

Inequalities in longevity by education level in Spain:

A life satisfaction approach



Background

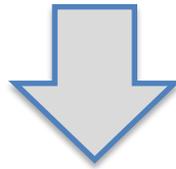
Improving the well-being of a population by **reducing inequalities** across different socio-demographic groups is a social challenge worldwide

Health, happiness & welfare contributes to our general state of well-being

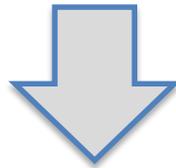
People's longer life in developed countries does not always translate into healthier lives (Solé-Auró & Alcañiz, 2015), plus no clear **international evidence** exists whether those extra years of life may be accompanied by **satisfied or unsatisfied** years with life.

LE, life satisfaction & education

The influence of **educational gradient in LE** persists among socioeconomic groups (Mäki et al., 2013).



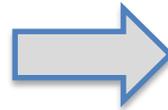
People with high levels of ed generally show the highest LE levels, and have been **leading** the way towards a **lengthening of life** for the remaining population groups (Jasilionis & Shkolnikov, 2016)



The association between **LE & happiness across education groups** is less explored in the literature

The Spanish Context

Spain had the **4th-highest LE** in the world (WHO, 2016), and among the highest healthy LE in Europe (Eurostat, 2018)



In 2016:
Women at 30: 56,3
Women at 65: 23,0
Men at 30: 50,9
Men at 65: 19,1

Differences in **satisfied LE** according to **education level** have **never been explored**

Main aims

Satisfied LE is a summary measure of population well-being
(length and the quality of life)

Main objectives:

- a. Assess the smoothed **age-specific prevalences of high LS** by gender & ed level
- b. Compute **Spanish LE by ed level & gender** at age 30 and 65
- c. Decomposing LE30 and LE50 into the number of years lived in a satisfied and in an unsatisfied state by level of ed (men&women)

Data

1. **2012 Spanish National Institute of Statistics** data for mortality rates, life tables and vital statistics
 - Population records from INE (51.5% females)
 - Proportion of three levels of education
 - a. **Low:** 24.8% for men and 30.1% for women
 - b. **Medium:** 48.5% vs 43.7%
 - c. **High:** 26.7% vs 26.3%
 - Estimate five-year mortality rates using registered deaths by level of education
2. **2013 EU-SILC data:** life satisfaction question from the survey
3. Data from INE and EU-SILC are combined using the ***Sullivan's method*** to compute life tables

Key Indicator

Well-being: Life satisfaction

Participants were asked to evaluate their life satisfaction by responding a single question:

“On a scale from **0 to 10** where **0** means completely dissatisfied and **10** means completely satisfied, how satisfied are you with your current life?”

We dichotomized the responses:

- a) Satisfied** = being high satisfied with life = **8 to 10**
- b) Unsatisfied** = being less satisfied = scores **less than 8**

Education

- a. Low Education:** primary & lower secondary credentials + illiterate individuals
- b. Middle Education:** higher secondary credentials and vocational training
- c. High Education:** university degrees

Analysis

Descriptive: we assessed smoothed age-specific prevalence of satisfaction

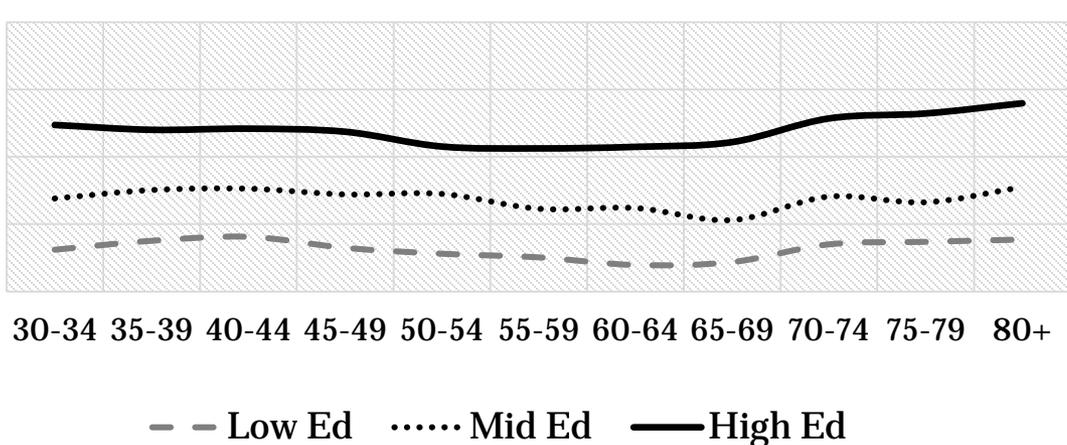
Abridged period life tables for ages 30+ and 65+ are calculated

Satisfied LE₃₀ and **LE₆₅** are estimated using the ***Sullivan method***:

- Expected years lived unsatisfied
- Expected years lived satisfied

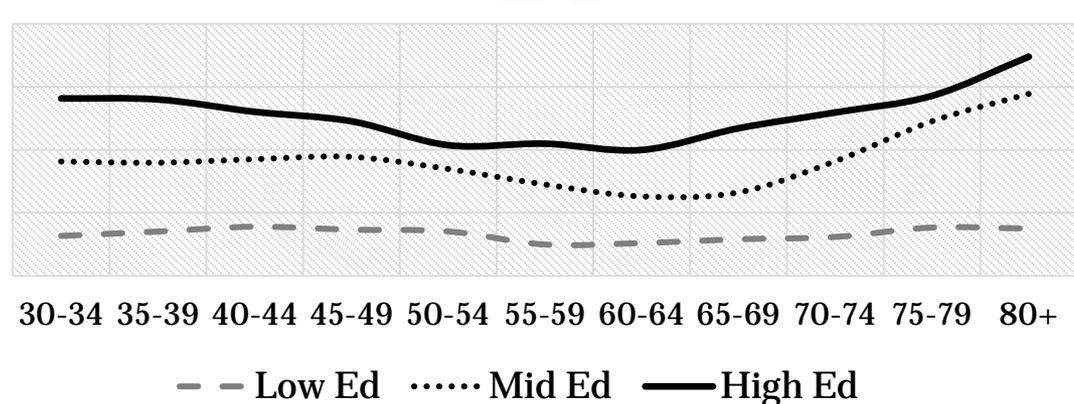
Smoothed Age-specific prevalence of high life satisfaction by gender & level of education

Men



- **Lower** prevalence of high satisfaction for **low** levels of edu & **higher** for **high** levels of edu (men & women)

Women



- **Women** have higher levels of high LS
- The largest **gender differences** in the prevalences of high LS at ages over 60 particularly for middle & high levels of edu

Gender differences in LE by level of education, Spain 2012

Education level	Age 30			Age 65		
	Men (LE ₃₀ =50.0)	Women (LE ₃₀ =55.6)	W-M Dif.	Men (LE ₆₅ =18.5)	Women (LE ₆₅ =22.4)	W-M Dif.
Low education	48.4	55.4	7.0	18.5	23.0	4.5
Medium education	49.9	56.8	6.9	18.5	23.7	5.2
High education	56.0	63.3	7.3	22.8	29.8	7.0

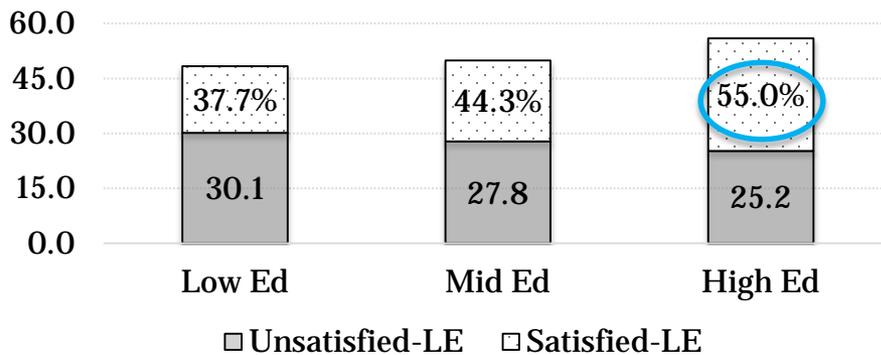
Source: INE, 2012.

Note: "LE₃₀" is life expectancy at age 30 ; "LE₆₅" is life expectancy at age 65. W-M Dif. is women-men differences in years of life.

- Women always reported higher LE than men. W-M differences in LE ranged from:
 - **Age 30: 6.9** years in medium ed to the highest **7.3** years in high ed
 - **Age 65: 4.5** years for low ed and **7.0** years for high ed
- The **smallest W-M differences** in LE by ed level were in the low ed at age 65, and the **largest** in the high ed at age 30
- The largest gender differences in LE were reported by people with **high levels of ed** & it was always in favor of women

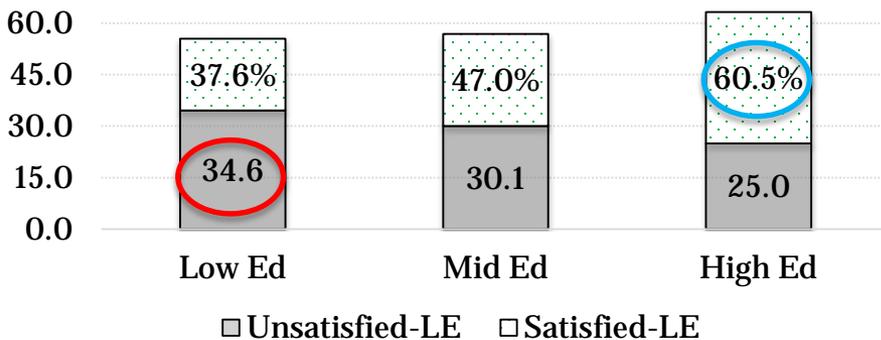
Decomposition of Spanish LE_{30} in (un)satisfied LE_{30} by education level in 2012

Life expectancy at age 30, MEN



- Only **High Ed level people** spent more years in a highly satisfied than in an unsatisfied state
- **Worse scenario:** 30 years old Spanish women with low levels of ed are expected to spend **34.6 years** in an unsatisfied state

Life expectancy at age 30, WOMEN

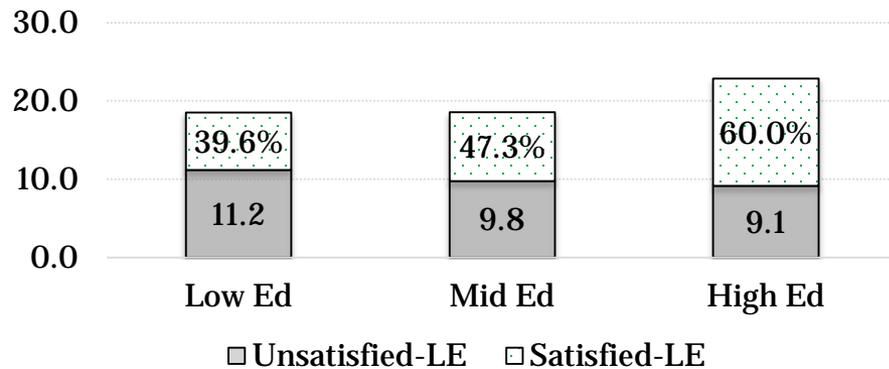


- **F-M differences in satisfied LE**
 - Largest for High Ed: 7.5 years
 - Lowest for Low Ed: 2.6 years
- **F-M differences in unsatisfied LE**
 - Largest for Low Ed: 4.5 years
 - Lowest for High Ed: -0.2 years

Source: INE 2012; EU-SILC 2013

Decomposition of Spanish LE_{65} in (un)satisfied LE_{65} by education level in 2012

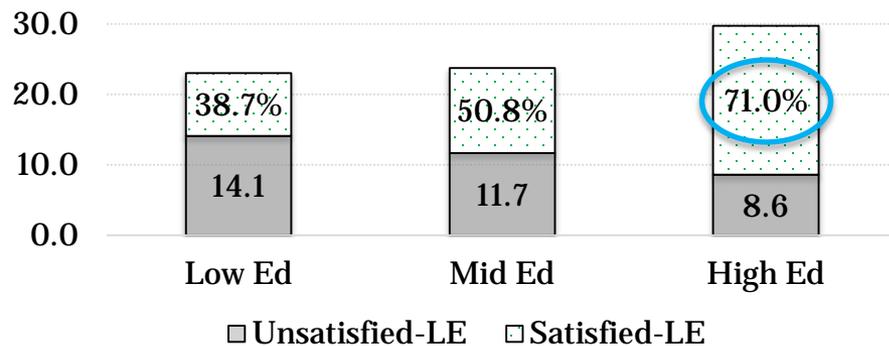
Life expectancy at age 65, MEN



A similar pattern is seen for women at age 30 and at age 65

Women with high levels of ed are **leading** the expected number of years to be spent in a **satisfied state**

Life expectancy at age 65, WOMEN



Source: INE 2012; EU-SILC 2013

Summary

1. **Spanish women** have longer LE and also an advantage in **satisfied LE** (except for the low ed)
2. The **largest gender gap in LE and in satisfied LE** was among the highest education level
1. The **larger share of the remaining years of life** was expected to be spent in an **unsatisfied state**
2. Only those with higher levels of schooling were the only ones who spent more years in **a satisfied** than unsatisfied state

Conclusions

- 1. Spanish women** live longer than men, however only those with higher education levels spent the extra years with satisfaction. Why? Two possible explanations:
 - Multiple roles and well-being: highly educated women are more attached to labor market, social networks, etc.
 - Increases in personal income and well-being
- 2. Low educated women** need special public attention: **social expenditures in education may complement health policies**
- 3. What is the relationship between objective & subjective measures of health? Life satisfaction as an important determinant of health & well-being**

Thank you!

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