Author's response to reviews

Title: 'It gives you an understanding you can't get from any book'. The relationship between medical students' and doctors' personal illness experiences and their performance: a qualitative and quantitative study

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Version: 2 Date: 4 September 2007

Author's response to reviews: see over
24th August 2007

Dear Dr da-Silva,

RE: 2058021596131369 - 'It gives you an understanding you can't get from any book'. The relationship between medical students' and doctors' personal illness experiences and their performance: a qualitative and quantitative study

Please find attached our responses to the reviewers' comments. Our responses are in italics, and quotes from the manuscript are indented.

Reviewer #1: Tim Wilkinson

There are some discretionary points that could perhaps be given greater weight or exploration within the discussion:

1. Do the authors believe that the 43% response rate by newly qualified doctors to the questions might introduce some element of bias? If so, how might this bias be manifest?

We have added a paragraph on page 16 of the discussion addressing this point (please see below).

As with most surveys, it is useful to consider possible differences between respondents and non-respondents. In this case, the questions were asked junior doctors were mostly concerned with preparedness for starting work, rather than about personal illness experiences, and it therefore seems unlikely that non-respondents were put off responding to the questionnaire by the subject. However, it is worth
bearing in mind that more depressed, anxious or stressed individuals may not have responded, and it is conceivable that those individuals may have experienced more negative life events than the respondents.

2. It is stated that depression is negatively correlated with 3rd year examination scores. I would describe this more as a weak correlation and with a P value of 0.19, one could wonder whether in fact there is no correlation at all. I think the conclusions relating to this aspect could perhaps be watered down a little.

We thank Tim Wilkinson for alerting our attention to a typo which crept into the reporting of this statistic, which now reads

Spearman’s Rho = -0.13; p = 0.019 (p11)

And is therefore statistically significant at the 5% level.

3. Figure 2 requires a little discussion and explanation. The dip in anxiety scores at 1 to 2 years is perhaps a little unexpected and might call into question the amount of “noise” in the score itself, some sampling factors or maybe it is a true observation that requires some interpretation.

We have added a sentence on page 10 highlighting the small number of students in the group who reported a serious illness, injury of assault in the previous 1-2 years, and indicating that caution should therefore be exercised in interpretation of this result.

4. Finally, I was interested in the observation that tutors felt that life experience added to students’ abilities to perform as a doctor and to learn. This certainly accords with my own previous work in this area [1].

1. Wilkinson TJ, Wells JE, Bushnell JA. Are differences between graduates and undergraduates in a medical course due to age or prior degree? Medical Education 2004;38(11):1141-1146
We thank Tim Wilkinson for this reference, and have included a brief discussion of our findings in relation to his on page 17.

**Reviewer #2: Trudie Roberts**

- On page 4 in the final paragraph it would be of interest to know the time period ie are the results for the students seeking healthcare over one year, five years or ten years?

  We have now changed this sentence to include the time period, which was “during their time at medical school”.

- It would be useful to understand what the definition of a serious illness was and how this was communicated to the questionnaire respondents, as differing ideas of what constitutes a serious illness by individuals could affect the results.

  The exact wording of the questions is presented on page 7, and possible differences between medical students’ and junior doctors’ interpretation of the adjective “serious” are discussed on page 16.

  We have also added this sentence into the discussion on page 15:

    “Further qualification of the term “serious” in the questionnaire could also reduce possible differences in its interpretation.”

- The authors state the number of students and the doctors sent questionnaires. Presumably the numbers in table 1 are the respondents which would give a very high response rate and it would be useful to include this in the text as a percentage as this strengthens the findings.
The response rates to the questionnaires are presented on page 8 and have now been highlighted in the discussion on page 15.

• I am not a statistician and so I would suggest further review of the statistics are in order. My observations are that there appears to be some slight inconsistencies in that the investigators compute means, effect size and talk about trends which are parametric variables but use Spearman’s Rho and Mann Whitney tests which are none parametric tests. The Chi-squared test is appropriate. It might be useful if the authors test their data for normality and if they find it is then that’s fine and they could do the usual parametric tests giving the usual caveats. If the data is not normal it would be useful to know this and then the caveats need to be addressed at effect size and mean.

We have done this on pages 9 and 10.

• Finally is the Spearman’s Rho value of -1.34 on page 10 correct, it seems a little suspect.

Please see response to Tim Wilkinson above.

Reviewer #3: Erica Frank

We would like to thank Erica Frank for her comments and for her perspective on our manuscript. Her review has stimulated discussion and additional reading which has allowed us to improve the quality of the paper.

From the ms.' title onward, the authors grossly overstep their bounds. In particular they claim to speak about "medical students", but only have data from 1 UK med school.
The need for further studies encompassing other medical students is mentioned in the Discussion. We have additionally altered the first sentence in the Conclusion to make even clearer the fact that our results reflects only a sample of medical students (please see below), albeit a sample with a reasonable n of 640.

“This study provides evidence that the majority of medical students in our sample [bold added here for ease of reference] and newly-qualified doctors will have at least one illness experience, either themselves or in a close friend or relative.”

It's not only anecdotes about docs' personal illness experiences and their effect on pts (beginning of abstract) -- there's plenty of substantial data and literature from our Women Physicians' Health Study (and other sources). They paint a typically (and mythologically) bleak picture of dr's health status, and its relationship with our patients. Regarding the Healthy Doc=Healthy Patient relationship, they should start with a look at http://jama.ama-assn.org/cgi/reprint/291/5/637?maxtoshow=&HITS=10&hits=10&RESULTFORM AT=
to understand better what is going on here.

We thank Erica Frank for providing the reference to this article, and have now referenced it, and studies relating to the WPHS in the Introduction.

Regarding our health status, they emphatically state that it is poor, without any data that I can see to support it, and plenty of data (in the JAMA article, above) to refute it.

A differentiation must be made between doctors' physical and mental health. We state that doctors experience high levels of stress and mental illness, and
reference 6 studies (references 2-7). We agree the previous data on physical illness is limited, and were pleased to be made aware of Dr Frank’s JAMA article, which we have now referenced in the first paragraph, as mentioned above.

They seem almost disappointed on pg 16 that the depression data aren't worse.

We are confused as to how Erica Frank got this impression - we state in the discussion (now on page 17):

“it is reassuring that our cohorts had relatively low anxiety and depression.”