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## ASSESSMENT AND COMPARATIVE ANALYSIS OF HEALTHY LIFESTYLE LEVELS AMONG THE ELDERLY POPULATION OF GORIS CITY AND RURAL COMMUNITIES OF THE SYUNIK PROVINCE

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**Keywords:** elderly population, healthy lifestyle, physical activity, sedentary behavior, diet, harmful habits, health-care accessibility, Syunik Province.

Population aging is one of the most significant demographic trends observed in the Republic of Armenia over the past decades. Over the years of independence, the country has experienced substantial demographic changes, including declining birth rates, increased mortality, rising divorce rates, and negative migration balance. Due to difficult socio-economic conditions and ongoing geopolitical challenges, there has been a persistent outflow of the population, particularly among younger and middle-aged groups. As a result, the proportion of elderly individuals has steadily increased, making them a stable and significant segment of the population.

The growing share of elderly people has led to increased social, economic, and healthcare challenges. Many older individuals live in unfavorable socio-economic conditions, often experiencing social isolation, limited access to healthcare services, and difficulties in meeting their basic needs. In particular, elderly individuals, who have lost family support due to migration or lack of close relatives, are at higher risk of physical, psychological, and social vulnerability. These factors contribute to the deterioration of health status and increased prevalence of psychosomatic disorders among this population group.

The relevance of the study is determined by the growing proportion of the elderly population and the need to assess the factors influencing their health and quality of life. In Armenia, the needs of the elderly population continue to increase annually and encompass both economic and socio-psychological aspects. Limited utilization of available healthcare and social services, often

due to physical, psychological, and informational barriers, further exacerbates their condition and reduces overall quality of life.

According to international classification, elderly individuals are defined as persons aged 65 years and older. Statistical data indicate that Armenia is among the aging countries, with elderly individuals accounting for a considerable proportion of the total population. Notably, Syunik Province has one of the highest shares of elderly residents, with observable differences between urban and rural populations in terms of lifestyle, health indicators, and life expectancy.

Lifestyle plays a crucial role in determining health outcomes, accounting for more than half of the factors influencing human health. Healthy behaviors, including adequate physical activity, balanced nutrition, proper sleep patterns, and avoidance of harmful habits, significantly contribute to improved health and longevity. Conversely, sedentary lifestyle, poor dietary habits, smoking, and alcohol consumption are associated with increased morbidity and mortality. These risk factors are particularly relevant in elderly populations, where physiological resilience is reduced and the impact of unhealthy behaviors is more pronounced.

Physical activity is essential for maintaining functional capacity and preventing chronic diseases in older adults. Regular movement improves cardiovascular and respiratory function, enhances metabolic processes, and strengthens the musculoskeletal system. In contrast, hypodynamia leads to metabolic disturbances, reduced work capacity, and increased risk of chronic conditions. Similarly, harmful habits such as smoking and alcohol consumption have well-documented negative effects on multiple organ systems and significantly reduce life expectancy.

Given the existing differences in living conditions and lifestyle patterns between urban and rural populations, it is important to identify and analyze these variations among elderly individuals. Understanding these

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differences will allow for the development of targeted, evidence-based interventions aimed at improving health outcomes, enhancing quality of life, and increasing life expectancy among the elderly population.

### Materials and methods

The study was conducted among the elderly population aged 65–90 years in the city of Goris and three adjacent villages—Karahunj, Verishen, and Akner—in the Syunik Province of the Republic of Armenia. In order to assess the level of healthy lifestyle, identify associated behavioral factors, and perform a comparative analysis between urban and rural populations, a quantitative, observational cross-sectional study was carried out using a structured questionnaire. The sample consisted of 200 participants, including 100 urban and 100 rural residents, selected through simple random sampling.

Data were collected using a pre-designed structured questionnaire consisting of 33 items, which included questions on sociodemographic characteristics, sleep patterns and duration, level of physical activity, dietary habits, presence and frequency of harmful habits, as well as the frequency of preventive medical check-ups. The questionnaires were administered in the form of individual interviews. Participation in the study was voluntary, and written informed consent was obtained from all participants prior to data collection. Respondents were informed about the purpose of the study, the voluntary nature of participation, their right to withdraw at any time, and the confidentiality of the information provided. No personal identifying information was recorded, and all collected data were used exclusively for research purposes.

The inclusion criteria were: age between 65 and 90 years, permanent residence in the selected communities, and provision of informed consent. Prior to the main study, the questionnaire was reviewed and refined to ensure clarity and relevance of the questions.

All statistical analyses were performed using SPSS version 20.0. Quantitative variables were presented as mean (M) and standard deviation (SD). Differences between groups were assessed using the  $\chi^2$  test and Student's t-test, with a p-value of <0.05 considered statistically significant. Microsoft Excel (Microsoft Corp.) was used for data visualization and graphical presentation.

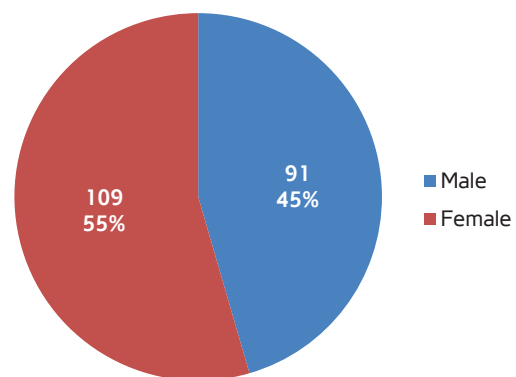
The study has several limitations. First, the cross-sectional design does not allow for establishing causal relationships between the studied variables. Second, the use of self-reported data may introduce information bias due to the subjective nature of responses. Third, the sample

was limited to one urban and three rural communities, which may restrict the generalizability of the findings. Finally, seasonal variations in lifestyle were not taken into account, as data collection was conducted within a limited period.

### Results and discussion

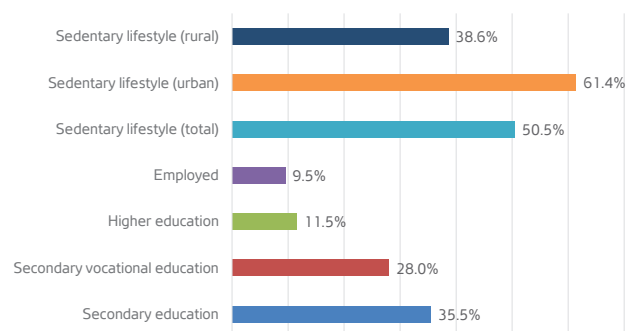
#### Results of the Statistical Analysis

The study was conducted in July–August 2022 among elderly residents of Goris city and three adjacent villages in the Syunik Province. A total of 200 participants aged 65–90 years were included in the study, of whom 91 (45.5%) were male and 109 (54.5%) were female (Fig. 1).



**Fig. 1** Gender Distribution of Participants ( $n = 200$ )

According to educational level, the majority of participants had secondary (35.5%) or secondary vocational education (28%), while 11.5% had higher education. In terms of occupational activity, only 9.5% of respondents were employed, while 50.5% reported a sedentary lifestyle, which was significantly more prevalent among urban residents (61.4%) compared to rural residents (38.6%) ( $p < 0.001$ ) (Fig. 2).



**Fig. 2** Distribution of Participants by Education and Lifestyle

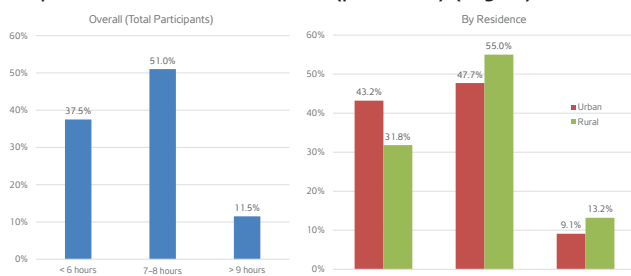
Analysis of sleep patterns showed that 37.5% of participants slept less than 6 hours per day, 51.0% slept 7–8 hours, and 11.5% slept more than 9 hours. Rural res-

**Table 1**

*Distribution of dietary habits, smoking status, and alcohol consumption among study participants.*

Characteristic	n (%)
<b>Dietary habits</b>	
Regular meals and breakfast	168 (84.0%)
Daily fruit consumption	86 (43.0%)
Fruit consumption 2–3 times per week	70 (35.0%)
Fried food consumption daily	29 (14.5%)
Fried food consumption 2–3 times per week	104 (52.0%)
<b>Smoking status</b>	
Current smokers	58 (29.0%)
Former smokers	72 (36.0%)
Never smoked	70 (35.0%)
<b>Cigarettes per day (among current smokers, n = 58)</b>	
10 or fewer	6 (10.3%)
11–18	10 (17.5%)
More than 18	42 (72.2%)
<b>Smoking duration (among current smokers, n = 58)</b>	
5 years or less	5 (8.6%)
6–10 years	11 (19.0%)
More than 11 years	42 (72.4%)
<b>Alcohol consumption</b>	
Consume alcohol	112 (56.0%)
<b>Type of alcohol (among those who consume, n = 112)</b>	
Vodka	68 (60.7%)
Wine	32 (28.6%)
Beer	12 (10.7%)
<b>Frequency of alcohol consumption (among those who consume, n = 112)</b>	
Daily	24 (20.2%)
Several times per week	31 (27.7%)
On special occasions	57 (50.9%)
Rarely	0 (0.0%)

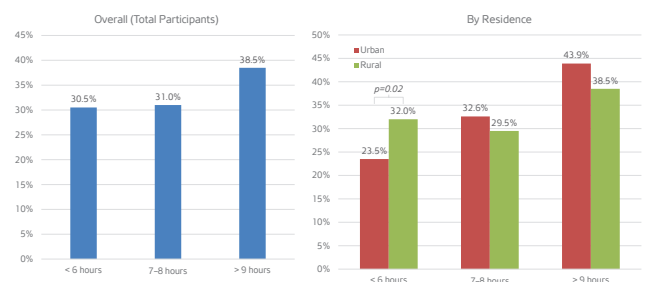
idents more frequently reported optimal sleep duration compared to urban residents ( $p = 0.03$ ) (Fig. 3).



Rural residents more frequently reported optimal sleep duration compared to urban residents ( $p = 0.03$ ).

**Fig. 3** Distribution of sleep duration among participants overall and by place of residence

Regarding healthcare utilization, 30.5% of participants underwent regular medical check-ups, 31.0% did so occasionally, and 38.5% did not undergo medical examinations at all. Rural residents reported slightly higher rates of regular check-ups compared to urban residents (32.0% vs. 23.5%,  $p = 0.02$ ) (Fig. 4).



Rural residents reported higher rates of regular medical check-ups compared to urban residents (32.0% vs. 23.5%,  $p = 0.02$ ).

**Fig. 4** Distribution of healthcare utilization (regular, occasional, no check-ups) among participants overall and by place of residence

Dietary habits analysis indicated that 84% of participants had regular meals and breakfast. Daily fruit consumption was reported by 43% of respondents, while 35% consumed fruit two to three times per week. Fried food consumption was relatively high, with 52% consuming it two to three times per week and 14.5% consuming

it daily .

A total of 58 participants (29%) were current smokers, while 36% had smoked at some point in their lives. Among smokers, the majority (72.2%) consumed more than 18 cigarettes per day, and most had been smoking for more than 11 years.

Alcohol consumption was reported by 56% of participants, with vodka being the most commonly consumed beverage (60.7%). Approximately 20.2% of respondents reported daily alcohol consumption, while 50.9% consumed alcohol on special occasions (Table 1) .

## Discussion

The obtained results demonstrate significant differences in lifestyle patterns between urban and rural elderly populations. Elderly residents of Goris city exhibited higher levels of education; however, they were more likely to lead a sedentary lifestyle, consume fried food more frequently, and engage in harmful habits such as smoking and alcohol consumption.

In contrast, rural elderly residents were more physically active and more likely to maintain regular daily routines, including optimal sleep duration and balanced dietary habits. These findings are consistent with the notion that rural lifestyles often involve greater physical activity and more traditional nutrition patterns, which may positively influence health outcomes.

At the same time, despite more favorable lifestyle characteristics, rural populations demonstrated lower utilization of healthcare services, which may negatively affect early disease detection and management. This highlights the presence of barriers to healthcare access in rural areas, including geographical, informational, and socio-economic factors.

The analysis of harmful habits revealed a higher prevalence of smoking and alcohol consumption among urban residents, which may contribute to increased morbidity and reduced life expectancy. These findings emphasize the need for targeted preventive interventions focusing on behavioral risk factors.

Overall, the results indicate that lifestyle factors play a crucial role in determining the health status of the elderly population. The identified differences between urban and rural residents underline the importance of developing differentiated public health strategies aimed at improving healthy lifestyle behaviors and enhancing access to healthcare services in both settings.

## Conclusions

The findings of the present study indicate significant differences in lifestyle patterns between elderly residents of Goris city and those living in adjacent rural communities. It was revealed that urban elderly have a higher educational level; however, they are more likely to lead a sedentary lifestyle, adhere to less healthy dietary patterns, and engage more frequently in harmful habits such as smoking and alcohol consumption. These factors may negatively affect their overall health status and quality of life.

In contrast, rural elderly residents are more engaged in physical labor and maintain a more active lifestyle. Their dietary habits are generally more balanced, and their sleep duration more often meets recommended health standards, which may contribute to increased life expectancy. However, despite these favorable lifestyle characteristics, the frequency of seeking medical care among rural elderly is considerably lower, which may hinder early diagnosis and timely management of diseases.

The higher prevalence of medication use, as well as tobacco and alcohol consumption among urban residents, further emphasizes the existence of behavioral risk factors that require targeted intervention. At the same time, limited healthcare utilization in rural areas reflects existing barriers to access, including geographical and socio-economic constraints.

Based on the obtained results, it can be concluded that improving the health and quality of life of the elderly population requires the development and implementation of differentiated, evidence-based preventive strategies tailored to the specific characteristics of urban and rural settings.

Considering the identified patterns, it is recommended to develop and implement programs aimed at increasing physical activity among urban elderly, including the creation of accessible recreational infrastructure and opportunities for regular outdoor activities. Educational interventions promoting healthy and balanced nutrition should also be strengthened. In addition, targeted counseling and support programs should be introduced to reduce tobacco and alcohol consumption among elderly individuals.

Taking into account the low level of healthcare utilization among rural populations, it is essential to expand access to medical services through the organization of mobile clinics, preventive screening programs, and awareness campaigns. Improving the availability and affordability of healthcare services, particularly in remote

rural communities, is crucial for ensuring early detection of diseases and enhancing overall health outcomes.

The above conclusions and recommendations pro-

vide a basis for the development of effective public health policies aimed at promoting healthy aging and improving the well-being of the elderly population.

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## ԱՄՓՈՓՈՒՄ

## ՍՅՈՒՆԻՔԻ ՄԱՐԶԻ ԳՈՐԻՍ ԶԱՂԱՔԻ ԵՎ ԶԱՐԱԿԻՑ ԳՅՈՒՂԵՐԻ ՏԱՐԵՑ ԲՆԱԿՉՈՒԹՅԱՆ ԱՌՈՂՋ ԱՊՐԵԼԱԿԵՐՊԻ ՄԱԿԱՐԴԱԿԻ ԳՆԱՅԱՏՈՒՄԸ ԵՎ ԶԱՍԵՄԱՏԱԿԱՆ ՎԵՐԼՈՒԾՈՒԹՅՈՒՆԸ

Ալեքսանդրյան Գ.Վ., Մկրտչյան Ս.Գ., Հովհաննիսյան Ս.Գ.  
ԵՊԲՀ, հիգիենայի և էկոլոգիայի ամբիոն

**Բանալի բառեր՝** տարեցներ, առողջ ապրելակերպ, ֆիզիկական ակտիվություն, նստակյաց կենսակերպ, սննդակարգ, վնասակար սովորություններ, առողջապահական ծառայությունների մատչելիություն, Սյունիքի մարզ:

Սույն հետազոտության նպատակն է գնահատել Սյունիքի մարզի Գորիս քաղաքի և հարակից գյուղերի տարեց բնակչության առողջ ապրելակերպի մակարդակը:

Հետազոտության արդիականությունը պայմանավորված է տարեց բնակչության ավելացող քանակով և նրանց առողջության պահպանման անհրաժեշտությամբ:

Ուսումնասիրության մեջ ներառվել է 65-90 տարեկան 200 մասնակից՝ 100 քաղաքային և 100 գյուղական բնակիչ: Կիրառվել է քանակական, ընտրովի հատույթային հետազոտության դիզայն: Տվյալները հավաքվել են կառուցվածքային հարցաթերթիկի միջոցով:

Հարցաթերթիկում ներառվել են սոցիալ-ժողովրդագրական տվյալները, քնի տևողությունը, ֆիզիկական ակտիվությունը և սննդակարգը:

Վերլուծվել են նաև վնասակար սովորությունները և բժշկական զննությունների հաճախականությունը: Արդյունքների վերլուծությունը ցույց է տվել, որ քաղաքային բնակիչներն ունեն կրթական ավելի բարձր մակարդակ: Միաժամանակ, նրանք ավելի հաճախ վարում են նստակյաց կենսակերպ:

Գյուղական բնակիչների շրջանում գերակշռում են ֆիզիկական աշխատանքը և ակտիվ կենսակերպը: Նրանց շրջանում ավելի հաճախ են արձանագրվել առողջ քնի տևողություն և հավասարակշռված սննդակարգ:

Բացի դրանից, քաղաքային բնակիչների շրջանում ավելի մեծ է ծխելու և ալկոհոլ օգտագործելու տարածվածությունը:

Հայտնաբերվել է, որ գյուղական բնակչությունն ավելի քիչ է դիմում բժշկական օգնության: Սա կարող է խոչընդոտել հիվանդությունների վաղ հայտնաբերումը և կանխարգելումը: Ուսումնասիրությունը վկայում է, որ կենսակերպը կարևոր դեր ունի տարեցների առողջության դեպքում: Ստացված արդյունքներում հիմնավորվում է նպատակային կանխարգելիչ ծրագրեր մշակելու անհրաժեշտությունը:

## РЕЗЮМЕ

## ОЦЕНКА И СРАВНИТЕЛЬНЫЙ АНАЛИЗ УРОВНЯ ЗДОРОВОГО ОБРАЗА ЖИЗНИ СРЕДИ ПОЖИЛОГО НАСЕЛЕНИЯ ГОРОДА ГОРИСА И СЕЛЬСКИХ ОБЩИН СЮНИКСКОЙ ОБЛАСТИ

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**Ключевые слова:** пожилое население, здоровый образ жизни, физическая активность, малоподвижный образ жизни, питание, вредные привычки, доступность медицинской помощи, Сюникская область.

Целью настоящего исследования было оценить уровень здорового образа жизни среди пожилого населения города Горис и прилегающих сельских общин Сюникской области Республики Армения, а также провести сравнительный анализ между городскими и сельскими жителями. Актуальность исследования обусловлена увеличением доли пожилого населения и необходимостью оценки факторов, влияющих на их здоровье и качество жизни.

Проведено количественное, выборочное, поперечное исследование. В исследовании приняли участие 200 респондентов в возрасте 65-90 лет (100 городских и 100 сельских жителей). Сбор данных осуществлялся с использованием структурированного опросника, включающего вопросы о социально-демографических характеристиках, режиме сна, уровне физической активности, питании, вредных привычках и частоте профилактических медицинских осмотров.

Результаты показали, что пожилые жители города Горис имеют более высокий уровень образования, однако чаще ведут малоподвижный образ жизни, чаще употребляют алкоголь и табак, а также придерживаются менее рационального питания. В сельской местности преобладают физический труд и более активный образ жизни, рацион питания является более сбалансированным, а продолжительность сна чаще соответствует рекомендуемым нормам, что может способствовать увеличению продолжительности жизни.

В то же время сельские жители значительно реже обращаются за медицинской помощью, что может препятствовать раннему выявлению заболеваний. У городских жителей выше распространенность приема медикаментов.

Полученные результаты свидетельствуют о необходимости разработки и внедрения целевых профилактических программ, направленных на формирование здорового образа жизни среди пожилого населения, а также повышения доступности медицинских услуг, особенно в сельских районах.