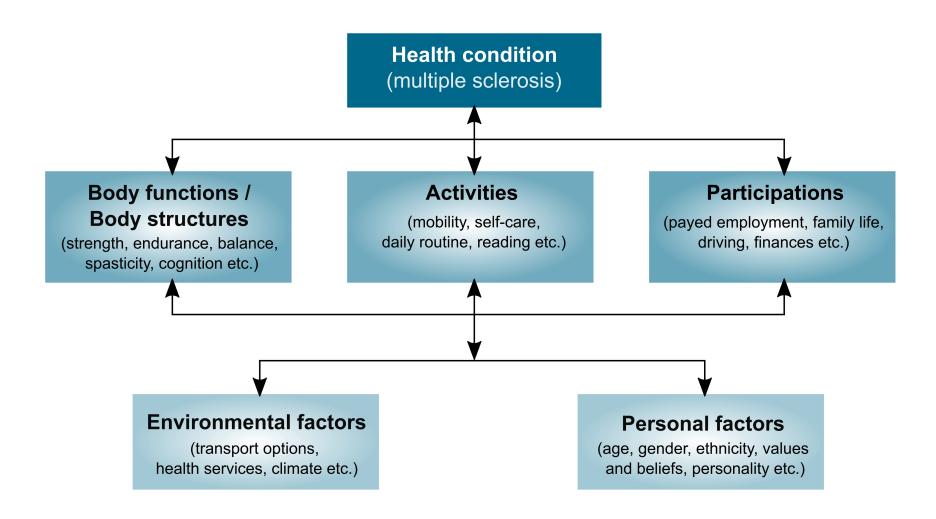
# ICF CATEGORICAL PROFILE AS A VERSATILE TOOL TO ASSESS AND PLAN REHABILIATION OF PEOPLE WITH MULTIPLE SCLEROSIS

Erasmus Blended Intensive Courses Programme In Neurorehabilitation

# ICF MODEL



ICF – International Classification of Functioning, Disability and Health (WHO 2001)

# **ICF CLASSIFICATION**

### Four main domains

- b1-b8 Body functions
- s1-s8 Body structures
- d1-d9 Activities and participations
- e1-e5 Environmental factors

https://apps.who.int/classifications/icfbrowser/ https://www.rehadat-icf.de/en/

### Three levels of precision

 d4 Mobility → d450 Walking → d4500 Walking short distances

Over 1400 categories → Core Sets

### Comprehensive Core Set for MS (138 cat.):

• 40b + 7s + 53d + 38e

### Brief Core Core Set for MS (19 cat.):

• 8b + 2s + 5d + 4e

Add categories that seem important for your case.

### **ICF Browser**

Language/Version

- □ 🧆 ICF
- b BODY FUNCTIONS
- ☐ d ACTIVITIES AND PARTICIPATION
  - d1 LEARNING AND APPLYING KNOWLEDGE
- a d2 GENERAL TASKS AND DEMANDS
- 🛅 d3 COMMUNICATION
- ☐ d4 MOBILITY

  - ☐ d450-d469 Walking and moving (d450-d469)
  - ☐ d450 Walking
    - d4500 Walking short distances
    - d4501 Walking long distances

    - d4503 Walking around obstacles
    - additional data and d
    - d4509 Walking, unspecified

  - - around using equipment
    - d469 Walking and moving, other specified and unspecified
  - - and d498 Mobility, other specified
    - and d499 Mobility, unspecified
- 🛅 d5 SELF-CARE
- 6 DOMESTIC LIFE
- ☐ d7 INTERPERSONAL INTERACTIONS AND RELATIONSHIPS
- d8 MAJOR LIFE AREAS
- 🛅 d9 COMMUNITY, SOCIAL AND CIVIC LIFE
- C ENVIRONMENTAL FACTORS
- 🗎 s BODY STRUCTURES

# **EXAMPLE FROM A STUDY**

- Virtual reality in physiotherapy of people with MS (pwMS)
- oriented on upper arm (UA)
- 8 measurement tools (Hand and Pinch grip, Box-and-Block, 9 Hole Peg Test, 5-times Sit to Stand, MSIS-29, EQ-5D-5L, VAS assessment of fine hand use and sitting stability)
- initial assessment included ICF classification by ICF Brief Core Set for MS, with 3 extra categories:
  - d430 Lifting and carrying objects, d440 Fine hand use, d445 Hand and arm use
- 29 pwMS (9 men, 20 women), average age 42 years (25 57)
- three pwMS examples

BODY FUNCTIONS	0	1	2	3	4
b130 Energy and drive functions					
b152 Emotional functions					
b164 Higher-level cognitive functions					
b210 Seeing functions					
b280 Sensation of pain					
b620 Urination functions					
b730 Muscle power functions					
b770 Gait pattern functions					
BODY STRUCTURES	0	1	2	3	4
s110 Structure of brain					
s120 Spinal cord and related structures					
ACTIVITIES AND PARTICIPATIONS	0	1	2	3	4
d175 Solving problems					
C					
d230 Carrying out daily routine					
C					
d430 Lifting and carrying objects					
C					
d440 Fine hand use					
C					
d445 Hand and arm use					
C					
d450 Walking					
C					
d760 Family relationships					
C					
d850 Remunerative employment P					
C					
ENVIRONMENTAL F. +4 +3 +2 +	0	1	2	3	4
e310 Immediate family					
e355 Health professionals					
e410 Indiv. attitudes of family members					
e580 Health services/systems/policies					

Note: strong tremor, with an assisstant at work (scientist)



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b130 Energy and drive functions						
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<b>ACTIVITIES AND PARTICIPATIONS</b>		0	1	2	3	4
	Р					
	С					
d230 Carrying out daily routine	Р					
	С					
d430 Lifting and carrying objects	Р					Г
	С					
d440 Fine hand use	Р					
	С					
d445 Hand and arm use	Р					
	С					
d450 Walking	Р					
	С					
d760 Family relationships	Р					
15 16	С					
	P					
	c					
ENVIRONMENTAL F. +4 +3 +2 +	+1	0	1	2	3	2
e310 Immediate family						
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Person No. 39

man, age 43, RR type 12 years, EDSS 5, MSIS-29 = 29

Person No. 52

man, age 37, RR type 9 years, EDSS 2, MSIS-29 = 45

Person No. 4

woman, age 48, RR type 23 years, EDSS 7, MSIS-29 = 39

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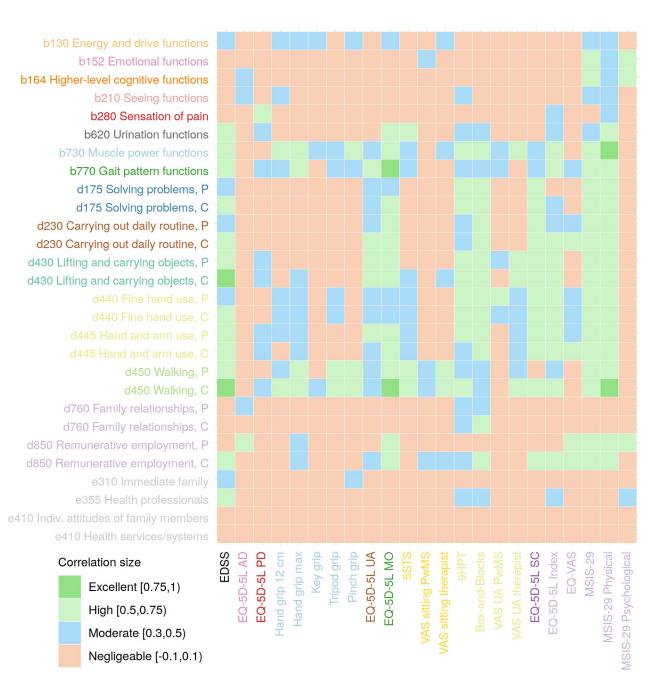
Note: participant is on wheelchair

# ICF IN PRACTICE

- understanding the situation and needs of pwMS
  - highlights less considered areas
    - at individual level → EBP; Evidence-based Practice
    - at broader level healthcare providers concentrate more on mobility and capacity, pwMS value participations at various levels
  - basis for discussion, identification of therapy goals
- visual aid in the form of a card helps the rehabilitation team to recall the client
- complete framework for the rehabilitation program
  - initial assessment, identification of therapy goals, intervention planning, monitoring the course up to final evaluation
- validation of measurement tools

# HEATMAP ICF CORE SET × MEASUREMENT TOOLS

- correlations at initial assessment
- color coded by ICF linking
- specific × general tools
- "objective" × subjective



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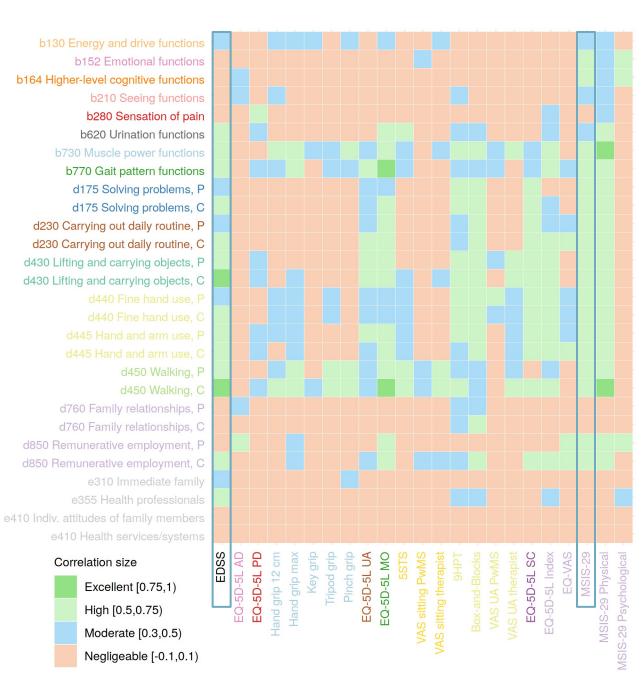
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## **EDSS**

- omits some functions
- stresses capacity

### **MSIS-29**

- includes impact on mental and emotional wellbeing
- stresses performance



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- improvement of the research and of the care systems

