

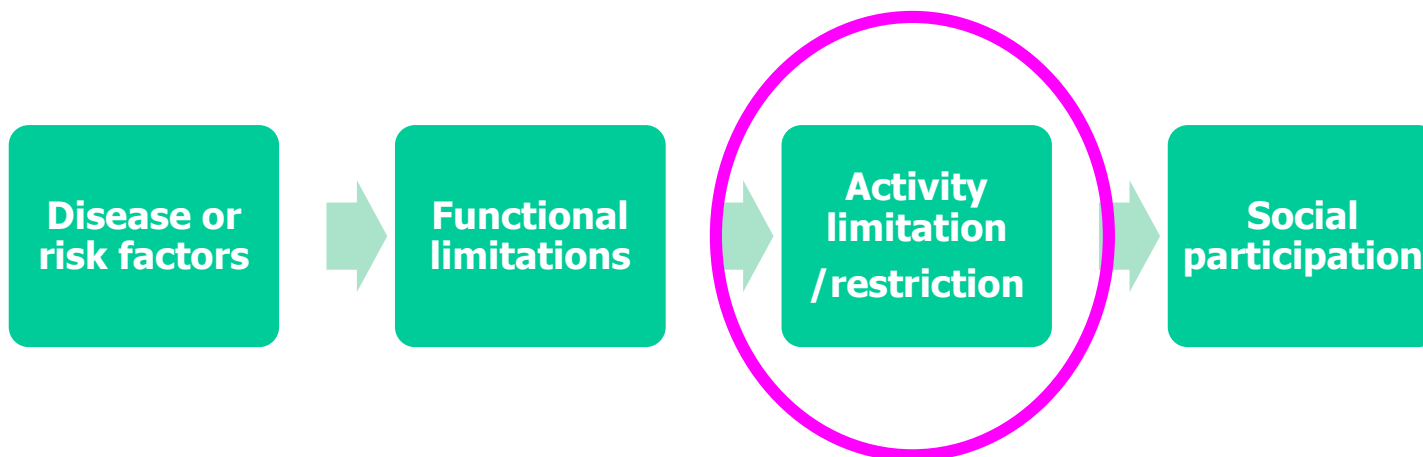
Impact of Question Wording on the Measurement of Activity Limitation: Evidence From a Randomized Test in France

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Activity limitation: definition

- Difficulty or inability to perform activities people usually do
- Correlation with functional limitations



Box I. Eurostat Presentation of the MEHM.

The MEHM is a set of three general questions characterizing three different concepts of health:

- **Self-perceived health** as the self-assessment of a person's own health in general: "How is your health in general? Is it . . ." with answer categories very good/good/fair/bad/very bad.
- **Chronic morbidity** as the presence of long-standing health problems: "Do you have any long-standing illness or health problem?" Yes/no.
- **Activity limitations** as the presence of long-standing activity limitation due to health problems measured via the GALI: "For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been . . ." with answer categories "severely limited/limited but not severely or/not limited at all?"
- The module was developed to be used in all social surveys and is at present implemented in the European Health Interview Survey (EHIS) and EU Statistics on Income and Living Conditions (EU-SILC). The GALI is present in more surveys, as in the Survey on Health, Aging and Retirement in Europe (SHARE).

Activity limitation measured with GALI

For at least the past six months,

to what extent have you been limited

because of a health problem

in activities people usually do?

- severely limited
- limited but not severely
- not limited at all

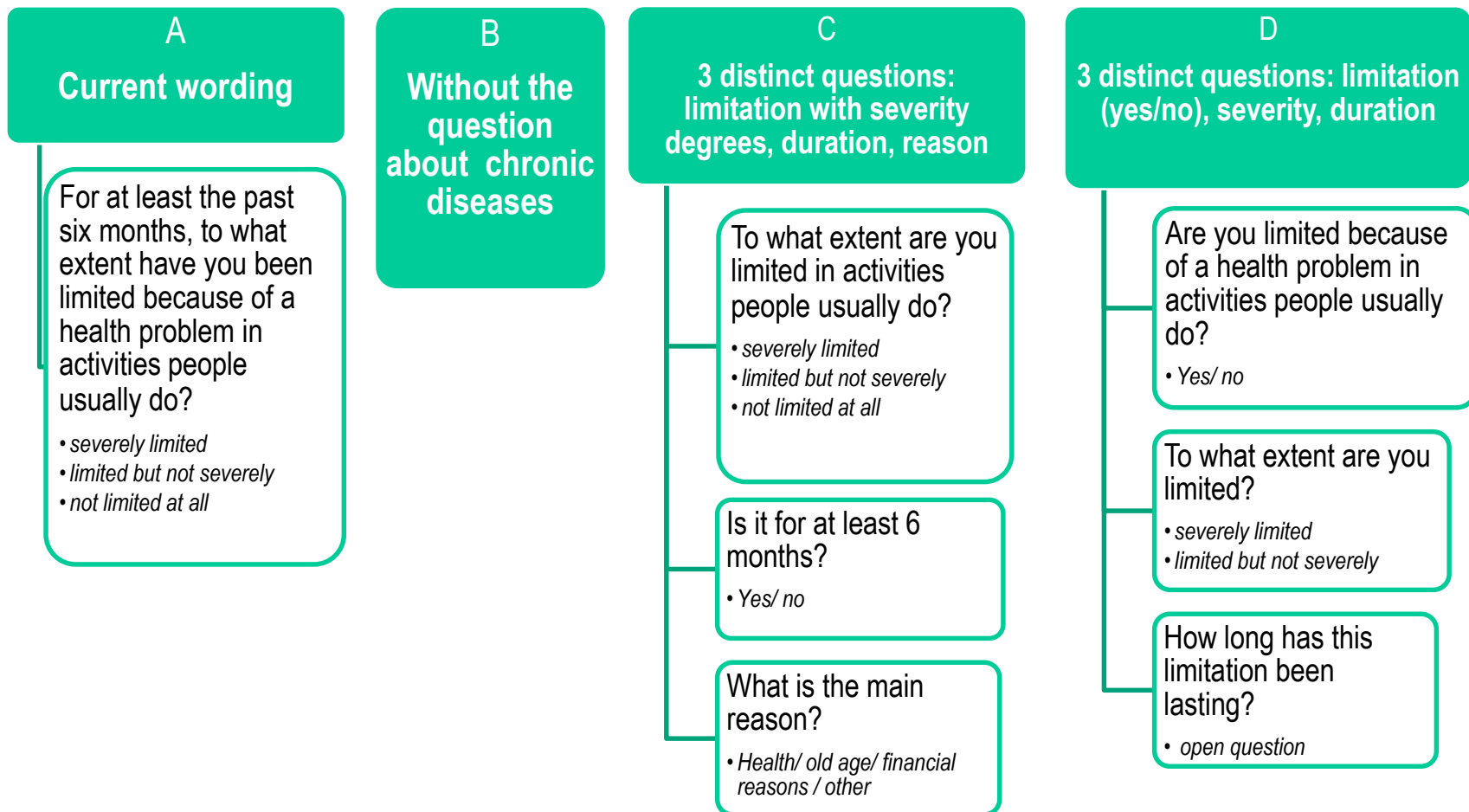
What if...

- 1) removing the question on chronic diseases in the MHEM
- 2) changing the GALI wording: splitting the different parts via routed questions?

A split sample methodology used on French data to measure the effect of a question wording change

- **Data from the Drees Barometer** (French Health Ministry)
 - 3,000 respondents
 - Created in 2013 to test framing effects
 - **Quota sampling allowing comparison over 4 similar sub samples**
Samples standardized on gender, age, occupation, geographical area
- **Does a change in wording modify the probability of reporting activity limitations?**
 - Comparing the prevalence obtained using 4 different wordings
 - Testing the changes using multinomial logistic regression: measuring the variation in reporting GALI according to the wording, and the effect of functional limitations

Comparaison of 4 wordings





Box 2. Wording of the Questions Resulting From the Work of the United Nations Washington Group on Disability Statistics.

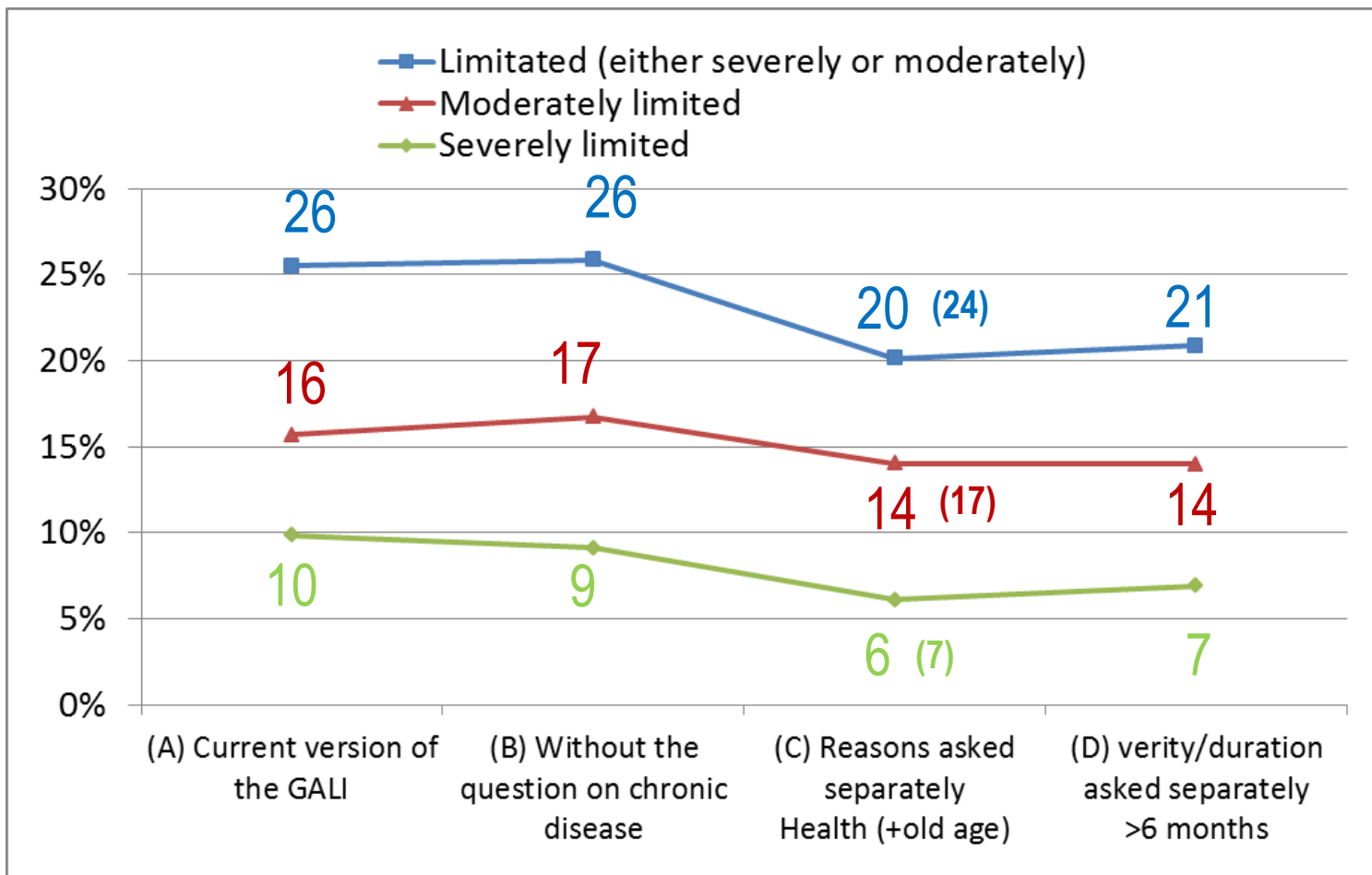
Do you have difficulty . . .

1. seeing, even if wearing glasses?
2. hearing, even if using a hearing aid?
3. walking or climbing steps?
4. remembering or concentrating?
 1. No, no difficulty/2. Yes, some difficulty/3. Yes, a lot of difficulty/4. Cannot do at all/5. [don't know]



Functional limitations	Sample				Total
	A	B	C	D	
No functional limitation	60%	60%	61%	63%	61%
At least one functional limitation	40%	40%	39%	37%	39%
<i>Moderate</i>	29%	31%	28%	28%	29%
<i>Severe</i>	11%	9%	11%	8%	10%
Total frequency	760	753	740	756	3009

Results: higher prevalence with the current wording





Is current wording not specific enough? AL=include people without disability

Table 3. For Each Variant of the GALI Question, Distribution of the Respondents With and Without ALs by the FL Profile: France, 2014 (DREES Opinion Survey).

	A	B	C	D	Total
Functional limitation profile of respondents with activity limitations					
No functional limitation (%)	20 >	18	19	18	19
Moderate functional limitation (%)	48	56	50	53	52
Severe functional limitation (%)	32 >	26	30	29	29
Sample size	194	195	149	157	694

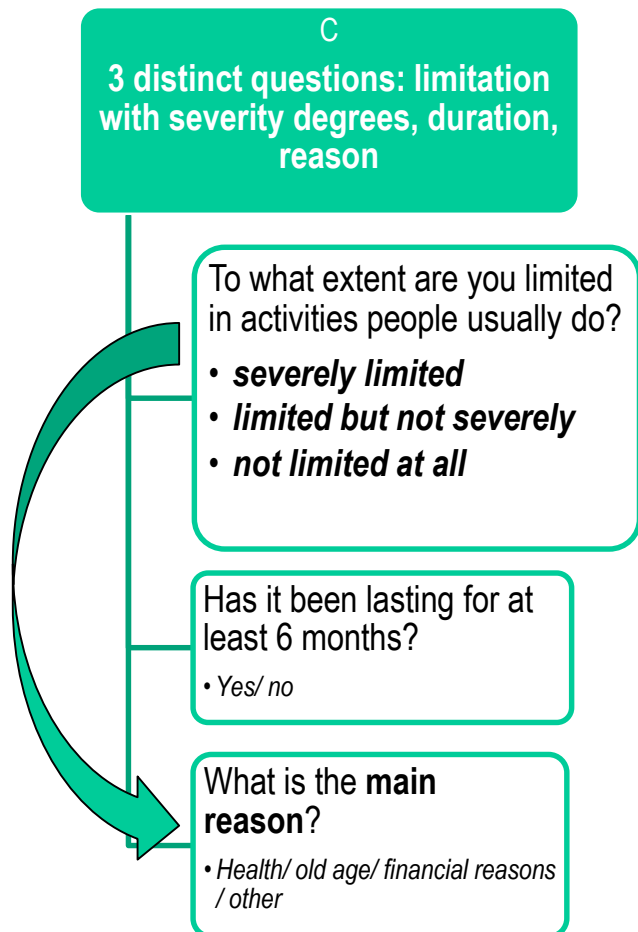
Are alternative wording not sensitive enough? No AL=people with disability

Table 3. For Each Variant of the GALI Question, Distribution of the Respondents With and Without ALs by the FL Profile: France, 2014 (DREES Opinion Survey).

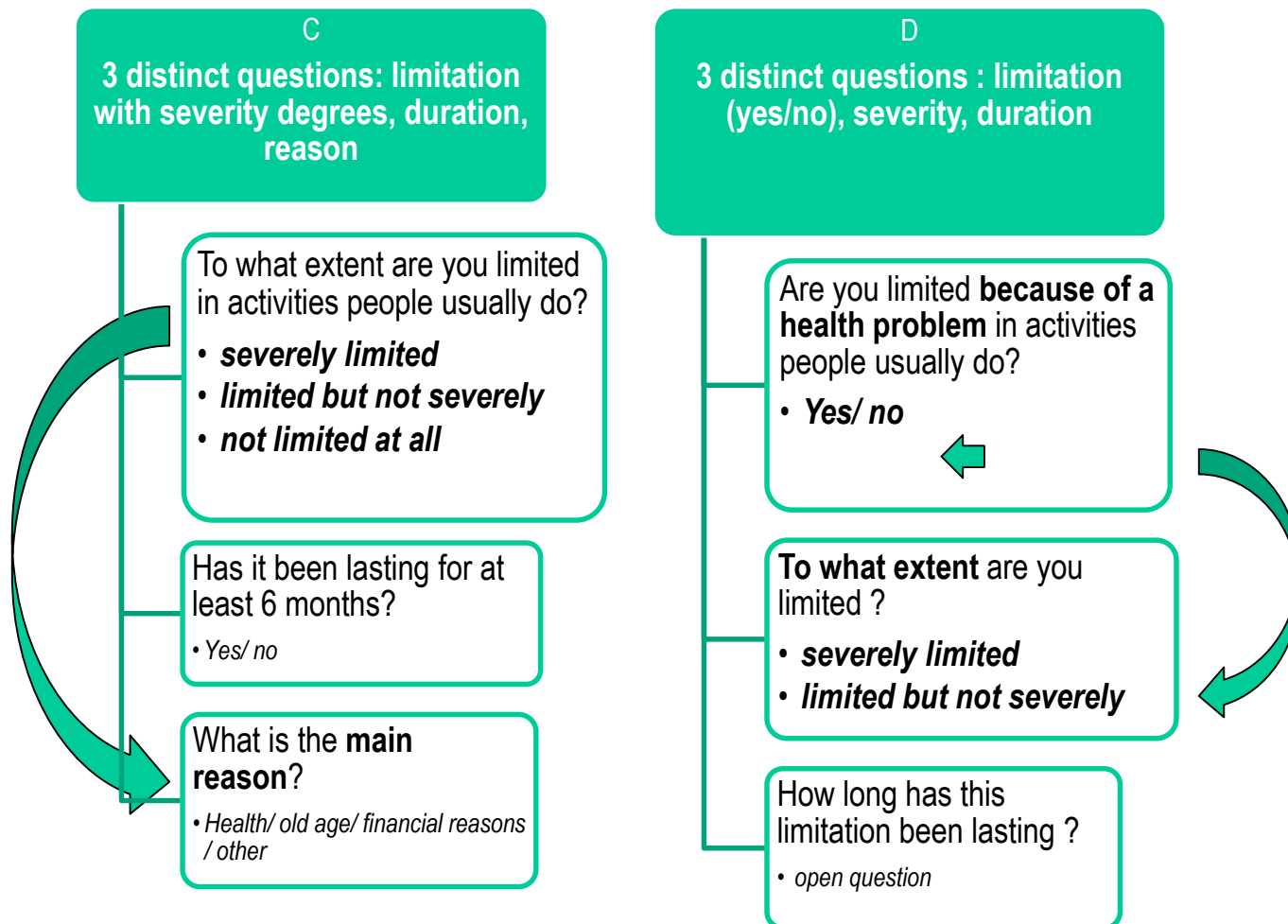
	A	B	C	D	Total
Functional limitation profile of respondents without activity limitations					
No functional limitation (%)	73	74	72	75	74
Moderate functional limitation (%)	23	23	22	22	22
Severe functional limitation (%)	4	3	6	3	4
Sample size	565	557	590	594	2,306

Need to further analyse the associations between functional limitations and GALI

Reminder for questions C and D



Reminder for questions C and D



Effect of changing the wording: question C

	NO ACTIVITY LIMITATION	MODERATE ACTIVITY LIMITATION	SEVERE ACTIVITY LIMITATION
Model 1 : ref = No activity limitation declared			
A	Ref		
C	1,00	1.13	0.67*
Model 2 : ref = Activity limitation, but not severe			
A	Ref		
C	1.21	1,00	0.60**
Control variable for models 1 and 2	Functional limitation+ Age, gender, education and employment status		

This wording decreases the probability of reporting a severe activity limitation

In the full sample: new wording decreases the probability of reporting a severe activity limitation rather than no and moderate limitation.

In people with moderate functional limitation: decreases the probability of reporting a severe activity limitation rather than moderate limitation (OR = 0,53*)

Effect of changing the wording: question D

	NO ACTIVITY LIMITATION	MODERATE ACTIVITY LIMITATION	SEVERE ACTIVITY LIMITATION
Model 1 : ref = No activity limitation declared			
A	Ref		
D	1,00	0.90	0.69*
Model 2 : ref = Activity limitation, but not severe			
A	Ref		
D	1.10	1,00	0.76
Control variable for models 1 and 2	Functional limitation+ Age, gender, education and employment status		

This wording selects less people than the current GALI

In the full sample: decreases the probability of reporting a severe activity limitation rather than no limitation.

In people with no functional limitation: decreases the probability of reporting moderate activity limitation rather than no limitation (OR = 0,32*)

Effect of discarding the question about chronic diseases (B)

- Everything else being equal, the probability of reporting being limited but not severely **increases among people with functional limitations**

Odd Ratio = 1.44*

- **Discarding this question affects significantly the measurement of activity limitation**

Summary of the results

- Splitting the question to simplify the GALI leads to
 - A lower prevalence activity limitation: is the current GALI question specific enough?
 - A lower probability of reporting activity limitations, everything else being equal for people with functional limitations => the alternative wordings seem less sensitive and get lower level of severe activity limitation among people with functional limitations
- Discarding the question about chronic diseases increases the probability of reporting moderate activity limitations => People with chronic condition might use this question to mention it (even if they are not limited?)
- Asking the cause of the activity limitation after a screening question does not seem to be relevant, and discarding the mention of health reasons does not seem to clarify the question

Limits and discussion

- Small sample size implies fewer significant effects
- Still splitted wordings lead to a lower prevalence of activity limitation
 - Self-censorship because of “Yes/No” response category?
 - Confusion when removing the mention of health reasons?
- Further analyzes are needed to prolong these results and interpretations

Main outcomes so far

- Changing the GALI wording changes the propensity to report activity limitation.
- It could thus lead to a break in the time series, with no evidence so far of an improvement in its measurement properties, but with question on the sensitivity of the alternative wordings



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Thank you for your attention

More about the Drees Barometer

<http://www.drees.sante.gouv.fr/le-barometre-d-opinion-de-la-drees,11136.html>