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Human functioning should be one of our highest priorities in health

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A Viewpoint on the Frontiers in Science Lead Article

The human functioning revolution: implications for health systems and sciences

Key points

- Health systems and sciences should have greater focus on human functioning, requiring all stakeholders to adopt this integrative paradigm shift.
- Human functioning is integral to healthy longevity, hence ongoing international and national initiatives in this area offer important implementation opportunities.
- Strengthening rehabilitation services in health systems is key to improving human functioning, requiring workforce education and training and research.

Introduction

“Our problem is not that we are individualists. It is that our individualism is static rather than dynamic. We value what we think rather than what we do. We forget that we have not done, or been, what we thought; that the first function of life is action, just as the first property of things is motion.”

Fernando Pessoa, Lisbon, Portugal (1888-1935)

It is time for human functioning to have a higher profile and priority in science, clinical medicine, and health policy and systems. The conceptual and theoretical article by Bickenbach and collaborators in this journal explains why (1). The authors propose that functioning is a fundamental characteristic of a healthy and happy human life. Furthermore, they argue that the development and utilization of valid and reliable measurements of human functioning could change the focus of health systems and health policy and transform current rehabilitation research and education. This combination of high-impact consequences can be seen, almost by definition, as a paradigm shift – whereby a new and different way of thinking replaces the traditional view.

To focus on human functioning is to give precedence to an integrative approach to health. In many respects, functioning is to health as physiology is to biology. Many elements of human biology interact to allow physiological systems to function. Physiology is an integrative discipline. Similarly, many determinants of health contribute to human functioning. It is the ability and/or capacity to integrate these individual determinants into a complex and desirable action that makes functioning the final common pathway. In daily life we do not focus on individual actions but on the performance of a task of personal or societal relevance that combines several actions in sequence and/or in parallel.

Implementing the ideas proposed by Bickenbach and collaborators will be challenging and will take time, but we should not delay the start of the process because there may be obstacles in the future. Health systems, particularly academic systems, professional schools, and even many research institutions, are notoriously slow in adopting transformative ideas and adapting to a new reality. Many leaders of health systems, policymakers, and health providers, to name a few stakeholders, will have to be educated in the sciences of human functioning and convinced that there is a better and more efficient way to treat patients, focusing on what in life matters most to humans. Research at different levels will have to be conducted to demonstrate that focusing on functioning is a better policy that will enhance the services delivered in health systems. For example, research studies could examine whether enhanced human functioning can result in a lower demand for health services and a lower financial burden on health systems. This may lead policymakers to prioritize programs on human functioning as part of their strategic plans. Furthermore, different geographical regions of the world with varying socioeconomic conditions, academic programs, and health systems may require different and flexible implementation approaches. Thus, the sooner we start, the better.

Human functioning is integral to healthy longevity

When a significant and transformative idea is being considered, it is appropriate to evaluate the prevailing circumstances in society, because they may have a significant effect on implementation efforts. In other words, what conditions in the socioeconomic and political environment could favor, or impede, change. I would argue that the prevailing circumstances in this decade represent an excellent opportunity for such a change for various reasons. One of the most important is the dramatic demographic changes recorded in the last two centuries. The consequences of an increase in life expectancy and in the number of people in older age groups cannot be addressed with the current policies and governmental priorities. Advanced adult age is associated with a decline in functioning that leads to increased morbidity and disability (2). We need a new strategy. This is clearly explained by the United Nations World Social Report (3) and many other

documents that highlight the demand on health and social services of this age group, the lack of long-term care strategies globally, and the importance of maintaining older adults in the labor market, for example. Similarly, the United Nations and the World Health Organization (WHO) have declared the current decade the “Decade of Healthy Aging” (4) because it has been predicted that longevity will continue to increase and the well-being of this large and increasing segment of the population will demand more attention. Arguably, older adults are more interested in functional independence than concerned with the risk of dying. Hence, these global efforts represent a positive environment for the implementation of the concept of functioning.

Another example of a circumstance that favors a paradigm shift, this time at a national level, is the publication by the United States National Academy of Medicine (US NAM) of the Global Roadmap for Healthy Longevity (5). This publication describes a path forward whereby societies can benefit from the participation of older people in work and community engagement while avoiding the predicted challenges of population aging. Together with that report, the US NAM launched the Healthy Longevity Global Grand Challenge as a worldwide movement to improve physical, mental, and social well-being for people as they age. The Challenge includes The [Healthy Longevity Global Competition](#), a multiyear, multi-million-dollar international competition that will accelerate breakthroughs in healthy longevity through a series of monetary awards and prizes. The competition is open to innovators of any background, including science, medicine, public health, technology, entrepreneurship, public policy, social engineering, and beyond. All these efforts represent opportunities to implement the concept of functioning in all nations because the challenge is not a local phenomenon.

Strengthening rehabilitation is key to improving human functioning

Rehabilitation is arguably the most important health intervention specifically designed to enhance human functioning. Therefore, efforts to strengthen rehabilitation in health systems, expand its evidence base, and educate and train its workforce represent opportunities to integrate the concept of functioning. Such efforts are active and underway. For example, the Rehabilitation Program of the WHO is implementing Rehabilitation 2030 to draw attention to the unmet need for rehabilitation worldwide and to highlight the importance of strengthening rehabilitation in health systems (6). The World Rehabilitation Alliance (WRA) is a WHO global network of stakeholders whose mission is to support the implementation of the Rehabilitation 2030 initiative through advocacy activities (7). It focuses on promoting rehabilitation as an essential health service that is integral to Universal Health Coverage and to the realization of Sustainable Development Goal 3: *Ensure healthy lives and promote well-being for all at all ages* (8). These two initiatives represent important windows of opportunity for the

implementation of the concept of functioning. Rehabilitation systems and professionals, by nature and education, have a better understanding and acceptance of functioning and related topics. If the implementation of this concept in health and science is not accomplished in the field of rehabilitation, it may be harder to do in other areas.

In conclusion, the article by Bickenbach and collaborators is a conceptual roadmap that explains why, and discusses how, human functioning should become a fundamental concept in health and science. It is time to join this effort.

Author contributions

WF was responsible for the concept, ideas, and writing of this article.

References

1. Bickenbach J, Rubinelli S, Baffone C, Stucki G. The human functioning revolution: implications for health systems and sciences. *Front Sci* (2023) 1:1118512. doi: 10.3389/fsci.2023.1118512
2. GBD 2019 Ageing Collaborators. Global, regional, and national burden of diseases and injuries for adults 70 years and older: systematic analysis for the global burden of disease 2019 study. *BMJ* (2022) 376:e068208. doi: 10.1136/bmj-2021-068208
3. United Nations. *UNDESA world social report 2023: leaving no one behind in an ageing world* (2023). Available at: <https://www.un.org/development/desa/dspd/world-social-report/2023-2.html> (Accessed March 5, 2023).
4. World Health Organization. *Decade of healthy aging* (2021). Available at: <https://www.who.int/publications/i/item/9789240017900> (Accessed March 5, 2023).
5. National Academy of Medicine. *Global roadmap for healthy longevity* Washington, DC: The National Academies Press (2022). Available at: <https://doi.org/10.17226/26144>. United Nations. (2023). *World Social Report*. <https://www.un.org/development/desa/dspd/world-social-report/2023-2.html> [Accessed March 5, 2023].
6. World Health Organization. *Rehabilitation 2030 initiative* (2021). Available at: <https://www.who.int/initiatives/rehabilitation-2030> (Accessed March 5, 2023).
7. World Health Organization. *World rehabilitation alliance* (2022). Available at: <https://www.who.int/initiatives/world-rehabilitation-alliance> (Accessed March 5, 2023).
8. United Nations. *Sustainable development goals website – goal 3: ensure healthy lives and promote well-being for all ages* Available at: <https://www.un.org/sustainabledevelopment/health/> (Accessed March 15, 2023).

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