Health inequalities at older ages in the European Union: findings from the Survey of Health and Retirement in Europe (SHARE)

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Introduction

Inequalities in life expectancy (LE) amongst European countries have been evident for some time, the major gaps being between the established EU countries (EU15) and the more recent EU members from Eastern European countries. However mortality rates and life expectancy are only indirect measures of the health of populations. With the advent of a new EU structural indicator on health, Healthy Life Years (HLY) it has been possible to demonstrate even greater inequalities in HLY than in LE across Europe of 14.5 years for men and 13.7 years for women at age 50 between the EU25 countries. Furthermore countries with the longest LE were not necessarily those with the greatest HLY suggesting that longer life and better health, indicative of compression of morbidity may not be universal (Jagger , Gillies et al. 2008).

Though global measures have a utility in terms of encapsulating differences between countries, more detailed measures are then necessary to determine where differences lie. Since the GALI is a measure of activity limitation, the most appropriate framework for drilling down to more detailed measures is the disablement process (Verbrugge and Jette 1994). Models of the disablement process identify disease or pathology as the initiating event, with a resulting limitation in body functions (physical, sensory or cognitive) which combine to produce restriction in instrumental activities of daily living (IADL) and basic personal care activities (ADLs). Data have confirmed this process in several countries with both cross sectional survey and longitudinal(Cambois, Robine et al. 2005; Jagger, Barberger-Gateau et al. 2005; Jagger,

Spiers et al. 2005; Pérès, Jagger et al. 2005). It is therefore useful to compute a range of indicators of disability free life expectancy in order to better understand trends within and differences between countries(Freedman, Crimmins et al. 2004; Cambois, Clavel et al. 2008). In this paper we use the Survey of Health and Retirement in Europe (SHARE) wave 2 to evaluate inequalities in a range of health expectancies, including HLY, and measures that span the disablement process, at older ages in Europe.

Methods

SHARE was first conducted in 2004 on individuals aged 50 years and over in 11 European countries: Germany, Austria, Belgium, Denmark, Spain, France, Greece, Italy, Netherlands, Sweden and Switzerland. The SHARE survey was repeated in 2006 in the original countries and additionally in Poland and the Czech Republic. Initial comparison of the 13 countries is by means of the prevalence of each of the measures, standardised to the European standard population. The Sullivan method is used to estimate: life expectancy free of chronic morbidity, life expectancy without physical functional limitations, Healthy Life Years (HLY), life expectancy without IADL restriction, life expectancy without ADL restriction and life expectancy in good perceived health. Hierarchical cluster analysis is then used to explore similar groupings of the countries on the health expectancies at age 50, entering the proportion of life expectancy spent with each health measure (transformed into Z scores) for men and women.

Results

There was a 6.1 year difference in life expectancy (LE) at age 50 for men in 2006 between the 13 countries, ranging from 24.8 years in Poland to 30.9 years in Switzerland, and a difference of 1.9 years for women, from 31.5 years in Poland to 35.4 years in Italy. Considerable intra-country differences were found on all the health expectancies and in general countries did not rank identically on the health expectancies. The exceptions were Switzerland with the highest male LE and the highest LE free of morbidity, physical functional limitations, IADLs and ADLs and in good self-perceived health. Poland had the lowest LE for men and the lowest LE free of any of the measures of ill-health. Five clusters were identified (Table 1) and these will be discussed in relation to possible mediators of progression through the disablement process.

Conclusion

Our results suggest that there are similarities in life expectancy and disability free life expectancy at age 50 in a core group of countries within Europe. However the profile is slightly different in Switzerland where individuals are generally likely to experience better health and the longest male life expectancy, and in Greece where individuals generally have better health but are more likely to experience physical functional limitations. The pattern is vastly different in the Czech Republic and Poland where poor health is experienced much more frequently.

References

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Table 1: Mean proportion of life spent free of morbidity, impairment or disability at age 50 for men and women in each country grouping

		1	2	3	4	5	ALL
LE at age 50 (yrs)	**M**	29.7	29.8	30.9	26.1	24.8	29.1
	F	34.3	33.2	35.2	31.3	31.5	33.8
Proportion of LE free of morbidity	**M**	10.0	10.3	13.1	6.0	6.7	9.7
	F	9.3	8.5	14.0	6.7	5.7	9.1
Proportion of LE free of PFL	**M**	18.2	15.7	22.3	15.7	10.5	17.5
	F	14.5	10.1	19.9	11.5	7.1	13.8
Proportion of LE free of activity restriction	**M**	17.3	21.7	21.2	12.3	10.5	17.1
	F	17.3	21.5	22.2	11.7	11.1	17.1
Proportion of LE free of IADL restriction	**M**	25.6	26.2	28.3	23.0	18.5	25.1
	F	25.8	23.7	30.3	24.4	20.3	25.5
Proportion of LE free of ADL restriction	**M**	26.7	28.1	28.5	24.0	19.4	26.2
	F	29.2	29.4	32.6	28.2	23.7	29.0
Proportion of LE in good self-rated health	**M**	19.4	22.4	25.4	14.9	10.3	19.0
	F	20.4	22.4	28.2	16.7	10.9	20.2

1= Austria, Belgium, Denmark, France, Germany, Italy, Netherlands, Spain, Sweden
2= Greece
3=Switzerland
4=Czech Republic
5=Poland