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**ПОСТІНДУСТРІАЛЬНІ ГІРНИЧІ СПІЛЬНОТИ: АСПЕКТИ ГЕОЕКОЛОГІЇ ЯКОСТІ ЖИТТЯ**

Мультидисциплінарний характер якості життя вимагає відповідного визначення цього поняття. Хоча це специфічно для галузі соціології, воно все частіше з'являється в екології, економіці, охороні здоров'я, кліматології тощо. Таким чином, феномен метаморфоз охоплює різні сфери діяльності, які спричиняють природні та технічні зміни. Модифікація природних систем та їх трансформація внаслідок природно-технічних причин, характерна для постіндустріальних гірничодобувних територій, наближає нові галузі досліджень до географічного середовища. Аналіз якості життя громад у цих районах передбачає трансдисциплінарний підхід (між різними дисциплінами та всередині них, а також за межами будь-якої з них), щоб зрозуміти фізіономію та здоров'я ландшафтів, відповідно, екологію ландшафтів, завантажених життєвими ресурсами. Через призму геотектонічних рухів в останній період часу, окрім безпечного підземного видобутку корисних копалин, забезпечення безпеки та здоров'я в публічних і приватних надземних просторах потребує необхідності аналізу реальної ситуації, насамперед у державних установах, державній та приватній системі охорони здоров'я (лікарні, амбулаторії). У цій статті коротко оглядається геоecologia якості життя, зосереджуючись на найважливіших визначеннях концепції та висвітлюючи елементи, застосовні до постіндустріальних гірничих районів.

**Ключові слова:** видобуток корисних копалин, громади, геоecologia, якість життя.

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**POST-INDUSTRIAL MINING COMMUNITIES: ASPECTS ON GEOECOLOGY OF QUALITY OF LIFE**

The multidisciplinary nature of quality of life calls for appropriate definitions of the concept. Although it is specific to the field of sociology, it appears more and more often in ecology, economy, health, climatology, etc. The phenomenon of metamorphosis thus involves the different fields with activities that produce natural and technical changes. The modification of natural systems and their transformation due to natural-technical causes, characteristic of post-industrial mining areas, brings the new fields of research closer to the geographical environment. The analysis of the quality of life of the communities in these areas involves a transdisciplinary approach (between and within various disciplines as well as beyond any of them) to understand the physiognomy and health of landscapes, respectively the ecology of landscapes loaded with life resources. Through the lens of geotectonic movements in the last period of time, in addition to safe underground mining, ensuring security and health in public and private above-ground spaces requires the need to analyze the real situation, primarily in public institutions, in the public and private health system (hospitals, ambulatories). This paper briefly reviews the geoecology of quality of life, focusing on the most important definitions of the concept and highlighting the elements applicable to post-industrial mining areas.

**Key words:** mining, communities, geoecology, quality, life.

**Problem statement.** Romania engaged in a large-scale industrial restructuring, assuming the reduction of production, the loss of jobs and the serious damage to the quality of human life in the communities established in mono-industrial areas. In synergy with the chaotic exploitation of natural resources (e.g.,

wood mass), the landscapes were subjected to disturbances specific to the interaction between the geographical environment and the human factor. The geographical environment is an irreducible macrosystem delimited by the components of the planet and determined by the interaction with basic

human activities (urban, industrial, agricultural, social, etc.). In the geographical environment the processes tend towards balance (uniformization, oblivion), unlike the environment (the space transformed by man) where they immortalize changes and transformations in the memory of the landscape. Offenbergl (2018) assimilates the geographical environment with the "organism", the system with its functional part and the (subjective) landscape with the most specific material expression of the surrounding environment [1].

The modification and transformation of space organization systems, both due to natural and technical causes, bring research fields closer to beyond the limit of interaction, making their analysis require a transdisciplinary approach (integration, transgression, metamorphosis, etc.), centered on understanding their political, economic, social, sanitary, ecological and cultural physiognomy and health [2].

Therefore, the objective visual manifestations of the spatial organizations of the geographical environment are defined by individual component parts and complex, natural and anthropic assemblies, having as distinctive temporal elements their structure and changes/transformations. The structure is influenced by the physical form and the specific spatial organization (scale) of the different systems/subsystems, while the changes in the structure are influenced by the dynamics and functionality of the different energy flows (hydraulic, wind, chemical, solar, etc.).

#### **Analysis of recent research and publications.**

The way the systems evolve and function is a component part, at different spatial scales, of the behavior of the holistic dimensions (spheres) of the geographic environment (Pedolithosphere – the domain corresponding to the lower level of the Atmosphere and the upper level of the Lithosphere, Biosphere, Hydrosphere, Reliefosphere – the totality of the forms of the solid surface of the planet (the Earth's crust), introduced in geosciences (the science of geomorphology) in 1969 by the geographer of German origin Julius Bűdel (1903–1983); Toposphere or Relief, Climosphere – represents the dynamics of all meteorological phenomena in a certain system (region, area, field) on the globe, in a very large time interval (usually several decades – 30 years); Climate, Sociosphere). Starting from these findings, Offenbergl (et. al., 2019), defines objective landscapes as physical, ecological and geographical entities that integrate sets of their own features with sets of natural processes and/or generated by human intervention, through all three elements the definitions: abiotic, biotic and cultural. From a Geoecological point of view, Offenbergl shows that, by analyzing the objective landscapes ("seen at a distance") with appropriate tools, we can practically map the quality of geosystems [3].

The **purpose of the paper** is to clarify the most important definitions of the geoecology quality of life and highlighting the elements applicable to post-industrial mining areas.

**Main body.** *Extractive industrial zones.* Water, air and food were and will remain necessities of survival and minerals extracted from the depths, transformed into goods and services, will serve the maintenance and

development of life. Without them it is impossible to exist Humanity [2]. Due to geological processes, extraction is carried out in isolated, hard-to-reach areas, usually mono-industrial. The structural change of mono-industrial areas is a complex process, which generates challenges both for local communities in administrative units that include communes, cities, counties and mining regions, as well as for the governments of the respective states; it encompasses changes in the political, economic, social, health, ecological and cultural landscapes at different geographical scales.

In Western Europe the subject has remained a preoccupation of the political class, civil society, media and academia for over 60 years. Important debates mainly concerned the future of some areas of the coal and steel industry affected by extensive restructuring, such as: N-E of England and Wales (UK), Wallonia and Limburg (Belgium), Lorraine and Nord-Pas-de-Calais (France), Ruhr and Saar (Germany), Asturias (Spain) [4].

In the former communist countries of Central and Eastern Europe, when the system collapsed in 1989/90 regime change found many old industries that had survived in autarkic (state of economic self-isolation; closed national economies, isolated from the world economic circuit) economies of these states. Free market competition caused these industries to rapidly collapse, and mono-industrial cities and regions to plunge into deep crisis [4].

In Eastern European countries, for example, large regions emblematic of the superior coal industry have also attracted a lot of attention: Upper Silesia (Poland), Ostrava-Karvina Region (Czech Republic), Donezkyj Bassejn (Ukraine) and Jiu Valley (Romania), including through trade union movements and social convulsions. Apparently more resistant, the lignite industries in Leipzig-Halle and Lusatian (East Germany), the Bohemian Basin (Czech Republic) as well as the Oltenia Basin (Romania) have, in turn, entered accelerated operational decline.

The shock spread like in Western countries, but the old industrial areas in the East had to learn on the fly the "change" in a society in general transition, with a national economy undergoing vertical and horizontal restructuring. In all areas affected by the closure of the mines there was a general decline of communities [4]. The shock felt was general and spread rapidly, inducing economic, social, ecological crises and the alteration of well-being in both large and small or isolated areas, while overcoming the shock proved to be a narrow, difficult, different process in reality than in the scenarios of "experts" and the exacerbated populist promises of "transition politicians".

Wirth (et. all 2012) notes that, given their importance in the European, regional and national economic balance, large mono-industrial mining areas have captured particular public attention, the transition proving to be a burden that actively involved, sometimes violently, governments, unions, employers but also communities, civil society and national and international financial institutions. At the same time, small mining areas have failed to capitalize on such attention, although the effects on communities have

been even more drastic there in terms of the degradation of life [4].

Therefore, looking back at the "roadmap", after having accumulated over 30 years of experience looking for and experiencing both different transitions towards sustainable exploitation and sustainable development of post-industrial mining areas and a palette of colors from "dirty" black to "clean" green, we only see the change in the quality of life of former extractive mono-industrial communities.

*The concept of quality of life.* The concept of quality of life has many definitions in the specialized literature, starting from general to conceptual definitions, multidisciplinary being an important characteristic of the concept; reporting is done to components or areas of applicability. Iliș (et. al. 2019) [5]. cites Mărginean (et. al. 2011), who defines the quality of life as a "set of elements that refer to the physical, economic, social, cultural, political, health situation, etc. in which people live, the content and nature of the activities they carry out, the characteristics of the relationships and social processes they participate in, the goods and services they have access to, the consumption patterns adopted, the mode and lifestyle, the assessment of the circumstances and the results of the activities in the perspective in which they correspond to the population's expectations, as well as the subjective states of satisfaction/dissatisfaction, happiness, frustration." [6; 7].

The definition tells us that any individual lives within a society, defined as a group in which permanent relationships are manifested (common interests, values and goals) or a social grouping (population) that occupies a certain geographical area and that is subject to a certain political authority and whose members share certain cultural aspirations [8].

*Quality of life, sustainability and sustainable development.* Starting from the definition, Iliș (et. al. 2019) [5]. separates the way of evaluating the quality of life, by referring to:

- 1) state, represented by the standard (level) of life at a given time,
- 2) value, represented by a set of criteria that appreciate the state of life.

Methodologically, Iliș (et. al. 2019) [5]. mentions that the condition and value can be assessed both individually and combined, because the life of an individual can be considered the totality of the activities carried out by him based on some: 1. own initiatives, and 2. living conditions, in which living conditions are made up of: life resources, and the frame (matrix) of life.

Iliș (et. al. 2019) [5] also mentions that:

1. The life resources of an individual represent those reserves or sources of means likely to be exploited at a given moment for the creation of his own life, which he finds in his living environment [9].; they can be economic, natural, social, cultural and personal (physical, intellectual, psychological, etc.), and

2. The living framework can, in turn, be divided into:

– the individual framework, represented by its living environment (habitat) that influences the

individual perceptually, biophysically and psychologically, and

– the collective framework, its social environment through which it interacts with individuals in society.

In the case of a population, given the much larger spatial (geographic) extension to which it refers, the living conditions are influenced both directly by the two components and synergistically by the action of disruptive factors of society [5].

For example, on a global level, the intensive and uncontrolled industrial exploitation of natural resources (coal, oil, gas, ores, water, wood, etc.) has caused the degradation of the environment (the geographical space affected by humans) in different planetary geosystems and led to the emergence of Geoecological crises whose solution was made by adopting a comprehensive action plan. This early comprehensive plan envisioned a global partnership for sustainable development to improve people's lives and protect the environment.

On the occasion of the Millennium Summit in 2000, the international community adopted the Millennium Declaration and 8 strategic development objectives of the millennium, called Millennium Development Goals (MDGs): (1) eradicating extreme poverty and hunger, (2) ensuring universal primary education (for all), (3) promoting gender equality and empowering women, (4) reducing child mortality, (5) improving maternal health, (6) combating HIV/AIDS, malaria and other diseases, (7) ensuring an environment sustainable and (8) participation in a global partnership for development [10].

Although, initially, it was only desired to preserve the quality of the environment in the affected geosystems, later, the concept of sustainability was reformulated as durability. Thus, in September 2015, within the UN General Assembly, leaders of countries around the world assumed the 2030 Agenda for sustainable development and adhered to 17 Sustainable Development Goals (ODG/SDGs), as follows: (1) No poverty, (2) No Hunger, (3) Health and Welfare, (4) Quality Education, (5) Gender Equality; (6) Clean water, (7) Affordable clean energy, (8) Decent work and economic growth, (9) Industry, innovation and infrastructure, (10) Reduced inequality, (11) Sustainable cities and communities, (12) Responsible consumption and production, (13) Climate action, (14) Life underwater, (15) Life on land, (16) Peace, justice and strong institutions, and (17) Partnership to achieve the Goals [11]. (Fig. 1).



Figure 1. Sustainable Development Goals (ODG/SDGs)

Goal no. 3 refers to "Health and well-being – Ensuring a healthy life and promoting the well-being of all at any age" while Goal no. 11 refers to "Sustainable cities and communities – Development of cities and human settlements so that they are open to all, safe, resilient and sustainable", practically making a direct connection between the two concepts: Quality of life and Sustainable development, applicable in the transition of post-industrial mining communities.

*The transition of mining regions at European level.*

There is much literature that has studied post-industrial structural changes in former mining regions over time. Many of these empirical studies have examined both the problems and the solutions adopted after the cessation of extractive activities, as part of a larger planning regarding the restructuring of the industry of the old mining regions of Western Europe (Eckart et al. 2003, Wirth et al. 2012) and the transition structural associated with regime changes in the 90s in former communist countries (Steiner 2003, Wirth et al. 2012), with reference to transformation processes in former mining regions.

In Western Europe the restructuring of the mining regions, mainly from the coal and steel industries, started earlier and was assimilated into the "old" market economies. The transition was dictated by political compromises and long-term scenarios of the elimination of extractive activity.

A great deal of experience has thus been gathered from several countries, especially from the coal industry and the steel industry. In this regard, Great Britain focuses on central England (Clove et al. 1996, cited by Wirth et al. 2012), north-east England (Hudson 2005, cited by Wirth et al. 2012) and Wales (Jones & Munday 2001, cited by Wirth et al. 2012). The debate in Great Britain revolved mainly around the role of the Government in London in the regeneration of affected mining areas, the relationship with local actors and the evaluation of development strategies.

In Germany the discussion focused on the Ruhr mining region, also considered the largest old industrial area in Europe (Hassink 1993; Häußermann & Siebel 1994; Ache 2000; Wissen 2001, cited by Wirth et al. 2012). Compared to the UK, Germany mainly bets on innovation policy and measures to overcome paternal (pattern of relations and practices of patronage (paternal protection, guardianship and control) in the relations between social classes considered as unequal: employers and workers, privileged and disadvantaged, the state and the masses) inertia of traditional industry.

In Austria the extractive industry has had a smaller expansion than in the UK and Germany, but the transition issues are very similar. Kaufmann & Tödtling (2000, cited by Wirth et al. 2012) point to the "German line", mentioning the importance of regional innovation systems, while Zimmermann et al. (2007, cited by Wirth et al. 2012) the combination of innovation and the concepts of identity and cooperation. In Asturias (Spain) there are great problems in compensating for the decline of the coal industry, focusing the discussions on the background of economic alternatives (Voth 2004, cited by Wirth et al. 2012).

Wirth (et al. 2012) concludes that the old industrial regions of Western Europe showed low adaptability, rigid behavioral patterns and few alternatives for transition (Steiner 2003, cited by Wirth et al. 2012). In parallel, the countries of the former socialist bloc, from Central and Eastern Europe, triggered the radical structural transformations only after the overthrow of the political regimes in the 90s. In order to recover the gaps, the speed required for change was extremely high and, obviously, the national economies did not have adapted sufficiently to cope with the transition from the centralized market to the free market in a globalized world. And although they have gradually established the basic institutions specific to the market economy after 30 years there are still differences between West and East in terms of living standards, productivity and competitiveness (Steiner 2003, Wirth et al. 2012).

*The vicious cycle of quality of life.* In assessing the quality of life, at the European level, it is recommended to use some sets of indicators.

As a starting point in the analysis, 8+1 dimensions are taken into account, of which 8 refer to people's capabilities in pursuing their "self-defined well-being", according to their own values and priorities, and the ninth, "general life experience", refers to the personal perception of the quality of life (i.e., satisfaction with life, emotions, meaning of life, etc.) [5].

Iliş (et al. 2019) mentions the following indicators specific to the living environment: (1) Quality of material and living conditions (Income/ Consumption/ Material conditions); (2) The main field of productive or other activity (Quantity of the labor force/ Quality of the labor force/ Other basic activities); (3) Health (Health status/ Determinants of health/ Access to health care); (4) Education (Level of education/ Self-teaching skills/ Lifelong learning or continuing vocational training/ Opportunities to access education); (5) Leisure and Social Interactions (Leisure/ Social Interactions); (6) Economic and physical security (Economic security/Physical security); (7) Governance and fundamental rights (Trust in public institutions and services/ Discrimination and equal opportunities/Citizen activity); (8) Natural and living environment (Pollution/Landscape and built environment); (9) Overall Life Experience (Life Satisfaction/ Affect).

Also, Iliş (2019) emphasizes that "an important dimension of the quality of life is the health of the population, due to the effect generated on the labor force (the working population)." Incurable diseases and/or the inability to work as a result of poor health increase the costs and reduce the capacity for intervention for Geoecological conservation or improvement (the ecology of landscapes, geosystems), forming a vicious circle that, in the end, will lead to the worsening of the health status of population and the decrease in the quality of life (Fig. 2).

*The transition of post-industrial mining communities in Romania.* In Romania, the transition period has become an arduous process of radical transformation of economic, political and social institutions. Throughout this period, the political elites assumed, one by one, the objectives of institutional transformation and social reconstruction on the model of

Western countries. Major political decisions taken during the transition period, such as privatization and diminishing the role of the state in most economic and social sectors, were legitimized through public discourses as "necessary" in order to achieve a better quality of life for citizens. But, when the costs of the transition turned out to be high, precisely affecting the quality of life of the population, the transition was cosmeticized "as a temporary period of sacrifice, necessary to reach a level of quality of life at least similar to that of the countries western." And so on.

Studies on the state of the quality of life in Romania, based on data from the Quality-of-Life Diagnosis, prepared in the period 1990–2010, followed the changes that occurred in the first 15 years of transition. Thus, Mărginean and others (2004) [13]. concluded, following such an analysis, that "the family and the home are the elements with which Romanian citizens are satisfied, and the aspects self-assessed as critical are the state of health, income, workplace and personal security." The author also illustrates general European characteristics regarding "the lack of interpersonal trust and in institutions, as well as a low degree of social participation." [12].

The studies indicated "the chronicling of community problems and the maintenance of conservative attitudes in the relationship with the authorities" as elements that contribute to passivity in solving the problems faced by former mining communities, similar to those encountered in the rest of Europe. In this regard, it was highlighted that only 17% of the members of the mining community would turn to the authorities to solve their most important problems and only 4% would turn to various foundations, associations or non-governmental organizations [14].

Moreover, 30% of the community members who benefited from support programs and 26% of those who did not benefit from them mentioned that they were rarely informed about the projects and decisions of the City Hall. At the same time, the relationship with the mayor or local councilors is marked by a high level of mistrust, with the effect, more quickly, of blocking possible cooperation initiatives. The greatest willingness to get involved is participation with work in the design of a public space (50%) or blood donation (49%). Also, in the case of implementing a project from which community members would not have direct benefits approx. 60% would invest time or work and only approx. 40% would invest money. The reasons for non-involvement were: lack of interest (29%), lack of specific requests from the authorities or knowledge regarding how to get involved (11%), lack of time, money, etc. (11%) [14].

In the post-industrial mining communities from Romania, both in urban and rural areas, the list of community problems inventoried through studies required immediate solutions, referring to: lack of jobs, underdevelopment of infrastructure and poor housing quality. In general, the common problems indicated by members of the mining communities concerned drinking water infrastructure (40%), methane gas, heating agent (50%), household waste management (50%), repairs to common parts of housing (70%) and/or poor condition of road networks (15%) [14].

In relation to social life opportunities, satisfaction was low, both from the point of view of available recreational spaces and the possibilities of spending free time in the former mining communities.

In terms of emergency situations, members of the mining communities indicated the risks of flashbacks or collapses due to former mining operations and the risks of landslides (over 30%) as serious problems. These risks correlate with the huge amount of investment required to prevent the occurrence of these dangerous phenomena [14].

Health problems, however, represent the most important at a personal level, noting that lack of income (21%), lack of a job (16%) and serious health problems of some family members (14%) affected the quality the lives of members of post-industrial mining communities. Moreover, in 26% of households "there was at least one member suffering from a chronic disease." Access to emergency (ambulance) and pediatric medical services is reduced, the causes being the roads and the lack of health insurance for members of the mining community [14].

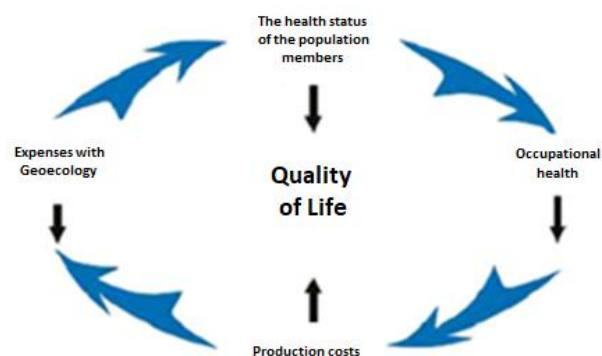


Figure 2. The vicious circle of quality of life

**Conclusions.** Now, after 30 years, we know that the end of the transition will not necessarily generate prosperity in the former mining areas, the restructuring of the mining sector affecting the communities as a whole, the effects propagate both at the household level and at the community level. Although, many of the former mining communities were declared, for a period, "disadvantaged areas", even the specific advantages of this measure did not bring the expected well-being. As in the rest of Europe, local public institutions remain incapable and powerless in this matter, always waiting for "a strategy elaborated from the center" to indicate the direction or at least to offer help. The lack of financial resources at the local level led to the chaotic implementation of small infrastructure projects, which led to the degradation of infrastructure and living conditions in former post-industrial mining communities.

An empirical study relevant for Romania is presented by Stănescu (2018, cited by Toc S. 2021), who carries out "a comprehensive analysis of the evolution of the quality of life in Romania in the last 100 years – 1918–2018 [15], illustrating aspects such as: Interwar Romania is characterized by the fact that the standard of living was low, and social inequality high; the communist period is one in which the quality of life

increases substantially, but deteriorates from the 80s onwards. This deterioration in the quality of life continued in the 90s for most of the population, with visible gains being registered only after the integration into the European Union” [16].

As a corollary, we must mention that life positions of people continually change, and sometimes they do not have time to understand and assimilate them. In order to avoid staying at the periphery of society, each individual needs to develop his/her own aptitudes towards new spheres of human activity, to extend his/her intellect, intuition, but above all his vision of the changes of which he is the subject [17], for a better quality of life.

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## ПСИХОЛОГІЧНА І КОГНІТИВНА РЕАБІЛІТАЦІЯ ЛЮДЕЙ З ПОСТКОВІДНИМ СИНДРОМОМ: СУЧАСНІ ПІДХОДИ СОЦІАЛЬНОЇ РОБОТИ

Стаття присвячена сучасним підходам щодо соціально-психологічної і когнітивної реабілітації людей з постковідним синдромом, розкриттю методів надання психологічної допомоги людям із COVID-19 та постковідним синдромом на прикладі роботи ГО «Центру соціально-психологічного супроводу «Добробут»; визначено фактори, що провокують стан психоемоційного напруження особи; окреслено психотерапевтичні та психокорекційні напрямки, які використовуються при наданні екстреної психологічної допомоги; доведено, що реабілітація передбачає багатогранний вплив на особу на різних рівнях: соціальному, психологічному, фізичному; когнітивно-поведінкова терапія визначена як інтегративний підхід, техніки якого спрямовано на досягнення змін у мисленні, емоційному стані та поведінці людини.

**Ключові слова:** соціальна робота, соціально-психологічний супровід, постковідний синдром, стрес, когнітивно-поведінкова терапія, реабілітація, соціальна та психологічна допомога.

**N.V. LYABAKH, D.V. KIRKO**

## PSYCHOLOGICAL AND COGNITIVE REHABILITATION OF PEOPLE WITH POST-CONDUCT SYNDROME: MODERN APPROACHES OF SOCIAL WORK

The article is devoted to modern approaches to the socio-psychological and cognitive rehabilitation of people with post-covid syndrome, the disclosure of methods of providing psychological assistance to people with COVID-19 and post-covid syndrome using the example of the work of the NGO "Center for Social and Psychological Support "Dobrobut"; the factors provoking the state of psycho-emotional tension of the person are determined; psychotherapeutic and psychocorrective directions used in the provision of emergency psychological assistance are outlined; it has been proven that rehabilitation involves a multifaceted influence on a person at different levels: social, psychological, physical; cognitive-behavioral therapy is defined as an integrative approach, the techniques of which are aimed at achieving changes in a person's thinking, emotional state, and behavior.

**Key words:** social work, socio-psychological support, post-covid syndrome, stress, cognitive-behavioral therapy, rehabilitation, social and psychological assistance.

**Постановка проблеми.** Життєвий шлях людини характеризується наявністю різноманітних і багатопланових подій. Деякі з них, на жаль, є негативними, або сприймаються такими, та мають травматичний характер. Події з негативним забарвленням багато в чому впливають на

формування подальшого сценарію життя людини і не кращим чином позначаються на її психічному й фізичному здоров'ї.

**Аналіз останніх досліджень і публікацій.** Оптимізація адаптаційних можливостей людини, екстрена психологічна допомога постраждалим в