



# Environmental factors in disability assessment: how to combine WHODAS and ICF.

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**Abstract** EFs were analysed in an Italian sample interviewed with the WHODAS 2.0, 36 items mapped to 27 ICF Activities and Participation categories. The aim of this contribution is to present some preliminary results.

## Introduction

WHO has developed ICF and WHODAS 2.0 in order to describe and measure functioning and disability. WHODAS 2.0 domains refer to the Activities and Participation (AP) component of ICF, but do not make explicit the type and number of Environmental Factors (EFs) that the respondent should take into consideration to point out the difficulties experienced in the last 30 days. EFs were analysed in an Italian sample interviewed with the WHODAS 2.0, 36 items mapped to 27 ICF AP categories. The aim of this contribution is to present some preliminary results.

## Methods & Materials

- 36 questions of WHODAS 2.0 were mapped to ICF second-level categories; an ICF core set with 27 AP categories was created, corresponding to 27 WHODAS questions (1).
- A web application was created to code the 27 ICF-mapped WHODAS 2.0 questions/answers into ICF (AP category.performance qualifier).
- Disability scores were calculated using the syntax provided by the WHODAS 2.0 Manual and a new syntax developed by one of the Author (CM); five disability classes were defined following the ICF severity ranges (2,3) (no disability, 0 to 4; mild disability, 5 to 24; moderate disability, 25 to 49; severe disability, 50 to 95; extreme disability, 96 to 100).
- EFs were investigated by adding four specific questions to each ICF-mapped WHODAS question. The four additional questions asked about the facilitator/barrier role of (i) support and relationships, (ii) products and technology used by the person, (iii) social and welfare services and (iv) health services used by the person in the previous 30 days (Table 1).
- The distribution of the EFs as facilitators and barriers for each ICF-mapped WHODAS question was calculated.
- The distribution of the EFs for each disability class was calculated.

## Results

109 persons were interviewed using WHODAS 2.0, 36 items: 62.4% were males, 15.6% were less than 18 years old and 65.1% had a mental disorder (ICD 9-CM Chapter V codes 290-319) (Table 2).

Four groups were described according to the disability scores (no one showed extreme disability).

The EFs were present in all groups. Support and relationships was the most frequent EFs, followed by the products and technology (Figure 1).

Ninety percent of the EFs considered were facilitators (Figure 2).

Table 1: EFs groups

ENVIRONMENTAL FACTORS	
<b>Health services, systems and policies</b>	
e580	Health services, systems and policies
<b>Services, systems and policies</b>	
e525	Housing services, systems and policies
e555	Associations and organizational services, systems and policies
e570	Social security services, systems and policies
e575	General social support services, systems and policies
e585	Education and training services, systems and policies
e590	Labour and employment services, systems and policies
<b>Support and relationships</b>	
e310	Immediate family
e315	Extended family
e320	Friends
e325	Acquaintances, peers colleagues, neighbours and community members
e330	People in positions of authority
e335	People in subordinate positions
e340	Personal care providers and personal assistants
e350	Domesticated animals
e355	Health professionals
e360	Other professionals
<b>Products and technology</b>	
e110	Products or substances for personal consumption
e115	Products and technology for personal use in daily living
e120	Products and technology for personal indoor and outdoor mobility and transportation
e125	Products and technology for communication
e130	Products and technology for education
e140	Products and technology for culture, recreation and sport
e150	Design, construction and building products and technology of buildings for public use
e155	Design, construction and building products and technology of buildings for private use
e165	Assets

Table 2: Some characteristics of the sample by disability class

Demographic characteristics (n=109)	Severity categories					Total
	No disability	Mild	Moderate	Severe		
Gender	Male	1 (1%)	20 (29%)	31 (46%)	16 (24%)	68
	Female	1 (2%)	17 (41%)	14 (34%)	9 (22%)	41
Age	<18	-	3 (18%)	6 (35%)	8 (47%)	17
	≥18	2 (2%)	34 (37%)	39 (42%)	17 (18%)	92
Disease	Mental	2 (3%)	34 (48%)	28 (39%)	7 (10%)	71
	Other	-	3 (8%)	17 (45%)	18 (47%)	38

Figure 1: Distribution of the EFs groups for each disability class

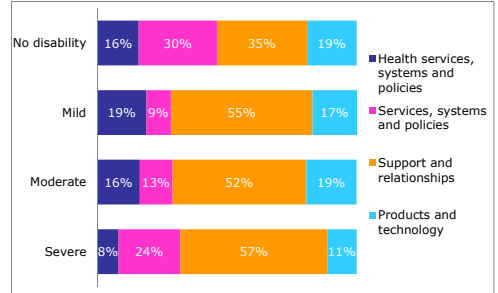
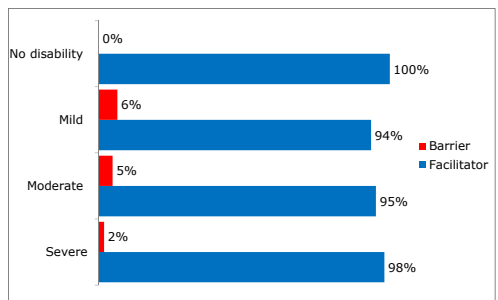


Figure 2: Distribution of facilitators and barriers for each disability class



## Conclusions

Investigation of the role of EFs allows to look at the persons with disabilities in a different light. The role of several EFs in the 27 ICF-mapped WHODAS activities showed that severe disability exists in the presence of facilitators. This allows to redefine persons with disability as persons with insufficient facilitators with respect to their needs. On the other hand, in our sample, persons without disability used a lot of EFs facilitators. In this case the absence of disability should be linked to the availability of "sufficient" facilitators with respect to their needs.

## References

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