

## **Analysis of the Factors of Longevity by The Data of Survey of the Long-Livers of Lankaran City**

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**The aim of the study was to substantiate and systematize medico-social approaches to the analysis of gerontological problems. The object of research is long-livers, as a specific socio-demographic group of society. The study included 54 indigenous inhabitants of the city of Lankaran, whose age varied from 85 to 118 years. The conducted study confirmed the importance of behavioral factors of active longevity. From interviews with longevity it becomes clear how much attention during their life was given to them by physical education, diet. The absence of bad habits, coupled with high physical activity, significantly reduces behavioral risk factors in the elderly. But most importantly, what was the most important conclusion that at the heart of longevity, at its very core, lie two important concepts - mutual understanding and love. It is very important to love and be loved throughout life.**

**Keywords:** *long-livers, longevity, analyzes, Lankaran*

### **INTRODUCTION**

According to UN estimates, the world's population aged 60 and over had 600 million people in 2000, almost three times the size of this age group in 1950 (205 million people). In 2009, it exceeded 737 million people, and by 2050 will be more than 2 billion people, once again tripling over a period of 50 years. According to the long-term forecasts of the United Nations, by 2025 the population of the globe will triple in comparison with 1950, and the number of elderly people will increase 6 times, while the number of elderly people over 80 will increase 10 times (Global aging ..., 2012; Shcherbakova, 2012).

The aging process is not unique, it is associated not only with processes of extinction, but also with the emergence of adaptive mechanisms for their suppression and compensation. Various kinds of changes in a person as an individual, occurring in the elderly and old age, are aimed at actualizing the potential, reserve opportunities accumulated in the body during growth, maturity and emerging during late ontogeny (Berdyshev, 1968; Golubev, 2009; World report on aging..., 2015). In old age, not only the activity of some genes is extinguished, but others are stimulated, which ensure a high level of viability of an elderly person. Old age is both an offensive and the possibility of victory over extinction. A healthy lifestyle just helps stimulate offensive genes. A healthy lifestyle, as a system, consists of three main interrelated and interchangeable elements: the culture of nutrition, the culture of

movement and the culture of emotions. It is characteristic that over the past 20 years the number of elderly people aged 85 and older has more than doubled (Berdyshev, 1968; Zhilkina and Dubovitskaya, 2008; Buttner, 2012; Dobrokhleb, 2012).

Countries, meeting at the World Assembly on Aging in 1984 recognized that the quality of life is as important as its longer duration, and therefore aging should, as far as possible, allow living in their own families fruitful, healthy, safe and satisfying life and be considered an organic part of society. In its resolution, the UN World Assembly adopted an action plan on aging and encouraged many countries to develop their national policies and programs for the elders (Tatarinova and Nikitin, 2008; Savchenkov and Sosedova, 2011; Soloviev, 2015).

In this regard, the problem of not just longevity, but active longevity, which is expressed both in the preservation of a satisfactory state of health in old age and in the possibility of prolonging the period of labor activity in old age acquires particular importance (Lee and Mason, 2015; World Population Prospects..., 2015; Pstrom et al., 2006).

The purpose of the study is:

- substantiation and systematization of medical and social approaches to the analysis of gerontological problems

The attainment of the goal is achieved by solving the following problem, which presupposes:

- analysis of the real life style of long-livers of the city of Lankaran, Azerbaijan under conditions of fundamental transformations of public life;

**MATERIALS AND METHODS**

The object of research is long-livers, as a specific socio-demographic group of society. The study included 54 indigenous inhabitants of the city of Lankaran, whose age varied from 85 to 118 years.

The subject of the study is the way of life of long-livers.

Modern methods of studying the quality of life.

In our study, we relied on the following methods for determining the quality of life in long-livers:

- 3 approaches to the definition of quality of life:
  1. through subjective well-being;
  2. through social opportunities (capabilities);
  3. through a fair distribution of "objective" resources (social fairness);
- 8 dimensions of complex well-being or well-life:
  1. standard of living (income, consumption, wealth, housing);
  2. health;
  3. education;
  4. personal activity (work, unpaid work, rest, etc.);
  5. political voice, participation, activity;
  6. social relations and relationships;
  7. The environment (in a narrow and broad sense – i.e., including ecology, the state of the environment, current and future);
  8. Insecurity (personal physical and economic security).

The main approaches to the definition of QOL in old age:

- ✓ Objective social indicators;
- ✓ Satisfaction of human needs;
- ✓ Subjective social indicators (based on standard psychological tests);
- ✓ Social capital;
- ✓ Ecology and environment resources;
- ✓ Health and functioning;
- ✓ Psychological models;
- ✓ Hermeneutical approaches.

**RESULTS AND DISCUSSION**

Almost all interviewed noted that among their relatives were long-livers, but these are mostly grandfathers or grandmothers or uncles and aunts.

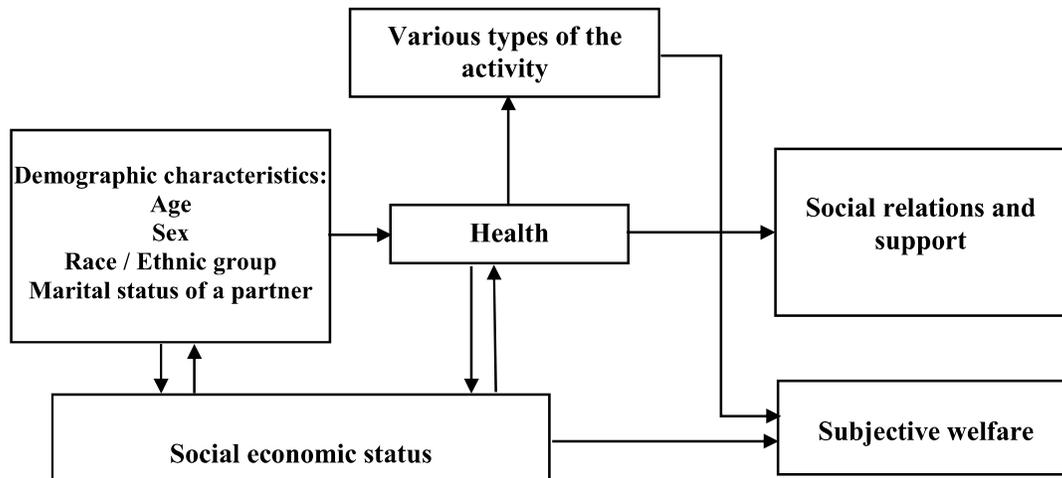
And the overwhelming majority are the women. Direct inheritance of longevity from parents was not revealed.

In the conducted study, we did not reveal the leading role of genetic factors, i.e. it is necessary to study in more detail other factors and, above all, the form and conditions of life.

Long-livers preferred walking all their lives, but, unfortunately, in the last 10 to 12 years, due to sharp changes in the bone system, most have limited motor activity.

The next important element in the formation of the "basis" of longevity is the observance of diet. Features of nutrition in old age are associated with the emerging changes in the digestive system: a decrease in functional activity and atrophy of the glandular epithelium of the stomach, intestines, and liver and pancreas, which together lead to a decrease in the secretion and activity of the produced enzymes.

**Conceptual model of the determinants of subjective well-being**



The motility of the gastrointestinal tract, digestion and absorption in the intestine are weakened. It is necessary to balance nutrition rationally in accordance with the age, metabolism and energy consumption of the organism. In connection with the decline in assimilating processes in elderly people and the restriction of energy consumption, the need for food in them is reduced to 1900-2200 kcal.

For the elders, four meals a day are recommended, and at a strictly defined time. The first breakfast in 8-9 hours includes 25-30% of the daily ration, the second breakfast at 12-14 hours - 10-15%, lunch at 17-18 hours - 45-50%, dinner at 20-21 hours - 10-20 %. If an elderly person is genetically predisposed to fullness, it is better to eat 5-6 times a day, but little by little, low in calories - at small intervals between meals. Late dinner deprives the rest time of secretory apparatus, which leads to overstrain and exhaustion of the digestive glands. Supper should be easy: a glass of milk, kefir, curdled milk, tomato or fruit juice, fresh fruit, berries. Drinking tea or coffee should not be fulfilled, because they excite the nervous system and disturb sleep.

Sour-milk products have a beneficial effect on the body - stimulate the secretory activity of the stomach, prevent rot in the intestines and normalize peristalsis, well affect the nervous system and metabolism. I.I. Mechnikov believed that one of the causes of aging are the poisons that form in the intestines as a result of the life activity of putrefactive bacteria. Acidic environment for them is unfavorable.

Therefore, the scientist suggested that bacteria of lactic acid fermentation be introduced into the body, which are contained in kefir, curdled milk and similar products.

Basic principles of nutrition in old age:

1. Limitation of consumption of animal fat, contained: in fatty meat, poultry; in dairy products - butter, cream, sour cream; cholesterol-containing products - products, egg yolks, fish eggs. The predominant use of dishes cooked without the addition of fat is in boiled, baked, stewed, or steamed, in a microwave oven, using Teflon-coated dishes.

2. The restriction of added sugar to 30-50 grams, consumed in the composition of various beverages (tea, coffee, compotes, carbonated soft drinks and sour-milk drinks), sweets and confectionery.

3. Restriction of table salt to 5 g per day for cooking, as well as foods high in salt, usually meat and fish delicacies.

4. Enrichment of the diet with polyunsaturated fatty acids. They are contained in vegetable oils (sunflower, olive, linseed, soybean, rapeseed), fatty fish (mackerel, sardines, herring, halibut, catfish, salmon and other kinds of fish from cold seas).

5. The use of sour-milk drinks with low fat content, enriched with useful microorganisms - probiotics.

6. Eating foods rich in dietary fiber. These are raw and boiled vegetables, a variety of fruits and berries, bran and whole wheat bread.

7. The use of foods with high content of magnesium and potassium salts. Among such products - millet, rice, oatmeal, prunes, dried apricots, cabbage, carrots, beets, potatoes, nuts, milk, beef, bran or whole grain bread.

8. The use of products - sources of vitamins C and important for the health of other biologically active substances: broth of wild rose, oranges, sweet red pepper, blueberries, currants, parsley, dill, green onions, gooseberries.

9. Use of foods with high content of B vitamins: bread from wholemeal, bran, legumes; cereals: buckwheat, oatmeal, millet; dairy products, fish.

Meals with relatives and friends, as well as communication with them, also have a positive effect on the well-being and health of the elderly.

Products that need to be consumed regularly in old age: oatmeal and other cereals 1-2 times a day; beans - daily, but at least 3-5 times a week; sour-milk drinks 1-2 times a day; mackerel, herring, sardines, etc. "fatty" fish at least 3 times a week; fruits and berries 1-2 times a day, parsley, dill, coriander, etc. leaf greens - 1-2 times a day; cabbage and other vegetables 1-2 times a day; potatoes - 4-5 times a week; nuts, seeds - every day.

The data obtained during the interviews indicate that almost all the respondents observed the diet in varying degrees throughout their lives. With age, the order of eating was given even more attention. Firstly, many respondents noted that over the course of their life they used mainly natural products, often grown on their own plots. Secondly, it was noted that the most important element of the diet is breakfast, which must necessarily include protein foods (eggs, cottage cheese, milk).

*Bad habits.* When talking about behavioral risk factors in older age, in addition to low physical activity, alcohol and tobacco consumption are often mentioned. The absence of bad habits is one of the secrets of active longevity. This thesis was confirmed in the course of the research: in the overwhelming majority of respondents said that throughout their lives they did not abuse alcohol and tobacco products. The maximum that some of the respondents could afford was the consumption of alcoholic beverages on holidays and in small quantities.

If in foreign studies part indicates the existence in the life of a long-lover of any hobby, then our subjects allocated only work on their own site.

Effective recovery is unthinkable without achieving mental health. A person with an exhausted nervous system experiences spiritual and physical fatigue. Outstanding modern pathologist G.Selye considered the disease solely as pathological stress or distress. He argued that stress is not what happened to you, but how you perceive it.

All long-livers are people who are well-disposed, big optimists who are able to even see joy in a small one. Smile, laughter transform a person. He will always be welcome in any company, in any society. Laughter is a sign of joy, cheerful mood and mental health.

Along time ago, Doctors included "laughter" in the arsenal of medicines. Laughter favorably affects the work of the lungs, regulates metabolism. Three minutes of laughter is more useful than 15 minutes of gymnastics. V.Shakespeare wrote: "If you did not laugh during the day, it means that you spent that day in vain."

But, it should be noted that optimism is not a natural quality. It is necessary to educate the mood, to be able to control oneself. With retirement, it becomes possible to regulate the rhythm of life. A feasible variety of work with a reasonably organized rest, careful attitude to the nervous system is a pledge of health, a long life.

*Stressful situations* were helped by strong family and friendly ties. For the respondents we observed, the situation is very typical.

The factor of longevity - both social ties,

*Social ties.* An active life position promotes the expansion and maintenance of a wide range of social ties. First of all, it should be noted that in the immediate environment of the respondents are usually relatives. Practically in all cases, the families of long-livers include a sufficiently large number of children, grandchildren and great-grandchildren. Wisdom is the basis for fulfilling one of the most important socio-cultural functions of the older generation - the transfer of life experience, and it finds its embodiment mainly in the family circle. In the main body, the subjects lived together with their children. Long-livers play an important unifying role in their families, which, among other things, allows the formation of family traditions.

*Labor activity.* The most striking feature of the interviewed long-livers is the length of the period of work. All of them started their labor path from a young age.

*Standard of living.* With regard to the financial situation of the respondents and housing conditions, at the current moment they can be called satisfactory: long-livers do not experience inconveniences in terms of the comfort of living, as well as the acute need for any goods or services. At the same time, the material and housing well-being of the respond-

ents is explained not only by the socially-oriented nature of state policy aimed at improving the level and quality of life of older citizens, but their residence in the family is of great importance.

Thus, the study confirmed the importance of behavioral factors of active longevity. From interviews with longevity it becomes clear how much attention during their life was given to them by physical education, diet.

The absence of bad habits, coupled with high physical activity, significantly reduces behavioral risk factors of the elders.

But most importantly, what was the most important conclusion that at the heart of longevity, at its very core, lie two important concepts - mutual understanding and love. It is very important to love and be loved throughout life.

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### **Lənkəran Şəhərində Uzunömürlülülərin Müayinəsinin Nəticələrinə Əsasən Uzunömürlülük Faktorlarının Təhlili**

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Tədqiqatın məqsədi herontoloji problematikanın təhlilinə tibbi-sosial yanaşmanı sistemləşdirmək və əsaslandırmaqdan ibarətdir. Tədqiqatın obyektı cəmiyyətin spesifik sosial-dəmoqrafik qrupu kimi uzunömürlülər olmuşdur. Tədqiqata Lənkəranın yerli əhalisindən olan 54 nəfər daxil edilmişdir. Aparılan söhbətlər məlum olmuşdur ki, onlar tərəfindən bədən tərbiyəsi, qida rejiminə çox böyük əhəmiyyət verilmişdir. Zərərli vərdişlərin olmaması böyük yaş qruplarında davranış faktorlarını aşağı salır. Lakin əsas məsələ odur ki, uzunömürlülüyn əsasını iki məhfum təşkil edir- qarşılıqlı anlaşıma və məhəbbət. bütün ömür boyunca sevmək və sevimli olmaq çox vacibdir.

**Açar sözlər:** *Uzunömürlülər, uzunömürlülük, müayinələr, Lənkəran*

### **Анализ Факторов Долголетия По Данным Обследования Долгожителей г. Ленкорани**

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Целью исследования явилось обоснование и систематизация медико-социальных подходов к анализу геронтологической проблематики. Объект исследования - долгожители, как специфическая социально-демографическая группа общества. В исследование включены 54 коренных жителя г. Ленкорани, возраст которых варьировал в диапазоне от 85 до 118 лет. Проведенное исследование подтвердило важность поведенческих факторов активного долголетия. Из бесед с долгожителями становится понятно, как много внимания на протяжении жизни уделялось ими занятиям физкультурой, режиму питания. Отсутствие вредных привычек вкупе с высокой физической активностью заметно снижает поведенческие факторы риска в старших возрастах. Но самое главное, что явилось самым важным выводом, что в основе долголетия, в самом ее корне, лежат два важных понятия – взаимопонимание и любовь. Очень важно на протяжении всей жизни любить и быть любимым.

**Ключевые слова:** *Долгожители, долголетие, анализы, Ленкорань*