



Physiotherapy and Rehabilitation: New Paradigms and Challenges

Renata Martinec*

Continuous development of various therapeutic and rehabilitation approaches requires continuous determination of new paradigms in order to provide a stable framework for dealing with illness and disability. Paradigms are defined as a set of theories, beliefs, values, techniques, skills etc. that is prone to be transformed and/or mended [1]. So, since nowadays we are witnessing major changes in the world of science and medicine, some paradigms should certainly be considered.

One of them is the principle of interdisciplinarity which is based on complex connection of different knowledge from the field of biomedical, social, technical and other sciences, but also from the field of art. In today's world, where specific insights are grouped into separate clusters, the principle of interdisciplinary communication is necessary, especially in the area of understanding and maintaining optimal psychophysical functioning in humans. Particularly, the process of interdisciplinarity is increasingly present in the field of physiotherapy and rehabilitation because it needs to include knowledge from various disciplines like physical medicine, neuroscience, anatomy, physiology, psychology, psychiatry, bio mechanism, assistive technology, psychoneuroimmunology, geriatrics etc., depending on the scope of the intervention.

But, how Prstačić emphasized, interdisciplinary communication can be influenced by numerous factors such as: level of human consciousness, sociocultural environment, social stereotypes, conceptual structure/terminology, discipline tradition, actual scientific rationale, education, public opinion as well as decisions which arises from individual point of view [2]. In this context, we enter into the field of professional ethics and professional identity. Namely, in the frame of the biomedical ethics it is necessary to be aware of professional scope and duties, as well as the importance of well-intentioned cooperation between experts from various disciplines.

Also, a biopsychological paradigm should be mentioned which concept of health, illness, injury, and disability considers through mechanisms of Health Environmental Integration (HEI) [3]. That model tries to recognize and improve complex multilevel mode of human functioning on the continuum that begins at the cellular level and ends at the individual's experience of the environment. The

significance of this paradigm is based on its endeavour to reduce disability by seeking to maximally integrate body and mind of an individual with the surrounding physical and social environment. That means that during therapy and rehabilitation all participants, such as patients, medical and paramedical professionals, members of social environment, medical policy etc., should have equal role in the process of achievement the best health care benefits.

Furthermore, development of objective knowledge supported by science, medicine, and technology has led to the gradual abandonment of body-mind dualism and adaptation of biomedical paradigm [4]. Or, according to Lock and Nguyen: "... *critically challenging assumptions that underlie the biomedical paradigm is necessary to help make the world more equitable with regards to health and well-being*" [5]. Respectively, the up-to-date knowledge from various disciplines has pointed out that causes of illness and process of healing are influenced by complex interaction of different physical, cognitive and psychosocial parameters. In that way, each treatment of the disease or injury requires the treatment of persons as a whole, including their body, mind and emotion.

Except global paradigms related to medical and social science overall, there are also specific paradigms related to certain disciplines. All of these paradigms, as a final goal, have an aspiration of achieving satisfactory quality of life in an individual. In that way, they are focused on the modalities that can restore and maintain health, strength, vitality, comfort, satisfaction and well-being in person. This tendency is not a new idea and it is often considered in different philosophical, religious and humanistic contexts. Recent development of technology, mechanical engineering and robotics together with the contemporary knowledge from different medical fields allows us to get closer to the realization of the *ancient ideal man* or *Renaissance man*. This, also called *Universal man*, was considered as "*the centre of the universe, limitless in his capacities for development, and led to the notion that men should try to embrace all knowledge and develop their own capacities as fully as possible*" [6].

So, new and valuable achievements in medical science are promised and it will, undoubtedly, contribute to a better psychophysical functioning of human. But also, we need to be careful not to fall into the trap of science for science's sake or state of the art according to which curing of separate symptoms represent satisfactory outcome of healing process. Furthermore, the development of new technologies enables the use of various approaches that are, sometimes, in conflict with the medical ethics and human rights protection. In this context, the good and bad side-effects of transhumanism should be considered [7,8].

Any way, we are entering into the new era of healing where therapy and rehabilitation approaches probably will enable a person to reach own physical capacities. But in this process we shouldn't forget the importance of treating the person in its entirety. Namely, the presence of any disease, injury or disability can induce the feelings of suffering, anger, shame, sadness, hopelessness, loneliness, helplessness or loss of social and professional accomplishment. So, all these facts should be to fall within the scope of modern medicine, collaborating with principles of holistic medical practice. It is a thought that connects the knowledge from the past, present and the future. Following this idea,

*Corresponding author: Renata Martinec, Department for Motility Disturbances, Chronic Disease and Art-therapies, Faculty of Education and Rehabilitation Sciences, University of Zagreb, Zagreb, Croatia, Tel: 385 1 245 7418; Fax: 385 (0)1 245 7559; E-mail: renata.martinec@erf.hr

Received: October 14, 2017 Accepted: October 17, 2017 Published: October 24, 2017

we are all invited to contribute to the creation of conditions that will enable a person to experience themselves as healthy, functional and satisfied. This is, in any case, a realistic and complex challenge that can enrich the field of therapy and rehabilitation in the 21st century.

References

1. Kuhn TS (2012) *the Structure of Scientific Revolutions*: (50thedn), University of Chicago Press, Chicago, United State.
2. Prstačić M (2004) *Ecstasy and genesis: science, art and creative therapy in psychosocial Oncology and Sophrology*, Medicinska knjiga, Zagreb.
3. Stineman M, Streim JE (2010) *The Biopsycho-ecological Paradigm: A Foundation Theory for Medicine*. *PM&R* 2: 1035-1045.
4. Ashcroft R, Van Katwyk T (2016) An examination of the biomedical paradigm: A View of Social Work. *Social Work in Public Health* 31: 140-152.
5. Lock M, Nguyen VK (2010) *An anthropology of biomedicine*. Chichester, West Sussex : Wiley-Blackwell, United. Kingdom.
6. Renaissance man - philosophical concept. Retrieved 2nd October 2017 on <https://www.britannica.com/topic/Renaissance-man>
7. Tennison M (2012) Moral transhumanism: the next step. *J Med Philos* 37: 405–416.
8. <http://newatlas.com/transhumanism-mainstream-era-popular/47941/>

Author Affiliations

[Top](#)

Department for Motility Disturbances, Chronic Disease and Art-therapies, University of Zagreb, Zagreb, Croatia

Submit your next manuscript and get advantages of SciTechnol submissions

- ❖ 80 Journals
- ❖ 21 Day rapid review process
- ❖ 3000 Editorial team
- ❖ 5 Million readers
- ❖ More than 5000 
- ❖ Quality and quick review processing through Editorial Manager System

Submit your next manuscript at • www.scitechnol.com/submission