

The disability continuum or the disability distribution represents the individual scores with the dotted lines as cut-offs indicating the boundaries of the different levels of disability. The disability continuum for the Philippines based on the NDPS sample given in Figure 2 shows that Filipinos, age 15 and older, tend to experience moderate disability.

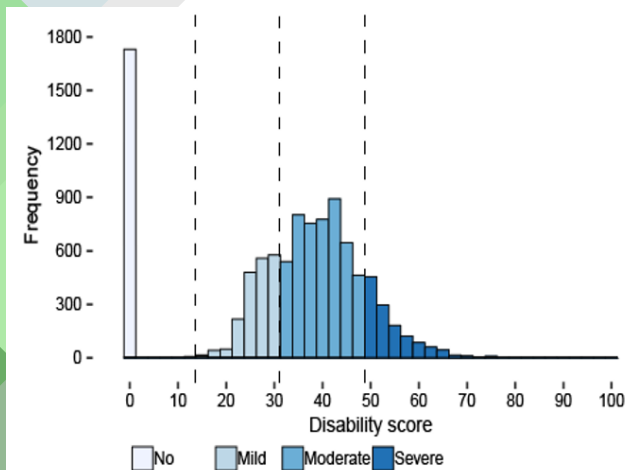
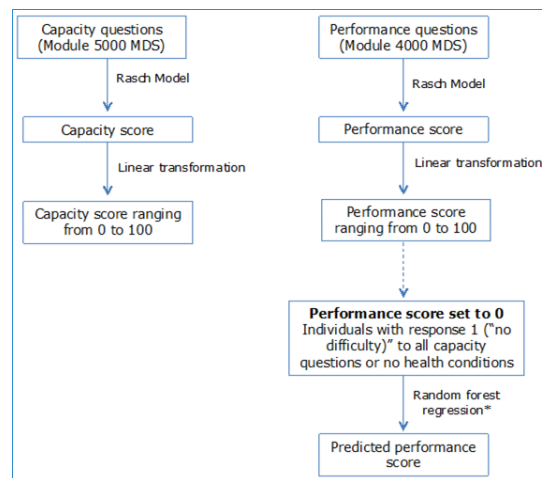


Figure 2. Disability Distribution of Sampled Population (NDPS) Age 15 and Older

Calculation of Disability Scores in NDPS

1. Identification of persons with disability
 - a. Calculate a capacity sum score with metric properties based on Rasch Analyses
 - b. Calculate the average capacity scores of those with a chronic disease, such as arthritis, diabetes, angina, asthma, and depression
 - c. Calculate average of the capacity scores of persons endorsing extreme difficulties in any of the 17 functioning domains (mobility, hand and arm use, self-care, seeing, hearing, pain, energy and drive, breathing, affect (depression and anxiety), interpersonal relationship, handling stress, communication, cognition, household tasks, community and citizenship participation, caring for others, and work and schooling)
 - d. Calculate the average mean of b and c
2. Level of functioning of those with disability compared with the rest of the population
 - a. Calculate a performance score with metric properties based on Rasch Analyses
 - b. Compare the score of those with severe, moderate and mild disability with the rest of the population



* Random forest regression fitted with performance scores as the response variable and capacity score, environmental factors, attitude, network, assistive devices use and the interactions between capacity score and the other variables as predictors.



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Information about the **MDS** and **ICF model** was obtained from:
https://www.wcpt.org/sites/wcpt.org/files/files/GH-ICF_overview_FINAL_for_WHO.pdf



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A New Perspective on Disability

The ICF Model

The First Disability Survey in the Philippines

The PSA conducted the National Disability Prevalence Survey or Model Functioning Survey (NDPS/MFS) in 2016 adopting the Model Disability Survey (MDS) developed by the World Health Organization (WHO) and the World Bank (WB). The MDS is grounded on the International Classification of Functioning, Disability and Health (ICF).

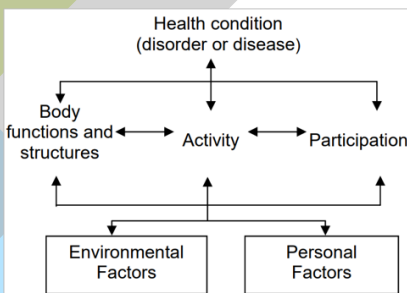
What is the ICF and the ICF Model?

The International Classification of Functioning, Disability and Health (ICF) is a framework for describing and organising information on functioning and disability. It provides a standard language and a conceptual basis for the definition and measurement of health and disability.

In the ICF, functioning and disability are multi-dimensional concepts, relating to:

- the **body functions and structures** of people, and impairments thereof (functioning at the level of the body);
- the **activities** of people (functioning at the level of the individual) and the activity limitations they experience;
- the **participation** or involvement of people in all areas of life, and the participation restrictions they experience (functioning of a person as a member of society); and
- the **environmental factors** which affect these experiences (and whether these factors are facilitators or barriers).

The ICF conceptualises a person's level of functioning as a dynamic interaction between her or his health conditions, environmental factors, and personal factors. It is a biopsychosocial model of disability, based on an integration of the social and medical models of disability. As illustrated in Figure 1, disability is multidimensional and interactive. All components of disability are important and any one may interact with another. Environmental factors must be taken into consideration as they affect everything and may need to be changed.



Although personal factors are recognised in the interactive model shown in Figure 1, they are not classified in the ICF at this time. Such factors influence how disability is experienced by the individual and some, such as age and gender, are commonly included in data collections.

Figure 1. Interactions between the components of ICF (WHO2001:18)

Definitions

- **Body functions** - The physiological functions of body systems (including psychological functions).
- **Body structures** - Anatomical parts of the body such as organs, limbs and their components.
- **Impairments** - Problems in body function and structure such as significant deviation or loss.
- **Activity** - The execution of a task or action by an individual.
- **Participation** - Involvement in a life situation.
- **Activity limitations** - Difficulties an individual may have in executing activities.
- **Participation restrictions** - Problems an individual may experience in involvement in life situations.
- **Environmental factors** - The physical, social and attitudinal environment in which people live and conduct their lives. These are either barriers to or facilitators of the person's functioning.
- **Functioning** is an umbrella term for body function, body structures, activities and participation. It denotes the positive or neutral aspects of the interaction between a person's health condition(s) and that individual's contextual factors (environmental and personal factors).
- **Disability** is an umbrella term for impairments, activity limitations and participation restrictions. It denotes the negative aspects of the interaction between a person's health condition(s) and that individual's contextual factors (environmental and personal factors).

Measurements

The ICF is a framework and classification system on which tools for measuring or 'assessing' individual functioning may be based, and to which they can be mapped. The broad framework puts assessment in context and provides the focus for selecting relevant aspects of functioning and disability for assessment.

Qualifiers are codes used to record the extent of functioning or disability in a domain or category, or the extent to which an environmental factor is a facilitator or barrier. A uniform or 'generic' qualifier scale is provided to record the extent of the 'problem' in relation to impairment, activity limitation and participation restriction as shown in below. The environmental factors qualifier uses both a positive and negative scale, to indicate the extent to which an environmental factor acts as either a facilitator or barrier to functioning. Measurement is an area for further development and it is recognised that the generic qualifier requires calibration to relate its scale to existing measurement tools.

ICF QUALIFIER SCALES

Generic qualifier:

- 0 No problem
- 1 Mild problem
- 2 Moderate problem
- 3 Severe problem
- 4 Complete problem
- 8 Not specified
- 9 Not applicable

Qualifier for Environmental factors:

- | | |
|---------------------------|-------------------------------|
| .0 No barrier | +0 No facilitator |
| .1 Mild barrier | +1 Mild facilitator |
| .2 Moderate barrier | +2 Moderate facilitator |
| .3 Severe barrier | +3 Substantial facilitator |
| .4 Complete barrier | +4 Complete facilitator |
| .8 Barrier, not specified | +8 Facilitator, not specified |
| .9 Not applicable | +9 Not applicable |

Disability as a Continuum

The WHO concept or understanding of disability used in the MDS is the outcome of the interaction between the health conditions and impairments of an individual and his/her environment whether physical, social, attitudinal and/or political. Disability is a continuum, a matter of degree ranging from no disability (0 score) to extreme disability (100 score). Based on this concept, disability is universal, meaning every person sits somewhere on the disability continuum.

Disability levels of respondents were measured by answering a series of questions in 17 functioning domains namely: mobility, hand and arm use, self-care, seeing, hearing, pain, energy and drive, breathing, affect (depression and anxiety), interpersonal relationship, handling stress, communication, cognition, household tasks, community and citizenship participation, caring for others, and work and schooling. The answers of the respondents were given equivalent scores and based on the scores, each respondent was classified as to having: "no disability", "mild disability", "moderate disability" and "severe disability". The WHO recommendation on the cut-offs depend on the purpose: (1) Severe disability rates? (2) Eligibility for disability benefits? (3) Allocation of health resources?. These cut-offs are as follows:

Cut-off criteria in classifying levels of disability recommended by the WHO

Target Level	Cut-off-Criteria
No Disability	Score < (Mean - 1SD) or Score = 0
Mild	(Mean - 1SD) < Score < Mean
Moderate	Mean < Score < (Mean + 1SD)
Severe	Score ≥ (Mean + 1SD)