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The structure of population life quality

Abstract. Purpose: to formate the conceptual life quality model that defines the basic components of human well-being. **Material and Methods:** theoretical analysis, scientific and methodical literature data generalization, sociological and statistical methods. The 300 youth respondents, 98 adults of first mature age, 290 adults of second mature age and 150 elderly people were surveyed. **Results:** objective and subjective component was selected in life quality; the basic components of life quality were identified. **Conclusions:** physical component, psychological component, social activity, material component, development and identity, environment are the basic components of quality of life.

Keywords: quality of life, health, model, population.

Introduction. For today an interest of a question of duration of healthy life avoids a usual analysis of mortality, incidence reasons, and is directed on studying of wellbeing of the population. Right a high quality of human life – is the main indicator of efficiency of the latest improving technologies.

For the last 15 years the quality of life became an integral part of popular and epidemiological researches and found the appendix during monitoring of health of the population, an estimation of efficiency of treatment, rehabilitation, palliative care. However, despite of that the quality of life was and remains the main object of researches in different areas of science, for today there is no only approach to interpretation of this concept.

The quality of life – is complex concept which is in the process of the development which is used actively in different branches of science [1; 2; 4; 8–10]. This term is borrowed and transferred from English-speaking literature. It is noted in the oxford dictionary of English (Oxford English Dictionary) that the quality of life is a measure of health, comfort and happiness that a person or a group of persons feel. The World Health Organization outlines this phenomenon as a perception a person of himself in life in the context of culture and system of values, depending on own purposes, expectations and standards [10]; D. Felse and J. Perry consider that wellbeing unites objective indicators and a value judgment of a physical, material, social and emotional state, according to a level of the development of an individual and his personal values [3].

The quality of life – is difficult, multi-component structure therefore a necessary element in knowledge of this phenomenon, establishment of the main components and communications, between them is the formation of a model which will contain the main components of wellbeing of a person.

Communication of the research with scientific programs, plans, subjects. The chosen direction of the research answers the basic scientific research of Lvov state university of physical culture “The involvement of elderly people to sports and improving educational programs for the purpose of improvement of health and quality of life”.

The objective of the research: formation of the conceptual model of quality of life which defines basic components of wellbeing of the person.

Material and methods of the research. The theoretical analysis and synthesis of data of scientific and methodical literature is carried out, sociological and statistical methods are used.

The structure and components of such estimating systems is in details analyzed: CHQ (Questionnaire “Child Health”), CHIP-CE (Child Health and Illness Profile – Child Edition), CHRI (Child health rating inventories), HSMC (Health Status Measure for Children RAND, RAND), HAY (“How Are You”), PEDSQL (The questionnaire “Quality of life of a child”, Pediatric Quality of Life Inventory), QOLQA (Questionnaire “Quality of Life for Adolescents”), SIP (Sickness Impact Profile), HIE (Health Insurance Experiment surveys), NHP (Nottingham Health Profile), QLI (Quality of Life Index), DUKE (Duke Health Profile), MOS FWBP (MOS Functioning and Well-being Profile), MOS Sf-36 (MOS “Functioning and Well-being Profile Short Form 36”), EUROQOL (European Quality of Life Index), Sf-6d (“A short form for estimation of health – 6d”, Sf-36 Utility Index), BSQ (Brief Screening Questionnaire), GPSS (Geriatric Postal Screening Questionnaire), GSQ (Geriatric Screening Questionnaire), QOLPSV (Quality of Life Profile – Seniors Version).

Respondents of youthful age took part in the questioning (students of the different directions of study, N=300, 18,2±0,81 years), the first and second mature age (teachers of comprehensive institutions, N=98, in 30,4±1,2 and N=290, in 40,5±0,79), advanced years (listeners of University of the third age, N=150, in 65,3±0,94).

The correlation analysis was carried out according to Spearman; carried out an inspection of the importance of the received coefficients.

Results of the research and their discussion. The analysis of definitions, these sociological surveys which are conducted in the different countries of the world, the existing methodological approaches to the estimation of wellbeing allows allocating three separate parts in quantity of life:

- 1) subjective that finds an individual assessment and satisfaction with own existence;
- 2) existential which allows defining usefulness and harmony of human life, feature of growth and development of an individual, according to spiritual and religious ideals;
- 3) objective which outlines a perception of quality of life taking into account factors of the outside world, adaptation of the individual to system of the existing cultural values that, in particular, is shown in the form of a material state or the social status.

Objective conditions and factors can be observed and measured definitely, and the subjective component is displayed in a type of personal judgments and answers of interested persons.

The allocation of an objective and subjective component and the use of the best strategy of each – of these approaches

(tab. 1) are useful at introduction and realization of monitoring of different level, formation of bases of standard data, estimations of quality of life of the certain individual and the population, in general. By the similar principle the system EUROMODULE which combines objective living conditions, subjective wellbeing, perception of quality of life, at the level of the certain individual and society functions. Objective indicators of EUROMODULE were chosen according to recommendations of the Program of development of the Organization of economic cooperation and development.

Table 1

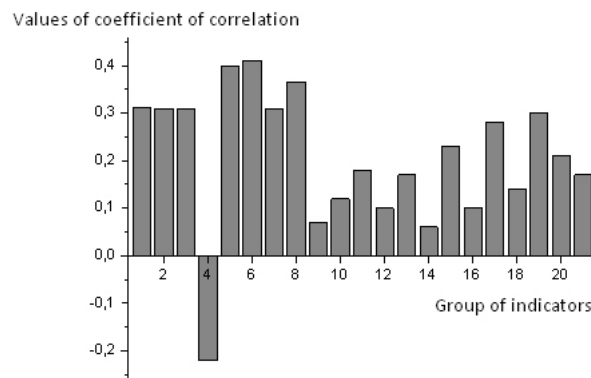
The quality system of life (on the example of the project EUROMODULE)

Level at which measurements were carried out	Indicators	
	Objective	Subjective
Individual	Dwelling, structure of a family, relation with people around, incomes, a state of health, education and job, environment and safety	Satisfaction living conditions, life, feeling of happiness, uneasiness and anomy, value of different components of life, relation (optimistic, pessimistic) to vital problems, estimation of own living conditions
Society	Social and economic situation, distribution of material resources, internal gross product	Existence of conflicts, trust to another, achievement of the different public benefits (freedom, safety, social justice), comparisons of living conditions in the country with other European states, prerequisites for social integration between persons of different social classes

A number of objective indicators is captured, in particular, the characteristic of conditions of dwelling, income, a living wage, educational services, a state of health and so forth. The main subjective indicators of this system is: the satisfaction living conditions, life, feeling of happiness, uneasiness and an anomy, the relation (optimistic, pessimistic) to vital problems, existence of the conflicts and so on. The assumption is key in this system that the satisfaction of basic requirements will define the structure of a family, relations with people around, income, a state of health, welfare of the population.

It is possible to consider approach of the system KIDSCREEN alternative which considers a holistic model of health with the corresponding allocation of a physical, psychological, social and material component [2]. The quality of life in this system is studied according to separate indicators: physical and mental wellbeing, mood and emotions, perception, autonomy, relations with parents, social support and coevals, social perception, the school environment, financial resources.

It should be noted that, despite of a weak communication between separate parameters of a subjective and objective component, they are necessary for the full characteristic of the quality of life (pic. 1). Correlation coefficients, average and insignificant behind size between a value judgment of the quality of life are found both some subjective and objective parameters. There are, average and insignificant correlation coefficients by a size between a value judgment of the quality of life and the main subjective and objective indicators. The greatest values of coefficient of correlation are found for such groups of parameters: satisfaction with life and satisfaction with work ($r=0,41$), assessment of wellbeing and health ($r=0,4$), education and income ($r=0,31$), quality of life and financial position ($r=0,37$), physical fitness and quality of life ($r=0,28$). The received results found a confirmation in numerous data of literature.



Pic. 1. Communication of objective and subjective indicators of quality of life:

1 – education/income [8; 9]; 2 – wage payment / worked out hours [7]; 3 – satisfaction with life/happiness [7; 9]; 4 – wellbeing/stress [8]; 5 – to the well-being / subjective perception of health [11]; 6 – satisfaction with life / satisfaction with work [6]; 7 – satisfaction with the society / subjective perceptions of quality of life [5]; 8 – satisfaction with own material status/ subjective assessment of quality of life [4]; 9 – education/satisfaction with life [9]; 10 – income/satisfaction with life (on the example of persons of the first, second and advanced years); 11 – education/happiness [9]; 12 – health/satisfaction with life [9]; 13 – wage payment/ satisfaction life [7]; 14 – education/wellbeing [8]; 15 – education/wellbeing (on the example of persons of the second mature and advanced years); 16 – income/happiness [8; 9]; 17 – physical preparedness/ subjective assessment of quality of life (on the example of persons of youthful and first mature age); 18 – physical preparedness/ subjective assessment of quality of life [11]; 19 – physical preparedness/ value judgment of health (on the example of persons of youthful age); 20 – physical preparedness/subjective perception of health [11]; 21 – education/satisfaction with work [8; 9].

It is possible to claim that in most cases of studying of quality of life isn't provided the development of the corresponding model, and by the allocation of separate components, understanding of communications between them is carried out within certain estimating systems. They can provide the collecting of objective and subjective data, however the compound qualities of life which are picked up according to the research objective. The analysis of the estimating systems (on the example of such which are designed for children and youth) found out that the main components of quality of life is physical and mental health, financial position, pastime free, communication with society, a state of environment (tab. 2).

Table 2

Component of the quality of life of children and youth

Assessment system	Compound qualities of life	Age, years
CHQ	Physical activity, incidence, vital competence, achievement, satisfaction with own life	5–18
CHIP-CE	Physical activity, incidence, achievement, ability to resist to stresses and to adapt	11–17
CHRI	Physical and cognitive functioning, influence of emotions on daily activity	5–12
HSMC	Physical and mental health	0–4
HAY	Physical, cognitive and social functioning, complaints to a physical state of health, feeling of happiness	7–13
PedsQL	Health, emotional and physical wellbeing, labor productivity, relations with people around	2–18
QOLQA	Physical, psychological, social wellbeing, autonomy, a state of environment	10–15

The analysis of a number of the estimating systems found the difficult hierarchical structure, but also compliance to the principles of subjectivity (the perception of the outside world is considered by the individual) and realities (aspects of activity are considered both positive and negative). To the main structures and substructures of quality of life of children and youth belong: physical health (physical and physical activity, pain, vigor, growth and development, incidence), mental health (emotional state (mood, positive and negative emotions, temperament), cognitive functioning), social health (social life, social support, relations with coevals, bully, relations with native, pastime free with parents), environment (school and rest, medical care, safety of conditions of the environment), social-psychological competence, financial position.

Similar results can be made by results of the analysis of the estimating systems for persons of mature and senile age. The structure of quality of life contains physical, mental and social health, pain, mood, dream, social contacts or isolation, labor productivity, a way of pastime free and so forth (tab. 3).

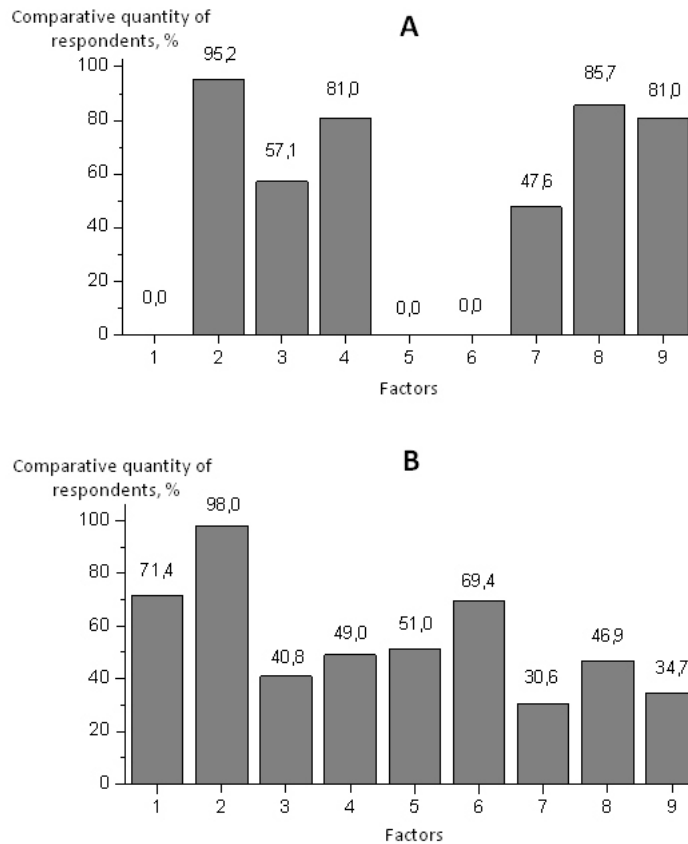
Table 3

The characteristic of the estimating systems which use for studying to quality of life of adults

Questionnaire	Parameters of quantity of life								
	1*	2	3	4	5	6	7	8	9
First and second mature age									
SIP			+	+	+		+		+
HIE	+	+	+		+	+	+		
NHP	+		+		+	+	+		+
QLI	+		+		+		+		
DUKE	+	+	+	+	+	+	+		+
MOS FWBP	+	+	+	+	+	+	+	+	+
MOS SF-36	+		+		+	+	+		
EUROQOL			+		+	+	+		
SF-6D			+	+	+		+		+
Old age									
BSQ		+	+	+	+	+	+		+
CORE-CARE		+	+		+	+			
EASY-CARE	+	+	+	+	+	+	+	+	
GPSS		+		+	+	+			
GSQ	+	+		+	+	+			
MOS SF 36	+	+	+	+	+	+	+		
QOLPSV		+	+		+			+	
SENOTS		+	+		+	+			

Note. * – 1 – general assessment of wellbeing or state of health; 2 – mental wellbeing; 3 – social wellbeing; 4 – cognitive wellbeing; 5 – physical functioning, in particular, physical activity; 6 – incidence, complaints; 7 – working capacity, daily activity; 8 – estimation of efficiency of treatment, examination or rehabilitation, action on health care; 9 – quality of a dream.

Factors which influence the quality of life of elderly people are given in pic. 2. Absolutely, according to respondents with poor quality of life, problems with health (95,2%) and in families (81,0%), low level of social activity (57,1%) are capable to worsen wellbeing. The modern generation of elderly people has low expectations of rather own life, because of social and economic problems and events of the first half of the XX century. Such assessment displays the underestimated expectations and opportunities and can be uncharacteristic for the next generations.



Pic. 2. Factors which influence quality of life of elderly people:

A – worsen quality of life (N=21, on the example of persons with poor quality of life); B – improve quality of life (N=49, on the example of persons with high quality of life). 1 – income; 2 – health; 3 – friends; 4 – family; 5 – work; 6 – hobby and interest; 7 – social life and activity; 8 – independence; 9 – mobility.

But, except a good shape of health, the existence of friendly relations with others, positive influence on quality of life has an income (71,4%) and a work (51,0%). Most of respondents (69,4%) as one of factors that is capable to improve quality of life, remember the activity in free time. Elderly people connect the high quality of life not only with absence of diseases, satisfaction with life, but ability to perform daily tasks independently, to carry out a choice independently and not to depend on the help of others. Dependence on a thought and a choice of other 85,7% of respondents with poor quality of life was chosen as a factor which significantly reduces wellbeing. Among respondents with the high quality of life a third of respondents (34,7%) chooses a mobility and nearly a half of respondents chooses an independence (46,9%) as factors which are capable to improve quality of life of the elderly person.

Conclusions:

1. Basic components of quality of life are similar at persons of different age. It allows using the only instrument of measurement of wellbeing irrespective of age, sex, the social status or a state of health of a respondent. The specialized narrowly targeted estimating systems are based on the statement what exactly the absence of diseases testifies to high quality of life and consequently, contain indicators, which are not actual for the main group of the population. Such approach doesn't provide understanding of quality of life, and provides set of sample statistics for use in medical practice.

2. Basic components of wellbeing of a person is a physical component (substructures – somatic health, daily activity, free time), a psychological component (an emotional state, a self-assessment), social activity (interaction, cohesion), a material component (a financial position, employment, living conditions), development and self-identification (purposes and values, autonomy, activity and a choice, education and skills), environment (the rights, characteristic of the environment).

Prospects of the subsequent researches is in the development of the theoretical structure of quality of life that allows characterizing compound qualities of life, connections among them and the main indicators.

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