THE AUTHORS REPLY

We appreciate the opportunity to respond to Macleod and Davey Smith’s letter (1) regarding our paper (2). Their first point concerns our interpretation of the finding that active job strain (high decision latitude combined with high job demands) is significantly and independently related to the 10-year incidence of definite coronary heart disease (CHD) in women, after taking into account the standard risk factors for CHD, occupational level, family income, and education. We offered a speculative explanation for our findings: Women in the 1980s were adopting new social roles and patterns of behavior, and those in job positions involving high demands combined with high authority and autonomy were unusual and at the cutting edge. The possible negative social reactions to these women may have created a deleterious effect on their risk of CHD. We provided social data that support this theory (2).

Macleod and Davey Smith do not agree with this interpretation. They posit a more “parsimonious” explanation for these findings: that job control may have no causal relation to risk of heart disease but the observed association may arise through noncausal mechanisms, such as a change in the social distribution of the disease. As Macleod and Davey Smith point out (1), both high occupational status and active job strain were related to increased risk of CHD among women in our study (2), and not surprisingly they were significantly correlated with each other. When occupational status and job strain were both entered into a multivariable Cox proportional hazards model with other risk factors, job strain remained significantly predictive of incident CHD (relative risk = 2.97, \( p = 0.02 \)), but occupational level did not. Macleod and Davey Smith point out that we found total mortality to be highest among women in low-status employment and heart disease rates to be highest among women in higher-status occupations. They state that our finding of a positive relation between active job strain and increased risk of CHD “could simply reflect the social patterning of both factors in this cohort” (1, p. 1031). We are not clear what they mean by “social patterning,” but we would argue that women’s moving into occupations with active job strain is part of the changing social pattern of employment in the United States. Rather than assume the positive or negative effect this move might have on women, it is important to subject it to careful scrutiny. On the basis of the strength of our research design and the consistency and magnitude of our results (2), we continue to conclude that active job strain was related to the risk of developing CHD in women. Nevertheless, we acknowledge that the reason for the relation between active job strain and CHD in women is currently speculative and worthy of further research.

Macleod and Davey Smith state that it is “implausible that the improved working conditions women have struggled so long and hard for are really damaging to their health” (1, p. 1031). It should be noted that social status was not always negatively associated with CHD in men. Between the 1940s and the 1960s, there was a shift from a positive relation between CHD and socioeconomic status to a negative relation among men in the United States (3). Mortality, on the other hand, has always been negatively associated with socioeconomic status in both men and women. The argument that “social advantage” is always healthy is not historically accurate when examining CHD.

Macleod and Davey Smith bring to our attention possible reporting bias regarding self-reported disease endpoints (subjective heart disease) and the perception of stress (1). In a previous paper, these authors elegantly showed that a positive association between heightened stress and angina was an artifact of reporting bias (4). Their paper supports our rationale for excluding angina pectoris from the disease outcomes we included in our analysis of data from the Framingham Offspring Study (2). We appreciate the authors’ directing our attention to their article (4) and their interest in our research.

REFERENCES


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