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EPIDEMICS IN THE HISTORY OF UZBEKISTAN: FROM A BIOLOGICAL FACTOR TO SOCIAL TRANSFORMATIONS

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Abstract
The article examines the historical evolution of infectious diseases and their impact on public health, social relations, and state policy, with particular attention to the experience of Uzbekistan. The study analyzes the spread of epidemics from ancient times to the modern era and highlights the role of environmental crises, poverty, migration, wars, unsanitary conditions, and climate change in increasing morbidity and mortality. The research is based on the conceptual approaches of S. Knobler and Giles-Wernick, which consider epidemics not only as biological phenomena but also as social, economic, and cultural processes affecting social development.

Keywords: Vaccine, pandemic, infectious diseases, epidemic, plague, mental state

Introduction

The spread of dangerous epidemics, environmental problems, climate change and a sharp increase in air temperature have a negative impact on the health of society. Large-scale work is underway in Uzbekistan to improve the medical literacy of the population, combat epidemics and prolong life expectancy. As a result of scientific research at the end of the 19th century, it was found that infectious diseases are caused by microorganisms. Hunger, poverty, violence, wars and environmental crises were recognized as the main factors contributing to the rapid spread of diseases.

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However, as a result of the development of science, opportunities have been created to combat microbes, comply with sanitary rules and, most importantly, preserve human health through vaccination. Humanity has been fighting many diseases from prehistoric times to the present day, finding ways to treat them and improve its life expectancy.Humanity has encountered infectious diseases with global impacts several times throughout its historical evolution.the reality of his life. Infectious diseases play a special role and have a special impact on the development of mankind. They not only affect an individual, but they can also have an impact on the whole family, society, country, and even on a global level. Humanity has encountered infectious diseases with global impacts several times throughout its historical evolution.

Materials and methods

In the analysis of public health policy and its impact on social relations, the approaches developed by S.Knobler and Giles-Wernick and his collaborators were followed.

Results and Discussions

At the end of the 19th century, science established that the causative agents of infectious diseases are microorganisms. V.Galiev showed the impact of epidemics and famine on human health using the example of Kazakhstan. He believes that the crisis is the result of the government's colonial policies, not a natural disaster. The memoirs of Anetta Makin's[1] trip to Turkestan mention information about the medical system and the personnel issue, the role of doctors in the attitude of the population to the new system, as well as the prohibition of the use of certain water sources in the Bukhara Emirate, as the cause of the spread of infectious diseases. R. Pathiddinov's scientific research is devoted to infectious diseases that affected the people (smallpox, malaria, etc.) and revealed their negative impact on the development of society[2].

[1] Meakin A. In Russian Turkestan a garden of Asia and its people. – London: George Allen, 1903. – 345 p.
[2] Патхиддинов Р. XIX аср охири - XX аср бошларида Туркистонда соғлиқни сақлаш тизими: анъанавийлик // НамДУ илмий ахборотномаси. – 2020. № 4. – Б. 161-164.

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In 1924, Bukhara was the center of the spread of guinea worm, and in 1932 the guinea worm was eliminated in our country. 1976 historian William McNeil in his work "Plagues and Peoples" mentioned: 1. Nomads are always on the move as a result, morbidity is rare. 2. Local residents lead a sedentary lifestyle, which leads to an increase in morbidity. In 1980, Vincent Navaro and Hans Bayer, in their critical medical anthropology studied how disease is related to problems of social production. Social determinants of health include the following factors: germs, infections, poverty, malnutrition, and lack of education.

According to the conceptual approach developed by S. Knobler and co-authors, global epidemics, the spread of infectious diseases, as well as their social and economic consequences are recommended to be comprehensively analyzed. The interrelation between the sustainability of the healthcare system, the medical culture of the population and the effectiveness of public policy has been studied. This approach considers epidemics not only as a medical problem, but also as a social phenomenon affecting the development of society. For example, during the COVID-19 pandemic, the introduction of quarantine restrictions in many countries led to a slowdown in economic activity, increased unemployment, and a negative impact on public morale. At the same time, the development of distance learning and online work systems in some countries has led to the emergence of new processes of social adaptation. The study also analyzed historical epidemics. In particular, the black plague, which spread across Europe and Asia in the 14th century, claimed millions of lives, as well as caused an economic crisis and demographic changes. In addition, smallpox has long posed a serious threat to the health of the world's population, and it was only thanks to mass vaccination programs that it was prevented. This situation highlights the important role of health policy in ensuring the sustainability of society. According to S. Knobler's methodology, poverty, migration, environmental problems, and inadequate medical care are considered the main factors in the spread of epidemics. For example, in regions with low levels of drinking water supply, infectious diseases are more common. In addition, the growing number of respiratory diseases due to air pollution and climate change is also putting enormous pressure on the healthcare system. The study also paid special attention to the preventive measures of the state. The promotion of sanitation and hygiene

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rules among the population, the expansion of vaccination programs and the formation of a healthy lifestyle are important factors in preventing epidemics. For example, medical examinations, vaccination programs, and environmental protection policies implemented in Uzbekistan contribute to improving public health. As a result, the effectiveness of the healthcare system is becoming increasingly important not only for reducing morbidity, but also for increasing the life expectancy of the population.

Based on the methods of anthropological and historical analysis proposed by Giles-Wernick and his colleagues, epidemics affect social relations in society. This approach considers the spread of diseases not only as caused by biological factors, but also as closely related to migration, environmental problems, economic inequality and cultural attitudes.

The disease, which originated in Eurasia in the 14th century and claimed the lives of many people, is known in European history as the "Black Death", and its first spread was caused by the arrival of ships from the Crimea in 1347.

In the 16th century, smallpox appeared, more deadly than the plague. Smallpox came to the West Indies in 1492 with Columbus. In 1518, a smallpox epidemic began on the island of Haiti, and the indigenous population declined due to smallpox, and only a thousand people survived on the island. The epidemic is beginning to spread to Mexico and Peru.

After smallpox, other epidemics occurred in the life of the local population for 100 years. After the discovery of America by Columbus, epidemics were mainly caused by Europeans. Diseases brought by Europeans claimed the lives of 90% of the population of the New World. As a result of the epidemic, the population of Mexico decreased from 30 million to 3 million, and the population of Peru — from 8 million to 7 million.

With an infectious disease, typhoid germs are not visible to the naked eye due to their unusually small size, and typhoid fever occurs in Uzbekistan in the second half of summer and in autumn in September. Prevention is proactive measures aimed at averting the development of diseases.

This leads to an increase in the incidence of tuberculosis, pneumonia, malaria, smallpox and other infectious diseases. Such infectious diseases are spread through drinking water and air as a result of environmental pollution, namely air,

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water, canals, soil and food. Diseases such as cholera are rare in ecologically safe areas. Clean water sources, food and shelter, as well as laws on proper storage and use are the basis for protecting human health when using environmentally friendly food. For 2,500 years, from the Hippocratic era to the middle of the 19th century, blood transfusion and herbal infusions were considered common methods of treatment.

However, doctors worked hard to find a cure for various diseases. For example, in Asia in the 9th-12th centuries, ar-Razi, ibn Sina, Abu Rayhan Beruni, Fariduddin Attar, Omar Khayyam used more than 700 plant species to treat various diseases, and in Europe in 1789, Edward Jenner created a vaccine against smallpox. In the 20th century, vaccines helped prevent many other diseases, including yellow fever, measles, and rubella. In 1882, Robert Koch discovered the bacterium tuberculosis.

Doctor Alexander Fleming created a new drug – penicillin, an antibiotic with which doctors fought incurable infections.

According to reports, the Ferghana Medical Society, organized in 1892 in Novy Margilan (now Ferghana), in the early years of its activity was focused on combating the epidemic, since it was opened during the cholera epidemic. During the twenty years of its activity (1892-1910), the Ferghana Medical Society conducted scientific research on the most pressing medical issues in the region. More than 160 articles and reports prepared by doctors who worked in the country testify to the tireless and innovative research of doctors.

Tuberculosis has also been found in mummies of ancient Egypt and Peru. Today, revived strains of tuberculosis claim the lives of about 2 million people every year. Malaria kills 1 million children every year. There are many malaria-carrying mosquitoes in East Africa, and people contract the disease when they are bitten. Of course, medicine has made great strides over the years, but the emergence of new and new diseases has claimed the lives of millions of people. New mutated forms of infections arise not only due to lack of funding and medicines, but also due to unecological and unsanitary conditions, poor medical care and lack of clean drinking water.

This led to great economic losses for many countries experiencing an industrial boom at the beginning of the 20th century, and entailed significant losses. These

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catastrophic consequences served as a signal to humanity and forced it to take this threat seriously and fight it. As a result, scientists have begun to pay special attention to scientific research in order to find new ways to combat such infectious diseases. As a result, the human attitude towards infectious diseases has radically changed, and many new effective ways to combat them have emerged.

Uzbekistan has established a sanitary and epidemiological service to promote a healthy lifestyle among the population, combat bad habits, enhance medical culture, promote active physical education, sports, and promote proper nutrition, well-being, and public health[3].

According to statistics, the incidence of certain infectious diseases in Uzbekistan in 2023 compared to 100,000 people, acute intestinal diseases account for 146.6% of men and 121.5% of women. The incidence of viral hepatitis is 167.1% in men, 154.5% in women; bacterial dysentery-2.1% in men, 2.3% in women; chickenpox-16.0% in men, 16.0% in women; influenza-13.7% in women, 15.7% in men; acute infections of the lower and upper respiratory tract-1693.6% for women, 1696.0%. There are significant differences in susceptibility to certain infectious diseases between men and women, as men often come into contact with a larger external environment, while women may be more resistant to certain diseases due to their immune system and biological characteristics.

1- table [4]

The incidence of acute diseases in the city of Ferghana in 1951-1952 and 1952-1953

№	Name of diseases	1951	1952	% increase	1952	1953	% increase
1	**Typhoid**	59	68	14.4%	7	-	4%
2	**Dysentery**	1197	1599	38.3%	243	135	-
3	**Scarlet fever**	212	422	88.2%	54	93	41.7%
4	**Tuberculosis**	249	42	-	15	9	-
5	**Rabies**	2	1	-	1	2	2%
6	**Epidemic hepatitis**	37	193	5%	33	70	2%

[3] The results of the implementation of the strategy of action on the five priority areas of development of the Republic of Uzbekistan in 2017-2020 [text]: newsletter /B. Bekmuradov [and etc.] – Tashkent: Baktria press, 2021. – 88b.

[4] Ferghana Regional State Archive, fund 1104/list 2/collection 120

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According to the analysis of the dynamics of the spread of certain infectious diseases in 1951-1953, the incidence of typhoid fever increased from 59 cases in 1951 to 68 cases in 1952, an increase of 14.4%. This indicates that the typhoid infection has spread to a certain extent. However, a sharp decrease in the indicator in the subsequent period indicates an increase in sanitary and hygienic measures. Since typhoid fever is usually associated with water supply and hygiene, this change can be considered as a result of preventive measures in the health system. Dysentery showed one of the highest rates. The number of cases in 1951 was 1,197, and in 1952 it increased to 1,599, an increase of 38.3%. This means that intestinal infections are common and sanitation conditions are inadequate. At the next stage, the number of cases decreased from 243 to 135. This decrease reflects the effectiveness of epidemiological surveillance, improvement of drinking water quality and medical preventive measures. The largest increase was recorded in scarlet fever. The incidence increased from 212 to 422 cases, which is 88.2% more. This indicates the rapid spread of infection among children. In 1952-1953, the number of cases increased from 54 to 93, an increase of 41.7%. Thus, scarlet fever has become epidemic in nature, and measures to combat it have proved insufficiently effective. Tuberculosis incidence rates tend to decrease. In 1951, 249 cases were reported, and in 1952 that number dropped to 42. In the subsequent period, it also decreased from 15 to 9. This situation indicates an increase in the effectiveness of follow-up, vaccination and treatment of tuberculosis. Rabies incidence rates remain very low. In 1951, 2 cases were registered, in 1952 – 1 case. Although their number increased from 1 to 2 in the subsequent period, this did not have a significant impact on the overall epidemiological situation. This means that veterinary supervision has been effective to a certain extent. However, the incidence of epidemic hepatitis has increased dramatically. In 1951, 37 cases were reported, and in 1952, 193. This indicates that the infection is widespread and there are problems with sanitation and hygiene. In the subsequent period, there was also an increase from 33 to 70 cases. Such an increase in the incidence of hepatitis indicates a lack of hygienic culture and safety of drinking water among the population. Data from the 1950s indicate that infectious diseases posed a serious threat to public health. In particular, the high rates of increase in the incidence of dysentery, scarlet fever

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and epidemic hepatitis reflect problems in the sanitation system. At the same time, the downward trend in the incidence of tuberculosis and typhoid fever indicates that medical prevention and public health policy are gradually beginning to bring effective results.

In 1955, 1,825 people in the Ferghana region contracted typhoid and paratyphoid fever. The incidence among schoolchildren was high and amounted to 26%. Women-734; men-591. Maximum indicators: 5-7 years-214; 10-14 years-199; 20-29 years-183. 48 people (36%) died. 14 deaths were recorded in Ferghana. Cause: heart failure.

Conclusion

In conclusion, it should be noted that in recent years there has been an increase in the number of epidemics, environmental problems and climate change, which pose a serious threat to public health. In this situation, international institutions such as the World Health Organization are implementing various preventive measures. Thus, in order to increase the effectiveness of the healthcare system, it is necessary to harmonize scientific, social and cultural approaches.

REFERENCES

1. Галиев В. Врачи-революционеры о голоде и холере 1892 г. в Казахстане // СЗ. – 1970. – № 8. – С. 74-79.
2. Meakin A. In Russian Turkestan a garden of Asia and its people. – London: George Allen, 1903. – 345 p.
3. Патхиддинов Р. XIX аср охири - XX аср бошларида Туркистонда соғлиқни сақлаш тизими: анъанавийлик // НамДУ илмий ахборотномаси. – 2020. № 4. – Б. 161-164.
4. Farg‘ona viloyat Davlat arxivi 1104 fond/1-ro‘yxat/ 2-yig‘ma jild. Qarang. Ич терлама. В.Раҳимов. Ўздавнашр-Тошкент-1950. В.Раҳимов. Брющной Тиф. Госиздат УзССР-Тошкент-1950. 3-12-betlar.
5. Итоги реализации Стратегии действий по пяти приоритетным направлениям развития Республики Узбекистан в 2017—2020 годах [Текст]: информационный бюллетень /Б. Бекмуродов [и др.].-Ташкент: Baktria press,2021.-88с.

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6. Farg‘ona viloyat Davlat arxivi 1104 fond/2-ro‘yxat/ 120-yig‘ma jild.
7. Farg‘ona viloyat Davlat arxivi 1104 fond/2-ro‘yxat/ 232-yig‘ma jild.