

- ⁴³ Schoenmaeckers RC, Lodewijckx E. Demographic behaviour in Europe: some results from FFS country reports and suggestions for further research. *Eur J Population* 1999;**15**:207–40.
- ⁴⁴ Rindfuss RR, Bumpass L, St John C. Education and fertility: implications for the roles women occupy. *Am Sociol Rev* 1980;**45**:431–47.
- ⁴⁵ Aassve A, Mazzucco S, Mencarini L. Childbearing and well-being: a comparative analysis of European welfare regimes. *J Eur Soc Policy* 2005;**15**:283–99.
- ⁴⁶ Vlasblom JD, Schippers JJ. Increases in females labour force participation in Europe: similarities and differences. *Eur J Population* 2004;**20**:375–92.
- ⁴⁷ Heliovaara M, Aromaa A. Parity and obesity. *J Epidemiol Community Health* 1981;**35**:197–99.
- ⁴⁸ Artazcoz L, Borrell C, Benach J, Cortes I, Rohlfs I. Women, family demands and health: the importance of employment status and socio-economic position. *Soc Sci Med* 2004;**59**:263–74.

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Commentary: Tipping the balance: wider waistlines in men but wider inequalities in women

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Obesity is concentrated in the most deprived sections of the community in most high-income countries in both adults¹ and children.² This is also increasingly true of low- and middle-income countries (where historically the inequality has operated in the opposite direction), particularly amongst women.³ Diet and physical activity and their socio-economic patterning are likely to be affected by individual factors, local social context (including family, peers, workplace, community and so on) and by wider societal influences (such as food pricing and availability, provision of facilities for physical activity, welfare state policies and so on).

The paper by Roskam and colleagues, published in this issue of *International Journal of Epidemiology*, compares educational inequalities in overweight and obesity across 19 countries in Europe.⁴ Of particular interest in Roskam's paper are the gender differences in the observations. Women had a lower prevalence of overweight and obesity [body mass index (BMI) ≥ 25] compared with men in all 19 of the included surveys, although roughly equal numbers of surveys showed higher prevalence of obesity (BMI ≥ 30) in women and men. Inequalities were wider for women than for men in all surveys for

overweight and obesity combined and in 15 of the 19 surveys for obesity. Thus, whilst socio-economic inequalities in overweight and obesity tend to be wider for women, the public health burden of overweight and obesity is concentrated in men in many of the countries of Europe. Interestingly, the prevalence of overweight in the lowest educational groups is similar in men and women (slightly lower in women). Thus, gender differences in overweight in this study are driven by women with high education. Highly educated women seem to be behaving in a way that men of similar education do not. Trying to understand the factors that generate this gender difference may provide clues on how to intervene to reduce the much higher overall burden of overweight among men.

It is often hypothesized that women are more influenced by ideals of thinness and dieting than men, and that these influences are stronger in high socio-economic groups.¹ Furthermore, it has been postulated that, in many societies, larger body size remains a sign of 'power and dominance' amongst men.¹ If these are the main mechanisms explaining thinness in highly educated women, it is unlikely that we want to submit men to these same pressures (or do we?).

Other mechanisms driving inequalities in obesity are proposed but these often do not account for the gender differences. The authors' conclusion that increasing gross domestic product (GDP) is associated with 'an increase in the availability of cheap, energy dense-foods, with the impact of these factors being larger among lower socio-economic groups' can surely only be applied to men, since, amongst women of all socio-economic groups in the surveys included in Roskam's study, the prevalence of overweight and obesity increase slightly with increasing GDP. Only in men was increasing GDP accompanied by widening inequalities in overweight, with prevalence decreasing amongst high-educated men and increasing amongst low-educated men.

Roskam *et al.* find larger inequalities in overweight amongst women in Southern Europe compared with women in other countries. One of their proposed explanations for this finding relates to labour force participation. The authors state that 'the dual role of worker and mother that is disproportionately expected from women of higher education... is (literally) more energy demanding than full-time motherhood'. It is true that highly educated women throughout Europe are more likely to be employed.⁵ However, the role of employment in explaining obesity inequalities and gender differences in these inequalities should be evaluated in the light of existing evidence on the effects of work on women's health, and with consideration of differences across the countries of Europe.

Women's roles have changed dramatically across many countries in recent decades. Despite huge differences remaining in the types of jobs men and women do, and persistent gender inequalities in pay, it is now increasingly common for women to enter the workforce, and consequently to have greater financial independence. The impact of a woman's family and societal roles on her health is likely to differ between time and place, with differences in social norms, welfare policies, etc. having an impact.⁶ Much of the evidence in this area, however, supports the 'multiple attachment hypothesis' (having both a family and paid employment is likely to be beneficial to a woman's health through providing multiple points of attachment to the community) rather than the 'multiple burden hypothesis' (dual roles being damaging to a woman's health).⁷ There is also evidence to suggest that the impact of dual roles differs between socio-economic groups—having both family and worker roles may be advantageous for the health of women in higher socio-economic groups, but deleterious for the health of women in lower socio-economic groups.⁸ Whilst family roles and participation in the labour market are likely to be one factor affecting international differences in prevalence and inequalities in obesity amongst women, the strength of importance and perhaps even directionality of association are likely to differ across the countries included in Roskam's study,

and indeed across subgroups of the populations of each country. Important cross-European differences that might affect the impact of employment on women's health include the degree to which part-time work is supported (rare in Southern Europe)⁹ and whether flexible working hours are possible (also less common in Southern Europe, and generally more widespread in highly skilled and managerial occupations⁹).

In summary, we believe that amongst the important emerging picture of influences on prevalence and socio-economic inequalities in obesity, it is important to retain a gender perspective. The gender differences observed by Roskam *et al.* imply that the societal processes contributing to certain groups of individuals becoming overweight may differ between men and women, and so, therefore, may the most appropriate intervention and policy responses. These differences warrant more thorough exploration. As we hopefully progress in preventing overweight in men, another recurrent 'problem' is likely to arise: will socio-economic inequalities in men increase as men get thinner? Or should we be able, by understanding what's happening to women now, to design interventions that reduce obesity at similar rates for men in all socio-economic groups?

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References

- 1 McClaren L. Socioeconomic status and obesity. *Epidemiol Rev* 2007;**29**:29–48.
- 2 Shrewsbury V, Wardle J. Socioeconomic status and adiposity in childhood: a systematic review of cross-sectional studies 1990–2005. *Obesity* 2008;**16**:275–84.
- 3 Monteiro CA, Moura EC, Conde WL, Popkin BM. Socioeconomic status and obesity in adult populations of developing countries: a review. *Bull World Health Organ* 2004;**82**:940–46.
- 4 Roskam AJR, Kunst AE, Van Oyen H *et al.* Comparative appraisal of educational inequalities in overweight and obesity among adults in 19 European countries. *Int J Epidemiol* 2010;**39**:392–404.
- 5 European Foundation for the Improvement of Living and Working Conditions *Working in Europe. Gender Differences*. Dublin, Ireland: Eurofound, 2008.
- 6 Arber S, Khlat M. Introduction to 'social and economic patterning of women's health in a changing world'. *Soc Sci Med* 2002;**54**:643–47.
- 7 Lahelma E, Arber S, Kivela K, Roos E. Multiple roles and health among British and Finnish women: the influence of socioeconomic circumstances. *Soc Sci Med* 2002;**54**:727–40.
- 8 Artazcoz L, Borrell C, Benach J, Cortes I, Rohlfs I. Women, family demands and health: the importance of employment status and socio-economic position. *Soc Sci Med* 2004;**59**:263–74.
- 9 European Foundation for the Improvement of Living and Working Conditions. *Mind the Gap – Women's and Men's Quality of Work and Employment*. Dublin: Eurofound, 2008.