

Research Irresponsibility and Misconduct: Predisposing Factors and Consequences

George Uchenna Eleje^{1,2,3*}, Lydia Ijeoma Eleje⁴, Chigozie Geoffrey Okafor³

¹Medical Research Society (MRS), Tropical Journal of Medical Research, Nnamdi Azikiwe University, Awka, Nigeria.

²Effective Care Research Unit, Department of Obstetrics and Gynecology, Nnamdi Azikiwe University, Awka, Nigeria.

³Department of Obstetrics and Gynecology, Nnamdi Azikiwe University Teaching Hospital, PMB 5025, Nnewi, Anambra State, Nigeria. ⁴Department of Educational Foundations, Nnamdi Azikiwe University, Awka, Nigeria.

ABSTRACT

Scientific misconduct can have serious consequences, such as avoidable disease or human loss as a result of erroneous information in the literature or the ongoing citation of retracted work. When current research or effort is based on previous, questionable, or fraudulent research, it can waste resources—both human and financial. The research careers of those who participate in misconduct may suffer as a result of article retractions and reputational consequences. Lack of appropriate training and skills, insufficient supervision or mentoring of the researcher, insufficient information, professional pressures, the researcher's personal psychology, and bureaucracy are all risk factors for research misconduct. The repercussions of research misconduct include dismissal from duty, imprisonment, suicide, failure to gain promotions, loss of editorships, dwindling research grants, graduate students unwillingness to join a research group, and early retirement. Academics should make every effort to prevent it.

INTRODUCTION

Researchers are expected to obey the ethical, legal, and professional rules that govern study. The consequences of unethical research activity can be severe, even death. Misconduct has the long-term effect of diminishing trust among coworkers. It may make it more difficult for colleagues at the same university to obtain grants since it may erode confidence between researchers and funding organisations. More crucially, scientific misconduct can weaken public trust in scientists' ability and morals [1].

Research misconduct is defined as behaviours or dubious research procedures that fail to fulfil the standards of ethics, research, and scholarship required to maintain the integrity of study [1]. It can be damaging to people and the environment, waste resources, undermine research credibility, and jeopardise the scientific record [1]. There are various risk factors and consequences for research misconduct, which are discussed more below.

OPEN ACCESS

*Correspondence:

Dr. George Uchenna Eleje
Medical Research Society
(MRS), Tropical Journal Of
Medical Research, Nnewi,
Nigeria.

Tel: +234806811744

Email:

georgel21@yahoo.com;
gu.eleje@unizik.edu.ng

Specialty Section:

This article was submitted to
Editorial, a section of TJMR.

Citation:

GU Eleje, LI Eleje, CG Okafor,
Research misconduct-
predisposing factors and
Consequences. *J Med Res.*
2023;22(1);i-iv
DOI: 10.5281/zenodo.8371020

Access Code



<http://tjmr.org.ng>

Risk factors for research irresponsibility and research misconduct

- a. **Inadequate training and skills:** Another cause of research misconduct is a lack of training on best practises and ethical principles to follow as a researcher [2].
- b. **Inadequate supervision or mentoring:** This refers to instances in which researchers, particularly early career researchers, may not receive adequate and appropriate support from immediate supervisors [2].
- c. **Inadequate knowledge:** Research misconduct can arise when a researcher lacks adequate knowledge of the topic/subject or research best practises. Carelessness in doing and reporting research is also considered research misconduct [2].
- d. **Career pressures:** The unreasonable pressure that researchers endure is a major factor related with research misconduct. They may carry out innovative research in a fast-paced atmosphere, published often in peer-reviewed journals, and obtain financing for research initiatives in order to develop their research career. This, combined with the necessity to manage various duties under tight deadlines, generate unnecessary stress, leading to intentional research misconduct [2].
- e. **Personal psychology of the researcher:** Some researchers were highly motivated by a desire to swiftly establish a strong professional reputation or even financial gain, which could lead to research misconduct.
- f. **Bureaucracy:** Bureaucracy is another acknowledged contributor to research misconduct [2, 3].

Repercussions of research misconduct

Misconduct in research has a number of consequences. Researchers are expected to obey the

ethical, legal, and professional rules that govern their studies. The consequences of unethical research activity can be severe, even death. Misconduct has the long-term effect of diminishing trust among coworkers. It may make it more difficult for colleagues at the same university to obtain grants since it may erode confidence between researchers and funding organisations. More crucially, scientific misconduct can weaken public trust in scientists' abilities and morals [1].

Consequences of research misconduct

Scientific misconduct can have serious consequences, such as avoidable disease or human loss as a result of erroneous information in the literature or the ongoing citation of retracted work. When current research or effort is based on previous, questionable, or fraudulent research, it can waste resources—both human and financial.

Research misconduct cases must be reported to funding bodies on a regular basis, which can be costly to the institution financially and destructive to the careers of those involved. The research careers of those who participate in misconduct may suffer as a result of article retractions and reputational consequences.

Failure to earn promotions, loss of editorships, drying up of research money, and graduate student unwillingness to join a research group are all consequences.

Examples of consequences of research misconduct

Research misconduct has a number of consequences. These are enunciated below [4-7].

a. Dismissed

Andrew Wakefield, a British doctor, rose to prominence following his spectacular 1998 study that claimed a link between vaccination and autism. His paper resulted in a decrease in vaccination rates throughout the United Kingdom. However, Wakefield drew even greater attention when it was revealed that his study was mostly based on fake data. He was removed from the medical register in

2010 and is no longer allowed to practice medicine in the UK [5].

Joachim Boldt, a once-prominent colloid researcher in Germany, lost his post as professor at the University of Giessen in 2011 after questions about the legitimacy of 90 research articles appeared. Boldt's several papers have been retracted. Yoshitaka Fujii, a Japanese anesthesiology researcher, was discovered in 2012 to have faked data and listed coauthors in nearly 170 journals, breaking Boldt's record and setting a new standard for misconduct. His position as a professor at Toho University has been terminated [5].

b. Imprisoned

Eric Poehlman, an American medical researcher, fabricated data for many hormone therapy trials in order to obtain millions of dollars in funding [5]. He was charged with a felony after being uncovered, made a guilty plea, and received a one-year prison sentence in 2006. He was also barred from ever taking federal money again [5].

c. Executed

In 1926, Austrian biologist Paul Kammerer challenged Darwin's theory of evolution by conducting toad tests that supported the alternative Lamarckian theory [5]. According to his denials, his toad's ostensibly acquired features (black foot pads) were fabricated by injecting black ink. Six weeks after the India ink accusation was made public, Kammerer committed suicide [5].

d. Relegation

These examples of scientific misconduct are less dramatic than those mentioned above, but they can nonetheless have serious consequences. Not getting promoted, losing editorships, having fewer research grants available to them, and graduate students being hesitant to join a research group are all consequences [5]. In one case, a polymer researcher produced a significant discovery and used his fame to get a better job at another company. The researcher "oversold the curability of his polymers, if not outright lied about it," as it was

later discovered. The researcher's name became linked with unreplicable discoveries, and he was downgraded to a less responsible job before retiring early. Justice can be slow to arrive in cases of scientific wrongdoing, but repercussions usually do [5].

e. Early Retiring

Concerning the allegations of wrongdoing levelled against late-nineteenth-century Vienna embryologist Samuel Leopold Schenk, *Theorie Schenk*, a book by Schenk, was published in 1898 regarding the effect on the gender ratio (Schenk's theory) [6]. According to the book, women who want to conceive may be able to select the sex of their child by changing their diet to effect egg maturation. This unusual combination of a scientific monograph and a best-selling self-help book drew a lot of attention, but it also prompted the Vienna Medical Association and, later, the University of Vienna Senate to accuse Schenk of weak science, self-promotion, quack medicine, and choosing the incorrect publisher. Schenk's formal allegations were dismissed in 1900, after he received the unusually harsh sentence of early retirement. Schenk passed away two years later [6].

CONCLUSION

Misconduct in research is a violation of scientific principles. Even if they had no long-term consequences, preventing and dealing with them would be critical. Lack of relevant training and skills, insufficient supervision or mentoring of the researcher, insufficient knowledge, professional pressures, the researcher's personal psychology, and bureaucracy could all be risk factors. Individual harm, reputational harm to the transgressor's firm and the publication that published the work, direct financial costs, greater social costs, and associated opportunity costs are only a few of the possible repercussions of research misconduct.

REFERENCES

1. Bouter L. Research misconduct and questionable research practices form a

- continuum. *Account Res.* 2023 Mar 3:1-5. doi: 10.1080/08989621.2023.2185141.
2. George E. Research misconduct: Reasons and types of research misconduct. April 3, 2023. Available at: <https://researcher.life/blog/article/research-misconduct-reasons-and-types/#:~:text=A%20lack%20of%20oversight%20and,or%20on%20research%20best%20practices.>
 3. Li D, Cornelis G. Defining and Handling Research Misconduct: A Comparison Between Chinese and European Institutional Policies. *J Empir Res Hum Res Ethics.* 2020 Oct; 15(4): 302-319. doi: 10.1177/1556264620927628.
 4. Clarke O, Chan WYD, Bukuru S, Logan J, Wong R. Assessing knowledge of and attitudes towards plagiarism and ability to recognize plagiaristic writing among university students in Rwanda. *High Educ (Dordr).* 2023;85(2):247-263. doi: 10.1007/s10734-022-00830-y.
 5. Enago Academy. The Effect of Scientific Misconduct on a Researcher's Career. October 19, 2021. <https://www.enago.com/academy/effect-of-scientific-misconduct-on-researchers-career/>.
 6. Buklijas T. Publicity, politics, and professoriate in fin-de-siècle Vienna: The misconduct of the embryologist Samuel Leopold Schenk. *Hist Sci.* 2020 Dec;58(4):458-484. doi: 10.1177/0073275320914140.
 7. National Academies of Sciences, Engineering, and Medicine; Policy and Global Affairs; Committee on Science, Engineering, Medicine, and Public Policy; Committee on Responsible Science. *Fostering Integrity in Research.* Washington (DC): National Academies Press (US); 2017 Apr 11. 5, Incidence and Consequences. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK475945/>.