



EDITORIAL

Publishing articles in scientific journals: a concern for research misconduct or dishonesty (fabrication, falsification and plagiarism)

MS Laskar

Abstract

An area of concern in scientific research including medical research is misconduct or dishonesty like fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. This article focuses on the concepts of research misconduct with the objectives to discuss briefly on the extent of problem, various forms, possible reasons; methods of detection, and prevention. It is expected that this article will encourage the leaders of academic research groups to inform their students, future researchers and research associates about the ethical responsibilities of scientific research and publications, and to insure that, when they are given the responsibility for research and consequently submitting a paper, they are fully aware of the potential consequences to themselves and to their coauthors for violations of research ethical guidelines.

Key words: Scientific research, scientific publication, research misconduct, fabrication, falsification, plagiarism.

Background

With mounting force from the apex bodies and the corresponding institutions, the academicians are under immense pressure to perform in the form of publications in peer reviewed journals.¹ However, authors are expected to comply with research ethics when conducting a research and publishing in scientific journals. Academic integrity and research ethics are an integral part of the good scientific research.¹

A quality research done and published in a peer reviewed journal becomes a source of information for other researchers and readers who seek knowledge.¹ In this era of evidence-based medicine, to impart best care for the patients, it is mandatory for the research work published to have certain values of truth, trust, honesty, and responsi-

bility.² For a researcher to uphold high-quality standards, these values should be applied at all levels of the research process, beginning from planning of the study, methodology, data collection, observations, analysis, discussion and conclusion including the tables and figures used.³

Research misconduct

An area of concern in scientific research including medical research is misconduct or dishonesty. Publications in a peer reviewed journal are an important measure of performance in medical institutions; however, today, similar to all other aspects of human life, even research in medicine has seen a tremendous upsurge in various forms of research misconduct or dishonesty, which means fabrication, falsification, or plagiarism in proposing, performing, or reviewing

research, or in reporting research results.^{1,4}

The integrity of research depends on the integrity of the data and the data record. As fabrication and falsification call into question the integrity of data and the data record, they represent serious issues in scientific ethics. Fabrication is the practice of inventing or making up data or results and recording and/or reporting them in the research record.^{4,5} Falsification is the practice of omitting or altering research materials, equipment, data, or processes in such a way that the results of the research are no longer accurately reflected in the research record.^{4,5} Both of these schemes are probably among the most serious offenses in scientific research as they challenge the credibility of everyone and everything involved in a research effort. These offenses make it very difficult for scientists to move forward as it is unclear to anyone what if anything is true and can be trusted and consequently can lead students and colleagues to waste precious time, effort, and resources investigating dead ends.

Many people think of plagiarism as copying another's work or borrowing someone else's original ideas. But terms like "copying" and "borrowing" can disguise the seriousness of the offense.⁶ According to the Merriam-Webster online dictionary, to "plagiarize" means: a) to steal and pass off (the ideas or words of another) as one's own, b) to use (another's production) without crediting the source, c) to commit literary theft, or d) to present as new and original an idea or product derived from an existing source.⁷ In other words, plagiarism is an act of fraud. It involves both stealing someone else's work and lying about it afterward.¹ According to University of Oxford, plagiarism is presenting else's work or ideas as someone's own, with or without their consent, by incorporating it into his or her work without full acknowledgment.⁸ All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition.

Some researchers considered plagiarism is

the most unethical practices involve substantial reproduction of another study (bringing no novelty to the scientific community) without proper acknowledgement.⁹ If such duplicates have different authors, then they may be guilty of plagiarism, whereas papers with overlapping authors may represent self-plagiarism, and simultaneous submission of duplicate articles by the same authors to different journals also violates journal policies.⁹

A crucial distinction between falsification, fabrication, and plagiarism and error or negligence is the intent to deceive.¹⁰ When researchers intentionally deceive their colleagues by falsifying information, fabricating research results, or using others' words and ideas without giving credit, they are violating fundamental research standards and basic societal values.¹⁰ These actions are seen as the worst violations of scientific standards because they undermine the trust on which science is based.¹⁰

Reasons for research misconduct

Some of the reasons to research misconduct could be- lack of originality; lack of an inquisitive mind and lack of confidence in the expression of innovation and possibly lack of adequate knowledge.¹ Plagiarism may be a result of easy accessibility to text on net, laziness to express and a desire to lengthy expression. It should be condemned.¹

How to detect research misconduct

Manual verification is mandatory to detect research misconduct although now a days, many software are also available to check and detect plagiarism online and offline. In case of data authenticity, journal editors can verify asking data set/file from the authors and also can make query to the concerned authors affiliation department and institution for checking the ownership of the related data. It is difficult, time consuming and depends on the willingness of the concerned parties. Sometime they may respond for the benefit of their organization to avoid their name of being in possible research misconduct scandal.

How to deal with research misconduct

Fairly few countries have developed national responses to allegations of research misconduct and formal governmental mechanisms exist or are in development in Australia, Canada, China, Denmark, Finland, Germany, India, Norway, Poland, Sweden, and the United States; however, the most formal, developed, and experienced systems exist in the United States and Denmark.¹¹

If the manuscript is a pure copy and paste material, then editors have the right to reject it uprightly and in such cases, the editors must inform and seek response from the head of the department and the institution in which the research was conducted.¹ In the wake of plagiarized content being received from eminent researchers and reputed institutions, such authors should be blacklisted, and their work in future should be scrutinized with extra effort. If the manuscript is worth publishing, in terms of new ideas but with a major amount of plagiarism, the author is encouraged to rewrite and resubmit.¹² In the case of joint publications as in manuscripts with multiple authors, all the authors are held responsible for the misconduct.¹³ The submitted papers can be retracted and investigations often lead to disciplinary action.¹⁴ The editors of a journal are to be clear about guidelines and rules to follow them. When authors submit a paper, authors need to read the journal's guide for authors/ authors instructions carefully and adhere to the conditions; they have to specify co-authors' contributions and all have to sign that they are submitting under the journal's terms, and have to sign a declaration that they have read, understood and will abide by the guide for authors/ authors instructions.¹⁴ If they have signed it and do not follow it, they can be held accountable.

The policy of National Institute of Health regarding research misconduct is intended to enable allegations of research misconduct to be processed fairly, confidentially, and promptly.¹⁵

It must be difficult to deal with research misconduct when someone does it knowingly

and repeatedly. It is quite true as quoted in an educational module for 'Responsible Conduct of Research' by Columbia University, "Someone who would knowingly lie about research data or steal someone else's ideas, according to the bioethicist Arthur Caplan, suffers from lapsed morals. All the information in the world about research misconduct and the responsible conduct of research probably would not change his or her behavior, Caplan says. In fact, a scoundrel taking part in training programs dedicated to these issues might actually get better ideas about performing misdeeds."¹⁶ This is very important to bear in mind when taking action against the person performing research misconduct.

The following suggestions to respond to suspected violations of professional standards may also be helpful.¹⁰ Self-regulation ensures that decisions about professional conduct will be made by experienced and qualified peers. Someone who witnesses a colleague engaging in research misconduct has an unmistakable obligation to act. Scientists and their institutions should act to discourage questionable research practices through a broad range of formal and informal methods in the research environment. The circumstances surrounding potential violations of scientific standards are so varied that it is impossible to lay out a checklist of what should be done. Expressing concern about a situation or asking for clarification generally works better than making charges. Another possibility is to discuss the situation with a good friend or trusted adviser. Institutional policies generally divide investigations of suspected misconduct into an initial inquiry to gather information and a formal investigation to reach conclusions and decide on penalties.

It is worth to mention that bad seeds may be transformed by researchers through some process of dealing with research misconduct which is not the goal. Rather, the goal is to provide information to researchers about what constitutes misconduct, how to report it, and how institutions can deal with it, and to identify some practices that might decrease

the risk of unwitting or deliberate research misconduct. It is expected that this article will encourage the leaders of academic research groups to inform their students, future researchers and research associates about the ethical responsibilities of scientific research and publications, and to insure that, when they are given the responsibility for research and consequently submitting a paper, they are fully aware of the potential consequences to themselves and to their coauthors for violations of research ethical guidelines.

References

1. Shankar SV, Amita K. Plagiarism in medical research: knowns and unknowns. *J Med Sci Health* 2015;1(3):1-4.
2. Gasparyan AY, Aivazyan L, Kitas GD. Biomedical journal editing: elements of success. *Croat Med J* 2011;52:423-8.
3. Masic I. Plagiarism in scientific research and publications and how to prevent it. *Mater Sociomed* 2014;26:141-6.
4. The Office of Research Integrity. US Department of Health & Human Services. Definition of Research Misconduct. Available from: <https://ori.hhs.gov/definition-misconduct> (Accessed on June 15, 2017).
5. The Web Guide to Research for Undergraduates (WebGURU), Northeastern University, United States of America. Falsification/ fabrication of data. Available from: <http://www.webguru.neu.edu/rofes-sionalism/research-integrity/fundamental-types-research-dilemmas/falsificationfabrication-data> (Accessed on June 15, 2017).
6. Committee on Science, Engineering, and Public Policy. National Academy of Sciences; National Academy of Engineering; Institute of Medicine of the National Academies. On being a scientist: a guide to responsible conduct in research: 3rd Edn. National Academies Press: Washington DC, 2009. Available from: <http://nap.edu/12192> (Accessed on June 15, 2017).
7. What is plagiarism? Available from: <http://www.plagiarism.org/article/what-is-plagiarism> (Accessed on June 15, 2017).
8. Merriam-Webster Online Dictionary. Available from: <https://www.merriam-webster.com/dictionary> (Accessed on June 15, 2017).
9. Plagiarism. University of Oxford. Available from: <https://www.ox.ac.uk/students/academic/guidance/skills/plagiarism?wssl=1> (Accessed on June 15, 2017).
10. Errami M, Garner H. A tale of two citations. *Nature* 2008;451:397-9.
11. Council of Science Editors. White Paper on Publication Ethics. Available from: <https://www.councilscienceeditors.org/resource-library/editorial-policies/white-paper-on-publication-ethics/3-2-international-models-for-responding-to-research-misconduct/> (Accessed on June 15, 2017).
12. Committee on Publication Ethics. COPE. Code of Conduct and Best Practice Guidelines for Journal Editors. Available from: <http://www.publicationethics.org/resources/code-conduct> (Accessed on June 15, 2017).
13. Ali J. Plagiarism: An editor's concern. *Int J Pharm Investig* 2011;1:129-30.
14. Mayer T. Advice on dealing with research misconduct. Available from: <https://www.elsevier.com/editors-update/story/publishing-ethics/advice-on-dealing-with-research-misconduct> (Accessed on June 15, 2017).
15. National Institute of Health, The United States of America. A guide to the handling of research misconduct allegations. 2012. Available from: https://oir.nih.gov/sites/default/files/uploads/sourcebook/documents/ethical_conduct/guide-handling_research_misconduct_allegations.pdf (Accessed on June 15, 2017).
16. Responsible Conduct of Research Courses Portal- Research Misconduct. Available from: http://ccnmtl.columbia.edu/projects/rcr/rcr_misconduct/introduction/index.html (Accessed on June 15, 2017).

Suggestion for citation of the above:

Laskar MS. Publishing articles in scientific journals: a concern for research misconduct or dishonesty (fabrication, falsification and plagiarism). *Mediscope* 2017;4(2):1-4.