Review of: "Prevalence of questionable research practices, research misconduct and their potential explanatory factors: A survey among academic researchers in The Netherlands"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

The paper "**Prevalence of questionable research practices, research misconduct and their potential explanatory factors: A survey among academic researchers in The Netherlands**" is an interesting and enjoyable read. It not only presents new data on the frequency of and reasons for questionable research practices (QRP) and research misconduct (RM) but it also presents a robust methodology and implementation of interesting solutions to the old problems in ways we measure scientific misbehavior. Considering the fact that this article is already reviewed and published, we will comment on it with the aim to broaden the discussion about the results and emphasize methodological advantages that should be followed in future similar articles.

Improvements of the methodology of the surveys

As emphasized in many earlier similar surveys, researching a sensitive topic such as RM and QRP involve facing the social desirability bias and increased requirement for the anonymity of respondents. Two measures, implemented during the data collection, increased the level of respondents' confidence in the anonymity of the process: the randomized response technique applied for questions on self-reported RM which reduced the influence of socially desirable bias, and a data collection conducted completely independent of the researcher which disabled that the respondents' identification data reach the authors of this research. However, applying these methods significantly depends on the resources available to the researcher and could be insurmountably challenging for researchers from low- and middle-income countries.

Moreover, this study comprehensively assesses the potential explanatory factors for research misbehaviors. To our knowledge, it was the first study to combine the most of the possible factors in one survey study. The detailed description of explanatory factors' scales used in this research (list of the sources from which they are collected, pilot tested, and presented with all relevant data) could be used as a starting point for further similar studies.

Frequency of QRP and RM

In the discussion of the prevalence of RM and QRP two interesting aspects could enrich the study's discussion first is comparison with other surveys from low- or middle-income countries, which also report higher rates than high-income countries [1][2] [3][4][5] and second is a comparison with surveys that employ a similar randomized response technique[6][7].

Despite a detailed and robust methodology, plagiarism is not included in the questionnaire, although it is the most frequent

form of research misconduct. This decision is quite surprising and not addressed in the article.

Disciplinary differences

The most surprising result from this study is the highest prevalence of falsification of data for scholars from Arts and Humanities, although these scholars are mostly engaged in non-empirical studies. Studies about the frequency of research misconduct in arts and humanities emphasize plagiarism, duplicate publication, and citation manipulation (e.g., excessive self-citation and mutual citation) as the most frequent forms of misbehaviors of humanities scholars[1][8][9]. We believe that this discrepancy in the results could have been affected by questions tailored for biomedical studies or disciplinary fields that include more empirical research. Furthermore, scholars from Arts and Humanities have the highest proportion of answers "not applicable" for 9 out of 11 QRP practices presented in this survey. Although all QRP questions have been tested in focus groups to tailor them appropriately for all scientific fields, no results were reported. Therefore, we conclude that future studies should consider designing separate QRP questions for the arts and humanities.
Arts and Humanities scholars also achieved the highest mean scores for exploratory scales, such as work pressure, and publication pressure, and the lowest mean scores for the organizational justice scale, which the article has not discussed. A possible explanation could be overemphasizing quantitative instead of qualitative criteria of the researchers' assessment[1]. This could significantly damage scholars in arts and humanities because they are more prone to publishing books instead of journal papers. Moreover, their journal papers receive fewer citations than papers from biomedicine or natural sciences.

Concluding, this paper provides a better understanding of influencing factors to research misbehavior and a robust methodology that can be used for further studies exploring different contexts and countries.

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