

Integral approach to the quality of life conditioned by health

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Background. Currently, there are a lot of methodologies for evaluating the quality of life both in West Europe and in the USA. The majority of them are grounded on the multi-disciplinary, systemic principles. Meanwhile, in some countries and in Lithuania, the studies of the quality of life are more focused on the fields of health and medicine. According to the modern conception of sustainable development, the quality of life is a result of an integral interaction of quality of life indicators. The modern concept of the quality of life is a particular social construct comprising different social dimensions.

Materials and methods. A sample of 1 200 persons was formed under the quota of age and gender. Its main point is that the health, social, economic, environmental and age elements of the quality of life comprise an integral, purposeful social system.

Statistical analysis was carried out using SPSS 17.0. The data were analyzed using the method of factorial analysis which accounts for the correlations among all indicators. Six latent factors were determined, and they explained 45.55% of the general dispersion. The position of beliefs was determined as the underlying latent factor formed by spiritual and social indicators. This factor explained 10.51% of the general dispersion. Also, in the systematic process, another latent factor – the need for medical services – plays an important role which increases with age, especially in people aged over 50 years.

Results. The results showed that at about 50 years all latent factors acquire negative values, i. e. at the age of about 46–50 years the social risk of the quality of life, determined by health, becomes greater.

Conclusions. The research helped to determine qualitative changes in the quality of life at the age of 45–50 years when essential changes in the priorities of the quality of life occur in all its domains.

Key words: integral approach, quality of life, social link, integrity

INTRODUCTION

Currently, there are a lot of methodologies for evaluating the quality of life both in West Europe and in the USA. The majority of them are based on the multi-disciplinary, systemic principles. While discussing the problems and possibilities of qualitative studies of the quality of life, G. Janušauskaitė states that currently attention is paid rather to the qualitative than quantitative evaluation of the life balance (1).

Meanwhile, in some countries (and in Lithuania), studies of the quality of life are more focused on the fields of health and medicine (2–5). The majority of them are related to clinical problems and are intended for the analysis of different situations, mainly those relevant to health. Local studies are important. But the problem is that a sum of similar local studies cannot provide the whole picture of the quality of life as the general wellness.

In our paper, we try to solve this problem from the systemic viewpoint. Considering this systemic viewpoint, we describe the quality of life as a purposeful social aspect (6). This selection is grounded on the methodologi-

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cal holism (systematic viewpoint) paradigm (7). When describing the quality of life as a purposeful social factor, we call it a social construct of a higher, qualitatively different level on which this construct can be understood as a result of the interaction between human health and social development elements. Social interaction is understood as a process including inter-actions and reactions of the subjects participating in the interaction (8). Their actions and reactions are understood in a broad sense, i. e. as understanding and controlling oneself as a social subject in the sphere of life. Individuals of different age and their populations are the subjects in our study. The social purposefulness of the quality of life in this work is identified by the systematic priorities of the quality of life. **The purpose of the study** was to analyze systematic connections between age and the quality of life, conditioned by the health of urban residents.

MATERIALS AND METHODS

Based on the law of large numbers, a sample of 1 200 persons was formed according to the quotas of age and gender.

Residents of the Vilnius city, aged 18 years and more, were surveyed in the research. The sample was representative, random, the quotas of age and gender were applied. The methodological background of the study is a systemic approach. Its main point is that the interaction of health and age elements forms the quality of life as an *integral, purposeful social aspect* (9, 10), and the purpose of its functioning is the high quality of life.

The questionnaire consisted of the international quality of life questionnaire WHOQoL-100.

The age was grouped into four groups: under 29 years – very young; 30–44 years – young; 45–59 years old – middle; 60 and more – elderly and old. The data were analyzed using the method of factorial analysis accounting for correlations among all indicators and determining the latent factors.

RESULTS AND DISCUSSION

The same variables of the questionnaire comprise the modeled latent structure of the quality of life, but in this case we analyze these factors while evaluating their inter-correlations. Considering the correlation, the latent factors are established and used for the formation of a new integral structure of the quality of life. We have done it by the method of factorial analysis. To reach a particular analogy with the earlier structure of the spheres of the quality of life, we have also established six latent factors (Table).

The first integral latent factor, common for the all age groups, comprised eight variables of the social relations sphere, six variables of mental health, four variables of spirituality and environment spheres. In this situation, the variables of personal beliefs, social support of the family and friends, self-confidence, positive feeling and sexual life dominate. This integral variable consisting of simple variables of the four spheres of the quality of life can be called 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 an adequate way. The factor explains 10.51% of the general dispersion. Its average values range from –3.72 to 2.96 (Table). The negative values mean a weakening position of the beliefs; on the contrary, the positive values mean the strengthening of the beliefs. The positive values reached 51.8% and the negative 48.2%. The difference between the mean positive and negative values was statistically significant, showing that the level of people's self-confidence is a little higher than the lack of self-confidence, although the lack of self-confidence has a "sharper" nature (the mean negative values are higher than the mean positive values).

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

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

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

There are particular psychological attitudes, possible inconveniences, a particular possible discomfort when a confrontation occurs between the two important beliefs or attitudes relevant to the possibility to move because of senility or illness, because of one's own appearance or bodily problems. In this paper, we called this integral latent factor *emotional discomfort*. As regards importance, it takes the second place and explains 9.20% of the general dispersion. Its average values ranged from -3.47 to 2.93 and their difference was statistically significant ($p = 0.005$). The positive values mean a lower discomfort and the negative values mean the highest discomfort. The positive values made 51.1% and the negative ones 48.9% 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 a negative feeling. Variables of the physical sphere are relevant to pain and the presence of the involved discomfort. The variable of the dependence sphere is related to the capability to perform daily work. Considering the nature of these variables, in our paper we have called the third integral variable the factor of *anxiety and pain feeling*. It explained 6.74% of the general dispersion, and the average values ranged from -3.95 to 3.46 . The positive values made 55.6% and the negative ones 44.4%. A significant ($p < 0.05$) difference was obtained between the average values describing the positive and negative situations of anxiety and pain.

The fourth integral factor comprised the variables of independence and physical sphere. The variables of independence were relevant to the dependence on treatment and drugs and the involved working capacity problem, and variables of the physical sphere were relevant to the problems of sleep and rest. This integral factor was called the factor of *need for medicines*. It explained 6.57% of the general dispersion, meanwhile its average values ranged from -4.18 to 2.59 . The positive values made 57.4% and meant a lower dependence on the treatment, and the negative values made 42.6% and meant an increased dependence. A significant ($p < 0.05$) difference between the average values that mean a positive or a negative situation of the dependence on treatment was obtained.

The fifth integral latent factor was formed by the variables of the environment and social relations. Variables of the environment were relevant to the quality of health and social maintenance and also to the possibility to receive information necessary for acquiring new abilities and for solving daily problems. We have called this integral variable the *quality of health services*. It explained 6.31% of the general dispersion, the average values ranging from -3.98 to 3.44 . The positive values made 52.4% and meant a better quality of services, and the negative values made 48.9% and meant a worse quality. A significant ($p < 0.05$) difference between

the mean values that meant a positive and a negative situation of the quality of health services was obtained.

The sixth integral factor comprised 14 of the 32 environmental variables. They have characterized the living environment at home, the situation of finances, and troubles with transport. This integral factor was named in our work the *quality of the home environment*. The factor explained 6.20% of the general dispersion, its mean values ranging from -3.38 to 3.37 . The positive values made 49.2% and meant a better quality of the home environment, meanwhile the negative values made 50.8% and meant the worse quality. A significant ($p < 0.05$) difference between the mean values that meant a positive and a negative situation of the home environment was obtained. Besides, the negative mean value of this integral factor was higher than the positive one, showing that in our case the situation of the living environment had rather a negative than a positive tendency.

All the above six integral factors of the quality of life explain 45.5% of the general dispersion. It isn't a high level of community as the remaining 54.4% consists of specific aspects of the quality of life. On the other hand, in this case we have studied the quality of life that is more influenced by health and not the quality of life that is formed by a broader social, economic and ecological factors of society development; therefore, such a community level may be satisfactory for characterizing this type of situation.

Latent factor of gender and age and the quality of life

The change of the average values of the latent integral factors subject to the values of age of the independent variable is presented in the figure (Figure). Two curves match the values of the latent factors for men and women. One can see from the graph that the form and steps of the curves of separate factors for men and women are different and greatly differ from the data obtained for the formal case. But there are also some similarities: all latent integral factors of the quality of life, similarly as the above analyzed spheres of the quality of life, have a tendency to worsen with age. Another common thing that it isn't difficult to notice that at the age of approximately 40–45 years more pronounced qualitative changes occur, and in most cases they are different for men and women.

The average values of the latent factor of the position of beliefs, when these values are formed by the mental, psychological and social relation indexes, are lower for men than for women. In the young age (in our study under 29), the spirituality of women has a tendency to increase, whereas, on the contrary, the spirituality of men tends to decrease. Later on, the mental and social beliefs of women are falling down and those of men somewhat rise up; also, their confidence and beliefs become stronger. However, at the age of 40–45 years, the beliefs of men regarding the possibilities of life decrease, while in the case of women the beliefs become better. At the limit of the age of 60, in the case of men,

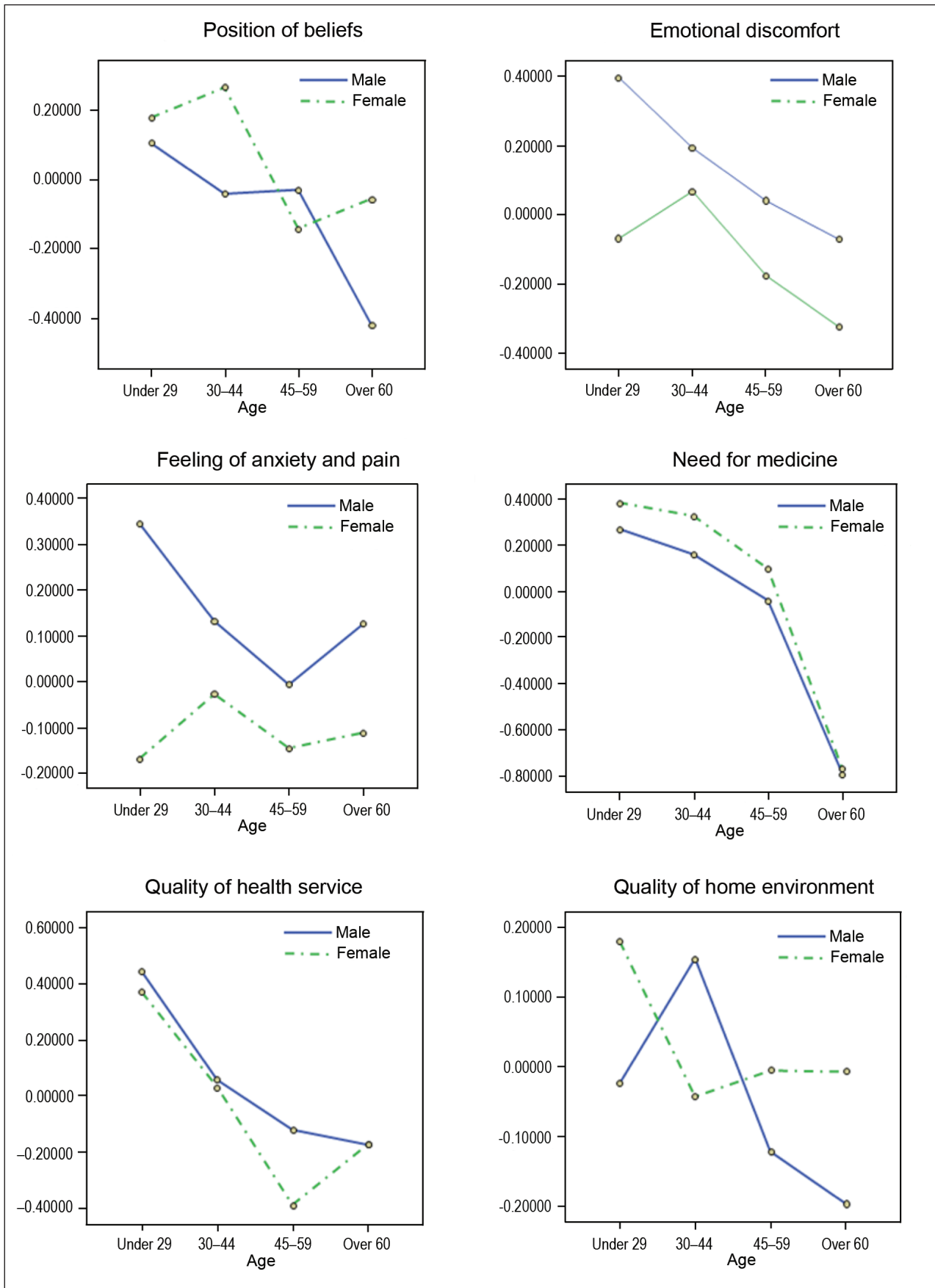


Figure. Distribution of the average values of latent integral factors of the quality of life according to gender and age

the possibility to overcome the hardships of life strongly decreases, meanwhile the optimism of women even somewhat increases as compared with the middle age.

The cognitive function of women, because of emotional discomfort, mainly grounded on self-confidence, her own abilities, in all age groups is worse as compared with men. This difference is particularly evident in the young age.

A similar situation occurs in the case of the latent factor of anxiety and pain feeling. Sadness, depression, negative feelings specially affect girls of the young age. In the middle age, the situation is somewhat better, although remains at a rather low level. Meanwhile, the negative feelings in the life of men are increasing to the limit of 45 years, and afterwards their influence begins to decrease.

Awareness of the absence of the need for medical services decreases both in men and women as the age is increasing.

Women's satisfaction with the quality of health services is becoming worse up to 45 years, and in the older age the opinion becomes better. Men begin to value the quality earlier (from the age of 45), and at the limit of 60 years the evaluations of men and women are matching. In summary, a systematic approach to the tendencies of the development of the quality of life allows to state that the above results confirm our hypothesis that the age determines the structure of the quality of life priorities.

Here, new priorities and new consistent patterns appear. One can clearly see that at the age of 45 years very important changes in the quality of life occur, and these changes, in general, influence the priorities of the quality of life. According to the results of the analysis presented above, the problem of the quality of services is dominant up to the age of 18 years, meanwhile the feeling of pain is at the lowest level. At the age of about twenty years, the underlying problem of the quality of health is becoming more evident, and this problem is present up to approximately the limit of 45 years. At this age, the priorities change, and feeling pain occupies the first place. Meanwhile, the health quality problem seems to begin losing its value.

These results of our study confirm that the quality of life conditioned by health does not obey the deterministic paradigms of the development; instead, it is a nonlinear system. Although with age the tendency of the general decrease in the quality of life remains actual, at about the age of 45 years the so-called bifurcation occurs: the quasi-linear flow of the quality of life must select the further direction of its development. Hypothetically, it is the dispersion point at which the accumulated instabilities pass into a qualitatively new stage of the quality of life.

Integral priorities of the quality of life

The integral factors of the quality of life were obtained while calculating the really existing correlative relation-

ships among the indexes establishing the aspects of the quality of life. In this way, the practical level of the quality of life was understood. We have found that the theoretically established identification model of the quality of life does not correspond to the practical situation. If in the first case the underlying field was the phenomenon of independence, here the most important underlying field consisted of the variables of several aspects, and the variables belonged to such spheres of life as personal identity relevant to the importance of the beliefs in different situations of life, to the alienation of social relations, to satisfaction with social interaction, to satisfaction with sexual life, to the quality of the physical environment, to such phenomena as noise and the cleanness of the environment. All these were named as a position of the beliefs.

Another important integral factor was first of all connected with self-confidence, one's own abilities in the modern complex and dynamic world, particularly when receiving and assimilating new information, and new abilities. The obtained data have shown that the level of self-confidence on average exceeds the level of the lack of self-confidence, although the lack of self-confidence causes a higher dissonance in a person than does the joy of self-confidence. This means that the level of one's own self-confidence is quite fragile as compared with the lack of self-confidence. The study has shown the presence of a rather strong cognitive dissonance; also there are particular emotional inconveniences relevant to the problems of one's own body, particularly in the elderly age. All three things cause quite a strong emotional discomfort.

A separate integral factor was the negative feelings and relevant symptoms of anxiety, depression. Bad mood, depression were often connected with headache and a particular discomfort. These are almost unavoidable in the ageing society. However, our research has also shown that the existence of anxiety and pain in society has a greater significance than the need for medical services. This shows that there is a problem of pain and anxiety treatment in the population. The problem is caused by dependence on drugs and the quality of treatment. The research has revealed this dependence to be strong and closely related to the working capacity of people and to their abilities to perform their duties.

The research has shown that home environment is of particular significance and is an integral factor of the quality of life. Results obtained with the help of our questionnaire show that in general 50% of respondents don't have any problems regarding living accommodation, and 50% have some problems or inconveniences. Of course, in separate particular cases this distribution is different. It is important when analyzing different aspects of living conditions, the environment and relations of the persons living in such conditions.

The research has shown that the six integral factors of the quality of life, determined by us, don't differ statistically significantly in separate age groups, although one can see that up to the age of 45 years the position of beliefs somewhat differs from that at the age over 45 years. A similar situation was found with the integral factor of emotional comfort. The integral factor of the need for medicine up to age of 45 years differs from that at the age under and over 60 years. It is understandable. Meanwhile, anxiety and pain affect people equally in all age groups. The quality of health services is differently evaluated at a very young and young age and almost equally after 45 years.

The results of our study show that after the age of 45, all values of the integral factors of the quality of life acquire negative characteristics. This means that the qualitative characteristics of the integral latent factors at the age limit of 45 years undergo changes, as do also the priorities of the quality of life. In the young age (under 20), the priority of the quality of health services is recognized, and the feeling of anxiety and pain is insignificant. The need for medicine starts increasing at about twenty, and this need is increasing up to the age of 45 years. Here, also priorities change, and the integral factor of anxiety and pain feeling becomes the underlying factor. Meanwhile, the factor of the need for medicine becomes less significant. Interestingly, at the limit of 45 years the position of the beliefs is at the lowest level and afterwards begins to increase insignificantly.

The results of our research revealed a very important and interesting synergetic fact: the limit of 45–50 years is a bifurcative point in the quality of life conditioned by health when the most important qualitative changes occur.

Our study has shown that although age does not form different groups of integral factors, it significantly influences the position of beliefs, emotional discomfort, need for medicine and the quality of health services.

When analyzing the position of the above integral factors of the quality of life in separate age groups, we noted that in each age group different integral latent factors of the quality of life are formed in the real conditions of life.

There are different priorities of the quality of life in each age group. In the group of 18–29 years, the obtained integral factor was called the ability to work (Table). At this age, it is an important aspect of life. In the later years, more importance is gained by self-confidence. In the phase of 30–44 years, problems with health occur; therefore, the quality of health services becomes a relevant matter. It is interesting to trace how the priority of the need for medicine is changing. In the group of 18–90 years, this priority takes the fourth place among the integral factors. People aged 18–29 years are the healthiest; therefore, the need for medicine is in the last (sixth) place. In the group of 30–44 years it takes the fifth place and, finally, the first place in the group of 60 years and over.

CONCLUSIONS

Age influences the integral factors of the quality of life, such as beliefs, emotional discomfort, need for medicine, the quality of health service; an integral significant effect of age and gender was revealed for the factors of beliefs, the feeling of anxiety and pain, and the quality of home environment. The age of 45 years is the point that determines qualitative changes in the quality of life, when essential changes of the quality of life priorities occur in all spheres of life. The development of the quality of life is an indirect social process. In each age group, different integral factors of the quality of life have been found, and different priorities are typical of four integral factors: in the age group of 18–29 years it is the ability to work, in the age group of 30–44 years it is self-confidence, in the age group of 45–59 years it is socio-economic insecurity, and in the age group of 60 years and over the need for medicine. Depending on individual needs of specific age groups also the principles of social life should be applied. Each age group has its own quality of life priorities aimed for ensuring the harmony of physical and mental health.

Received 6 June 2011
Accepted 13 June 2011

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INTEGRALUS POŽIŪRIS Į GYVENIMO KOKYBĘ IR SVEIKATA

Santrauka

Įvadas. Šiuo metu Vakarų Europos šalyse ir JAV yra sukurta daug gyvenimo kokybei vertinti skirtų metodikų, kurių dauguma yra paremtos daugiadisciplininiais, sisteminiais principais. Kai kuriose šalyse, taip pat ir Lietuvoje, gyvenimo kokybės tyrimai daugiau koncentruojasi medicinos srityje. Pagal šiuolaikinę darnios plėtros koncepciją, 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.

Medžiaga ir metodai. Tyrimų imtis buvo suformuota iš 1 200 asmenų pagal amžių ir lytį. Metodologinis darbo pagrindas yra sisteminis požiūris, kurio esmė – gyvenimo kokybę formuojančių sveikatos, socialinių, ekonominių, aplinkos ir amžiaus elementų sąveika

yra integrali, tikslinga socialinė sistema. Duomenų analizei naudota SPSS (*Statistical Package for the Social Sciences* SPSS 17.0) programa.

Duomenys analizuoti faktorinės analizės metodu skaičiuojant koreliacijas tarp visų klausimyno rodiklių. Išskirti šeši latentiniai veiksniai, kurie paaiškino 45,55 % bendrosios dispersijos. Prioritetiniu latentiniu veiksmiu buvo išskirta įsitikinimų pozicija, kurią formavo dvasinio ir socialinio turinio rodikliai. Jis paaiškino 10,51 % bendros dispersijos. Sisteminiame raidoje svarbų vaidmenį atlieka ir medicinos paslaugų poreikio latentinis veiksnys, kuris didėja su amžiumi ir ypač sustiprėja po 50 metų.

Rezultatai. Rezultatai rodo, kad apie penkiasdešimtuosius gyvenimo metus įvyksta visų latentinių veiksnių kokybinis virsmas link neigiamų reikšmių. Tai rodo, kad apie 46–50 gyvenimo metus sustiprėja sveikatos sąlygojamos gyvenimo kokybės socialinė rizika.

Išvados. Tyrimu nustatytas sinergetinis gyvenimo kokybės taškas – 45–50 amžiaus riba, kai įvyksta esminiai gyvenimo kokybės prioritetų pokyčiai visose srityse.

Raktažodžiai: integralus požiūris, gyvenimo kokybė, socialinis ryšys, integralumas