

The Role of Synergetic Approach in the Methodology of Psycho-Pedagogical Support of Persons with Disabilities¹

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Abstract

The role of synergetic approach to psychological and pedagogical optimization of the quality of life of individuals with disabilities is studied by the authors of the article. Synergetic approach acts as the integrator of the two scientific perspectives - sociocentric and anthropocentric concepts. The system of psychological-pedagogical and socio-psychological rehabilitation of persons with disabilities in conditions of hospital treatment is perceived as a self-organizing and self-evolving social phenomenon. The capacity of diverse systems for self-development not only under the influence of external causes, but also due to the use of their internal capabilities, proves conceptual and methodological novelty of the ideas of self-organization. As a result, it increases rehabilitation potential and improves the quality of life of individuals with disabilities. The use of synergetic approach justifies the need for integration of elements of various concepts into psychological and pedagogical optimization of the quality of life of disabled people, affirming polyparadigmatic character of modern scientific thought.

Keywords: Individuals with Disabilities; Pedagogical Support; Synergetic; Sociocentric and Anthropocentric Approaches; Optimization of the Quality of Life.

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1. Introduction

Multidimensionality of social rehabilitation practice of people with disabilities “promoting social inclusion and personal fulfillment, employability and adaptability” (Khovanskaya et al., 2017), the level of development of the modern theory of social, psychological and pedagogical work with such category of population lead to providing high-quality support to the individual on the basis of various methodological approaches (Baylies, 2002; Ghazanfarpour, et al., 2013).

Problems of synergetic approach in formation and personal development were the research area of many modern scientists: A.I. Bochkaryov, V.G. Vinenko, A.A. Vorozhbitova, V.A. Ignatova, E.N. Knyazeva, S.P. Kurdyumov, S.N. Simonov, E.A. Solodova, N.M. Talanchuk, S.P. Firsova, H. Haken, Yu.V. Sharonin, etc.

The term “synergetics” comes from Greek “synergeia” – “coherent action”, “cooperation” and focuses attention on coherences of interaction parts in formation of a structure as a whole. The synergetics is translated as “energy of joint action” (from a Greek “sin” – “with”-, “in common” and “ergos” – “action”), a term coined by professor of the Stuttgart university Hermann Haken.

The philosophical dictionary contains more detailed definition: “Synergetics is the modern theory of self-organization, the new worldview connected with a research of phenomena of self-organization, nonlinearity, nonequilibrium, global evolution, studying the processes of formation of “an order through chaos”, bifurcation changes, irreversibility of time, instability as fundamental characteristic of evolution processes”. Separate aspects of the theory of self-organization from the pedagogical point of view are reflected in V.G. Budanov (Budanov, 2017), V.G. Vinenko, V.A. Ignatova, E.N. Knyazeva, S.P. Kurdyumov (Knyazeva & Kurdyumov, 1992), L.N. Makarova, N.M. Talanchuk (Talanchuk, 1997), M.A. Fedorova, Yu.V. Sharonin's works, etc.

The pedagogical dictionary edited by G.M. Kodzhaspirov gives the following definition: “Synergetics is the science investigating processes of complex systems transition of the disordered state to an ordered one and opening such connections between elements of this system where their total action effect within a system exceeds simple addition of action effects of separate elements”.

L.N. Popov points out that the synergetics may be understood as a kind of system approach, as an approach to understanding of development of open nonlinear systems and special style of thinking. The basic concepts of synergetics are “self-organization”, “openness” — the accidental deviation of values leading to emergence of a new structure, “attractor” — relatively final, steady condition of a system.

According to Simonov (2012), the synergetics is included into the universal methodological paradigm relating to those areas of knowledge where complex systems, the self-organization phenomena are studied and represents uniform cross-disciplinary approach to the studied objects. In the author’s opinion, the subject of

synergetics are self-organization mechanisms therefore it is called the theory of self-organization. "Self-organization in synergetics is understood as processes of macroscopically ordered space-time structures emergence in complex nonlinear systems, being non-balanced states, close to specific critical points". Sometimes self-organization is defined as "the streamlining of any elements caused by the internal reasons without influence from the outside". Distinctive feature of processes of self-organization is their purposeful, but at the same time natural, spontaneous character: these processes proceeding in interaction of a system with the surroundings are to some extent autonomous, rather independent from the environment. Process of self-organization results from interaction of accident and need and is always connected with transition from instability to stability (Simonov, 2012; Mendoza Velazco & Rivero Padrón, 2019).

Need for the integration of different concepts' elements in psychological-pedagogical support to optimize the quality of life of individuals with disabilities is confirmed by the polyparadigmatic nature of a modern scientific thought. Its main point consists of theoretical concepts creation, and, accordingly, practice of psychological-pedagogical support of this process on the basis of several methodologies, right up to mutually exclusive ones. The essence of such integrative psychological-pedagogical support to optimize the quality of life of individuals is the combination of two mechanisms of the above-mentioned process (Stone, 1999):

- the socialized (personal) relation (microlevel) where the character and intensity of development of subjects of rehabilitation process depend on their personal peculiarities and on the type of the relations.
- the system of the socially oriented relations (macrolevel) which represents a humane organized community connected with society via various dependences.

The purpose of the research is to increase the rehabilitation capacity and to improve the life quality of persons with disabilities.

2. Theoretical Basis

The existing theories reflecting methodological approaches can be divided (conventionally) into two big groups: anthropocentric and sociocentric (Gordon, & Rosenblum, 2001).

Understanding the development of individuals with disabilities as expansion of their internal forces - their development from "themselves" is characteristic of supporters of anthropocentric concepts' modifications (Habermas, 2005).

According to anthropocentric model of psychological-pedagogical support, the provision that the individual with disabilities is a self-adjusted system with internal, impulsive, extramental aspirations, internal need for his own life quality

improvement, finally guiding him to advancement (a synergetic syndrome), is intrinsic.

Supporters of the sociocentric concepts attach crucial importance in optimization of quality of life of disabled people to external factors, social institutes (Parsons, 1997). Its followers, give value to social and psychological conditions within this process, supposing hospital to serve the only “instrument of social and psychological reconstruction”. (Taylor, 2007)

Sociocentric models of this activity have such advantages as predictability, effectiveness (timing and content), a high possibility to use technology in psychological-pedagogical maintenance process, testability and controllability of its results, etc. (Haken, 2004)

The authors used the following methods and tools as the basis of the study:

- system analysis method to identify concepts and tendencies in academic thought on the subject;
- synergetic approach to identify the nonlinear bifurcation mechanisms of evolution;
- synthesis of anthropocentric and sociocentric approaches;
- integrative principle in designing the rehabilitation model of support for people with disabilities.

3. Results and Discussion

In our opinion, according to dual bio-social human nature, psychological-pedagogical support to optimize the quality of life of individuals with disabilities has to be arranged on the basis of synthesis of anthropocentric (person-centered and activity approach, hermeneutical, systems and role specific approach, value-based, individual) and sociocentric (acmeological, ambivalent, paradigmatic, systematic, multifaceted, environmental) approaches. These approaches may comprise a methodological basis of the integrative personal and social, psychological-pedagogical concept of this process. They also allow us to consider psychological-pedagogical support to optimize the quality of life of individuals with disabilities as the complete process, built on the basis of integration of the above-mentioned opposite theories and implemented by means of a holistic targeted elaborate system.

The integrity implies internal unity of objects, their relative autonomy from the environment. The integrity of activities for the organization of psychological-pedagogical support to optimize the quality of life of individuals with disabilities is manifested in several aspects (integrity: organizational, substantial, practice-oriented, structural). As a rule, in modern pedagogical literature additivity and consistency are distinguished as signs of a complete system.

On the basis of our methodological viewpoint, the integrity assumes the idea of integrity, as one of the fundamental principles. Methodological value of the principle of integrity is the creation of new qualities through resolution of conflicts by means of constructive synthesis. In beneficial synthesis (integration) of contrasts into a single whole, at various levels of formation and evolution of any system, including the system of psychological-pedagogical support to optimize the quality of life of persons with disabilities the synergetic bifurcation mechanism of its development is gradually revealed.

In our integrative personal and social concept of psychological-pedagogical support to optimize the quality of life of persons with disabilities, synergetic principle acts as the integrator and allows to consider psychological-pedagogical assistance as a process, substantially self-organizing, not based on direct cause-effect relationship, and proceeding ambiguously; the process caused by a set of internal and external influences; natural and accidental; predictable and spontaneous, ordered and chaotic.

The conceptual and methodological novelty of the ideas of self-organization is connected with recognition of the ability of various systems to self-development not only due to inflow of energy, information, substance from the outside, but also due to use of their internal capabilities.

Firsova (2011) points out that in recent years there is a rising interest of various areas of scientific knowledge to methods and the principles of the theory of self-organization. Numerous borrowings of the corresponding terminology to the area of humanitarian knowledge are observed. This process is quite natural as the general theory of systems and synergetics provide a methodological basis for full studying and the description of any kinds of systems regardless of their nature, forms of existence, degree of complexity and features of functioning.

Synergetic approach promotes restoration of complete ideas of the world, a world view as a unique process. Integration of knowledge on the basis of cross-disciplinary linkages provides the opportunity to capture linear communications across and point connections down, to catch not only the sequence, but also simultaneity of these communications and to recreate a complete vision of any problems, situations, the phenomena in all completeness of versatility, a multidimensionality at the new, higher level.

Synergetic approach to psychological-pedagogical support to optimize the quality of life of the individuals with disabilities assumes development of variable models of the organization of this process. The method of the system analysis organically fits into synergetic approach of this process. The main thing here is logically coherent research of a problem and use of the corresponding methods for its solution which can be developed within other sciences. The system analysis assumes interdisciplinarity.

The system analysis of psychological-pedagogical support to optimize the quality of life of the disabled person experience allows to track the sequence of this

process, to identify systematically important factors, tendencies, mechanisms, stages, features of interaction of subjects and objects in the conditions of social-psychological and psychological-pedagogical rehabilitation.

Salahutdinov (1999) notes that “the system is defined as structure, the integral entity consisting of a set of closely interconnected parts, complementing each other, thereby providing dynamic development of this entity. System qualities, laws of its development and functioning are characteristic to all formations - both individual and general ones. In each model (system) technical, natural, biological, public, etc. a set of organizational parts suggests the specialization constructed on complementarity, interference and the integrating interrelations considering features of this entity”.

Applying the system principles to the studied object, the author implies the following characteristics of the latter:

- each element in a system has those properties which were not inherent in it taken separately;
- all elements of pedagogical process are dialectically interconnected;
- each element of a system represents a subsystem.

The openness of this system, on the one hand, creates variety of the interests and requirements regarding rehabilitation, development of spiritual needs, intellectual resources of an individual, his spiritual and moral competences (Durkheim, 2009). On the other hand, a variety of forms and technologies of psychological-pedagogical activity providing optimization of quality of life of patients are created in this system. Psychological-pedagogical support of persons with disabilities represents a nonequilibrium system since the openness of a system to society leads to emergence of innovations, increase in the internal variety degree.

4. Conclusions

Using the ideas of synergetics, we made an effort to justify the process of psychological-pedagogical support to optimize the quality of life individuals with disabilities in hospital conditions:

1. Firstly, it becomes obvious that we cannot impose compulsory methods of treatment on such complicated system as an individual with disabilities; therefore, process of psychological-pedagogical support to optimize the quality of life of disabled people is based on the core principle of voluntariness when choosing methods and ways of rehabilitation actions, being guided by the regulations, but at the same time by the freedom of choice of the disabled person.
2. Secondly, the synergetics demonstrates that any elaborate system, as a rule, does not have only one way, but has a range of own ways of

development corresponding to its nature. Thus, psychological-pedagogical support to optimize the quality of life of the individual with disabilities promotes self-expression, self-affirmation and self-development of the personality through freely chosen multidirectional, sometimes the spontaneous actions which are promoting optimization of rehabilitation process.

3. Thirdly, in a synergetic cyclism chaos can act as the mechanism of self-organization and self-fulfillment of the personality.

Thus, synergetic approach to psychological-pedagogical support to optimize the quality of life of people with disabilities is based on use of nonlinear characteristics, openness of social-pedagogical and psychological-pedagogical systems, their ability, (as well as the capacity of a disabled individual and a rehabilitation therapist) to adapt to environmental conditions on the basis of self-organization.

The description of synergetic approach proves the necessity to apply given methodological orientation for creating a model of psychological-pedagogical support to optimize the quality of life of persons with disabilities. At the same time we consider the object, (i.e. the system of psychological-pedagogical and social-psychological rehabilitation of the individual with disabilities in the conditions of hospital treatment), as the self-organizing and self-developing social phenomenon.

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