Reviewer's report

Title: Stress, burnout and doctors' attitudes to work are determined by personality and learning style: A twelve year longitudinal study of UK medical graduates

Version: 1 Date: 12 May 2004

Reviewer: Ed Peile

Reviewer's report:

General
Thank you for asking me to review this paper. It is a further serious attempt to tease out the factors which predict performance and staying power in medical careers. Building on previous work by Chris McManus and others, this publication gives useful pointers to the development of more effective assessment tools for medical admissions tutors. The important message of this paper is that much of the difference in the ways that doctors approach their work and perceive the climate at their workplace is a reflection of stable long-term individual differences in the doctors themselves. These differences are reflected in measures of personality and learning style. As well as striving to improve conditions in the workplace, we must therefore do more to try to select medical students whose learning style is conducive to effective doctoring and whose personality has the characteristics of stable contented team workers.

One of the remarkable features of this study is response rate to questionnaires. A 63.3% response rate from busy medical graduates who had been laboriously traced twelve years after they had entered medical school is highly creditable considering that the questionnaire consisted of four A4 sheets. By dint of this hard work, the authors had data on 1668 individuals to compare with their previous questionnaires.

This paper is a prime example of a paper which needs to be read in detail carefully and slowly if the full meaning is to come across. Although the authors have worked hard at an abstract, no abstract can do this paper justice in my opinion. I particularly commend the careful text in the section on multiple regressions which contracts strongly with the scattergun search for significance adopted by many authors. Path analysis is a very powerful and appropriate way of demonstrating correlations between variables. Plausible, causal inferences may then be drawn by bearing in mind the time dimension. The discussion is both thoughtful and pragmatic, focusing our attention on the implications of the correlations which the authors have found.

The tables, figures, definitions and additional files are all important features of this work which has been carefully constructed and referenced.

I commend this paper as a highly relevant contribution to the literature on well-being and performance of doctors. Its contents deserve careful analysis by those with responsibility for selection and admission to medical schools.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the
Discretionary Revisions (which the author can choose to ignore)

1. I think it’s worth another attempt to clarify the results paragraph in the abstract, particularly the second sentence which might be made clearer by something along the lines of “How doctors perceive their workplace climate and workload is predicted both by approaches to work and by measures of stress, burn out and satisfaction with medicine. These characteristics are partially predicted by trait measures of personality taken five years earlier.”

2. My other quibble is in the conclusion: Are causes and correlates mutually exclusive concepts? I would prefer to say that personality and learning style are causal correlates of approaches to work, etc.

3. What about the different career paths of doctors in this study. Is it relevant to doctors’ perception of work-load which branch of medicine they are working in?

Which journal?: Appropriate or potentially appropriate for BMC Medicine: an article of outstanding merit and interest in its field

What next?: Accept for publication in BMC Medicine after discretionary revisions

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

none