Commentary: Psychological distress: a matter of hearts and minds

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There is a growing literature on the effects of psychological distress and coronary heart disease (CHD). As time has passed, the evidence has grown stronger that this association reflects the influence of psychological states on medical outcomes and not vice versa, although the reasons for the association remain unclear. In this issue of the International Journal of Epidemiology there is an excellent article from the Whitehall II Study on distress and CHD.¹ One of the major contributions of the paper is the set of findings relating psychological distress to both self-reported incident CHD, including angina pectoris, chest pain, and doctor diagnosed ischaemia, and to incident ECG abnormalities. These two sets of CHD outcome data enable the investigators to test hypotheses differentiating issues related to self-report from those related to objective, and indeed potentially asymptomatic, ischaemia. Additional strengths of the study include an insightful analysis of many of the psychosocial conditions thought to mediate or potentially influence the relationship between distress and CHD.

The authors find that psychological distress is associated with the increased incidence of overall self-reported CHD as well as with ECG abnormalities in men after adjustment for a host of relevant covariates. In women, distress was associated with the self-report of CHD but not with ECG abnormalities. This gender difference is intriguing given that women are more likely than men to report both high levels of distress and CHD, though ECG abnormalities are more common in men than in women. It should also be noted that the ratios of ECG abnormalities to incident self-reports were dramatically different in men and women. In men, there were 400 incident CHD events and 163 cases based on ECG abnormalities. Among women, there were 252 incident self-reported cases and only 57 ECG abnormalities. Furthermore, though not statistically significant, the odds ratios in the analyses of distress and ECG abnormalities in women were all substantially under one (range 0.66–0.70). The gender differences are difficult to interpret but may relate to the well-documented differences between symptoms of CHD in women as compared with men.

The finding that distress is associated with new ECG abnormalities in men is important since much of the literature in this area is built on mortality, often after people have experienced their initial acute event. Thus, perhaps the greatest bias in many, though not all, studies to date is the potential that ill people become distressed as a result of their illness or actual prognosis. This study puts this issue largely to rest with regard to the findings for men. It clearly raises the issue for women.

There are a few areas which the authors might have explored in greater depth given the richness of the study itself. For instance, there is a lively controversy raised by the authors themselves concerning what the ‘critical’ component of the General Health Questionnaire (GHQ) might be: depressive illness, more minor symptomatology, anxiety, distress very generally, hopelessness, etc. Furthermore, the chronicity of these symptoms or their transience is important to evaluate. The investigators might help us understand these issues more deeply by exploring which items or components of the GHQ are most predictive of outcomes, whether or not there is a gradient in risk or where the ‘threshold’ falls in risk. Since the Whitehall Study has data on the GHQ at three time points, it is also possible to explore some issues related to chronicity or transient feelings of distress. For instance, while the number of outcome events will be reduced, one wonders whether cohort members who were distressed at waves one and two were at increased risk compared with those who were only distressed at one point in time. It is also possible to evaluate which is more predictive of CHD: initial classification or ‘caseness’ on the GHQ or ‘caseness’ based on the closest preceding evaluation. All these analyses would move us closer to understanding what it is about such a vague concept as distress that predicts not only survival after an acute cardiovascular event but the onset of the event itself.

In spite of these unresolved questions, Stansfeld et al. have made an important contribution to this new field and Whitehall II remains one of the best cohort studies to examine these complex issues. Having identified the strong associations between distress and CHD for men and the inconsistent associations for women, the investigators are well-equipped to tackle the next set of issues.

References