

# Personal Factors in the International Classification of Functioning, Disability and Health: Prospective Evidence

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The goal of this study was to propose a systematic classification of relevant personal factors for describing the background of an individual's life and way of living. The German Society of Social Medicine and Prevention constituted an ICF working group consisting of members from Medical Advisory Boards of Statutory Health Insurances ( $n = 6$ ) and other institutions ( $n = 12$ ) in 2009. A two-tier consensus building approach was utilised to construct and document the personal factors, with an initial team of experts compiling the personal factors and a second group of experts, who had not participated in developing the initial proposal, validating the process. The consensus process resulted in personal factors classified into 72 categories and arranged in six chapters as follows: general factors normally unchangeable (chapter 1); a person's inherent physical and mental constitution (chapters 2 and 3); more modifiable factors, such as attitudes, basic skills and behaviour patterns (chapter 4); life situation and socioeconomic/sociocultural factors (chapter 5); and other health factors e.g., prior interventions (chapter 6). We believe the personal factors from this effort to be a good basis for a wider global dialogue on their operationalisation.

**Keywords:** ICF, contextual factors, personal factors, attributes, German Society for Social Medicine and Prevention (DGSMP)

The International Classification of Functioning, Disability, and Health, ICF (World Health Organization, 2001) is gaining more and more ground in terms of interest, recognition, and use in Germany, especially in the fields of social medicine, medical and vocational rehabilitation (Rentsch & Bucher, 2005; Ewert, Freudenstein, & Stucki, 2008). When the ICF was endorsed by the World Health Organization (WHO) in 2001, there was great support for the idea of expanding the model for classifying impairment, disability, and handicap. Since that time, classification efforts have expanded beyond the sequelae of diseases. Additionally, they have also

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addressed the potential influence of external environmental factors, as well as the internal contexts that are integral to the individual.

Contextual factors are extremely important in working with the ICF (Fries & Fischer, 2008). Personal factors play an essential part in effecting health problems and the impact of disability on inclusion. WHO describes personal factors as internal factors, which 'may include gender, age, coping styles, social background, education, profession, past and current experience, overall behaviour pattern, character and other factors that influence how disability is experienced by the individual' (WHO, 2001, p. 11). We define personal factors as the particular background of an individual's life and living, including features of the individual that are not part of a health condition or health states, and which can impact functioning positively or negatively. Nevertheless, personal factors are not yet classified in the ICF; 'Their assessment is left to the user, if needed' (WHO, 2001, p. 19). As a result, some users of the ICF have generated lists of 'personal factors' for their own use.

Personal contextual factors play an essential part in the model of the ICF. Classifying these factors is most useful when the criteria reflect the country-specific social and cultural environment and its particular linguistic terms. To date, only a few proposals for a user-oriented list of personal factors have been published worldwide (Geyh et al., 2011).

To begin with, some doubts arose as to whether personal factors are too personal to be classified. The workgroup discussed whether health care ethics (see Peterson, 2010), and data privacy protection constitutes an obstacle in shaping this discussion. Personal factors should not be used to stigmatise, label, or otherwise blame a person. Instead, the objective is to respect the individual's needs and strengths (United Nations, 2006).

To neglect the topic of personal factors would mean accepting the ICF as an incomplete instrument. In fact, personal factors have an impact regardless of whether they are categorised. Compiling a catalogue helps health care professionals, as well as people with or without a health problem, gain a comprehensive perspective about a person's condition, be it in the context of rehabilitation or for other reasons.

Classifying personal factors sensitises people to their role in health-related issues. Failing to address personal factors would mean 'losing sight of the person and of the full background of each person's life and living, which is the context of functioning and disability' (Geyh et al., 2011, p. 1099), thereby raising possible ethical concerns. Thus, in the rehabilitation and other fields: '... personal factors can play a role in all stages of the rehabilitation process... , in assessment, goal-setting or matching interventions to the person's characteristics' (Geyh et al., p. 1098).

## **Previous Research**

Efforts to identify and document personal factors have thus varied in scope and purpose. For example, Stephens, Gianopoulos, and Kerr (2001) proposed personal factors with hearing impairment in the context of the ICF. They identified the following to be important attributes: 'Other health conditions, coping styles, past and current experience, overall behaviour pattern and character style, and individual

psychological assets' (p. 298). Ueda and Okawa (2003) considered personal factors to have a 'subjective dimension'. In their 2004 study, the Heerkens, Engels, Kniper, van der Gulden, and Oostendorp (2004) workgroup addressed the topic of work-related disability and made a distinction between general personal factors such as age, sex, education, lifestyle and mental factors (including coping) versus work-related personal factors such as motivation, experience and willingness to exertion [sic]. Badley (2006) proposed a three-tiered categorisation: scene-setting personal factors, potentially modifiable personal factors, and social relationships. In Australia, Howe (2008) examined this issue from the perspective of treating speech-language pathology and proposed personal factors that were relevant in this context. He suggested differentiating between potentially changeable factors and those which are more difficult to change, or unchangeable. Huber, Sillick, and Skarakis-Doyle (2010) distinguished between personal factors such as coping styles, social background, past and current experiences and individual psychological assets on the one hand, and an individual's personal perception of his or her own health condition on the other hand, explaining: 'Attributed meaning results from individuals' aspirations and intentions, the foundations for their self-perceptions' (p. 1964).

Quite clearly, a gap exists between the importance of personal factors and shortcomings in how they are classified, a challenge for ICF users. Taking a first step toward resolving that gap was the goal of this study.

Preliminary work by the German Medical Advisory Board of Statutory Health Insurances (Medizinischer Dienst der Krankenversicherung [MDK]) to develop a systematic approach to incorporating personal factors in 2006 (Viol et al., 2006) suggested that personal factors could be used by social medicine specialists in statutory health insurances in assessing the need for interventions (e.g., rehabilitations measures or paid sick leave), and that these factors needed specification. This study builds on the previous research by Viol et al.

## Goal of the Study

The study aimed to compile a preliminary ICF-based list of personal factors for a German-speaking region as a basis for a comprehensive discussion about the possible format of personal factors in the ICF. It is generally assumed that the process of classifying personal factors is most useful when the criteria reflect the country-specific social and cultural environment and its respective linguistic terms. WHO has not yet classified personal factors for global use. Suggesting personal factors for German-speaking countries reflects the principle of having a catalogue of personal factors compiled for a rather circumscribed social and cultural setting. Once it has been defined for this area, however, we believe the proposal may be of interest for other countries, too.

The research questions of this study were: (1) What criteria for the selection of items into a list of personal factors for the German speaking area can be agreed upon? (2) What items are to be included into this list? (3) In what systematic structure can the personal factors agreed upon be arranged?

We aimed at creating a list that is more sophisticated than just a sampling of examples as offered by ICF or by the Australian User's Guide (Australian Institute of

Health and Welfare, 2003). Our intention was to be comprehensive with regard to structure, but not too detailed for this preliminary and regional proposal.

## **Method**

### *Research Design*

To develop a catalogue of personal factors, we used an interpretive qualitative approach (Mayring, 1996). First, the approach has the advantage of allowing for holistic reflection on the health problems in interaction with contextual factors. Second, we take the view that qualitative, consensual-driven introspection by a team of experts is a legitimate means of knowledge. Third, the consensus-driven inductive methods we engaged allowed us to generate a stepwise thematic generalisation out of separate content or item observations. Our interpretive qualitative approach yielded valid rules to map the association between a health problem and personal factors, taking into account the relevant context.

### *Participants and Setting*

The ICF working group of the German Society of Social Medicine and Prevention (DGSMP) represented a wide spectrum of institutions, mainly from medical fields, especially physicians in social insurance and rehabilitation institutions, as well as experts from other professional groups (see Appendix A for full list of participants). Table 1 summarises the participant organisation and member characteristics. The work of Viol et al. (2006), on which this proposal was based, was created by nine physicians of the Medical Advisory Board of Statutory Health Insurances. The proposal presented is based on a broader community of 18 ICF users and their experiences in various institutions. The stakeholder group was expanded more broadly and included patients' representatives (Table 1).

As described, the list presented was drafted based on an expert consensus by self-selected members of the German Society for Social Medicine and Prevention (DGSMP). There was no election procedure or commission from the WHO or any institution. Instead, experts who work with the ICF in their various professional settings did an exploratory work, as it were, because they were convinced of the benefits of having a comprehensive list of personal factors. Access to the working group was open to all experts who deal with the ICF in their professional setting. The result was a thoroughly comprehensive group of German specialists from different health care insurance companies and institutions.

### *Data Sources and Collection*

The starting point for data collection was the publication by Viol et al. (2006). The items listed by this workgroup were thoroughly revised in a consensus procedure. At the beginning, six rules for the working group were established:

1. The list of personal factors should be developed using the study of Viol et al. (2006) as a starting point.
2. The items exemplarily mentioned by WHO were to be incorporated.
3. The approach was decided to be all embracing and universal.

**TABLE 1**

The German Society of Social Medicine and Prevention (DGSMP) Participant Profile

	For comparison: preceding proposal Viol et al., 2006	ICF working group 2010	ICF working group 2012
Number of participants	(9)	(18)	(18)
Medical Advisory Board of Statutory Health Insurances	(9)	(6)	(4)
Other Social Insurances		(2)	
Federal Rehabilitation Council		(6)	(6)
Universities		(3)	(4)
Rehabilitation Centres		(6)	(7)
Patients' Associations		(2)	(4)
Others (coordinator of the translation of ICF into German; consulting)		(2)	(1)
Discipline areas	Physicians of various disciplines (9)	Physicians of various disciplines (13), (neuro-) psychologists (2), physiotherapist (1), scientists (4), pedagogues (2),	Physicians of various disciplines (12), (neuro-) psychologists (2), physiotherapist (1), scientists (4), pedagogues (2), lawyer (1), gerontologist (1)
Professional associations			
German Society of Social Medicine und Prevention, DGSMP		(7)	(7)
German Society of Physical and Rehabilitation Medicine, DGPMR		(1)	(1)
German Society of Rehabilitation Sciences, DGRW		(3)	(3)
German Society of Occupational and Environmental Medicine, DGAUM		(2)	(2)
German Society for Neurotraumatology and Clinical Neurorehabilitation, DGNKN		(1)	(1)

**TABLE 1**

Continued

	For comparison: preceding proposal Viol et al., 2006	ICF working group 2010	ICF working group 2012
German Society for Medical Rehabilitation, DEGEMED		(1)	(1)
German Association for Health Related Fitness and Sport Therapy, DVGS			(1)
Association of German Doctors for Occupational Health, VDBW	(1)		(1)
Swiss Working Group for Rehabilitation, SAR		(3)	(4)
European Registered Association for Vitality and Active Ageing, eVAA			(1)

Note: The numbers in brackets are the expert personnel from the respective organisation. Multiple affiliations possible.

4. The categories agreed upon were to be neutral, manageable, relevant, and clear, without ambiguity.
5. Overlapping with terms already part of another component of ICF was to be avoided; if not avoidable, the character of an item selected as personal factor should clearly be justified as such.
6. The neutral stand of ICF with regard to aetiology is a convention for personal factors too. The pool of items was reviewed, applying the criteria for agreed-upon selection and taking into account the various perspectives of the participants.

### *Criteria for Selection*

The workgroup agreed that a list of ICF personal factors needed to be as comprehensive, universal, neutral, user-friendly, relevant, unequivocal, definitive in their focus, and nondiscriminatory as possible.<sup>1</sup> These criteria served as a standard for whether or not a factor was to be included. From a technical perspective, overlaps with other components of the ICF (homonymic items in two components) were avoided. If this was not possible, the use of such corresponding pairs had to be justified.

### *Data Credibility and Trustworthiness Checks*

We made use of expert interviews in the form of a chaired discussion (Gläser & Laudel, 2006) and literature control (Geyh et al., 2011) to determine the credibility and

trustworthiness of the data from the qualitative procedures we engaged. Using these procedures, we achieved a level of procedural oversight in consensually mapping the categories (through deductive theoretical selection criteria) for personal factors that could act as a barrier or facilitator in association with a health problem. Systematic content analysis (Mayring, 1996) helped to reduce and systematise linguistic basic material we accumulated.

To ensure unanimity, we also developed criteria for the selection of items, including a formal decision-making process for collating items and mapping them to the ICF. For compatibility with the ICF structure, the items of the list were marked alpha-numerically, corresponding to the ICF's standard. Once compiled, the list was sent to nine experts who had not participated in developing the proposal for cross-validation of the mapping, for review.

### *Procedure*

The members of the working group had nine meetings during the period from June 2009 to November 2010. We started by discussing the obstacles and difficulties, defining the goals of the group and the group's understanding of personal factors, and constituting the rules for working and the criteria for inclusion or exclusion. Every item proposed for inclusion was intensively evaluated to assess whether it fulfilled the preconditions. The process of data collection and data analysis were connected; that is, selecting categories led to establishing a structure of chapters.

The next step was to reach a consensus on the structure of the chapters and the number of levels in the classification. In subsequent meetings, items were either added or removed, chapters combined, and the completed list was reviewed. External reviews ( $n = 9$ ) were carried out by Swiss professionals from Zurich Pedagogical University and from the Hospital of the Canton of Lucerne, by the coordinator of the translation of the ICF into German, and by Physicians of Public Health and of patients' associations. Regular progress reports on the status of the proposal were provided within the DGSM. Suggestions and representations also came from other experts, from inside and outside the DGSM (e.g., Rohwetter, 2011; Cibis 2011). The prototype proposal was published as a work in progress (Grotkamp et al., 2010). After this, new members joined the working group in 2011 (see Table 1), increasing the discipline areas represented.

### *Data Analysis*

The list of items proposal was reviewed both by external experts from medical fields who were not previously involved in the discussion process, as well as by members of other professional groups. The objective of the review process was to make sure that the proposal was logically consistent within itself, current in terms of its content, comprehensive, and comprehensible in its scope. The answers, questions, and remarks we received, most of them very helpful (e.g., ameliorating the terms chosen, mentioning the importance of ethical considerations, or being afraid of medical predominance), were used to improve the proposal. The workgroup affirmed that the proposal was also aimed at children and youth.

**Levels of Personal Factors.** In developing the components of personal factors, the workgroup followed the template of the ICF, which distinguishes among four levels:

first level = chapter level; second level = prefix + 3-digit code (= short version); third level = prefix + 4-digit code; and fourth level = prefix + 5-digit code (only for body functions and structures).

The ICF has 'blocks' (i.e., interim steps) between the first and second level of the components of body functions and activities/participation. However, these blocks cannot be coded in the ICF. In this proposal, blocks were used if the categories needed only a second level (chapters 3, 4, and 5). If a third level was needed, blocks were not used (chapters 1, 2, and 6).

**Qualifiers.** Analogous to the WHO's recommendations about classifying environmental factors, items in the category of personal factors can be defined as a qualifier — that is, a barrier or a facilitator — in terms of their impact on functioning. The categorisation here depends on the observer or person doing the assessment and on the issue in a given situation. This means that determining whether contextual factors are qualifiers is a more subjective process than determining disabilities. There are only a few items in the first two chapters where further objective depiction is possible, such as stating someone's age in years or body height in centimetres.

In compiling the chapters a question arose as to whether the categories attached to them were sufficient. Every relevant factor was intended to be included. Whether an item was included in the proposal or not depended on whether the criteria agreed upon for selection (see below) were fulfilled. Data analysis brought up some crucial questions, that is, how to draw the line between personal factors and body functions and structures (see discussion). We resolved the problem by focusing on the perspective and definition of the different components of the ICF.<sup>2</sup>

**Ethical Considerations.** 'With so many potential uses, there are many opportunities for potential misuse' (Mpofu & Oakland, 2010, p. 56). We sought neutral, not discriminatory terms, and took into account the ethical considerations that are essential to using the ICF at all, emphasising that the ethical guidelines included in annex 6 of the ICF (WHO, 2001) have to be respected when applying personal factors in particular.

## Results and Discussion

This study proposed to develop a systematic and well-structured approach to incorporating personal factors into the use of the ICF. Only a few researchers and organisations have addressed this issue. ICF users have to create lists of their own. That is why the proposal is designed to expand and contribute to the process of discussing (and potentially standardising) the classification of personal factors in the ICF on an international level. Previous research makes a distinction between stable and modifiable (Badley, 2006; Howe, 2008), objective and subjective (Ueda & Okawa, 2003), demographic and nondemographic (Badley, 2006), and general and work-related factors (Heerkens et al., 2004). Our findings partially correspond with the conclusions of other authors; for example, the overlapping of proposed factors in chapters 2 and 3 with body functions (see Badley). The differentiated structure here was selected not only in order to correspond to the component of the environmental factors. Our system of the six chapters described earlier seemed expedient and logical.



### *Proposal for a List of Personal Factors*

Tables A1 to A6 in Appendix A show the suggested list of personal factors. The draft categorises the 72 categories into 6 chapters.

Chapter 1 (see Table A1) contains general personal characteristics such as age, sex and genetic factors. Gender and age are items mentioned by WHO as examples and are generally accepted. The voting procedure led to exclusion of formerly included categories such as ethnicity or race (see Viol et al., 2006) in favour of the more comprehensive category of genetic factors, and to the renouncement of a specific chapter 'Ageing'.

Chapter 2 (see Table A2) lists physical factors as body measurements or handedness, while chapter 3 (Table A3) lists mental factors (personality factors and cognitive factors). Both chapters are concerned with existing but modifiable factors, and the person's physical and mental constitution. Some items cover categories of body functions and body structures; however, the focus was on how they impact upon functioning with respect to disability. Badley (2006) also mentions physical characteristics and psychological traits as 'scene setting personal factors' (p. 9). Stephens et al. (2001) refers to these as 'individual psychological assets' (p. 298), and in Heerkens et al.'s (2004) description, mental factors, together with general characteristics, belong to general personal factors, in contrast to work-related personal factors.

Factors that are more associated with lifestyle (attitudes, basic skills and behaviour patterns) constitute chapter 4 (see Table A4) of the proposal. This chapter covers a broad range of categories that are at least partially modifiable. Attitudes and behaviour patterns have been proposed for classification by other authors, too. Basic skills were considered to be relevant categories influencing functioning and disability.

Life situation and socioeconomic/sociocultural factors are represented in chapter 5 (see Table A5). Sociodemographic factors have also been accepted as personal factors by Badley (2006) and Howe (2008).

Chapter 6 (see Table A6) comprises other health factors. There was an intensive discussion whether this chapter was necessary or whether the items of this chapter should belong to health conditions. The decisive factor for its inclusion was the fact that WHO accounts for 'other factors' as personal factors (see above), and the need for a classification of former health problems that are no longer a health problem or in connection with disability, but which may function as facilitator or barrier in the context of another, new health problem.

Three major themes are the focus of our discussion: overlapping components, likely missing factors, and unnecessary factors.

**Overlapping Components.** In the proposed catalogue of personal factors, there are terms that at first seem similar or identical to items of other components of the ICF. This surprising fact seemed inevitable in the process of developing this instrument. Using the ICF, Body Functions and Body Structures can be considered as positive or negative aspects. Nevertheless, using qualifiers, we can only classify the degree of the impairment (i.e., only negative, not positive deviations). The ICF does not offer a way to classify the fact that a body function or structure influences health positively because of a favourable body function or structure (e.g., an exceptionally athletic build). However, personal attributes may influence a person's functioning or disability (e.g.,

during rehabilitation measures). As a result, those items were listed as personal factors as they were not regarded from the perspective of disability, but as contextual factors influencing functioning in a positive way. Our intention was to create a classification that would identify all sorts of factors that influence a person's functioning or disability. Otherwise, facilitators pertaining to body function or structures that positively influence functioning could not be described.

We propose that if a body function, body structure or activity may have a positive effect on the person's functioning or disability that cannot be classified otherwise, this item should be allocated to the personal factors. For example, dietary restrictions due to dysphagia should be designated as an activity limitation. On the other hand, particular eating habits that can have a positive or negative effect on current functioning are considered a personal factor. A prior infection with rubella may be considered a positive effect if a pregnant woman is exposed to rubella, and therefore it would be categorised as a personal factor, not impairment.

Similarly, allocating overlapping categories to either environmental or personal factors depends on the perspective of the observer. Items are allocated to the individual's personal factors if the characteristics in question are integral to that person. An example here would be fearfulness as a consequence of having experienced inadequate pain relief during surgery. If the influences are external forces that affect a person, such as other people's attitudes towards the individual's current health situation, they are classified among the environmental factors.

### *Are Any Important Factors Missing?*

This draft proposal deliberately does not include complex issues such as motivation or compliance. These factors are the result of various influences; for example, attitudes, behaviour patterns, socioeconomic status. 'Motivation' or 'compliance' do not exist per se. Someone may be motivated for rapid return to work after illness, but not motivated for an intervention. Describing the various relevant personal factors as proposed, however, can help evaluate someone's motivation for such things as returning to work or accepting a risky treatment.

### *Have Any Unnecessary Factors Been Suggested?*

Reviewers pointed out that some factors were not relevant in their context — for instance, genetic factors or other health factors — while others could be more differentiated, such as factors that are meaningful in assessing work incapacity or willingness to perform. The classification's purpose is to be useful for any given constellation of functioning and disability in relation to a health condition. In other words, a balance has to be found between attempting to be comprehensive and creating a manageable volume.

## **Limitations of the Study**

The authors were aware of the limitations of the methodological approach to the construction of the proposed classification. The study may be critically considered as a combination of brainstorming, compilation of lists of personal factors of ICF users in Germany and Switzerland, and constructing a proposed inventory, as described. The qualitative approach was intended as a first step. It might be followed by more

sophisticated studies asking for the quantitative impact of each factor (see, e.g., Ziegler & Bühner, 2009).

This proposal was not compiled by corresponding to WHO rules for bringing a classification into the WHO-FIC (see Madden, Sykes & Ustun, 2007). It is rather to be seen as a forerunner, a contribution to ICF users missing an official classification, and as a 'bottoms up' contribution to stimulate the international discussion of personal factors. This work represents the views of the participants and the conclusions may represent the personal and professional biases of the study participants. Additionally, the impact of professional disciplines (e.g., medicine) may have influenced the process and the final product. Finally, the limited number of participants may restrict the generalisability of the study.

This proposal has been reviewed by German-speaking experts. Additional review and approval processes are suggested on an international level to make sure the instrument develops further. The suggested classification of personal factors is not to be seen as a checklist to be worked through from top to bottom. After all, physicians do not use the ICD to generate a diagnosis; instead, they use it as a standardised way to document their diagnoses, based on their own findings and assessments. By the same token a classification of personal factors can be applied.

## **Conclusion**

To summarise, personal factors play an essential part in effecting health problems and the impact of disability on inclusion in society. This article presents one of the world's first systematic attempts at cataloguing personal factors in order to stimulate a discussion about the fourth component of the International Classification of Functioning, Disability and Health.

The study incorporated the experiences of ICF users in Germany and Switzerland who work with lists of personal factors in their daily work. The working group did not choose an approach that required reviewing literature and numbering what items were mentioned and how often. We used a different approach, but both approaches seemed us to be legitimate. Nor was it our ambition to bring the classification into the WHO-FIC at this preliminary stage. The workgroup sees this draft as a basis for a comprehensive discussion about the possible format of personal factors in the ICF. We hope that this classification proposal stimulates dialogue that may or may not lead to changes at a systemic level globally. Based on the experiences of ICF users in Germany and Switzerland, the working group intended to develop a list of personal factors that should cover every relevant factor, be suitable for all intents and purposes, but nevertheless of limited complexity. Classifying the personal factors of the ICF provides a standardised tool for describing relevant personal factors and their influences on a person's functioning.

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## Endnotes

- <sup>1</sup> The guiding motto for the workgroup was, 'The focus is on the individual!' — which, of course, applies to ICF classification product as well. The list of personal factors was intended to be comprehensive. Users were invited to select the core set they needed for their individual purpose. As a result, in each person's case, only the relevant categories that were significant in that specific situation were applied.
- <sup>2</sup> As an example, a very pedantic performance of a person can be considered from the perspective of impairment in body function in connection with brain injury. A pedantic attitude, however, may stand as a facilitator for self-management of therapy with insulin or vitamin K-antagonists, and then be classified as personal factor. Another point was the necessity of 'other health factors', different from comorbidity and from health problems.

## Conflict of Interests

None declared

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## Appendix A

Table A1

Chapter 1

### General personal characteristics

This chapter addresses the inherent general characteristics such as age, sex and genetic factors that may have an effect on a person's health.

This chapter does not cover characteristics that correlate to impaired health status or a disease.

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<b>i 110</b>	<b>Age</b>	Age including chronological, psychological and biological age
<b>i 1100</b>	<b>Chronological age</b>	A person's age as calculated from their date of birth to the present day
<b>i 1101</b>	<b>Psychosocial age</b>	A person's age as defined by their emotional and social development
<b>i 1102</b>	<b>Biological age</b>	A person's age in terms of biological aging factors; this can deviate from their chronological age (e.g. premature or delayed aging)
<b>i 1108</b>	<b>Age, other specified</b>	
<b>i 1109</b>	<b>Age, unspecified</b>	
<b>i 120</b>	<b>Sex</b>	The status of belonging to a sex (male/female/intersexual) as defined by biological terms and the gender role (how the sexual self is experienced and lived)
<b>i 1200</b>	<b>Biological sex</b>	
<b>i 1201</b>	<b>Gender role</b>	
<b>i 1208</b>	<b>Sex, other specified</b>	
<b>i 1209</b>	<b>Sex, unspecified</b>	
<b>i 130</b>	<b>Genetic factors</b>	A person's hereditary characteristics that can influence diseases and have other effects on health
	Excl.:	Biological sex (i1200)
<b>i 1300</b>	<b>Genetic factors</b>	
<b>i 1308</b>	<b>Genetic factors, other specified</b>	
<b>i 1309</b>	<b>Genetic factors, unspecified</b>	

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Table A2  
Chapter 2

**Physical factors**

This chapter addresses the factors of the physique and other bodily criteria to whatever extent they affect the person's ability to function and the body's potential to change. The term refers to a person's congenital or acquired constitution and their existing functional capacities. Health conditions or diseases that impair the current functional status are classified among body structures and functions. Mental factors (Chapter 3) are not covered in this section.

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<b>i 210</b>	<b>Factors related to the person's physique</b>
<b>i 2100</b>	<b>Body measurements</b>
<b>i 2101</b>	<b>Body shape</b>
<b>i 2102</b>	<b>Body composition</b> (proportions and build)
<b>i 2108</b>	<b>Factors related to physique, other specified</b>
<b>i 2109</b>	<b>Factors related to physique, unspecified</b>
<b>i 220</b>	<b>Other physical factors</b>
<b>i 2200</b>	<b>Factors related to mobility</b> (including muscular strength, stamina, dexterity, handedness)
<b>i 2201</b>	<b>Factors of cardiovascular and respiratory function</b>
<b>i 2202</b>	<b>Metabolic factors</b>
<b>i 2203</b>	<b>Factors of the sensory organs</b>
<b>i 2208</b>	<b>Factors of body function, other specified</b>
<b>i 2209</b>	<b>Factors of body function, unspecified</b>

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## Table A3

## Chapter 3

**Mental factors**

This chapter addresses a person's inherent mental factors. Mental factors may serve as facilitators and barriers that affect functioning. Health conditions or diseases that impair the current functional status are classified among body structures and functions. Mental factors include personality factors as well as cognitive factors (incl. mnestic factors).

**Personality factors (i 310–349)**

General mental factors that influence a person's constitutional nature in terms of their individual responses to a situation; these include the emotional characteristics which distinguish one person from another. If these personality factors become pathological, they are not classified among personal factors but among the mental aspects of body functions. (Personality factors fall along a continuum between two extremes. As a result, both the extent of the trait and the predominant pole can be mentioned.)

**i 310 Extraversion**

Inherent mental factors which range along the scale from extraversion (gregariousness, sociability and the (emotional) ability to express oneself) to introversion (restraint in interactions with others, independence and solitude).

**i 315 Factors of emotionality**

Inherent mental factors which range along the scale from equilibrium, contentedness, calm and tranquillity to tension, concern and embarrassment

Incl.: Psychological stability and emotional status

**i 320 Reliability**

Inherent mental factors which range along the scale from dependability, meticulousness, integrity and industriousness to carelessness, unreliability, imprecision and irresponsibility

Incl.: Conscientiousness

**i 325 Openness to new experiences**

Inherent mental factors which range along the scale from curiosity, imaginative ability, willingness to experiment and the desire for new experiences to great faith in the tried-and-true, conventional behaviour and conservative values

Incl.: Enthusiasm, curiosity, interest, willingness to change

**i 330 Affability**

Inherent mental factors which range along the scale from altruism (willingness to cooperate, friendliness and obligingness) to egocentricity (distrust of other opinions, a competitive [contentious] basic attitude)

**i 335 Self-confidence**

Inherent mental factors which range along the scale from self-assuredness, courage and the ability to assert oneself to timidity, insecurity and restraint

Incl.: Perseverance, self-efficacy

**i 340 Optimism**

Inherent mental factors which range along the scale from cheerfulness, vivacity and assuredness to despondency, pessimism and despair

**i 349 Personality factors, other specified or unspecified**



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### **Cognitive and mnestic factors (i 350–369)**

Specific mental factors which are inherent and serve as a facilitator or barrier to functioning. If these cognitive and memory factors reach a pathological state, they are not classified among personal factors but grouped with body functions. An emphasis was placed here on the facilitating or impeding nature of the effects because of the fact that there is not thorough scientific consensus about the practical aspects of classifying these topics.

#### **i 350 Intelligence-related factors**

Multimodal factor that consists of the elements of comprehension, problem-solving abilities and coping ability.

**Note:** there is no universal construct here. Intelligence is often defined 'in reverse', as it were, and in lieu of consensus about how to proceed, the global and widely ranging test procedures that are used to determine intelligence are more quantitative than qualitative in nature (e.g., Hamburg Wechsler intelligence test). The extent to which aspects of intelligence can be described and tested remains a very controversial subject. Even though there is no widely recognised and standardised means of quantifying intelligence, there is often little hesitation about outlining a detailed gradation of someone's intellect. This often has far-reaching consequences for the person in question (e.g., when that person is declared to be of above- or below-average intelligence).

#### **i 355 Cognitive factors**

Specific mental factors which affect the deliberate processing of information, including interpretation (understanding the relevance of what is perceived and placing it into an intelligent context), language, attention (deliberate orientation toward and focus on a fixed point while simultaneously registering other events in the environment and while exhibiting intellectual and emotional awareness) and concentration (comprehending a situation by means of deliberate focus on all aspects, signals and people involved.)

Excl. Memory factors (i 360), speech competence (i 440), linguistic communication (i 545)

#### **i 360 Memory factors**

Specific mental factors which involve memory, storing information, processing, recall and retrieval

#### **i 369 (Inherent) cognitive and memory factors, other specified and unspecified**

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Table A4  
Chapter 4

**Attitudes, basic skills and behaviour patterns**

This chapter deals with a person's attitudes, basic skills and behaviour patterns that can be relevant in coping with the effects of disease and health conditions. Attitudes, basic skills and behaviour patterns are elements that can have a varying influence on a person's lifestyle. They may serve as facilitators (e.g., protective/salutogenic factors) or barriers (e.g., risk factors). A person's attitudes, basic skills and behaviour patterns influence their motivation when it comes to interventions and changes in behaviour. Basic skills can include issues such as the ability to develop coping strategies in dealing with the effects of a health condition, whereas some behaviour patterns can exacerbate existing problems.

The chapter does not include activity limitations as the result of a disease or health problem; these are classified with the component of activities and participation.

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**Attitudes (I 410–429)**

The cumulative sum of personal values, convictions and opinions which are usually inherent in nature and affect an individual's behaviour and life in certain areas.

**i 410 World view**

The cumulative sum of (usually inherent) personal values, convictions and opinions which influence how a person interprets the world, the role of the individual and society as a whole. World view includes religious, philosophical, moral and political values, convictions and opinions.

**i 413 Satisfaction with life**

An individual's (usually inherent) self-assessment of their own life in general. This includes subjective feelings, rational judgment and evaluation of various aspects of their lives in terms of the quality of life they experience as well as their own view of their achievements.

Incl.: Satisfaction with work

**i 416 Attitude toward health and disease**

The cumulative sum of (usually inherent) personal values, convictions and opinions in conjunction with disease and health. These can include the person's general understanding of disease and health conditions, convictions about the purpose of health-promoting behaviour, dealing with health risks ('enjoying one's health' vs. 'wasting one's health') and the person's views on the relevance of health as the foundation of being able to enjoy life and achieve things.

Excl.: Attitude toward intervention

**i 419 Attitude toward intervention and health-related assistance**

The cumulative sum of (usually inherent) personal values, convictions and opinions in conjunction with treatment compliance (such as surgical procedures, use of prosthetics, medication, psychotherapy, rehabilitation).

**i 422 Attitude toward work**

The cumulative sum of (usually inherent) personal values, convictions and opinions in conjunction with the person's work and the work of other people, (paid work, e.g., gainful employment; unpaid work, e.g., volunteer work, raising children, housework, hobbies such as gardening, work motivated by personal convictions (political, religious, social causes).

Work can be regarded as something obligatory, edifying or burdensome, for example.

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**i 425 Attitude toward social environment/society**

The cumulative sum of (usually inherent) personal values, convictions and opinions in conjunction with the person's interactions vis-à-vis others in both their immediate and broader social environment and society. For example, someone can be convinced that they are obligated to make a certain contribution to society, while another individual might see society as owing them support.

**i 428 Attitude toward help**

The cumulative sum of (usually inherent) personal values, convictions and opinions in conjunction with accepting help from other people and organisations as well as giving help to other people and organisations.

Excl.: Attitude toward interventions

**i 429 World view, satisfaction with life and attitudes, other specified and unspecified****Basic skills (i 430–449)**

General skills (including the fields of social skills, methodical skills, empowerment, action-related skills and media skills) which form the basis for adapting and transferring more specific skills. These basic skills include general life knowledge as well as the abilities and aptitude to apply this information appropriately. Basic skills are also called core skills or life competence. Motivation is a multimodal factor consisting of elements such as attitudes and a willingness to work and take action. This is why the concept of motivation is not classified separately.

**i 430 Social skills**

The cumulative sum of knowledge, aptitude, and abilities that are necessary for social interactions as well as being useful, in particular when it comes to (a) perceiving the skills, attitudes and values of others; (b) linking the goals of an individual's actions to those of others; and (c) influencing the behaviour of others. Social skills include communications skills (e.g., linguistic skills), cooperation and team skills, conflict-management skills and others.

Excl.: Intelligence factors (i 350), linguistic communication (i 545)

**i 433 Methodical skills**

The general skills related to using work techniques, approaches and learning strategies in a manner that is appropriate and expedient in a given situation. Methodical skills include problem-solving capabilities, for example.

Incl.: Analytical abilities, logical thought and actions, problem-solving skills, creativity, willingness to learn, coping strategies

**i 436 Empowerment**

The general skill of being able to deal with one's own self appropriately, especially with reference to (a) perceiving inherent strengths and weaknesses; (b) standing up for one's personal goals in a manner that is responsible and autonomous based on one's own needs, standards, strengths and boundaries; (c) developing strategies for achieving these goals and reflect critically on one's own abilities. Empowerment includes factors such as self-confidence, self-management, self-reflection.

Incl.: Willingness to work, involvement, self-motivation, flexibility, endurance, independence, adaptability, resilience

**i 439 Proaction**

The skill needed to develop the motivation to act, to plan actions and to proceed expediently. These skills include the willingness to act, short-/mid-/long-term motivators, the ability to reflect on one's own motivation, expedient actions as well as the ability to reflect on the consequences of the actions on oneself and others.

**i 442 Media skills**

The knowledge, ability and aptitude needed to use media and their contents in a manner that reflects the person's own goals and needs, as well as the ability to form and refine critical thinking about the media available and the person's own awareness. This includes the awareness, use, selection, and criticism of media.

**i 449 Basic skills, other specified and unspecified**

**Behaviour patterns (i 450–479)**

Long-term behaviours that have become routine due to repetition. This category does not include one-time, deliberate or situationally dependent behaviours.

**i 450 Eating habits**

Dietary habits such as the selection of food, its composition, shopping, storage, the way it is prepared and consumed; the amount and kind of calories consumed, the use of any diet products. Eating habits also include disease-related diets and certain food preferences

Excl.: Use of stimulants

**i 453 Habitual use of stimulants**

The use of alcoholic beverages, coffee, tea, tobacco, etc.

Excl.: Abuse of addictive drugs

**i 456 Exercise habits**

The manner in which physical activity is commonly integrated into everyday life (work, family, recreation, and so on); for example whether the person's behaviour patterns emphasise or avoid physical activity, and any athletic activities in their spare time.

Incl.: Pursuing high-risk sports, mobility habits

**i 459 Relaxation habits**

The manner in which the person's days are typically structured, their sleeping patterns and breaks, the person's general relationship between stress and relaxation, and their habits in their free time.

Excl.: Exercise habits

**i 462 Sexual habits**

Behaviour in terms of sexual relationships and practices.

**i 465 Communication habits**

The manner and extent to which a person generally communicates as a sender and recipient of language, writing, signals and symbols, including use of communication tools and techniques.

**i 468 Hygiene habits**

The manner and extent to which a person pursues hygiene measures. This includes body care, oral care, toilet hygiene, the hygiene of the person's surroundings and hygiene in dealing with food.

**i 471 Habits in dealing with money and material goods**

The manner in which the person deals with money and material goods, e.g. more inclined towards generosity or thriftiness.

**i 479 Behaviour patterns, other specified and unspecified**

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## Table A5

## Chapter 5

**Life situation and socioeconomic/sociocultural factors**

This chapter focuses on the factors of someone's immediate personal life situation, regardless of whether they actively influence it or not. In this chapter there are many corresponding items found under environmental factors which describe the effects that a life situation has on a person.

**Immediate life situation (i 510–529)****i 510 Living arrangements**

Refers to the immediate family environment a person experiences or has designed

Incl.: Living with family, living alone, has a life partner

**i 515 Accommodation arrangements**

Refers to the immediate situation in which a person lives

Incl.: Urban, rural, owns property, rents, without a steady address

**i 520 Employment situation**

Refers to the nature and extent of training, paid or volunteer work

Incl.: School and university students, housewives, the unemployed

**i 525 Financial situation**

Refers to the nature and extent of financial means at a person's disposal

Incl.: Property holdings, gainful employment, unemployment benefits, pension

**i 529 Life situation, other specified and unspecified****Socioeconomic/sociocultural status (i 530–559)**

A complex of factors that describe life circumstances. These include formal education and the amount of schooling, training and postsecondary education, profession and income, ownership of cultural items, cultural habits, residence and ownership, liquidity, and creditworthiness.

**i 530 Socioeconomic status**

Describes the socioeconomic position within a social structure or this position relative to the system of social hierarchy. The status expresses the rank, prestige, social value, authority and power a person has in society.

Incl.: Class identification

Excl.: Profession, education (i550)

**i 535 Cultural status**

A person's cultural status can be shaped by their national origin and the length of the time they spend abroad as well as by the language spoken in everyday life at home. Their school education and professional/vocational training are also an issue here. In this context, other considerations include cultural habits, participation in social cultural activities such as fairs or festivals, theatre shows or trips to museums and the ownership of cultural items such as books, audiovisual media, and so on.

**i 540 Belonging to groups in society**

Belonging to groups with an orientation that is religious, ideological, political, ethnic, etc.

Incl.: Identification with a group in society

Excl.: Class identification (i 530)

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<b>i 545</b>	<b>Linguistic communication</b> Refers to a person’s individual environment in settings such as the family, their place of residence, their workplace, bureaucracies
<b>i 550</b>	<b>Educational status</b> Includes the personal characteristics of an individual in terms of their educational status as the outcome of a process of training and education. It also includes the extent to which these characteristics could have an effect on their disease or impairment. The educational level achieved can facilitate or exacerbate the person’s ability to cope with the effects of their disease.  Incl.: Informal education, preschool education, school education, vocational training, professional development, professional experience / competence, health-related education
<b>i 559</b>	<b>Socioeconomic/sociocultural status, other specified and unspecified</b>

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Table A6

Chapter 6

**Other health factors**

The ICF mentions that personal factors can also involve ‘other health conditions’ that are not part of a person’s overall health status but are able to affect their current functioning. These health factors can cumulatively or individually play a part when describing functioning and disability at any level (e.g., pregnancy). Comorbidities must be regarded separately; they are to be classified among health conditions.

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<b>i 610</b>	<b>Prior diseases, health impairments, injuries or traumas</b>
<b>i 615</b>	<b>Prior interventions</b>
<b>i 619</b>	<b>Health factors, other specified and unspecified</b>

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Table A7

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