

Guest Editorial

Toward a Common Language of Disablement

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FUNDAMENTAL to advancing the science of disablement is the ability to communicate with one another and to speak in a common language that is understood across related professional fields and disciplines. Within the United States, Nagi's *Disablement Model* has proven useful as a language used by researchers to delineate the consequences of disease and injury, both at the level of body systems, the person, and society (1–4). For Nagi, *impairment* refers to a loss or abnormality at the tissue, organ, and body system level. At the level of the individual, Nagi uses the term *functional limitations* that represent restrictions in the performance of specific tasks by a person. The term *disability*, as defined by Nagi, refers to the limitation in performing socially defined roles and tasks expected of an individual within a sociocultural and physical environment. These roles and tasks are organized in spheres of life activities such as those of the family or other interpersonal relations; work, employment, and other economic pursuits and education, recreation, and self-care.

The core disablement concepts, impairments, functional limitations, and disability, have become generally accepted terms and a language widely used by gerontologists in the United States and within the pages of *Journal of Gerontology: Medical Sciences*. Although many gerontologists have adopted Nagi's *Disablement Model* as a framework that has helped facilitate our communication and guided our research, others, particularly in international circles, have relied on a different language (5,6).

The use of different frameworks and definitions for the same disablement concepts has led to confusion in communication among scientists and hampered the progress of our science (7). This confusion of languages has created a veritable Babylonian Tower of Babel with its resulting weakening of the foundation for our research. I believe the time has come for gerontologists worldwide to adopt a common international language for disablement research, and I believe we should adopt the language and concepts of the *International Classification of Functioning, Disability, and Health* (ICF) framework of the World Health Organization (WHO) as the means for accomplishing this goal (6). My reasoning is as follows.

The WHO has developed a "family" of internationally accepted classifications with the intent of providing a framework to code information about health and to equip the international community with a standardized language

facilitating communication about health across the globe and across various disciplines. The most widely known WHO classification is the *International Classification of Diseases, Tenth Revision*, which provides a classification system for diseases, disorders, and injuries (8). The newest member is the ICF (6). Consistent with the Nagi's disablement model, the ICF framework describes the etiology of decrements in functioning and disability not only in association with underlying health conditions but also in association with personal and environmental factors. The ICF, which views functioning along a continuum, introduces new disablement language that attempts to replace previous terminology that implied distinctions between healthy and disabled individuals and/or populations.

The ICF framework, like Nagi's *Disablement Model*, attempts to provide a coherent biopsychosocial view of health states from a biological, personal, and social perspective. To encourage worldwide acceptance and cultural applicability, WHO developed the ICF framework using a global consensus-building process that involved multiple stakeholders, including persons with disabilities. The ICF was endorsed in May 2001 by the World Health Assembly as a member of the family of International Classifications. In 2007, in its new report, *The Future of Disability in America*, an Institute of Medicine (IOM) Committee recommended that federal agencies, among others involved in disability research, explicitly adopt the ICF framework and support efforts to improve it (7). This was a departure from its earlier reports on disability that endorsed variations on Nagi's formulation (9,10). The 2007 IOM Committee argued that the ICF framework, if widely adopted, could provide a common, international language that has the potential to facilitate communication, and scholarly discourse about disability across disciplines as well as across national boundaries could, stimulate interdisciplinary research, improve clinical care, and ultimately better inform health policy and management.

Like Nagi's disablement model, as elaborated upon by Verbrugge and Jette (4), the ICF portrays decrements in human function and disability as the product of a dynamic interaction between various health conditions and contextual factors. Although the terminology of the ICF is quite unlike that of the Nagi's framework, the basic concepts within each are more similar than they might appear on the surface. Importantly, within the ICF, the terms function and disability

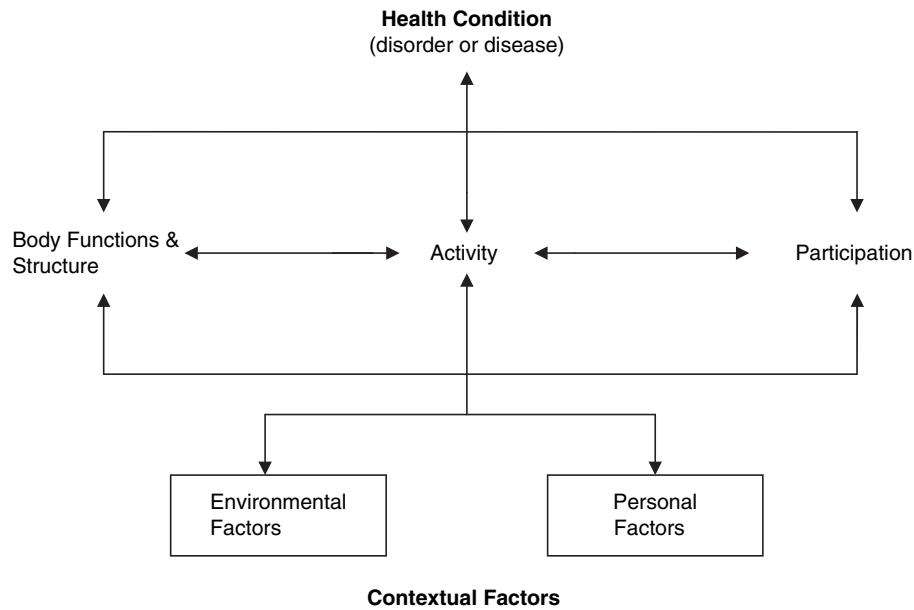


Figure 1. The International Classification of Function, Disability, and Health.

are not used to label specific elements in the model but instead are used as umbrella terms in the same fashion that the term *disablement* is used within the Nagi framework. The term *health condition* is used within the ICF to represent diseases, disorders, injury and/or trauma, aging, and congenital anomaly, similar to the concept of active pathology in Nagi's formulation.

Like Nagi, the ICF identifies three levels of human functioning: functioning at the level of body or body parts, the whole person, and the whole person in their complete environment; these levels are termed *body functions and structures*, *activities*, and *participation*. The term *disability* is used to denote a decrement at each level, that is, impairment, an activity limitation, and a participation restriction (Figure 1).

The main concepts included within the Nagi and ICF models are strikingly similar although the terms used to represent them are quite different. Table 1 summarizes and compares the basic disablement concepts and their definitions as presented in both formulations.

The first component of the ICF model is *body functions and structures*, which are defined as follows: In the context of health experience, body functions are the physiological functions of body systems (including psychological functions). Body structures are anatomical parts of the body such as organs, limbs, and their components. Impairments are problems in body function or structure as a significant deviation or loss. Impairments within the ICF include deviations from generally accepted population standards in the biomedical status of the body and its function and can be temporary or permanent.

The ICF defines activity and participation concepts as follows: In the context of health experience, activity is the

execution of a task or action by an individual. Activity limitations are defined as difficulties an individual may have in executing activities.

Participation is involvement in a life situation, whereas participation restrictions are problems an individual may experience in involvement in life situations. The ICF organizes the areas of activity and participation into subdomains. The subdomains are hypothesized as the same for both domains and include the following:

- learning and applying knowledge
- general tasks and demands

Table 1. Disablement Concepts and Definitions

Nagi	ICF
Active pathology—interruption or interference with normal processes, and effort of the organism to regain normal state	Health conditions—diseases, disorders, and injuries
Impairment—anatomical, physiological, mental, or emotional abnormalities	Body function—physiological functions of body systems Body structures—anatomical parts of the body Impairments—problems in body functions or structure
Functional limitation—limitation in performance at the level of the whole organism or person	Activity—the execution of a task or action by an individual Activity limitation—difficulties an individual may have in executing activities
Disability—limitation in performance of socially defined roles and tasks within a sociocultural and physical environment	Participation—involvement in a life situation Participation restriction—problems an individual may experience in involvement in life situations

Note: ICF = International Classification of Function, Disability, and Health.

- communication
- mobility
- self-care
- domestic life
- interpersonal interactions and relationships
- major life areas
- community, social, and civic life.

Like Verbrugge and Jette's elaboration of Nagi's model, the ICF framework includes two contextual factors, environment and personal factors. Contextual factors include aspects of the human-built, social, and attitudinal environment as well as personal factors such as sex, age, coping styles, social background, education, and overall behavior patterns that may influence how disablement is experienced by the individual. Subdomains included within the concept of environment include the following: products and technology; natural environment and human-made changes to the environment; support and relationships; attitudes; and services, systems, and policies that may act to facilitate or hinder a person's level of function and disability. Personal factors are composed of features of the individual that are not part of a health condition or health states and can include gender, race, age, or other health conditions, fitness, lifestyle, habits, upbringing, coping styles, social background, past and current experience, character style, as well as other psychological assets.

To summarize my rationale, my key reasons for advocating adoption of the ICF include the following: (a) It has been developed by an international organization after a long consultative process; (b) Although the language is different from Nagi's, the underlying concepts in the ICF and Nagi framework's are quite similar; and (c) Gerontologists in the United States are at risk of being left behind in function and disability research if they are not using the language that most other researchers are using around the world.

Although the ICF framework holds considerable promise to provide a synthesis of earlier models of disablement, I believe that limitations in the ICF need to be resolved if the formulation is to fully realize its potential as an international standard that has the potential to provide a universal disablement language and a conceptual framework that focuses on how people live with the consequences of various health-related conditions. For scientific investigation, a crucial aspect of any conceptual framework is its internal coherence and its ability to differentiate clearly among concepts and categories within the framework. A crucial area of research is to improve the ICF's ability to differentiate clearly among concepts and categories within the framework and to develop sound assessment instruments that can be used to measure the various domains and qualifiers outlined in the ICF framework. In the ICF manual, the WHO has acknowledged, for example, that, it is difficult to distinguish between "Activities" and "Participation" on the basis of the domains

in the activities and participation component(6). Nevertheless, differentiation among ICF concepts and the ability to measure each distinctly is essential if the ICF is to achieve acceptance as an international classification of human functioning and disability. Researchers are beginning to investigate the boundaries of the activity and participation domains of the ICF. In our research group, for example, we have empirically identified the existence of individual and distinct subdomains within the overall domains of activity and participation but have begun to question if these domains are entirely distinct (11,12). Ongoing research on the ICF formulation will contribute to future revisions of the framework by the WHO.

Would I have preferred that the WHO had adopted the language of Nagi's disablement model in developing its revised disablement classification? Yes! In my opinion, Nagi's concepts and terminology was clear, had a long history emanating from his seminal work in the 1960s, and includes definitions consistent with the concepts included in the new ICF. Nonetheless, the international community has spoken and I for one applaud the WHO and those who developed the ICF for their contributions toward institutionalizing and promoting a universal disablement framework. Gerontologists should become familiar with the new disablement language and the ICF framework and consider using it in our scholarly discourse and in our research. To do otherwise runs the risk of the perfect becoming the enemy of the good and isolating ourselves from other disciplines, and other researchers, and scholars across the globe.

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