Author’s response to reviews

Title: Do peer review models affect clinicians' trust in journals? A survey of junior doctors.

Authors:

Jigisha Patel (Jigisha.Patel@biomedcentral.com)
Mary Pierce (mary.pierce@btinternet.com)
Stephanie Boughton (stephanie.boughton@biomedcentral.com)
Stephanie Baldeweg (stephanie.baldeweg@uclh.nhs.uk)

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Jigisha Patel; Mary Pierce; Stephanie L Boughton; Stephanie E Baldeweg Research Integrity and Peer Review

Response to editor’s comments

We have changed the title to:

Do peer review models affect clinicians trust in journals? A survey of junior doctors.

Response to reviewers comments.

Reviewer reports:

Reviewer #1: Dear authors,

Thank you for the opportunity to review this paper. Here are my suggestions for its improvement:

1) Please report n and % in the abstract

Thank you. This has been done.
2) Line 39 u have two dots at the end: based. Corrected.

3) Your question - How often do you look up information in scientific journals to aid your clinical decision making? - did not have a no answers - so in regards to the different answers respondents gave to this question - were there differences between respondents in the other answers they gave?

See response below to 3, 4 and 5.

Please also address in the discussion that you did not assess the main source of information these junior doctors go to for clinical decision making.

A sentence has been added to the discussion.

4) Similarly to above - have you compared differences between the answers given on the sociodemographic data and the rest of the questions?

>> You do say that - There is no comparative analysis because the subgroups were too small to obtain meaningful results, however gender wise, having ever done a peer review or never, as well having a postgraduate degree or not having one are some of the categories you could check differences for - as there is enough participants for that. also regarding those that have and those that have never published a paper.

5) When you do treat the sample as a whole - some statistics (chi squared tests) would be welcome - as on a sample of this size there is really no stat. difference between trustworthiness to NEJM137/178 (77%), and Lancet 129/178(72%). Also, it would be good instead of listing percentages to say what stat. differences you did find, e.d. in hearing about different types of peer review aside the decoupled and the post publication types.

Responses to the first part of point 3, 4 and 5.

Thank you for your suggestion to include some statistical analyses. We have considered this carefully. We know that this is a small study and have taken care to use language in the manuscript to avoid any over interpretation of the findings. Given the study limitations we feel that statistical analysis will generate p values in which we have no confidence and which at best will be meaningless and at worst will be misleading. We agree that gender differences and other subgroup differences would be interesting, but these are different questions and we believe need to be investigated via studies specifically designed to answer these questions. However, we can show the distribution of responses for gender, post-grad degree, no post grad degree, recent peer review experience and no recent peer review experience as an additional file. We note that when the responses are separated out in this way, our main conclusion remains unchanged – ie that doctors appear to trust peer review in long established journals with well-known names and trust open peer review less than single blind peer review, with no apparent differences between the subgroups shown. We have included a paragraph referring to the additional file in the manuscript, in the results section.
“Appendix 5 shows the distribution of responses according to the following subgroups: female, male, post graduate degree, no post graduate degree, experience of peer reviewing someone else’s work in the last year and no experience of peer reviewing someone else’s work in the last year. The distribution of responses to survey questions in these groups was similar to the distribution of responses for the 178 respondents as a whole. “

In response to the reviewer’s specific point about differences in respondent’s answers to the question related to clinical decision making, we show the subgroup responses by gender, post grad degree and experience of peer review in an additional file.

The distribution of responses is similar across all groups.

6) In the discussion you say - Doctors may feel they do not often need to directly refer to primary research in their day to day work. - please mention here the percentages of your study

This is a speculative statement made in the discussion. This question was not part of the questionnaire. We have included a sentence in the discussion.

“This study did not explore which sources of information junior doctors use for clinical decision making and it is possible that doctors do not view the published evidence as important in their day to day work. “.

Your finding that junior doctors find questionable the peer review process in the key journal in their field is very interesting - I would welcome your views on this.

The survey did not explore this question further, but we agree it is interesting. We speculate that junior hospital doctors are likely to have read the long established general medical journals, NEMJ, Lancet and BMJ while medical students, but would not have started to read specialist journals in their field until later in their training, once they had decided on their specialisations. It is possible that familiarity with the general medical journals from early in their careers conferred greater trust in their peer review processes over those of specialist journals which may not have been known to them for as long a period of time.

8) Additionally, while you have explored do they trust single blind more or less than the other types - the reasons behind this were not addressed in this study, but should be perhaps mentioned as limitation or in the discussion.

We have included the following in the limitations section.

“This survey did not aim to further explore the responses provided by the participants, for example it did not seek explanations from participants the reasons for their preference or otherwise of certain journals or models of peer review.”

9) Finally, although you acknowledge the non-representativeness of your sample, could you list the number of junior doctors in the UK - and describe perhaps in the UK system how much decision making they have during their training/practice.

Once fully registered, which all who participated in this survey were, doctors are able to prescribe as they wish and can make independent decisions on treatment plans for patients. However, in NHS hospitals there are likely to be treatment guidelines and doctors are likely to follow these and seek advice from senior colleagues. We have included a sentence in the discussion.

“In addition, hospitals often have their own clinical guidelines and there are senior colleagues available to give advice. Junior hospital doctors may feel they do not need to directly refer to primary research in their day to day work or to make independent decisions with all of these resources available to them.”

10) Conclusion - you say: explore the views of a group of hospital doctors - please put here also junior doctors.

We have revised to use the term ‘junior hospital doctors’ throughout the manuscript.

11) I would also suggest rewriting your final conclusion - it seems very normal (to me) that junior doctors do not wish to scrutinize already published papers - the purpose of the publication process and the peer review is to do so, therefore similar to other service, young doctors can have expectations that it is done properly and only with to use it as a finished product (even if such expectations are naive in regards to the current system).

Thank you. We have revised the conclusion.

>> Kind regards,

>> Mario Malicki

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Reviewer #2: The authors have proposed the interesting question of whether or not early-career/junior doctors who are not specifically conducting research understand peer review and are aware of various types of peer review and whether or not this knowledge influences clinical decision making. As the authors state in the manuscript, there does not seem to be any published research on this topic. Although the sample size of the study was relatively small (and this is acknowledged by the authors), I believe that this paper warrants publication pending revision.

>> Specific Comments:
1. Although the gender of individual survey recipients is not provided, the gender of the recipients are basically a 50%/50% split between men and women meaning that both sexes are well represented in the results.

2. On page 2 (in the conclusions section of the abstract), the authors refer to a lack of evidence that peer review works as a means of validation, however, on page 3 they cite a study (reference 2) which states that peer review is the best means by which research can be judged for publication. These statements seem contradictory, although later on page 3 they cite a 2007 study (reference 14) which indicates a lack of evidence that peer review achieves the perceived aim of validating research. Given the age of this study and the rapid changes in scholarly peer review processes, the authors may wish to update this reference if possible.

We agree this seems contradictory. The distinction is that peer review is perceived as a means of validation despite the lack of any objective evidence for this. There is a sentence in the manuscript that highlights this distinction between the perceived purpose of peer review and lack of evidence to support this perception.

“Furthermore, there is no objective evidence that peer review achieves the perceived aim of validating research.”

Research on peer review is very difficult and individual studies have limitations. Reference 14 is a Cochrane systematic review of 28 studies on peer review. We feel this represents the best reference for evidence of the efficacy of peer review in achieving its perceived aims. We are not aware of any updates to this systematic review or further large scale studies on peer review.

3. The authors should include a definition of "junior" doctors.

We have revised to use the term ‘junior hospital doctor’ throughout the manuscript. The term is defined as follows at the end of the introduction.

“…junior hospital doctors, defined as hospital doctors at any stage of training between full registration with the General Medical Council and consultant level….”.

4. The authors should further define or clarify the following statement made on page 11 (lines 210-212) "Due to the high level of competition for London based jobs, the group......this survey was highly selected." Could the authors comment on the selection criteria?

All core medical trainees and specialist registrars, which formed the majority of our respondents, have to apply for their posts via one national application process. The process scores applicants on several domains of achievement including, degrees, publications, quality improvement projects and teaching in addition to clinical skills, suitability and commitment to specialty, communication skills, professionalism and governance. The competition ratio (applicants: posts offered) varies in different specialties but is highest in London when compared with the rest of
the U.K. Therefore, those holding London posts will have the highest scores, with more academic achievements.

We have included the following in the limitations section:

“Due to the high level of competition for jobs in London, and a national selection process that credits research and other academic activities as well as clinical skills, it might be expected that our sample included a greater proportion with experience of scientific research and other academic activities than a country wide sample of junior doctors.”

Reviewer #3: This article covers a very practical topic. It is well-written and easy to understand.

The limitation of the paper is the statistical power, which has already been acknowledged by the authors in the article.

The results are not astonishing but very important.

However, we wish to draw your attention to minor typos and formatting issues in the references (e.g. Consistency for formatting of URL links, Ref No 3: Churchill D (position of comma), Ref No 6 Remove underline of volume, Ref No 17 punctuations). Upon these minor correction of typos this article is acceptable for publication.

Thank you. We have corrected and checked for further typos and formatted the references according to the journals instructions for authors.