3.2 Socio-Economic Disparities in Physical Health in 10 European Countries
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Introduction

During the last few decades, European countries have attempted to solve one of the oldest problems in modern societies: the health gap between the rich and the poor. At the international level, the WHO (World Health Organisation) has initiated numerous campaigns and spent considerable efforts to eliminate these disparities. However, socio-economic differences in health do not only prevail across Europe, but also seem to exist in all dimensions of health: Individuals with a lower socio-economic status have more health problems, face more disability and live shorter than those with a more privileged socio-economic position (Cambois, Robine and Hayward, 2001; Huisman, Kunst and Mackenbach, 2003). Furthermore, the health gap between the rich and the poor may be increasing with recent changes in European policy (Mackenbach et al., 2003). Thus, health disparities remain an unacceptable outcome in current European society and should be further examined. SHARE represents a unique opportunity to explore the nature and magnitude of health disparities in Europe.

This contribution presents an overview of socio-economic disparities in physical health in Europe. Elderly populations experience a wide array of health problems; added to the detrimental impact of ageing, those in the lower classes experience an even larger burden of morbidity and disability. We collected data on a wide array of physical health problems and were able to explore how socio-economic status may have an impact on specific diseases or functional aspects of health. SHARE is one of the first studies to collect data on socio-economic and health variables using a standard instrument across many European countries.

Methods and Measures

Data were collected on physical health and socio-economic status indicators in 10 European countries. We used two complementary indicators of socio-economic status: Educational level and household income. Individuals were first classified into national education schemes based on the highest level of education reported and then reclassified into three equivalent categories: Levels 0-2 (pre-primary, primary and lower secondary education), 3 (upper secondary education) and 4-6 (post-secondary education) of the ISCED (international standard classification of education) (UNESCO 1997). Household income was defined as the sum of the income of each individual member of the household and the income received by the household overall. Income was divided into quintiles. In order to adjust for household size, we divided the value of income by the square root of the number of persons in the household (Buhman, Rainwater, Schumaus and Smeerding 1988; Huisman et al. 2003).

In order to illustrate socio-economic disparities in health, we calculated age and country adjusted odds ratios. This measure compares the risk of diseases between the lower and middle/high educational groups, as well as between the two upper and two lower quintiles of income. An odds ratio of 1 indicates that there are no differences between the two groups, whereas an odds ratio higher than 1 indicates a higher risk among lower than among higher socio-economic groups. An odds ratio below 1 suggests that those with a higher socio-economic position have a higher risk than those with a lower socio-economic position.
A Larger Burden of Physical Health Problems Among the Lower Socio-Economic Status Groups in Europe

Results from SHARE clearly indicate that men and women with a lower socio-economic status have a worse physical health than those with a higher socio-economic position (Figure 1). Among both men and women, a low educational level or income is associated with a higher risk of reporting less than good self-perceived health, long-term problems, as well as activity limitations due to health problems. This pattern applies to both educational level and income. For most physical health problems, socio-economic disparities are of a similar size among men and women (Figure 1).

![Graph showing odds ratio of general physical health measures according to socio-economic status among men and women in 10 European countries](image)

*Figure 1* Odds ratio of general physical health measures according to socio-economic status among men and women in 10 European countries

Note: *Less than good self-perceived health*

Individuals were asked whether they had ever been diagnosed with a number of specific chronic diseases. Figure 2 shows that the prevalence of reporting two or more chronic diseases was higher among lower than among higher educational level groups. The largest educational disparities existed in chronic lung disease, ulcer, diabetes and arthritis among men. Among women, the largest educational disparities existed in diabetes, stroke, chronic lung disease and heart disease. A similar pattern was observed for income (see Table 3A.4 in the Appendix to this chapter). This probably reflects the fact that the lower socio-economic groups smoke more, have a worse diet and generally a worse risk factor profile than those with a higher socio-economic position (Cavelaars, Kunst and Mackenbach 1997).

In contrast, those in the highest income groups had a higher prevalence of cancer than those in the lowest income groups (Table 3A.4). It should be noted that the prevalence of cancer depends on both cancer incidence and case-fatality. Previous research has shown a higher cancer incidence and case-fatality among lower than higher socio-economic groups (Schrijvers, Coebergh, van der Heijden and Mackenbach 1995). That is, cancer is more
incident among the lower classes, and furthermore these patients have a shorter survival than those in the higher classes. The combination of both higher incidence and case-fatality rates among the lower classes may in turn produce a lower prevalence of cancer among

![Graph showing odds ratio of chronic diseases by educational level and gender]

*Figure 2 Odds ratio of chronic diseases according to educational level among men and women in 10 European countries*

lower than among higher socio-economic groups. This hypothesis needs to be further examined using longitudinal data.

The prevalence of reporting two or more symptoms was also higher among individuals with a lower than those with a higher socio-economic status (Tables 3A.5 and 3A.6). Individuals with a lower educational or income level report more symptoms such as pain, heart problems, breathing problems, coughing and fear of falling than their higher socio-economic counterparts. It is astonishing to confirm that the lower socio-economic groups have consistently 30% to 65% higher risk of these symptoms than those in a more privileged socio-economic position.

**A Lower Socio-Economic Status Associated with More Functioning Limitations Among the Elderly**

Physical functioning is an important dimension of health, as it reflects the ability of individuals to perform normally in a society. Figure 3 shows that individuals with a lower educational level are more likely to experience limitations with mobility, arm or fine motor functions. Similarly, the prevalence of eyesight, hearing and chewing problems was higher among those with a lower than among those with a higher educational level. A similar pattern was also observed for income (Table 3A.7).

Walking speed and grip strength are strong predictors of mortality and objective measurements of physical functioning (Rantanen et al. 1999). Interestingly, the pattern for these outcomes was the same as for other health outcomes in SHARE: those with a lower socio-economic position are more likely to be in the lowest quartile of grip strength, as opposed to those with a higher socio-economic position (Figure 3, Table 3A.7). Walking speed was assessed among those aged 76 years and above only. Although confidence in-
tervals were wide among men, we observed large educational level disparities in walking speed among women (Figure 3).

Similarly, men and women with a lower socio-economic status are considerably more likely to experience limitations with activities of daily living (ADL) such as dressing and bathing than individuals with a higher socio-economic status (Figure 3, Table 3A.7). They are also more likely to face limitations with instrumental activities of daily living (IADL) such as preparing hot meals and making telephone calls. This further reflects the higher burden of physical limitations among those with a lower socio-economic status.

**Consistent Socio-Economic Disparities in All European Countries**

Further to providing estimates for Europe as a whole, SHARE offers a unique opportunity to compare countries. Figure 4 presents odds ratios of less-than-good self-perceived health according to educational level in each country. The consistency of the pattern is once again astonishing: in all countries, men and women with a lower educational level perceive their health as less-than-good more often than those with a higher educational level (Figure 4). The same pattern was observed for income (Table 3A.8), although no clear disparities were observed in Spain, Switzerland and Austria. Nevertheless, these findings further illustrate that across Europe, the most disadvantaged socio-economic groups have a higher prevalence of physical health problems than those with a higher socio-economic status.

**Conclusions**
Results from SHARE suggest that large socio-economic disparities in physical health exist across Europe. Furthermore, the lower socio-economic groups experience more limitations than their higher socio-economic counterparts. This is consistent with previous studies that have shown a health disadvantage among the lower socio-economic groups in Europe (Cambois et al. 2001; Huisman et al. 2003).

Healthcare systems across Europe rely on solidarity schemes aimed at providing ‘access to good health’ to all individuals. Thus, it remains the question of why socio-economic disparities in health exist in countries with universal healthcare systems. This may be due to the fact that health care utilisation disparities seem to play only a minor role in the origin of health disparities (van Lenthe et al. 2004). Instead, SHARE has shown that the lower socio-economic groups in Europe smoke more, are less physically active, and are more likely to be overweight or obese than those with a higher socio-economic status (see contribution on health behaviour). Former studies also show that consistent socio-economic disparities exist in other factors such as a healthy diet (Cavelaars et al. 1997). This suggests an enormous potential to reduce socio-economic disparities in health through risk factor prevention tailored towards the lower socio-economic groups.

However, it is likely that socio-economic differences in risk factors are indeed the result of a more structural difference between the rich and the poor. Former research indicates that socio-economic disparities in risk factors are largely the result of socio-economic disparities in adverse material circumstances (van Lenthe et al. 2004). Thus, health prevention may not be enough to reduce disparities in health: structural social policy changes may be required to achieve health equality across Europe.

The higher prevalence of health problems in the lower socio-economic groups is likely to result in higher utilisation of healthcare services among the poor. This has been observed in previous studies (van Dooslaer et al. 2000) and may contribute to increased costs and healthcare system financing problems in Europe. Therefore, future planning
should incorporate strategies to reduce these disparities. Similarly, the higher prevalence of health problems among the poor is likely to result in less labour force participation in these groups. Thus, tailoring interventions towards the lower classes may contribute to reduce the prevalence of factors such as health-related work absence. These policy interventions may contribute to minimise the negative consequences of health disparities in European countries during future decades.

Key Points

- Despite decades of universal healthcare coverage, large socio-economic disparities in physical health and functioning exist in all European countries.

- The potential consequences of health disparities on healthcare utilisation and labour participation require social and economic policies targeted towards the lower socio-economic groups.

- Longitudinal data are necessary to identify the causal factors that can be addressed in order to prevent socio-economic disparities in health among welfare European countries.

References


