

Identification of limitations in functioning in patients with Multiple Sclerosis using the ICF

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BACKGROUND

Functional impairment, activity limitations and participation restrictions are important consequences of Multiple sclerosis (MS). With the International Classification of Functioning, Disability and Health (ICF) we can now rely on a globally agreed-upon framework and system for classifying the typical spectrum of problems in functioning of individuals with MS given the environmental context in which they live. The ICF framework is based on a comprehensive and integrative perspective covering functioning and disability with its components 'body functions and structures', 'activities and participation' as well as 'personal factors' and 'environmental factors' (Figure 1). The ICF with more than 1400 categories can serve as a reference but is not applicable in clinical practice. Tools such as ICF Core Sets are needed to make the ICF useful for medicine.

OBJECTIVE

As preparatory study for the development of ICF Core Sets for MS an empirical study was performed to identify limitations in areas of functioning and relevant environmental factors in individuals with MS using the ICF.

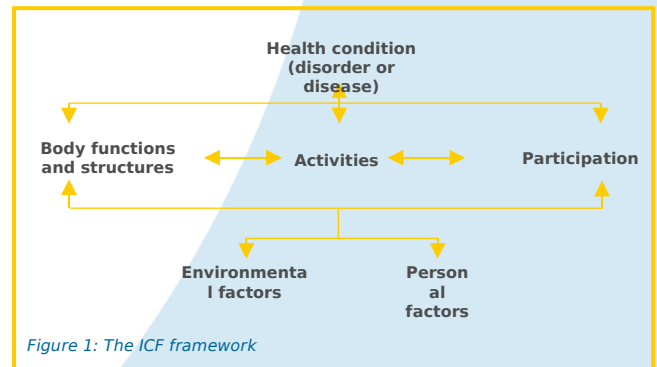


Figure 1: The ICF framework

METHODS

A multi-centre cross-sectional study was performed at Valens Rehabilitation Centre (Switzerland), Rehabilitation Center Quellenhof Bad Wildbad (Germany), University Hospital Zurich (Switzerland) and Swiss Multiple Sclerosis Society (Switzerland).

RESULTS

ICF-based data were collected of 205 individuals with MS (Table 1) based on medical records and single interviews using the Extended ICF Checklist of WHO.

129 (84%) out of 154 ICF categories of the Extended ICF checklist were identified as at least mildly impaired/restricted in more than 5% of individuals. Table 2 shows the most frequent identified ICF categories.

CONCLUSIONS

The identified ICF categories could serve as a list to describe limitations in functioning and relevant environmental factors in patients with MS. This ICF list potentially facilitates description and classification of functioning and health in persons with MS in a comprehensive and systematic way.

COOPERATION

The empirical study was part for the project *Development of ICF Core Sets for MS* and was funded by the Hertie Foundation in a cooperative effort:

- World Health Organization (WHO)
- Department of Neurorehabilitation of the Valens Rehabilitation Centre (Switzerland)
- ICF Research Branch of the WHO Collaboration Centre of the Family of International Classifications (Germany)
- Multiple Sclerosis International Federation (MSIF)
- International Society of Physical Medicine and Rehabilitation (ISPMR)

N	205 individuals with MS
Gender	148 female (72%); 57 male (28%)
Age	19 - 76 years; mean 44.7 years
MS form	RR MS = 112 (55%); male 23 (11%) PP MS = 33 (16%); male 13 (6%) SP MS = 60 (29%); male 21 (10%)
EDSS	EDSS 1 – 7.5; mean 3.7 EDSS 1 - 3.5 = 111 (54%) EDSS 4 - 6.5 = 78 (38%) EDSS 7 – 10 = 16 (8%)

Table 1: Empirical study patient data of individuals with MS

Body functions • 'Muscle power functions' and 'Gait pattern functions' identified as impaired in more than 90%.

Body structures • 'Structure of brain' and 'Spinal cord and related structures' identified as impaired in more than 90%.

Activities and participation • 'Walking', 'Doing housework', and 'Recreation and leisure' identified as restricted in more than 90%.

Environmental factors • 'Extended family', and 'Friends' as well as their 'Individual attitudes' identified as restricted in more than 90%.

Table 2: ICF categories most frequently identified in individuals with MS

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