



Key Milestones and Events in the History of Kazakh Balneology

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ABSTRACT

INTRODUCTION. The profound socio-political and economic changes of the 1990s had a negative impact on people's quality of life and overall health. The constant stress inherent in urbanized society leads to a decline in the functional capabilities of the human body. Developing the health resort complex is a key solution to maintain the population's essential life-support systems and address the challenges associated with urbanization. To better understand the current state of the resort industry in Kazakhstan, it is important to explore its history and development. This will help us understand its characteristics and challenges.

AIM. To examine and evaluate the historically significant events in the development of balneology in Kazakhstan, as well as to identify current trends and outlooks for the modernization of the country's resort industry.

MATERIALS AND METHODS. In order to conduct a comprehensive literature review, a range of international electronic databases were consulted, including Medline, PubMed, Google Scholar and eLibrary. The period under review extended from 2014 to 2024, with earlier works of seminal importance also included in the analysis. Literature searches were conducted using comprehensive search strategies that were relevant to the development of Kazakhstani balneology during certain historical periods.

RESULTS AND DISCUSSION. The history of health resort treatment in Kazakhstan goes back well beyond the thirty years since the country's independence. This traditional form of therapy is used in various fields of medicine for disease prevention. Sanatoriums and resorts offer a wide range of natural resources, including a unique climate, clean mountain air, mineral waters and therapeutic muds. These elements create exceptional conditions for recovery and improved health. This approach combines traditional medical practices with modern technologies, as well as natural and climatic factors. Although Kazakhstan has a significant recreational potential, the demand for these services is still low. This may be due to the fact that the focus is still on the Soviet-style recreation, which emphasizes social interaction and the state engagement. In the past, the government had to cover significant expenses for running sanatoriums, resorts, and providing recreational services, ensuring restorative care for people.

CONCLUSION. The development of resorts in Kazakhstan has undergone significant transformations, starting in the pre-socialist period and continuing into the post-Soviet era of modernization. Thanks to its rich natural resources and government support, as well as private investment, Kazakhstan was able to partially maintain its resort industry. However, the modernization of Kazakhstan's resorts and sanatoriums requires government regulation, followed by optimization and digitalization of the health resort network in order to provide high-quality treatment and recreational services that are accessible to all segments of the population.

KEYWORDS: history of balneology, the Republic of Kazakhstan, rehabilitation therapy, natural resources, recreational therapy

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Важные вехи и события в истории казахстанской курортологии

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РЕЗЮМЕ

ВВЕДЕНИЕ. Глубокие социально-политические и экономические изменения 1990-х годов оказали негативное влияние на качество жизни людей и общее состояние их здоровья. Постоянный стресс, присущий урбанизированному обществу, приводит к снижению функциональных возможностей человеческого организма. Развитие санаторно-курортного комплекса является ключевым решением для поддержания основных систем жизнеобеспечения населения и решения проблем, связанных с урбанизацией. Чтобы лучше понять текущее состояние курортной индустрии в Казахстане, важно изучить ее историю и развитие. Это поможет нам понять его особенности и проблемы.

ЦЕЛЬ. Изучить и оценить исторически значимые события в развитии курортологии в Казахстане, а также определить современные тенденции и перспективы модернизации курортной индустрии в стране.

МАТЕРИАЛЫ И МЕТОДЫ. Для обзора литературы были использованы международные электронные базы данных, такие как Medline, PubMed, Google Scholar и eLibrary. Были проанализированы публикации за 2014–2024 годы, а также более ранние работы, имеющие основополагающее значение. Поиск литературы проводился с использованием комплексных стратегий поиска, которые имели отношение к развитию казахстанской курортологии в определенные исторические периоды.

РЕЗУЛЬТАТЫ И ОБСУЖДЕНИЕ. История санаторно-курортного лечения в Казахстане насчитывает более тридцати лет с момента обретения страной независимости. Эта традиционная форма лечения используется в различных областях медицины для профилактики заболеваний. Санатории и курорты предлагают широкий спектр природных ресурсов, включая уникальный климат, чистый горный воздух, минеральную воду и целебные грязи. Эти элементы создают исключительные условия для оздоровления и улучшения состояния здоровья. Такой подход сочетает традиционные медицинские практики с современными технологиями, а также природно-климатические факторы. Несмотря на то что Казахстан обладает значительным рекреационным потенциалом, спрос на эти услуги по-прежнему остается низким. Возможно, это связано с тем, что в центре внимания по-прежнему отдых в советском стиле, в котором особое внимание уделяется социальному взаимодействию и участию государства. В прошлом правительству приходилось покрывать значительные расходы на содержание санаториев, курортов и предоставление рекреационных услуг, обеспечивая восстановительный уход за людьми.

ВЫВОДЫ. Развитие курортов в Казахстане претерпело значительные изменения, начавшиеся в досоциалистический период и продолжающиеся в постсоветскую эпоху модернизации. Благодаря своим богатым природным ресурсам и государственной поддержке, а также частным инвестициям, Казахстан смог частично сохранить свою курортную индустрию. Однако модернизация казахстанских курортов и санаториев требует государственного регулирования с последующей оптимизацией и цифровизацией санаторно-курортной сети с целью предоставления высококачественных лечебно-оздоровительных услуг, доступных всем слоям населения.

КЛЮЧЕВЫЕ СЛОВА: история курортологии, Республика Казахстан, восстановительная терапия, природные богатства, лечение в рекреационных зонах

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INTRODUCTION

The basis of human existence is considered to be their state of health. In today's world, the primary objective of all urbanised states is the advancement and protection of public health. The Republic of Kazakhstan is one of the developing urbanized states. According to the latest statistical data as of 1 July 2024, 62.7 % of the population of the RK live in cities, representing 12.630.546 people out of a total population of 20.159.707. [1]. The key focus of the Concept of Healthcare Development in the Republic of Kazakhstan until 2026 is

to fight and counteract the main predictors of circulatory system diseases and causes of mortality among the working-age population¹.

However, insufficient attention has been paid to the application of preventive medicine measures and modern disease prevention methods, particularly in fostering a

¹ Decree of the Government of the Republic of Kazakhstan dated 24.11.2022 No. 945 "On Approval of the Concept for the Development of Healthcare of the Republic of Kazakhstan until 2026"

healthy lifestyle and improving population health at the stage of health-resort treatment.

It is beyond doubt that the therapeutic and recreational effects of natural resources have been known since ancient times. In fact, the trivial buildings of spas in the vicinity of mineral waters created at the beginning of the 15th century are the forerunners of modern resorts. The population of Kazakhstan has been using the therapeutic properties of mineral waters and muds for centuries, but it was only in the 19th century that balneology made significant progress [2].

The history of balneology in Kazakhstan is long and distinguished, with its roots dating back to the Soviet era. It was during this period that the fundamental principles of the modern health resort industry were established [3]. During the Soviet era, a unique health resort treatment system was developed which was distinct from any other system in the world. The concept of continuity served as the basis for a three-stage health recovery system for the entire Soviet population. During the same period, a centralized management system was introduced in the health resort treatment, ensuring sustainable operation and dynamic development of health resort complexes [4].

After the collapse of the Union of Soviet Socialist Republics (USSR) and the emergence of a market economy, the health resort industry of independent Kazakhstan lost its scientific, technical and material infrastructure. Changes and reforms in all spheres of the state at the stage of modernization changed the fundamental framework for the operation of the health resort complex and led to a crisis in the spa sector [5]. After gaining independence, Kazakhstan continued to develop and modernize its health resort facilities, adapting to new economic and social realities. To have a complete understanding of the principles, specificity and identity of the Kazakhstan health-resort industry, it is necessary to give an outline of the historical evolution through the development of the general format of the organization of health-resort services [6].

This article explores the historical evolution and establishment of the health-resort industry through the analysis of the transforming model and organizational framework of the health-resort complex.

AIM

To examine and assess notable historical milestones in the history of Kazakh balneology, as well as to identify current trends and prospects for the modernization of the health-resort industry in Kazakhstan.

MATERIALS AND METHODS

The literature search was conducted in international databases such as Medline PubMed and Google Scholar, using Medical Subject Headings (MeSH) terms: USSR Balneology/history, Health Resorts/history, and Kazakhstan. Specific methodological filters were applied to narrow the search focus to studies with critical review designs and reports.

For the historical research, the authors used a natural science approach, which allowed for a deeper understanding of the paradigm of the formation of the health-resort industry during the Soviet era and its subsequent development in the post-Soviet period. This included the analysis of historical data, the study of documents and literary sources, as well as the comparison of various aspects of resort treatment and its evolution in the context of social and medical policy.

RESULTS AND DISCUSSION

According to calculations by the Bureau of National Statistics of the Republic of Kazakhstan, as of the end of 2023, there were 175 restorative treatment and medical rehabilitation organizations in the country, including 115 sanatoriums, 26 rehabilitation centers, 25 specialized sanatoriums and other facilities, and 9 health resorts [7].

The historical evolution and establishment of the sanatorium-resort industry in Kazakhstan had begun long before gaining independence and sovereignty. Given the close historical ties with Russia during the Soviet Union era, it is reasonable to use the Russian model of sanatorium-resort complexes for analyzing aspects of resort treatment, comparing and adapting it to our circumstances and context [8, 9].

Thus, three distinct periods can be identified in the establishment and development of the health-resort sector:

Table 1. Format of the structure of health-resort services in the Republic of Kazakhstan

Period Name	Historical Period	Period Description		
		Key Characteristics	Structure Format	Goal
Stage I	Pre-Socialist. From the establishment of the Kazakh Khanate — 1917	Exploration and use of natural therapeutic resources, early concept of resorts.	There is no model formed as such, but there is an understanding of the resort area helping to overcome ailments	Strengthening and restoring individual health (mainly for warriors recovering after repelling attacks of the neighbors)
Stage II	As a republic of USSR 1917–1992	Dynamic development of the health-resort sector with ongoing scientific support	Centralized state-run system for resort management	Universal access to health and wellness activities to promote public health
Stage III	Independence and independence from 1992 to date	Uncoordinated development, establishment of various forms of ownership	Combination of state and private health-resort services	Supporting individual and public health

- the pre-revolutionary period and the early Soviet era;
- during the USSR period;
- and the gaining sovereignty and independence, followed by the resurgence of capitalist forms in Kazakhstan.

Table 1 shows an adapted structure of the stages in the development of balneology in Kazakhstan.

Stage I

Pre-Socialist Period

In the era of the Kazakh Khanate, there was no management as such in the spas, which were perceived by the locals as places where batyrs, who repelled countless raids of neighbors, and rich nobles restored their strength and health. The pre-socialist period is characterized by the fragmentary work of the health resort sphere, where there was a predominantly patronizing attitude to balneology [10]. In this period, the services of market exchange of goods were just emerging. Not all population groups in Kazakhstan could have full access to health rehabilitation programs. During this period, the private practice of healers prevailed, so the level of organization of therapeutic work was also at a low level. All this allows us to interpret that the pre-socialist period of health resort business has a fragmented organizational and economic format, the purpose of which was to maintain and strengthen individual, rather than public, health [11].

Stage II

Soviet Period

From the first years of the Soviet power, the use of natural physical factors to improve the nation's health was given great importance [12]. After a special government decree in 1918, all the resorts that existed on the territory of the country were declared state property and transferred to the Supreme Council of National Economy, which assigned the task of their management to the People's Commissariat of Public Health of the USSR [13, 14]. From this period, the spa activities of Kazakhstan became part of the USSR healthcare system [6, 15].

Trade unions were involved in administrative and management work, while associations of doctors specializing in health resort rehabilitation were in charge of scientific and methodological support [16]. Thus, an original model of the organization of resort complexes was formed. This created a unique structure for the resort industry in the USSR, unprecedented on the global stage. The system was characterized by accessibility, wide availability, and a preventive focus, making resort therapy and wellness a regular part of the Soviet national culture.

New progressive forms of restorative and rehabilitative care were introduced in spa complexes, as well as standardized programs of spa therapies and services. Cost minimization and a high level of comfort became the cornerstones of the development of a unified state policy in the field of balneology [17–19].

Although the resorts belonged to different sectors and government departments, this did not prevent them from pursuing a unified state policy in the field of health recovery and recreation. Funding came mainly from the State Social Insurance Fund and various ministerial funds, which allowed the institutions to finance new construction, reconstruction and substantial modernization.

Economic science began to recognize the resort sector as a contributor to economic growth and national wealth, moving away from its prior view of the industry as unproductive [20–22].

During this period, non-market methods dominated in coordinating resort activities, while administrative organizations managed the allocation of resources, achieving a balance of supply and demand in the resort economy through collective management structures and relevant social and financial institutions [23–25].

Stage III

Independence

The reforms of the 1990s caused cardinal changes in the functioning of the health resort complex of the independent state. The collapse of trade unions and the withdrawal of social insurance funds made it impossible to differentiate between spa vouchers or to cover payments to holidaymakers in the form of compensation.

The funds were withdrawn from the management of trade unions, which, in turn, lost their functions. The established state social insurance funds, in turn, stopped allocating any funds to recreational facilities, except for payment for the cost of stays, which deprived health resorts of funds for expanded reproduction. The difficult economic situation in most sectors of the national economy sharply reduced another source of financing of the resort complex — the funds of industrial enterprises, for which the tasks of fighting for their own survival with the traditional leftover attitude to the problems of recreation and treatment of workers came to the foreground. This could not but affect the state of health resort institutions, statistical indicators of health resort services sharply deteriorated. Only health resorts of the Ministry of Health and law enforcement agencies retained their state status, while the rest were transformed into organizations of different organizational and legal forms and forms of ownership and switched to self-management [26].

The collapse of the USSR, the transition to a market economy, and the difficult economic situation of the transition period hit the spa industry hard. The impoverished population could not pay for health resort treatment. The health-resort system began to fall apart. Many resorts operated at half capacity or less, becoming unprofitable and closing. Only well-to-do citizens could afford health-resort treatment, preferring rehabilitation abroad. Along with changes in quantity, the country's resort complex was reformed in terms of quality. Resorts acquired new organizational and legal forms in accordance with Kazakhstani legislation, and this privatization was of a fundamental nature and reflected a change in ownership forms [27–29].

Since the late 90s, positive development trends have been observed in the health-resort industry of Kazakhstan. Health resorts that survived the transition period began to acquire modern medical equipment and develop new types of services. Unique natural resources, ongoing achievements of Kazakhstani balneology combined with new trends to expand the range of services, improve the comfort of health resorts provide a real opportunity for the successful development of both individual health resort institutions and the industry as a whole [30, 31]. The health-resort industry, like other sectors, saw a shift in ownership forms, leading to a multi-structured landscape with diverse organizational

and legal frameworks for resorts. Today, maximum efficiency in recreational institutions is achieved through a pluralistic approach to ownership and management [32]. At the same time, if state and municipal health resorts in their activities are focused on solving medical and social problems, then private health resorts focus on economic efficiency of resource use. Given the diverse forms of sanatorium-resort services, a symbiotic approach that blends public and private resort treatment is currently the most effective model for serving the population [33].

With the development of market relations, the resort complex evolved not only quantitatively, but underwent changes in quality as well. With the change in the conditions of functioning of the health resort industry, there emerged a need to develop new structural and organizational forms, taking into account regional peculiarities and recreational and recovery potential of natural resources. In addition, these forms had to consider the laws of business and ensure the increase of profitability of the health resort industry [34–36].

In the times of market-based relationships, there has been a significant risk of excessive commercialization in the health-resort sector. First of all, this situation has led to the disappearance of affordable but essential medical services and reduced access to recreational services due to the increased cost of vouchers, and secondly it has also caused a decline in research activities in the field of balneology. Experts in the field of health-resort economics believe that a significant boost for the national health-resort industry can be achieved through the integration of innovative therapeutic and preventive measures with various tourism sector services and technologies (such as marketing, management, and hospitality) — a powerful leisure and entertainment industry [37–40].

It is undeniably important to preserve the best traditions of domestic balneology, which contribute to strengthening the health of the nation. An extensive research conducted over many years by Pyatigorsk State Scientific Research Institute of Balneology indicate that spa treatments can be an effective intervention for adults and children with common chronic diseases, with significant medical, social, and economic effects:

- medical effects include — reduced frequency and intensity of disease exacerbations by 2.5–3 times, reduced hospitalization by 1.5–2 times, decreased average hospital stay by 20–30 %, reduction in the average duration of 1 case of temporary disability by 30–40 %, increase in the remission period of the main disease by 3.5–4 times, of comorbidities by 1.5–2 times, reduction in disease progression by improving the functional status of organs and body systems, increase in the physiological reserves of the organism;
- social effects include — improvement of the quality of life, restoration of domestic, professional and social functions, reduction of disability, increase in labor potential and professional longevity;
- effects include — it is estimated that employees will return to work 3–4 times more often, reducing the cost of social insurance payments and the financial costs by 2–2.5 times (due to reduced use of medical services, taking pharmaceuticals, use of outpatient clinics, treatment in hospitals, etc.), increase in labor productivity 10–15 %.

At the present stage, the management structure of health resort business in the Republic of Kazakhstan, corresponding to the market model of economic management, is still being formed. In each region there are many sanatoriums, hospitals, which treat all kinds of diseases, both with the help of medicines and traditional methods. As for the specifics, most people who have undergone various kinds of diseases, surgeries, injuries, also people suffering from joint diseases, etc., are in dire need of sanatoriums, and they play an important role in complementary medicine. The deterioration of air quality contributes to various diseases, weakens the human body, and reduces its resistance to stress and external viruses. Due to the deterioration of air, there are so many different kinds of diseases, after which the human body becomes weakened and becomes unstable to stress and external types of viruses. Also, people get tired of their daily work, in which they practically stay in a stressful state, in which it becomes more and more difficult to cope with their job responsibilities. In such a situation, treatment and recreation in a sanatorium complex will restore all the lost strength and health, both physical and psychological state. This all helps to recover and continue your labor activity in a normal rhythm. Timely treatment in a sanatorium can prevent any disease from moving to a chronic stage. If a person is healthy and refreshed, he/she is a good worker. Thus, if the state develops such health resort complexes in the country and focuses on the simple, necessary needs of people, finance materially support all the complexes, it is certainly a long-term investment in the future.

Medical sanatoriums provide a variety of therapies, including massage, physiotherapy, and dietary therapy, as well as other treatments tailored to each patient's specific needs. These treatments are based on the type of illness the patient has. Most sanatoriums specialize in one or more types of illness, and can be divided into single-profile or multi-profile facilities. Single-profile sanatoriums focus on treating only one type of illness, while multi-profile ones can treat a variety of conditions. Multi-profile sanatoriums have different departments, each specializing in a specific type of treatment. The course of treatment depends on the examination, analysis, and referral of the patient [41].

Despite progress in health-resort projects, there are obstacles hindering the development of this sector:

- accommodation conditions in medical preventive centers in Kazakhstan do not fully meet the European standards;
- decreasing accessibility of health-resort services for socially vulnerable groups, such as low-income individuals;
- unstable growth in the cost of health-resort services;
- disjointed management of the health resort sector in the Republic of Kazakhstan, in other words, the health resort sector is important for the health care system and tourism as a complementary sector;
- lack of an appropriate regulatory and legal framework;
- poor use of medical statistics on health resort service;
- the scientific concept of the development of health-resort services is practically non-existent.

CONCLUSION

The health-resort sector is a traditional form of health recovery for post-Soviet countries. In Western countries, where spa business originated, the market has ousted health recovery from the first positions in tourism, replacing it by entertainment and recreation.

Kazakhstan has a variety of natural and recreational resources which are the basis for the operation of health resorts. However, the existing problems, both in the field of functioning of resorts themselves and organization of health resort treatment, as well as in the field of balneology, in modern market conditions make the industry uncompetitive. At the present stage, a targeted strategy of resort and recreational development is required, including a comprehensive assessment of existing and new natural therapeutic resources, their resort development, development of new medical technologies for the application of natural therapeutic factors, as well as the creation of organizational and legal forms that allow effective development of the health-resort industry. Unique natural resources, achievements of Kazakhstan balneology in combination with modern forms of resort management provide an opportunity to preserve the traditions of national balneology and successful development of the health-resort industry.

Kazakhstan has a need for comprehensive measures aimed at improving the health of the population, promoting healthy lifestyles, aimed at the development

of human potential. The role of the health resort sector in this regard is underrated. State attention, expressed in the development of program products, should be focused on enhancing the use of the health-resort complex in order to ensure favorable demographic conditions for socio-economic development. In order to create a national modern highly efficient, competitive system of health-resorts and recovery centers, it is necessary to take a number of measures to develop and improve the system of health-resort recreation in Kazakhstan, such as improving the state regulation of the system of health-resort care and recovery of the population, streamlining the benefits for health-resort treatment and recovery and the conditions for their provision, optimizing the network of health-resorts and recovery centers, improving the quality of health care and recreation, improving the quality of health care and recovery of the population, improving the management of health-resort treatment and recovery of children etc.

In summary, the development of the resort industry in Kazakhstan has undergone significant changes from the Soviet times to the post-Soviet modernization period. It is important to note that thanks to abundant natural resources, state support, and private investment, Kazakhstan has been able to preserve and expand its resort industry. Modern resorts and sanatoriums in Kazakhstan offer quality health and recreational services that appeal to both domestic and international tourists.

ADDITIONAL INFORMATION

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