Psychological Medicine, 1997, **27**, 497–499.

CORRESPONDENCE

To the Editor:

A recent Editorial (McGee *et al*. **26**, 441–447) posed the general question 'Are life events related to the onset of breast cancer?', but then debated whether or not life events are *directly* related to the diagnosis of this condition. The distinction is small but vital. On the basis of our own large study (Cooper & Faragher, 1993) we, too, would be reluctant to infer a direct link; however, we would infer that the occurrence of a major stress event will increase the risk of a breast cancer being detected in some women if other important psychosocial factors are present also.

Our research is summarized in a detailed paper (Faragher & Cooper, 1996), which argues from an empirical base that several different psychosocial factors combine to form an interface between major stress events and the diagnosis of breast cancer. These factors include coping skills (and their success in resolving the problems created by the life event), personality and the availability of appropriate social support. It is the nature of these interface factors that determines the extent to which a woman is at risk of developing a breast malignancy in the immediate aftermath of a serious life event. In very general terms, an individual with poor coping skills, introvert (largely Type B) personality characteristics and a limited social support network is likely to be much more at risk than a woman with coping skills which help to resolve her problems, a strong personality and supportive family/friends. We believe that it is no coincidence that the life events most strongly implicated in this context are loss-related, which by their very nature, impinge negatively on a person's social support network.

The Editorial by McGee *et al*. correctly identifies the problems with the studies published in this field; it would have been helpful if some suggestions had been offered on how future study designs could be improved. Virtually all of the formative work published has used a classical case–control format. By definition, information collected on life-events was dependent on retrospective recall, with its inherent problems. The most obvious alternative strategy would be a prospective cohort study involving in-depth interviews of subjects after major life events. Such a study would require an enormous study population followed-up over many years with a large team of researchers.

Our own study, in line with many others, attempted to minimize this difficulty by including as a second control group women presenting with a breast problem ultimately diagnosed as being benign in nature. By interviewing subjects prior to their diagnosis being known, such women should have similar recall bias to those women with breast cancers or cysts. Most attention should be given to differences involving this control rather than differences against a 'normal' disease-free control group. The evidence suggesting that the women with cancer somehow 'know' this at presentation is interesting and would fit into our theories about the personalities of women most at risk. However, the arguments quickly become circular and more research is needed in this area. In our own study, patients were selected from clinics dealing with new referrals; women with a history of breast cancer were extremely unlikely to have had a previous breast malignancy as such women would have been referred directly to a nearby specialist centre.

The problem of age-confounding has been an issue for many years, and remains so. The interface psychosocial factors identified in our study are themselves affected by age, even when analysis is confined to the 'normal' control group. We found that the number of different coping skills individuals use tends to decrease with age, with an apparent switch to strategies less likely to resolve problems in general. Our data is, of course, cross-sectional rather than longitudinal, but the trends are potentially very important. Less contentiously, the availability of social support decreased with advancing age, a finding which is more intuitively obvious. Indeed, an evaluation of the time trends in the psychosocial factors studied would lead to the

conclusion that, if they are alleviating factors, an increase in the incidence of breast cancer with age is inevitable. Consequently, we would wish to argue that the so-called 'age-effect' may not be purely biological as widely believed and its interpretation needs be reviewed.

We would concur with McGee and colleagues about some of the statistical issues. Our summary paper (Faragher & Cooper, 1996) includes odds ratio with confidence intervals. We have been guilty ourselves of over-emphasizing significance tests and now prefer the confidence interval approach to data presentation and interpretation. To overcome the problem of the low incidence of the more major life events, we attempted some multivariate analyses which suggested that events can probably be classified into broad groups (loss-related, illness-related, work-related, etc.) without much loss of generality. A coincident emphasis on impact ratings rather than reliance on simple incidence figures may further reduce the methodological problems encountered in earlier studies.

Finally, the concluding suggestion by McGee and colleagues that future research should concentrate primarily on 'subjecting falsifiable hypotheses … to as strong a test as the methodology allows' needs careful and critical consideration. Such studies may have a role to play, but would be difficult to construct and execute. Irrespective of what types of study are planned in the future, it is our strongly held conviction that they *must* take appropriate account of the role of the psychosocial factors which interface (positively and negatively) between the occurrence of a stressful event and the subsequent development of breast cancer (or, for that matter, any other disease).

REFERENCES

Cooper, C. L. & Faragher, E. B. (1993). Psychosocial stress and breast cancer: the inter-relationship between stress events, coping strategies and personality. *Psychological Medicine* **23**, 653–662.

Faragher, E. B. & Cooper, C. L. (1996). A relative risk evaluation of the inter-relationship between psychosocial stress, social support and breast cancer. *Psychological Medicine* (submitted for publication).

McGee, R., Williams, S. & Elwood, M. (1996). Are life–events related to the onset of breast cancer? *Psychological Medicine* **26**, 441–447.

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To the Editor:

The paper by Chalder *et al*. (**26**, 791–800) in a cross-sectional study concludes that the diagnosis of 'ME', which makes an external attribution for fatigue, 'seems to protect against psychological distress but not against disability'. We should like to offer strong support for this conclusion from the prospective data of a patient involved in a 12-year study of the outcome of neurotic disorder.

CASE REPORT

The patient, a married woman aged 40, was seen as an out-patient in 1984. She had a history of two previous episodes of depression (including in-patient treatment for a period of three weeks in 1976, and 1983). At the time of initial assessment she was diagnosed as having dysthymic disorder and included in a study of the short-term treatment and long-term outcome of neurotic disorder (Nottingham Study of Neurotic Disorder). She, unlike most other patients in the study (Tyrer *et al*. 1993), did not make much improvement over the first 2 years of the study, during which fatigue was often a major symptom, and after the 2-year assessment (using the Structured Clinical Interview for DSM-III (Spitzer & Williams, 1983)) had co-morbid major depressive episode, agoraphobia, post-traumatic stress disorder (following the accidental death of her son) and generalized anxiety disorder.

In 1992 she was diagnosed as having ME and at the time of assessment at 12 years she regarded herself as having completely recovered from her former anxiety and depression. However, her scores on the Comprehensive Psychopathological Rating Scale (CPRS) (Åsberg *et al*. 1978), Montgomery & Åsberg Depression Rating Scale (MADRAS) (Montgomery & Åsberg, 1979) and Brief Scale for Anxiety (BAS) (Tyrer *et al*. 1984) remained high and most other patients in the study would have regarded themselves as unrecovered at these levels of pathology. Nevertheless, when her fatigue score (the total of questions 14 (lassitude) and 15 (fatiguability) on the CPRS was compared with the remaining CPRS items, her depression (MADRAS) and anxiety (BAS) ratings a strong negative relationship was found in which

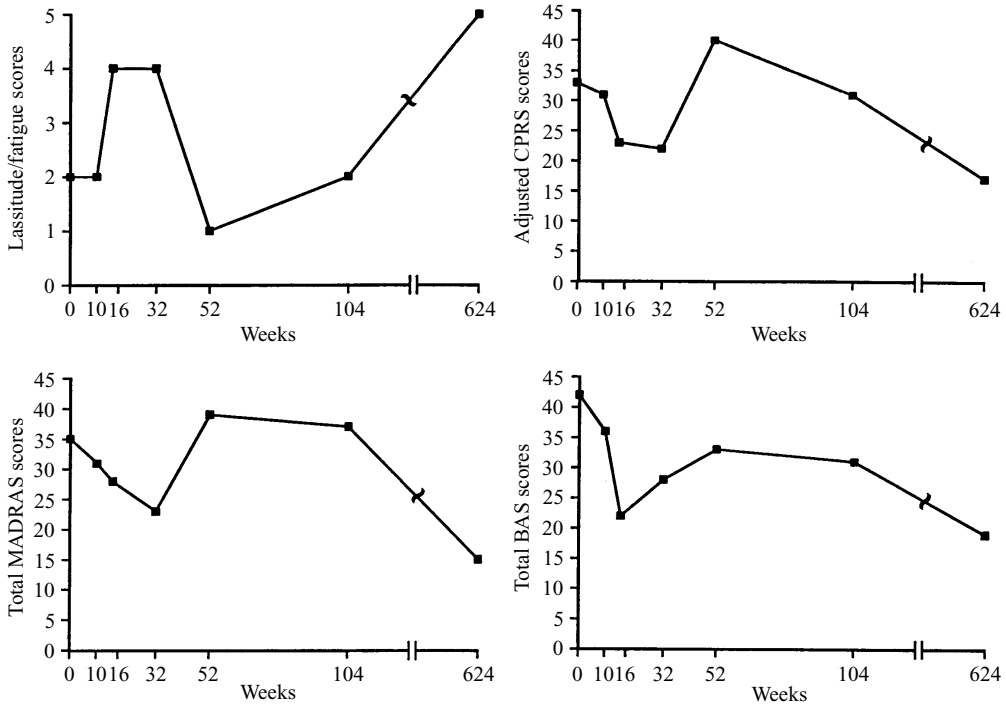

FIG. 1. Inverse relationship between lassitude/fatigue score (range 0–6) of the Comprehensive Psychopathological Rating Scale (CPRS) and the remaining items of the CPRS scale (adjusted CPRS scores), depression (MADRAS) and anxiety (BAS) scores over 12 years.

Table 1. *Rank order correlations* (*Spearman's*) *between fatigue scores and psychiatric symptom scores on* 10 *occasions over* 12 *years*

	Spearman's rho	*P*
Fatigue scores *v.* MADRAS	−0·86	0·001
Fatigue scores *v.* BAS	−0·65	0·04
Fatigue scores *v.* CPRS total score	−0·91	0·0002

Assessments were made at 0, 2, 4, 6, 10, 16, 32, 52, 104 and 624 weeks after entry to the study.

fatigue appeared to become a partial replacement for her neurotic symptoms (see Fig. 1 and Table 1).

We conclude, that for our patient the diagnosis of ME has been a favourable development in terms of her well-being but that almost all the change has been a consequence of altered attribution rather than a fundamental qualitative change in neurotic symptomatology.

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REFERENCES

Åsberg, M., Montgomery, S. A., Perris C., Schalling, D. & Sedvall, G. (1978). A comprehensive psychopathological rating scale. *Acta Psychiatrica Scandinavica* suppl. 271, 5–29.

Montgomery, S. A. & Åsberg, M. (1979). A new depression scale designed to be sensitive to change. *British Journal of Psychiatry* **134**, 382–389.

Spitzer, R. & Williams, J. B. W. (1983). *Structured Clinical Interview for DSM-III* (*SCID*). Biometrics Department, New York State Psychiatric Institute: New York.

Tyrer, P., Owen, R. T. & Cicchetti, D. (1984). The Brief Scale for Anxiety: a subdivision of the Comprehensive Psychopathological Rating Scale. *Journal of Neurology, Neurosurgery and Psychiatry* **47**, 970–975.

Tyrer, P., Seivewright, N., Ferguson, B., Murphy, S. & Johnson, A. L. (1993). The Nottingham Study of Neurotic Disorder: effect of personality status on response to drug treatment, cognitive therapy and self-help over two years. *British Journal of Psychiatry* **162**, 219–226.

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