VILNIUS UNIVERSITY
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INTERACTION BETWEEN AGE AND QUALITY OF LIFE CONDITIONED BY THE HEALTH

Summary of doctoral dissertation
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ABBREVIATION

EU	– European Union
QL	– quality of life
KMU	– Kaunas University of Medicine
WHO	– World health organization
GDP	– gross domestic product
PS	– physical functioning sphere
MS	– mental functioning sphere
IS	– independence sphere
SRS	– social relations sphere
ES	– environment sphere
SS	– spirituality sphere

INTRODUCTION

Evaluation of the quality of life is a difficult task. Each person is satisfied or dissatisfied with his or her life mainly because of the personal reasons. People need at least elementary material wellbeing that is seen by everyone in a different way. But the material wellbeing alone doesn‘t yet make a person happy. Such life where faced problems can be successfully solved is better for the person. As there are a lot of and very different problems, the most important and universal factors are selected for the evaluation of the human and society life. In the first place these factors were material things. Despite this, a human being is full not only with bread. Happiness of the people is determined not only by conditions of living and distribution of material resources, but also by subjective evaluation of the own life when establishing physical, social and mental health, feeling, values, priorities of life, possibility and freedom to make decisions, political, cultural, economical and ecological ideal. Life as integral whole of people presence and being covers everyday aspects, work, celebrations, holidays, social and economical relations, value system sphere. Accordingly to the modern conception of the sustainable development, the quality of life is a result of interaction of social, economical and environmental factors. The modern conception of the quality of life understood …" as particular social construct consisting of distinct social dimensions". The society itself is building own, acceptable model of the life quality where the quality of life means a level of complete satisfaction with one's life.

Ageing society has features of risk. When society is ageing its' physical and social power is also decreasing and this means that its' potency to act in active and productive way is also decreasing. In other words, ageing of the society unavoidably raises risk for the public health.

Given prominence of health to the quality of life is very important because it can be rated as the main component of the quality of life that has impact on the all other spheres of life. Health is physical, social and mental power of human and society and investment to the health is both investments to the quality of the society development. Health as a component of quality of life becomes important both physical and social factor that is also included in the human social development index. It is stated in one of the first definitions of the life quality presented by World health organization in 1993 that the quality of life is an individual evaluation of own purpose in life in the view of cultural and value system where an individual lives, relevant with his or her purposes, hopes, standards and interests. It is a broad conception that is influenced in a complex way by physical health and psychological state of the person, his or her level of independence, social connections and connections with the environment. It is discussed in the WHO strategy "Health 21" not only about the quality of life as a resource of life but also as about the possible risk of life that occurs because of the social and economical inequality, effect of the environment pollution on health. Resources and risk of the health become concepts of the modern health theory and these concepts can be also acceptable to the up-to-date analysis of the quality of life and evaluation system.

Currently there are a lot of methodologies for the evaluation of the quality of life created both in the countries of West Europe and in the USA. Majority of them are grounded on the multi-disciplinary, systemic principles. While discussing problems and opportunities of the qualitative studies of the quality of life G. Janušauskaitė is stating that currently the attention is paid more to the qualitative evaluations of the life balance

than to the quantitative evaluations. Meanwhile in the some countries and in Lithuania the studies of the quality of life are more focused on the fields of health and medicine. Majority of them are related with the clinical nature problems and are intended for the analysis of different situations mainly relevant with the health. It is important local studies. But the problem is that a sum of similar local studies can‘t provide the whole picture about the quality of life as the general wellness.

While at least partly solving in this paper before mentioned problem we are attempting to connect in a systematic way the two important factors of the modern quality development of life – ageing of the society as an important latter-day social phenomenon and significance of the health effect to the quality of life. We are hypothetically establishing following thesis: while society is ageing the increasing social risks exceeds its' life resources and causes the impairment tendency of the quality of life. The process can be corrected while increasing proportion of social development resources-risk for the account of risk decreasing.

In our paper it is tried to solve this problem on the grounds of systematic viewpoint. Considering this systematic viewpoint we are describing the quality of life as a purposeful social system. This selection is grounded on the methodological holism, (systematic viewpoint), paradigm. When describing the quality of life as a purposeful social system we are naming it as social construct of the higher, in qualitative way different level, when this construct can be understood as a systematic result of produced by the interaction between human health and social development elements. The social interaction is understood as a process including inter-actions and reactions of the subjects participating in the interaction. Their actions and reactions are understood in the broad meaning, i.e. while understanding and controlling oneself as a social subject in the spread of life. The different age individuals and their populations are the subjects in our paper. The social purposefulness of the quality of life in this work is identified with the systematic priorities of the quality of life.

Purpose of the work

To analyze systematic connections between social factors and the quality of life conditioned by the health of city residents

Tasks

1. To analyze tendencies of the changing priorities of the quality of life while the age of people is increasing.
2. To study particularities of the interaction between the quality of life and social factors.
3. To evaluate the interaction between the factors of the quality and life and age.
4. To compare proportion between the resources of the quality of life and risk while the age is changing.
5. To predict the prognostic influence of social factors to the development of the quality of life.

Novelty

Under the scientific point of view it is new in this paper that the health causal change of the quality of life with age is analyzed in the wholeness point of view when a

lot of interdependent factors are acting meanwhile these factors are establishing new integral, directly immeasurable factors. A new, original methodology of the research was created where causal and probability factors of the quality of life, health, social, economical and also environmental factors were integrated into a one undivided wholeness used as a base of innovative scientific attitude towards the social processes of public health.

Under the practical point of view – obtained results can be used for the observation of change in the public health and the quality of life in our suggested "chain of observation". And the new factors can be used while establishing development policy of the quality of life and public health.

DEFENDED STATEMENTS

1. Different determination forms condition different priorities of the change of life quality under the different age.
2. Interaction of the quality of life and the social factors with the age forms latent integral factors of the quality of life.
3. Change of the quality of life and age links is indirect social process.
4. As the time increases the social risk of the quality of life is also increasing.
5. The quality of life of Vilnius city residents is mostly influenced by integral effect of the physical and social health.

OBJECT AND METHOD OF THE RESEARCH

Object of the research

On the grounds of the law of large numbers, a sample of 1200 persons was formed under the quota of age and gender.

An order for the State data protection inspectorate regarding establishment of the random sample was presented. State data protection inspectorate has made decision regarding issuance of the permission in 2005, on the 27th of January, No. 2R-275(2.6). After making an agreement of data proving No. 29 grt-s-367, twice as big sample was formed: 2400 persons over 18 years and older, because it was forecasted earlier that not all respondents will be participating in the research.

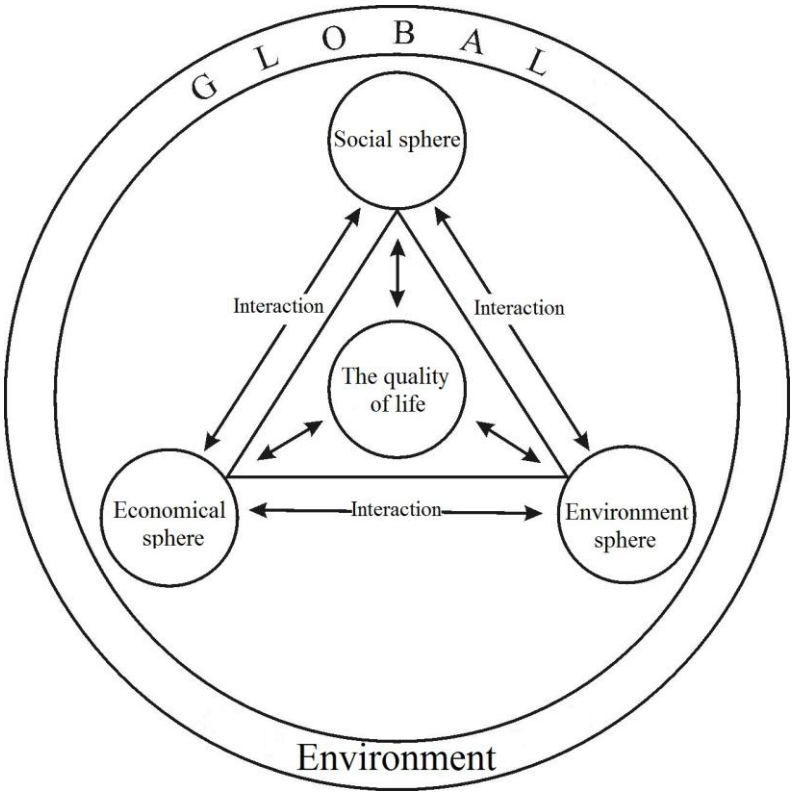
18 years old and older residents of Vilnius city were surveyed in the research. The sample is representative, random, probability, the quota of age and gender was applied. The sample was formed accordingly to the information about demographical composition of Vilnius city residents provided by the Government of the Republic of Lithuania in 2004, on the 1st of January.

Also a permission No. 8 to perform the research of Lithuanian Bioethics Committee was received 25-02-2005.

Method of the research

Theory

Methodological basement of the paper is systematic viewpoint. The main its' matter is that interaction of health, social, economical, environment and age elements that forms the quality of life is an *integral, purposeful social system*. And the purpose of this system functioning is the quality of life (1 illustration).



1 illustration. Establishment system of the quality of life

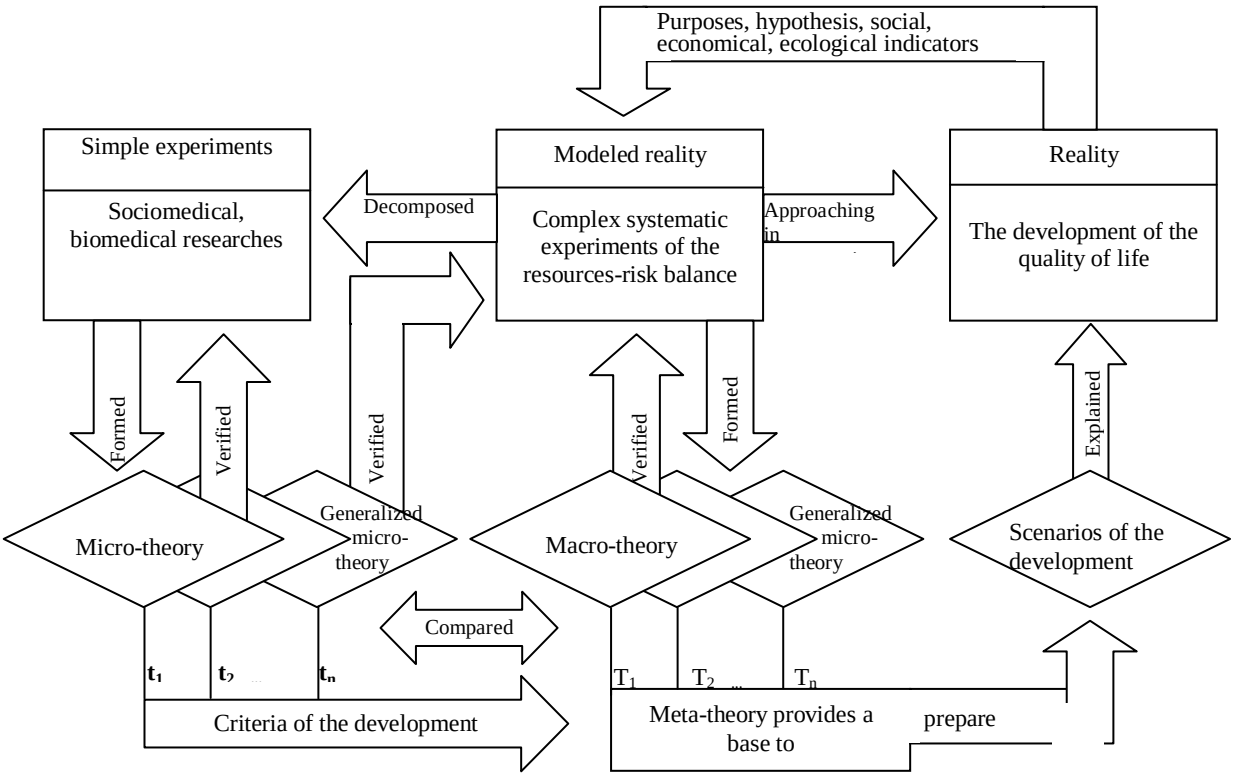
Functioning of the system is inseparable from its' development that in general case can be positive or negative. The efficiency of development is determined by *balance of sustainable development, its' positive and negative elements*, when this balance in our research is identified by the relation between resources that forms the development of the quality of life and the risk. If resources of the development are marked with letter I and the risk is marked with letter R, index of the quality of life development shall be expressed in the following inequality:

$$dI<d(I/R).$$

This means that development quality is positive when the changes of resources are lower than the changes of relation between the resources and risk.

Methodological scheme of the research

The new and essential feature of the integral, systematic scheme presented in the 2 illustration is that it is tried to match in it biomedical, deterministic research model that is inefficient in the field of the public health with the modern synergic nonlinear model. On the grounds of this model and systematic viewpoint the direction of analysis is changed from the wholeness to the elements, but not is the same way as earlier in the biomedical model when elements were used in order to establish wholeness. Considering purpose of the research an integral wholeness is established, also its' functioning purposes, indexes, hypothesis are formed and the priorities are accentuated.



2 illustration. *Scheme of the integrated research of the quality of life*

We tried to solve this in the first task (2 illustration, reality block). The integral latent factors that are established in the interaction between the quality of life and the social link are determined by the second task, with factorial analysis method when using indexes selected in the first task. In the third task the obtained systematic wholeness of the quality of life was decomposed into the separate systematic elements on the base of relation between resources-risk. Further the synthesis of the obtained results begins while comparing them with the situation of the wholeness. Synthesis of the results provides a base to generalize quality of the development and to prepare the possible scenarios.

Description of the research questionnaire

Questionnaire "Integrated research of the health, environment and the quality of life" was prepared for the identification of the reality block. Questionnaire consisted of the international the quality of life questionnaire WHOQoL-100, brief WHO social health questionnaire; mental health questionnaire GHQ-28, and fragments and social and demographical indexes of the WHO questionnaire adapted in the State environment health centre "Accommodation and health" and "Resident and his/her environment". The prepared questionnaire of the integrated research was discussed and corrected in the working group and in the VU MF Public health institute.

Features forming the situation of the quality of life were evaluated by appropriate scales and grouped while applying methods of the mathematical statistics. The general health state was valued in the ordinal five points scale. The income was calculated in the money amount for one family member. In the analysis income was grouped under quintile principle. The social and environment indexes were valued in the nominal scale. The age was grouped into four groups of age: up to 29 y.o. – very young; 30-44 y.o. – young; 45-59 y.o. – average; 60 and more – the elderly and old.

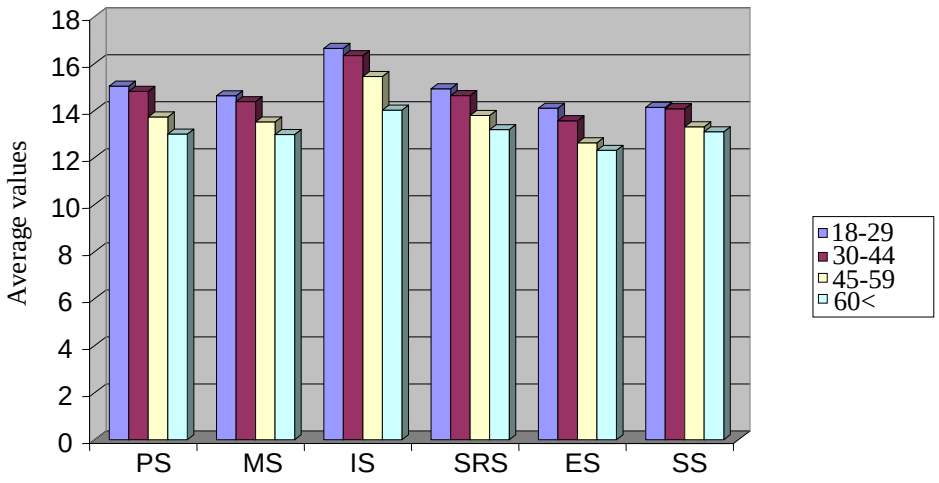
SPSS (Statistical Package for the Social Sciences) program (SPSS 16.0) was used for the data analysis.

RESULTS

1. Tendencies of the development of the spheres of the quality of life

We were attempting to accentuate the formal structure of the quality of life accordingly to the advance evaluation model of the quality of life, meanwhile the before mentioned structure consists of the spheres of the quality of life and aspects that are forming these spheres.

Distribution of the average values of the spheres of the quality of life in the different groups of age presented in the 3 illustration is showing that as people are ageing the quality of life is decreasing in the all spheres. If an average value of the physical functioning in the 18-29 age group was 15.04 (standard deviation 2.14), then in the age of 60 or more this value decreased to 13.00 (standard deviation 2.34). The average values of the mental functioning sphere agreeably were ranging from 14.62 (standard deviation 2.03) to 12.98 (standard deviation 1.87). Data presented in the illustration is showing that at least damaged is the sphere of independence – average values of this sphere is the highest in compare with other spheres. But as the age is increasing the independence is also decreasing from 16.65 (standard deviation 1.46) in the age group of 18-29 to 14.02 (standard deviation 2.62) among 60 years old and older people. Similar situation was observed in the sphere of the social relations where the average values decreased from 14.93 (standard deviation 2.16) in the young age to 13.19 (standard deviation 2.15) among the elderly people. The lowest average values of the quality of life were obtained in the environment sphere. These values were ranging from 14.09 (standard deviation 1.87) in the 18-29 aged population to 12.31 (standard deviation 1.75) among 60 years old and older people. When the age was increasing, spiritual flight was decreasing from 14.13 (standard deviation 2.97) in the young age of 18-29, to 13.10 (standard deviation 2.97) among the elderly and old people. Average values of the spheres of the quality of life presented in the illustration are showing that change of the values reaches the breaking point approximately at 40 years of age.

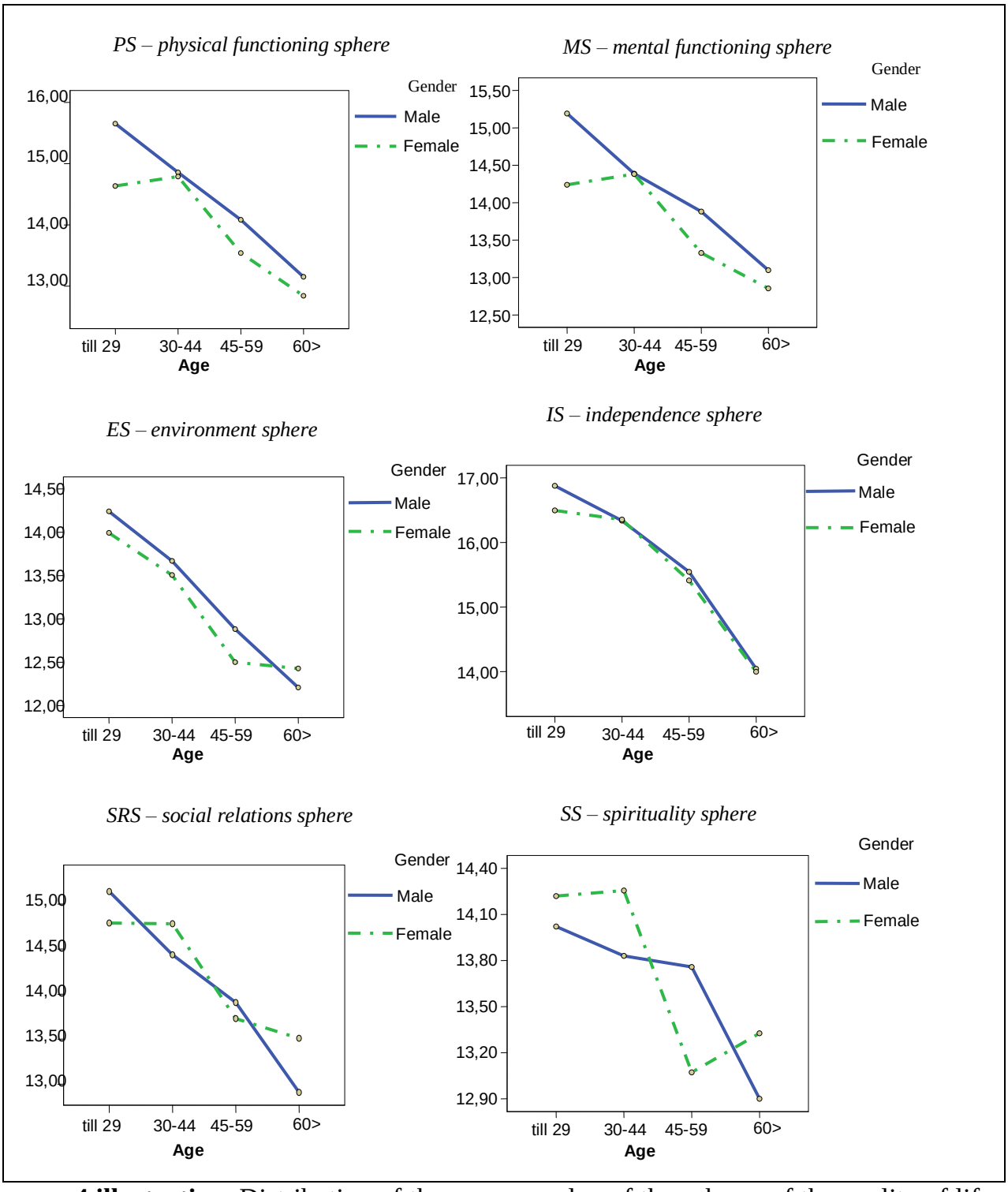


*PS – physical functioning sphere, MS – mental functioning sphere IS – independence sphere, SRS –social relations sphere, ES – environment sphere, SS – spirituality sphere.

3 illustration. Distribution of the average values of the spheres of the quality of life in the different groups of age

The quality of life, gender and age

The dependence of distribution of the average values of the spheres of the quality of life obtained under the dispersive analysis method on the groups of genders is presented in the 4 illustration.



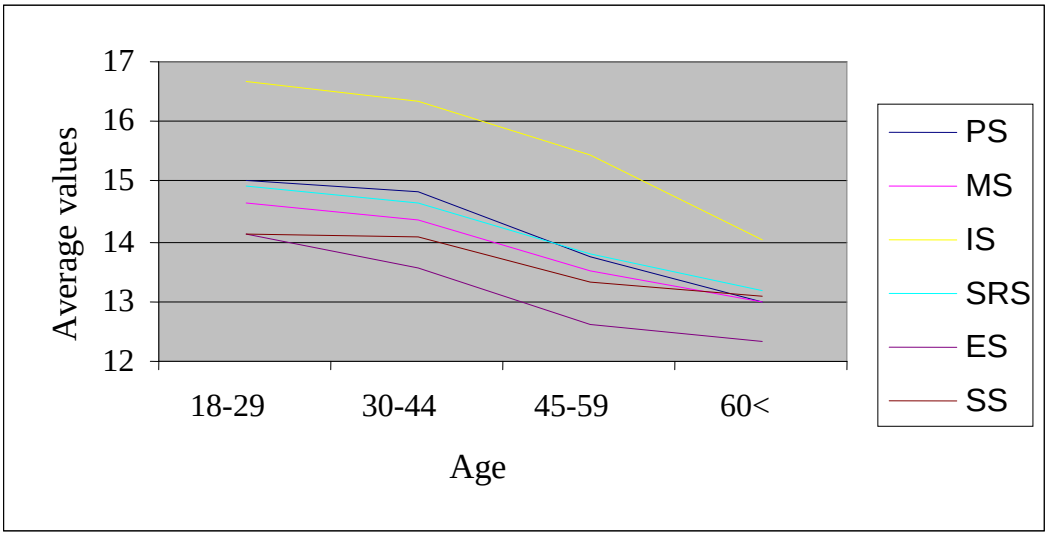
4 illustration. Distribution of the average value of the spheres of the quality of life accordingly to the gender

The data is showing that the general tendency is following: as the age is increasing the quality of life in all its' structural spheres is decreasing both for men and women

gender groups. Other more general feature is following: the quality of life of men in the young age, up to 29 years, in five spheres except mental is better than in the case of women. In general, the quality of life of men in all spheres is decreasing with age almost linearly, meanwhile in the case of women some rises and falls are observed. The quality of life of men was better in compare to women in the physical, mental functioning, environment and independence spheres, in the all groups of age.

A similar picture of the change in physical and mental functioning with age was obtained in the spheres. The quality of life of women in this sphere in the period of 18-29 age is lower when compared to men, but in the period of up to 30 year it is becoming better and reaches the value among men. Further the quality of life both of men and women in these spheres is decreasing equally, but in the case of women it is lower than in the case of men.

The change of average values in the spheres of environment and independence is almost equal in the all groups of age, except the case when for 45 aged women influence of the environment becomes almost insignificant.



5 illustration. The priorities of the spheres of the quality of life in the different groups of age

In summary it is worth to note that discussed spheres of the quality of life and factors that are forming it aren't discreet matters – they are related to each other in one or another way. This means that the phenomenon of the quality of life is an integral process of life. Also it should be acknowledged that influence of the age is very significant to the course of this process. It is showing a tendency that when the age of people is increasing, the quality of life has a tendency to decrease (5 illustration). Also the research have shown that in the range of analyzed scale the level of the quality of life isn't high. The sphere of the quality of life that was represented in the best way was independence sphere. The main factors of this sphere is ability of the people to move, ability of the people to perform everyday works, absence of dependence on the drugs and treatment and working capacity of the people. The mental sphere is represented in the worst way, meanwhile this sphere is formed by beliefs about the meaning of life, how the believes of person help him/her to understand and overcome hardships of the life, enjoy its' pleasures and other factors that reflect dignity of the person.

In this way presented results are showing that priorities of the quality of life is more oriented towards the people freedom reaching in the everyday domestic matters meanwhile ignoring entity and transcendental problems. When evaluating these results considering social ethics and priorities of values it can be hypothetically stated that we have faced a new phenomenon – risk of the quality of life.

2. Tendencies of the development of integral factors of the quality of life

The same variables of the questionnaire are forming the modelled latent structure of the quality of life, just in this case we are analyzing these factors while evaluating their inter-correlations. Considering correlation relations the latent factors are established and they are used for the formation of the new integral structure of the quality of life. We have performed this when applying factorial analysis method. In order to reach particular analogy with the earlier structure of the spheres of the quality of life, we have also established six latent factors (1 table).

First integral latent factor that is common for the all group of age is formed by eight variables of the social relations sphere, six variables of the mental health, four variables of the spirituality and environment spheres. In this situation variables of the personal beliefs, social support of the family and friends, self-confidence, positive feeling and sexual life are dominating. This integral variable consisting of simple variables of the four spheres of the quality of life can be named an integral factor - ***position of beliefs.***

People believe that they aren't completely lonely, they have positive hopes and when needed they can be understood in and adequate way. The factor explains 10.51 percent of the general dispersion. Its' average values ranges from -3.72 to 2.96 (1 table). The negative values mean weakening position of the beliefs, and, on the contrary, positive values mean strengthening of the beliefs. The positive values reached 51.8 percent and the negative 48.2 percent. Different of averages of the positive and negative values was statistically significant. This shows that level of the people self-confidence is a little bit higher than lack of self-confidence, although lack of self-confidence has "sharper" nature (average of the negative values is higher than the average of the positive value).

The second common integral latent factor was formed variables by the mental sphere, independence sphere and physical sphere. Variables of the mental sphere were more relative to the cognitive function, self-satisfaction, satisfaction with own body, abilities to focus the attention. The independent variables were relevant to the ability to move.

1 table. The average values of the integral latent factors

Integral latent factors	Average of factors				Difference between averages of positive and negative values		
	min	max	Pos.%	Neg.%	t	df	p
1. Position of beliefs	-3.72	2.96	51.8	48.2	-46.36	1222	0.000
2. Emotional discomfort	-3.47	2.93	51.1	48.9	-46.46	1222	0.000
3. Feeling of anxiety and pain	-3.95	3.46	55.6	44.4	-46.01	1222	0.000

4. Need for medicine	-4.18	2.59	57.4	42.6	-42.86	1222	0.000
5. Quality of health services	-3.98	3.44	52.4	48.9	-42.24	1222	0.000
6. Quality of the home environment	-3.38	3.37	49.2	50.8	-46.34	1222	**0.000**

These are particular psychological attitudes, possible inconveniences, particular possible discomfort that is felt when confrontation occurs with the two important beliefs or attitudes relevant with possibility to move because of senility or illness, because of own appearance or problems of body. In this paper we have called this integral latent factor ***emotional discomfort.*** When considering the important it is in the second place and explains 9.20 percent of the general dispersion. Its' average values ranged from -3.47 to 2.93 and their difference was significant statistically in 0,005 rate. The positive values mean lower discomfort and the negative values means highest discomfort. The positive values made 51.1 percent and negative values made 48.9 percent of all cases.

The third integral factor was formed by the variables of psychological, physical, social relations and independence spheres. Variables of the psychological sphere are relevant to the presence of the negative feeling. Variables of the physical sphere are relevant to the pain and presence of the involved discomfort. Variable of the dependence sphere was related with capability to perform everyday works. Considering the nature of these variables in our paper we have called the third integral variable as a factor of ***anxiety and pain feeling.*** It explained 6.74 percent of the general dispersion and the average values ranged from -3.95 to 3.46. The positive values made 55.6 percent and negative values – 44.4 percent. Significant ($p<0.05$) difference was obtained between the average values describing positive and negative situation of the anxiety and pain.

The fourth integral factor was formed by independence and physical sphere variables. Variables of the independence sphere were relevant to the dependence on the treatment and drugs and involved working capacity problem, and variables of the physical sphere were relevant to the problems of sleep and rest. This integral factor we have called in our paper as a factor of ***need for medicine***. It explained 6.57 percent of the general dispersion, meanwhile the average values ranged from -4.18 to 2.59. Positive values made 57.4 percent and meant lower dependence on the treatment, and the negative values made 42.6 percent and meant increase in the dependence. Significant ($p<0.05$) difference between the average values that mean positive or negative situation of the dependence on the treatment was obtained.

The fifth integral latent factor was formed by the variables of environment and social relations spheres. Variables of the environment sphere were relevant to the quality of the health and social maintenance and also to the possibility to receive information necessary for the acquirement of new ability and for the solving of the everyday problems. We have called this integral variable in our paper as ***quality of the health services.*** It explained 6.31 percent of the general dispersion, the average values ranged from -3.98 to 3.44. The positive values made 52.4 percent and meant better quality of the services and the negative value made 48.9 percent and meant worse quality. Significant ($p<0.05$) difference between the average values that meant positive and negative situation of the quality of health services was obtained.

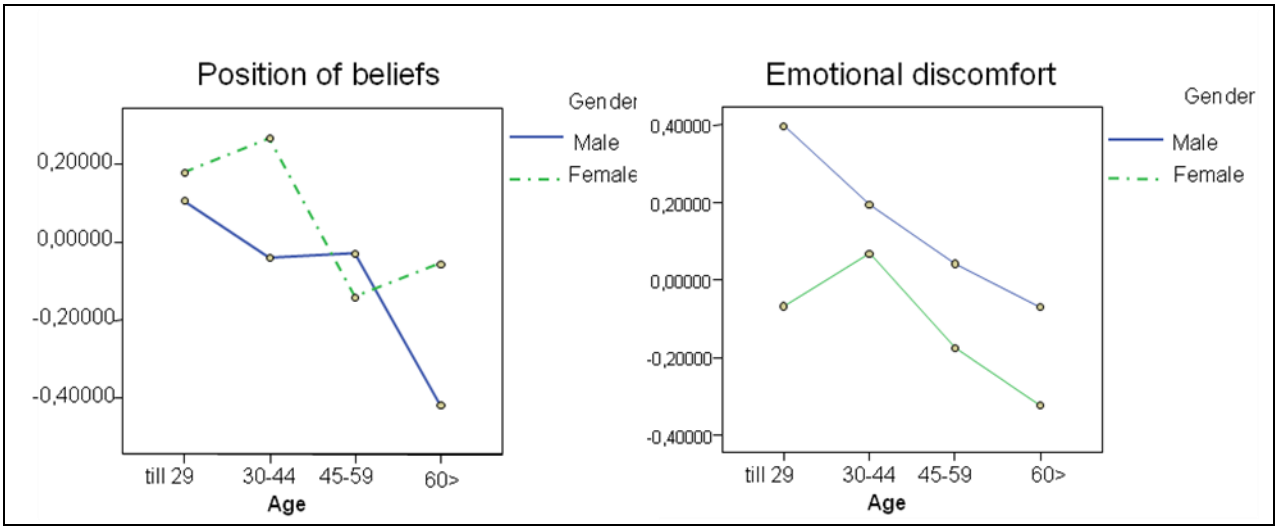
The sixth integral factor was formed by fourteen of the thirty two environment sphere variables. They have characterized living environment of the home, situation of

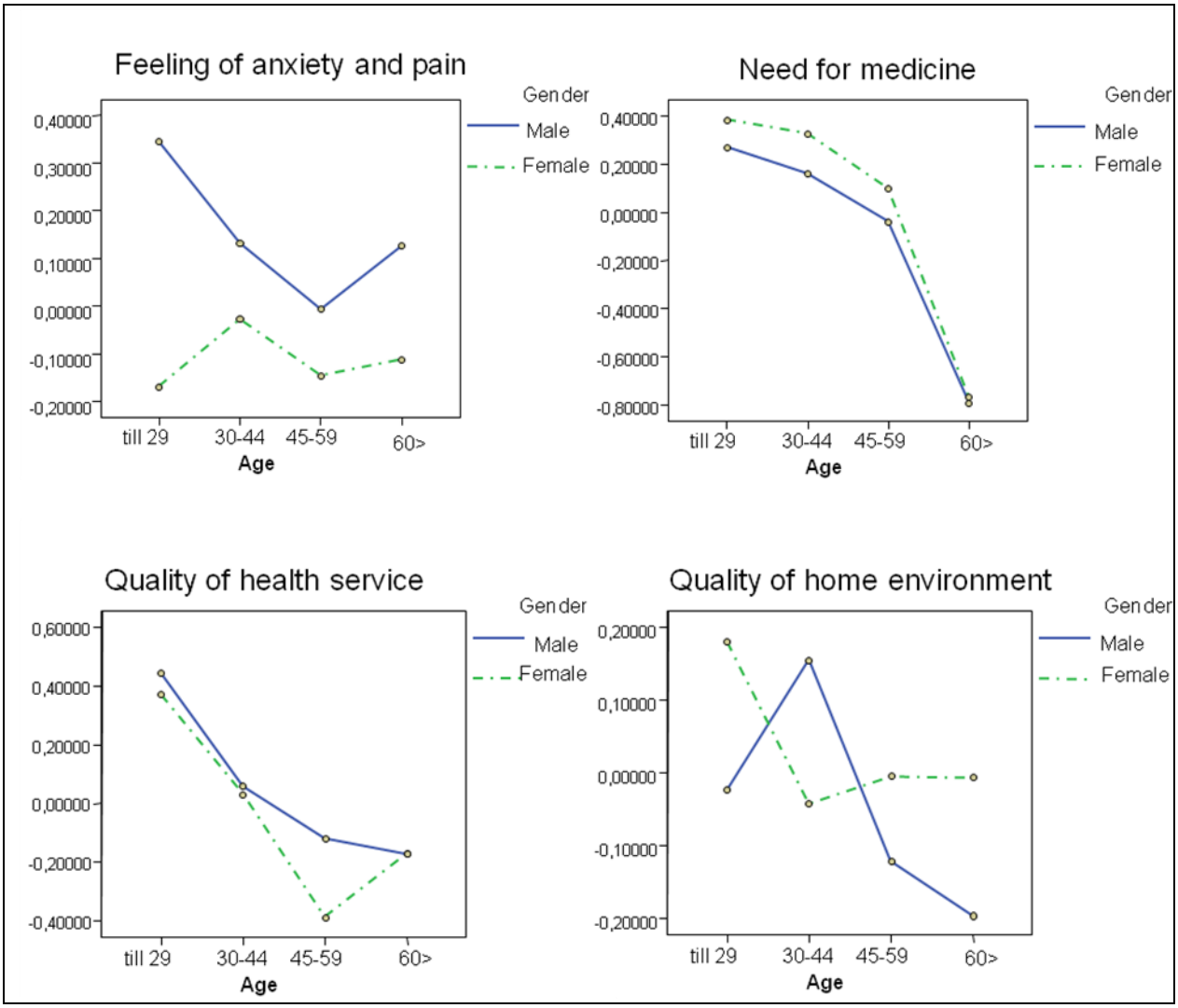
the finances and troubles with transport. This integral factor was named in our work as ***quality of the home environment.*** The factor explained 6.20 percent of the general dispersion, the average values ranged from -3.38 to 3.37. The positive values made 49.2 percent and meat the better quality of the home environment, meanwhile the negative values made 50.8 percent and meant the worse quality. Significant ($p<0.05$) difference between the average values that meant positive and negative situation of the home environment was obtained. Besides, negative average of values of this integral factor was higher than positive average and this shows that in our cases situation of the living environment has more negative rather than positive tendency.

All these six integral factors of the quality of life explain 45.5 percent of the general dispersion. It isn't a high level of community as the remaining 54.4 percent consists of specific aspect of the quality of life. On the other hand in this case we are studying the quality of life that is more influenced by health, not the quality of life that is formed by broader social, economical and ecological factors of the society development, therefore such community level can be satisfactory for the determination of this type of situation.

Latent factor, gender and age of the quality of life

Change of the average values of the latent integral factors subject to values of age of the independent variable is presented in the 6 illustration. Two curves match values of the latent factors of men and women. It can be seen from the graph that forms and steps of the curves of separate factors in the case of men and women are different and on the large scale differ from the data obtained for the formal case. But there are also some similarities: all latent integral factors of the quality of life in the same way as before analyzed spheres of the quality of life have a tendency to worsen as the age increases. Another common thing is following: it isn't hard to notice that at the age of approximately 40-45 years stronger pronounced qualitative changes occur that is most cases are different for men and women.





6 illustration. Distribution of the average values of the latent integral factors of the quality of life accordingly to gender and age

Average values of the latent factor of the position of beliefs when these values are formed by mental, psychological and social relation indexes, in the case of men are lower in compare to women. In the young age, in our research up to age of 29, spirituality of women has a tendency to increase and on the contrary, spirituality of the men is tended to decrease. Further mental and social beliefs of women are falling down and mental and special beliefs of men are a little bit raising up, also their confidence and beliefs become stronger. But around age of 40-45 years, beliefs of men regarding opportunities of life are decreasing, and in the case of women the beliefs are becoming better. On the limit of age of 60, in the case of men, opportunity to overcome meaning of life and hardships of the life strongly decreases, meanwhile optimism of women even a little bit increased when compared with the middle age.

Cognitive function of women (emotional discomfort), mainly grounded on the self-confidence, own abilities, in the all groups of age is worse than compared with men. This difference is particularly evidenced in the young age.

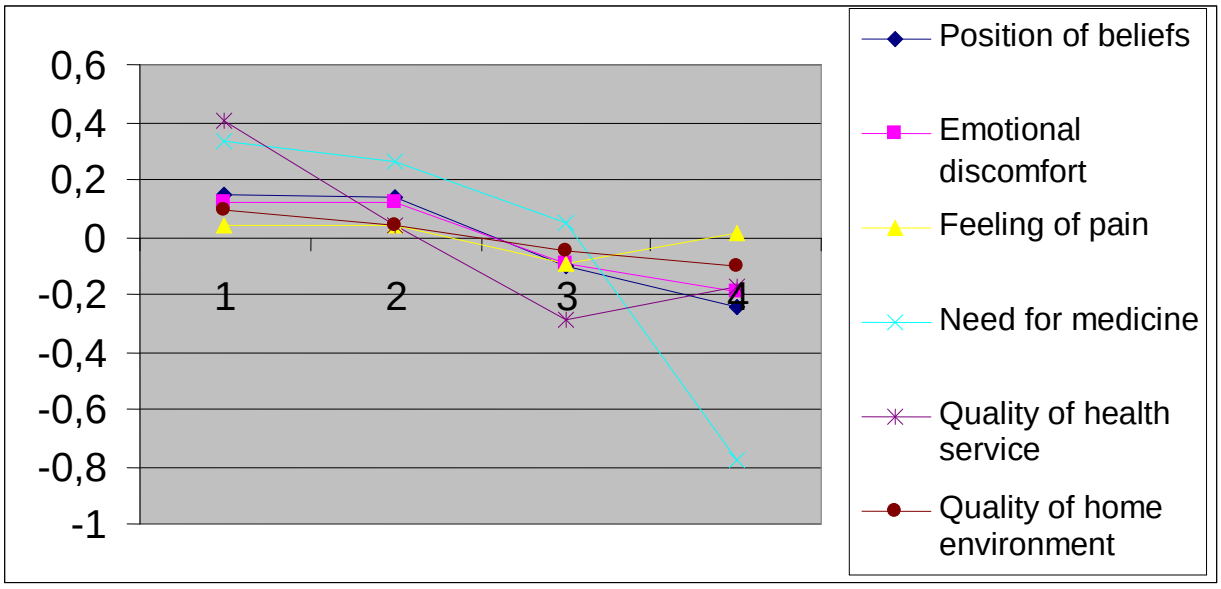
Similar situation is in the case of latent factor of the anxiety and pain feeling. Sadness, depression, negative feelings are specially affecting girls of the young age. In the middle age the situation gets a little bit better, although remains in not high level.

Meanwhile negative feelings in the life of men are increasing to the limit of 45 years and afterwards their influence begins to decrease.

Understanding about absence of the need for the medical services is decreasing both for men and women as the age is increasing.

Women satisfaction with the quality of the health services is becoming worse up to 45 years and in the older age the opinion is becoming better. Men begin to value the quality earlier, from the age of 45 year and in the limit of 60 years evaluations of men and women are matching. In summary systematic viewpoint to the tendencies of the development of the quality of life it can be stated that presented results confirms our hypothesis about the fact that age is establishing structure of the priorities of the quality of life.

The general distribution of the priorities of the latent factor of the quality of life in the different groups of age is presented in the 7 illustration (where 1, 2, 3, 4 – groups of age).



7 illustration. Distribution of the latent factors of the quality of live accordingly to the age

Here new priorities and new consistent patterns are obtained. It can be clearly seen that in the period of 45 years very important changes in the quality of life are occurring when these changes in general influence priorities of the quality of life. Accordingly to the results of the analysis of the 1 section, the problem of the quality of services is dominant in the limit of 18 years, meanwhile the feeling of pain is in the lowest level. About in the twentieth years the underlying problem of the health quality is becoming more evident and this problem is remaining approximately to the limit of 45 years. Here priorities change and feeling the pain occupies the first place. Meanwhile it seems that the health quality problem begins to lose its' meaning.

These results of the research confirm statement that the quality of life conditioned by the health don't obey deterministic paradigms of the development, instead of this, it is nonlinear system. Although when age increases, the tendency of the general decrease in the quality of life remains, but at about age of 45 years so called bifurcation process occurs when quasi-linear flow of the quality of life must select the further direction of

the development. It can be hypothetically stated that it is the dispersion point where accumulated instabilities pass to the qualitatively new stage of the quality of life.

Integral priorities of the quality of life

Integral factors of the quality of life were obtained while calculating in reality existent correlative relations between the indexes establishing aspects of the quality of life. In this way the practical existence of the quality of life was understood. It appeared that theoretically established identification model of the quality of life isn't the same as practical situation. If in the first case the underlying field was phenomenon of the independence, here the most important underlying field consisted by variables of the several aspects, when variables belonged to such spheres of life as personal identity relevant to importance of the beliefs in the different situations of the life, to the viewpoint of alienation of the social relations, to satisfaction with the social interaction, to satisfaction with the sexual life, to the quality of the physical environment, to such phenomena as noise, cleanness of the environment. All these were named as a position of the beliefs.

Other important integral factor firstly was connected with the self-confidence, own abilities in the modern complex and dynamic world, particularly when receiving and assimilating new information and new abilities. Obtained data have shown that the level of self-confidence on average exceeded the level of lack of self-confidence, although existence of lack of self-confidence caused higher dissonance of the person than the joy of the self-confidence. This mean that available own self-confidence is quite fragile than in compare with dominance of the lack of self-confidence. The research has shown that strong enough cognitive dissonance is existent, also there are particular emotional inconveniences relevant to the problems of own body, particularly that more often occur in the elderly age. All three things cause quite a strong emotional discomfort.

The separate integral factor was formed by negative feelings and relevant symptoms of anxiety, depression. Bad mood, depression was often connected with the pain of head and particular discomfort. It is almost unavoidable matters in the ageing society. But our research has also shown that existence of the anxiety and pain in the studies society has a biggest significance than the need for medical services. This shows that there is a problem of the pain and anxiety treatment in the studied population. The problem is formed by dependence on the drug and the quality of treatment. The research revealed that this dependence is strong and closely related to the working capacity of the people, also with their opportunities to perform own duties.

The research has shown that home environment is particularly significant to the quality of life and it is forming an integral factor of the quality of life. Results obtained accordingly to our prepared questionnaire are showing that in general 50 percent of respondent don't have any problems regarding living accommodation. And 50 percent of respondents have few problems or inconveniences. Of course, in separate particular cases this distribution is different. It is important when analyzing different matters of the living accommodation, environment of the accommodation and relations of the persons living in such accommodation.

The research has shown that our determined six integral factors of the quality of life don't distinguish statistically significantly in the separate groups of age. Although it can be seen that up to age of 45 years the position of beliefs is a little bit different from the position of beliefs in the age after 45 years. The similar situation is with integral

factor of the emotional comfort. Integral factor of the need for medicine up to age of 45 years differ from the one it is in the age up to 60 year and after age of 60 years. It is understandable thing. Meanwhile anxiety and pain is affecting people equally in the all groups of the age. Quality of the health services is differently evaluated in very young age and in the young age and almost equally after the age of 45 years.

But results of the research are showing that after age of 45 years, all values of the integral factors of the quality of life have acquired negative characteristics. This means that qualitative characteristics of the integral latent factors at the limit of 45 years are changing. Also the priorities of the quality of life are changing in this limit of age. In the young age of up to 20 year the priority of the quality of the health services is recognized, and feeling of anxiety and pain is insignificant. Need for medicine starts to increase about at the age and twenty, and this need is increasing to the age of 45years. Here also priorities change and integral factor of the anxiety and pain feeling becomes underlying factor. Meanwhile factor of the need for medicine becomes less significant. It is interesting that at the limit of 45 years position of the beliefs is in the lowest level and afterwards begins increase insignificantly.

Results of our performed research revealed a very important and interesting synergetic fact the limit of 45 years is a bifurcative point of the quality of life conditioned by health when the most important qualitative changes are occurring.

The research has shown that although age don't form different groups of the integral factors but it is significantly influencing position of the beliefs, emotional discomfort, need for medicine and quality of the health services.

When analyzing establishment of the before described integral factors of the quality of life in the separate groups of age it was determined and in every group of age different integral latent factors of the quality of life are forming under the real conditions of life.

2 table. Structure of the integral latent factors of the quality of life in the different groups of age

Age, years	1 factor	2 factor	3 factor	4 factor	5 factor	6 factor
18-90	Position of the beliefs	Emotional discomfort	Feeling of anxiety and pain	Need for medicine	Quality of the health services	Quality of the home environment
18-29	Ability to work	Home environment	Feel-good rest	Position of the beliefs	Sexual life	Need for medicine
30-44	Self-confidence	Quality of the health services	Anxiety and pain feeling	Sexual life	Need for medicine	Quality of the home environment
45-59	Socio-economical insecurity	Position of the beliefs	Need for medicine	Emotional discomfort	Ability to work	Understanding of body and appearance
60 and <	Need for medicine	Position of the beliefs	Socio-economical insecurity	Negative feelings	Quality of the health services	Emotional discomfort

There are different priorities of the quality of life in the each group of age. In the group of 18-29 years obtained integral factor was named ability to work (2 table). At this age it is an important purpose of life. In the later years more importance is gained by viewpoint of the self-confidence. In the phase of 30-44 years problems of the health occur, therefore it quality of the health services becomes a relevant matter. It is interesting to trace how priority of the need for medicine is changing. In the group of 18-90 years this priority is in the fourth place among the integral factors. 18-29 years old

people are the healthiest one therefore need for the medicine is in the last sixth place. In the group of 30-44 years old respondents it is in the fifth place, and in the other group – the third place, and finally the first place in the group of 60 years and more.

These results of the research have revealed very important consistent pattern of the development of the quality of life – the quality of life is indirect dynamical social process. This mean that analysis of the quality of life and interpretation of such analysis results must be rounded on the new scientific paradigm that ensures possibility to evaluate situation at the given moment of time and at the given place, because in the other time and in the other place interaction of the same parameter of the quality of life is giving completely different results.

3. Resources and risk of the quality of life

Resources and risk of the quality of life were calculated agreeably to our prepared methodology on the grounds of three viewpoints to the structure of the quality of life: accordingly to the questionnaire of the quality of life, accordingly to the general factors formed by the inter-connections between general factors of the quality of life questionnaire and accordingly to the integral latent factors established in the interaction of the quality of life and social factors.

3 and 4 tables present results of the resources and risks of the quality of life that were obtained while using original method described in our methodology.

3 table. Distribution of the resources-risk of the quality of life and social health in the different groups of age

I/R	n,%	Age, years				In total
		Up to 29	30-44	45-59	60<	
Resources	n	151	170	96	75	492
	%	51.7	45.8	32.2	27.6	39.9
Risk	n	141	201	202	197	741
	%	48.8	54.2	67.8	72.4	60.1
Total	n	292	371	298	272	1233
	%	100	100	100	100	100

χ^2 =46.990, df=3, p=0.000

In the young age of up to 30 years the resources of the social health and the quality of life exceed the risk but this difference is very small, only about 3 percent. For example, in the elderly age, at 60 and over, the resources of health made only 27.6 percent, meanwhile risk was equal to – 72.4 percent. The difference increased up to 44.8 percent.

Connection between relation of age and resource/risk is statistically significant and this means that health resources strongly depend of the age.

4 table. Change of the resources-risk of the quality of life and social health among men and women while the age is increasing (%)

I/R	Gender	Age, years				In total
		Up to 29	30-44	45-59	60<	
Resources	Men	27.8	34.9	17.5	19.8	100
	Women	33.1	34.2	31.1	25.0	100

Risk	Men	19.6	25.2	22.9	32.4	100
	Women	18.4	28.6	30.2	22.8	100

Men - χ^2 =16.783, df=3, p=0.000
Women - χ^2 =33.625, df=3, p=0.000

Resources of the men health and the quality of life up to age of 30 year are lower than of women. At the age of 30-44 years level of resources becomes almost equal and in the elderly age resources of the men again are lower in compare to women. Risk of the quality of life and health risk of men increase at the age of 30-44 years and at the age of 60 years and more, meanwhile in the case of women – in the age phase from 30 to 60 years. Dependence of the quality of life and social health on the age is statistically significant both for men and women.

CONCLUSIONS

1. When using questionnaire of the quality of life it was determined that the most important spheres were following: independence sphere (average=15.69±2.24), physical functioning sphere (average=14.20±2.40) and mental functioning sphere (average=13.92±2.10). Environment sphere was evaluated in the worst way (average=13.19±2.06). Average values of the all spheres of the quality of life were statistically significantly ($p<0.05$) different in the all three groups of age: 18-45 years, 45-60 year and over 60 years.
2. When analyzing the quality of life in more practical viewpoint, the most important priorities and integral factors: position of the beliefs (10.51percent of dispersion), emotional discomfort (9.20 percent of dispersion) and pain feeling (6.74 percent of dispersion). It was determined that age is statistically significantly ($p<0.05$) influencing integral factors of the quality of life: position of the beliefs, emotional discomfort, need for medicine and quality of the health service, and integral significant effect of the age and gender was obtained for the factors of position of the beliefs, feeling of anxiety and pain and the quality of home environment.
3. The research helped to determine synergetic bifurcative point of the quality of life in the limit of age of 45 years, when essential change of the quality priorities of the quality of life is proceeding in the all spheres of the quality of life.
4. Development of the quality of life is indirect social process. In the each group of age different integral factors of the quality of life are established and different priorities are typical for thee integral factors: at age group of 18-29 years it is ability to work (9.79 percent of dispersion); at age group of 30-44 years it is self-confidence (14.41 percent of dispersion); at age group of 45-59 years – socio-economical insecurity (9.29 percent of dispersion); at age group of 60 years and over – need for medicine (14.45 percent of dispersion).
5. The material direction tendencies are typical to the development of the quality of life. The underlying principle of the integral social interaction was formed by variables of the physical and mental functioning sphere and this underlying principle reflects physical and mental powers of the human quality of life (24.44 percent of dispersion). Also a great effect was implied by the human energy level dependent on the treatment and drugs and also by the problem of pain and discomfort. Integral factor of the social health was in the second place (7.38 percent

of dispersion) and factor of the value orientations was in the last place (3.37 percent of dispersion).

6. When analyzing relation between the resources and risk of the development of the quality of life it was determined that a sage increases the recourse of the development is rapidly decreasing and the risk is increasing. At young age, up to 29 years, resources made 51.7 percent, risk – 48.8 percent, and at the age of 60 years and older – resources were equal to 27.6 percent and risk – 72.4 percent. This shows that interaction of the quality of life and the social factors has features of the social risk.

LIST OF PUBLICATIONS

Scientific articles:

1. Jurgelėnas A., Juozulynas A., Butkienė B., Butikis M., Savičiūtė R. Integrity characteristics of the quality of life and age. Gerontology. 2008;9(4):207-213.
2. Filipavičiūtė R., Juozulynas A. , Butikis M., Butkienė B., Jurgelėnas A. Evaluation of the elderly people health strengthening situation. Gerontology 2008;9(1):21-26.
3. Juozulynas A., Jurgelėnas A., Greičiūtė K., Butikis M.. Ageing and the quality of life. Gerontology 2007;8(2):92-96.
4. Juozulynas A., Jurgelėnas A., Marcijonas A., Šurkienė G., Gocentas A., Butikis M. The quality of life of the employees of public health. Sciences of health. 2005;15(2):76–80.

Presented reports:

International conferences

1. Juozulynas A., Butikis M. Survey of the integral risk and prevention of the psychoactive materials use among the youth. State drugs control department by the Government of the Repulic of Lithuania and Ministry of education and science "Drug control and drug addiction prevention in 2008: youth and drugs". 2008, November 6, 7. Vilnius.
2. Butikis M., Juozulynas A., Jurgelėnas A. Integral evaluation of the social development of health in the community of city. Biomedical engineering. Kaunas Technological University. 2007, October 25, 26, Kaunas. p. 11-13.
3. Jurgelėnas A., Juozulynas A., Butikis M. An adaptive model of the bio-medical information spreading in the social development space. Bio-medical engineering. Kaunas Technological institute. 2007, October 25, 26. Kaunas. p. 14-17.

Other publications:

Other scientific articles

1. Juozulynas A., Jurgelėnas A., Astrauskienė A., Prapiestis J., Butikis M., Savičiūtė R. Problem of the use of psychoactive materials and integral effect to the health of young people. Public health. 2009;1(44):50-55.
2. Juozulynas A., Astrauskienė A., Jurgelėnas A., Prapiestis J., Butikis M., Savičiūtė R.. Integral risk of the psychoactive materials use and protection among the youth Gerontology. 2008;9(3):157-161.
3. Juozulynas A., Astrauskienė A., Jurgelėnas A., Šurkienė G., Butikis M. Social links of alcohol and smoking. Sciences of health. 2008;5(59):1938-1941.

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Disertacijos reziumė

Gyvenimo kokybės vertinimas yra sudėtingas uždavinys. Kiekvienas žmogus patenkintas ar nepatekintas gyvenimu daugiausia dėl asmeninių priežasčių. Žmonėms reikia bent elementarios materialinės gerovės, kuri kiekvienam atrodo skirtingai. Tačiau materialinė gerovė dar nedaro žmogaus laimingu. Žmogui geresnis tas gyvenimas, kuriame jis gali sėkmingiau išspręsti jam iškylančias problemas. Kadangi problemų yra daug ir įvairių, žmogaus ir visuomenės gyvenimo kokybei matuoti atsirenkami svarbiausi ir universaliausi veiksniai. Tokiais veiksniais pirmiausia buvo materialiniai dalykai. Tačiau žmogus ne vien duona sotus. Žmonių laimę apsprendžia ne vien sąlygos, kuriomis jie gyvena ir paskirsto materialinius išteklius, bet ir subjektyvus savo gyvenimo vertinimas apibūdinant fizinę, socialinę ir dvasinę sveikatą, jausmus, vertybes, gyvenimo prioritetus, sprendimų galimybę ir laisvę, politinį, kultūrinį, ekonominį ir ekologinį idealą. Gyvenimas kaip integrali žmonių buvimo ir būties visuma apima kasdieniškumą, darbą, iškilmes, šventes, socialinius ir ekonominius santykius, vertybinę sferą. Remiantis šiuolaikine darnios plėtros koncepcija, gyvenimo kokybė yra socialinių, ekonominių ir aplinkos veiksnių sąveikos rezultatas. Šiuolaikinė gyvenimo kokybės samprata suvokiama …" kaip tam tikras socialinis konstruktas, susidedantis iš savitų socialinių dimensijų". Pati visuomenė konstruoja savitą, jiems priimtiną gyvenimo kokybės modelį, kur gyvenimo kokybė reiškia visapusiško pasitenkinimo gyvenimu laipsnį.

Senstanti visuomenė turi rizikos bruožų. Senstant visuomenei mažėja jos fizinė ir socialinė galia, o tai reiškia, kad mažėja jos potencija aktyviai ir produktyviai veikti. Kitaip tariant visuomenės senėjimas neišvengiamai sukelia pavojų visuomenės sveikatai.

Darbo tikslas

Ištirti miesto gyventojų sveikata sąlygojamos gyvenimo kokybės ir socialinių veiksnių sistemines sąsajas amžiaus grupėse.

Uždaviniai

1. Ištirti gyvenimo kokybės prioritetų kaitos tendencijas didėjant žmonių amžiui.
2. Išanalizuoti gyvenimo kokybės ir socialinių veiksnių sąveikos ypatumus.
3. Įvertinti integralių gyvenimo kokybės veiksnių ir amžiaus sąsajas.
4. Palyginti gyvenimo kokybės išteklių ir rizikos santykį kintant amžiui.
5. Numatyti socialinių veiksnių prognostinę įtaką gyvenimo kokybės plėtrai.

Naujumas

Moksliniu požiūriu šiame darbe nauja tai, kad sveikatos priežastinė gyvenimo kokybės kaita su amžiumi analizuojama visuminiu požiūriu kai vienu metu veikia daug, tarpusavyje susijusių veiksnių kurie suformuoja naujus integralius tiesiogiai neišmatuojamus veiksnius. Sukurta nauja originali tyrimo metodika, kurioje apjungiama priežastiniai ir tikimybiniai gyvenimo kokybės, sveikatos, socialiniai, ekonominiai, aplinkos veiksniai į vieningą visumą, duodančią pagrindo inovatyviam moksliniam požiūriui į visuomenės sveikatos socialinius procesus.

Praktiniu požiūriu - gauti rezultatai gali būti panaudoti visuomenės sveikatos ir gyvenimo kokybės kaitos stebėsenai mūsų siūlomoje „stebėsenos grandinėje". O nauji veiksniai – formuojant gyvenimo kokybės ir visuomenės sveikatos plėtros politiką.

GINAMIEJI TEIGINIAI

1. Skirtingos determinacijos formos nulemia skirtingus gyvenimo kokybės kaitos su amžiumi prioritetus
2. Gyvenimo kokybės ir socialinių veiksnių sąveika su amžiumi formuoja latentinius integralius gyvenimo kokybės veiksnius
3. Gyvenimo kokybės ir amžiaus sąsajų kaita yra netiesinis socialinis procesas
4. Didėjant amžiui didėja gyvenimo kokybės socialinė rizika
5. Vilniaus miesto gyventojų gyvenimo kokybę labiausiai įtakoja fizinės psichinės ir socialinės sveikatos integralus poveikis

Tyrimo metodas

Darbo metodologinis pagrindas – sisteminis požiūris. Jo esmė ta, kad gyvenimo kokybę formuojančių sveikatos, socialinių, ekonominių, aplinkos ir amžiaus elementų socialinė sąveika yra *integrali, tikslinga socialinė sistema*. Šios sistemos funkcionavimo tikslas yra gyvenimo kokybė.

Sistemos funkcionavimas neatskiriamas nuo jos plėtros, kuri bendru atveju gali būti pozityvi ar negatyvi. Plėtros veiksmingumą apibrėžia *Darnios plėtros, jos pozityvių ir negatyvių elementų subalansuotumas*, kuris mūsų tyrime identifikuojamas gyvenimo kokybės plėtrą formuojančių elementų išteklių ir rizikos santykiu. Jeigu plėtros išteklius pažymėsime raide I, o riziką raide R, tai gyvenimo kokybės plėtros indeksas bus išreiškiama tokia nelygybe:

$$dI<d(I/R).$$

Tai reiškia, kad plėtros kokybė yra pozityvi tada, kai išteklių pokyčiai yra mažesni už išteklių ir rizikos santykio pokyčius.

IŠVADOS

1. Gyvenimo kokybės klausimynu nustatyta, kad svarbiausios prioritetinės sritys buvo nepriklausomumo sritis (vid.=15,69±2,24), fizinio funkcionavimo sritis (vid.=14,20±2,40), ir psichinio funkcionavimo sritis (vid.=13,92±2,10). Prasčiausiai vertinama aplinkos sritis (vid.=13,19±2,06). Visų gyvenimo kokybės sričių vidutinės reikšmės statistiškai reikšmingai ($p<0,05$) skiriasi tarp trijų amžiaus grupių: 18-45 metai, 45-60 metų ir virš 60 metų.
2. Analizuojant gyvenimo kokybę daugiau praktiniu požiūriu nustatyti svarbiausi prioritetai integralūs veiksniai: įsitikinimų pozicija (10,51 proc. dispersijos), emocinis diskomfortas (9,20 proc. dispersijos) ir skausmo pojūtis (6,74 proc. dispersijos). Nustatyta, kad statistikai reikšmingai ($p<0,05$) amžius įtakoja įsitikinimų pozicijos, emocinio diskomforto, medicinos poreikio ir sveikatos paslaugų kokybės integralius gyvenimo kokybės veiksnius, o amžiaus ir lyties integralus reikšmingas poveikis gautas įsitikinimų pozicijos, nerimo ir skausmo pojūčio, ir namų aplinkos kokybės integraliems veiksniams.
3. Tyrimu nustatytas sinergetinis gyvenimo kokybės bifurkacijos taškas 45 amžiaus metų riboje, kuriame įvyksta esminiai gyvenimo kokybės prioritetų pokyčiai visose gyvenimo kokybės srityse.

4. Gyvenimo kokybės plėtra yra netiesinis socialinis procesas. Kiekvienoje amžiaus grupėje susiformuoja skirtingi integralūs gyvenimo kokybės veiksniai su skirtingais prioritetais: 18-29 metų grupėje gebėjimas dirbti (9,79 proc. dispersijos); 30-44 metų grupėje pasitikėjimas savimi (14,41 proc. dispersijos); 45-59 metų grupėje socioekonominis nesaugumas (9,29 proc. dispersijos); 60 ir < metų grupėje medicinos poreikis(14,45 proc. dispersijos).
5. Gyvenimo kokybės raidai yra būdingos materialinės krypties tendencijos. Jos integralios socialinės sąveikos prioritetinį veiksnį formavo fizinio ir psichinio funkcionavimo sričių kintamieji, kuris atspindi fizinę ir psichinę žmonių gyvenimo kokybės galią (24,44 proc. dispersijos). Didelės įtakos turėjo žmonių energingumo priklausomybė nuo gydymo ir vaistų bei skausmo ir diskomforto problema. Antroje vietoje buvo socialinės sveikatos integralus veiksnys (7,38 proc. dispersijos) ir paskutinėje vietoje vertybinių orientacijų veiksnys (3,37 proc. dispersijos).
6. Analizuojant gyvenimo kokybės plėtros išteklių ir rizikos santykį buvo nustatyta, kad su amžiumi sparčiai mažėja plėtros ištekliai ir didėja rizika. Jauname, iki 29 metų amžiuje ištekliai sudarė 51,7 proc, rizika – 48,8 proc., o 60 metų ir vyresniame amžiuje – ištekliai buvo 27,6 proc., o rizika 72,4 proc. Tai rodo, kad tirtos populiacijos gyvenimo kokybės ir socialinių veiksnių sąveika turi socialinės rizikos bruožų.

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