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Theoretical and Methodological Principles of Life Quality Model Forming of Different Population Groups

Abstract

The topicality. The indicators of life quality are undetermined and unstandardized; the problem of determination of a single quantitative meaning of the quality of life remains unsolved. **The aim of the research** – to describe modern approaches to determining the quality of life and on their basis to propose a comprehensive theoretical model for the explanation of life quality phenomenon and the role of health in its formation. **Methods:** analysis and synthesis of scientific literature, documentary data; methods of theoretical research (analysis, synthesis, specification, classification, historical method, comparative analysis, system and structural analysis). **The results:** It has been proved that the quality of life is closely related to the health of human beings and it includes physical, mental and social being, considering the beliefs, expectations and world outlook. Based on the theoretical analysis and synthesis, it proposes the multicomponent structure of the quality of life, taking into account both positive and negative aspects of life, common to people of different sex, age, and state of health. Domains, sub-domains, indicators, and variables were defined as the main components of the model. Physical Component, Mental Component, Social Activity, Material Component, Development and Identity, Environment were assigned to the components of the highest level. The health-related quality of life was separated as the single part of the model. **Conclusions and recommendations for further research.** The theoretical model based on the principles of consistency, hierarchy, equality, determinism, unity of internal factors and external conditions was developed.

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

Introduction

The term “quality of life” is actively being developed in various fields of science and is controversial. In this regard, there is a contradiction between its

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multidimensionality and lack of well-defined components and their characteristics. Despite numerous research papers, life quality as a problem determining a single quantitative indicator of life quality remains undetermined and uncontrolled. Selection of the components of quality of life is often done in haphazard way, because even if a statistical base to the quality of life may vary. Also unaccounted for are human values, cultural and national identity, universal human needs – the desire to live safely satisfy their biological needs, interact with society.

Active development of today has become the direction of research according to which the quality of life is studied as a complex medical and social phenomenon [1]; [2]; [3]; [5]; [18]; [20]. This approach is crucial in today's international research and receives support for increasing Ukrainian scientists (Y.I. Feschenko and others, 2002; E.N. Prystupa, N.O. Kurish, 2010; S.L. Nyankovskyy, O.R. Sadova, 2013; A.V. Tsos and others, 2014).

The scientific community suggested models that deepen understanding of the links between the functional state of man and his well-being [10]; [18]; [21] but despite that a system of indicators for development appraisal system, which would cover the different areas of life and society is insufficiently elaborated.

Approaches to improve the quality of life in Ukraine shows that the focus is aimed at ensuring the material welfare of citizens, while the value of health in the structure of the quality of life is proved insufficient, and factors that determine the quality of life, are not fully understood and defined.

The purpose – to describe modern approaches to determining the quality of life and on their basis to offer a comprehensive theoretical model to explain this phenomenon and importance of health in shaping it.

Materials and methods – analysis and synthesis of information, scientific literature, documentary evidence; methods of theoretical research (analysis, synthesis, specification, classification, historical method, comparative analysis, system-structural analysis).

The structure and components of such estimative system as CHQ (Child Health Questionnaire), CHIPCE (Child Health and Illness Profile – Child Edition), PedsQL (Pediatric Quality of Life Inventory), QOLQA (Quality of Life Questionnaire for Adolescents), 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), BSQ (Brief Screening Questionnaire), GPSS (Geriatric Postal Screening Questionnaire), GSQ (Geriatric Screening Questionnaire), QOLPSV (Quality of Life Profile – Seniors Version) are analysed.

Results and discussion

According to Cambridge Academic Content Dictionary, the quality of life – is the satisfaction and comfort of an individual or a group of individuals. Today the quality of life is not as outlined concept and contradictions connected with it

are the result of its application in various fields of science (economics, sociology, philosophy, law, ecology, medicine, geography).

Active development of the concept of quality of life started on the beginning of XX century, in the 30's. Several attempts were made to identify, characterize and develop an algorithm for measuring the quality of life [12]. During this period, the quality of life and its performance are the cornerstone of reports of politicians, reports devoted to the socio-political situation, labor economists and others. For example, in Baltimore, during the Great Depression, a series of articles about quality of life of residents of the United States was published. They first attempted to develop a system of assessment based on objective and subjective indicators (infant mortality, income, education, crime rates, housing prices, satisfaction of residence and neighbors). As a result, first ranking list was formed on the basis of administrative-territorial division [13].

In the 50s and the 60s of the XX century the term "quality of life" was often used by economists as objections to unrestricted growth. So, S. Ordway (1953) and F. Osborn (1954) used this concept when they stressed the environmental danger arising from rapid economic growth. The work "The Affluent Society" by John Galbraith stated that "what is important is not the quantity of our products and the quality of life". But in the second half of the XX century the term "quality of life" was no longer the prerogative of economists. The importance of this was the work by Robert Bauer ("Social Indicators", 1966) and Alvin E. Tofler ("The Third Wave", 1980), which provided the quality of life in addition to economic aspects of the social and environmental aspects.

According to N. Nykyforenko and others [4] the concept of the quality of life in the Western science took a particular evolutionary path to the multidisciplinary concept and these studies involved representatives of various branches of science; the phenomenon as life became paramount goal of socio-economic development of any country, the main meter efficiency at all levels of government. Instead, as a denial of scientific works of Soviet scientists significantly prevalent concept of "lifestyle", which outlines the conditions of human existence, describes the most important features of a particular type of society. As a result of domestic science, the quality of life is equivalent to the "standard of living", "lifestyle", "welfare" and even changes its and then identified mistakenly with the service (free medicine, education), product characteristics and benefits.

Since the 90s of the 20th century worldwide specialist research centers have been operating and applying appropriate research program. For example, in 1994 a study of Denmark for the quality of life based Research Center, Canada Ministry of Health funded a special national survey. In France, non-profit organization MARI was created, which is the focal point of registration and testing different methods of evaluating the quality of life, developer guidelines. The same does the teaching and research Corporation RAND (USA), which has separate offices in the UK and Belgium, and the Australian Center for Quality of Life.

In medical literature, the life quality has been used actively during the last four decades as the main parameter for decision making on health. Researchers focus their attention on the design and testing of measuring instruments [6]; [16]. Most definitions of quality of life in the scientific literature are of a general nature – “awareness own welfare”, “satisfaction or dissatisfaction with their lives”, „happiness or unhappiness” or „life satisfaction and personal well-being”. Researchers John Reyeski, Sh. Mihalko pay attention to the complexity of the concepts and describe it as “umbrella” [15]. According to B. Massama, the prominent place should be taken among the quality of life and the conditions of life and social environment [12]. Therefore, in the study of the welfare of certain groups or the general public, the quality of life is analyzed not only as a purely subjective category, but as a value based on quantitative and objective standards of life [8]; [11]. However, according to A. Novik, that subjective perceptions can provide an understanding of quality of life as a comprehensive description of the physical, mental, emotional and social functioning [1].

M. Farkvhar analyzed the known definitions of the quality of life and developed a classification of definitions. Based on the review of the scientific literature, she singled out four types of concepts: 1) general; 2) partial; 3) selective; 4) combined [9]. The researcher noted that despite the common definition, components of the quality of life are not named, but they are most common in the scientific literature. However, for assessment of the quality of life it is important to isolate certain components, but there are definitions that include a set of objective and/or subjective indicators selected for the purpose of research. Selective definitions are narrowly focused and contain a list of components of the quality of life. They are most often found in works devoted to health, physical activity and disability rights. These scientific studies generally used the term “quality of life”, but there is no description of the concept and interpretation of the term implicitly made in the context of selected activities and research methods. In the fourth type, definitions clearly mention all the possible components of the quality of life.

In 1995, the World Health Organization described the quality of life as people’s perception of themselves in life in the context of culture and value systems, depending on their goals, expectations and standards. This definition covered physical and mental health of an individual, his or her social activities, values and views. In general “health” definition of quality of life is closely related to the understanding of health and disease, and components of quality of life are related directly to vital functions of a patient (physical and mental state, motor and social activity, environment, etc.). The World Health Organization distinguishes the following components of quality of life [18]:

- 1) physical well-being (level of energy, fatigue or pain, quality of sleep and rest);
- 2) psychological well-being (the ability to focus on an object to store information in memory, emotional balance, control negative emotions, etc.);

- 3) social welfare (relationships with others, adapting to the physical and social spheres, implementation of socially useful work);
- 4) spiritual well-being (religion, personal beliefs);
- 5) the environment (environmental safety, pollution levels, availability and quality of medical and social services, the opportunity to learn and improve one's skills, pollution, climate);
- 6) autonomy (level of daily activity, performance, depending on the therapy and pharmacological agents).

Ruut Vinhoven is a known researcher of happiness and he believes that the quality of life is made up of four components – environmental factors, individual life skills, usefulness of life, and one's own "internal" evaluation of life [20]. Thus, each of these components is interconnected with one another. For example, the ability to perform daily activities independently and active communication with society effect positively on well-being, but it is strongly dependent on the health and financial situation. Accordingly, the quality of life – a dynamic value, consisting of the positive and negative experiences, includes emotional component values, and its evaluation varies with the time of the events in life, changing health status, experience and so on.

According to D. Sella [7], the quality of life consists of multiple domains – physical, cognitive, psychosocial and spiritual well-being. The scientists, R. Tartar and colleagues, believe that the quality of life includes behavioral and cognitive abilities of an individual, emotional well-being, an ability to perform daily and occupational activities, and performance of social roles [17].

I. Wilson's and P. Clary's model of quality of life [21] combines a paradigm of biomedical and social sciences. Scientists have identified the following components: "Characteristics of the individual", "Biological and physiological factors", "Signs", "Functional State", "Characterization Environment", "General perception of one's own health". Considering the close relationship between quality of life and health, scientists proposed a separate structural part – health-related quality of life, HRQOL, and actively explore it [14]; [19]. It includes physical and social functioning and is based on a subjective assessment.

According to D. Feltse, J. Perry, the quality of life consists of 6 domains and 14 subdomains that can be analyzed with the use of objective and subjective indicators [10]. This multi-component structure singled out financial (income, housing, transportation), physical (health, well-being, personal safety), social (personal relationships, community involvement), emotional (optimism, respect and status, mental health, stress, beliefs, convictions) and professional welfare (competence, productivity).

Toronto's model takes into account individual personal achievements, activities, life satisfaction, ability to use existing benefits and opportunities (University of Toronto, 2004). There are three domains of quality of life – "Existence", "Belonging" and "Becoming". The components of "existence" are a physical be-

ing (physical health, personal hygiene, nutrition, physical activity, ability to perform daily work, etc.), mental being (mental health, feelings, self-esteem, self-control), spiritual being (personal values and standards, spiritual beliefs). “Relevance” reflects the relationship of an individual with the environment, a substructure of this domain is a natural affiliation (home, work, educational institution, the nearest neighbors and community) and social identity (the social and health care services, the effectiveness of educational and recreational programs, participation in public events, the level of social activity). “Establishment” – is the achievement and implementation of one’s objectives and desires. In this domain, you can isolate application activity (activity at home, at school, at work, volunteering), recreation (types of activities that promote rest and reduce stress levels) as well as personal growth and development (activity aimed at self-improvement and adaptation to environmental conditions).

Thus, one could argue that the “quality of life” is closely related to human health and includes physical, mental and social human being. It also takes into account beliefs, expectations and outlook. Multi-component structure of the quality of life, which includes positive and negative aspects of life, is common to people of different gender, age, health and so on (it is based on the theoretical analysis and synthesis). The main components of the model are the defined domains, sub-domains, indicators and variables (moderators and mediators).

Domains and subdomains – components of the highest quality of life and higher order respectively obtained by analyzing the definition of the quality of life, generalization of scientific data and information on statistical databases on indicators of well-being of people living in different countries, and modern systems of evaluation. The main parameters, according to which the selection of domains is realized includes unity of all respondents, regardless of, for example, the socio-demographic characteristics and health.

There are five domains of the quality of life: “The physical component”, “Mental component”, “Social activity”, “Material component”, “Development and Self-identity” and “Environment”. As subdomains (“Somatic health”, “Daily activity”, “Free time”, “Emotional condition”, “Self-appraisal”, “Interaction”, “Cohesion”, “Financial situation”, “Employment”, “Living conditions”, “Education and skills”, “Activity and choice”, “Autonomy”, “Tasks and values”, “Rights”, “Environment”) determined a group of factors which affect directly the formation of personal well-being and performance of this level helped to extend the understanding of the quality of life.

Moderators are quantitative (age, salary) or qualitative changes (gender, socio-demographic class), which influence the direction or strength of the connection between the independent change (predictor) and dependent change (index). Mediators explain the relationship between independent changes and the overall value of quality of life; they demonstrate how external factors become internally, psychologically significant and determine indirect causal relationships essentially.

Indicators are qualitative and quantitative markers that relate to perception, behaviors, environmental conditions and make it possible to form some idea of the quality of life or to give it a clear assessment. They are necessary for tracking positive or negative changes in each domain or sub-domain and are able to provide a holistic view on the state of the system as a whole.

It singled out the quality of life in this model, which related to health directly. When forming this structure one takes into account the quality of life related to health – narrower concept. The quality of life encompasses all aspects of human life and HRQOL – diseases, disease states, reflects individual perception and understanding of their state of health and non-medical aspects of socio-demographic variables that influence well-being.

Conclusions and recommendations for further research

Based on a holistic scientific analysis, the model, based on the principles of consistency, hierarchy, equality, determinism, unity of internal factors and external conditions is offered. It is a perspective to develop the terms of the system for complex evaluation of the quality of life of different groups.

References

- [1] Bergier B., Bergier J., Tsos A. (2014). *Factor determining physical activity of Ukrainian students*. Annals of agricultural and environmental medicine, vol. 21, no. 3, pp. 613–616; <https://doi.org/10.5604/12321966.1230674>.
- [2] Bowling A. (1995): *Health-related quality of life: a discussion of the concept, its use and measurement*. Measuring disease. Open University Press. Philadelphia, pp. 1–19.
- [3] Cella D.F. (1994): *Quality of life: concepts and definition*. Journal of Pain and symptom management, vol. 9, no. 3, pp. 186–192.
- [4] Diener E., Suh E. (1997): *Measuring quality of life: economic, social, and subjective indicators*. Social Indicators Research, vol. 40, no. 1–2, pp. 189–216; <https://doi.org/10.1023/A:1006859511756>.
- [5] Farquhar M. (1995): *Definitions of quality of life: a taxonomy*. Journal of Advanced Nursing, vol. 22, no. 3, pp. 502–509; <https://doi.org/10.1046/j.1365-2648.1995.22030502.x>.
- [6] Felce D., Perry J. (1995): *Quality of life: its definition and measurement*. Res. Dev. Disabil, vol. 16, no. 1, pp. 51–74; [https://doi.org/10.1016/0891-4222\(94\)00028-8](https://doi.org/10.1016/0891-4222(94)00028-8).
- [7] Institute of Medicine and National Research Council. Local Government Actions to Prevent Childhood Obesity(2009). Institute of Medicine and Na-

- tional Research Council. Washington, DC, The National Academies Press, p. 138.
- [8] Massam B.H. (2002): *Quality of life: public planning and private living*. Progress in Planning, vol. 58, no. 3, pp.141–227.
- [9] Mitra A. (2003): *Painting the town green. The use of urban sustainability indicators in the United States of America*. RICS. London, p. 38.
- [10] Pavlova I., Vynogradskyi B., Ripak I. et al. (2016): *Prognostication of health-related life quality of Ukrainian residents due to physical activity level*. Journal of Physical Education and Sport, vol. 16(2), art. 65, pp. 418–423; <https://doi.org/10.7752/jpes.2016.02065>.
- [11] Rejeski W.J., Mihalko S.L (2001): *Physical activity and quality of life in older adults*. Journals of Gerontology. Series A, Biological Sciences & Medical Sciences, vol. 56, no. 11, pp. 23–35; https://doi.org/10.1093/gerona/56.suppl_2.23.
- [12] Taillefer M.C., Dupuis G., Roberge M.-A., Lemay S. (2003): *Health-related quality of life models: systematic review of the literature*. Social Indicators Research, vol. 64, pp. 293–323; <https://doi.org/10.1023/A:1024740307643>.
- [13] Tartar R.E., Erb S., Biller P.A. et al. (1988): *The quality of life following liver transplantation: a preliminary report*. Gastroenterol Clin. North. Am., vol. 17, pp. 207–217.
- [14] The WHOQOL Group. The World Health Organization Quality of Life Assessment (WHOQOL): position paper from the World Health Organization (1995). The WHOQOL Group. Social Science and Medicine, vol. 41, no. 10, pp. 1403–1409; [https://doi.org/10.1016/0277-9536\(95\)00112-K](https://doi.org/10.1016/0277-9536(95)00112-K).
- [15] Tsos A., Shevchuk A., Kasarda O. (2014): *Rukhova aktyvnist u motyvatsiino-tsinnisnykh oriientatsiakh studentiv [Motor activity in motivational and valuable orientations of students]*. Fizychnye vykhovannia, sport i kultura zdorovia u suchasnomu suspilstvi: zb. nauk. pr. Skhidnoievrop. nats. un-tu im. Lesi Ukrainky. Lutsk, no. 4 (28), pp. 83–87; <https://doi:10.1001/jama.1995.03520250075037>.
- [16] Veenhoven R. (2000): *The four qualities of life. ordering concepts and measures of the good life*. Journal of Happiness Studies, vol. 1, pp. 1–39.
- [17] Wilson I.B., Cleary P.D. (1995): *Linking clinical variables with health-related quality of life: a conceptual model of patient outcomes*. JAMA, vol. 273, pp. 59–65.

Teoretyczne i metodologiczne zasady formułowania modelu jakości życia dla różnych grup populacji

Streszczenie

Wskaźniki jakości życia są niejasne i nieznormalizowane; problem określenia pojedynczego, ilościowego znaczenia jakości życia pozostaje nierozstrzygnięty. Celem niniejszego artykułu jest opisanie typów współczesnego podejścia do określenia jakości życia i zaproponowanie na tej podstawie wyczerpującego modelu teoretycznego w celu wyjaśnienia zjawiska jakości życia i roli zdrowia w jej osiągnięciu. Wykorzystano następujące metody badawcze: analiza i synteza literatury naukowej i danych dokumentacyjnych, metody teoretycznych badań naukowych (analiza, synteza, specyfikacja, klasyfikacja, metoda historyczna, analiza porównawcza, analiza systemowa i strukturalna). Udowodniono, że jakość życia jest ściśle powiązana z ludzkim zdrowiem i obejmuje byt fizyczny, umysłowy i społeczny, z uwzględnieniem przekonań, oczekiwań i światopoglądu. W oparciu o analizę teoretyczną, zaproponowano wieloskładnikową strukturę jakości życia, biorąc pod uwagę zarówno pozytywne, jak i negatywne aspekty życia, popularne wśród ludzi różnej płci, różnego wieku i stanu zdrowia. Jako główne składniki tego modelu zdefiniowano domeny, poddomeny, wskaźniki oraz składowe. Wśród najważniejszych składowych wymieniono: składową fizyczną, składową umysłową, aktywność społeczną, składową materialną, rozwój i tożsamość, środowisko. Jakość życia związaną ze zdrowiem wyodrębniono jako najważniejszą część tego modelu. Opracowano model teoretyczny oparty na zasadach konsekwencji, hierarchii, równouprawnienia, determinizmu, spójności czynników wewnętrznych i warunków zewnętrznych.

Słowa kluczowe: jakość życia, zdrowie, składowa, model, populacja.