Author’s response to reviews

Title: Misconduct in research: A descriptive survey of attitudes, perceptions and associated factors in a developing country

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Author’s response to reviews: see over
Sir,

COVER LETTER

Thank you for the rigorous review of our manuscript. The manuscript has been extensively revised in line with suggestions from the remaining reviewer. Below are our responses and details of the revisions made (in red) according to the recommendation of the reviewer.

1. Abstract: the results section should include the datum about awareness of actual misconduct conducted by colleagues, and link these results to the definition given. I would suggest to start this section with something like “half of respondents (50.4%) were aware of a colleague who committed misconduct, defined as “non-adherence to rules, regulations, guidelines, and commonly accepted professional codes or norms”

RESPONSE

This has been done (page 2; Abstract, section results) and it now reads:

Half of the respondents (50.4%) were aware of a colleague who had committed misconduct, defined as “non-adherence to rules, regulations, guidelines, and commonly accepted professional codes or norms”.

2. Introduction:
The paragraph introducing the authors’ previous study (page 3), needs re-writing. For one thing, it announces a list of eight “forms of misconduct” but then breaks the sentence at four. Moreover, given the heterogeneity of the behaviours in question, the authors should talk, here and elsewhere in the paper, either of “misconduct and questionable research practices” or use more generic words. The term wrongdoing, for example, which was used by an independent study cited in that same paragraph, would seem to be more appropriate.

RESPONSE
This has been done. The list of eight forms of misconduct has been mentioned and a generic word “research wrongdoing” has been added (page 3 last paragraph and page 4). The paragraph now reads:

The first study to report on research misconduct and other research wrongdoing in Africa revealed that 68.9% of a group of researchers in Nigeria admitted to having committed at least one of eight listed forms of scientific misconduct.[7] These eight acts of research misconduct were plagiarism; falsifying data; intentional protocol violations related to subject enrolment; intentional protocol violations related to procedures; selective dropping of data from ‘outlier’ cases; falsification of biosketch, resume or reference list; disagreements about authorship and pressure from a study sponsor (e.g. pharmaceutical company or device company) to engage in unethical practices.

3. Results:
Page eight, we should remind the reader what the definition of misconduct is: i.e. “Over 88% of researchers were concerned about the amount of scientific misconduct (defined as “non-adherence to rules, regulations, guidelines, and commonly accepted professional codes or norms”, unless differently specified)

…”

RESPONSE

In the second sentence of the result (page 9 line 3) we remind readers of our definition of scientific misconduct. The paragraph reads:

We previously reported on the personal involvement of these researchers in scientific misconduct, as well as possible behavioural factors that might have influenced such conduct.[7]
We now report on the researcher’s perception of research misconduct (defined as non-adherence to rules, regulations, guidelines, and commonly accepted professional codes or norms) and their attitudes and beliefs about research misconduct.

The presentation of the subheadings in the results has now been rearranged to conform to the subheadings in the extensively revised discussion.

4. Discussion:
As previously suggested, the authors should summarize all the results, not just the one that is most “pertinent”. Their main findings seem to be about: 1-concerns for SM; 2-beliefs about occurrence – and in particular the fact that falsification and plagiarism are perceived as the most common infractions; 3-awareness of misconduct occurring in work place; 4-factors perceived as important.

RESPONSE
The first paragraph summarizes our findings giving particular mention of the high perception that plagiarism and falsification had occurred in their institutions (page 13 first paragraph).

5. The section about general limitations (paragraphs 2 and 3) feels a bit out of place, and would need more development anyway. For example, the issue of breadth of definition is relevant to some questions (awareness of prevalence) but not others (beliefs about occurrence). Therefore, I think it would be clearer to the reader if this paragraph were removed entirely, or perhaps moved, with some cuts, towards the end of the paper.

RESPONSE
The paragraph on limitations of the study is now towards the end of the discussion (page 19). This was the initial placement in our first version of the manuscript, but we had to place it earlier in response to the recommendation of same reviewer.

6. For each of the four main findings listed above, the discussion section should make first comparisons with other literature, and then discuss possible methodological factors that can explain them away. When doing this, for each of the four findings, it is crucial that the authors compare similar to similar. I suggested this already previously, and although I appreciate the changes made by the authors, these in my opinion are still insufficient, and omit many important points of discussion. Based on previous studies and surveys on scientific misconduct, it is both logical and empirically supported to assume that the rate of admission will vary because of a number of factors: 1- whether surveys are about beliefs or actual experience; 2-whether surveys are about self-reporting or non-self reporting; 3-the nature of the behaviours being asked about (e.g. fabrication versus dropping outliers); 4-the wording of the survey itself; 5-who the respondents are: PhD students will have different perceptions from researchers, in turn different from e.g. research coordinators; 6-other methodological aspects such as how a survey is delivered. (note that handing out a survey is NOT a limitation. My meta-analysis suggested that handed out surveys might be MORE RELIABLE, because researchers might feel to have more control over their anonymity).

RESPONSE
The discussion has been extensively revised and discussed along the 4 subsections.

The challenges of comparing data has been acknowledge and stated (page 13 paragraph 2).

A careful selection of similar studies for comparison has been made and differences in study population, method and date of study highlighted when making comparisons e.g page 16 paragraph 2 reads:
Our findings do mirror the situation reported in some earlier studies (more than a decade ago) in the US and Europe.[16, 22] About half of our researchers said that they were aware of at least one case of scientific misconduct during the past five years, while in 1992, Kalichman and Friedman reported that 36% of 549 biomedical trainees at the University of California knew of an instance of scientific misconduct [22] and in 2001, Geggie reported from the United Kingdom that 55.7% of newly appointed consultants had observed some form of misconduct.[23]  

We have also tried to explain the significance and implications of our findings in the discussion.

7. Another finding that I think worth discussing is the fact, pointed out in the new version of the manuscript, that not all respondents that had admitted to committing misconduct think that misconduct in their work place occurred at all. There is an obvious contradiction here, which could suggest an incomplete understanding of the questions on behalf of respondents. So it would be important to know if other surveys had obtained similar inconsistencies.

RESPONSE:

There could be a plausible explanation for the seeming contradiction. The question on knowledge of acts of misconduct was limited to a 5 year period while the question on having EVER committed misconduct had no time frame. The act of misconduct by the respondents could have occurred more than 20 years ago while the same respondent could now be working in a different work place where he has neither committed any new misconduct nor seen any committed. We have, however, refrained from discussing this at length since it remains speculative and we could not find other surveys that reported similar results. We also did not make the rather lengthy discussion even longer and perhaps less focused.

8. Awareness of misconduct perpetrated by colleagues. Again, comparing with a few previous studies will not suffice. Some of the studies currently mentioned used other definitions of misconduct. Others used the same SMQ-R, but on a different class of respondents. These factors need to be examined carefully, before concluding that misconduct in Nigeria is higher. As I pointed out before, by the way, my meta-analysis showed that when surveys used broad definitions of misconduct, rates of non-self reports are perfectly compatible with the ones reported here. So, taken alone, this datum would NOT suggest that misconduct in Nigeria is actually higher. The data on self-reports, previously published by the authors, would suggest higher rates of misconduct in Nigeria. A datum that I find quite baffling, however, is that, in this previously published study, the authors reported that nearly 69% or respondents ADMITTED to at least one misbehavior. In this study, based on the same respondents, only 50% ca of them knows a colleague that
committed misconduct. In other words, we have more people admitting to misconduct than people who know of others that did it. This seems to be at odds with all other findings in western countries. It is very important to point this fact out, by making comparisons with other studies. I cannot think of any methodological factor that could explain this finding away. It could reflect genuine cultural idiosyncrasies of the African context (e.g. a widespread conspiracy of silence), but we should also consider the possibility that such inconsistencies reveal limitations in how respondents understood the questions they were asked about.

RESPONSE

This has been addressed in Page 16 last paragraph and it reads:

Another significant finding is that the percentage of researchers (51.4%) who were aware of any particular case of misconduct in their institution in the last five years was considerably lower than the 68.9% (from the same sample in our earlier report) who had admitted to have committed misconduct. Admittedly, the question on awareness of acts of misconduct in their institution was limited to the preceding 5 years, while the question on having ever committed scientific misconduct had no time limit, and this may offer a possible explanation for the observed difference. On the other hand, it may be argued that the observed difference reflects the inability of the institutions to detect research misconducts. Expectedly, scientists who engage in misconduct would not readily admit to their colleagues (unless anonymously) that they had participated in unethical behaviour.

9. Discretionary Revisions
A final overall comment concerns the writing style, which could benefit from some further improvement. The paper reads sufficiently well to be understood, but many sentences seem to lack key words and/or are structured in unorthodox ways. Content is more important than form, but correcting these defects would add further credibility to the work.

RESPONSE

We have tried to correct identified flaws in the writing style

APPRECIATION BY THE AUTHORS

We appreciate the extensive reviews by all six experts. This has helped in greatly improving the quality of the manuscript. We acknowledge the challenge sometimes of balancing the suggestions of each reviewer and satisfying all reviewers.

Thank you
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