comparable to those of laparoscopic ones.

Discussion

A comparative analysis of the results of surgical treatment of diseases of the upper urinary tract in children using three approaches - retroperitoneoscopic access, laparoscopic access and open access - showed that the retroperitoneoscopic method in this pathology is comparable in terms of capabilities with open operations, but at the same time has a significant advantage due to less traumatism, shorter terms of rehabilitation and stay of the patient in a hospital after operation. Meanwhile, the duration of the operation was longer with endovideosurgical approaches. However, as experience is gained, this indicator in the group of retroperitoneoscopic interventions is steadily decreasing and is approaching the average duration of traditional operations. At the same time, the results of retroperitoneoscopic and laparoscopic operations did not have significant differences.

Thus, it can be argued that open access operations should be used only if there are contraindications to endovideosurgical interventions or their unavailability.

Each of the endovideosurgical methods (laparoscopic and retroperitoneoscopic) certainly has its own advantages and disadvantages. At the same time, the advantages of one method indicate the disadvantages of the other, and vice versa. Thus, the advantages of the laparoscopic method compared to the retroperitoneoscopic method are a larger volume of the operating space, which provides ease of manipulation, the presence of clear anatomical landmarks, since with retroperitoneoscopic access, on the contrary, a small working cavity leads to technical difficulties in carrying out manipulations, and the absence of distinct anatomical landmarks makes it difficult search for an object with retroperitoneal access. At the same time, the advantages of the retroperitoneoscopic method are a short and direct access to the upper urinary tract, the absence of contact with the abdominal organs, which is especially important in patients with a history of surgical interventions on the abdominal organs. With LD, the path to the retroperitoneal space is longer, there is a risk of mechanical and thermal damage to the abdominal organs, as well as the threat of urinary leakage into the abdominal cavity.

Our experience shows that each of the methods has its own indications and contraindications.

When comparing two approaches for performing resection of a solitary kidney cyst, we noted that it was more convenient to use LD when localizing kidney cysts along the anterior or medial surface of the kidney. Visualization of the cyst was carried out without technical difficulties. When the kidney cyst is located in the dorsolateral sections, the retroperitoneoscopic approach showed greater efficiency, which provided the opportunity for a full examination of the entire cyst cavity, adequate resection of its wall and total electrocoagulation of the cystic lining of the residual cavity, followed by retroperitoneal drainage with minimal time and ergonomic costs, which is difficult to perform laparoscopic access at a given localization of the cyst. Subsequently, with the accumulation of experience, we more often used endovideosurgical retroperitoneal access, which made it possible to remove a cyst of any localization.

The most complex and lengthy operation in our study was retroperitoneoscopic pyeloplasty. However, in the presence of a dorsal orientation of the pelvis, it was the use of retroperitoneoscopic access that ensured the convenience of performing all the manipulations of surgical intervention, and with laparoscopic access, the orientation of the pelvis posteriorly during pyeloplasty caused conversion. Therefore, we consider the presence of a dorsal orientation of the

pelvis as an absolute indication for the use of the retroperitoneoscopic method. At the same time, taking into account the complexity of performing reconstructive operations, their duration, we believe that when the pelvis is oriented anteriorly, it is more expedient to use laparoscopic access.

When performing ureterolithotomies and nephroureterectomies, we did not reveal any differences between the laparoscopic approach and the retroperitoneoscopic approach.

As our experience shows, all factors that complicate or lengthen operations are contraindications to the use of retroperitoneoscopic access, since in the case of performing endovideosurgical interventions in difficult conditions and for a long time, the risk of complications increases, and, in addition, the mini-aggressiveness of surgical intervention becomes doubtful. Such factors are the adhesive process due to previous operations on the organs of the retroperitoneal space, which will prevent the formation of an adequate working cavity and can cause various complications due to the risk of damage to the organs of the urinary system or large vessels, as well as the anatomical features of the kidney, for example, as mentioned above , the direction of the pelvis anteriorly during pyeloplasty, which will significantly complicate the reconstructive operation, or anomalies in the relationship of the kidneys (horseshoe-shaped, gallet-shaped kidney, and others), when the rotation of the pelvis, the presence of an isthmus, features of angioarchitectonics, additional main vessels will complicate surgical intervention or may even make the operation impossible with this access and cause a conversion.

Thus, based on the study, we formulated the following indications and contraindications for retroperitoneoscopic access.

Absolute indications for the use of retroperitoneoscopic access in diseases of the upper urinary tract in children are:

- a history of multiple operations on the abdominal organs; – dorsally oriented renal pelvis in patients with hydronephrosis;

- solitary cyst of the kidney, located on the posterolateral surface of the kidney. Contraindications:

- previously transferred operations on the organs of the retroperitoneal space;

- orientation of the pelvis anteriorly for pyeloplasty with hydronephrosis;

- anomalies of the kidneys.

In general, our study showed the great potential of endovideosurgical retroperitoneal operations for diseases of the upper urinary tract in children.

Since there is no difference between the laparoscopic approach and the retroperitoneoscopic approach in the considered pathology when assessing the invasiveness of interventions, the choice of approach (with the exception of absolute indications and contraindications) depends on the skills and experience of the surgeon. However, we believe that preference should still be given to the retroperitoneoscopic approach, since it is more physiological, direct, excludes contact with the abdominal organs, and minimizes complications from the abdominal organs.

Conclusion

Thus, endovideosurgical retroperitoneal operations can be successfully used in pediatric surgery for diseases of the upper urinary tract and will improve the results of treatment in comparison with open interventions. At the same time, the results of retroperitonescopic interventions are comparable with the results of laparoscopic operations. The authors are convinced of the prospects of further introduction of retroperitoneoscopic operations in the treatment of various urological diseases in children.

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SAID OTALIQ MADRASAH - PLACE OF SCIENCE AND ENLIGHTENMENT

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ANNOTATION

This article is about the madrasa built in honor of Hazrat Khwaja Alauddin Attar, one of the exponents of the Naqshbandi doctrine who lived in the 15th century, who was considered to be the disciple of Bahauddin Naqshband, and the history of its construction, its activities and its current status are discussed.

Keywords: Bahauddin Naqshband, Surkhan, Denov, Khanaqoh.

The main part

Said Ataliq Madrasah is the largest of the cultural monuments in the Surkhan oasis and was built in the city of Denov. Later, during the rule of the Shaibanis, Denov developed rapidly and became the center of the region. Two structures (madrasa and dormitory) were built in the city center, known as "Double Madrasa". The first preserved madrasa building was completed by Ahmad Muhammad Bukhari.

The second apartment building was demolished in 1929-1934. Khanaqoh bricks were used for the construction of public education department, prosecutor's office, hotel, police building, raykom (district committee) and railway polyclinic, school building. [3] A certain part of the bricks was cut as a sidewalk in the distance from the market to the railway. The reason is that Denov is considered to be a swampy and fertile land. The preserved madrasa is called Said Ataliq. Although there is no clear and precise information about when the madrasa and the dormitory building were built, some sources estimate that it was built in the 16th and 17th centuries. The conclusion that it was renovated in the middle of the 19th century was included in the research. Sheikh Attar's name was Khwaja Alauddin. He was born in a noble family in Bukhara. He was one of the sons of a businessman from Khorezm. His fathers were also traders.

After his father's death, Alauddin Attar, the youngest son, renounced his inheritance, leaving it to his brothers Shahabuddin and Mubarak, and went to one of the Bukhara madrasas and led a hermit life. Khwaja Bahauddin Naqshband, the founder of the Naqshbandi order, took him under his care in the Madrasah of Bukhara, and he gave him education and training. After the death of Bahauddin Naqshband, the founder of the Naqshbandi sect, he moved the teaching center to Dehnav (Denov). In 1389-1400, Naqshbandi was ruled from this city and provided unity to thousands of students. Contemporary scientists and people nicknamed him Sheikh Attar because he was engaged in trade only for a living, and he occasionally gave gifts and gifts to those seeking knowledge. Attar is an Arabic word meaning "seller".

It proves that two cultural centers developed as a socio-economic and cultural center between Samarkand and Herat during the Timurid period. During this period, water was released from the Topalang river to Dehinav. [2] Craft and trade developed. The influence of Islamic-gnostic science on economic development was strong. Naqshbandi includes all social strata of the population and created a basis for the moral and spiritual growth of the population based on moderation. Said Ataliq madrasa and Khanaqahlar were full of scholars and connected the cities of Samarkand, Karshi, Balkh and Herat economically and spiritually. Sheikh Allauddin Attar played an important role in the development of Ya'qub Charkhi, Muhammad Khomush, Saddidin Kashgori, Khoja Ahror Vali in Denov. According to reports, Sheikh Allauddin Attar had two sons.

They are Khwaja Hasan and Khwaja Husan. His son Khoja Husan was killed in the war. Said Otaliq madrasa in Denov was built by his son Khoja Hasan and grandson Khoja Yusuf for 26 years. The author N. Ismailov writes in the book "Denov Tarona" that it is a monument dedicated to Sheikh Alluuddin Attar. If we take into account that the period when Alauddin Attar's children Khwaja Hasan and Khwaja Yusuf lived in the middle of the 15th century, it can be concluded that the madrasa was built in the 15th century. But if we take into account that the madrasa was built on the basis of the Mir Arab madrasa in Bukhara (completed in 1536), it suggests that the madrasa was built in the 16th century.

In July 1988, architect T.F. Zhukova published the following in the magazine "Architecture and Construction of Uzbekistan". "The madrasa building in Denov is a historical monument of the 17th century. The construction of this madrasa is connected with Bukhara field farms. Khans of Bukhara have always shown great favors to the Khojabori Khojas. They gave land, money, and valuable gifts to the sheikhs of Khoybori and tried to establish kinship ties with them." One of these khans, Imam Quli Khan from the Ashtarkhani dynasty (1611-1642), after ascending to the throne of Bukhara, married his sister to Tajiddin Khoja Hasan Joybori and gave her the land of Pirmast in Bukhara and Denov in Hisar as a gift. They will also give 20,000 coins and a number of camels and horses. The lands awarded by the ruler were managed independently by the Joybori people, and the owners of these lands were given the status of "Otaliq". Tajiddin Khoja Hasan Joybori built 2 madrasas in Denov with his own funds. Because Tajiddin belonged to the Prophet's generation, he had the title of Sayyid among the people.

For this reason, the madrasa was called Said Otaliq after him and it was completed in 1612-1628. It is not by chance that the center of Denov was chosen for the construction of the madrasa. This place, with its weather and water, was in every way favorable compared to other places. The bricks of the madrasah were taken from the soil of the village of Zakhartepa and baked in large brick kilns available there. [4] The depth of the foundation of the madrasah is 5.5 meters, and several rows of reeds are laid on it, and it is made of baked bricks in a special style. As we mentioned above, the madrasa building was built by master Ahmed Muhammad Bukhari. The reason why the building has 114 rooms is significant because it is compared to the number of suras of our holy book, the Holy Qur'an.

The madrasah has a rectangular layout (46x64 m) stretching from north to south, and the corners are decorated with flowers. There is a 2-story 3-arched porch on 2 sides of the pediment. At the entrance through the peshtok, there is a miyansaray (consisting of several sections), a mosque with a chortok roof and a classroom next to it. The dome of Mionsaray rested on shield-shaped arches, and the domes of the mosque and classroom rested on arches. Around the yard (40x29.5 m) there are 2-story rooms with a deep arch. [1]

The size of the rooms on the lower floor is 4.75×2.75 m and the size of the rooms on the upper floor is 2.75×2.25 m, the roof is vaulted. The windows of the room are made of ganch bars. This type of madrasa is the only one in Surkhandarya region. In the 1920s, about 400 students studied at the madrasa, and 33 mudarris taught them. [6]

Conclusion

In conclusion, as a result of the reforms being carried out in our country, a number of practical works are being carried out to pay attention to historical monuments and to pass them on to the future generations. The madrasa was included in the national list of "Real Estate Objects of Tangible Cultural Heritage" approved in 2019, and a craft center is planned to be built there. [5] In 2020, measures were developed to preserve the building and improve its infrastructure.Since

this topic has not yet been fully studied, we have set ourselves the goal of conducting research in the future with a thorough analysis of sources and literature.

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IMMUNOMODULATION IN GYNECOLOGY. OPINION OF AN IMMUNOLOGIST AND AN OBSTETRICIAN-GYNECOLOGIST

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Abstract: The currently available information on the epidemiological features and chronic clinical course of diseases caused by sexually transmitted pathogens is the reason for the search for drugs and methods that increase the effectiveness of their therapy [1]. A very serious problem for clinicians is the polyresistance of pathogens to antiviral, antimicrobial and antifungal drugs, the high frequency of infection of various population groups with herpes viruses, human papillomaviruses, their negative impact on the immune system and factors of colonization resistance of the reproductive tract [2].

Keywords: chronic, pathogen, immune system, reproductive, carcinoprevention

One of the main issues that worries practitioners - obstetrician-gynecologists, perinatologists, immunologists - is the lack of significant success in the treatment of diseases caused by human papillomaviruses (HPV) and Candida fungi, despite the variety of drugs used and methods of influencing the infectious agent [3]. For example, in 2008, cervical cancer was the third most common cancer in women worldwide, and in 2020 it ranked fourth in incidence and mortality among women [4].

Such negative dynamics, of course, causes concern among specialists. In this regard, the search for new formulas, drugs that can influence the state of factors that provide an adequate response to high concentrations of fungi of the genus Candida and viral agents on the surface of the mucous membranes is relevant. Complex, not fully understood mechanisms of regulation of the immune response under the action of agents of a viral, bacterial and fungal nature determine the versatility of the problem of immunomodulation, although it is the use of immunomodulating therapy that increases the physician's ability to provide medical care to patients with human papillomaviruses and those with chronic inflammatory diseases caused by fungi genus Candida.

Human papillomaviruses: structural features and pathogenetic role in the development of proliferative diseases in humans In the development of proliferative diseases, the role of human papillomaviruses of high carcinogenic risk (types 16, 18, 30, 31, 33, 39, 40, 42, 43, 51, 52) has been proven, 55, 57–59, 61, 62, 64, 67–70) [1]. Human papillomaviruses infect basal and immature metaplastic cells of stratified squamous epithelium. A high frequency of persistence of human papillomaviruses of the A9 phylogenetic group, in particular types 16, 33, 39, 52 and 58, was noted. Replication of viral DNA and synthesis of capsid proteins alter the cell cycle and lead to atypia of cellular elements and cells in general. By integrating into the cell genome, the virus transforms normal epithelial cells to CIN II–III/CIS. Embedding the nucleic acid of human papillomaviruses into the genome of epithelial cells is the main step towards their tumor transformation.

HPV detection in endometrial biopsy is three times higher in endometrial cancer (47.2%) than in healthy endometrium (13.8%). Human papillomavirus induces pathological changes in the expression of genes of Toll-like receptors (TLRs) on the surface of epithelial cells, primarily TLR9, TLR2. TLR4 agonists are involved in the activation of innate immune responses and the modulation of specific adaptive immunity to HPV, the production of interferon, which is crucial

for stopping an episode or relapse of the disease. TLRs are involved in the primary recognition of viral DNA and activate the production of pro-inflammatory cytokines. A consequence of a decrease in the expression of recognizing receptors is the establishment of an immunosuppressive status with inhibition of type I interferons [6].

Since virus-infected cells are a target target for human papillomavirus infection (PVI), strengthening the recognition abilities of immune cells will increase the effectiveness of therapy. Activation of the ability to recognize the viral agent TLR (innate immunity receptors) is an important step in therapeutic measures, to recognize the affected cells and promote their elimination [5]. Factors of viral aggression are also proteins E6 and E7, the activity of which contributes to:

• changes in genes that regulate the cell cycle (for example, pRb and p53), which leads to the proliferation of tumor cells;

• inactivation of genes suppressing carcinogenesis;

• inhibition of apoptosis of virus-modified cells;

• accumulation of genetic changes in epitheliocytes.

The persistence of highly oncogenic types of human papillomaviruses for two years or more is a dangerous factor in the progression of cervical precancer [6]. In most cases, human papillomaviruses are eliminated spontaneously, and the balanced work of the cellular and humoral components of innate and adaptive immunity can help eliminate HPV-infected cells. Persistence (long-term presence in the body) of HPV is due to the action of immunosuppressive mechanisms. HPV-infected cells cease to secrete the spectrum of pro-inflammatory Th1 cytokines characteristic of normal epitheliocytes. Moreover, in epitheliocytes, there is an upregulation of CTLA-4 and PD-1 inhibitor molecules with a decrease in the amount and activity of type I interferons [7].

Cervical intraepithelial neoplasia. LSIL (CIN I). Management tactics, relapse prevention

Cervical intraepithelial neoplasia (CIN) is characterized by the maturation and differentiation of the stratified squamous epithelium of the cervix [8]. The trigger factor for CIN is persistent HPV infection. 90% of cases of cervical intraepithelial neoplasia and more than 90% of cases of cervical cancer occur in patients with verified HPV infection [9]. With a morphologically confirmed diagnosis of LSIL (signs of HPV infection, koilocytosis, CIN I), expectant management is used with dynamic monitoring of the state of the cervix for 18–24 months in the form of cytological control once every 6 months and HPV testing once every 12 months. Observational tactics become ineffective as the woman may miss her doctor's appointment, leading to a high risk of missing a CIN.

Destructive treatment is recommended if there is no regression after 18–24 months. The recurrence rate of squamous intraepithelial lesions of the cervix after surgery is 20–30% [10]. In case of insufficient effectiveness of surgical treatment, activation of antiblastoma immune factors, the so-called cancer prevention technology, is effective.

Carcinoprevention is a set of measures aimed at systemically reducing the risk and incidence of malignant lesions. Carcinoprevention includes diagnostic (laboratory diagnostics) and drug (immunomodulatory drugs) mechanisms. Immunomodulatory therapy of the productive component of HPV infection is pathogenetically justified in addition to surgical methods [1], since activation of HPV infection and carcinogenesis are markers of immunosuppression. According to V.N. Serova et al., the appointment of treatment aimed at the immune system should proceed from the general principles of immunotherapy. The main requirements for immunomodulatory drugs

are that the drug has immunomodulatory or immunostimulatory properties, clinically proven high efficiency, preferably natural origin, safety, non-addictive, no side and carcinogenic effects [11].

The choice of an immunomodulator should be responsible and scientifically justified, since immune cells can exhibit dual activity against a tumor: type M1 macrophages, type 1 dendritic cells, N1 neutrophils have an antitumor effect, and M2 macrophages, type 2 dendritic cells, N2 neutrophils support carcinogenesis [12], and activation of immune cells without correction of their phenotype in HPV infection is not yet a guarantee of success in the use of immunomodulators in the treatment of PVI. Moreover, if the pro-oncogenic profile of cells of the immune system, the connective tissue stroma is not corrected, then immune activation does not achieve the main goal - cancer prevention.

Correction of immune disorders - a direction for increasing the effectiveness of therapy for HPV-associated diseases

An integrated approach to the treatment of patients with HPV-associated diseases of the cervix, including destructive treatment of lesions and the use of drugs with antiviral and immunomodulatory effects, can be considered as the most effective. A promising class of drugs for the treatment of PVI are drugs that activate Toll-like receptors of innate immunity cells.

The drug of choice that activates nonspecific immunity factors, which is fundamentally important for the correction of immune disorders in PVI, is Immunomax®. By chemical nature, it is peptidoglycan, which is recognized by Toll-like receptors of cells of the immune system, which enhances the activity of antiviral and antitumor immunity [12]. Immunomax® promotes the activation of immune cells with an anti-oncogenic activity profile. It has been shown that the cytolytic activity of NK cells increases three times two to three hours after in vitro application of the drug. In vitro studies have shown the ability

Immunomax to influence the transfer of the dendritic cell ("sentinel on guard" of homeostatic reactions) from the -M2 state, which promotes tumor progression, to the -M1 state with a suppressive effect in the 4T1 model of breast cancer. Immunomax® contributed to a decrease in the expression of the myeloid antigen CD38+, characteristic of monocytic leukemia cells. Positive regulation of transcription of TLR/RLR genes of pattern recognition receptors under the influence of the drug in tumor cell lines THP-1 and HCT-116 was revealed, which demonstrates the possibility of correcting the signaling mechanisms of the immune response in tumor cells THP-1 and HCT-116 [13, 14]. Immunomax® inhibits the immunosuppressive potential of pE6 and pE7 HPV, which allows you to realize your own capabilities of the immune system. Immunomax® 200 IU is administered intramuscularly, dissolved in 1 ml of water for injection before administration. The course of treatment is six injections on the 1st, 2nd, 3rd, 8th, 9th, 10th days of treatment.

The combined persistence of HPV with herpes simplex virus type 2, cytomegalovirus, Epstein-Barr virus, chlamydia and mycoplasmas, opportunistic fungi of the genus C. albicans is extremely unfavorable. The presence of vulvovaginal candidiasis prevents HPV self-elimination [15].

The state of factors of colonization resistance of the mucous membranes of the genitourinary system in urogenital candidiasis. Methods of correction using immunomodulatory therapy

In a large-scale study of 1927 strains of Candida fungi isolated from patients with vulvovaginal candidiasis, a progressive decrease in the etiological significance of C. albicans and an increase in the significance of C. non-albicans isolates were established. An increase in the resistance of Candida fungi to antimycotics is observed [16]. The etiological significance of taking

dapagliflozin, a selective reversible inhibitor of sodium glucose cotransporter type 2 (SGLT2), has been proven [17]. One of the methods of complex therapy of vulvovaginal candidiasis is to increase the colonization resistance of the mucous membranes of the organs of the genitourinary system. This approach to local immunotherapy is based on the available data on the key role of local mechanisms of immune defense of mucosal candidiasis [18]. Gepon® as part of a combination therapy for candidiasis is effective in the treatment of infections of the mucous membranes and skin caused by Candida fungi, reduces the intensity of inflammation (redness, swelling, itching, burning, pain) of the mucous membranes and skin, dryness of the mucous membranes, is used to prevent candidiasis of the mucous membranes and skin during antibiotic therapy. More than 80 published clinical studies involving more than 4,700 people testify to the effectiveness of Gepon®. Gepon® is an immunomodulator with local anti-inflammatory, immunoregulatory and antimycotic activity. Produced in the form of a sterile lyophilized powder, which contains, respectively, 1, 2 or 10 mg of the active substance of tetradecapeptide. The presence of anti-inflammatory effects of the drug is especially important in the treatment of lesions of smooth skin in complex therapy. In this case, topical application of the drug by applying a gauze napkin soaked in Gepon solution to the affected areas is relevant.

The immunomodulatory and anti-inflammatory effect of Gepon® is due to the fact that it changes the cytokine response of cells to a viral infection (the activity of IL-2, IL-6, IL-10, IL-12, IL-18 and TNF-α mRNA increases); causes the production of type I interferons, stimulating interferonogenesis, while regulating the production of pro-inflammatory cytokines - IL-1, IL-6, IL-8, mobilizes and activates the functional and metabolic status of macrophages; stimulates the production of antibodies to antigens of an infectious nature; increases the content of the subpopulation of CD4+ T-lymphocytes (Th) and NK cells, increases the functional activity of neutrophils, natural killer cells and CD8+ T-cytotoxic cells (Tc), which are key links in the body's defense against bacteria, viruses and fungi [18 -20].

The use of Gepon® ensures the normalization of the microflora on the surface of the mucous membranes and the homing effect of lymphocytes. The mucous membranes of the genitourinary system are an arena for the interaction of microorganisms with the most important depot of the body's immunocompetent cells - lymphoid tissue. The homing effect is explained by the affinity of lymphocytes for receptors (addressins) of the endothelial venules that drain the mucous membranes of the "home region" of the urogenital tract. Stages of the homing effect of lymphocytes:

- antigen presentation and antigenic stimulation of T-lymphocytes in lymph nodes;
- differentiation (specialization) of lymphocytes;
- lymphocytes enter the lymphatic vessels and bloodstream;
- lymphocytes return to the focus of infection, where they were stimulated by the antigen.

Chronic inflammation accompanying adhesion, colonization by fungi of the genus Candida leads to activation and hyperactivation of immune system cells, which reduces the effectiveness of the therapy. According to the results of studies, Gepon® contributed to an increase in the level of T-regs, which further reduced the severity of the inflammatory process [21]. Evaluation of the effectiveness of therapy with Gepon® in women with recurrent vulvovaginal candidiasis resistant to standard therapy is presented in the work of A.L. Tishchenko. Patients treated with Gepon® showed a prolongation of the period without exacerbations up to one and a half years. A month after treatment with Gepon®, clinical signs of candidiasis were absent in 90% of cases, microscopic examination revealed the absence of pseudomycelium in 84% of patients, the

qualitative and quantitative composition of the resident microflora of the mucous membranes of the vagina normalized, there were no discharges of a purulent and cheesy nature, dyspareunia (Fig. 3) [22, 23].

Conclusion

The treatment of diseases caused by pathogenic and opportunistic microorganisms, such as HPV and fungi of the genus C. albicans or non-albicans, is one of the leading directions in modern gynecology, dermatovenereology, and clinical immunology. The complexity of their therapy is associated with immunopathogenetic disorders, which result in a long-term persistence of the pathogen, leading to impaired immune surveillance and proliferation [22]. In HPV-mediated infection, the activity of CD8+ cytotoxic T-lymphocytes is affected by a decrease in antigen presentation (MHC-I / HLA-A) and a violation of the expression of TLR and CCR7 recognition protein on the surface of the membrane of infected cells, therefore, modulation of TLR-like receptors by Immunomax® is TLR agonist - restores the balance of immune mechanisms, which contributes to the activation of antitumor immunity against HPV-infected cells. Virus-mycotic associations are recorded much more often than monoinfection, so the normalization of local antimicrobial protection factors is a necessary step in the treatment of recurrent vulvovaginal candidiasis. The use of Gepon® has a pronounced anti-inflammatory effect - the symptoms of inflammation, itching, burning, dyspareunia decrease or disappear within one or two days, which makes it possible to reasonably recommend immunomodulatory therapy in the complex treatment of vulvovaginal candidiasis.

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Compliance with Environmental, Social, and Governance Requirement in the Mining Industry

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Abstract. The mining industry plays a significant role in global economic development; however, its operations often have adverse environmental and social impacts. As the importance of sustainable business practices gains recognition, Environmental, Social, and Governance (ESG) requirements have emerged as crucial benchmarks for evaluating a company's responsible practices. This study examines the extent of compliance with ESG requirements in the mining industry and explores the factors influencing companies' adherence to these standards. Through a comprehensive literature review and analysis of publicly available data, this research sheds light on the challenges faced by mining companies in integrating ESG considerations into their operations and highlights successful strategies employed by industry leaders. The findings offer valuable insights for policymakers, investors, and mining stakeholders, contributing to the ongoing efforts towards a more sustainable and responsible mining sector.

Keywords: Compliance, ESG requirements, mining industry, sustainability, environmental impact, social responsibility, governance, responsible mining, sustainable business practices, stakeholders, mining companies, environmental regulations, social impact, corporate governance, sustainable development, investor relations.

The study is highly relevant and important for several reasons. First of all, the mining industry is known to have significant environmental impacts, such as deforestation, water pollution, habitat destruction, and emissions of greenhouse gases. Understanding the extent of compliance with ESG requirements can help assess the industry's efforts in minimizing its environmental footprint and transitioning to more sustainable practices.

Secondly, mining operations can also have profound social consequences, including displacement of communities, human rights violations, and labor issues. Analyzing the compliance with social aspects of ESG standards can provide insights into how mining companies are addressing these challenges and promoting social well-being.

Then, ESG compliance includes considerations of corporate governance, transparency, and accountability. Evaluating how well mining companies adhere to governance requirements is crucial for ensuring ethical business practices and safeguarding shareholder and stakeholder interests (Asatryan K.K. 2023).

In recent years, investors and stakeholders have increasingly incorporated ESG factors into their decision-making processes. A study on ESG compliance in the mining industry can help investors assess the long-term sustainability and risk profile of mining companies, influencing investment decisions and encouraging sustainable practices.

Governments and regulatory bodies can use insights from this research to design and implement effective ESG-related policies and regulations in the mining sector. By understanding the challenges faced by companies in complying with ESG requirements, policymakers can tailor supportive frameworks to drive positive change.

Moreover, the United Nations Sustainable Development Goals emphasize the importance of responsible business practices, environmental protection, and social inclusivity. Evaluating ESG compliance in the mining industry aligns with these global goals and contributes to achieving sustainable development targets (Broadstock, D. C. et al 2020).

The mining sector has faced criticism for its environmental and social practices. Demonstrating a commitment to ESG compliance can enhance the industry's reputation, leading to improved relationships with local communities, NGOs, and other stakeholders (Martínez-Ferrero, J. et al 2021).

The study can serve as a benchmark for companies to compare their ESG performance with industry peers. Identifying best practices adopted by leading companies can inspire others to adopt similar approaches and drive overall industry improvement.

Overall, studying compliance with ESG requirements in the mining industry holds significant relevance in advancing sustainable practices, mitigating environmental and social risks, attracting responsible investments, and fostering positive industry transformation in line with global sustainability objectives.

So, the main goal of this study is to understand the compliance with environmental, social, and governance requirement in the mining industry.

The study of ESG requirements can be approached through various theoretical lenses that provide different perspectives and frameworks for understanding and analyzing the complex interactions between businesses, society, and the environment.

Stakeholder theory posits that organizations have a responsibility to consider the interests and concerns of all their stakeholders, including employees, communities, customers, suppliers, and investors. In the context of ESG, this theory emphasizes the importance of engaging with and addressing the needs and expectations of various stakeholders to achieve sustainable and responsible business practices.

Institutional theory focuses on how organizations conform to prevailing institutional norms, values, and rules in their environment. When applied to ESG requirements, this theory examines how companies adopt and implement ESG practices to gain legitimacy and maintain their social license to operate in the eyes of stakeholders and regulatory bodies (Mohammad, W. M. W. et al 2021).

Resource-Based View suggests that a company's competitive advantage is derived from its unique resources and capabilities. In the context of ESG, this theory highlights how companies can leverage their commitment to environmental and social responsibility (ESG resources) to create a sustainable competitive advantage and attract responsible investors (Akgun, O. T. et al 2021).

Triple Bottom Line approach expands the traditional focus on financial performance by considering three dimensions: economic, social, and environmental. This framework emphasizes that businesses should strive for not only financial profitability but also social equity and environmental sustainability. ESG requirements align closely with the TBL concept, advocating for a holistic assessment of a company's performance (Adams, C. A. et al 2021).

Corporate Social Responsibility (CSR) refers to a company's voluntary actions to address social, environmental, and ethical concerns beyond legal requirements. ESG requirements often form the foundation of CSR initiatives, guiding companies to integrate sustainability into their core business strategies (Khalid, F. et al 2021).

Normative ethics provides moral principles and guidelines that can inform and guide business decisions related to ESG requirements. Concepts such as utilitarianism (maximizing overall societal welfare), deontology (acting in accordance with ethical rules), and virtue ethics (emphasizing personal and organizational virtues) can be applied to assess the ethical implications of ESG-related practices (Paat, A. et al 2021).

Institutional logics refer to the underlying values, beliefs, and assumptions that guide decision-making within organizations and societal systems. Analyzing the competing and complementary institutional logics surrounding ESG requirements can shed light on the dynamics influencing companies' adoption of responsible practices.

This theory examines how innovations, in this case, ESG practices, spread and are adopted within an industry or society. Understanding the factors that facilitate or hinder the diffusion of ESG requirements can provide insights into the transformational processes needed for widespread sustainable practices in the mining industry (Bąk, I. et al 2020).

These theoretical approaches offer valuable frameworks for studying and understanding the motivations, challenges, and outcomes related to compliance with ESG requirements in the mining industry and other sectors. Researchers and practitioners can draw upon these theories to inform strategies, policies, and interventions aimed at promoting sustainability and responsible corporate behavior.

Functioning ESG requirements in the mining industry are characterized by specific features that aim to promote responsible and sustainable practices:

1. Environmental Compliance. ESG requirements in the mining industry emphasize adherence to environmental regulations and best practices. Companies are expected to minimize the negative environmental impacts of their operations, including measures to reduce pollution, conserve natural resources, and rehabilitate mined areas (Kluza, K. et al 2021).
2. Sustainable Resource Management. Mining companies are encouraged to implement sustainable resource management practices, ensuring the responsible extraction of minerals and metals while considering long-term environmental and social implications.
3. Social Responsibility. ESG requirements focus on the well-being of communities and workers impacted by mining operations. This includes respecting the rights of local communities, providing fair compensation and safe working conditions for employees, and engaging in meaningful consultation with affected stakeholders (Kluza, K. et al 2021).
4. Community Engagement. Mining companies are expected to actively engage with local communities to understand their concerns, incorporate their feedback into decision-making processes, and contribute positively to their development.
5. Human Rights Protection. ESG requirements advocate for upholding human rights standards in mining operations, preventing forced labor, child labor, and other human rights abuses throughout the supply chain.
6. Transparency and Disclosure. Companies are encouraged to be transparent about their ESG policies, practices, and performance. Transparent reporting allows stakeholders, including investors and the public, to assess a company's commitment to sustainability and its progress towards ESG goals (Bassen, A. et al 2020).
7. Governance Structure. Effective corporate governance is crucial in ensuring that mining companies align with ESG requirements. This includes having independent boards, clear lines of accountability, and mechanisms for oversight and accountability (Kluza, K. et al 2021).

8. Ethical Business Conduct. ESG requirements advocate for ethical behavior, including anti-corruption measures and responsible lobbying, to ensure that mining companies operate with integrity and maintain the public's trust.

9. Risk Management and Resilience. ESG emphasizes the identification and management of environmental and social risks that could impact a company's long-term viability. Building resilience to these risks is essential for sustainable business practices (Bassen, A. et al 2020).

10. Long-Term Perspective. ESG requirements encourage mining companies to adopt a long-term perspective that considers the interests of future generations and aligns business strategies with sustainable development goals.

11. Investor Relations. Companies complying with ESG requirements can attract responsible investors who consider environmental and social factors in their investment decisions. Meeting ESG standards can enhance a company's reputation and access to capital.

12. Innovation and Research. ESG-driven mining companies invest in research and innovation to find new ways to reduce environmental impacts, enhance social outcomes, and improve overall sustainability performance (Bassen, A. et al 2020).

By integrating these features into their operations, mining companies can demonstrate their commitment to responsible practices, mitigate potential risks, and contribute to a more sustainable and socially responsible mining industry. The application of ESG requirements in the mining sector can foster positive change, address societal concerns, and promote the industry's alignment with broader sustainability goals.

Now we are going to deal with case studies compliance with environmental, social, and governance requirement in the mining industry.

Case Study 1: Newmont Corporation.

Newmont Corporation is one of the world's largest gold mining companies and has demonstrated a strong commitment to ESG requirements. The company's approach to compliance with ESG standards has earned it recognition as a leader in sustainable mining practices.

Newmont has made significant efforts to reduce its environmental footprint. For instance, the company has implemented energy efficiency programs, installed renewable energy projects, and actively monitors and manages water use to minimize its impact on local water resources (Ould Daoud Ellili, N. 2020).

Newmont places a high priority on engaging with local communities and addressing social issues. The company has established community development programs, including initiatives to improve education, healthcare, and economic opportunities for residents near its mining operations. Furthermore, Newmont focuses on hiring and training local workforce members, fostering economic development in the regions it operates.

Newmont has a well-defined governance structure that ensures accountability and transparency. The company has a board of directors with diverse expertise, including sustainability, and maintains clear lines of responsibility for ESG-related matters (Ould Daoud Ellili, N. 2020).

Newmont's commitment to ESG compliance has resonated with responsible investors. The company's ESG performance has been recognized by several sustainability indices and organizations, attracting investments from funds and investors with a strong focus on sustainable business practices.

Case Study 2: Rio Tinto.

Rio Tinto, a multinational mining company, provides another case study on ESG compliance, highlighting both successes and challenges.

Rio Tinto has taken steps to address environmental concerns. The company has set ambitious targets to reduce greenhouse gas emissions and improve water management in its operations. However, Rio Tinto has faced criticism for incidents such as the destruction of culturally significant Aboriginal sites in Australia, which raised questions about its environmental stewardship (Conca, L. et al 2021).

Rio Tinto has implemented various community engagement initiatives and sustainable development programs. Nevertheless, the company has encountered controversies related to its treatment of indigenous communities and labor rights in some regions of operation, indicating the need for ongoing improvement in its social responsibility practices.

Rio Tinto has been transparent in reporting its sustainability performance and goals. However, the company's handling of certain incidents, such as the destruction of the Aboriginal sites, highlighted the importance of further improving transparency and accountability (Conca, L. et al 2021).

Rio Tinto's governance structure has undergone scrutiny in response to the incidents mentioned above. The company has made efforts to enhance its governance practices and diversity in leadership positions.

Case Study 3: BHP.

BHP, a global mining company, has also embraced ESG requirements as a fundamental part of its operations.

BHP has set ambitious climate targets, aiming to reduce operational emissions and support the transition to a low-carbon economy. The company invests in renewable energy projects and works towards responsible water management.

BHP engages in extensive community consultations and invests in community development initiatives, focusing on health, education, and local economic development. The company strives to build positive relationships with indigenous communities, acknowledging their rights and heritage (Oncioiu, I., et al 2020).

BHP has established clear governance mechanisms to oversee ESG matters, including a Board-level sustainability committee, which ensures that ESG is embedded in the company's decision-making processes.

BHP invests in research and innovation to improve its sustainability performance. For example, the company collaborates with research institutions to develop innovative technologies for more sustainable mining practices (Oncioiu, I., et al 2020).

Overall, these case studies highlight how various mining companies have approached compliance with ESG requirements. While some have been successful in integrating ESG principles into their core business strategies, others have faced challenges and experienced setbacks. Nonetheless, these case studies illustrate the growing recognition of the importance of ESG in the mining industry and its potential to drive positive change for the environment, communities, and long-term business resilience.

The development paths of ESG requirements in the mining industry have evolved over time, driven by changing societal expectations, regulatory developments, and the recognition of the industry's impact on the environment and communities (Qureshi, M. A. et al 2020). The following are key development paths that have shaped ESG requirements in the mining sector:

1. Early Environmental Regulations. In the early stages, environmental regulations in the mining industry primarily focused on mitigating the most visible and immediate environmental impacts, such as pollution and land degradation. These regulations were typically reactive and aimed at addressing specific incidents (Buallay, A. M. et al 2020).

2. Growing Awareness of Social Impact. Over time, there was an increasing awareness of the social impacts of mining on local communities, including displacement, human rights violations, and inadequate benefit sharing. This led to the recognition that social considerations should be an integral part of ESG requirements.

3. Emergence of Sustainable Development Frameworks. In the 1990s, sustainable development principles gained traction globally, and the mining industry started integrating sustainability into its operations. The concept of the «Triple Bottom Line» - considering economic, social, and environmental factors - began influencing the industry's approach (Buallay, A. M. et al 2020).

4. Stakeholder Engagement and Inclusion. The mining industry faced mounting pressure from various stakeholders, including local communities, NGOs, and investors, demanding greater accountability and transparency. As a result, stakeholder engagement became a crucial aspect of ESG requirements, ensuring the voices of affected communities and other stakeholders were considered in decision-making.

5. Industry Standards and Certifications. Mining companies and industry associations began developing voluntary ESG standards and certifications. For example, the International Council on Mining and Metals introduced the «10 Principles» and «Sustainable Development Framework» to guide member companies in their ESG efforts.

6. Investor Focus on ESG. Responsible investing and the integration of ESG factors into investment decisions gained momentum. Investors started recognizing that companies with strong ESG performance could offer better long-term returns and lower risks (Duque-Grisales et al 2021).

7. Regulatory Advancements. Governments around the world started strengthening environmental and social regulations related to mining activities. This led to a shift from voluntary compliance to mandatory ESG requirements.

8. Sustainability Reporting and Disclosures. Companies began publishing sustainability reports, detailing their ESG performance, goals, and progress. Standardized reporting frameworks, such as the Global Reporting Initiative and the Sustainability Accounting Standards Board, emerged to guide consistent and comparable reporting.

9. Integration of ESG in Corporate Strategy. Leading mining companies recognized the strategic importance of ESG and started integrating sustainability considerations into their corporate strategies and business decision-making processes (Duque-Grisales et al 2021).

10. Alignment with Global Goals. The mining industry sought alignment with international sustainable development goals, such as the United Nations Sustainable Development Goals, demonstrating its commitment to contributing positively to global sustainability targets.

11. Technological Advancements. Innovation and technological advancements have played a crucial role in improving the industry's environmental and social performance. Technologies such as automation, renewable energy adoption, and water recycling have helped address ESG challenges (Park, S. R. et al 2021).

12. Continuous Improvement and Collaboration. The mining industry continues to evolve its ESG practices through collaboration with stakeholders, sharing best practices, and learning from each other's successes and failures (Park, S. R. et al 2021).

As the mining industry progresses, the development paths of ESG requirements are likely to further evolve, driven by ongoing societal expectations, regulatory changes, and advancements in sustainable technologies and practices. Embracing ESG principles will remain essential for the mining industry to thrive responsibly and sustainably in the future.

In conclusion, the study highlights the critical importance of integrating sustainability and responsible business practices into mining operations. The mining industry plays a crucial role in global economic development, but its activities have historically been associated with significant environmental degradation and social challenges.

ESG requirements have emerged as essential benchmarks for evaluating mining companies' commitment to mitigating negative impacts and contributing positively to environmental, social, and governance considerations.

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THE GOLDEN AGE OF THE UZBEK LANGUAGE

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Abstract: Today, the attitude towards the Uzbek language is not very positive. People's linguistic wealth is getting poorer and poorer. It is being replaced by social network slang and inappropriate Russian words.

Key words: Uzbek language, era of globalization, rich scientific heritage, research works.

As this year marks the 31st anniversary of the adoption of the Law "On State Language", we feel its practical value more and more. This historical document proves to be a significant step to restore the status of the Uzbek language, which is the product of many centuries of cultural, scientific, educational and artistic thinking. According to UNESCO, there are currently 6,909 languages in the world, and about 200 of them have the status of a state language. How deeply our grandfather Navoi described the charm, beautiful expression, emotion and elegance of our language, and in the last century, representatives of literature Abdulla Kadiri, Cholpon, Oybek, Gafur Ghulom, Abdulla Oripov, Erkin Vahidov, Ozad Sharafiddinov contributed to enriching it with their works. The rich scientific heritage left by such enlightened leaders is honored and respected today.

Indeed, today the Uzbek language is reflected in all official documents as the state language, and extensive efforts are being made to develop it. By the decree of the President of the Republic of Uzbekistan dated October 21, 2019 "On measures to fundamentally increase the prestige and position of the Uzbek language as a state language" No. PF-5850, this date was recognized as the "Day of the Uzbek language holiday".[1] In addition, within the framework of the implementation of this decree, the activities of the Department of State Language Development of the Cabinet of Ministers have been established, with the aim of organizing state control over the development of the state language by state bodies and organizations, including local executive authorities, and the observance of laws on the state language. the position of adviser on issues of increasing efficiency, ensuring compliance with laws on the state language was introduced. This also serves to conduct business in the state language. "Whoever wants to feel all the grace, charm and power of the Uzbek language, and its limitless possibilities, should listen to the legends of our Munis mothers, our thousand-year-old epics, our immortal statuses, and listen to the magical songs of our bakhshi and hafiz," said President Shavkat Mirziyoyev, saying that the Uzbek language was granted the status of the state language. in his speech at the 30th anniversary ceremony. [2]

Over the past period, a lot of practical work has been done to develop the Uzbek language, to preserve its purity, to increase the prestige of the state language as a language of science, and to fully teach young people. In 2006-2008, a five-volume "Annotated Dictionary of the Uzbek Language" was published. The edition of the dictionary in the Latin alphabet is being prepared these days. It is expected to contain 100 thousand words.

But how effective is it? Are we feeling the effects of this in society? What is the attitude towards the language not only among young people but also among adults?

Today, the attitude towards the Uzbek language is not very positive. People's linguistic wealth is getting poorer and poorer. It is being replaced by social network slang and inappropriate Russian words. Although new technological terms are coming in from abroad and enriching our vocabulary, none of us feel the responsibility to value our own language more than it does. True,

in the era of globalization, we need foreign words, but it will not hurt to think about creating and using Uzbek alternatives.

Advertising banners on the streets, store fronts, foreign names of household service outlets, and mistakes written in Uzbek are criticized by our intellectuals who are lovers of the language, and it is not without reason.

Why don't we love our language, learn to appreciate it. After all, how many of our grandfathers, Abdulla Avloni, Munavvarqori Abdurashidkhanov, and Mahmudhoja Behbudi, did not dress a century ago? What if the problems of the century have not changed? Our great writer Abdulla Qadiri said, "The Uzbek language is not poor, those who call it poor are poor. "They should not transfer their ignorance to the Uzbek language," he said. As a linguist, Mahmudhoja Behbudi wrote articles such as "Not two, but four languages are necessary", "Every nation is proud of its own language", "Language issue", "The word Sart is unknown", "The word Sart was not known".[3] While the process of preparation of scientific articles and dictionaries is still going on, they remain only papers, the impact of which is not known due to the fact that the mechanisms of bringing it into the people have not been developed.

Linguist scientist Bakhtiyor Mengliev wrote in "Marifat" newspaper, "Creating corpora of the Uzbek language in our country is not satisfactory. The scientific research conducted in this field is only at the stage of developing the theoretical foundations of Uzbek corpus linguistics and creating a couple of corpus records as an example," he wrote. [4] Why is corpus linguistics, a booming field in the last decade, faltering? I think this is one of the aspects that we have to deal with.

Language is our identity, it embodies our values. It enters our blood with mother's milk. We communicate in Uzbek, express our thoughts, laugh, cry. Language is an image of who we are.

But starting from the family, even when we go to our office, if we don't add a single foreign word, we don't feel free, as if we are demonstrating our "competence". This problem indicates that we do not read books or newspapers and magazines, and our vocabulary is poor. After all, if we communicate with our child who grew up watching Uzbek cartoons at home, we will be surprised by the literary words in his pronunciation, right? So, pure Uzbek shows, artistic-literary books will undoubtedly serve to enrich our language.

When it comes to language, it would not be wrong to include the issue of literacy and beautiful writing as an issue. We have to read over and over again to understand the words of our boys and girls who are typing on social networks, it is very difficult to select the ones who write beautifully among the students of the higher education institution. Therefore, while we are talking about the purity of the language and its beauty, we should strictly control the literacy of students from the first period of education - from school, and consider it our main task to raise them to be educated.

Each office has a specific department that deals with documents. The most frequently observed language problems occur in the activities of this department. For example, if the office writes a letter to a certain organization, or receives some document, the methodological problems in it will be clearly visible. Today, one of the most urgent issues is this - one of the most important and urgent issues in the formation and improvement of Uzbek documentation is the issue of the language and style of documents. Every leader, employees of management institutions, in a word, people whose activities are involved in the preparation of work documents, should know Uzbek spelling, punctuation marks and stylistic rules thoroughly and perfectly. Otherwise, documents

will be accepted piecemeal, piecemeal, piecemeal, or we will write in Russian and translate it into Uzbek.

Recently, I read on the website of the Committee on International Relations and Friendship with Foreign Countries under the Cabinet of Ministers that interest in learning the Uzbek language is growing in the Netherlands. [5] A meeting was held at the Embassy of the Republic of Uzbekistan in the Kingdom of Belgium on the issue of supporting the interest in learning the Uzbek language in European countries. Of course, this is worthy of attention.

It is not good for us to be apathetic and indifferent at a time when foreigners are interested in learning our language.

I will conclude with the following poem by the poetess Zulfia Mominova, who proudly wrote about language:

There is no one greater than you for me,
My mother tongue is a corrupt king.
If you are there, then there is an Uzbek,
My mother tongue is Olympanohim.

List of used literature

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INFLUENCE OF TYPES OF WEEDS FOUND IN THE WHEAT FIELD AND PESTS ON THE DEVELOPMENT

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Introduction. The main peculiarity of the microclimate of the wheat biotope is that the number of plants is 400-500 plants per 1 m² area, and if it produces 5 plants on average, 2000-2500 spikes appear, productivity depends on the development of these phases. In addition, winter wheat seeds are sown in September and wintered in the budding phase, from early spring until the crop ripens in 80-90 days, and the crop is harvested in June. Despite these characteristics of wheat, many weeds and pests appear in the field, and it is known that the main part and quality of the harvest will decrease if the controlling measures are not properly organized.

METHODS OF THE RESEARCH.

Controlling weeds in the wheat field was organized based on the methods of Sh.T. Khojaev [2004]. Conducting scientific research and analyzing the results of dispersion, mathematical statistical processing was carried out based on the method of B.A.Dospekhov [1986].

RESULTS OF THE RESEARCH

The appearance of weeds in the wheat biotope, including the development of weeds together with sprouts in autumn, and the continuation of development in spring for many years, requires consideration as the main biotic factor. The reason is that in this agro-climatic conditions, September is the month when pests of agricultural crops go to wintering. As a result, due to the end of the physiological processes of development in other types of agricultural crops, it was taken into account that the species of insects preparing to go to wintering gather in the wheat field where sprouts have appeared.

The main reason became known as a result of observations in this regard. Table 1 shows the results of observations on identifying the types of weeds growing in the wheat field. As it can be seen from this, in the fields where wheat seeds were sown and sprouts appeared in September, the growth of perennial and annual weeds was observed. The reason is that tilling the soil and keeping the air temperature at 20-25 ºC are optimal conditions for weed seed germination.

Depending on the mechanical composition of the soil of the field planted with winter wheat, it was taken into account that the growth of annual and perennial weeds in the biotope continued until November. In the years when the air temperature is hot, the field bindweed and salsolas that grew in the wheat field grew up to 20-30 cm and their leaves increased. In November, when the air temperature drops, the growth slows down, and it was found that it will die completely due to the influence of minus air temperature.

Despite this, it was taken into account that the eggs of earworms (autumn and exclamation marks) increased in the wheat field from September, and the worms continued to feed and went to wintering.

Table 1

Development dynamics of the types of weed species

Chimboy, Kegeyli and Nukus districts, 2022-2023.

Plant types	Names of plants		September	October	November	March	April	May	June
	In Uzbek	In Latin							
Perennial	Common reed	*Phragmites australis (Cav)* Trin	++	++	++	+	++	++	++
	Licorice	*Glycyrrhiza glabra* L.	+	+	+	+	+	+	+
	Camel thorn	*Alhagi pseudalhagi (Bieb)* Dew	-	+	+	+	+	+	+
	Field bindweed	*Convolvulus arbensis*	++	++	++	+	++	+++	+++
Annual	Salsola	*Salsola* L.	++	+++	+++	-	+	+	+
	Cockspur	*Echinochloa crusgalli* (L) Beauv	+	++	++	-	-	+	+
	Common cocklebur	*Xanthium strumarium* L.	-	+	++	-	+	+	+
	Black nightshade	*Solanum nigrum* L.	+	+	+	-	+	+	+

Explanation: - not found; + rarely found; ++ found in middle number; +++ found in large numbers.

In addition, it was noted that some types of aphids, including apricot-reed aphids, field aphids and bug (field bug) were found every year, and their number increased to the maximum level and went to wintering.

The results of the analyses in this regard indicate that the wheat varieties grown under these conditions begin to develop from early spring, and perennial weeds continue to develop, and the number of annuals is slightly less.

The growth of field bindweed in the field begins in the autumn months and continues in the spring, which proves that it creates a favorable environment for the development of pests that have wintered in this biotope. As a result, it was taken into account that the species of earworm and aphids, which have increased in these wheat fields, will continue to develop and migrate to other fields as their number increases.

The importance of weeds that appear in the wheat field is that they are a source of food for pests in autumn. In addition, due to the absence of agrotechnical activities in the biotope during the winter, it overwinters in full and provides an opportunity for rapid spread and development from early spring.

Conclusion: It has been theoretically proved that as a result of the structured biodiversity in the biotope, that is, the increase of weeds in the wheat field from early spring is considered the main factor for the development of adapted pests of wheat.

When observing the appearance of weeds in the field planted with wheat, it was taken into account that the species that develop in autumn and spring are present on the edge of the field and in nearby biotopes. Therefore, it has been proven that the pests that have multiplied in the wheat field until June continue to develop in these biotopes in July and August and migrate to the wheat fields in September.

Weeds have been proven to be the main factor affecting the development of insects in the wheat biotope as an effect of external environmental factors. The reason is that among the weeds that have appeared in the field, field bindweed and salsola species are the main food for pests of agricultural crops. As a result, it is necessary to take into account the increased number of species as the main biotic factor of causing damage to wheat sprouts, when generative bodies appear in spring.

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Pre-processing of digital images to improve the efficiency of liver fat analysis

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Abstract:

Research based on digital image analysis is widely used in medical diagnostics. This allows you to study the problem in detail and possibly without surgical intervention. We can get information about the microcosm and justify the necessary treatment options. Such a study of the task at hand also contributes to obtaining additional information as a result of a more detailed analysis. It is also possible to conduct a comparative analysis, which is important in the diagnostic process. However, in order to produce the most reliable results, it is important to have a good quality digital image. There should be no interference or distortion here. For these purposes, special methods of pre-processing of medical images are used. This allows you to significantly improve the quality of the input image. As a specific example, we consider digital images of fatty liver lesions taken under a microscope. The paper presents real medical images and the results of their analysis after pre-processing and searching for lesions.

Key words: Analysis, Diagnostics, Medicine, Liver, Image processing techniques, Pre-processing, Microscopic image

Introduction

The analysis should be considered as a research tool in the diagnosis of various diseases. This tool helps to investigate the process or phenomenon that we are studying. In this case, various digital images [1]-[6] can be used as an object to be studied. Among such images, it is advisable to single out images that are made under a microscope. These images reflect small details that should be taken into account in the process of diagnosis, a detailed study of the subject area of the study. Moreover, we can get additional information, which is also an important point. This approach has found wide application in medicine [7]-[10]. This helps to improve the efficiency of diagnosis, the choice of methods for treating the disease and/or preventing its development.

Please note that some images may have certain defects (the image is fuzzy, there is some noise). This makes it difficult to analyze them and obtain reliable results. Here, too, erroneous conclusions can be obtained, which will affect the course of treatment or the prevention of the development of the disease. In this case, it is advisable to apply the methods of image preprocessing. At the same time, the choice of such approaches should not impair the understanding of what is represented in the digital image. The use of methods for preliminary processing of the input image should contribute to the expansion of obtaining reliable information and substantiation of the results obtained for their subsequent use in the treatment and prevention

of the disease. This, in the end, determines the relevance of the chosen research topic, its practical significance.

Among the diagnosis of various diseases, we will focus on the degree of damage to the liver as a result of its fatty disease. This choice is due to the fact that

on the one hand, fatty liver disease does not have pronounced symptoms in its early stages of development [11]-[13];

on the other hand, this article is a continuation of our previous study and helps to complete the overall picture of the research issues [14].

Thus, the main goal of this work is to consider pre-processing of images for diagnosing the development of fatty liver disease. In this aspect, at the beginning of our study, we will conduct a small comparative analysis of the relevant publications.

Some related work

In this section, we will consider several works of other researchers that are devoted to the problems of pre-processing of medical digital images. This will help to better understand the essence of the question.

R. B. Jeyavathana, R. Balasubramanian and A. A. Pandian provide a detailed analysis of medical image preprocessing methods [15]. The authors note the importance of this stage for the analysis of information presented in a digital image. The article discusses various approaches and gives their comparative characteristics. In this case, the consideration of pre-processing is directed to the segmentation of the input image.

E. Vocaturo, E. Zumpano, and P. Veltri explore advanced imaging techniques for diagnosing melanoma [16]. At the same time, the authors also take into account the need for pre-processing of images to obtain more reliable results, the possibility of their effective application in practice. The paper focuses on the choice of the best approaches in order to take into account errors in the diagnosis. It is also shown that the stage of image pre-processing is the main one for both improving image quality and obtaining reliable results. But for these purposes, it is necessary to take into account the general problems of research, the scope of such approaches.

The study by R. Ramani, N. S. Vanitha and S. Valarmathy is devoted to the methods of pre-processing of medical mammographic images [17]. These methods are used to detect breast cancer. At the same time, the study states that pre-processing is important for correcting the original image, preparing it for further processing. And we must fully agree with this. The authors consider the possibility of using various filtering and noise suppression methods. For the purposes of solving their problem, the authors consider the possibility of using the Wiener filter, average or mean filter, adaptive median filter [17].

The article by the authors Z. R. Hussein and others discusses the issues of pre-processing of medical images to solve the problem of extracting the contours of individual objects [18]. The paper notes the importance of solving such a problem. This allows a more detailed and qualitative assessment of the objects under study. The authors emphasize that pre-processing helps to avoid fuzzy boundaries and obtain an accurate image of the area of interest. The same problem arises in the process of analyzing liver lesions, when it is important for us to know the clear contours of this area in order to determine the area of the lesion.

The work [19] describes various methods of digital image preprocessing. This issue is considered in the context of the use of training in prostate cancer research. The authors note that in most cases such training cannot be done without preliminary processing of the original images.

There are several pre-processing steps in this process. At the same time, special attention is paid to the preservation of the original information, its least distortion. It is also emphasized that such stages depend on the type and type of the input image. It is also necessary to take into account the ultimate goal for which appropriate algorithms and approaches are applied. It is advisable to take a comprehensive approach to solving the issues raised, which will allow you to get the best result, conduct an effective diagnosis.

Z. Qian, Y. Lv, D. Lv, H. Gu, K. Wang W. Zhang, and M. M. Gupta propose an approach based on input image preprocessing [20]. It is noted that this is important from the point of view of increasing the level of early diagnosis. In this case, pre-processing of the original image is done to obtain the most complete characterization of the polyps. The authors emphasize that they are trying to reduce the number of mirror images of polyps in the image. This contributes to the improvement of diagnostic results, obtaining more accurate results, which is noted in the article. Thus, the stage of preliminary diagnostics is uncontested and important.

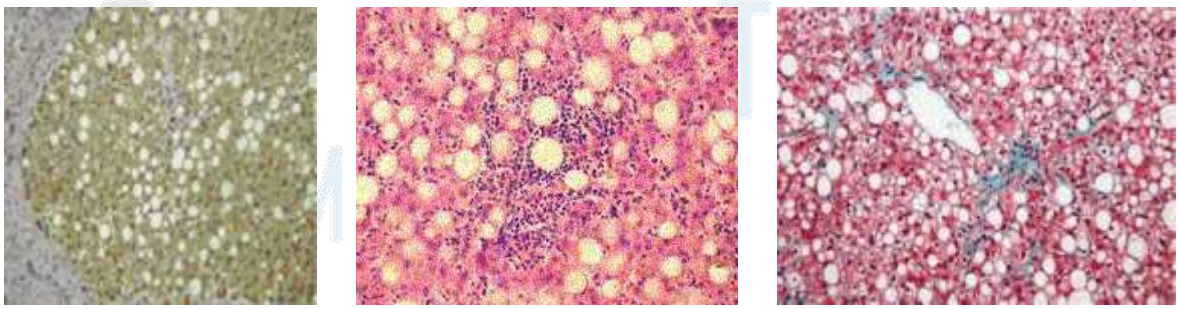
Also consider the fact that many medical images are stained. This is necessary for accurate localization of the area of interest. The book by M. M. Escobar discusses in detail a number of color image preprocessing methods [21]. Such approaches are used to diagnose various tumors, their isolation against the general background. This can also be facilitated by image binarization and the use of other approaches [22]-[24].

Thus, further we will show how interference negatively affects the processing of images with foci of fatty liver disease. We will not focus on the subtleties of formalization. We present a series of images, highlight some preliminary methods, and show the results. The main task is to show the need for pre-processing of input images in the problem of detecting foci of fatty liver lesions.

Data for analysis (noisy and non-noisy digital images)

So, the bases of our consideration are images with noise (the so-called noisy images) and images without noise (non-noisy images).

On Fig. 1 shows a series of images, which have interference and / or distortion of various kinds.



a) b) c)

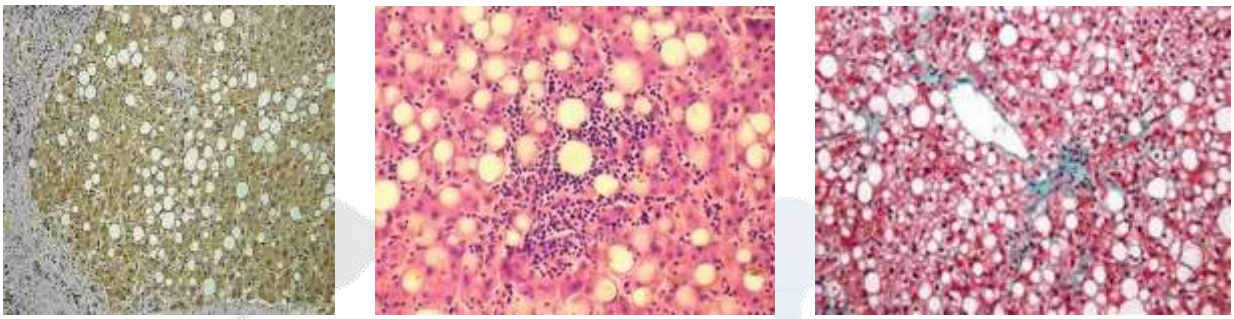
Figure 1: Distorted Images of Lesions of Fatty Liver Disease

On Fig. 1a shows a fuzzy, so-called blurry image. This image does not clearly identify the contours of the lesions, making it difficult to determine their true size.

On Fig. 1b and Fig. 1c shows images with different levels of their noisiness. The manifestations of such noise are individual point noise. It also makes it difficult to accurately

determine the contours of the required objects and, as a result, their size. We also pay attention to the different colors that are typical for individual images. Foci of fatty lesions of liver tissues also have different shades. All this makes it difficult to carry out the necessary analysis.

On Fig. 2 shows the corresponding non-noisy images, according to the data in Fig. 1



a) b) c)

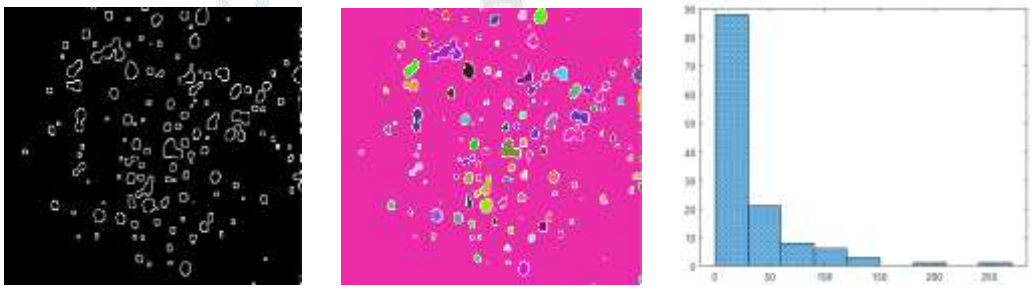
Figure 2: Non-noisy images of liver adipose tissue

Even visually, you can see the key differences between noisy and non-noisy images. At the same time, it should be noted that the process of eliminating individual defects is a process consisting of several stages. The first stage of these transformations is the transition from a color image to a monochrome image. We can also view individual color channels as monochrome images. Then for each such channel we do the same type of operations to eliminate distortion and interference. Then we connect such channels together and get again a color image, which has already been processed.

Various methods have been used to eliminate interference in each individual case. These methods include: deblur image using Wiener filter, median filtering, averaging filtering, fuzzy masking, and color contrasting.

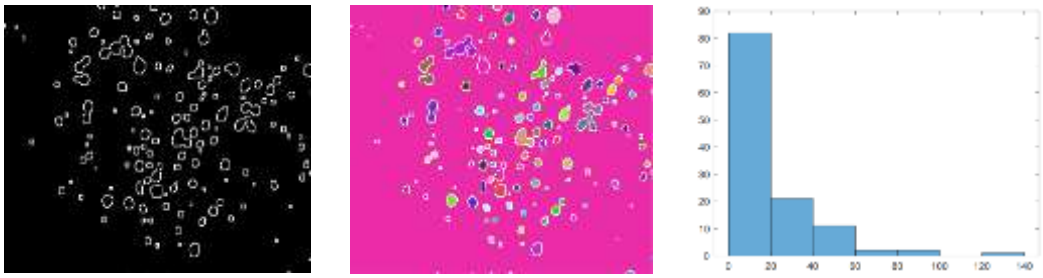
Results

On Fig. 3 and Fig. 4 shows the results of the allocation of fatty lesions of the liver for data Fig. 1a and Fig. 2a, respectively. In this case, the same algorithms with the same parameters were used.



a) b) c)

Figure 3: Results of image processing in Fig. 1a



a) b) c)

Figure 4: Results of image processing in Fig. 2a

On Fig. 3a and Fig. 4a shows the results of highlighting the contour of fatty foci of damage to liver tissues.

On Fig. 3b and Fig. 4b – the results of the identification of fatty foci of damage to liver tissues.

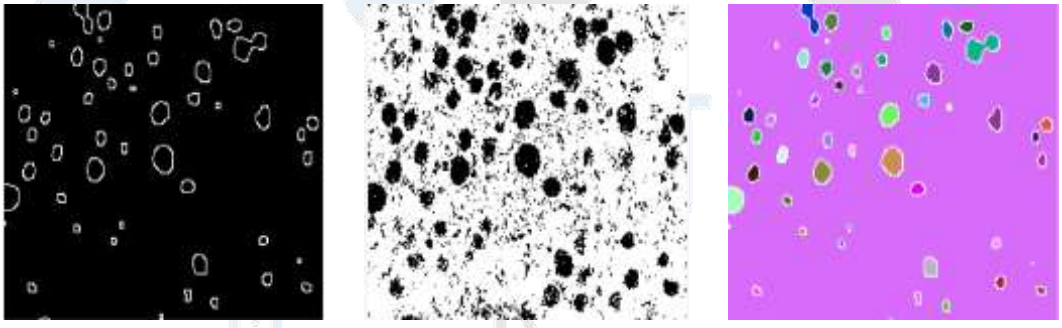
On Fig. 3c and Fig. 4c – the results of the distribution of lesions by area (abscissa axis – the area of the lesion, the ordinate axis – the number of lesions).

Comparing Fig. 3 and Fig. 4 we can see some differences. The key difference between the results shown is the identification of false lesions of liver tissues in the first case. This is clearly seen from the distribution histogram of such foci (see Fig. 3c and Fig. 4c).

On Fig. 5 and Fig. 6 shows the following example of image processing of liver lesions. This example for Fig. 1b and Fig. 2b, respectively.

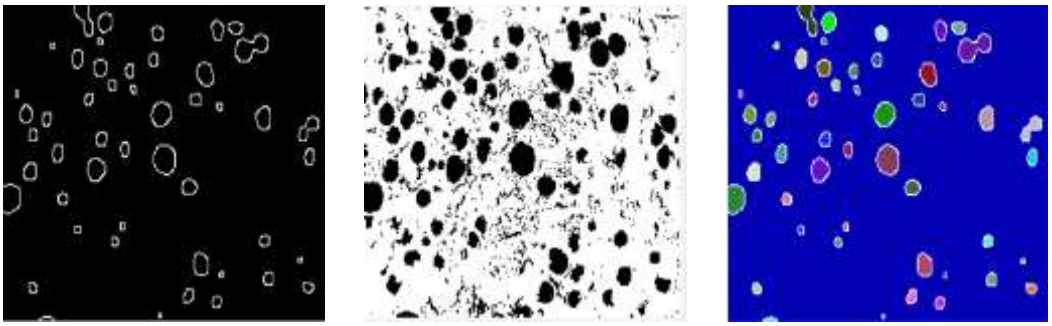
It also presents the contours of the selected objects (Fig. 5a and Fig. 6a) and their identification (Fig. 5c and Fig. 6c).

We also introduced the binarization of the input image. This is Fig. 5b and Fig. 6b.



a) b) c)

Figure 5: Results of image processing in Fig. 1b



a) b) c)

Figure 6: Results of image processing in Fig. 2b

Here you can also see the differences in the processing results. This is clearly seen from the data in Fig. 5b and Fig. 6b. At the same time, it should be noted that the binarization stage plays an important role in the preliminary processing of the original images, the possibility of accurately selecting the contour of objects.

Conclusion

The article deals with general issues of image analysis of foci of fatty lesions of liver tissues. Particular attention is paid to the preprocessing of such images. It is noted that this is an important step in the removal of noise and interference in the image for its further processing and analysis.

Real images of images with noise and without noise are presented. These images use the same analysis methods to identify liver lesions. The differences in the obtained results are shown. It is concluded that it is necessary to use methods of pre-processing of images in the study of fatty lesions of the liver.

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TYPES OF ANALEPTIC SUBSTANCES AND TYPES OF EFFECTS

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Abstract: An analeptic, in medicine, is a central nervous system stimulant. The term "analeptic" typically refers to respiratory analeptics (for example, doxapram). Analeptics are central nervous system stimulants that include a wide variety of medications used to treat depression, attention deficit hyperactivity disorder, and respiratory depression. Analeptics can also be used as convulsants, with low doses causing patients to experience heightened awareness, restlessness, and rapid breathing. The primary medical use of these drugs is as an anesthetic recovery tool or to treat emergency respiratory depression. Other drugs of this category are prethcamide, pentylenetetrazole, and nikethamide. Nikethamide is now withdrawn due to risk of convulsions. Analeptics have recently been used to better understand the treatment of a barbiturate overdose. Through the use of agents, researchers were able to treat obtundation and respiratory depression.

Keywords: Analeptics, nikethamide, etimizol, camphor, cordiamine, heart increases.

Substances to all departments of the central nervous system has a stimulating effect, but on one or another section of each the effect will be stronger. Analeptics mainly in the medulla oblongata bemegrid, which stimulates the respiratory and vascular center,includes korazol, camphor, etimizol. Substances of the cerebral cortex and also stimulates the spinal cord, but a therapeutic amount of ulamin first of all, it affects the medulla oblongata. In the medulla oblongata do not stimulate the vascular center located and peripheral vascularization increases resistance, reduces the volume of accumulated blood, vein return of blood to the heart, the stroke volume of the heart increases, blood pressure rises. Analeptics increase the excitability of the respiratory center, to the carbonic acid of the center and to the excitability of the nerves increases sensitivity. The breath quickens and deepens, in the lungs the volume of oxygen, the vitality of the lungs increases. Etimizol, bemegrid, korazol directly affects the longitudinal centers of the brain shows.

If the amount of analeptics increases, convulsions occur, because their central excitatory and convulsant amounts are close to each other. An example of this is corazol, so it is the substance is hardly used. Bemefid on analeptic activity It is stronger, followed by cordiamine, camphor takes Analeptics are the opposite of narcotics, it has the properties of anesthetizing, awakening, but this is the effect

in high amounts of analeptics that cause convulsions observed. The mechanism of action of analeptics is not fully established substances increase the excitability of neurons, the activity of

the reflex apparatus, increases the tone of nerve centers, interneuronal conductivity also has a positive effect.

Analeptics are light with narcotics, hypnotics, ethyl alcohol used in case of poisoning. Due to the increase in temperature of children in pediatrics in the resulting collaptoid cases, lungs after narcosis to increase ventilation, which occurs after the cold used to prevent atelectasis. But children in practice, analeptics are used less and less, because hypoxia If analeptics are given to children in case of severe convulsions can be, so face in newborns It is forbidden to use this substance in case of severe hypoxia.

Analeptics are a diverse group of medications that work through a variety of chemical pathways; analeptic medications work through four main mechanisms to stimulate respiration. Analeptics can act as potassium channel blockers, ampakines, serotonin receptor agonists, and adenosine antagonists.

Two common potassium channel blockers are doxapram and GAL-021. Both act on potassium channels in carotid bodies. These cells are responsible for sensing low concentrations of oxygen and transmitting information to the CNS, ultimately leading to an increase in respiration. Blocking the potassium channels on the membranes of these cells effectively depolarizes the membrane potential, which in turn leads to opening of voltage-gated calcium channels and neurotransmitter release. This begins the process of relaying the signal to the CNS. Doxapram blocks leaky potassium channels in the tandom pore domain family of potassium channels, while GAL-021 blocks BK channels, or big potassium channels, which are activated by a change in membrane electron potential or by an increase in internal calcium.

Ampakines are the second common form of analeptics, which elicit a different mechanism for an analeptic response. They bind to AMPA receptors, or alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionate receptors, within the pre-Bötzinger complex. The pre-Bötzinger complex is part of the ventral respiratory group and the induction of long-term potentials in the postsynaptic membrane of these neurons leads to an increased respiratory rate. The endogenous AMPA receptor ligand is glutamate and ampakines mirror glutamate's interaction with the receptors. Ligand binding causes AMPA receptors to open and allow for sodium ions to flow into the cell, leading to depolarization and signal transduction. At this time, CX717 is the most successful ampakine in human trials and has very few side effects. Analeptics have a high effect on the spinal cord, to clonic and tonic convulsions by stimulating the motor center will bring. Due to convulsions, the central nervous system is exhausted, first of all the respiratory center is paralyzed. Analeptics in high doses nausea, vomiting, dizziness, arrhythmia, fevercause. In severe cases, swelling of the lungs, urine stop, the patient may even die. Anticonvulsants in acute poisoning with analeptics use, its absorption into the blood should be stopped, the stomach should be rinsed, saline repellents, sorbents are used and poisoning mitigation measures are taken. Cordiamine acts directly on the central nervous system and the reflector affects. It has a wide range of effects and is non-toxic. Cordiamine vascular tone when blood circulation is acutely and chronically derailed when it decreases, the breath of patients suffering from infectious diseases occurring in deficiency, acute collapse, during surgery in cases of shock and in newborns enteral and administered parenterally.

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ЭТИОПАТОГЕНЕЗ СРЕДНЕГО ОТИТА У ВИЧ ИНФИЦИРОВАННЫХ ПАЦИЕНТОВ

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Аннотация. *Аннатация. Работа проводилась на клинической базе Бухарского государственного медицинского института - и в областной многопрофильной клинической больнице. Проанализированы данные обследования и лечения 75 пациентов в возрасте от 18 до 60 лет с патологией ЛОР-органов на фоне ВИЧ-инфекции за период с 2020-2021 гг. Всем пациентам проведено комплексное обследование, включая оториноларингологическое, клинико-лабораторное, бактериологическое исследования.*

Результаты исследования показали, что основные возбудители заболевания среднего уха развивались на фоне ВИЧ-инфекции, патогенная микрофлора в группе ВИЧ-инфицированных пациентов была значительно выше по сравнению с аналогичными пациентами, не инфицированными ВИЧ.

Ключевые слова: *ВИЧ-инфицированные пациенты, пациенты, не инфицированные ВИЧ, острый средний отит, хронический средний отит.*

Актуальность. Вероятность контакта врача-оториноларинголога с ВИЧ-инфицированными пациентами увеличивается в связи со значительным нарастанием количества случаев ВИЧ-инфекции. При ВИЧ-инфекции часто имеют место различные проявления болезни с поражением ЛОР-органов. Литературные данные указывают на высокую распространенность заболеваний респираторного тракта у лиц, инфицированных вирусом иммунодефицита человека [1;6;8;22]. Исследования последних лет показывают что, наиболее частыми возбудителями острых и хронических заболеваний ЛОР-органов (носа, носоглотки, уха) являются пневмококк (25-30%), гемофильная палочка (15-20%), моракселла (15-20%), В-гемолитический стрептококк группы А (2-5%), золотистый стафилококк (5%) и другие микроорганизмы (20%) [2;3;20;21]. В настоящее время известно более 300-х видов бактерий, которые находятся и живут в полостях носа, рта, 10-15 видов из них способны индуцировать заболевания [5;7;10;13]. Пневмококк и гемофильная палочка – это одни из главных микроорганизмов, являющихся этипатогенетическими агентами острых инфекций в оториноларингологии. Довольно реже причинами болезней являются моракселла катаралис и β-гемолитический стрептококк группы А. Особое значение отводится анаэробным возбудителям (до 48% случаев), потому что здесь они становятся причиной таких грозных осложнений, как орбитальные и внутричерепные гнойные процессы, сепсисов с развитием инфекционно-аллергических поражений других органов, например, сердца и почек, а также они являются причиной снижение качества и продолжительности жизни [4;9;14;19].

Результаты микробиологического анализа пунктата барабанной полости указывали на то, что как при ОРС, основными возбудителями ОСО являются Streptococcus pneumoniae и Haemophilus influenzae. Это именно те бактерии, разные штаммы которых внедряются и заселяют носоглотку у большинства детей с ВИЧ-инфекцией. Streptococcus pneumoniae и Haemophilus influenza – это те два вида бактерий, которые в суммарном отношении составляют приблизительно 60% бактериальных возбудителей заболевания [12;16;17]. Относительно реже выделяют Moraxella catarrhalis (3–10%), Streptococcus pyogenes (2–

10%), Staphylococcus aureus (1–5%). Приблизительно 20% посевов из барабанной полости не были воспалительными, либо «сохраняли» свою стерильность. Вирусы тоже нередко являются этиологическим фактором ОСО. Определенное значение в развитии ОСО отводят Mycoplasma pneumoniae, которая, в частности, способна индуцировать буллезный геморрагический мирингит. Кроме этого, Chlamydia trachomatis и Chlamydophila pneumoniae тоже являются причиной ОСО у детей [11;15;18].

Цель исследование. Изучить особенности этиологических факторов острого и хронического среднего отита у больных с ВИЧ-позитивным и ВИЧ-негативным статусом.

Материалы и методы исследование. Работа выполнена на клинической базе Бухарского государственного медицинского института - и областной многопрофильной клинической больнице. Проанализированы данные обследования и лечения 75 больных от 18-года до 60 лет, с ЛОР-патологией на фоне ВИЧ-инфицирования за период с 2020-2021 годы. Всем больным проведено комплексное обследование, включающее в себя оториноларингологическое, клинико-лабораторные, бактериологические исследования.

Больные были разделены на группы по следующим показателям: 1. Больные с острым средним отитом (ОСО) 25 больных, из них ВИЧ негативные 7 больных, ВИЧ позитивные - 18; 2. Больные с хроническим средним отитом -50 (ХСО), ВИЧ негативные 16 и ВИЧ позитивные 34.

Таблица 1.1

Видовой спектр возбудителей при острого среднего отита у больных с ВИЧ – негативным статусом и ВИЧ-позитивным статусом

№	Показатели	Острый средний отит у ВИЧ-негативных больных (n=7)		Острый средний отит у ВИЧ-позитивных больных (n=18)	
		абс.	%	абс.	%
1	Staph.aureus	4	40	3	9,6
2	Staph.epidermidis	1	10	2	6,5
3	Staph.saprophyticus	-	-	1	3,2
4	Str.pyogens	-	-	-	-
5	Str.pneumoniae	1	10	2	6,5
6	Str.fecalis	-	-	-	-
7	Str.veridans	-	-	-	-
8	Ps.aeruginosa	3	30	5	16,2
9	Escherichia coli	-	-	1	3,2
10	Klebsiella sp.	-	-	1	3,2
11	Proteus sp.	-	-	1	3,2
12	Moraxellasp.			-	-
13	Haemophilus sp.	1	10	1	3,2

14	Peptostreptococcus sp.	-	-	1	3,2
15	Peptococcus sp.	-	-	2	6,5
16	Fusobacterium sp.	-	-	1	3,2
17	Candidasp.	-	-	3	9,7
18	Penicillium sp.	-	-	3	9,7
19	Aspergillussp.	-	-	4	12,9
	Всего выделенных штаммов в %	10	100	31	100

Результаты бактериологического исследования выражали в колоние образующих единицах КОЕ/мл содержимого поражённых очагов ЛОР органов. Частоты встречаемости штаммов тех или иных видов выражали в %, по отношению к общему числу выделенных штаммов и количеству изучаемых контингентов, а также встречаемости в монокультурах и ассоциации. Результаты исследования видового спектра возбудителей при ОСО представлены в таблице 3.2.

При микробиологическом исследовании до лечения у больных ОСО без ВИЧ инфекции рост микрофлоры отсутствовал в 22,2% случаях. Выделенные микроорганизмы в 55,5% случаях обнаруживались в виде монокультуры и в 22,2% пробах в двух компонентных ассоциациях.

У больных первой группы в гнойном отделяемом содержались как кокки, так и палочки. Всего выделено 10 штаммов, из них 5 штаммов принадлежали к стафилококкам (50,0%) и 4 штамма грамотрицательным палочкам (40%). Анализ видового спектра возбудителей показал, что во всех клинических группах чаще высеивались *S. aureus* 4 штамма (40%) и 3 штамма - *P.aeruginozae* (30%). Штаммы *S.pneumoniae, Haemophilus spp* напротив, в меньшей мере высеивались в культурах больных ОСО без ВИЧ инфекции (10%), соответственно.

При микробиологическом исследовании до лечения у 18 больных ОСО с ВИЧ инфекцией рост микрофлоры отсутствовал в 11,1% случаях. Выделенные микроорганизмы в 33,3 случаях обнаруживались в виде монокультуры и в 55,6% в виде ассоциации, и из них у 7 (38,9%) больных двух в компонентных, а у 3 (16,7%) трех компонентных ассоциациях.

У больных с ОСО всего было выделено 31 штаммов микроорганизмов, из них 10 штаммов принадлежали к патогенным (S.aureus, *S.pneumoniae и P.aeruginosae*) видам (32,2%), 9 штаммов (29%) представители грибковой флоры, 4 штамма (12,9%) принадлежали к условно патогенным анаэробам, 3 штамма к сопутствующим или условно патогенным коккам (9,7%) и 3 штамма к транзиторным грамм-отрицательным бактериям (9,7%). Следует заметить, что данные виды микробов (анаэробный, грибковые и граммотрицательная бактериальная флора), не выделялась у больных ОСО с ВИЧ негативным статусом.

Обращает внимание на себя высокая доля выделенных бактериальных ассоциаций — 55,6 % из числа пациентов с бактериальным подтверждением. Эти показатели в 2,5 раза больше по сравнению с больными ОСО без ВИЧ статуса.

Таким образом, среди ВИЧ неинфицированных больных с ЛОР патологией при острой форме заболевания высевалась преимущественно кокковая флора (50-85%), а у больных с хроническим течением отмечалась регистрация и грамотрицательной флоры, анаэробов и

грибов. Очевидно, что от тяжести течения и хронизации ЛОР-патологии отмечается прямопропорциональная зависимость к увеличению числа спектра и частоты высеваемости возбудителей в смешанных культурах с хроническим процессом. Причём, у пациентов с хроническим процессом частота высеваемости возбудителей в смешанных культурах значительно превышает (в 2 раза) таковой показатель у пациентов острыми воспалительными заболеваниями ЛОР-органов, у больных детей ЛОР-патологией с ВИЧ позитивным статусом, при первичном микробиологическом обследовании, кроме признанных возбудителей (ОСО), преимущественно в концентрации от 10^4 до 10^6 КОЕ/мл, выделены представители условно патогенных и транзиторных микроорганизмов. Нами выявлено достоверное увеличение частоты выделения анаэробных микроорганизмов, также у больных ОСО было обнаружено достоверное увеличение грибковой флоры по сравнению с больными 1 группы с ВИЧ негативном статусом.

Таблица 1.2

Видовой спектр возбудителей при хроническом среднем отите у больных с ВИЧ–негативным и ВИЧ-позитивным статусом

№	Показатели	Хронический средний отит у ВИЧ-негативных (n=19)		Хронический средний отит у ВИЧ-позитивных (n=38)	
		абс.	%	абс.	%
1	Staph.aureus	5	21,8	2	2,9
2	Staph.epidermidis	2	8,7	3	4,4
3	Staph.saprophyticus			2	2,9
4	Str.pyogens			-	-
5	Str.pneumoniae	2	8,7	3	4,4
6	Str.fecalis			2	2,9
7	Str.veridans			-	-
8	Ps.aeruginoza	6	26,1	7	10,4
9	Escherichia coli			2	2,9
10	Klebsiella sp.			1	1,5
11	Proteus sp.			3	4,4
12	Moraxellasp.	3	13,1	5	7,4
13	Haemophilus sp.	2	8,7	4	5,8
14	Peptostreptococcus sp.			5	7,4
15	Peptococcus sp.	1	4,3	4	5,8
16	Fusobacterium sp.			5	7,4
17	Candidasp.			3	4,4
18	Penicillium sp.	1	4,3	9	13,3

19	Aspergillussp.	1	4,3	8	11,8
	Всего выделенных штаммов	23	100	68	100

Следующим этапом работы была оценка частоты встречаемости штаммов тех или иных видов микроорганизмов при хронических поражениях среднего уха у больных с ВИЧ и без ВИЧ инфекции. В таблице 3.3 приведена характеристика частоты встречаемости штаммов возбудителей при хроническом среднем отите у ВИЧ-негативных и ВИЧ-позитивных в начале исследования.

Бактериологические результаты исследования, видовой спектр возбудителей при воспалительных заболеваниях ЛОР органов у больных с ВИЧ – позитивным статусом показал, что значительные изменения горизонтальной структуры микробного спектра во всех обследованных группах больных детей с хроническими заболеваниями ЛОР-органов. Характерной особенностью этих изменений является существенная диспропорция как между признанными возбудителями, так и условно патогенной микрофлорой.

При рецидивирующих формах среднего отита (всего 19 больных) диагноз бактериологический подтвержден у 16 (84,2,6%) обследованных, при этом выделены 23 штамма микроорганизмов, рост микрофлоры отсутствовал в 15,8% случаях. Выделенные микроорганизмы в 52,6 случаях (рис.4.7.) обнаруживались в виде монокультуры и в 31,6% пробах в ассоциации. Стафилококковый процесс выявлен у 30,4%обследованных больных, что составило 43,7% от числа пациентов, у которых диагноз был подтвержден бактериологическими методами. В 26,2% случаев выделена *P. aeruginosae*. В ассоциациях с *P. aeruginosa* или стафилококами у 6 пациентов были идентифицированы *Moraxella spp.*и /или представители *Peptococcus spp, Aspergillus spp.*

У 34 больных детей с ХСО при бактериологическом исследовании определёно отсутствие микрофлоры в 3 (7,3%) случаях, у 35 (92,7%) больных детей были выделены 68 штаммов микроорганизмов. У 8 больных детей (21,1%) выделенные микроорганизмы обнаруживались в виде монокультуры и в 27 (71%) случаях выделенные микроорганизмы находились в ассоциации, из них в 21 (40%) случаях принадлежали к двум компонентным и 6 (21%) более двух компонентным ассоциациям.

Как видно из представленных данных, частота выделения монокультуры у больных с ВИЧ позитивным статусом снизилась в 7,2 раза по сравнению с контрольной группой, а в смешанной культуре, наоборот, у больных ХСО с ВИЧ позитивным статусом в 2,2 раза возрастало по сравнению с контрольной группой (табл. 4.3).

Среди выделенных микроорганизмов наиболее часто встречались представители грибковой флоры у 20 (57,1%) детей ХСО с ВИЧ позитивным статусом, среди которых грибки рода *Penicillium spp.* высевались в 9 (25,7%) случаях. Эти показатели в 3,4 раза выше у больных детей с ХСО по сравнению с показателями у больных детей с ХСО без ВИЧ статуса.

Бактериальная обсеменённость исследуемого материала также имела видимую тенденцию к увеличению представителей анаэробных бактерий у больных детей с ЛОР-патологией с ВИЧ позитивным статусом. У больных ХРС с ВИЧ позитивным статусом высевались в 19 (63,3%) случаях анаэробные бактерии, у 14 (40%) больных детей ХСО. Эти показатели в 6,7 раза, чаще выявлялись у больных детей с ВИЧ позитивным статусом.

На фоне снижения сопротивляемости организма на фоне ВИЧ инфекции, у пациентов с хроническим средним отитом, резко возросла этиологическая роль условно патогенной

микрофлоры. В этой группе резко увеличилась регистрация условно-патогенных представителей сем. Enterobacteriaceae по сравнению с пациентами контрольной группы. У больных ХСО с ВИЧ-позитивным статусом высеивались в 6 (17,1%) случаев анаэробные бактерии. Доминирующими представителями в этом семействе являются *Proteus spp.* выявлены у 8,7% пациентов при высокой плотности микробной колонизации ($4{,}0\cdot10^3\pm7{,}7\cdot10^2$ КОЕ/мл). Эти показатели достоверно выше (100%) результатов контрольной группы.

Таким образом, полученные нами данные о закономерностях этиологической роли видовой структуры признанных возбудителей ЛОР-патологии с ВИЧ-негативными статусом согласуются с данными литературы, свидетельствующими, что у больных детей с воспалительными заболеваниями ЛОР органов значительно чаще обнаруживаются кокковая флора (*S.aureus,* S.*pyogens, S.pneumoniae) и* грамотрицательные палочки (*P.aeruginosae, Haemophilus spp)* и в меньшей степени транзиторные микроорганизмы.

У ВИЧ - позитивных пациентов с ОСО частоты высеваемости возбудителей в смешанных культурах значительно превышает (в 3,3 раз) таковой показатель у ВИЧ – негативных пациентов. Такая же тенденция сохраняется при анализе высеваемости возбудителей у пациентов с хроническими течениями заболевания, при этом у ВИЧ – позитивных больных частота высеваемости смешанной культуры возрастает в 2,7 раза. Увеличение количества определенных видов бактерий и их ассоциаций среди остальных в период заболевания, а также доминирование их в популяции населяющей очаг поражения, может косвенно предупредить снижение общей сопротивляемости организма.

Таким образом, полученные результаты свидетельствуют о возможности синергизма ассоциативных форм микрофлоры в развитии воспалительных заболеваний среднего уха у ВИЧ/СПИД позитивных больных. Основной спектр возбудителей микрофлоры у больных с патологией среднего уха на фоне ВИЧ-инфицирования сопоставим с таковым у пациентов без ВИЧ-инфицирования; в группе ВИЧ-инфицированных заметно преобладает патогенная микрофлора.

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PROCESSING AND NEUTRALIZATION OF WASTE FROM HOUSEHOLD AND INDUSTRIAL ENTERPRISES.

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Abstract: This article deals with processing and neutralization of waste generated from household and industrial enterprises, one of the most important problems at the moment.

Keywords: absorption, adsorption, recuperation, anthropogenic changes, flora, fauna, reductant.

ПЕРЕРАБОТКА И ОБЕЗВРЕЖИВАНИЕ ОТХОДОВ БЫТОВЫХ И ПРОМЫШЛЕННЫХ ПРЕДПРИЯТИЙ.

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Аннотация: Данная статья посвящена переработке и обезвреживанию отходов, образующихся на бытовых и промышленных предприятиях, что является одной из наиболее важных проблем на данный момент.

Ключевые слова: поглощение, адсорбция, рекуперация, антропогенные изменения, флора, фауна, восстановитель.

INTRODUCTION: With the development of society all over the world, the impact of people on the environment changes. As development accelerates on all fronts, environmental problems in the biosphere also increase, become larger and begin to take refuge in living nature.Scientific and technological development, man - made Developments, chemical industry, atomic stations these are very favorable for human survival and lifestyle, but bring environmental risks to the development of nature and living organisms in it.

Humanity often, forgetting that it is also a part of nature, negatively affects nature, disrupting the balance in it, creating universal, regional, territorial and national environmental risks without thinking about it. The mother planet today needs treatment from human influence, poverty, hunger, continuous population growth, ur - banization, greedy use of Natural Resources, increased demand for water, earth, energy are striking the biosphere.

MAIN PART: In all industrialized countries, solid waste accumulates in very large quantities. In addition to polluting themselves, the surrounding environment, solid waste also keeps a very large area of land occupied. This land can be used as a yekin field to grow cultivated plants and produce useful products for humans.

Solids are not only polluting the atmosphere, but also they contain a second kind of useful substances, this substance can be extracted only with the help of processing - lash. When the solids are left standing for long, precipitation runoff will contaminate the immediate area. It is completely unsuitable for activating waste, very toxic gases and solid metals fly into the atmosphere with smoke. As a result of rain and snow falling on it, toxic substances are slowly absorbed into the soil, which also poison the groundwater.

It is impossible to plant plants in this place for a long time, even after the solid waste accumulates and becomes clean in places where it has remained for a long time. As long as the plant is planted, it is also impossible to eat those products. Because these plants carry most of the toxic substances with them through the soil ozu - qa substances. These soils are rich in iron, chromium, and other substances, or depending on which species is a solid waste.

Industrial waste content by state standard 12.1.007-76- agi is divided into four groups by Toxic Substances and pollution of the external environment: [1]

1) extremely dangerous;
2) very dangerous;
3) moderately dangerous;
4) slightly dangerous.

Group 4 includes those in which industrial waste does not contain toxic substances. This group of waste contains phosphates, marganets store mercury salts of zinc.

Group 3 enterprise waste risks human chayote by storing copper sulfate, ash acid salts of copper, chlorine salt of nickel, lead oxide, etc.in its composition. Group 2 includes Mercury, margimush, chromium, leaded nitrogen and other toxic substances that pose a threat to human life in the structure of enterprise waste it is considered very dangerous by its storage of salts. Industrial waste production according to its type of waste- it is divided into qindisi and recyclable waste. It is known that not all waste can be buried or burned, part of which is processed and the necessary substances in it are extracted. When solid waste is processed and disposed of according to its type, their use increases in the imcone.

For example, they are divided into :

- black and non-ferrous metal waste;
- waste of minerals-waste that stores ash, slag and coal; - waste of plastics and polymers; cotton
-waste of paper, wool, silk and synthetic fibers; waste that preserves rubber; asbestos
-storing waste; waste from windows and building materials; waste from wood processing; waste from windows and building materials; waste generated in wood processing;
- skin and fur waste;
- food industry waste;
- waste of agricultural products; waste of paper and cardboard products;

worn rubber and asbestos preservatives; plastic waste;

wood products from consumption;

- failures of various iron metal;

- products of Solid Waste Treatment Devices and facilities. As can be seen from the above, part of them is completely destroyed by burial, but part is processed and a second mah - sulot is obtained. So, since there is also this type of waste in the industry of our republic, it is necessary to use the best ways to neutralize them, bring them to an environmentally harmless state and industrial it is necessary to strive to create a waste-free product technology at the enterprise.

Enterprise waste is divided into two, that is, one can be used, the second type cannot be used at all. From the waste of an industrial enterprise, bricks, building materials, fuel products are extracted, as well as certain elements in their pure form. For example, if the slag residues emitted in the oil refining industry are processed, then 1 million. of the tonnage, 4,300 tons of cob can be obtained.[2]

MATERIAL AND METHODOLOGY: The variety of problems studied in ecology requires the use of various methods. The following methods are used in ecology: field, laboratory, experimental and mathematical modules.

THE RESULTS OF THE RESEARCH CARRIED OUT: Metallurgical Combinator develops energy from slag and heat- what are the cement, fertilizer, material fibers from ash from the sections of the chimney is produced. Also, acid-resistant insulation from them devices for pouring materials and concrete are prepared.Unusable, hazardous to man and nature, waste is neutralized and buried in absolutely distant places from settlements. In special furnaces when neutralizing waste by a thermal method, they are burned at 1000+1200° C, but if toxic gases are formed from their combustion, they are definitely caught using special holders.[3]

Waste MiG - drugs from the Almaliq and Angren industrial enterprises in US are greatly increased. Sometimes the amount of waste collected is 40 million. it can reach up to tons, many of the waste in these enterprises will be recycled or buried. The highly toxic waste is trapped in iron containers 10 mm or 1 cm thick and buried in concreted pits on four sides, the pits reserved for waste are buried with concrete on all sides and soil on the edges. The concreted deep ground remains at least 80-100 cm below.[4]

In large cities, industrial waste comes out in huge numbers. For example, in the city of Moscow, one of the largest cities, solid, household waste costs 300 kg per person per year. Of this, paper and cartons are 28.8%; metal bodies are 5.7%; food waste is 28.5%; plastic is 5.1%; textiles is 3.1%; glass is 4.4%; fuel materials are 1.8%; inert materials are 3.4%; fine dust waste is 19.2% of the waste volume[5]

In our republic, solid waste is mainly ash and slag from energy - giving in-shoots; slag from black and non-ferrous metallurgy. Coke residues; dust waste from the coal - mining industry: sawdust and scraps from wood-processing farms; chemistry is formed from sa-noate in the form of phosphogips.

Solid waste contains a variety of chemicals, ranging from highly toxic substances such as arsenic, fluorine, phosphorus, mercury to inert substances, such as chalk, gypsum and clays.

The main factors that pollute the atmospheric air are industrial enterprises, chemical plants and factories, vehicles. Also, steel smelting furnaces, domna kilns, Coke-chemical industry, nitrogen-fertiliser plants, coal and non-ferrous metal mines, rail transport vehicles throw continuous toxic substances into the atmosphere.

Mining now mainly involves blasting, with large amounts of dust spreading to the environment as a result of the explosion. At high temperatures, a swarm of gases and dust forms in domna furnaces, these powders and gases contain 35-50% iron, 4-14% is gas, 8-13% silicon and aluminum, magnesium, calcium and other oxides.[6]

In Marten ovens, steel is melted at a high temperature, at this time a very large amount of sulfur oxide, nitrogen briquettes and is gas are thrown into the mosphera. 6-10 kg of dust in exchange for a ton of molten steel. 0.5-2.0 kg of IS gas, 0.5-1 kg of sulfate angdride, 1-2 kg of nitric oxide are formed.[7]

In the Republic, a number of GRESES spend in exchange for stoneware and mazut (including Angren, Tonkoron and Shirin in the city). Work incomplete burnt coal is considered a very polluting source of the atmosphere. This can also be seen from the following case. The temperature of heat in a non - woven furnace should be maintained at 600-700 °C from beginning to end.[8] If the temperature drops from this of course the stoneware cha - la burns, as a result of which a lot of CO, and water vapor are thrown into the air.

CONCLUSIONS: When a mixture of different gases increases in the composition of atmospheric air, this thing will definitely harm human health. If there is an increase in is gas from gases in the air, it is absolutely not felt by a person, this gas is extremely toxic and leads a person to death. It does not smell, which is why a person remains unaware of the presence of is gas when he breathes. In large industrialized cities, the air is incredibly heavy the stain can be noticed as soon as it enters the city. Navoi, Angren,more than 10 human health in the atmospheric air in the cities of Almaliq there are harmful gases for.

The danger of gassing is that they pass into the lungs and blood during the breathing process, accumulate with moisture in the mucous membrane and become inflamed, and eventually cause severe diseases. Gas inhalation causes an increase in lung cancer, aller - Gia, bronchial asthma, and respiratory diseases. Hence, when the air polluted areas become known, there are finding gas sources that can be thrown into the mosphere, you can clean them and it is necessary to try to throw fresh air into the mosfera as much as possible. A person can live only a few minutes without oxygen according to his structure, the most necessary thing in the process of survival is oxygen. Oxygen can contain only substances necessary for the human body and also often toxic substances.

According to data, sources of atmospheric pollution are considered below - GIS: energy 28.5%; non-ferrous metallurgy 21.6% ; qua metallurgy 15.2%; oil extraction 7.9%; oil refining 5.1%, 21.7% from the rest of the networks give toxic gases.[9] Gases that are thrown into the atmosphere can be solid, liquid, gaseous, non volatile-you, periodic, in a single large volume, supplied and disordered.

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SPACE TOURISM.

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Abstract: Space tourism is privately funded spaceflight into Earth's orbit for recreational or scientific research purposes. The idea of space tourism was first introduced in the series of works by Barron Hilton and Eric Kraft published in 1967. At first, they tried to promote the idea of space commercialization. At that time it was unsuccessful. This article provides information on space tourism and its development.

Key words: Space tourism, space, Mars planet, travel, International Space Station, astronaut.

Space tourism began to develop actively at the end of the 20th century. In 1986, at the International Astronautical Congress (English: International Astronautical Congress), a lecture was presented on the topic "Potential economic consequences of the development of space tourism", which caused a great discussion not only in scientific, but also in business circles.

The first tourist was to be the American teacher Christy McAuliffe. He died during the launch of the space shuttle Challenger in 1986. After this incident, the US government passed a law prohibiting non-professionals from flying into space.In 1990 and 1991, the first commercial cosmonauts - Toyohiro Akiyama (Japan) and Helen Sharman (Great Britain) launched Soyuz TM-11 / Soyuz TM-10 and Soyuz TM-12 as part of privately funded projects of TBS and Juno television companies. / flew to the orbital station "Mir" on the Soyuz TM-11 spacecraft. (Consortium of British Companies).

Space tourism is a step already taken. In 2001, an American businessman named Dennis Tito traveled to space for a week. The first thoughts about space flights and space travel appeared first in works of fiction. In particular, Jules Verne's book "From the Earth to the Moon" was published in 1865. Another fantasy writer Edward Hale's "Brick Moon" also tells about the adventures of people who accidentally fly into space and are on a space trip. Of course, sometimes non-scientific textures are used in works of art, but they are very important in increasing people's interest in science, especially astronomy and technology. It can be said that the theme of space travel is also sufficiently covered in the art of cinema. For example, Ridley Scott's movie "The Martian" (2015) was watched by many. The movie "Passengers" directed by Morten Tildum and released in 2016 is also considered one of the good works on this topic (in any case, it won an Oscar!). The film that covered the topic of space travel for the first time with great success was, without a doubt, the film "2001: A Space Odyssey".

Directed by Stanley Kubric Today, the issue of space travel has already moved from the pages of fiction to reality, and now there are even tour operators engaged in the organization of space tourism. For example, the company "Space Adventures" provides services in this field. After Dennis Tito, the first space traveler mentioned above, 6 more people have traveled to space and returned (one of them - US billionaire Charles Simoni even went into space twice). Naturally, a space tourism ticket is not cheap and only billionaires can afford it. For example, in 2001, Dennis Tito paid $20 million for a flight to the ISS (International Space Station).k and now a classic of the genre, this film hit the big screens in 1968 and won four Oscars in 1969 (definitely recommend watching).But being a billionaire is not enough to go on a space trip. One must also be physically

fit and fit enough to withstand the rigors of flight. Therefore, buying space travel with money is only one side of the issue.

The next closest space trip to us is planned for October 2021, and Elon Musk's Crew Dragon spacecraft will take tourists to the SpaceX section of the ISS at a cost of $55 million per person and return. Also, a new tour operator, Axiom, is entering the field of space tourism, and it is he who is organizing the trip in October. For $55 million, space tourists spend 8 days on the ISS. Also, NASA itself wants to start work on space tourism, but the price they offer per person is 58 million. As you can see, there is now competition between tour operators in space travel. Now tourists are offered not only a flight to the ISS, but even a flight to the Moon. Accordingly, it can be said that the ticket for space travel will probably become "cheaper" from now on. In any case, analysts predict that by 2030 the space tourism market will reach $3 billion. In order to reduce the number of zeros in the ticket price from 6 to 5, there are also plans to make the space flight cheaper by making it in a suborbital direction, on special planes.

From July 20, 2021, the richest man on the planet, Jeff Bezos, was in space... Mars has always attracted humanity. In the future, when the Red Planet is colonized by humans, it will be possible to conduct tours on the planet. Mars is a great tourist destination. Huge volcanoes, deep canyons and craters can be found here. In the future, the Red Planet will be an interesting tourist destination when the first human colonies appear on the planet. The publication "Focus" collected several places that can become a popular tourist center. Mount Olympus is the highest volcano in the Solar System. According to NASA, it is located in the volcanic region of Tharsis. Olympus is almost three times higher than Everest (8.9 km). Olympus rises to a height of 25 km. It's not just a mountain - it's a huge shield volcano formed from lava slowly flowing down its slopes. This means that future tourists will climb the mountain without much difficulty, since the average slope is only 5%. At the top of the mountain, there is an impressive depression about 85 km wide, formed by magma chambers and falling down.

Of course, the question of space travel is, at the moment, an extraordinarily expensive pastime that only a few people on our planet can afford. However, in the coming years, many people will have the opportunity to fly into space, feel like Gagarin or Neil Armstrong, and walk around the moon for free (!). Yes, you read that right, it is possible to travel to the moon for free. The fact is that in 2018, Japanese art tycoon Yusaku Maezawa, who became the first customer for a space flight to the Moon in Elon Musk's Starship spacecraft, also went to look for a companion to "circulate the Moon" with him. The project is called "DearMoon", according to which Maezawa has single-handedly booked all the space on the Starship spaceship and is now selecting talented people to fly to the moon together. According to his idea, several art-loving companions should be inspired to create new works of art by flying with him to the moon.

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