### Inequalities in subjective health among older Europeans: a systematic literature review

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#### Abstract:

Systematic reviews aim to provide a complete summary of scientific literature relevant to a particular research question and are now a usual first stage of empirical research in many disciplines such as epidemiology and public health but not yet widely used in demography. We conducted a systematic literature review on inequalities in subjective health in older age in Europe. The dimensions of subjective health considered were self-rated health, quality of life, life satisfaction and loneliness. The review focused on educational, socioeconomic and gender differences in these outcomes. We considered evidence on possible interactions between the various social indicators and other factors that may contribute to or mediate associations, such as. health related behavior and social support, as well as age and gender differences in associations. Journal articles published between 1995 and 2011 were identified using Medline, Global Health, Embase, Social Policy and Practice, Cinahl, Web of Science and IBSS. A total of 43 studies on self-rated health, 20 studies on quality of life, nine studies on life satisfaction and five studies on loneliness were identified. In general lower education and poorer socio-economic position were associated with poorer subjective health. Indicators of current circumstances such as income and home ownership showed a stronger association with outcomes than past circumstances such as occupational status or education. Associations tended to be weaker in the oldest age groups. Adjusting for intermediate factors, reduced the Associations between subjective health and socioeconomic position diminished when intermediate factors, such as such as social support and health related behaviours, were controlled. Gender differences were not consistent and tended to diminish after adjusting for health and life circumstances.

## Background and aim of the study

Population ageing means that investigating and understanding underlying social determinants of health among older people is an important priority (WHO World Health Report 2008), especially for Europe, the world region in which population ageing its most advanced. However, until relatively recently, such investigations have been limited in comparison with the volume of research on young or middle aged people. This past relative neglect of the topic of health inequalities at older ages may reflect perceptions that poor health and disability are inevitable features of growing older and as such are driven by biological senescence rather than social determinants. However, although differentials in health by factors such as gender, socioeconomic status, education and ethnicity tend to be smaller in the second than in the first half of life, there is now extensive evidence of considerable social inequalities in health in older people both within and between different regions of Europe. Life course perspectives on later life health may also have led some to conclude that interventions to reduce inequalities at older ages are less likely to be effective than interventions earlier in the life course and so a lesser priority for research or policy. However, these assumptions have been challenged by a growing number of studies demonstrating the plasticity of ageing and the responsiveness of health indicators to current circumstances as well as events earlier in the life course.

Within the literature on social inequalities in the health of older adults indicators of subjective well-being, such as loneliness or quality of life, have been less often considered than outcomes such as mortality. This makes it important to systematically summarise what is known from those studies that have been undertaken as a first stage in identifying both implications and needs for further research. The aim of the systematic literature review we report on here was to investigate inequalities in subjective health in older age groups in Europe.

### Method

The review was undertaken as part of a larger study on the Social Determinants of Health in Europe. Included papers had to fulfill the following criteria: report on data collected in the WHO European region, include results for people aged 65+, study health inequalities reporting

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educational, socioeconomic or gender differences in subjective health, and be based on empirical research published in a journal article of between January 1995 and June 2011.

Journal articles were identified using Medline, Global Health, Embase, Social Policy and Practice, Cinahl, Web of Science and IBSS. A total of 7709 citations were identified (some of them for other health outcomes included in the larger review). After systematic coding, we identified 43 studies on self-rated health, 20 studies on quality of life, nine studies on life satisfaction and five studies on loneliness.

## Results

In general higher levels of education were associated with several measures of better subjective well-being although some studies did not find educational differences in subjective health, especially in the oldest age groups and after adjustment for other circumstances. The association between education and subjective health tended to weaken with increasing age. Gender differences in the association were reported in some studies but the pattern was not consistent.

Poorer subjective health was associated with a number of other indicators of lower socioeconomic position. These associations varied according to the measure of socio-economic position used: indicators of current circumstances such as income and home ownership showed a stronger association than past circumstances such as occupational status or education. Adjusting for intermediate factors reduced the association between subjective health and socioeconomic position suggesting that these factors (such as health related behavior and social support) may be mechanisms through which socio-economic position influences subjective wellbeing. A number of studies indicated that the association between socioeconomic position and subjective health became weaker in older ages. This was especially the case for socioeconomic measures that reflected occupational status. Associations between socioeconomic factors and subjective health were generally weaker in women than men.

Poorer subjective health among women compared to men was reported in a number of studies, but many studies did not find a gender difference, and some studies reported better subjective

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health among women compared to men. Gender difference generally diminished after adjusting for health and life circumstances.

# Discussion

Systematic reviews aim to provide a complete summary of scientific literature relevant to a particular research question and are now a nearly universal first stage of empirical research in many disciplines such as epidemiology and public health, although as yet not widely used in demography. The results of this review of the literature on socio-economic inequalities in subjective well-being at older ages demonstrate the importance of social influences on later life subjective well-being and also indicate areas which need further investigation, such as the role of mediating factors. The generally weaker associations found with increasing age may reflect reduced statistical power in generally smaller samples of very old people; decreased salience of factors related to working life for those in the oldest groups and operation of various selection effects. Further work on unravelling these is merited.