

LETTER TO THE EDITOR

ORGANIZING HUMAN FUNCTIONING AND REHABILITATION RESEARCH INTO DISTINCT SCIENTIFIC FIELDS

Sir;

As identified by Stucki et al. (1), “an important basis for the successful development of rehabilitation practice and research is a conceptually sound description of rehabilitation understood as a health strategy based on a universally accepted conceptual model and taxonomy of human functioning”. The World Health Organization (WHO) International Classification of Functioning, Disability and Health (ICF) (2) is a suitable framework. It is internationally recognized, was developed via consultation with a variety of appropriate stakeholders using a well-documented process (3), and has been used widely as the basis for core sets for the assessment of chronic conditions relevant to the practice of Rehabilitation Medicine (4).

Stucki et al. (5) discussed ICF-based conceptual descriptions and domains for research. Suggested domains for research are outlined to illustrate the conceptual descriptions. The domains for research include human functioning sciences, integrative rehabilitation sciences, biomedical rehabilitation sciences and engineering, and professional rehabilitation sciences. ICF-based conceptual descriptions are provided for each of these domains.

It is interesting to see the ICF framework used as a basis for discussing rehabilitation research. Researchers and healthcare practitioners from a variety of backgrounds are becoming increasingly aware of the importance of a holistic approach. The development of the ICF should provide a basis for coding data, ensuring that all parts of a complex system are considered and enabling individual components to be considered in the context of related fields within and between domains.

In a recent letter, Jensen & Kartin (6) express their interest and agreement with the structure suggested by Stucki et al. (1) We would agree that it is a carefully considered and erudite approach to a complex area. However, like Jensen & Kartin, we wonder whether a simpler, single discipline approach would be most beneficial. Nonetheless, rehabilitation and functioning sciences are complex and any system of organizing this area needs to acknowledge this complexity.

One possible approach may be to adhere more closely to the ICF structure and consider terminology more closely equivalent to the ICF concepts of activity, participation and environmental factors, under the single discipline umbrella term of rehabilitation sciences. Additional use of the ICF domains would provide underlying detail to a structure that is simple overall.

For example, the term “Rehabilitation Sciences”, suggested by Jensen & Kartin (6), could be divided into the components of body function and structure-related rehabilitation sciences, activity and participation-related rehabilitation sciences and environment-related rehabilitation sciences. Body

function and structure-related rehabilitation sciences could include the biomedical rehabilitation sciences; activity- and participation-related rehabilitation sciences could include the human functioning sciences and the integrative rehabilitation sciences; environment-related rehabilitation sciences could include rehabilitation engineering, epidemiology, health policy and ethics.

Each component could then be divided into the ICF domains/chapters. There are 8 body function and 8 body structure domains. Genitourinary and reproductive function-related rehabilitation science, for example, would evaluate fertility issues in individuals with disabilities; rehabilitation sciences related to structures involved with movement could include research concerning joint reconstruction or replacement. There are 9 activity and participation domains. Communication-related rehabilitation sciences, for example, could include speech therapy research; learning and applying knowledge-related rehabilitation sciences could include neuropsychology research. There are 5 chapters of environmental factors. Attitude-related rehabilitation sciences, for example, could concern client advocacy and public education; support and relationship-related rehabilitation sciences may involve assessment of patient support groups; and product and technology-related rehabilitation sciences would relate to prosthetics, orthotics and other adaptive equipment.

It is uncertain whether the use of the concept of facilitators, barriers and qualifiers would add unnecessary complexity, although their use would be optional within any rehabilitation science system. Within the environmental domains a factor may be considered a barrier or facilitator to an individual’s functioning. It is, however, unlikely that there will be any areas of rehabilitation science that are only ever facilitators or barriers. For example, workplace assessment as a rehabilitation science related to the environmental domain of the natural environment and human-made changes to environment can identify barriers to return to work and then suggest facilitators to enable continued employment. The use of qualifiers, whether a rehabilitation sciences domain has a mild, moderate, severe or complete impact on human functioning, is unlikely to be a useful concept. An individual’s functional or structural impairment may have no greater impact on their ability to function in society than inappropriate environmental structures, systems and attitudes, and hence an important advocacy and educational role of the rehabilitation sciences is identified.

We would therefore suggest that a useful structure for organizing human functioning and rehabilitation research may be even more closely related to the ICF, permitting a simple overview, with a capacity for deeper sub-analysis.

There is also a need for a suitable umbrella term for “human functioning and rehabilitation research”. The term “Rehabilitation Sciences” suggested by Jensen & Kartin (6) is simple and self explanatory. However, there may be some confusion. To a lay audience, and some health professionals, rehabilitation means “drug rehabilitation” or “psychiatric rehabilitation” rather than the holistic physical, functional and social rehabilitation practiced by rehabilitation physicians. Also, the term *rehabilitation* implies return to a previous level of function. However, multidisciplinary assistance to an individual may enable them to achieve a previously unattained level of functioning via, for example, the removal of longstanding environmental barriers, or could necessitate an enforced reduction in participation via, for example, mandatory cessation from driving for health and safety reasons.

“Human Functioning Sciences” is a possible general term for this scientific field. The components would then be body function and structure-related human functioning sciences, activity and participation-related human functioning sciences and environment-related human functioning sciences.

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