

Toward a Common Language for Function, Disability, and Health



Within physical therapy, the disablement model has proven useful as a language to delineate the consequences of disease and injury. This perspective provides an update on the changing language of disablement, reviews selected contemporary disablement models, and discusses some challenges that need to be addressed to achieve a universal disablement language that can be used to discuss physical therapy research and clinical interventions. The World Health Organization's *International Classification of Functioning, Disability and Health* (ICF) framework has the potential of becoming a standard for disablement language that looks beyond mortality and disease to focus on how people live with their conditions. If widely adopted, the ICF framework could provide the rehabilitation field with a common, international language with the potential to facilitate communication and scholarly discourse across disciplines and national boundaries, to stimulate interdisciplinary research, to improve clinical care, and ultimately to better inform health policy and management. [Jette AM. Toward a common language for function, disability, and health. *Phys Ther.* 2006;86:726-734.]

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The ICF framework holds great promise to provide a synthesis of earlier models of disablement and to provide . . . a universal language with which to discuss disability and related phenomena.

The ability to communicate with one another and to speak and be understood across related professional disciplines is fundamental to the science and the practice of physical therapy. Within physical therapy, the disablement model has proven useful as a language to delineate the consequences of disease and injury, both at the level of the person and at the level of society.^{1,2(pp27–36)} The term *disablement*—as adapted from Nagi’s seminal work^{3,4}—refers to the “various impact(s) of chronic and acute conditions on the functioning of specific body systems, on basic human performance, and on people’s functioning in necessary, usual, expected, and personally desired roles in society.”^{5(p380)}

Conceptual frameworks, such as the disablement model, provide a rudimentary language that helps guide our communication, clinical research, and patient care. As stated in the *Guide to Physical Therapist Practice*:

. . . the disablement model is used to delineate the consequences of disease and injury both at the level of the person and at the level of society. The disablement model provides the conceptual basis for all elements of patient/client management that are provided by physical therapists.^{2(p27)}

In this perspective, I will provide an update on the changing language of disablement. I will review selected contemporary disablement frameworks and the definitions and terms being used to address common disablement concepts, and I will discuss some of the future challenges that need to be addressed to achieve a universal disablement language for discussing physical therapy research and clinical interventions.

Contemporary Disablement Frameworks

Several major schools of thought have influenced the definition of disablement concepts.^{6,7} The first, called the *medical model*, views disability as a characteristic or attribute of the person, which is directly caused by disease, trauma, or other health condition and requires some type of intervention provided by professionals to “correct” or “compensate” for the problem. The US Social Security Administration (SSA), for example, defines work disability in a way that is consistent with this medical model viewpoint.⁸ For the SSA, work disability

represents an inability to engage in any substantial, gainful activity by reason of any medically determinable physical or mental impairment, which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months.

In contrast, the *social model* of disability views the phenomenon of disability as a socially created problem and not as an attribute of the person. In the social model of disability, the underlying problem is created by an unaccommodating or inflexible environment brought about by the attitudes or features of the social and physical environment itself, which calls for a political response or solution.⁶

Finally, the third conceptual approach for examining the concept of disability, called the *biopsychosocial model*, attempts to integrate the medical and social models of disability.⁹ In the biopsychosocial model, disability is viewed as a consequence of biological, personal, and social forces. The interactions among these various factors result in disablement. The biopsychosocial model of disability represents the dominant perspective behind contemporary disablement frameworks in use today.

In this perspective, I will compare and contrast 2 contemporary disablement frameworks and elaborations of each that have received widespread circulation and use within the rehabilitation and related fields. The first is the disablement model developed by Nagi. The second is the *International Classification of Impairments, Disabilities, and Handicaps (ICIDH)*¹⁰ and its most current version, referred to as the *International Classification of Functioning, Disability and Health (ICF)*.¹¹

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The Disablement Model

Nagi's disablement model has its origins in the early 1960s as part of a study of disability commissioned for the SSA and in his work on conceptual issues related to rehabilitation. Nagi constructed a framework that differentiated among 4 distinct, yet related, phenomena that he considered basic to the field of rehabilitation. He referred to these as active pathology, impairment, functional limitation, and disability.³ His conceptual framework has become known as Nagi's disablement model.

For Nagi, *active pathology* involves the interruption of normal cellular processes and the simultaneous homeostatic efforts of the organism to regain a normal state. He notes that active pathology can result from infection, trauma, metabolic imbalance, degenerative disease processes, or another etiology. Examples of active pathology are the cellular disturbances consistent with disease processes such as osteoarthritis, cardiomyopathy, and cerebrovascular accidents.

For Nagi, *impairment* refers to a loss or abnormality at the tissue, organ, and body system level. Active pathology usually results in some type of impairment, but not all impairments are associated with active pathology (eg, congenital loss or residual impairments resulting from trauma). Impairments can occur in the primary location of the underlying pathology (eg, muscle weakness around an osteoarthritic knee joint), but they may also occur in secondary locations (eg, cardiopulmonary deconditioning secondary to inactivity).

At the level of the individual, Nagi uses the term *functional limitations* to represent restrictions in the performance of the person. An example of functional limitations that might result from arthritis could include limitations in the performance of tasks such as the person's ability to walk or his or her ability to transfer from a sitting to a standing position. These functional limitations might or might not be related to specific impairments secondary to arthritis and thus are seen as distinct from disturbances of the organ or body systems.

According to Nagi's disablement model, *disability* is the expression of a physical or a mental limitation in a social context. Nagi viewed the concept of disability as representing the gap between a person's intrinsic capabilities and the demands created by the social and physical environment—a product of the interaction of the individual with the environment.^{3,12,13} This is a fundamental characteristic of Nagi's thinking that is consistent with the biopsychosocial school of thought.

According to Nagi's own words:

[Disability is a] 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. Not all impairments or functional limitations precipitate disability, and similar patterns of disability may result from different types of impairments and limitations in function. Furthermore, identical types of impairments and similar functional limitations may result in different patterns of disability. Several other factors contribute to shaping the dimensions and severity of disability. These include (a) the individual's definition of the situation and reactions, which at times compound the limitations; (b) the definition of the situation by others, and their reactions and expectations—especially those who are significant in the lives of the person with the disabling condition (e.g., family members, friends and associates, employers and co-workers, and organizations and professions that provide services and benefits); and (c) characteristics of the environment and the degree to which it is free from, or encumbered with, physical and sociocultural barriers.^{13(p315)}

Nagi's definition stipulates that a disability may or may not result from the interaction of an individual's physical or mental limitations with the social and physical factors in the individual's environment. In Nagi's terms, the physical impairments of a person with arthritis, for example, would not invariably lead to a disability. For example, 2 patients with rheumatoid arthritis may present with a very similar clinical profile. Both may have moderate impairments such as restricted range of motion and muscle weakness. Their pattern of function also may be similar, with a slow, painful gait and difficulty grasping objects.

Their disability profile, however, may be radically different. One individual may restrict or eliminate his or her outside activities, require help with all self-care activities, spend most of the time indoors watching television, and be unemployed and depressed. The other may fully engage in his or her social life, receive some assistance from a spouse in performing daily activities when needed, be driven to work, and be able to maintain full-time employment through workplace modification. Two patients with very similar underlying pathology, impairments, and functional limitations may present very different disability profiles. Furthermore, similar patterns of disability may result from different types of health conditions.

Elaboration of the Disablement Model

Verbrugge and Jette¹⁴ extended the Nagi disablement model by elaborating the dimensions of disablement within Nagi's model and by including sociocultural

factors (ie, social and physical environment) and personal factors (eg, lifestyle behaviors and attitudes) within their framework. Their framework retained the original Nagi concepts.¹⁴ Verbrugge and Jette's elaboration of Nagi's model was an attempt to attain a full sociomedical framework of *disablement*, which they defined as the impact that chronic and acute conditions have on functioning of specific body systems and on people's abilities to act in necessary, usual, expected, and personally desired ways in their society.¹⁴ The term "process" is used to characterize the dynamic and changing nature of disablement (ie, variation in type and severity of functional consequences over time and the factors that affect their direction, pace, and pattern of change).¹⁴

Nagi's concept of disability and the elaboration by Verbrugge and Jette defines disability as a broad range of role behaviors that are relevant in most people's daily lives. Five commonly applied dimensions of disability evolved from this line of scientific inquiry:

- Basic activities of daily living (BADL)—including behaviors such as basic personal care;
- Instrumental activities of daily living (IADL)—including activities such as preparing meals, doing housework, managing finances, using the telephone, shopping;
- Paid and unpaid role activities—including occupation, parenting, grandparenting, student roles;
- Social activities—including attending church and other group activities, socializing with friends and relatives; and
- Leisure activities—including sport and physical recreation, reading, distinct trips, and so on.

This elaboration of the disability concept highlights the varied nature of role task behavior, from fairly basic self-care activities to advanced and complex social, work, and leisure activities.

Verbrugge and Jette attempted to differentiate the "main pathways" of the disablement process (ie, Nagi's original concepts) from factors hypothesized or known to influence the ongoing process of disablement. From a social epidemiologic perspective, Verbrugge and Jette argued that one might analyze and explain disablement relative to 3 sets of variables: predisposing risk factors, intra-individual factors, and extra-individual factors.¹⁴ These categories of variables, which are external to the main disablement pathway, can be defined as follows:

- *Risk factors* are predisposing phenomena that are present prior to the onset of the disabling event that can affect the presence or severity of the disablement process. Examples include sociodemographic background, lifestyle, and biologic factors.

- *Intra-individual factors* are those that operate within a person, such as lifestyle and behavioral changes, psychosocial attributes and coping skills, and activity accommodations made by the individual following onset of a disabling condition.
- *Extra-individual factors* (those that operate outside or external to the person) pertain to the physical as well as the social context in which the disablement process occurs. Environmental factors relate to the social as well as the physical environmental factors that bear on the disablement process. These can include medial and rehabilitation services, medications and other therapeutic regimens (eg, exercise or physical activity), external supports available in the person's social network, and the physical environment.

Verbrugge and Jette¹⁴ hypothesized that risk factors along with intra- and extra-individual factors mediate or moderate the relations among pathology, impairment, functional limitation, and disability. The intricate interrelations of these factors within the disablement process have been an active area of research over the past decade.^{15–20}

A further elaboration of Nagi's conceptual view of disability is contained in Pope and Tarlov's *Disability in America*.¹³ The 1991 Institute of Medicine (IOM) report uses the original main disablement pathways put forth by Nagi with minor modification of his original definitions. The IOM report provides 2 important additions to the disablement model: the concepts of *secondary conditions* and *quality of life*, both of which are discussed later in this perspective. In an effort to emphasize Nagi's view that disability is not inherent in the individual but rather is the result of the interaction of the individual with the environment, the IOM issued another report, titled *Enabling America*,²¹ where they referred to disablement as the "enabling-disabling process." This effort was an explicit attempt to acknowledge, within the disablement model itself, that disabling conditions not only develop and progress but they can be reversed through the application of rehabilitation and other forms of explicit intervention.

International Classification of Impairments, Disabilities, and Handicaps (ICIDH)

A similar process was under way in Europe that was independent of, but contemporary with, Nagi's work, which in 1980 led to the World Health Organization's (WHO) *International Classification of Impairments, Disabilities, and Handicaps (ICIDH)*.¹⁰ Like Nagi's disablement model, the ICIDH model differentiated a series of 3 distinct concepts related to disease and health conditions—impairments, disabilities, and handicaps—although the definitions differed from those put forth by

Nagi.^{10,22} I will not review the original ICIDH classification but refer readers to the literature for details.¹⁰ I will note, however, that this original ICIDH model was designed to become part of the WHO family of international classifications, the best known of which is the *International Statistical Classification of Diseases and Related Problems*,²³ which provides an etiological framework for the classification of diseases, disorders, and other health conditions by diagnosis. The ICIDH was conceived as a complementary framework, classifying function and disability associated with health conditions; however, it failed to receive endorsement by the World Health Assembly.²⁴

Existing disablement frameworks such as the Nagi disablement model and the ICIDH have received both positive and negative reviews in the literature.^{13,25,26} Although they have stimulated useful discussions of disability concepts and have been used around the world, the absence of a universally accepted conceptual scheme to describe and classify disablement has led to confusion within the scientific literature.¹⁴ Different terms have been invented and measured in a myriad of ways; and similar terms, such as disability, impairment, and function, have been given various and overlapping meanings. This makes comparisons across studies and over time extremely problematic and hampers clear communication and discussion in clinical as well as research contexts.

International Classification of Functioning, Disability and Health (ICF)

Sensitive to criticisms of existing frameworks, the WHO released a major revision of the ICIDH in 2001, called the *International Classification of Functioning, Disability and Health (ICF)*,¹¹ which, like the disablement model, attempted to provide a coherent biopsychosocial view of health states from a biological, personal, and social perspective. Like Verbrugge and Jette's elaboration of Nagi's framework, the ICF portrays human function and decreases in functioning as the product of a dynamic interaction between various health conditions and contextual factors. Within the ICF, contextual factors include aspects of the human-built, social, and attitudinal environment that create the lived experience of functioning and disability 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. Within the ICF, the term *health condition* is used to represent diseases, disorders, injury, or trauma, aging, and congenital anomaly. The terms *function* and *disability* are used as general or umbrella terms in the same fashion that the term "disablement" is used within the Nagi framework.

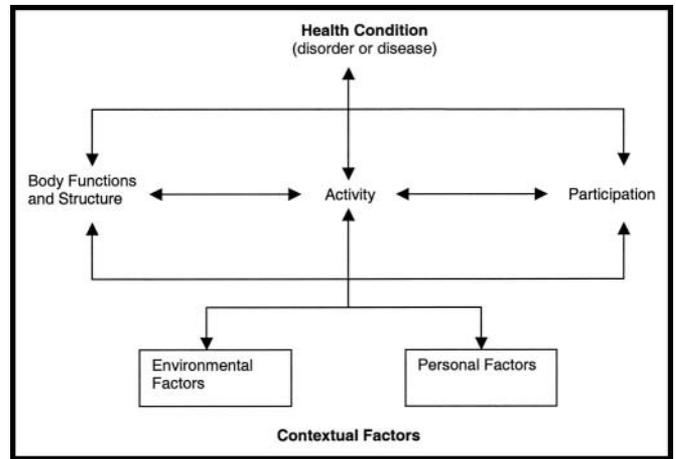


Figure. The International Classification of Functioning, Disability and Health (ICF). Reprinted from *International Classification of Functioning, Disability and Health: ICF*. Geneva, Switzerland: World Health Organization; 2001 with permission of the World Health Organization.

The ICF identifies 3 levels of human function: functioning at the level of body or body parts, the whole person, and the whole person in their complete environment. These levels, in turn, contain 3 domains of human function: body functions and structures, activities, and participation. The term *disability* is used to denote a decrement at each level (ie, impairment, an activity limitation, and a participation restriction).

The first domain 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.¹¹

The ICF defines the *activity* and *participation* domains 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.¹¹

Participation is involvement in a life situation while *participation restrictions* are problems an individual may experience in involvement in life situations.¹¹

The ICF framework is illustrated in the Figure. The main concepts included within the Nagi and ICF models are strikingly similar although the terms used to represent them are quite different. The Table summarizes and

Table.Disablement Concepts and Definitions^a

Nagi ^{3,13}	ICF ¹¹
<i>Active Pathology</i> —interruption or interference with normal processes, and effort of the organism to regain normal state	<i>Health Conditions</i> —diseases, disorders, and injuries
<i>Impairment</i> —anatomical, physiological, mental or emotional abnormalities	<i>Body Function</i> —physiological functions of body systems <i>Body Structures</i> —anatomical parts of the body <i>Impairments</i> —problems in body functions or structure
<i>Functional Limitation</i> —limitation in performance at the level of the whole organism or person	<i>Activity</i> —the execution of a task or action by an individual <i>Activity Limitation</i> —difficulties an individual may have in executing activities
<i>Disability</i> —limitation in performance of socially defined roles and tasks within a sociocultural and physical environment	<i>Participation</i> —involvement in a life situation <i>Participation Restriction</i> —problems an individual may experience in involvement in life situations

^aICF=International Classification of Functioning, Disability and Health.

compares the basic disablement concepts and their definitions as presented in both formulations.

The ICF organizes the domains of activity and participation into subdomains. The subdomains are the same for both domains and include the following:

- Learning and applying knowledge;
- General tasks and demands;
- Communication;
- Mobility;
- Self-care;
- Domestic life;
- Interpersonal interactions and relationships;
- Major life areas; and
- Community, social, and civic life.

For the ICF framework to capture descriptive information about functioning and disability in each subdomain, the framework uses qualifiers that identify the presence and severity of a decrease in functioning at each domain of the ICF (ie, body function, activity, or participation). In the domain of body function and structure, for instance, the primary qualifier is the presence and degree or severity of a specific impairment. A 5-point scale is used to record the severity of impairment as: no, mild, moderate, or severe impairment (the scale includes a code 8 [not specified] and code 9 [not applicable]).

Within the activity and performance domains, the ICF advocates the use of qualifiers to assess performance or capacity. A performance qualifier should be used to describe what a person does in his or her current environment, including whether assistive devices or other accommodations may be used to perform actions or tasks and whether barriers exist in the person's actual environment. Capacity qualifiers, on the other hand, should be used to describe a person's inherent ability to

execute a task or an action in a specified context at a given moment. The capacity qualifier identifies the highest probable level of functioning of a person in a given ICF domain in a standardized environment without the use of specific assistance or accommodations. In essence, the performance qualifiers capture what people actually do in their normal environments, whereas the capacity qualifier describes the person's inherent ability to function without specific environmental impact. The gap between capacity and performance reflects the difference between the impacts of current and uniform environments as well as personal factors, the second part of the ICF framework.

Steiner et al²⁷ have recently described the potential utility of the ICF framework as a clinical problem-solving tool for rehabilitation clinical care. In their article, they provide a useful example of a female patient with reactive arthritis and chronic pain, and they use the ICF framework to help a clinician understand the patient's functioning and disability related to her condition. In the domain of body functions and structure, this patient is described as reporting neck pain, as well as pain in her hands and feet, along with chronic fatigue. Impairment qualifiers are used to describe her joint impairment and fatigue as moderately severe. In the domains of activity and participation, her impairments prevent her from participating in leisure clubs that she had been active in the past and she reports difficulty writing and in performing household activities that involve lifting and carrying objects with her hands. Walking long distances has become almost impossible for her because of her hand and feet impairments, preventing her from joining her husband on his walks. Above all she was described as anxious about losing her job as a nurse that would lead to further financial dependency on her husband. For each identified activity limitation and participation restriction, the ICF calls for the application of qualifiers to further define the capacity or performance although

these qualifications are not included in the article. Steiner et al²⁷ note the challenge in finding ways to operationally define qualifiers of both capacity and performance. The development and use of standardized assessment instruments to qualify degree of activity limitations and participation restrictions has become an active area of ongoing research.^{28–30} Its application in specific clinical areas also has been investigated.^{31–33}

The ICF framework includes 2 contextual factors: environmental and personal factors. *Environmental factors* are defined in the ICF framework as the physical, social, and attitudinal environment in which people live and conduct their lives. The subdomains included within the domain of environment include: products and technology; natural environment and human-made changes to the environment; support and relationships; attitudes; and services, systems, and policies. The environmental factors classification, once operationally defined, can be used to identify specific features of the person's actual environment that act to facilitate or hinder a person's level of function and disability. It also can be used to standardize specific testing environments where capacity in activity and participation can be assessed.

Personal factors are the particular background of an individual's life and living, and are composed of features of the individual that are not part of a health condition or health states. Personal factors can include sex, race, age, health conditions, fitness, lifestyle, habits, upbringing, coping styles, social background, past and current experience, character style, as well as other psychological assets. Although environmental factors have been elaborated upon within the ICF framework to facilitate their classification, personal factors have not.

The early disablement frameworks such as Nagi's and the ICIDH formulation presented the disablement process as a linear progression of response to illness or consequence of disease.^{3,10,13} One consequence of this traditional view is that disabling conditions have been viewed as static entities.³⁴ This traditional, early view of disablement failed to recognize that disablement is more often a dynamic process that can fluctuate in breadth and severity across the life course. It is anything but static or unidirectional.

More recent disablement formulations or elaborations of earlier models have explicitly acknowledged that the disablement process is far more complex.^{11,14,21,35,36} These more recent authors all note that a given disablement process may lead to further downward spiraling consequences. These consequences of a given disabling condition—called “secondary conditions,”³⁷ which may involve pathology, impairments, further limitations in function, or disability—have been explicitly incorpo-

rated into the graphic illustrations of more recent disablement formulations. Commonly reported secondary conditions include pressure sores, contractures, depression, and urinary tract infections, but it should be understood that they can be a pathology, an impairment, a functional limitation, or an additional disability.³⁴

Little is known about the etiology of secondary conditions as they relate to disablement and their consequences. Longitudinal analytic techniques now exist to incorporate secondary conditions into research models and are beginning to be used in epidemiologic disablement investigations.¹⁵ Much more research is needed in this area.

Implications for Physical Therapy Research

The development of the ICF framework is an important advance that can contribute to the field of physical therapy and rehabilitation. One of the most exciting aspects of the ICF framework is that it has the potential to provide a universal, standardized disablement language and framework that looks beyond mortality and disease to focus on how people live with their conditions. The ICF framework, if widely adopted, could promote a common, international language that has the potential to facilitate communication and scholarly discourse across disciplines as well as across national boundaries, to stimulate interdisciplinary research, to improve clinical care, and ultimately to better inform health policy and management.³⁸ Unlike the ICIDH, the ICF was endorsed in May 2001 by the World Health Assembly as a member of the WHO family of international classifications.¹¹

Nonetheless, challenges around the measurement of ICF concepts need to be resolved if the formulation is to succeed as an international standard that can be used by researchers, clinicians, and governmental and regulatory bodies, as well as in other applications.

One of the intents of the ICF is to provide a scientific basis for understanding and studying health and health-related states, outcomes, and determinants.¹¹ 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.³⁹ Without empirical differentiation, conceptual frameworks cannot be investigated and validated. One of the frequent criticisms of the original ICIDH was that it was difficult to identify and measure the boundaries between the basic concepts; each lacked the clarity and distinctness necessary for useful empirical testing.^{10,40–44} For the ICF to be truly useful as a framework for research, it is critical that the classification contain distinct and measurable domains and subdomains. Without distinct and measurable domains, researchers will have trouble using the ICF for measure-

ment construction and research applications, as well as in professional communication and in the clinic.

In the ICF manual, the WHO has acknowledged that, "It is difficult to distinguish between 'Activities' and 'Participation' on the basis of the domains in the Activities and Participation component."¹¹(p16) Nevertheless, differentiation among ICF concepts and the ability to measure each clearly and distinctly is essential if the ICF is to achieve acceptance by individuals, organizations, and associations as an international classification of human functioning and disability. Researchers are beginning to examine the boundaries of the activity and participation domains of the ICF. In our research group, for example, we have been able to identify the existence of individual and distinct constructs of activity and participation that can be measured using self-report instruments.^{45,46} In one sample of older adults, for example, our analyses revealed 2 distinct activity subdomains with content parallel to the subdomains included within the ICF handbook.⁴⁷ We labeled one "basic mobility" and the other "daily activities," and they correspond to the "domestic life" and "self care" subdomains of the ICF.¹¹ In addition, a distinct "social/role participation" subdomain emerged from our analyses, which corresponds to the "interpersonal interactions" subdomain of the ICF.¹¹ Both activity subdomains were more highly correlated with each other than with the participation domain, providing further support for our interpretation of distinct activity and participation constructs. Internal consistency of each scale was very high.

It may be useful to reflect on what differentiates the content of the activity and participation domains of the ICF as revealed in our research.⁴⁷ In our work on measuring disablement concepts, the activities domains have been made operational using relatively simple tasks or activities (eg, use common utensils) that an adult encounters on a frequent if not daily basis.⁴⁸ In addition, the measurement scales used for the activity domain items focused on the ability or capacity of a person to perform each specific task or action, or their perceived difficulty in performing each task. Activity items did not address whether people were limited in performing them in the context of their normal daily life. In contrast, the participation domain has been defined as the limitation the person did encounter in the performance of more complex life roles. The roles contained within the participation domain refer to much more complex categories of life activities (eg, provide meals) compared with activity domain items that can be accomplished using a variety of tasks or component actions.⁴⁹ This content distinction is very consistent with the differentiation made between the functional limitations and disability domains outlined within the Nagi and ICF disablement frameworks.

Summary

The ICF framework holds great promise to provide a synthesis of earlier models of disablement and to provide the rehabilitation disciplines with a universal language with which to discuss disability and related phenomena. The ICF identifies 3 levels of human function: functioning at the level of body parts, the whole person, and the whole person in their complete environment. These levels, in turn, contain 3 domains of human function: body functions and structures, activities, and participation. Much work remains, however, to realize the ICF's full potential. 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. Physical therapy researchers can provide important leadership in this area of research in the years ahead that, in turn, can improve our ability to provide the highest quality clinical care to our patients.

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