

Conceptualization and measurement of disability in studies on subjective well-being: A critical review and evidence from the Italian Health Interview Survey

Alessandra Battisti, Carlo Francescutti,
Giampiero Griffo, Alessandro Solipaca



“...the well-being agenda, ..., is grounded in purported evidence that there is no guarantee that increasing wealth, providing education, or eliminating discrimination (i.e., increasing OWB) will make people happier; therefore the agenda advises governments to be more concerned about removing psychological or internal obstacles to SWB than making provision to provide, or removing the social obstacles to enjoying, the resources of OWB”

Bichenback J. Disability and the well being agenda. In: Bichenback J, Felder F, Schmitz B (eds). Good Human Life. Cambridge: University Press; 2013.

" ... if adaptation inevitably occurs ... it suggest that those who have experienced trauma need no outside intervention such as therapy or support groups because adaptation occurs on its own ... "

Lucas RE. Long-term disability is associated with lasting changes in subjective well-being: evidence from two nationally representative longitudinal studies. J Pers Soc Psychol. 2007; 92:717-730

Is disability a “scientific concept”?

It is hard to find two studies sharing the same definition of the population with disability

We will discuss whether the concept of "disability", as variously formulated, can be considered a good foundation for scientific research

Is disability an “event”?

In longitudinal studies disability is defined as an "event" as it could be a divorce or a marriage, the birth of a son, a lottery win, or the death of the spouse...

But what is the nature of the event that “generates” disability?

... self-identification as disabled?

(Oswald AJ, Powdthavee N. Does happiness adapt? A longitudinal study of disability with implications for economists and judges. IZA Discussion Papers, No. 2208. 2008)

...a “public certification”?

(Lucas RE. Long-term disability is associated with lasting changes in subjective well-being: evidence from two nationally representative longitudinal studies. J Pers Soc Psychol. 2007;92:717-730)

...the inability to work because of disability?

(Anusic A, Yap SCY, Lucas RE. Testing Set-Point Theory in a Swiss National Sample: Reaction and Adaptation to Major Life Events. Soc Indic Res. 2014;119:1265-1288)

Labor policies and returning to work

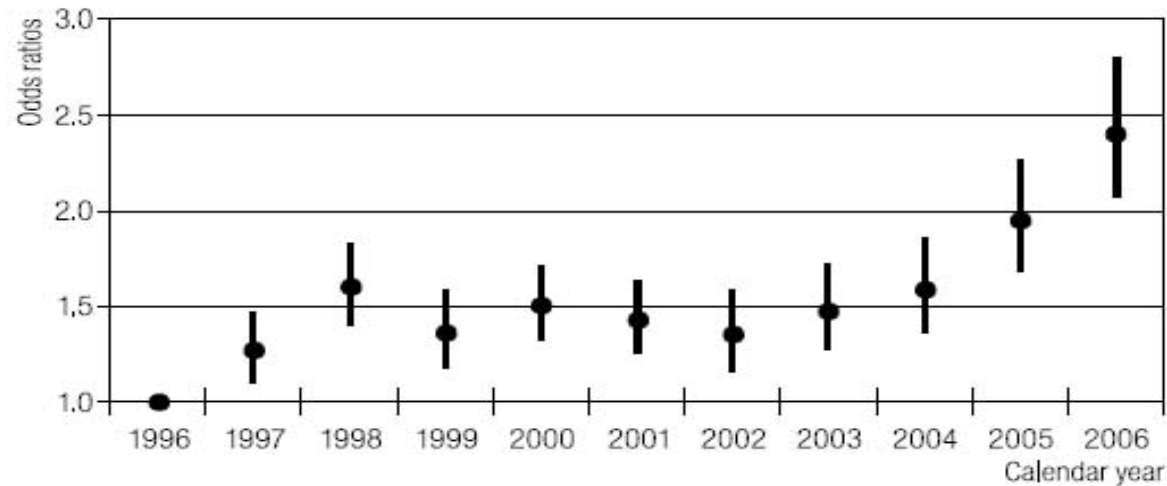


Fig. 1. Odds ratios with 95% confidence interval for return to gainful occupation two years after stroke, by onset calendar year, among the previously employed stroke patients in Denmark. Calendar year 1996 is the reference year

Hannerz H, Mortensen OS, Poulsen OM, Humle F, Pedersen BH, An LL. Time trend analysis of return to work after stroke in Denmark from 1996 to 2006. Int J Occup Med Environ Health. 2012;25:200-204.

The limits of this approach:

- a) although its actual nature is doubtful disability is emphasized as an event ;
- b) the generalization of final results may be questionable as it is difficult to argue that the sample selected is "representative" of the disabled population;
- c) the adjustment to the disabling condition could be underestimated if a population with disability experiencing social adverse events was selected.

Compared to the limited number of longitudinal population studies on SWB, those based on what we can call a "clinical" perspective are several hundreds

The **“trauma” or “disease” is the crucial event** that identifies the target population.

Disability is conceived **as an outcome** and not an event

Significant differences between groups of people and different models of adaptation has been described

In his work Stensmen suggested that there are important differences between groups of people with SCI. He described the course of individual cases and highlighted at least four models of adaptation:

- A - Good coping / Stable;
- B - Good coping after initially low QOL;
- C - "Unstable coping";
- D - Unsatisfactory coping.

Stensman R. Adjustment to traumatic spinal cord injury. A longitudinal study of self-reported quality of life. Paraplegia. 1994;32:416-422

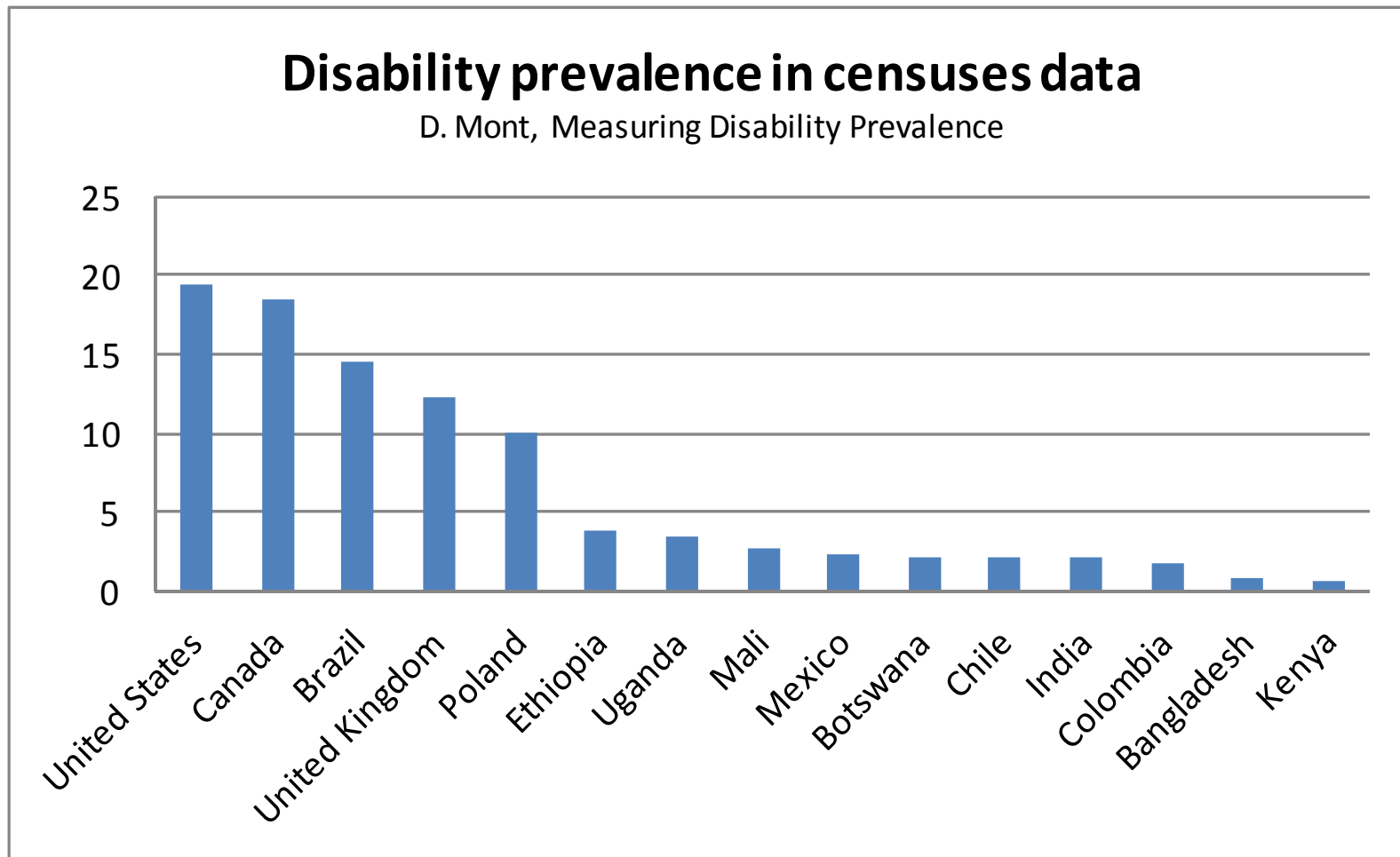
Van Leeuwen et al. study : “... showed five distinct trajectories from the start of active rehabilitation to 5 years after discharge: low life satisfaction scores at each time point (27.2%), high life satisfaction at each time point (16.5%), a recovery trajectory (23.3%), a deterioration trajectory (2.4%), and an intermediate life satisfaction trajectory (30.6%) that included less distinctive or variable patterns of life satisfaction”

(van Leewen et al., Trajectories in the course of life satisfaction after spinal cord injury: identification and predictors, Arch Phys Med Rehabil, 2011; 92:207-213)

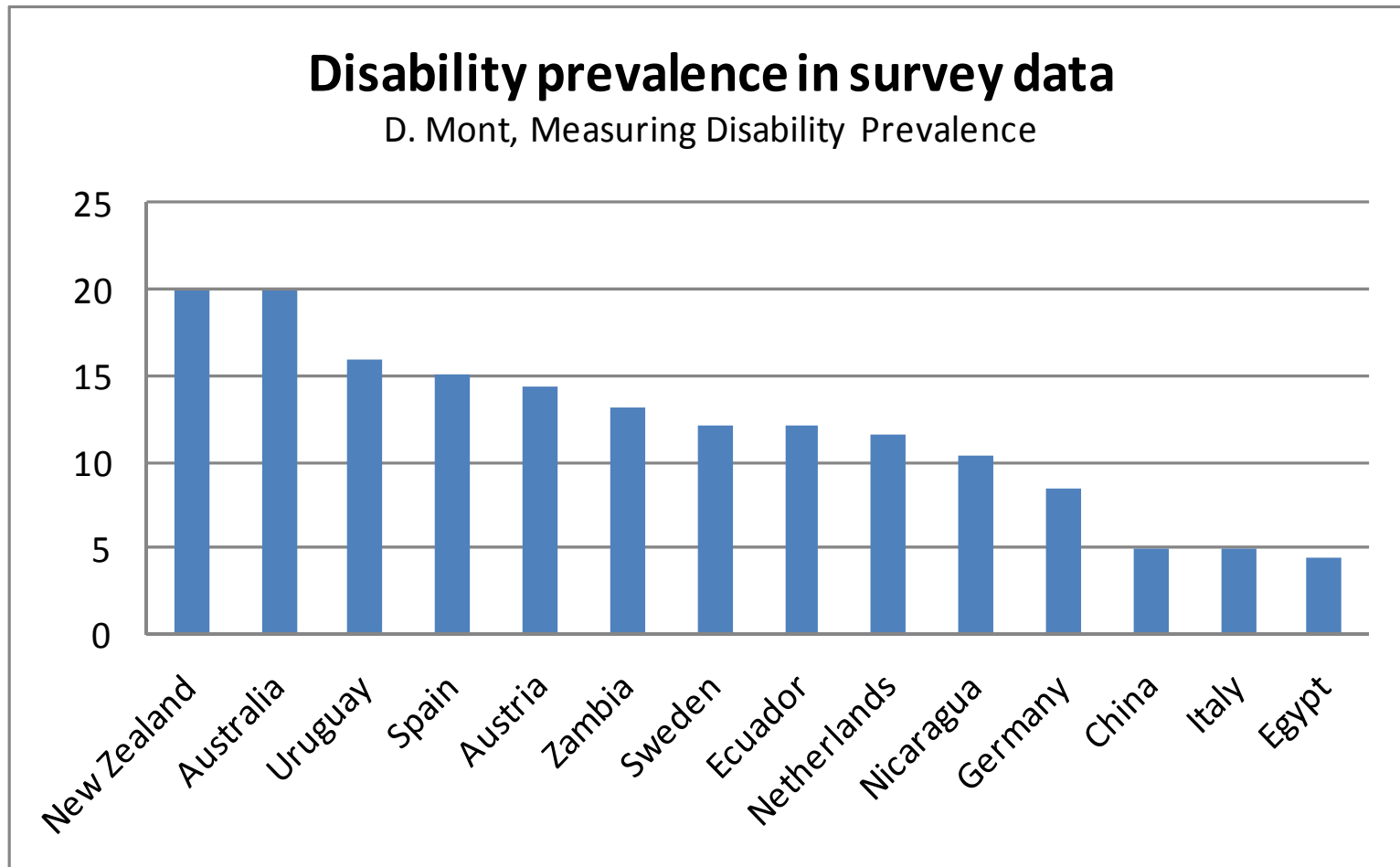
The adjustment requires significant strength on the part of the person with disability and much effort from people close to him or her and from society.

Post VCM, Leeuwen CMC. Psychosocial issues in spinal cord injury: a review. Spinal Cord. 2012;50:382–389.

The majority of **cross-sectional population studies** suffers from the same problems of disability definition and classification of longitudinal ones, albeit with different accents.



Mont D. Measuring disability prevalence. SP Discussion Paper, no. 0706, World Bank 2007.



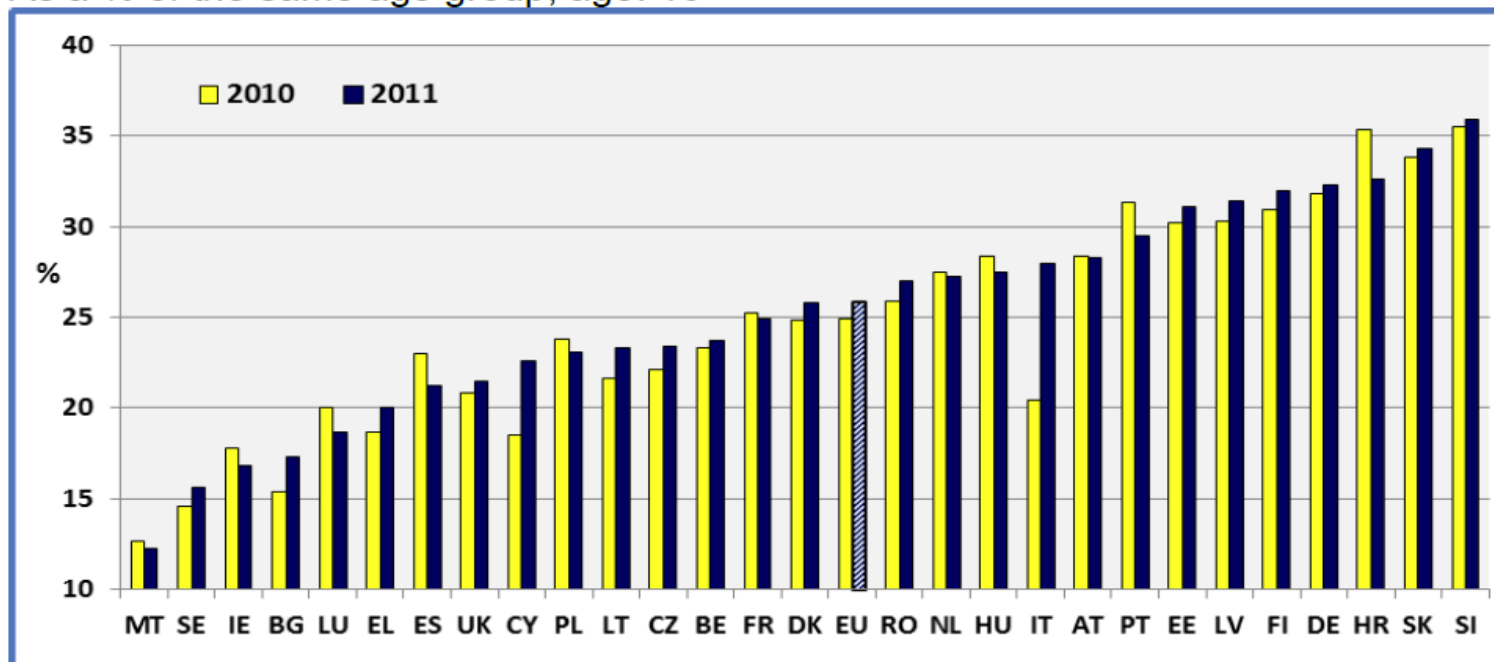
Mont D. Measuring disability prevalence. SP Discussion Paper, no. 0706, World Bank 2007.

Different approaches taken in generating these prevalence estimates

- Self-identification as disabled.
- Diagnosable conditions.
- Activities of Daily Living (ADL).
- Instrumental Activities of Daily Living (IADL).
- Participation.

The use of the same statistical indicator (GALI) may produce not completely convincing results for international comparison

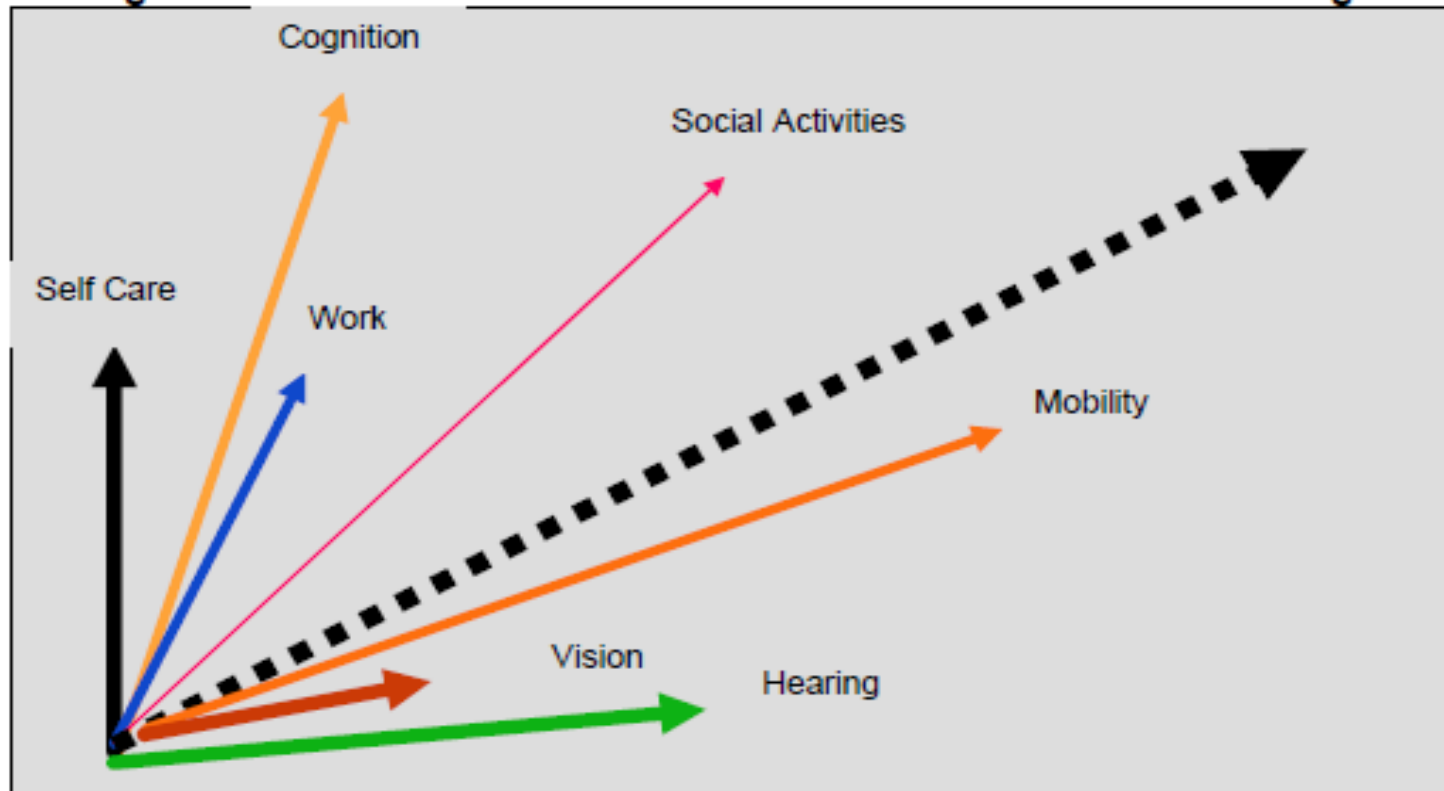
Figure 1: Percent of people with disabilities by Member State; 2010 and 2011
As a % of the same age group; age: 16+



Data source: EU-SILC 2010, EU-SILC 2011 & Eurostat.

ICF – Considering "disability" as a continuum in a multi-dimensional space

Diagram 2.6: ICF – a combination of different vectors of functioning



WHO-UNESCAP. Training manual on disability statistics. World Health Organization /United Nations Economic and Social Commission for Asia and the Pacific; 2008

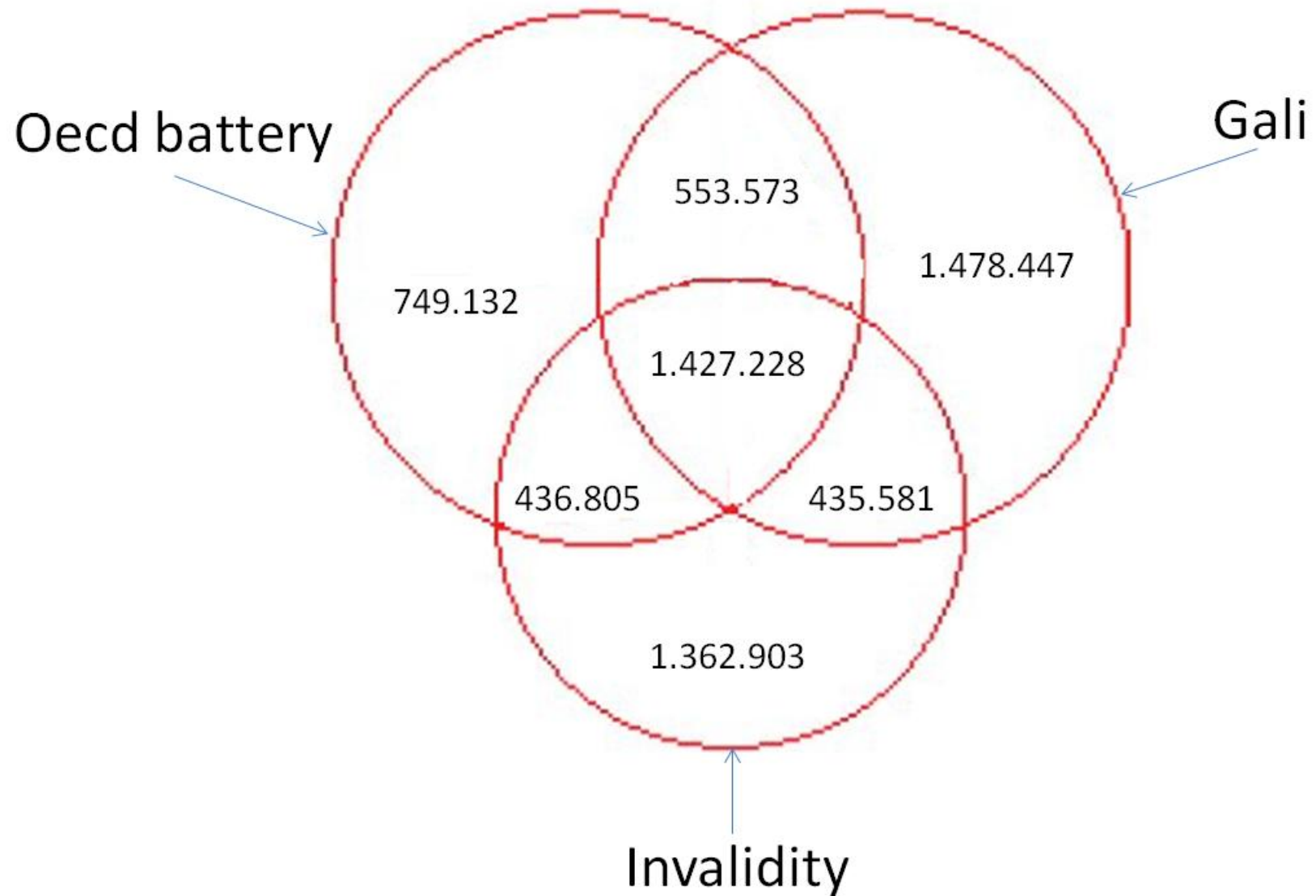
Fellinghauer and colleagues (2012) have provided an application of ICF conceptual framework based on data from the Swiss Household Survey that can be replicated, with some adjustments, in many other national surveys and does not require screening questions and an a priori definition of “people with disabilities”.

Fellinghauer B, Reinhardt JD, Stucki G, Bickenbach J. Explaining the disability paradox: a cross-sectional analysis of the Swiss general population. BMC Publ Health 2012;12:65

Intersection between OECD and GALI-HIS populations

HIS - ISTAT 2013 (estimates projected on Italian population)





HIS - ISTAT 2013

GALI

OECD

Variable	Severe limitations	Mild/Moderate limitations	No limitations	Disabled	Not disabled
% Prevalence	6.5	16.5	77.0	5.3	94.7
Mean age	65.49	60.81	38.90	74.04	42.74
% female	59.0	56.9	40.9	66.0	50.9
% Employed	9.8	25.0	40.2	3.6	37.4
% High educ.	3.6	7.3	11.1	2.8	10.4
Mean Activity limitations	4.44	1.44	0.12	6.11	0.32
Mean Chronic diseases	3.73	2.70	0.79	3.92	1.16
% Happy most of time	19.2	33.8	62.1	16.6	55.9

HIS - ISTAT 2013

Probability (Marginal Effects) of being in Low or Very low happiness categories (Italian Health Interview Survey - 2013)

(Predictors: Age, Gender, Education, Marital status, Education, Income satisfaction, Place of residence, Professional Status, Perceived Health, Pain/
Binomial Probit)

See: Blackaby D, Drinkwater S, Jones M, Murphy P, Phari M, Robinson C. An Analysis of Subjective Wellbeing in Wales: Evidence from the Annual Population Survey Final Report. Wales Institute for Social and Economic Research, Data and Methods (WISERD). Swansea University; 2012.

	Model 1			Model 2			Model 3	
	M.E.	P.V.		M.E.	P.V.		M.E.	P.V.
Count A&P limitations (range 0-11)	0,0035	0,00	OECD	0,0427	0,00	GALI	0,0720	0,00
Count Chronic Diseases (range 0-21)	0,0144	0,00						
Mc Fadden R squared	0,175			0,168			0,170	
Number of Observations	104085							

Suggestions for future research

We strongly support the scientific value of ICF conceptual framework considering disability as an “objective” condition, measurable in a multidimensional space.

It looks questionable to consider disability as an “exogenous event” with clearly identified temporal contours, unless the dynamic that generates impairment does not create a clear break in life experience.

Too often disability is caught by a single indicator with the result to obscure the variability of human experiences and conditions of persons with disability

A complete understanding of the processes of adaptation requires careful consideration and specification of the different disability trajectories

Clinical studies suggest that SWB is largely influenced by the specific nature of diseases and impairments affecting people

Disability is associated with a greater risk than the general population to experience negative events.

The identification of the population with disabilities on the basis of a negative social "outcome" only, causes a selection bias and should be avoided

The “systemic” nature of the adjustment processes, which in literature is often left in the background, would call for a more explicit and convinced consideration, modeling, and measurement.

The SWB of people with disabilities is linked hand in glove with that of their family and relational system