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Published in:
Disability and Rehabilitation

DOI:
[10.1080/09638288.2016.1277404](https://doi.org/10.1080/09638288.2016.1277404)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2018

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Heerkens, Y. F., de Weerd, M., Huber, M., de Brouwer, C. P. M., van der Veen, S., Perenboom, R. J. M., van Gool, C. H., ten Napel, H., van Bon-Martens, M., Stallinga, H. A., & van Meeteren, N. L. U. (2018). Reconsideration of the scheme of the international classification of functioning, disability and health: Incentives from the Netherlands for a global debate. *Disability and Rehabilitation*, 40(5), 603-611. <https://doi.org/10.1080/09638288.2016.1277404>

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Reconsideration of the scheme of the international classification of functioning, disability and health: incentives from the Netherlands for a global debate

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To cite this article: Yvonne F. Heerkens, Marjolein de Weerd, Machteld Huber, Carin P. M. de Brouwer, Sabina van der Veen, Rom J. M. Perenboom, Coen H. van Gool, Huib ten Napel, Marja van Bon-Martens, Hillegonda A. Stallinga & Nico L. U. van Meeteren (2018) Reconsideration of the scheme of the international classification of functioning, disability and health: incentives from the Netherlands for a global debate, *Disability and Rehabilitation*, 40:5, 603-611, DOI: [10.1080/09638288.2016.1277404](https://doi.org/10.1080/09638288.2016.1277404)

To link to this article: <https://doi.org/10.1080/09638288.2016.1277404>



Published online: 27 Jan 2017.



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PERSPECTIVES IN REHABILITATION

Reconsideration of the scheme of the international classification of functioning, disability and health: incentives from the Netherlands for a global debate

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ABSTRACT

Purpose: The ICF (International Classification of Functioning, Disability and Health) framework (used worldwide to describe 'functioning' and 'disability'), including the ICF scheme (visualization of functioning as result of interaction with health condition and contextual factors), needs reconsideration. The purpose of this article is to discuss alternative ICF schemes.

Method: Reconsideration of ICF via literature review and discussions with 23 Dutch ICF experts. Twenty-six experts were invited to rank the three resulting alternative schemes.

Results: The literature review provided five themes: 1) societal developments; 2) health and research influences; 3) conceptualization of health; 4) models/frameworks of health and disability; and 5) ICF-criticism (e.g. position of 'health condition' at the top and role of 'contextual factors'). Experts concluded that the ICF scheme gives the impression that the medical perspective is dominant instead of the biopsychosocial perspective. Three alternative ICF schemes were ranked by 16 (62%) experts, resulting in one preferred scheme.

Conclusions: There is a need for a new ICF scheme, better reflecting the ICF framework, for further (inter-)national consideration. These Dutch schemes should be reviewed on a global scale, to develop a scheme that is more consistent with current and foreseen developments and changing ideas on health.

ARTICLE HISTORY

Received 2 October 2016
Revised 17 December 2016
Accepted 24 December 2016

KEYWORDS

Medical model;
biopsychosocial perspective;
health; functioning;
disability

► IMPLICATIONS FOR REHABILITATION

- We propose policy makers on community, regional and (inter)national level to consider the use of the alternative schemes of the International Classification of Functioning, Disability and Health within their plans to promote functioning and health of their citizens and researchers and teachers to incorporate the alternative schemes into their research and education to emphasize the biopsychosocial paradigm.
- We propose to set up an international Delphi procedure involving citizens (including patients), experts in healthcare, occupational care, research, education and policy, and planning to get consensus on an alternative scheme of the International Classification of Functioning, Disability and Health.
- We recommend to discuss the alternatives for the present scheme of the International Classification of Functioning, Disability and Health in the present update and revision process within the World Health Organization as a part of the discussion on the future of the International Classification of Functioning, Disability and Health framework (including ontology, title and relation with the International Classification of Diseases).
- We recommend to revise the definition of personal factors and to draft a list of personal factors that can be used in policy making, clinical practice, research, and education and to put effort in the revision of the present list of environmental factors to make it more useful in, e.g., occupational health care.

Introduction

In the health care system of Western societies, the medical paradigm has been dominant for several ages, as reflected in the first official classification system with etiologic origin, the Bertillon

Classification of Causes of Death as accepted for use by the International Statistical Institute in 1893. Influenced by political and economic changes, the social paradigm emerged around 1960, representing a shift in focus from disease, being an

individual attribute, to the consequences of disease in terms of disability and handicap. Disability and handicap, being a result from systematic barriers and negative attitudes within the environment, was thought of as to be dealt with on a societal level through legislation [1]. In 1977 Engel published his article “The need for a new medical model” in *Science* [2]. Being a fusion of the medical, the social and the psychological perspective on health and disease, the biopsychosocial paradigm gave way to new approaches in healthcare. In accordance with the biopsychosocial paradigm the International Classification of Impairments, Disabilities and Handicaps was released in 1980 to provide in the need for a classification describing human functioning, meant for complementary use with the International Statistical Classification of Diseases and Related Health Problems (ICD) [3]. Given the (negative) wordings used in the International Classification of Impairments, Disabilities and Handicaps and the absence of contextual factors, the focus remained on disease rather than on functioning and on describing health and disease being strongly influenced by contextual factors. With the International Classification of Functioning, Disability and Health (ICF) in 2001 [4], the World Health Organization (WHO) added contextual factors to the scheme. Although still being imperfect, e.g., the fact that personal factors are not currently classified in the ICF and still giving a dominant position to the medical approach by positioning health condition at the top of the ICF scheme, the WHO provides with the ICF a common denominator for describing current societal developments in the area of demographics/economics/legislation (e.g., strong focus on societal participation given the rapid aging on a population level) and for the reconceptualization of health. An example for the reconceptualization of health is the “dynamic concept of health” by Huber et al. [5] (health as “the ability to adapt and to self-manage in the face of social, physical, and emotional challenges”) and its elaboration into six dimensions (bodily functions, mental functions and perception, spiritual/existential dimension, quality of life, social and societal participation, and daily functioning). This elaboration with six dimensions is indicated as “Positive health” [6]. Taking care of a population with an increasing percentage of people with chronic conditions shifts the focus from cure to care and prevention. At the same time, a paradigm shift in the healthcare system is needed for the fostering of health and functioning across the lifespan [7]. Yet for enhancing the implementation of the ICF throughout disciplines and professions engaged in these societal developments and for facilitating a truly biopsychosocial perspective in healthcare, revision of the ICF scheme is needed.

The aim of this article is to present alternatives for the ICF scheme to counter the criticism on the ICF framework and to incorporate new ideas emerging from society, especially based on the current discourse about the concept of health. The ultimate goal of this effort is to change the ICF scheme in such a way that it is appropriate to the purposes of the users now and in the future and that it gives a firm boost to the implementation of the ICF on a global scale.

The ICF

The ICF framework consists of the ICF scheme representing the position of the components of the ICF towards each other and the relations between them, the underlying biopsychosocial theory/perspective, and a common language (domains and categories at different levels). As indicated in the introduction, the ICF framework is developed to describe functioning and has become a “components of health classification” [4]. Or, as stated by Stucki

recently, “At its core, the ICF offers a new perspective for describing and understanding a person’s lived experience of health” [8].

In the ICF scheme – the visual representation of the ICF framework – the terms describing functioning – body functions and structures, activities and participation – are positioned in the center (see Figure 1). Where “functioning” is the umbrella term for functions and structures, activities and participation, “disability” (problems in functioning) can be used as the negative umbrella term for impairments in body functions and structures, limitations in activities, and restrictions in participation. Environmental factors and personal factors (contextual factors) – together with health condition (disease/disorder) – can influence functioning positively and negatively.

In the ICF scheme, functioning is presented as a tripartite construct including (1) body functions and structures, (2) activities, and (3) participation (see Figure 1). The ICF as a classification consists of two parts [(1) functioning and disability and (2) contextual factors] and each part consists of two components. The four components are: (1) body functions and structures (consisting of a classification of body functions and a classification of body structures), (2) activities and participation (reflected in a common classification of domains of life), (3) environmental factors (consisting of a classification of environmental factors), and (4) personal factors (not currently classified).

Since its approval by the World Health Assembly in 2001, the ICF is increasingly used in healthcare, research, policy and planning, occupational care, and education. In 2011, Cerniauskaite et al. presented a systematic literature review on the state of the art of the use of the ICF since its release [9]. The papers were assigned to one of the six categories: conceptual papers, development of ICF and of ICF-related instruments, clinical and/or rehabilitation contexts, non-clinical contexts, linking papers, and papers in which the ICF is only mentioned. The majority of the 672 publications found were conceptual papers (30.8%) or papers reporting clinical and rehabilitation studies (25.9%).

In an article published in 2015, Escorpizo and Bemis-Dougherty summarized the literature on the use of the ICF in physical therapy practice and research from 2001 to 2012 [10]. A wide array of application of the ICF in research, clinical practice and teaching (classroom and clinical education) was found, with resource allocation and prevention and wellness as emerging topics [10].

Recently Maribo et al. published a systematic literature review on the ICF from 2001 to 2013 in the Nordic countries, focusing on clinical and rehabilitation context [11]. Using the criteria for good quality papers of the WHO’s Functioning and Disability Reference Group [12], they included 170 papers in their review. These papers were assigned to one of the six categories, created by

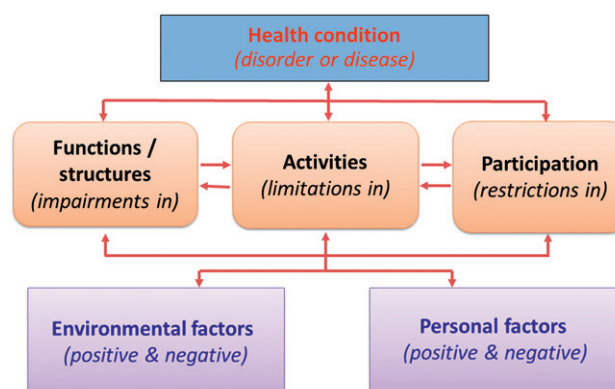


Figure 1. The present ICF scheme [4].

Cerniauskaite et al. [9]; and two categories were added: reviews and protocols. The majority of the papers (47.6%) were in the category clinical and/or rehabilitation contexts [11].

For the specific area of ICF in health education, Bornbaum et al. [13] performed a review of the current literature to explore the use of the ICF in health education programs and they conclude that the use of ICF in education is “a relatively new but growing phenomenon”. They included 18 articles in their scoping review, from which 10 addressed ICF-based clinical training programs and only five described ICF integration into the curriculum for students in health professional programs. A good example of the latter is the recent use of the ICF in the Master Program Work, Health and Career of Maastricht University. In the program the ICF is used as a frame of mind throughout the curriculum, to enhance teaching the concept of sustainable work [14].

Themes

From the literature five themes were extracted as a base for developing alternatives for the current ICF scheme.

Societal developments/influences

Over the past few decades, the worldwide increase of life expectancy, formerly fatal conditions, have turned more into chronic conditions (such as heart disease, diabetes, asthma and cancer) [15]. Chronic conditions and related multi- or co-morbidities have become increasingly prevalent in European populations. This required healthcare systems to shift focus from diagnosis and treatment of acute illness towards comprehensive strategies for improving care and functioning for people with chronic disorders. In practice, research, and literature, we see integrated care programs that vary greatly in design and implementation, yet almost all promote one or more of the six core elements – health care organization and leadership, linkage to community resources, support of patient and self-management, coordinated delivery system design, clinical decision support, and clinical information systems – of the Chronic Care Model developed by Wagner et al. [16].

Furthermore, the (western) world is transitioning from passive to active citizenship for which health may be viewed not only as an endpoint but as a means to achieve further states, such as maximum societal participation.

Health and research influences

To also improve long-term outcomes, reduce costs, and create organizational structures and management practices, Porter and Lee suggest “Value Based Health Care” [17]. Patient empowerment within this framework is more than putting the patient at the center of care (services); it is about designing and delivering services in a way that renders control to the patient and supports his or her daily functioning and autonomy. Monitoring health across the lifespan through the use of a client specific database and valuing of a broad evidence base relevant to the lived experience of health of a particular client [7], might enhance a shift away from post diagnosis tertiary care towards a more value based healthcare practice. The starting point for realizing the latter is client-centered communication based on a common paradigm, providing the client as well as the professional with a shared language understandable for both. Implementing ICF provides all stakeholders in healthcare with a language to describe (problems in) human functioning from their own perspective and likewise to explicate goals for improvement through interventions [18]. In a

recent article Madden et al., in search of an Integrative Measure of Functioning, draw the conclusion that such a measure, based on the concept of functioning and the concept of environmental factors of the ICF, could deliver person-centered, policy-relevant information for a range of programs, promoting harmonized language and measurement and supporting international trends in human services and public health [19].

Conceptualization of health throughout the ages

Throughout history, health has been an important value, but the way “health” has been understood by the public at large, by health professionals, including physicians, as well as by philosophers, in history up to present times, has changed quite considerably. With these changes also the models and terminology with respect to health have been changed, as can be seen in Box 1.

Models/frameworks of health and disability

As indicated in the “Introduction” section, the ICF was published by the WHO as a classification for describing functioning (negative: disability) of persons and the contextual factors influencing functioning. In the literature there are several conceptual frameworks in the field of disability besides the ICF and its predecessor, the International Classification of Impairments, Disabilities and Handicaps. Most of these frameworks are older than the ICF, such as the Nagi framework [25], or are developed during the same period as the ICF. Examples are the framework used in the book *Disability in America: toward a national agenda for prevention of the Institute of Medicine* [26], the disablement process, as described by Verbrugge and Jette [27], and the Disability Creation Process Model [28].

An interesting model in relation to the ICF framework is the Capability Approach [29–31]. The Capability Approach is described by Nussbaum and Sen [32]. This approach defines quality of life in terms of capabilities, i.e., the real opportunities to do and be what one has reason to value. Saleeby [33] notes that both the ICF and the Capability Approach use a “biopsychosocial” approach. The ICF and the Capability Approach both distinguish the role and importance of contextual factors in individuals’ lives and differentiate between personal and environmental factors. Using the ICF together with the Capability Approach will contribute to an improved understanding of the life situations of individuals [33]. Some authors describe the shortcomings of the ICF compared to the Capability Approach. Trani et al. [34] state that the ICF does not address a central aspect of human life: individual choice.

Storytelling (narrative approach) provides means to illustrate the aspirations of the person [35]. In two studies the ICF was used to code the data collected from open interviews and in both studies the researchers concluded that the ICF was suitable for this purpose [36,37]. Stallinga et al. [38] compared a functioning assessment to a conventional medical assessment and found that a functional assessment provided a broader and more complete care plan without the loss of focus on medical problems. Furthermore a study of Davidsen and Reventlow [39] showed that the professional identity of general practitioners seems related with different types of narrative styles they use for telling about the treatment process of their patients (varying from including patients life perspective to keeping to biomedical matters only). The study indicates that a narrative approach (hermeneutic understanding) could lead to enhancement of the general practitioners’ empathy, a broader understanding of patients suffering from

Box 1. Conceptualization of health.

The English word “health”, etymologically, means wholeness, being whole, complete, sound, well. To “heal” literally means to make whole. The views of Hippocrates and Galenus as physicians and of Aristotle as a philosopher about the human potential to be in a state of balance and the aim of developing oneself, remained highly influential in Western medicine and thinking over 15 centuries.

From the sixteenth century, a new paradigm dawned in medicine. From then on, microbiology and pathological anatomy became the dominant views in medicine. Diseases were no longer understood as caused by imbalances of qualities, but were to be searched and understood in the physical body, in organs, cells and microbes, and should be treated there. Health definitively became the absence of disease.

From the twentieth century onwards, public health started to be organized on both a national and international scale, operated by large health organizations. The definition of health of the WHO was established. The broadness of the definition of health, beyond being the absence of disease, was ground breaking at that time (1948): *Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity* [20].

In 1974 the Lalonde Report was published, the first significant government report to suggest that health care services were not the most important determinant of health. The report suggested that there were four “health fields” – lifestyle, environment, health care organization, human biology - and that major improvements in health would result primarily from improvements in lifestyle, environment, and our knowledge of human biology [21].

In 1979 the American-Israeli medical sociologist Antonovsky, addressed a new view as opposed to pathogenesis, addressing the generation of health which he called salutogenesis. He found three personality traits to be crucial to support this salutogenesis, together forming the so called ‘Sense of Coherence’. The components of the Sense of Coherence are comprehensibility (1), manageability (2), and meaningfulness (3) [22].

In 2008, Jadad and O’Grady initiated a global discussion to reenact the discussion of 60 years ago that had led to the 1948 WHO definition of health [23]. At that time, the Dutch Government also felt the urgency to redefine health in a more dynamic and operational way and organized a two-days international expert conference on “health”. The broad discussion condensed in the dynamic general concept “Health as the ability to adapt and to self-manage, in the face of social, physical, and emotional challenges” [5]. This concept was further elaborated in the broad content, as perceived by patients, called “Positive health” [6].

Based on the Capability Approach (discussed in the main text) and in line with the later concept of Huber, Law and Widdows view health as a capability, a collection of valuable components which can be constructed in a variety of ways [24].

psychological problems and to improvement of the patients’ recovery by enhancing their own agency.

Criticism concerning the ICF

Despite all the positive reactions on the ICF, there is also criticism. This criticism can be divided in: criticism on the *content* of the present version of the ICF and criticism on the *applicability* of the ICF.

Points of criticism with respect to the present content of the ICF are:

- Several authors have indicated that by putting health condition at the top of the scheme, it still seems that the medical perspective is dominant, despite the biopsychosocial perspective of the ICF [40,41]. However, the scheme still holds value if no (known) health condition is present, as is indicated by Bornbaum et al. [42], who explored the ICF framework from the perspective of oncology. They indicate that when the health condition (e.g., laryngeal cancer) has been eliminated; the person can be left with “significant persistent physical and psychological consequences of the disease and the treatment” [42].
- There is a lot of debate on the term *health condition* used in the upper part of the ICF scheme (Figure 1). Health condition is used as an umbrella term for disease (acute or chronic), disorder, injury, or trauma and can be classified with the ICD. A health condition may also include other circumstances such as pregnancy, ageing, stress, congenital anomaly, or genetic predisposition [4]. Walsh [41], studying human communication, presented a scheme in which “health condition” is replaced by “communication well-being”.
- When we look at health from a broader perspective, the term “health condition” might be confusing, as it seems to indicate health as a whole. Although Bornbaum et al. [42] propose to use the term “health state” as an alternative for health condition, we propose to use the term “health” or “health state” as a description of the scheme as a whole (with the different components of the ICF as aspects or dimensions of health).
- The lack of a clear ontological structure. At least some components of the ICF exhibit nonconformance to many formal ontological principles. In the Practical Manual published in 2013 [43], the following example is mentioned on page 14:

there are constructs within Activities and Participation (e.g., “d210 undertaking multiple tasks”) which can be considered as parent concepts to other constructs in the same component (e.g., “d630 preparing meals”).

- A more stringent and logical re-definition of the ICF categories would: (a) reduce ambiguity of concepts and improve ICF use efficacy; (b) facilitate semantic interchangeability among the major WHO classifications; and (c) ease the process of ICF update and maintenance [43].
- The lack of a clear differentiation between activity and participation [44–46]. Although there are attempts to differentiate between activity and participation [47], making this differentiation is not easy and for this reason the ICF contains only one classification of activities and participation together. This is mainly a flaw on the level of the classification, not on the level of the ICF scheme.
- The lack of a classification of personal factors [42,48–50] and the possible overlap between mental functions and personal factors [42,50,51]. The importance of a classification of personal factors is recently emphasized in an empirical study on health indicators, where patients stressed the inclusion of concepts that could be described as spiritual or existential [6]. The six dimensions and 32 aspects in this study were compared against the ICF categories and the aspects were linked to the most appropriate ICF categories using the linking rules described by Cieza et al. [52]. Of the 32 aspects, 18 were coded as personal factors. It was concluded that the personal factors found in this study could be used as input for attempts to formulate a classification of Personal Factors, while available instruments could be selected for measuring several of the identified aspects of health, based on a link with the appropriate ICF codes. Although the ICF scheme includes personal factors, no international consensus could be reached on the structure and the content of a classification due to “the large social and cultural variance associated with them” [53]. On top of this lack of consensus, a debate about the ethical concern was advocated by all out of the conviction that a classification of personal factors can be misused as a ‘classification’ of the person [54]. We refer to the literature for more information on the position and definition of personal factors, see, e.g., Grotkamp et al. [55], Simeonsson et al. [49], Leonardi et al. [56], and Müller and Geyh [57].

- According to Bornbaum et al. [42], there is a contradiction between the definition and the description of personal factors related to comorbidities. According to the definition stated in the ICF, comorbidities are not viewed as personal factors, whereas in the description, comorbidities are viewed as personal factors.
- Although environmental factors form a separate component in the ICF scheme, the ICF still places less prominence on the significant role of the environment than other models, e.g., the Disability Creation Process Model [28]. Based on the results of their systematic literature review, Maribo et al. stated that, although in modern rehabilitation and the biopsychosocial mind set the context impact on functioning is one of the key elements, the contextual factors, including environmental and personal factors, were the least used components [11].

Other points of criticism with respect to the present content of the ICF are also more a classification flaw than a flaw of the ICF scheme. Examples are:

- The lack of many relevant items in the classification of environmental factors, such as factors related to the working environment [58–60].
- A lack of items in the other classifications. The ICF-CY is an attempt to add items to the ICF for a specific group, Children and Youth, but there are also other attempts, e.g., the development of an ICF-dietetics [61].
- The lack of clarity with respect to (the use and utility of) the qualifiers “capacity” and “performance”, may jeopardize the uniformity of data collection. There are many attempts to consider other qualifiers, such as “opportunity” [62], “a readiness for change” [63], and a qualifier measuring subjective experience of involvement to facilitate the split between activity and participation in the ICF-CY [64].

Points of criticism with respect to the applicability of the ICF:

- Some authors, especially representatives from disability organizations, fear that a detailed coding system, such as the ICF, objectifies people in an unpleasant way and that categorizing people can be misused by medical and social professionals [65].
- There are authors who think that the perspective of the client is not expressed enough in the ICF (“Where is the person in the ICF?”) [66]. However, in the process of care different data are generated which can all be coded with the ICF; e.g., the findings, complaints and experiences of the clients expressed during history taking, the findings of the health professional, the functional diagnosis, the treatment goals (formulated by the client and the health professional together), and the treatment results (also in the form of patient reported outcomes). The Problem Solving Form of Steiner provides an example of how to deal with the persons’ perspective alongside the professionals’ perspective [18].
- The main concern is that the ICF is not easy applicable in daily practice; with its more than 1400 categories (and more than 1600 categories in the ICF-CY) it is not easy to select the proper categories. One way to solve this problem is to make selections (so-called ICF core sets) from the ICF for specific groups of clients; most of these ICF core sets are based on the type of disease/disorder or setting (e.g., acute care) [67]. A disadvantage of utilizing an ICF core set for a specific disease/disorder can be that it gives the impression that the focus is on the disease and its consequences, rather than on the biopsychosocial impact,

the functioning of the individual. McIntyre and Tempest indicate another disadvantage of ICF core sets [68], namely that in fact more than one disease-specific core set could be necessary to ensure a correct description of the impact on functioning of the patient as many patients have more than one disease (resulting in more diverse functioning problems) [69].

Expert opinions

In the fall of 2014 two discussion meetings were organized in the Netherlands. There is a lot of expertise in the Netherlands on the application of the ICF in healthcare, research, education, and in policy and planning. A purposeful sample of 23 health and health-system related experts using the ICF and known to the ICF-team of the Dutch WHO Collaborating Center for the Family of International Classifications was formed plus direct invitation from out of the network of the last author (NvM) and thereupon snowball-mentioning of expert-names of others. The experts work in different domains, including policy, education, research, and clinical practice in the fields of public health, family medicine, sociocultural health, mental healthcare, life sciences, and occupational care. The group of experts was diverse, but all have expertise in the actual use of the ICF. The motives for changing the ICF scheme were discussed and ideas about alternative schemes were exchanged.

In the summer of 2015, the results from the literature and the selected alternative ICF schemes were sent to the participants of the meetings as well as to three other Dutch experts – who were not able to participate in the earlier meetings – in the form of a concept of the present article. Based on the written comments given, three alternative schemes were selected.

Proposal for adapted ICF schemes

The pursued paradigm shift, the motives listed hereto, the criticism on the ICF, the prominent place of the ICF scheme in the discussions, the experts’ conviction that a change in the ICF scheme might take away some of the (wrong) impressions (such as that the medical perspective is still dominant in the ICF), and their efforts to bring together new ideas about health resulted in three alternative schemes, represented in Figures 2–4.

The first idea was to simply turn around the scheme (the component health condition (disease/disorder) at the bottom of the scheme), as already is indicated by Rosenbaum and Gorter [70]. A more radical idea, taking into account the fact that sometimes no (known) health condition (disease/disorder) is present, was to include health condition (disease/disorder) in the component ‘personal factors’. This alternative is presented in Figure 2 as our first alternative ICF scheme. There are two changes in comparison to the original ICF scheme: (1) health condition (disorder/disease) is removed from the scheme and is included – as (co)morbidity – in personal factors; and (2) to emphasize the importance of participation, the position of functions/structures and of participation are swapped. The term (co)morbidity is used to indicate that both the ‘main’ disease/disorder/trauma as well as other coexisting medical problems (comorbidity is already included in the present description of personal factors) are meant. In this way the discrepancy mentioned by Bornbaum et al. [42,48–50] between the present definition and description of personal factors with respect to comorbidity, is solved.

To emphasize the importance of environmental factors, in the second alternative scheme, presented in Figure 3, the representation of the environmental factors is changed, comparable to the graphic representation of the ICF presented by Ravenek et al. in

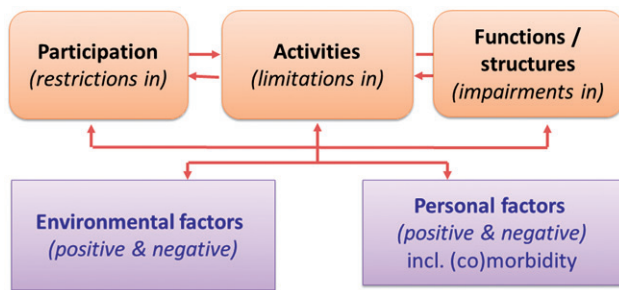


Figure 2. The first alternative ICF scheme.

2013 [46] (consisting of a set of circles with quality of life as the outer circle and environmental factors as the second circle). In Figure 3 the environmental factors are encircling functioning and personal factors. To indicate the importance of the personal factors these are positioned at the top of the scheme. As in the first alternative scheme, (co)morbidity is included in personal factors.

The third alternative scheme, presented in Figure 4, is a modification of the scheme presented in Figure 3. To emphasize the importance of participation, participation is positioned in the center of this scheme.

Expert rankings

The three alternative ICF schemes were sent to the 26 Dutch experts involved in the process for ranking the alternative schemes in the fall of 2015. Sixteen experts (62%) ranked the schemes from most preferable (3 points) to least preferable (1 point). The most popular version (39 points) is the third alternative (Figure 4), followed by the first alternative (Figure 2) (29 points) and, almost equal, the second alternative (Figure 3) (28 points).

Some of the participants indicated why they prefer a certain alternative. An important argument in favor of the third alternative is the central role of participation; it is important for people to have the possibilities to participate in society. Another argument is the fact that from this third scheme it becomes clear that environmental and personal factors have a different role. An advantage of the first alternative is its simplicity; it is the scheme that resembles most closely the 2001 ICF scheme.

Conclusions

Although the literature on the use of the ICF shows an amazing growth [9,11], there are also many authors criticizing the ICF for its lack of conceptual clarity and the fact that the ICF scheme gives the impression that the ICF (still) supports the medical model. Although the ICF scheme is only the visual expression of the ICF framework, we hope that – by coming up with three alternatives for the ICF scheme – to reduce the dominance of the concept of health condition in the scheme (and indirectly also in the ICF framework) and to emphasize the biopsychosocial perspective. Furthermore, these alternatives for the present ICF scheme are more in line with present ideas about the concept of health, as they still incorporate health and at the same time put more emphasis on functioning, the pivotal position of participation, and the importance of environmental and personal factors; priorities clearly outlined in this paper and also underlined by authors as Lenfant [71] and Crowley [72], until more recently Giles-Corti et al. [73].

To meet the important criticism on the “medical perspective” of the present ICF scheme, in all three alternative ICF schemes (co)morbidity is included in the personal factors. An additional

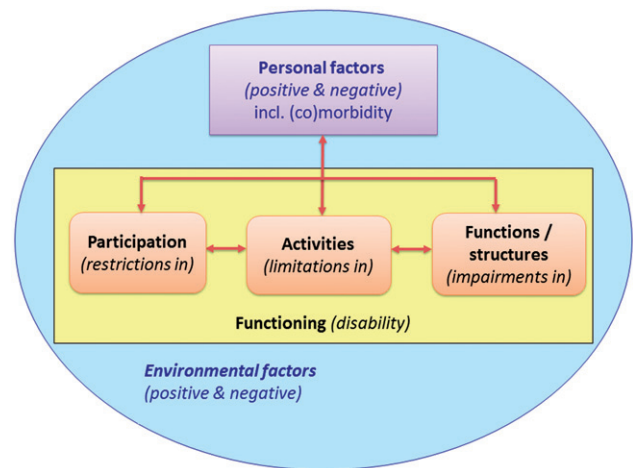


Figure 3. The second alternative ICF scheme.

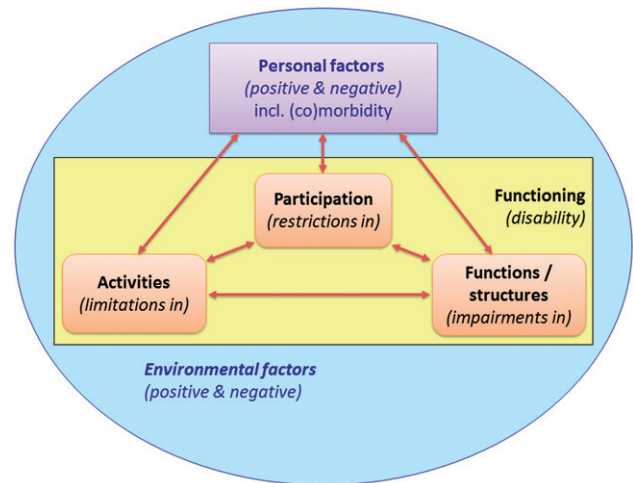


Figure 4. The third alternative ICF scheme.

advantage of this change is that the confusing term “health condition” is removed from the scheme. The scheme as a whole can – from out of the perspective of “functioning” – still be used to describe the “health” or “health state” of the individual, which is in line with the reconceptualization of health as the “dynamic concept of health” and the six dimensions distinguished by Huber et al. [6]

The alternative ICF scheme in which the environmental factors surround the other components – stressing the importance of environmental factors for functioning and giving participation a central position – seems to be in favor by Dutch experts.

Together with the adoption of a new ICF scheme, the definition of personal factors must be revised, certainly when (co)morbidity is included in the personal factors [56], and a classification of personal factors must be developed.

With these proposals we would like to invite colleagues – including patients and their (branch) representatives, researchers, teachers, health care and occupational care professionals, policy makers – from all over the world to reconsider the ICF scheme from their own perspective and setting and to join the discussion that we intended to start with this article. Our goal is to combine the biomedical approach with its emphasis on disease with the biopsychosocial approach with a strong emphasis on functioning and health. At the same time, we would like to stress the need that the ICF remains independent of the ICD in order to maintain

the breadth of utility for the classification in all sectors of statistics, beyond the medical.

Finally, the methods used here might be considered as relatively weak. That is: one country, three generated options for choice, and a small set of expert-subjects ranking their prevalence for the alternative schemes. We, however, find this approach quite reasonable as a first step in a hopefully more robust process to be started soon, given the lack of work done in this area and the need to move the conversation forward internationally. Best would be that by this paper the WHO would proactively convene an international independent group to take the next steps in a process to work on a future proof new scheme. We consequently call upon the WHO and all the more so the much broader international community of public and private health and health-related stakeholders, partners, experts and professionals out of an "active citizenship" to come along with us and eloquently help debate, create and ultimately choose from alternative schemes, be it ours or others, up until even the rethinking of the title of the classification and perhaps also deleting "disability" here, in order to focus more on 'functioning and health'. Hereby we collectively may help the health (care) sector in moving toward functioning and health as indicators and outcomes, and no longer just as disability and the absence of illness. Functioning and health are as such more than medicine, way more.

Disclosure statement

The authors report no declarations of interest.

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