

Regional Trends and Social Factors of Longevity in Uzbekistan

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Abstract: This article analyzes the changes in the number of people aged 90 and above in the Republic of Uzbekistan from 2000 to 2024, with a focus on regional distribution, gender differences, and urban–rural disparities. The study identifies the decline rates within this demographic group, areas with population growth in this category, and the social factors influencing these trends. The primary goal of the research is to determine the factors affecting the longevity of the population, to highlight existing issues, and to propose recommendations for strengthening the social protection of this demographic in the future.

According to statistical data, the number of residents aged 90 and above has decreased by 16% nationwide between 2000 and 2024. This trend is particularly noticeable in several regions, including the Republic of Karakalpakstan, Namangan, Andijan, Samarkand, and Surkhandarya. Conversely, in regions such as Fergana and Syrdarya, the number of people over 90 has increased.

The study also addresses gender differences. As of 2024, women made up 66.7% of the 90+ population, while men accounted for only 33.3%. This gap is attributed to several negative factors more prevalent among men, such as cardiovascular diseases, tobacco and alcohol consumption, hazardous work conditions, and higher stress levels. In contrast, women tend to lead healthier lifestyles, exhibit greater social activity, and benefit from stronger social support. Their lifelong engagement in labor, close family ties, and emotional stability have also contributed to their longevity.

Differences between urban and rural populations were also examined. In rural areas, factors such as prolonged physical activity, cleaner air, and a diet rich in natural products have positively influenced health outcomes. At the same time, better access to healthcare services in urban areas has led to increased longevity in some cities. Nevertheless, the overall number of long-lived individuals remains higher in rural settings.

Keywords: Highlight existing issues, social factors influencing, demographic group.

Introduction: In recent decades, life expectancy has become one of the key indicators of socio-economic development for many countries. Specifically, the level of longevity is closely linked to public health, lifestyle, the quality of medical services, and environmental factors. Uzbekistan is no exception to this global trend: since independence, the country's demographic structure, access to healthcare services, and reforms in the overall healthcare system have had a significant impact on changes in life expectancy.

At the same time, certain regional and gender-based disparities in life expectancy persist. For example, while

some regions demonstrate higher longevity rates, others show relatively lower figures. Additionally, the differences in life expectancy between men and women remain an important subject of demographic research. These differences can be explained by various factors, including lifestyle, working conditions, genetic predispositions, and social circumstances.

Identifying changes in life expectancy, analyzing regional differences, and statistically justifying gender-based disparities highlight the relevance of this issue. Such analyses play an essential role in shaping health policy in Uzbekistan and promoting social equity.

Literature Review

In recent years, longevity has become a pressing subject in socio-demographic research. Numerous studies at both international and national levels focus on identifying the factors influencing life expectancy and analyzing them within demographic, social, and economic contexts.

Researchers such as R.P. Murtin and D. Bloom have analyzed the impact of longevity on demographic and economic growth. They emphasize the rise in human capital as one of the positive aspects of longer life expectancy, while also noting the potential additional burdens on healthcare and pension systems. Likewise, T. Parsons' theories assign significant importance to the role of the elderly and long-lived individuals in society. From a functionalist perspective, Parsons argues that each social group has specific roles and functions that help maintain the stability of society. In his view, old age is a phase during which individuals adopt new social roles and adapt to societal changes.

According to data from the United Nations, there are substantial differences in life expectancy among countries in Europe, North America, Asia, and Africa. For instance, in Japan, the life expectancy exceeds 84 years, while in some sub-Saharan African countries, it

is lower than 60 years.

METHODOLOGY

The primary goal of this study is to identify and analyze regional and gender-based differences in longevity in Uzbekistan. Statistical data on life expectancy were collected and analyzed. The research identified regional differences in life expectancy and examined disparities between men and women.

Analysis Results. One of the important indicators reflecting a country's socio-economic development is the average life expectancy of its population. Globally, the average life expectancy is approximately 71 years. This figure is 84.6 years in Japan, 84.2 in Andorra, 82.3 in Israel, 79.8 in the United States, 72.7 in Russia, 73.8 in Uzbekistan, 73.7 in Tajikistan, and 70.4 in Turkmenistan. Uzbekistan leads among Central Asian countries in terms of this indicator.

In recent years, the gap in life expectancy between women and men in Uzbekistan has remained consistent with global trends. As of January 1, 2024, the average life expectancy is 76.9 years for women and 72.5 years for men. This difference can be attributed, on the one hand, to biological factors, and on the other hand, to the prevalence of high-risk occupations, stress, and unhealthy lifestyles among men.

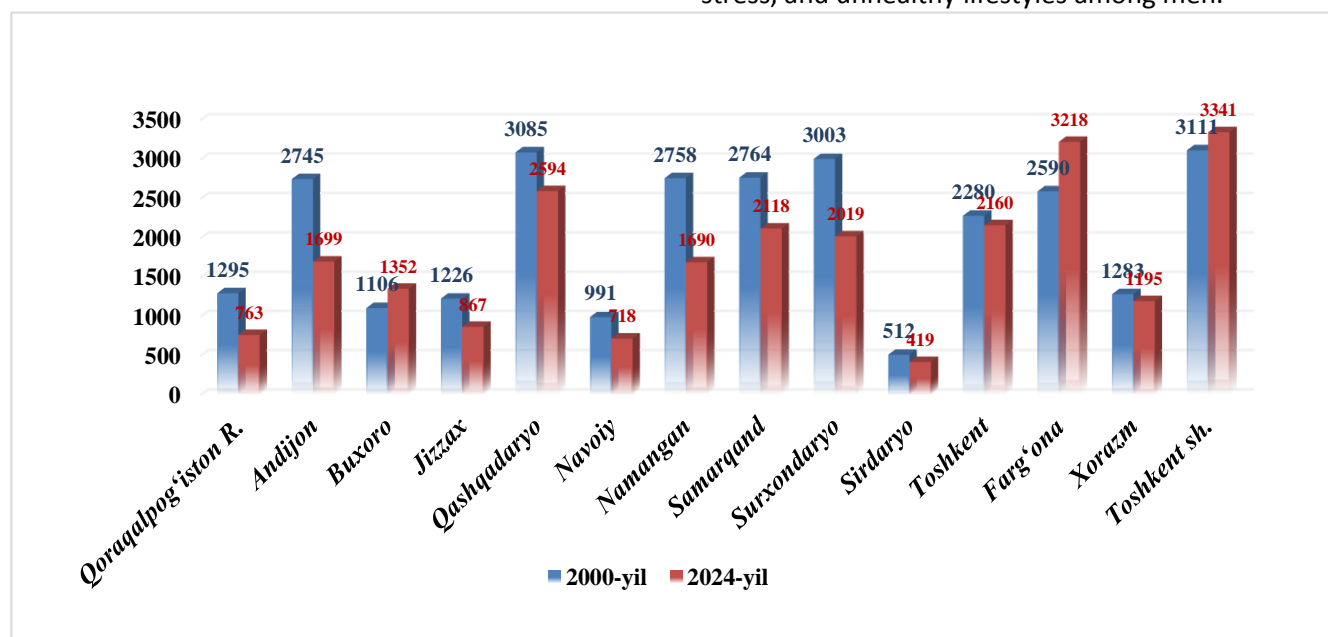


Figure 1. Population Aged 90 and Above

Regional analyses show that in some regions of Uzbekistan—particularly in areas affected by environmental problems such as the Aral Sea zone—life expectancy is below the national average. This underscores the significance of the environmental context as a critical factor in public health.

According to the Agency of Statistics under the President of the Republic of Uzbekistan, the total

number of people aged 90 and above decreased by 16.0% in 2024 compared to the year 2000 (Figure 1).

From 2000 to 2024, the number of people aged 90 and above declined significantly in almost all regions of Uzbekistan. For example, the population in this age group decreased by: 41.1% in the Republic of Karakalpakstan, 38.1% in Andijan region, 38.7% in Namangan, 32.8% in Surkhandarya, and 27.5% in Navoi.

This trend reflects broader demographic patterns in the country, such as declining birth rates and changes in life expectancy. Additionally, migration and socio-economic conditions have influenced the reduction in the elderly population. These developments, in turn, increase demand for social security and medical services.

The decrease in the population aged 90 and above reflects broader changes in the age structure of the population. This significant decline is primarily associated with lower natural growth (i.e., reduced birth rates), along with increased access to and efficiency of health and social services. Furthermore, improvements in public health systems and a growing emphasis on healthy lifestyles among youth are reshaping the demographic composition.

Regional variation in the extent of population decline or growth is also linked to differences in socio-economic development and demand for social services. For instance, improvements in social services and economic growth in Fergana region and Tashkent city have positively affected public health and contributed

to population growth.

The decline in the number of people aged 90 and above in Uzbekistan also reflects broader socio-economic shifts among youth, enhancements in healthcare services, and demographic changes. This situation indicates the need to address the evolving age structure, improve youth health, and strengthen social support systems.

Moreover, from 2000 to 2024, the proportion of individuals aged 90 and above relative to the total permanent population has also declined across all regions of Uzbekistan. Specifically, while this proportion was 0.12% in 2000, it dropped to 0.05% in 2024, confirming a significant decline in this demographic group. For instance, in Surkhandarya, the share dropped from 0.17% in 2000 to 0.07% in 2024. Similar trends were observed in Andijan, Navoi, and Jizzakh regions.

Based on data obtained from the State Statistics Agency, Table 1 below presents an analysis of the number of people aged 90 and above across urban areas of Uzbekistan from 2000 to 2024.

Table 1
Population Aged 90 and Above in Urban Areas (Number of People)

Regions	Years						Change in 2024 compared to the year 2000	
	2000	2010	2020	2021	2022	2024	+,-	%
Republic of Uzbekistan	14401	13101	11270	10213	10806	10383	-4018	-27,9
Republic of Karakalpakstan	877	702	264	236	254	216	-661	-75,4
<i>Regions:</i>								
Andijan	989	1434	735	727	746	700	-289	-29,2
Bukhara	571	672	388	348	361	353	-218	-38,2
Jizzakh	566	526	348	354	401	400	-166	-29,3
Kashkadarya	1036	1163	1109	1041	1083	1116	80	7,7
Navoi	371	393	227	209	234	211	-160	-43,1
Namangan	1308	1260	913	891	953	808	-500	-38,2
Samarkand	1554	1199	727	648	662	694	-860	-55,3
Surkhandarya	841	1234	776	745	790	785	-56	-6,7
Sirdarya	79	90	244	206	188	148	69	87,3

Tashkent	1408	1024	1046	801	972	914	-494	-35,1
Fergana	1175	1266	1470	1450	1576	1580	405	34,5
Xorazm	515	441	368	367	372	373	-142	-27,6
Toshkent city	3111	2350	2655	2190	2214	2085	-1026	-33

Source: Calculated by the author based on data from the Statistics Agency under the President of the Republic of Uzbekistan.

According to the statistical data presented in Table 1, the number of people aged 90 and over in Uzbekistan decreased across all regions between 2000 and 2024. These demographic changes manifested differently in each province of the country, but the general trend indicates a decline in the elderly population. Compared to the year 2000, by 2024 the number of individuals aged 90 and over in urban areas had decreased by 27.9%. In particular, this decline was most significant in the Republic of Karakalpakstan – 75.4%, and in the following regions: Samarkand – 55.3%, Navoi – 43.1%, Namangan and Bukhara – 38.2%, and Tashkent – 35.1%. However, in Kashkadarya, the elderly population decreased by only 7.7%, while in Syrdarya it actually increased by 87.3%.

The decline in the population aged 90 and above over the period of 2000–2024 is closely linked to demographic changes and socio-economic factors in Uzbekistan. Each region exhibited specific challenges and shifts in demographic structure. These processes are expected to increase demand for social protection and healthcare services.

According to the analysis, between 2000 and 2024, the share of the urban population aged 90 and over in the

Republic of Uzbekistan decreased from 0.16 per mille to 0.06 per mille. This decrease varied by region: in the Republic of Karakalpakstan, from 0.12 to 0.02 per mille; in Andijan – from 0.15 to 0.04; in Jizzakh – from 0.19 to 0.06; in Kashkadarya – from 0.19 to 0.07; in Namangan – from 0.18 to 0.05; in Samarkand – from 0.21 to 0.04; and in Surkhandarya – from 0.24 to 0.08 per mille. These regions experienced a sharp decline.

The data shows that during the studied period, the proportion of urban residents in Uzbekistan aged over 90 decreased. This trend is associated with various demographic changes and processes, and adapting to this situation requires promoting a healthy lifestyle, improving social protection, and developing healthcare services.

According to statistical data, in 2024 the number of rural residents aged 90 and over decreased by 34.8% compared to the year 2000 (see Table 2).

As shown in the table, between 2000 and 2024 there was a sharp decline in the number of rural residents aged 90 and above in Uzbekistan. Significant decreases were observed in Andijan (53.2%), Namangan (46.2%), and Surkhandarya (49.0%) regions. The downward trend continued in other regions as well.

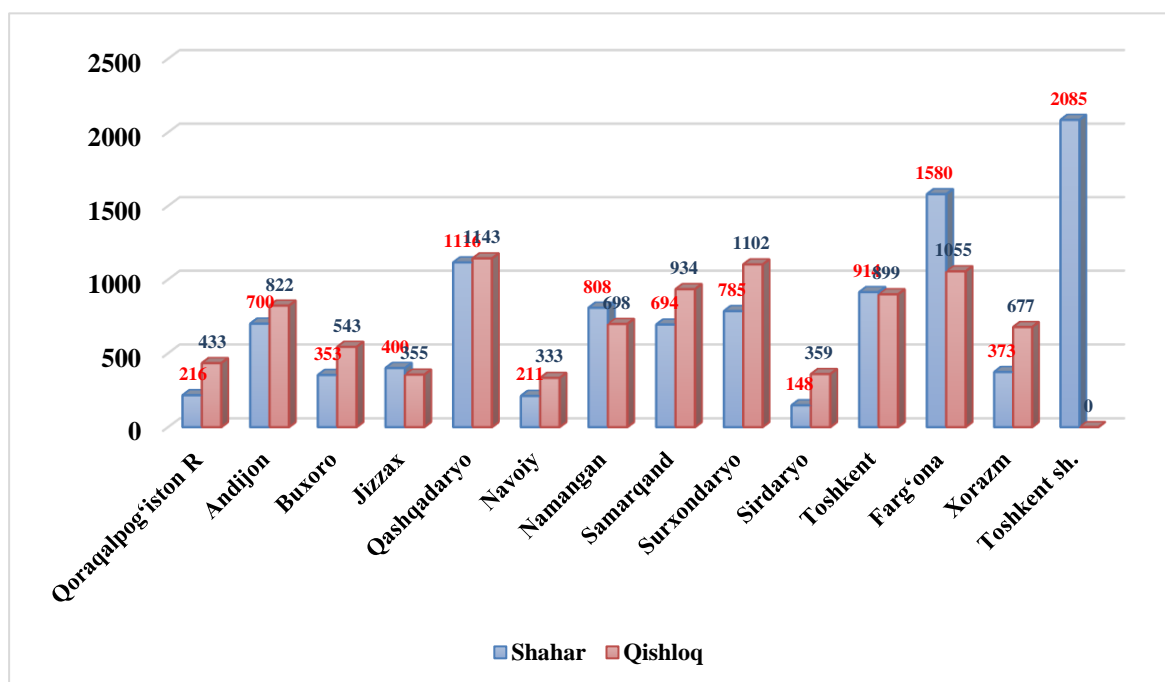


Figure 2. Distribution of the population aged 90 and over by regions

Accordingly, the population increased by 3.6% in the Republic of Karakalpakstan, 1.5% in Bukhara region, and 3.1% in Tashkent region. The growth in population in these areas is attributed to the successful operation of the healthcare system and the improvement of social welfare. In Karakalpakstan, the population growth reflects successful changes in the social system, while in other regions, a decline in population indicates systemic problems in various relevant sectors.

The proportion of people aged 90 and older in the rural population was 0.09% in 2000, but decreased to 0.04% in 2024. A year-on-year decline has been observed across the regions, with the most significant decrease recorded in Navoi region.

According to the analysis, in 2000, the proportion of urban residents aged 90 and older was 50.1%, while in 2024 it reached 52.6%. In contrast, the figures for rural areas were 49.9% and 47.4%, respectively.

Based on data from the State Statistics Agency, the number of men aged 90 and older decreased by 36.5% compared to the year 2000.

During the analyzed period, the highest number of men aged 90 and older in the republic was recorded in the Kashkadarya region in 2000.

As can be seen from the above data, from 2000 to 2024, the number of men aged 90 and older in the republic significantly decreased. In particular, some regions experienced up to a 50% decline in population. For example, a sharp decline in the number of men aged 90 and older was observed in the Republic of Karakalpakstan and some regions (Andijan, Navoi, Namangan).

It is especially noteworthy that the largest decline in the number of men aged 90 and older was observed in four regions (Andijan, Navoi, Namangan, Samarkand) and the Republic of Karakalpakstan.

In the ranking of regions by the decline in the number of men aged 90 and older, Tashkent region ranked sixth, while Surkhondaryo ranked seventh.

Between 2000 and 2024, the share of men aged 90 and over in the permanent population in the regions of the Republic of Uzbekistan significantly decreased. In 2000, this share was 0.08%, and by 2024 it had decreased to 0.04%.

Various factors have influenced the decline in population, such as economic and social conditions, the standard of living, labor migration, and other factors. The population decline in many regions of the country, especially when considering recent demographic changes in the regions, indicates the need to reconsider living standards and socio-economic measures.

Among the population aged 90 and over, the number of women decreased by 12.9% in 2024 compared to 2000.

The number of women aged 90 and over in 2024 decreased by 37.8% in Namangan region compared to 2000. This decline was also observed in the following regions: Andijan – 33.8%, Surkhondaryo – 32.9%, Navoi – 25.1%, Samarkand – 23.2%. Significant declines were also recorded in other regions. In contrast, some regions showed positive changes, with increases in the number of women aged 90 and over: Fergana – 33.0%, Bukhara – 9.9%, Tashkent region – 7.0%, and Tashkent city – 8.6%.

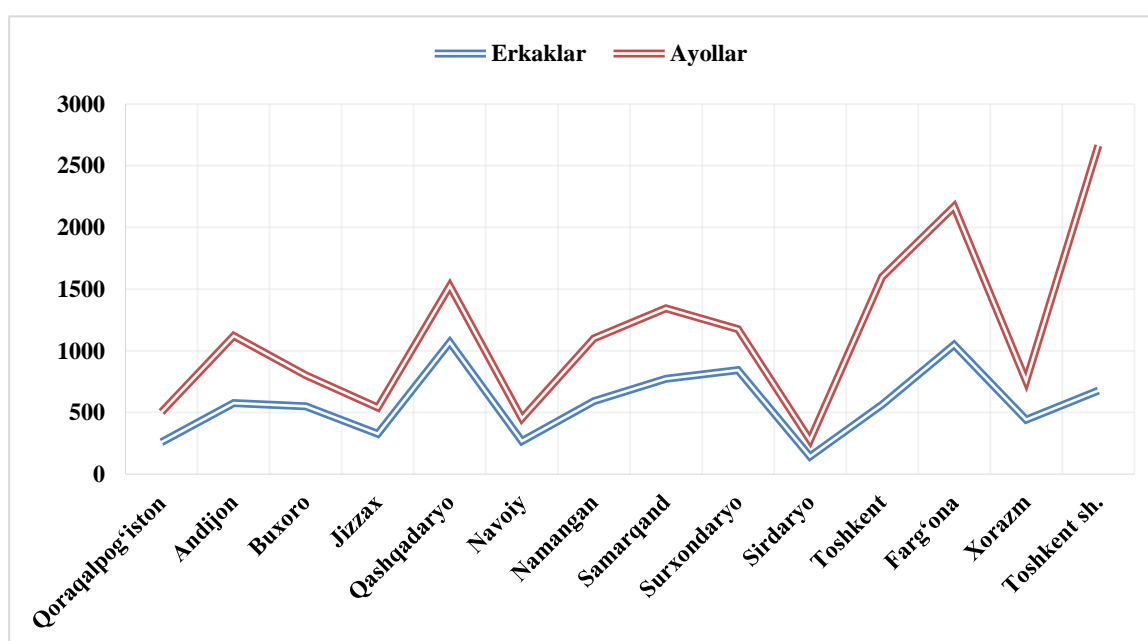


Figure 3. Regional distribution of the population aged 90 and over (men and women)

The decline in the number of women aged 90 and older indicates specific socio-economic and demographic problems, and to prevent this situation, programs aimed at improving healthcare, managing migration, and supporting youth health are necessary.

At the same time, in 2000, the proportion of women aged 90 and older was 64.0%, which increased to 66.7% in 2024, while the proportion of men decreased from 36.0% to 33.3%.

RESULTS

To determine the reasons and factors behind longevity in different regions, a sociological survey was conducted among individuals aged 90 and older in the regions of Jizzakh, Tashkent, Fergana, and the city of Tashkent. From a regional perspective, the opinions of respondents on how often they had fallen ill throughout their lives were analyzed in connection with other demographic indicators, revealing the following aspects:

The frequency of illness among long-livers varies by region. In Jizzakh region, the proportion of those who said "I was almost never ill" was the highest (41.7%), followed by Fergana region (35.0%). Those who were rarely ill were most prevalent in Tashkent region (87.5%), indicating a good state of public health. Although the share of those who said "I was often ill" was low across all regions, it was highest in Jizzakh region (8.3%). Differences in health conditions between regions are explained by various social, environmental, and economic factors. For example, in Tashkent city, the developed infrastructure of medical services played an important role in the prevention and treatment of diseases (Appendix 1.1).

Among long-livers who spent most of their lives in rural areas, two out of five (40.0%) reported never being ill, whereas in urban areas only one in five (20.0%) shared this view. The proportion of long-livers who were frequently ill was 8.9% in urban areas and 2.9% in rural areas. These differences show the varying impacts of rural and urban environments on health, such as higher stress and environmental pollution in cities.

The results revealed a certain correlation between work experience and frequency of illness. It was found that as work experience increased, the incidence of illness decreased. For instance, more than three-fifths (61.5%) of those with over 40 years of work experience reported almost never being ill, while none of those with 5–15 years of experience gave the same answer.

In addition, when their professional activities were examined, it was found that among women, agriculture and the food industry were the most common sectors, with 48.1% employed in these fields. Women also

worked in the education sector more frequently than men (14.8%). Men, on the other hand, were predominantly engaged in industry and manufacturing (24.1%) as well as construction and architecture (20.0%). Among intellectual labor sectors, men were more involved in science and research (12.0%), while women were mostly employed in education and healthcare.

In urban areas, intellectual labor sectors were more widespread, with leading roles played by education and academic institutions (18.8%), science and research (6.3%), and industry and manufacturing (25.0%). In rural areas, physical labor sectors dominated, including agriculture and the food industry (58.1%). Construction and trade were more prevalent in cities than in villages, and the transport sector was also more developed in urban areas. Intellectual labor sectors such as science and civil service were almost nonexistent in rural areas.

The study showed that the health of long-livers differs depending on region, place of residence, work experience, and professional activity. The proportion of healthy individuals was higher among those living in rural areas with long work experience. The health level in Jizzakh and Fergana regions was relatively high, which is associated with the natural environment and physical activity. In cities, stress and environmental conditions negatively impacted health. Overall, longevity is a multifactorial process, with a healthy lifestyle, ecological stability, and an active working life being the main contributing factors.

CONCLUSION

This study analyzed regional trends and gender differences in longevity in Uzbekistan. The findings can be summarized as follows:

Between 2000 and 2024, the number of people aged 90 and older decreased significantly in almost all regions of the republic. This situation is mainly related to socio-economic factors such as population decline and insufficient healthcare services.

Life expectancy for women is higher than for men, a difference observed in all regions. This is associated with factors such as a healthy lifestyle, greater resistance of the female body to external influences, and stress resilience.

Longevity indicators are higher in urban areas compared to rural areas. This difference is mainly due to the more developed healthcare services and improved social infrastructure in urban regions.

To increase life expectancy, the following measures are proposed:

Improving the healthcare system: Enhance medical services in rural areas and promote a healthy lifestyle.

Developing social support systems: Provide social assistance to the elderly and strengthen their role in society.

Ensuring gender equality: Ensure equality between men and women, and create equal access to healthcare services.

Collecting and analyzing data: Systematically collect and analyze demographic data to identify the factors contributing to longevity.

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