Wittgenstein Centre
FOR DEMOGRAPHY AND GLOBAL HUMAN CAPITAL

Health Expectancy: Increasingly Used, But Not Really Understood

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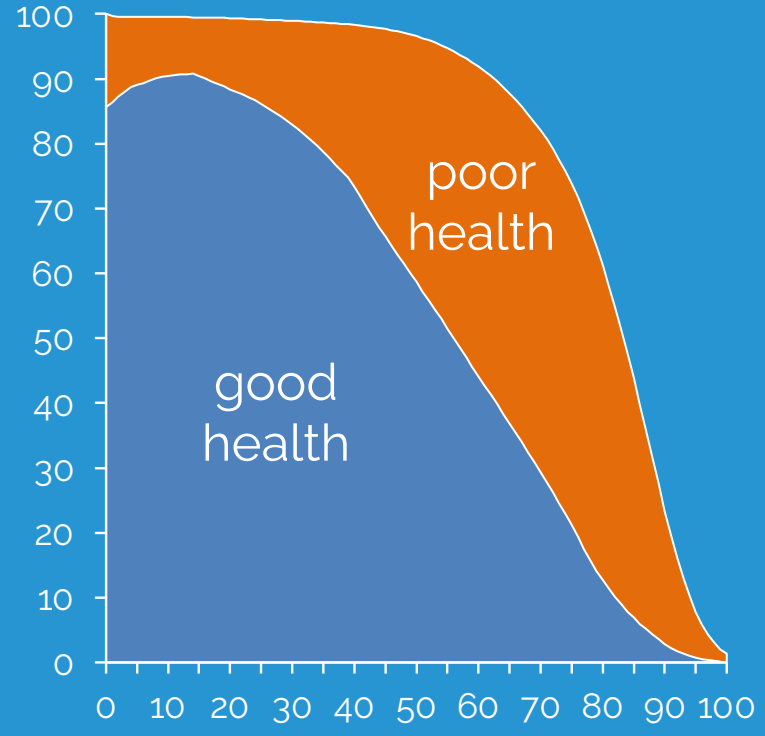
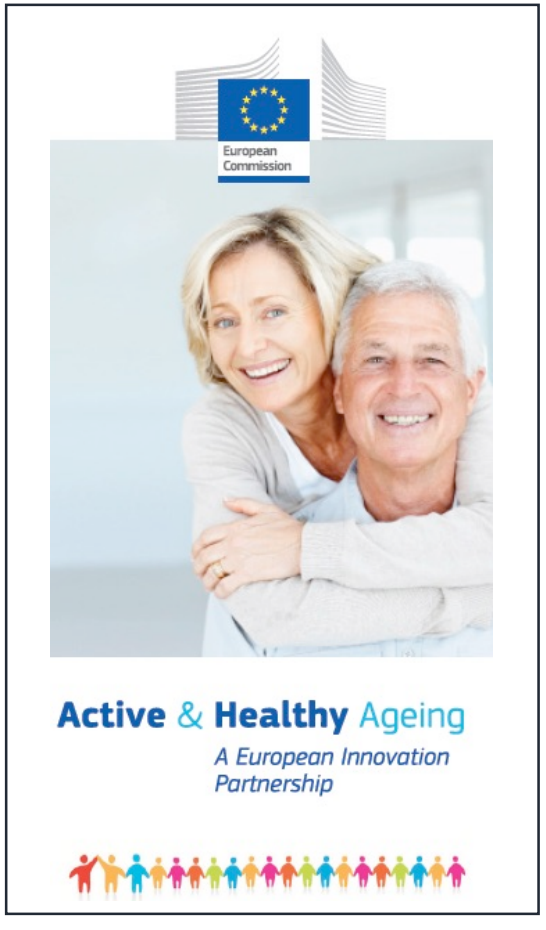


Workshop of the EAPS Health, Morbidity, and Mortality Working Group
Budapest, Hungary, 20-22 September 2023

Health Expectancy (HE) indicators become increasingly important in health research and in health policy

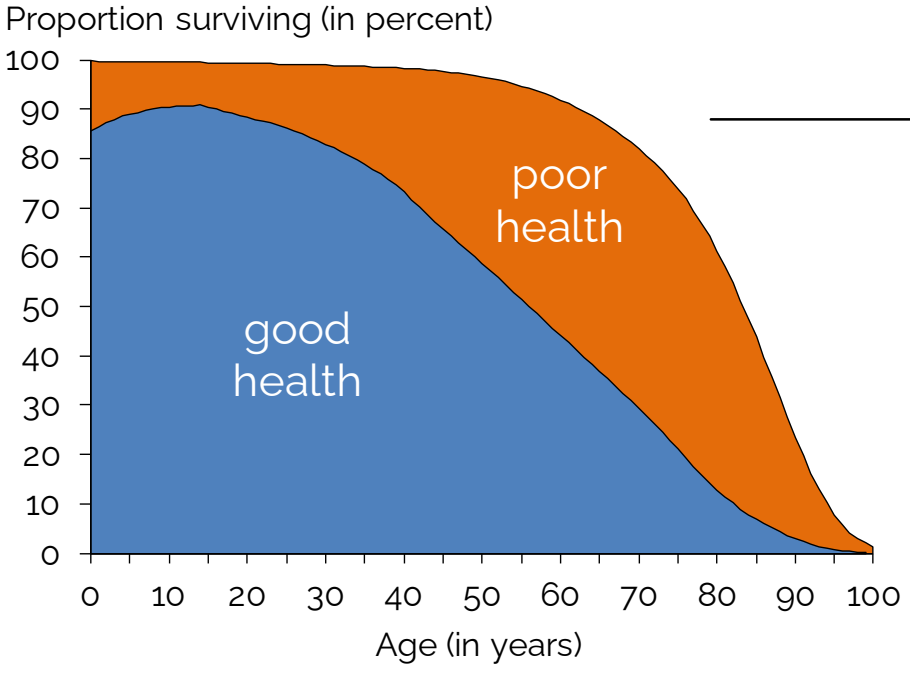


"Its main objective is to increase the average healthy lifespan in the EU by two years by 2020."

The progress toward this target was assessed with the structural indicator "Healthy Life Years" (HLY)

Flyer: http://ec.europa.eu/research/innovation-union/pdf/ active-healthy-ageing/leaflet.pdf

LETHE has been aiming to investigate and assess the HE indicators' sensitivity to specific measurement and estimation features



Measurement
(Concept)

- Survey data
- Health indicator
- Reporting behaviour
- Good versus poor health
- Definition of good/poor health

Estimation
(Technique)

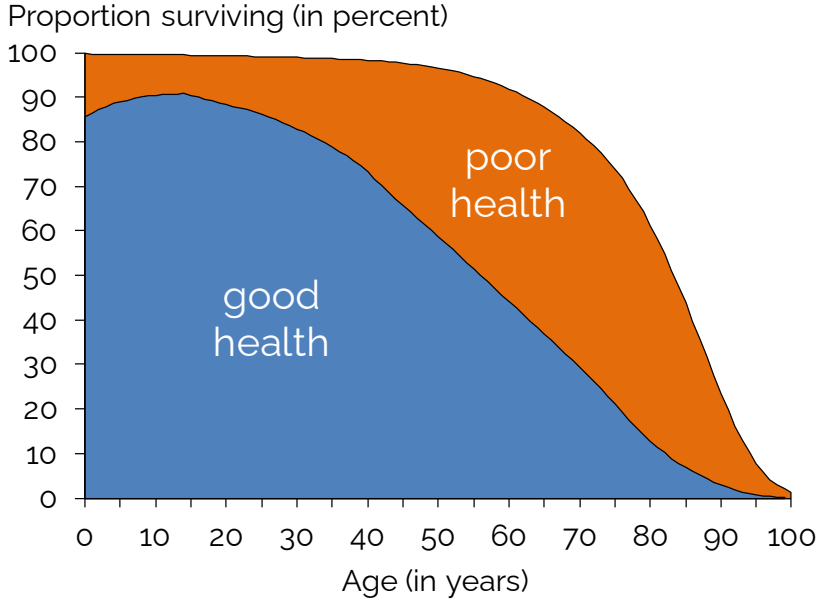
- Missing cases
- Life table features
- Age-specific prevalence
- Age range and partitioning
- Combination health/mortality

This presentation focuses on some measurement issues in estimating health expectancy and aims to raise awareness of its sensitivity

(1)
Role of health indicator

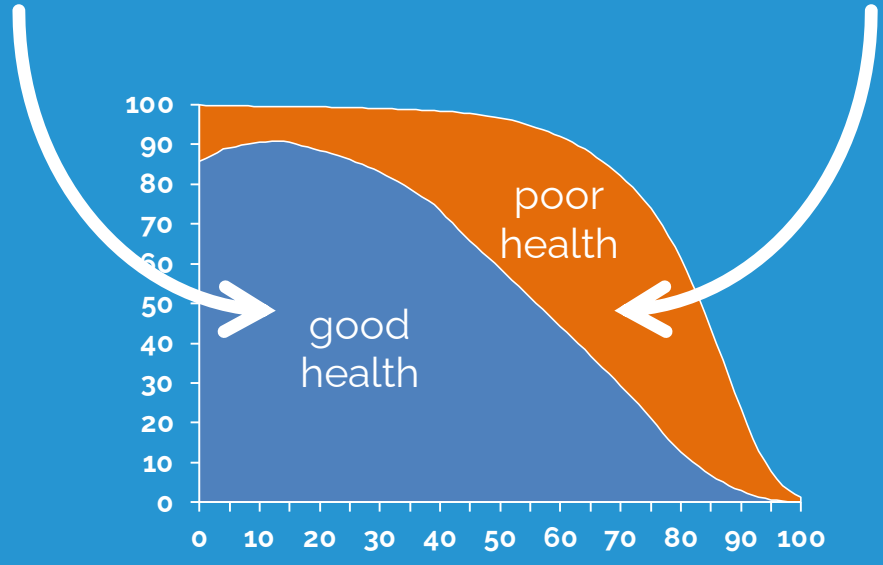
(2)
Role of survey data

(3)
Role of reporting behaviour



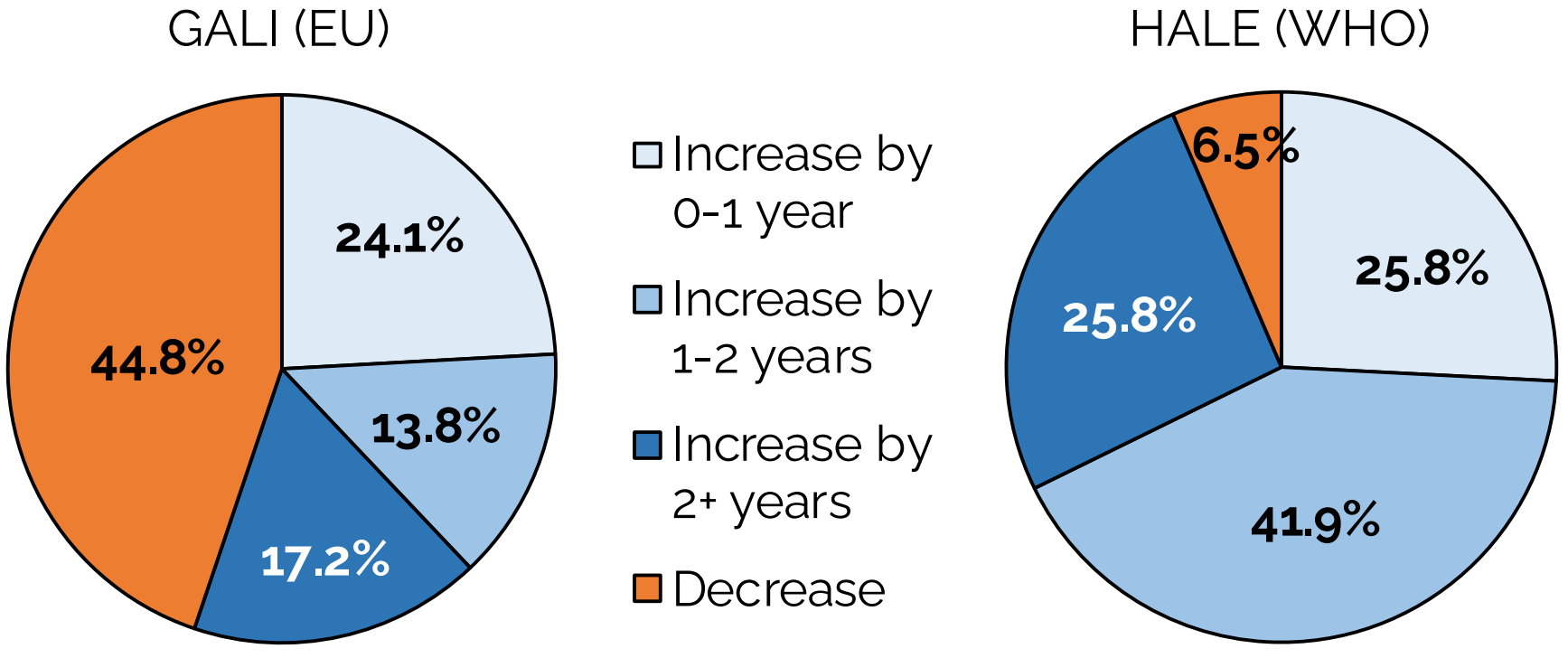
(4)
Options and
Conclusions

1.
Health Indicator



If the European Commission had chosen WHO's HALE instead of GALI as its structural indicator, the picture would be different

Proportion of European countries by change in HLY between 2010-13

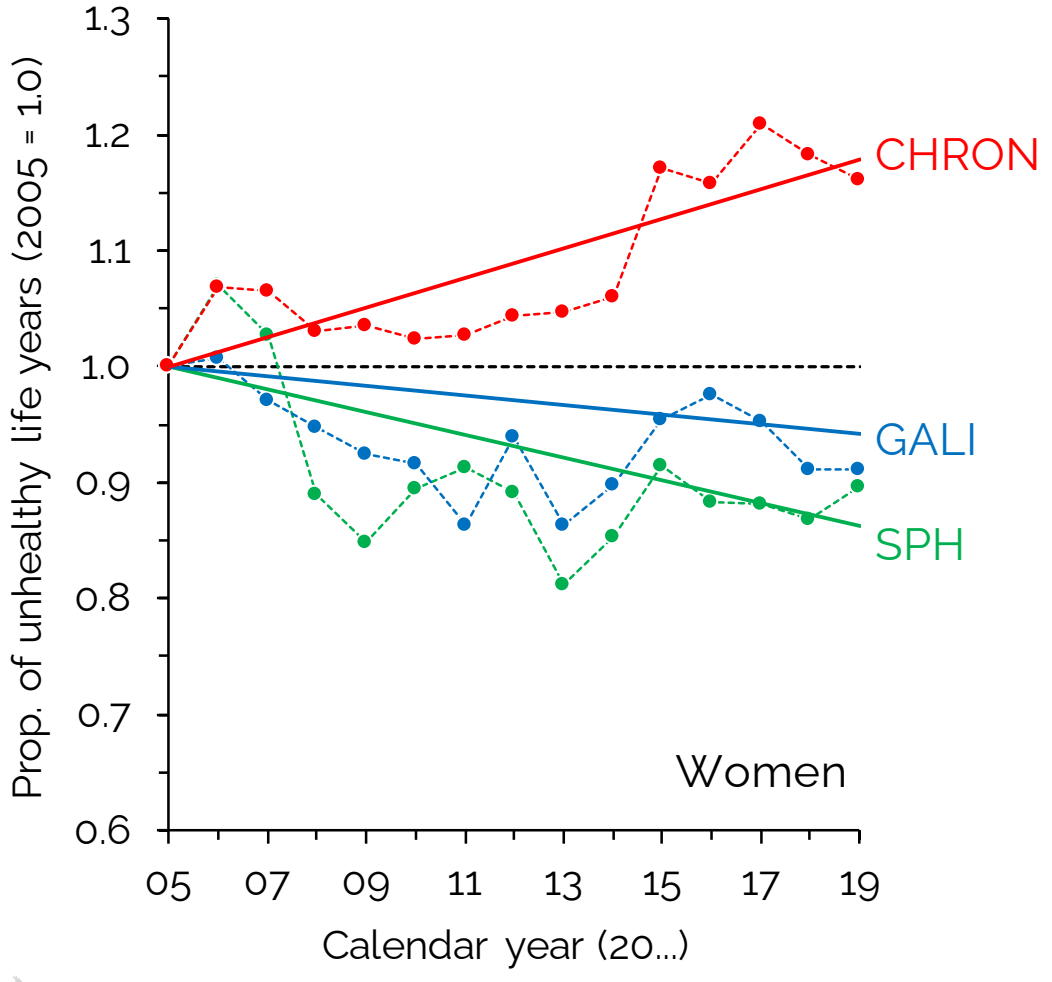


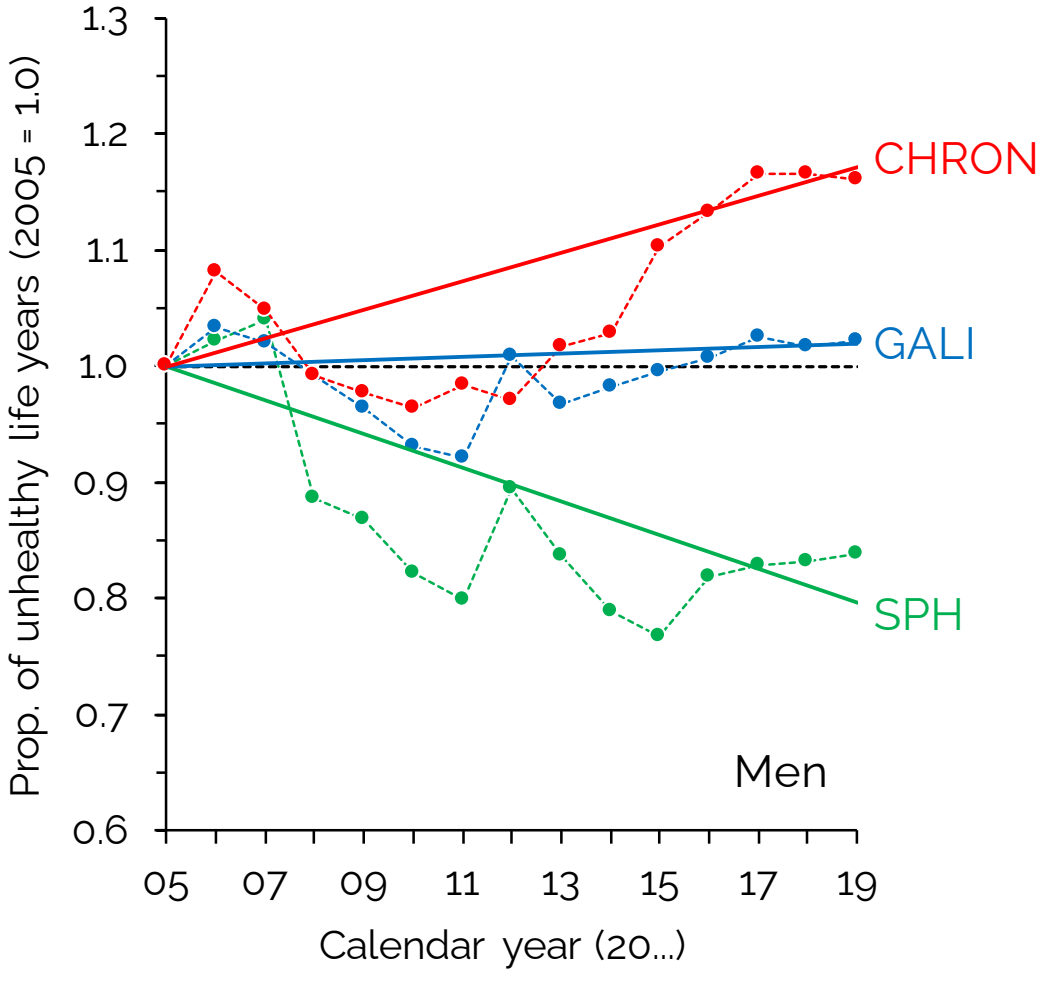
Source: own calculations with data from EUROSTAT and IHME, data for men

The “Minimum European Health Module” (MEHM) includes three health indicators that cover different health traits

Functional limitations (GALI)	Self-perceived health	Chronic illness	
“For at least the past six months, to what extent have you been limited because of a health problem in activities people usually do?”	“How is your health in general? Is it…”	“Do you have any longstanding illness or health problem?”	
(1) Not limited	(1) Very good	(1) No	GOOD HEALTH
	(2) Good		
(2) Limited, but not strong	(3) Fair		
	(4) Poor		POOR HEALTH
(3) Strongly limited	(5) Very poor	(2) Yes	

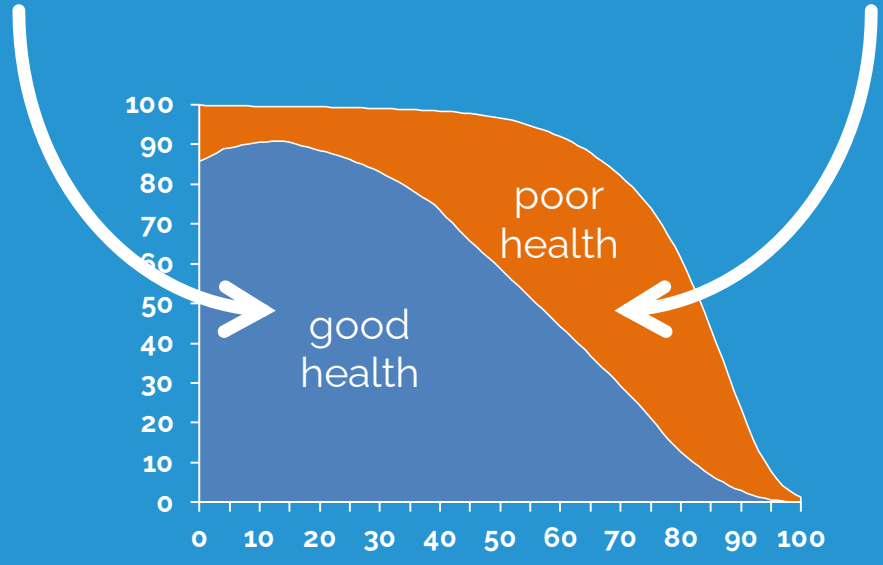
Even in MEHM, the choice of health indicator has a critical impact on the most frequently asked research questions



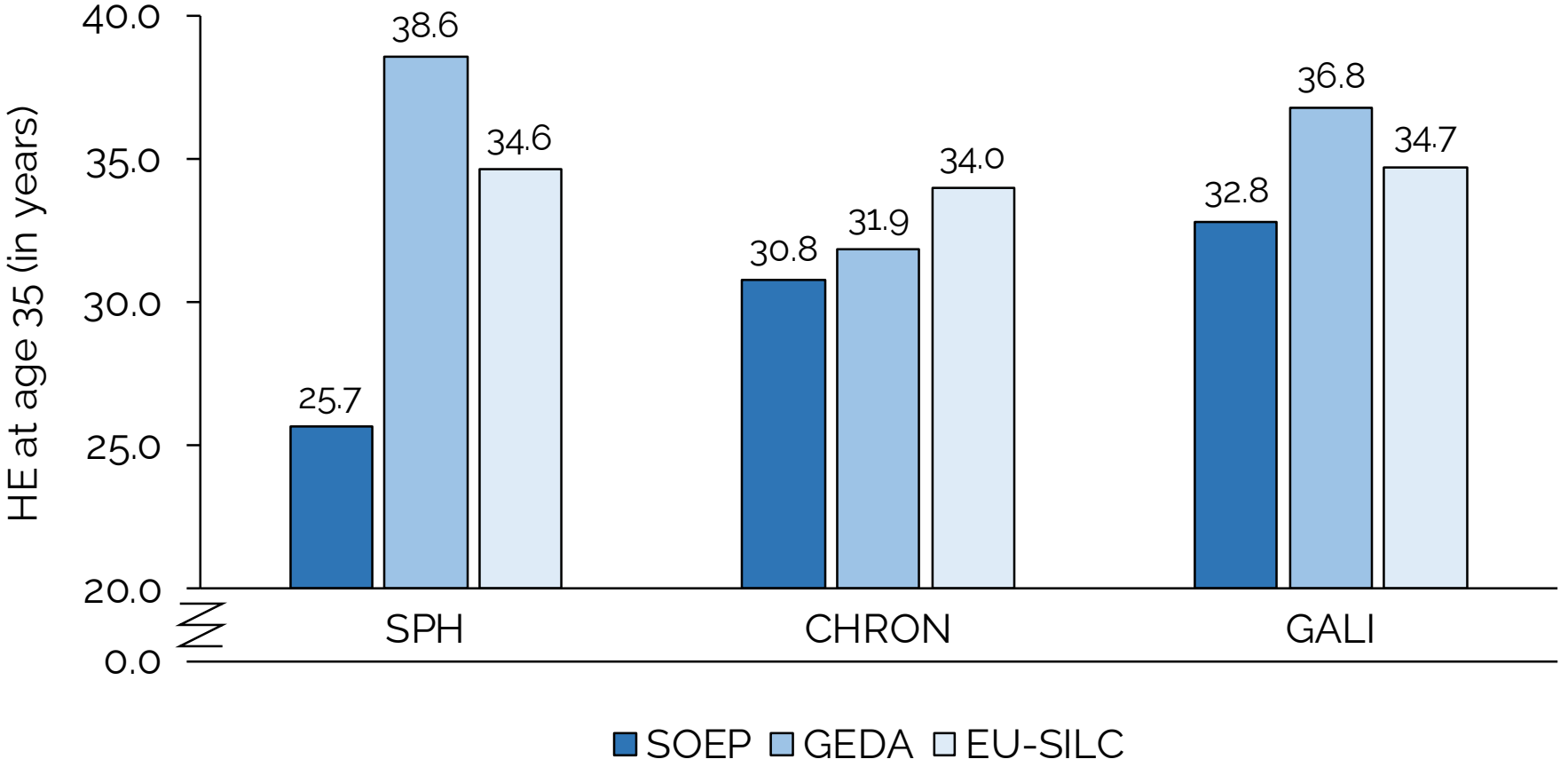


Source: own calculations with data from German EU-SILC for ages 16+; GALI values adjusted for breaks in time series

2.
Survey Data



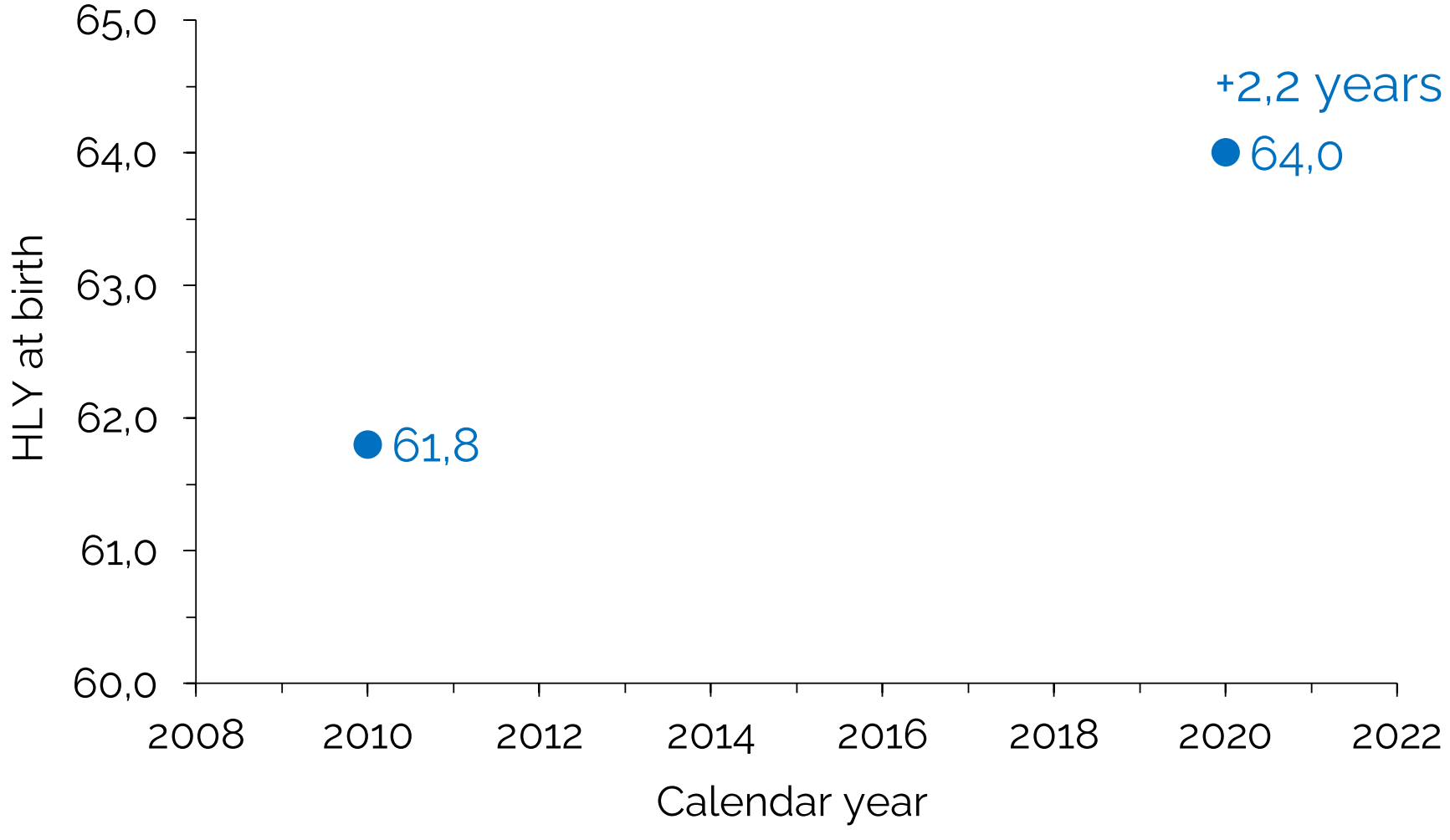
Health expectancy can also be strongly influenced by the choice of survey used to determine the age-specific health prevalence



Health expectancy at age 35, Germany, men, 2012

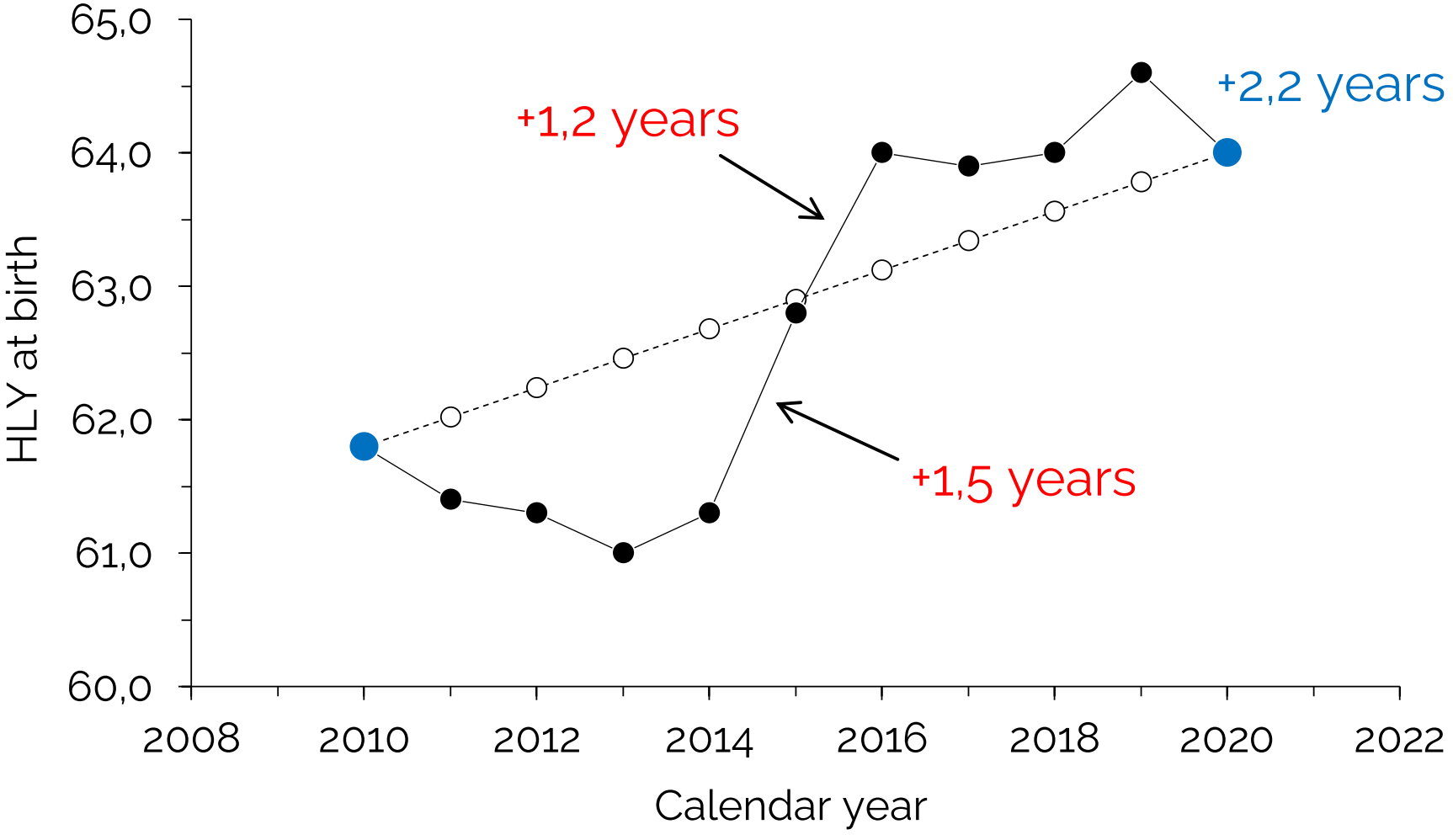
Source: own calculations with data from SOEP, GEDA und EU-SILC

Europe's population achieved the headline target of EIP-AHA to increase the average healthy lifespan by two years by 2020



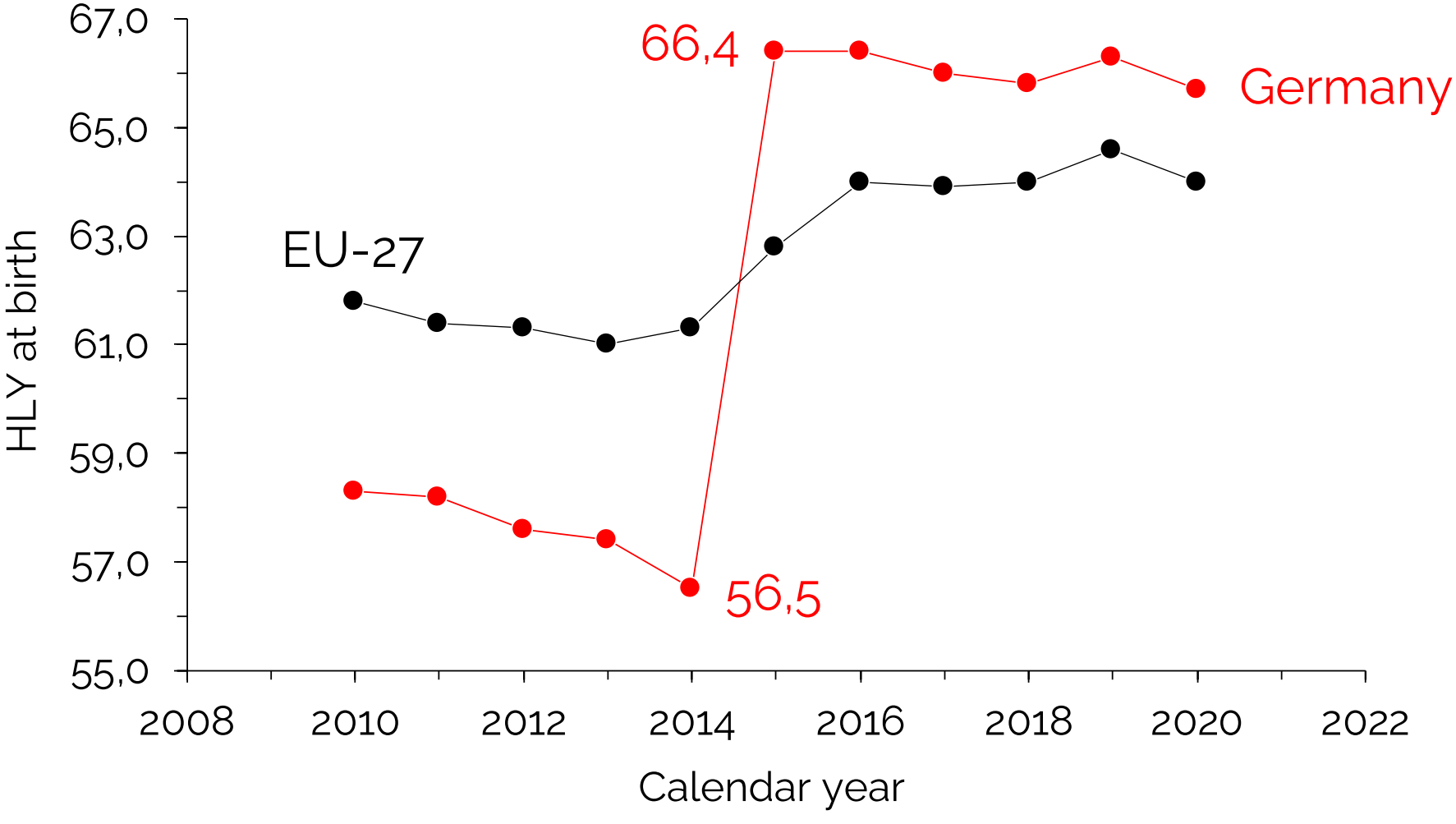
Data: Eurostat

The decisive trend change occurred in 2015 and 2016, when healthy life years (HLY) increased by 1,5 and 1,2 years, respectively



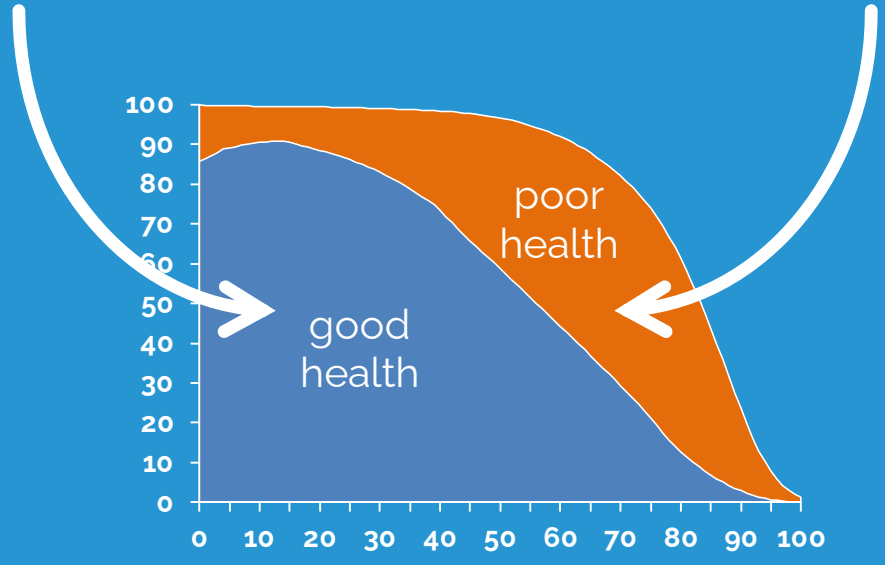
Data: Eurostat

The modification of the GALI question resulted in a 10-year increase in healthy life years in Germany from 2014 to 2015



Data: Eurostat

3.
Reporting Behaviour



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https://doi.org/10.1093/eurpub/ckad142

The impact of interpersonal reporting heterogeneity on cross-country differences in Healthy Life Years in Europe

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The aim of this study was to adjust HLY for DIF with the help of anchoring vignettes from SHARE 2004

Women, EU-SILC 2005

Rank	Country	HLY(50)
1	Greece	21.4
2	Italy	21.3
3	Sweden	20.4
4	France	20.2
5	Netherlands	20.1
6	Belgium	19.0
7	Spain	18.8
8	Germany	13.9

Men, EU-SILC 2005

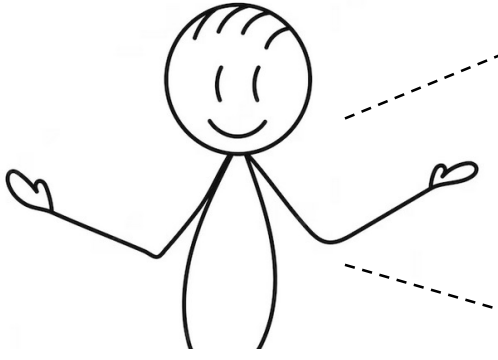
Rank	Country	HLY(50)
1	Italy	20.9
2	Netherlands	20.1
3	Greece	20.1
4	Sweden	20.0
5	Spain	19.3
6	Belgium	18.9
7	France	18.3
8	Germany	13.6

Source: own calculations with data from EU-SILC 2005 and HMD 2005

Survey respondents

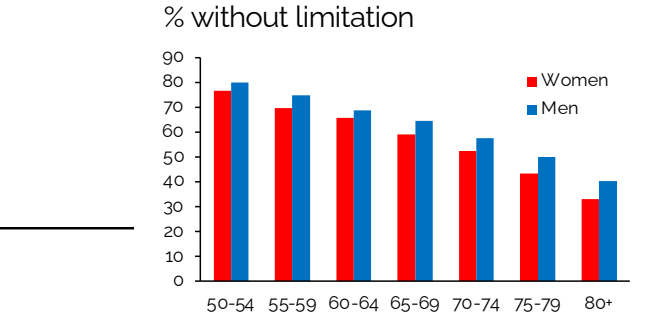
Activity limitations (GALI)

Seven health traits

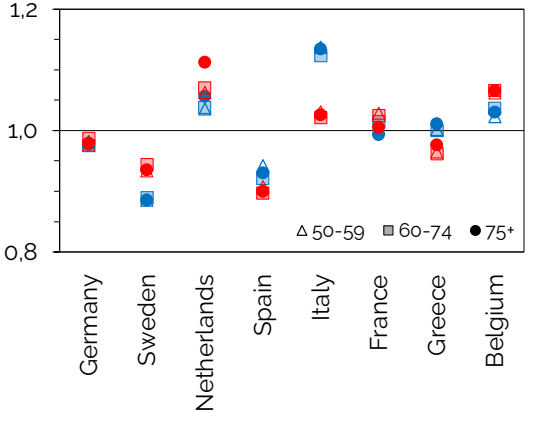


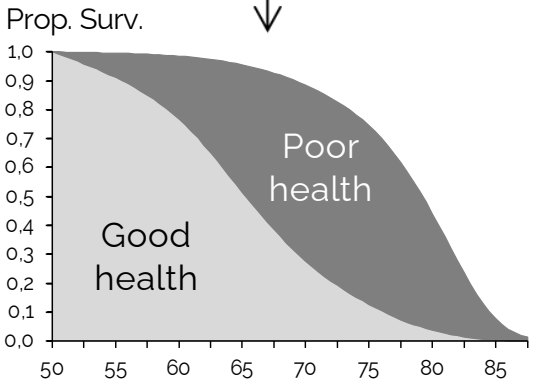
Vignette characters

Vignettes of health traits related to GALI



Unadjusted

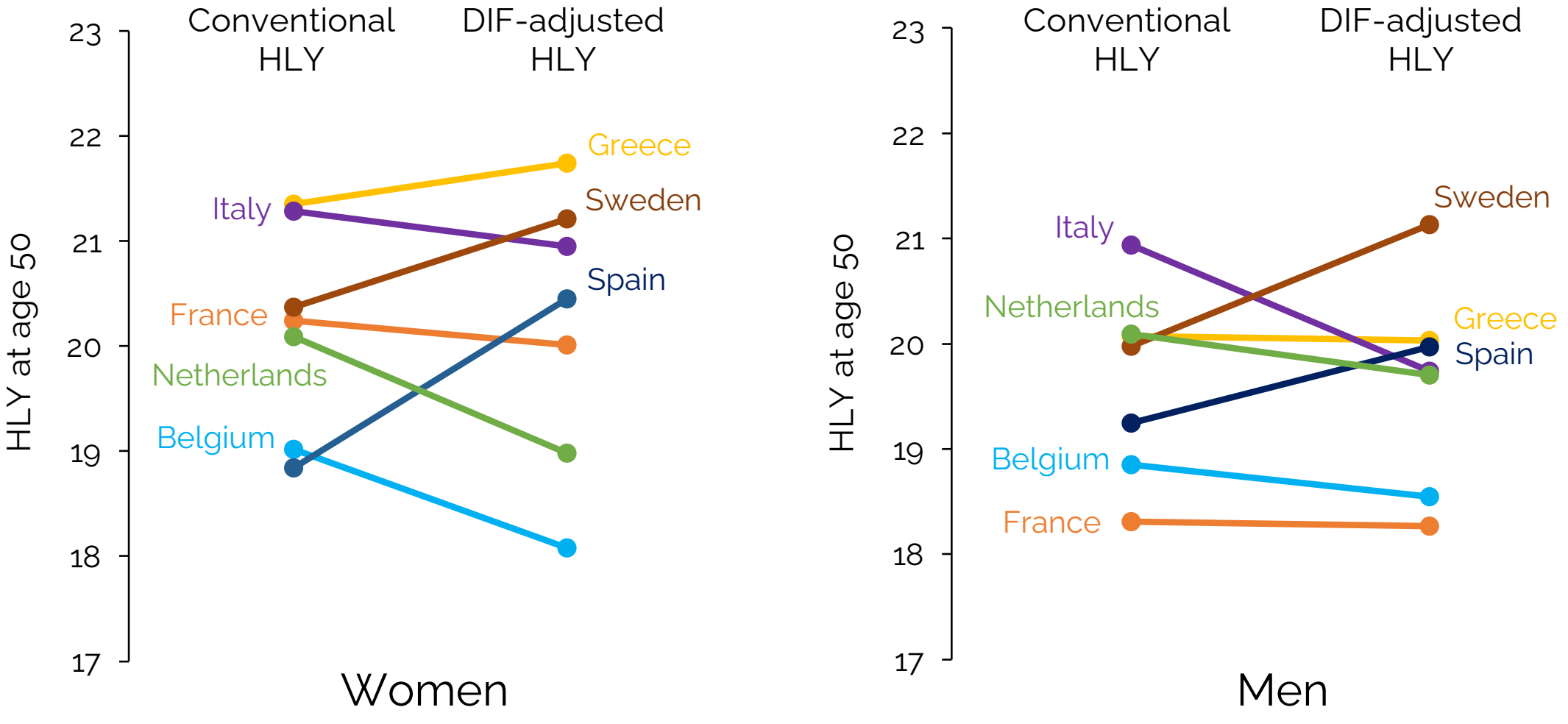




Healthy Life Years (Sullivan)

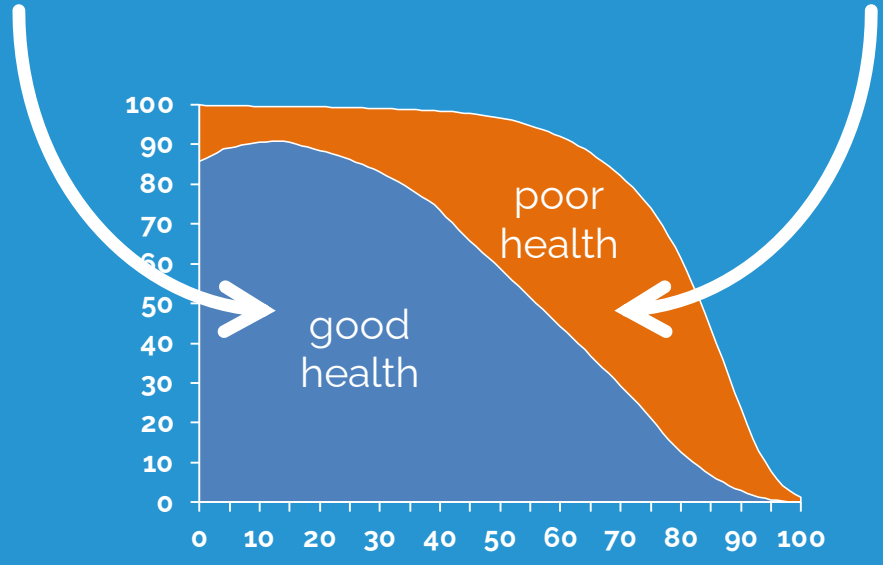
Adjusted

The results suggest that DIF may indeed have a non-ignorable impact on the country ranking and differences in Healthy Life Years

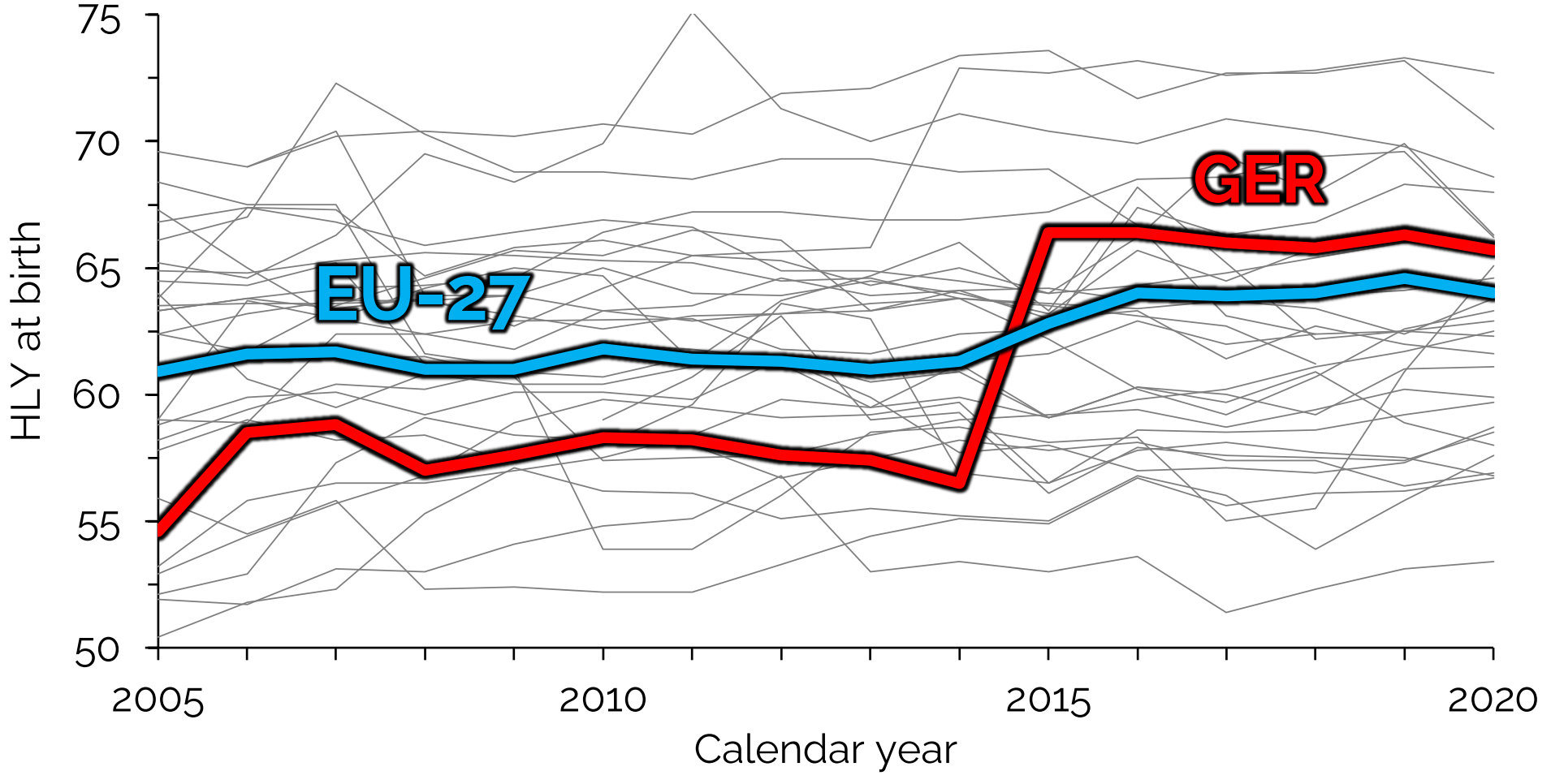


Source: own calculations with data from SHARE 2004, EU-SILC 2005 and HMD 2005

4.
Options and conclusions



With the current implementation, the HLY indicator cannot fulfil its task as a structural indicator



Source: Eurostat database

One option could be to combine the health indicator underlying HE/HLY with the respective impact on people's wellbeing

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https://doi.org/10.1007/s10680-022-09628-1

Well-Being Adjusted Health Expectancy: A New Summary Measure of Population Health

Magdalena Muszyńska-Spielauer[1] · Marc Luy[1]

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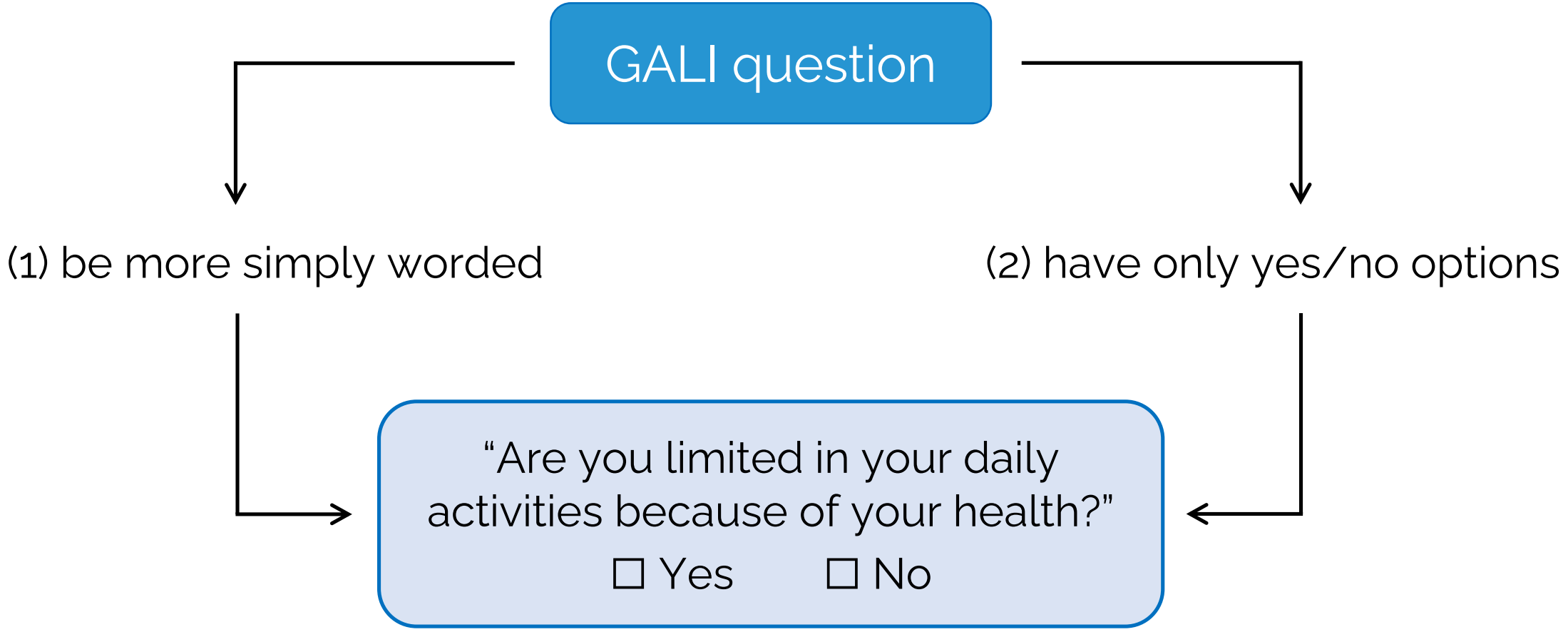
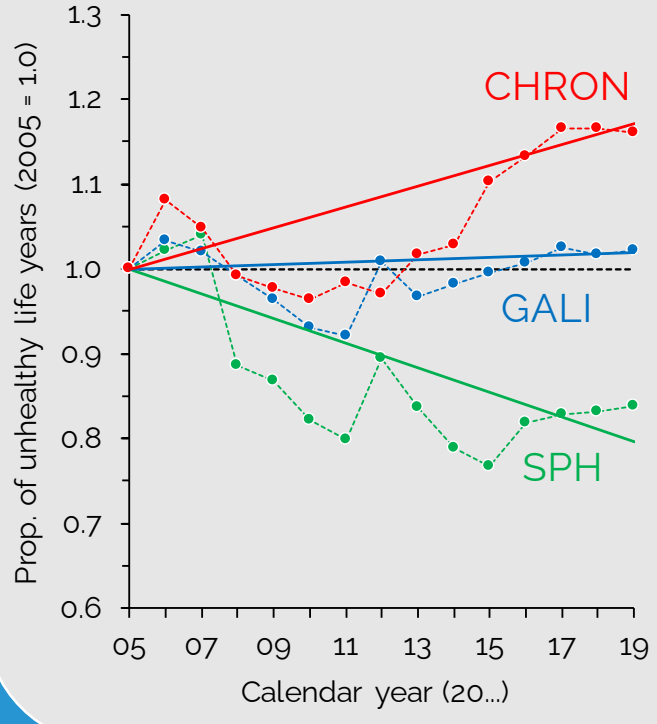
Another option could be to adapt the GALI indicator to its sensitivity to variations in meaning in different languages

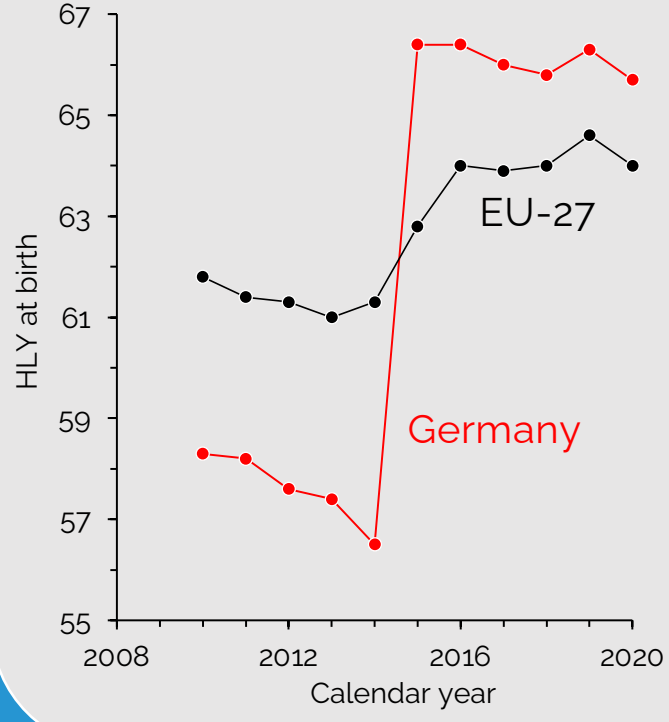


The impact of HE's measurement sensitivity can be huge and must not be ignored in practical application

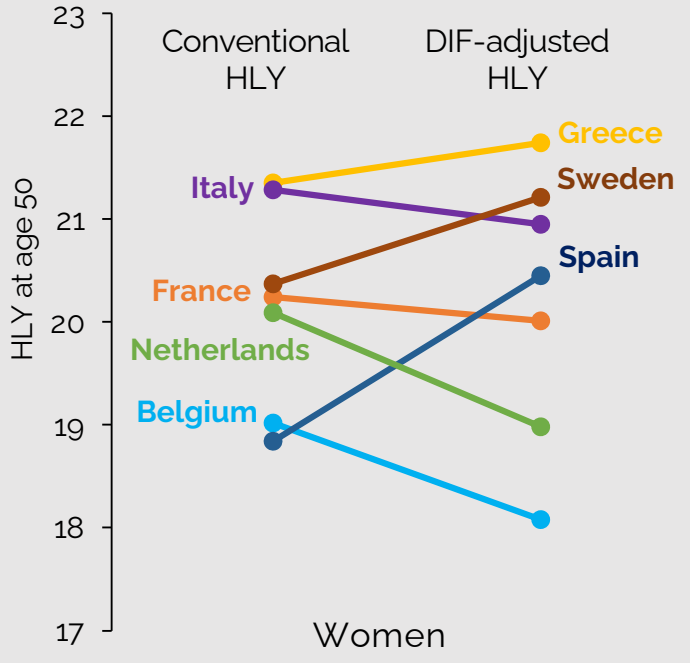
Health indicator



Survey data



Reporting behaviour



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