Reviewer's report

Title: Who Wants to be a Surgeon?

Version: 1 Date: 6 July 2006

Reviewer: Michael J Goldacre

Reviewer's report:

General

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

1. The opening sentence of the Introduction states that “the medical profession is generally representative of society as a whole.” This is manifestly not so. For example, it has high socio-economic status; and, in the past, its intake has been predominantly male. Currently in the UK, by contrast with the past, women are now heavily “over-represented” in the medical school intake as are people from ethnic minorities. This means that the second sentence of the Introduction is also out of date assuming that “the profession” means medicine as a whole. If the authors intention in this sentence is to write about surgery, the words “the profession” should be changed to “surgery.” (A better reference than those given about ethnic minorities and women in different branches of medical practice would be BMJ 2004, 329,597 using the whole web-based version including the extra tables. This is not intended to be a “compulsory” point but it runs on neatly from the first part of this paragraph which I think definitely needs to be changed.)

2. Study limitations, paragraph 3: “our results remain valid.” There is nothing in the paper about tests of validity. Validity is not the same as statistical power (“chi squared can be employed effectively”). And I think that the study is in fact hampered by lack of statistical power too, see below, so the point about being able to use chi squared tests doesn’t really contribute anything.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. In the second sentence of the Introduction, reverse this trend is not the right phrase. The authors have not described a trend.

2. In the Aims, it is too sweeping to state that the aim was “to find out what kind of person wants to be a surgeon,” which, I think to many readers, would imply information about personality or other attributes well beyond the basic demographic characteristics studied by the authors. The paper reports mainly on male-female differences and ethnicity.

3. Results: what was the response rate? 100%? Results, first sentence: “ethical” should presumably be “ethnic.”

4. Results, material on calculating the chi squared test: it isn’t conventional to spell out each step of a chi squared calculation a bit too much here! And the values don’t need 3 decimal places. The calculations on surgery, general practice and paediatrics aren’t strictly speaking independent of one another (if a higher percentage of women than men want a career in general practice, a lower percentage of women than men must want careers in other branches of practice, etc).

5. Results, para 5: It seems a bit sweeping to say that 22.3% of students did not know what they wanted to do at all. They did not yet know what branch of medicine they wished to pursue.

6. In the following paragraph on ethnicity, the authors should be cautious about writing “no significant differences.” It is evident from the table that, in most categories of ethnic group and specialty, the numbers are small and there simply isn’t the statistical power to detect such differences that may exist.
(Some differences by ethnic group do exist in career choices, in qualified doctors “see the BMJ paper cited above “but big numbers may be needed to show them.)

7. Conclusion, first sentence: it would be easier for the reader if the authors compared a percentage with a percentage, eg 18% of women, compared with 50% of men, chose surgery\[1]TM.

8. Conclusion, paragraph 3: the study is about career choices, not career prospects. And the conclusion about different ethnicities is not really reliable given small numbers (see above).

9. Study limitations, second paragraph: What about Chris McManus\[1]TMs work on medical students?

10. Study limitations, last paragraph: What is a “predicted future career”\[1]TM? Do the authors mean “actual future careers”\[1]TM here?

11. Figure 1: authors please justify! I don\[1]TMt think that this adds to the data in the table.

Discretionary Revisions (which the author can choose to ignore)

12. Conclusion, paragraphs 4 and 5. There are very sweeping statements here. This final part of the paper is about opinion, rather than research findings, so I suppose the authors should feel free to ignore my comments but here goes!
- “life-long conditioning”\[1]TM is it really life-long in respect of surgery? “or is it more accurate to say “that views held prior to entering medical school have lead women to believe\[1]TM
- “anyone who has the ability and ambition “I know what the authors mean, but there will inevitably be restrictions on the numbers entering surgery (for example, it is inconceivable that the 50% of men who said that they wanted a career in surgery will be able to have one). Selection will be inevitable, such that the authors statement is never likely to translate into reality. The authors mean, I think, that whereas selection is inevitable, it should not be based on discrimination against people with particular demographic characteristics.
- “and we have seen the benefits as a result\[1]TM What benefits does this mean?
- “Diversity “and “hence, numbers “are not inter-changeable: diversity could be increased without increasing numbers, and numbers could be increased without increasing diversity
- The penultimate sentence, about efforts throughout society, has a tub-thumping ring to it that is presumably intended to go well beyond choices for a career in surgery! “m not sure that it sits comfortably in a scholarly paper about surgery.
- And, finally, “m not sure about an “extremely slow process\[1]TM. Of course, UK medicine was male-dominated throughout most of history. But the recent gender reversal in medical school intake “ from predominantly male, to about half and half, to a substantial predominance of women “ happened really rather quickly once it finally started to happen!

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests