

Operationalization of Functioning for Population Health



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Historic resolution on strengthening rehabilitation in health systems

Strengthening rehabilitation in health systems

Emphasizing that **rehabilitation services are key to the achievement of Sustainable Development Goal 3 (to ensure healthy lives and promote well-being for all at all ages)**, as well as an essential part of achieving target 3.8 (achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all)

SUSTAINABLE DEVELOPMENT GOALS

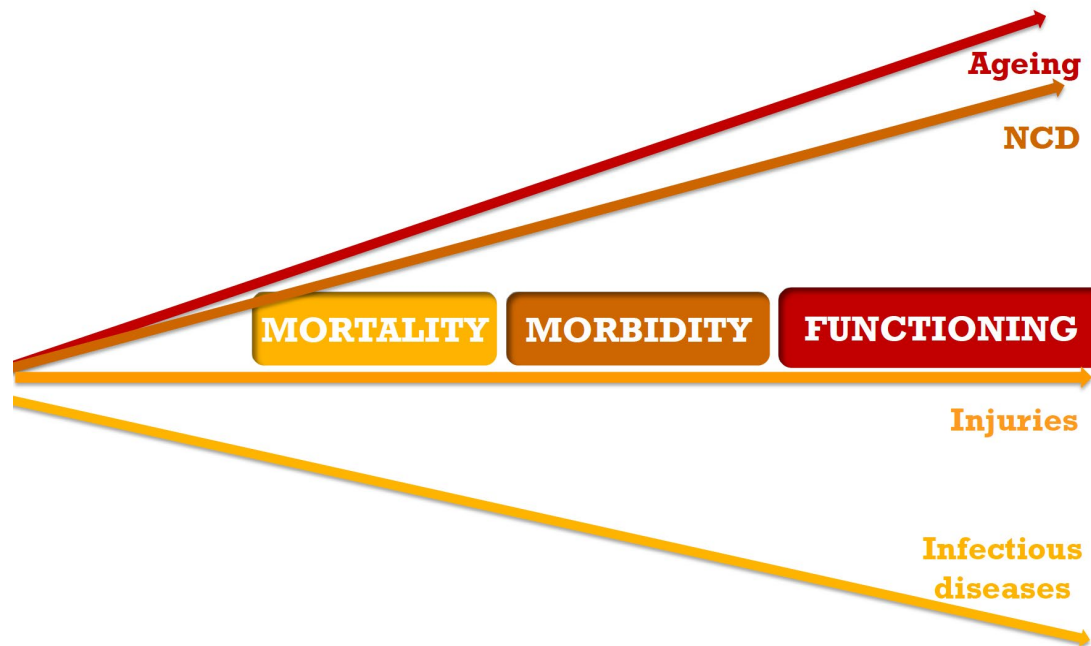


3 GOOD HEALTH AND WELL-BEING



Functioning: the third health indicator

Functioning: the foundation for rehabilitation



Rehabilitation is...

*...a set of interventions designed to **optimize functioning and reduce disability** in individuals with **health conditions in interaction with their environment***

Integrity in

Body functions
Body structures

Activities and

Participation

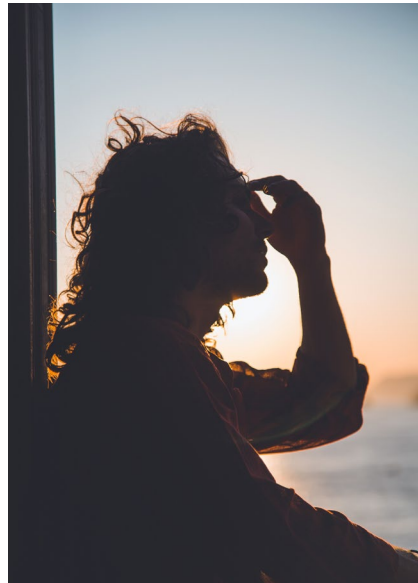


Photo by [Matteo Vistocco](#) on [Unsplash](#)



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Impairments in

Body functions and
Body structures

Limitations in activities and

Restrictions in participation

Complete functioning

Complete disability

Rehabilitation is...

“In a healthcare context”, rehabilitation is defined as a “multimodal, person-centered, collaborative process” (Intervention-general) including interventions targeting a person’s “capacity (by addressing body structures, functions, and activities/participation) and/or contextual factors related to performance” (Intervention-specific) with the goal of “optimizing” the “functioning” (Outcome) of “persons with health conditions currently experiencing disability or likely to experience disability, or persons with disability” (Population).



Integrating functioning across the health system building blocks

Health system building block	
Health service delivery	• Implementation of people-centered integrated service types to improve functioning • Functioning assessment used for quality management
Health workforce	• Functioning used as basis for interdisciplinary / interprofessional communication and collaboration
Health information systems	• Standardized functioning data using ICF collected across health system for clinical, research, management and policy purposes
Access to essential medicines	• Functioning included in research on appropriateness and efficacy of essential medicines and assistive technology and their provision
Health systems financing	• Functioning information integrated into standard case-mix systems utilizing diagnosis related groups
Leadership and governance	• Infrastructure, methodologies, policies, incentives and funding for implementation • Overarching governance addressing individual lived experience of health and optimizing the societal response

→ ICSO-R

→ IRP

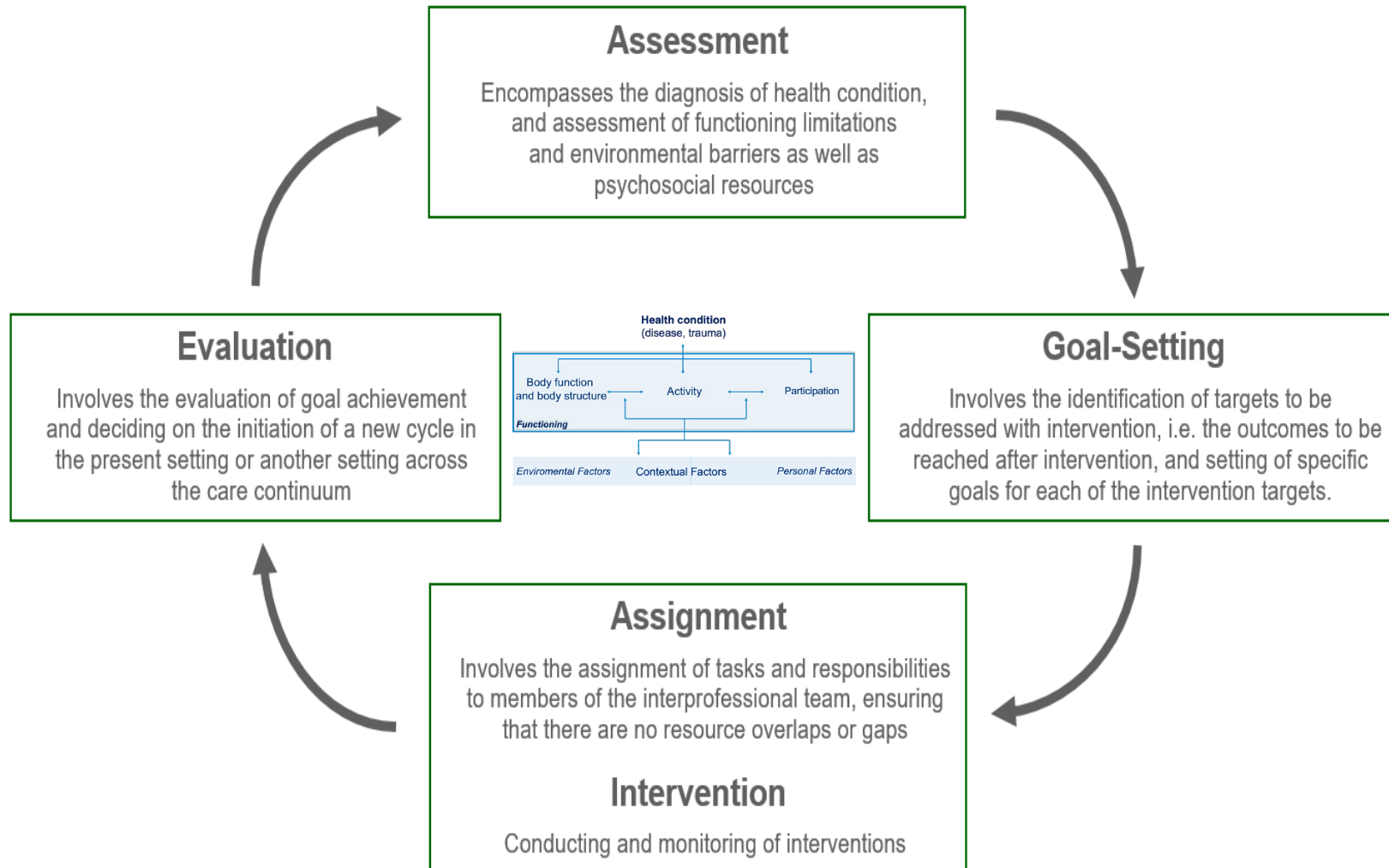
→ StARS

→ Environmental factors (OMERACT)

→ SDO-R

→ MDS, ClinFIT

Individual Rehabilitation Project



Zampolini M, Selb M, Boldrini P, Branco CA, Golyk V, Hu X, Kiekens C, Negrini S, Nulle A, Oral A, Sgantzos M, Shmonin A, Treger I, Stucki G; UEMS-PRM Section and Board. The Individual Rehabilitation Project as the core of person-centered rehabilitation: the Physical and Rehabilitation Medicine Section and Board of the European Union of Medical Specialists Framework for Rehabilitation in Europe. *Eur J Phys Rehabil Med.* 2022 Aug;58(4):503-510. doi: 10.23736/S1973-9087.22.07402-0. Epub 2022 Feb 11. PMID: 35148044.

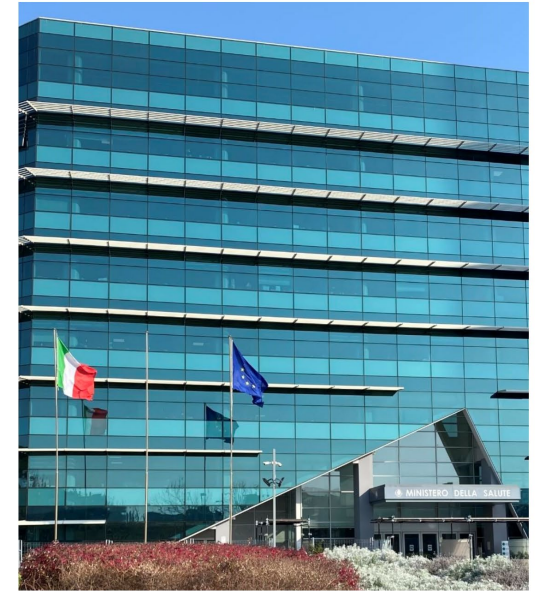
SDO-R

1. Coding of diagnoses - pathological conditions – ICD
 - ✓ Functional Diagnosis
 - ✓ Causal Diagnosis
 - ✓ Complexity
 - ✓ Complications
2. Coding of procedures
3. Origin of the patient
4. Modality of discharge
5. Evaluation scales
 - ✓ Rehabilitation Complexity Scale extended
 - ✓ Barthel Index based on dyspnea
 - ✓ ...
6. Codes 28, 56, 75



Flusso informativo SDO:
aggiornamenti relativi all'uso del
nuovo tracciato record (tracciato C)
con contenuti riferiti ai ricoveri di
riabilitazione ospedaliera
(D.M. n. 165/2023)
[SDOr]

Gruppo Tecnico ex art. 6 D.M. 5 agosto 2021



Ricovero di Riabilitazione codice 56			
Dimensione indagata	Scala di valutazione	Timing di registrazione	note
FUNZIONALITÀ PREMORBOSA	Rankin Scale	Ingresso	Valutazione anamnestica della funzionalità pre-evento acuto (evento indice). In caso di ricovero non correlato ad evento acuto (ricovero dal domicilio), andrà valutata la funzionalità pre-ricovero riabilitativo
DISABILITÀ	Barthel Index (BI)	Ingresso e dimissione	Versione italiana 2015
	Barthel Index Dispnea (BD)	Ingresso e dimissione	Per MDC 4 e MDC 5
	Six minutes walking test (6MWT)	Ingresso e dimissione	Per MDC 5 e MDC 4
COMPLESSITÀ	Rehabilitation Complexity Scale extended (RCS-e)	Ingresso e dimissione	Versione 13

Model Disability Survey (MDS)

- **General population survey**
- Aim: to **enable comparison** between groups with differing levels and profiles of disability, as well as to those without disability
- Will help policymakers identify which interventions are required **to maximize the functioning of persons with disability and ...promote inclusion**
- Can also **contribute to monitoring the Sustainable Development Goals (SDGs)**



<https://www.who.int/news-room/questions-and-answers/item/model-disability-survey>

Courtesy of Prof. Gerold Stucki

ClinFIT - Clinical Functioning Information Tool

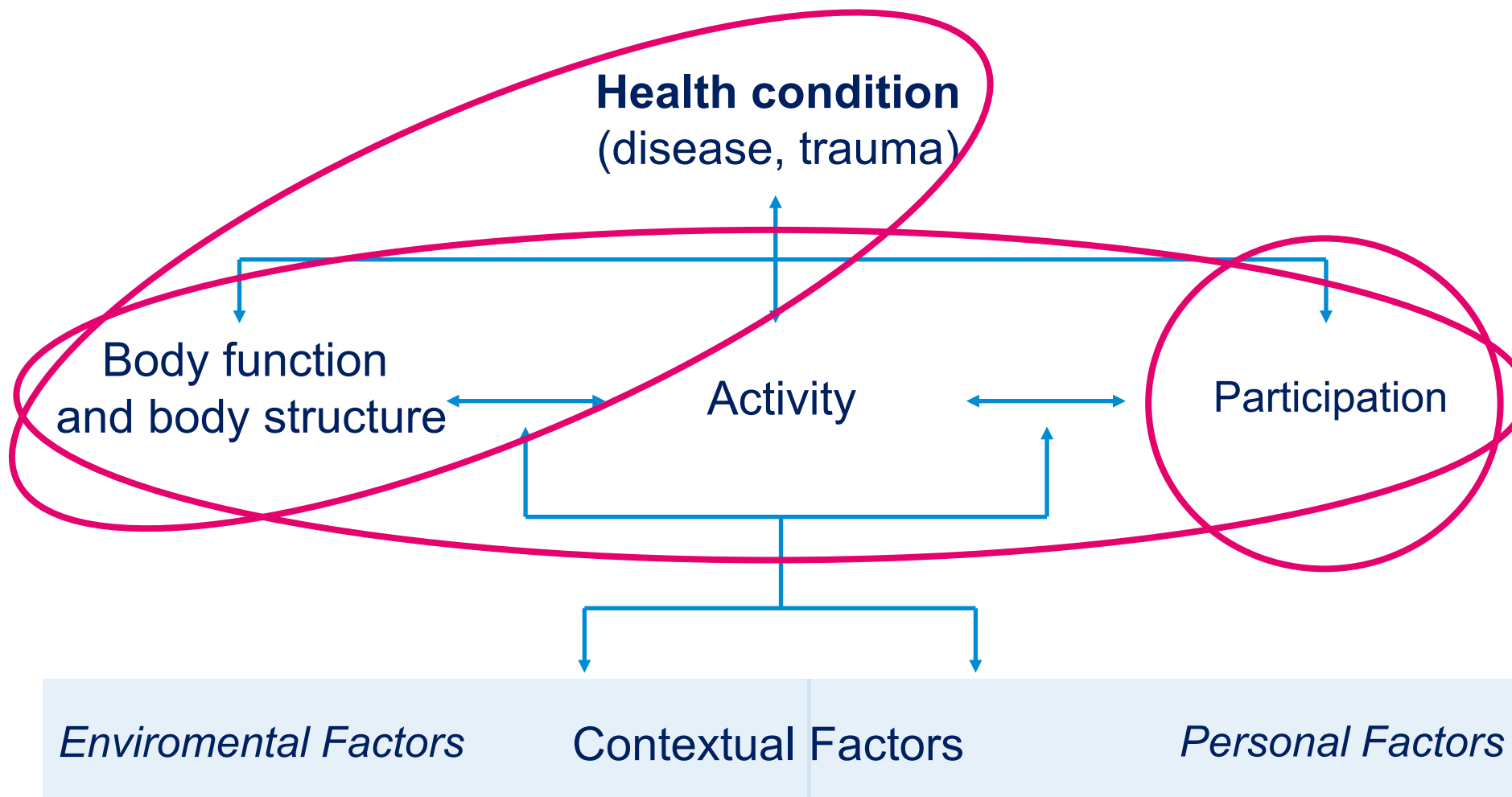
“**Clin**” ⇒ “clinical”; emphasizes the application setting

“**F**” ⇒ “functioning”; refers to its content

“**I**” ⇒ “information”; refers to the relevant building block of the health system

“**T**” ⇒ “tool” refers to its purpose.

...that can be tailored to the needs of clinicians



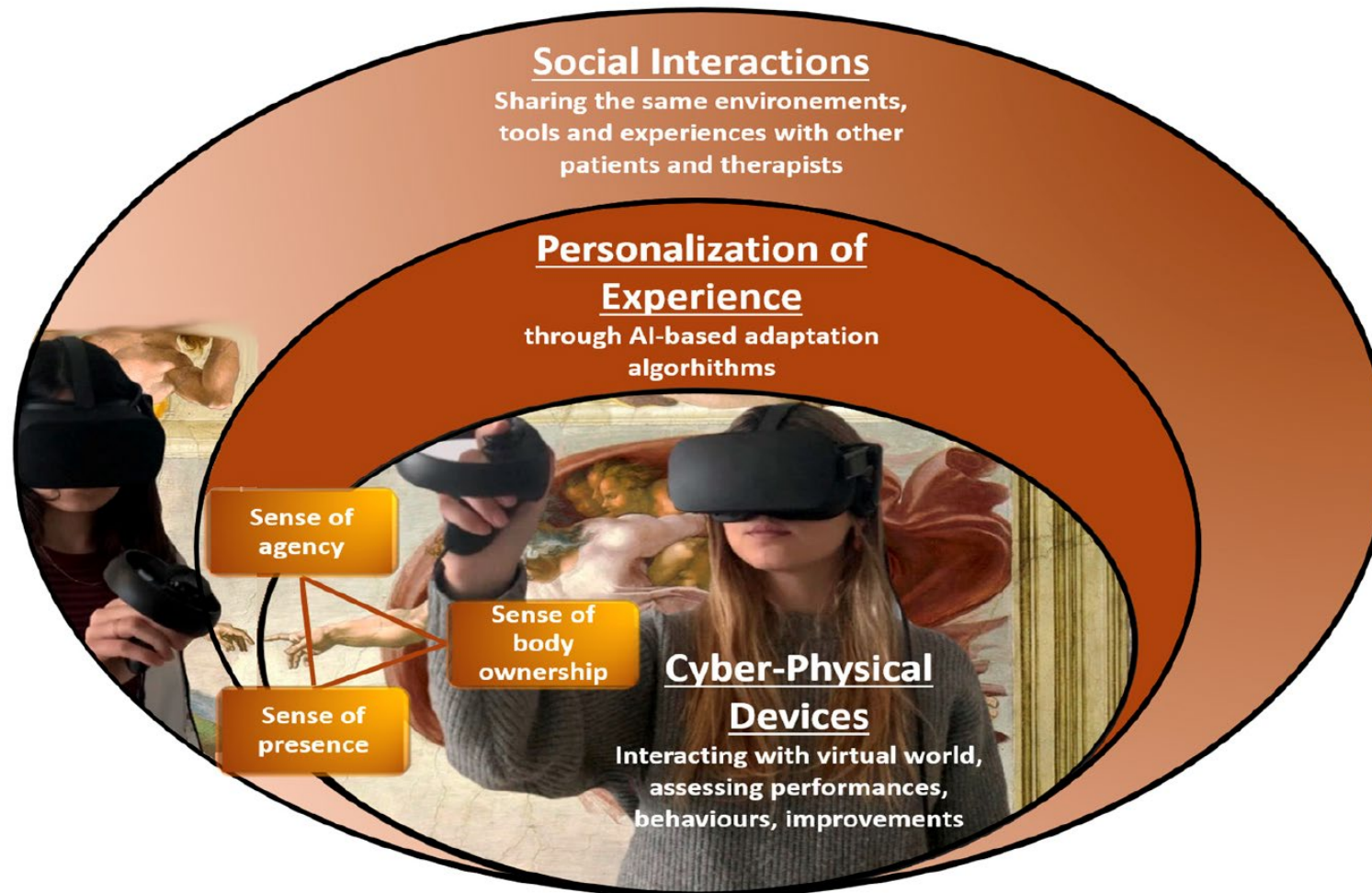
Environmental factors make up the physical, social and attitudinal environment in which people live and conduct their lives.

These factors are external to individuals and can have a positive or negative influence on the individual's performance as a member of society, on the individual's capacity to execute actions or tasks, or on individual's body function or structure

Personal factors are the particular background of an individual's life and living, and comprises features of the individual that are not part of a health condition or health state.

These factors may include gender, race, age, other health conditions, fitness, lifestyle, habits, coping styles, social background, education, profession, past and current experience,...

Metaverse in Rehabilitation



Calabrò RS, Cerasa A, Ciancarelli I, Pignolo L, Tonin P, Iosa M, Morone G. The Arrival of the Metaverse in Neurorehabilitation: Fact, Fake or Vision? *Biomedicine*. 2022 Oct 17;10(10):2602. doi: 10.3390/biomedicine10102602. PMID: 36289862; PMCID: PMC9599848.

Artificial Intelligence



“And we applied for disability, hoping it will be accepted at 100%, and in practice, I'm feeling a bit worse now, especially with regards to my bones, my back is giving me problems, I think it's really serious, I'm completely stuck in bed screaming from pain, many treatments don't work because they make me vomit, I have a delicate stomach therefore we did some infiltrations in the end, but... Anyway, so I have a condition of polyarthritis. Here, well, right here. So, this is the lumbosacral spine, isn't it? Using the numbers, it's scary, where osteoporosis and severe spondylotic and spondyloarthritic manifestations are evident. And then with this anterolisthesis. And it also starts a bit, let's leave it also at level D8. For example, in the D8, there's a small collapse, typical of osteoporosis. So, I was not working anymore, the problem of love started, I began working a little assistance. They need accompaniment. She and he, well, more or less, they manage it, but a bit slow. Sometimes even with the right one, it starts with me. So, I have memory problems, a little yes. In the morning, I go down, maybe she has turned, the raised hole puts the like. She forgets to turn off the milk pot, is it pouring? I let them square, I leave them alone. If they start getting angry, mine gets agitated. Accompaniment was needed. Madam, madam, what year is it now? More or less, anyway. You, how old are you? 89. And when were you born? In what year? Do you remember the year you were born also because you hear little, from July to July, the year, the year, the year, the year. I don't know if it was an evening. Listen, where are we? Where are we? Where are you right now? And what place is this? Good pedal, good, good. At times, at times, luckily, I'm also with you, so if you have cognitive problems a little bit. But clearly, I wanted to get the wheelchair. At home, I said look, now I'll get you a wheelchair. I started to get agitated in the hospital, I'm not going there, I'm not going there slowly, this chart. Listen, do you need help getting dressed? Yes. Got it? Ah. I understand and then, for example, can you wash yourself? When you get up from bed, can you get up from bed? Does she help you? And then when you go to the bathroom, no, do you clean yourself or do you need help? And about leaks, sometimes do you wet yourself? And if. In time. Slowly, slowly, going there. I understand other diseases high blood pressure. Diabetes? High cholesterol? Days? It makes me want to cry, so she cries easily. Here. And at night, does she sleep? She doesn't sleep. And then she feels very little. If winning almost nothing. Do you understand, so in movements, even if she moves little, anyway, she recently fell. She fell, when? Recently, a long time ago. A month and a half and a half and a half, in fact, I slipped. We cashed in the session. Listen, can you sit down on the bed?”

Artificial Intelligence

