

Scientific Watch January 2024 (n°11)

The scientific watch led this month to the selection of **26 papers**. Seven of them focus on scientific publishing [1-7]. Ten address misconduct and questionable research practices [8-17]. Six of them deal with issues related to new research practices [18-23]. Two address education and training [24], [25]. The last one relates on research evaluation [26].




FOCUS OF THE MONTH

Retraction notices: is transparency always desirable?

In 2023, a study showed that around 74% of the retraction notices indexed in Web of Science did not disclose information about the institutional investigations (i.e. carried out in research institutions) that may have led to the withdrawal of papers.¹ The authors thus recommended that the [Committee on Publication Ethics](#) should make this disclosure mandatory. For this researcher from the University of Singapore [1], however, such a systematic communication in retraction notices is not always desirable. For instance:

- In cases where there has been no misconduct even though the article was retracted (e.g. honest errors), disclosure may unfairly damage the reputation of those involved;
- When the misconduct does not affect the content of the paper, it can lead to confusion regarding the validity of the results;
- A mere suspicion of misconduct can also undermine public trust, as the public may not examine the details of each case;
- Legal constraints may prevent the disclosure of some information, or disclosure may place the persons concerned in a difficult position;
- Investigation procedures are lengthy. This obligation should not delay the retraction of an article when its content is invalid (whatever the conclusions regarding misconduct).

As the institutions do not always publish investigation reports, these notices may be the only means of providing information on how misconduct affects results. The author therefore proposes to retrospectively add information to the notice once the investigations are completed, for proven misconduct and only when content of the article is affected.

[1] B. L. Tang, « Potential Issues in Mandating a Disclosure of Institutional Investigation in Retraction Notices », *Science and Engineering Ethics*, vol. 30, art. 1, janv. 2024, doi: [10.1007/s11948-024-00468-2](https://doi.org/10.1007/s11948-024-00468-2). 

¹ Xu, S. B., Evans, N., Hu, G., & Bouter, L. (2023). What do retraction notices reveal about institutional investigations into allegations underlying retractions? *Science and Engineering Ethics*, 29(4), 25. <https://doi.org/10.1007/s11948-023-00442-4>.



SCIENTIFIC PUBLISHING

Effect of editorial policy on reproducibility

This international team is assessing the impact of an editorial policy on the reproducibility of articles published in *Management Science*. Like several other journals, *Management Science* introduced a policy in 2019 requiring authors to provide data, programmes and other information supporting the results they publish. The team analysed 334 articles published before the policy came into force and 447 articles published afterwards. They relied on 753 reports from 733 reviewers who volunteered more than 6,500 hours to replicate the results of studies for which data were available.

- Before 2019, only 12% of studies were accompanied by replication material - which was then voluntarily shared by the authors. Of these 12%, 55% could be reproduced or widely reproduced according to the peers participating in the experiment.
- After 2019, all published studies provided replication material, in accordance with the new policy. Of these studies, 67.5% could be reproduced or widely reproduced. However, for 29% of the articles, the replication material did not provide access to all the information needed to reproduce the results, in particular because some data were protected in different ways (e.g. confidentiality).

This limited access to data is the main barrier to reproducibility identified in this study. The team therefore made several recommendations, such as sharing de-identified data for the sole purpose of reproducibility, agreements with subscription databases to obtain access, restricted sharing of confidential data with a designated person from the scientific journal or a third party who can certify reproducibility.

[2] M. Fišar, B. Greiner, C. Huber, E. Katok, and A. I. Ozkes, « Reproducibility in *Management Science* », *Management Science*, dec. 2023, doi: [10.1287/mnsc.2023.03556](https://doi.org/10.1287/mnsc.2023.03556). 


Retraction and other editorial responses

- [3] M. J. Ali and A. Djalilian, « Readership awareness series – Paper 8: Research ethics and 'editorial expressions of concern' », *The Ocular Surface*, jan. 2024, doi: [10.1016/j.jtos.2024.01.007](https://doi.org/10.1016/j.jtos.2024.01.007).
- [4] M. J. Ali and A. Djalilian, « Readership awareness series – Paper 9: Retraction of a publication », *The Ocular Surface*, jan. 2024, doi: [10.1016/j.jtos.2024.01.008](https://doi.org/10.1016/j.jtos.2024.01.008).
- [5] A. Grey, A. Avenell, and M. J. Bolland, « Ten Years later: Assessments of the integrity of publications from one research group with multiple retractions », *Accountability in Research*, available online: dec. 2023, doi: [10.1080/08989621.2023.2295996](https://doi.org/10.1080/08989621.2023.2295996).



- [6] P. Herrera-Añazco, D. Fernandez-Guzman, F. Barriga-Chambi, J. K. Benites-Meza, B. Caira-Chuquineyra, and V. A. Benites-Zapata, « Retraction of health science articles by researchers in Latin America and the Caribbean: A scoping review », *Developing World Bioethics*, available online: jan. 2024, doi: [10.1111/dewb.12439](https://doi.org/10.1111/dewb.12439).


Predatory journals

- [7] K. Talari and V. Ravindran, « Predatory journals: How to recognise and keep clear! », *Journal of the Royal College of Physicians of Edinburgh*, vol. 53, n° 4, p. 232-236, dec. 2023, doi: [10.1177/14782715231215525](https://doi.org/10.1177/14782715231215525). 

MISCONDUCT AND QUESTIONABLE RESEARCH PRACTICES

Occurrence of questionable practices in Pakistan

This study, carried out by researchers from Pakistan and Qatar, explores the frequency of questionable research practices among members of Pakistani medical and dental faculties. According to the authors, this online survey conducted in 2022 is one of the first of its kind in South-East Asia. Of the 654 respondents, all stated that they engaged in inappropriate research practices (or misconduct) on at least one occasion. In particular: 61% stated that they carried out research on humans without ethical approval more than once; 68% stated that they fabricated data more than once, 80% added one or more authors more than once without their contribution being justified, and 86% omitted one or more authors from a publication more than once. Authors then discuss the various factors that can encourage such practices: a research culture that is still in its infancy or the lack of effective control bodies.

- [8] A. Fahim, A. Sadaf, F. H. Jafari, K. Siddique, and A. Sethi, « Questionable research practices of medical and dental faculty in Pakistan – a confession », *BMC Medical Ethics*, vol. 25, n° 1, p. 11, jan. 2024, doi: [10.1186/s12910-024-01004-4](https://doi.org/10.1186/s12910-024-01004-4). 


Integrity of clinical trials

- [9] N. J. DeVito, J. Morley, and B. Goldacre, « Barriers and Best Practices to Improving Clinical Trials Transparency at UK Public Research Institutions: A qualitative interview study », *Health Policy*, available online: jan. 2024, doi: [10.1016/j.healthpol.2024.104991](https://doi.org/10.1016/j.healthpol.2024.104991). 
- [10] L. Zhao *et al.*, « Primary Prevention of Venous Thromboembolism for Cancer Patients in Randomized Controlled Trials: A Bibliographical Analysis of Funding and Trial Characteristics », *Research and Practice in Thrombosis and Haemostasis*, vol. 8, n° 2, art. 102315, jan. 2024, doi: [10.1016/j.rpth.2024.102315](https://doi.org/10.1016/j.rpth.2024.102315). 



- [11] C. H. Emmerich, R. Bernard, T. Steckler, and A. Bepalov, « The EQIPD Quality System – Assessment and certification procedures », *Journal of Neuroscience Methods*, art. 110053, available online: dec. 2023, doi: [10.1016/j.jneumeth.2023.110053](https://doi.org/10.1016/j.jneumeth.2023.110053).

Excessive exclusion of research participants

- [12] M. D. Wang and K.-T. Hau, « Flagging insufficient effort responses in surveys: Stopping rule to prevent insufficient or excessive removal of doubtful data », *Acta Psychologica*, vol. 243, art. 104135, available online: janv. 2024, doi: [10.1016/j.actpsy.2024.104135](https://doi.org/10.1016/j.actpsy.2024.104135). 

Questionable practices in tourism research

- [13] K. Czernek-Marszałek and S. McCabe, « Sampling in qualitative interview research: criteria, considerations and guidelines for success », *Annals of Tourism Research*, vol. 104, art. 103711, jan. 2024, doi: [10.1016/j.annals.2023.103711](https://doi.org/10.1016/j.annals.2023.103711).

Conflicts of interest

- [14] L. Falciola and M. Barbieri, « Disclosure of patenting activities within scientific publications as potential conflicts-of-interest: Evidences from biomedical literature », *World Patent Information*, vol. 76, art. 102251, available online: jan. 2024, doi: [10.1016/j.wpi.2023.102251](https://doi.org/10.1016/j.wpi.2023.102251).


Reproducibility of nutrition research

- [15] S. Forester, E. Jennings-Dobbs, and B. Burton-Freeman, « Development of a Comprehensive Food Data Citation Standard: A Surprising Gap in the Nutrition Research Literature », *Current Developments in Nutrition*, vol. 8, n° 1, art. 102048, jan. 2024, doi: [10.1016/j.cdnut.2023.102048](https://doi.org/10.1016/j.cdnut.2023.102048). 

Issues related to public communication of science

- [16] U. Samarasekera, « Peter Hotez: physician-scientist-warrior combating anti-science », *The Lancet*, vol. 403, n° 10422, p. 134, jan. 2024, doi: [10.1016/S0140-6736\(24\)00007-2](https://doi.org/10.1016/S0140-6736(24)00007-2).




Relationship between ethics and integrity with regard to misconduct

- [17] A. Muthanna, Y. Chaaban, and S. Qadhi, « A model of the interrelationship between research ethics and research integrity », *International Journal of Qualitative Studies on Health and Well-being*, vol. 19, n° 1, art. 2295151, available online: dec. 2024, doi: [10.1080/17482631.2023.2295151](https://doi.org/10.1080/17482631.2023.2295151). 




NEW RESEARCH PRACTICES


Generative artificial intelligence systems

- [18] S. Benchekroun, « The robot uprising is here: Is scholarly publishing ready? », *Learned Publishing*, vol. 37, n° 1, p. 66-68, jan. 2024, doi: [10.1002/leap.1595](https://doi.org/10.1002/leap.1595). 
- [19] D. Guo, Y. Fu, and Z. Zhu, « Letter to the editor "A Review of Top Cardiology and Cardiovascular Medicine Journal Guidelines Regarding the Use of Generative Artificial Intelligence Tools in Scientific Writing" », *Current Problems in Cardiology*, art. 102408, available online: jan. 2024, doi: [10.1016/j.cpcardiol.2024.102408](https://doi.org/10.1016/j.cpcardiol.2024.102408).
- [20] T. G. Heck, « What artificial intelligence knows about 70 kDa heat shock proteins, and how we will face this ChatGPT era », *Cell Stress and Chaperones*, vol. 28, n° 3, p. 225-229, may 2023, doi: [10.1007/s12192-023-01340-1](https://doi.org/10.1007/s12192-023-01340-1). 
- [21] H. Calamur and R. Ghosh, « Adapting peer review for the future: Digital disruptions and trust in peer review », *Learned Publishing*, vol. 37, n° 1, p. 1-68, jan. 2024 doi: [10.1002/leap.1594](https://doi.org/10.1002/leap.1594). 


Fraudulent participation in online research

- [22] M. S. Johnson, V. M. Adams, and J. Byrne, « Addressing fraudulent responses in online surveys: Insights from a web-based participatory mapping study », *People and Nature*, available online: nov. 2023, doi: [10.1002/pan3.10557](https://doi.org/10.1002/pan3.10557). 

Issues related to science in times of crisis

- [23] J. Salerno, D. L. Weed, C. M. Pandey, V. Crabb, E. S. Peters, and W. M. Hlaing, « Global matters of epidemiology and the ethical challenges of addressing the health of populations », *Annals of Epidemiology*, available online: jan. 2024, doi: [10.1016/j.annepidem.2024.01.003](https://doi.org/10.1016/j.annepidem.2024.01.003). 

EDUCATION AND TRAINING

- [24] É. B. Rangel *et al.*, « Scientists of Tomorrow/ Cientistas do Amanhã : a project to inspire, stimulate scientific thinking, and introduce scientific methodology for young students », *einstein (Sao Paulo)*, vol. 21, dec. 2023, doi: [10.31744/einstein_journal/2023AE0622](https://doi.org/10.31744/einstein_journal/2023AE0622). 
- [25] J. Knight, « The evolution of contemporary education hubs: Fad, brand or innovation? », *International Journal of Educational Development*, vol. 104, art. 102972, jan. 2024, doi: [10.1016/j.ijedudev.2023.102972](https://doi.org/10.1016/j.ijedudev.2023.102972).



RESEARCH EVALUATION

- [26] J. P. A. Ioannidis and Z. Maniatis, « In defense of quantitative metrics in researcher assessments », *PLOS Biology*, vol. 21, n° 12, art. e3002408, dec. 2023, doi: [10.1371/journal.pbio.3002408](https://doi.org/10.1371/journal.pbio.3002408). 