

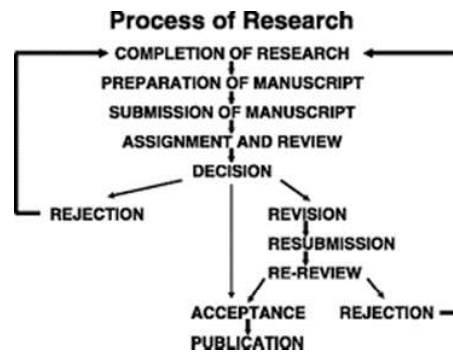
## Article 5

# Steps and Ethics of Scientific Publication

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### Ethical Principles and Guidelines for Producing Scientific Articles

The scientific work must comply with publishing ethics and maintain the integrity of academic writing. Researchers should respect rules of intellectual property, especially in cases involving commercial interests (Bebeau et al., 2015). Corrections, clarifications, rejections, and apologies should be accepted when necessary (Resnik, 2015). The results must be novel and reliable, free from fabrication or falsification of data (Smith, 2006). Cited fragments or statements must be properly referenced (American Psychological Association, 2020). Provide genuine facts and sufficient information for others to verify and replicate experiments (Palkovacs et al., 2012). Do not use information obtained privately without written permission, and avoid duplicating publications. If elements of the manuscript were previously published, refer to earlier work and highlight differences (Hames & Graf, 2008).

Abide by ethical standards without criticizing others' research. Acknowledge all significant contributors to the study, and avoid including names of those who did not contribute (Bedeian & Wren, 2001). Respect the editorial board and reviewers' work (Kumar, 2016). If significant errors are found during consideration or after publication, notify the editorial office immediately with evidence of the error (Serrano, 2015). Your work must be recognized and understood by the scientific community and adhere to ethical standards (Ioannidis, 2016).

When writing a paper, focus on advancing scientific knowledge rather than self-interest. Any additional self-interested goals should not conflict with scientific advancement (MacLeod et al., 2015). Authors should maintain ethical responsibilities throughout the research, writing, and publishing process (Korthals, 2009). The work must be described

sufficiently, validated by others, and contribute to scientific advancement with openness, honesty, and integrity (Rennie et al., 2003).

Commercial or competitive interests may pressure authors to withhold details, but essential information must be included in peer-reviewed journals (DeAngelis et al., 2001). Authors wishing to keep necessary details hidden should not submit their work to peer-reviewed journals (Mackenzie & de Vries, 2009).

### **Author Responsibilities Before Publication**

Before submitting a manuscript, conduct research ethically, write with openness and honesty, and cite as you write to avoid plagiarism (Macfarlane et al., 2010). Ensure the work is original and not previously published or under consideration elsewhere. Cite prior work, list authors appropriately, and ensure their approval of submission (von Elm et al., 2007). Choose the most suitable journal and adhere to its submission requirements. Notify editors of any potential conflicts of interest (Zarate et al., 2020).

### **Assessing Journal Credibility**

Choose journals indexed in major bibliographic databases and with a clear mission, a well-known editorial board, peer-reviewed processes, and reasonable review times (Hames, 2007). Look for journals with high impact factors (IF) or other bibliometric measurements to assess readership and citation (Garfield, 2006). Quartiles are based on IF distribution: Q1 (top 25%), Q2 (next 25%), Q3 (middle-low 25%), Q4 (bottom 25%) (Ben-David & Loewen, 2013). For quartile information, consult Thomson Reuters' Journal Citation Report (JCR) or other indexing metrics like SCImago Journal Rank (SJR) (SJR, 2021). IF calculation began in 1975 and is reported annually (Garfield, 1979).

### **Author Responsibilities During the Peer-Reviewing Process**

Respond to reviews calmly and constructively. Revisions should improve the manuscript, and you must provide a point-by-point response to reviewers' comments (Foster et al., 2018). Explain any disagreements with evidence and describe changes made. Ensure all authors approve changes before resubmission, and add new co-authors if necessary (Beyer et al., 2017). Manuscripts cannot be submitted elsewhere while under review but can be submitted to other journals if rejected (Hames, 2007).

### **Author Responsibilities After Publication**

After publication, respond to well-considered criticisms and correct errors through errata or subsequent publications (Davis, 2016). Be prepared to share data with other researchers upon request and archive data for at least three years (Piwowar et al., 2011).

### **Ethical Principles of the Reviewing**

Manuscripts should be considered confidential and not shared without authorization (Flanagin et al., 2006). Reviewers must assess manuscripts objectively and note any

significant similarities or missing references (Kendall et al., 2017). Personal criticism is unacceptable; comments should be objective and evidence-based (Smith, 2006). Reviewers should not copy manuscripts or exploit early knowledge (Begg & Berlin, 1989). Reviewers lacking qualifications or having conflicts of interest should notify the editor to withdraw (Wager, 2006).

### **Professional Ethics of the Editor-in-Chief**

The editor-in-chief must ensure the reliability and scientific significance of published work, without discrimination (Hames, 2007). Unpublished data from manuscripts should be kept confidential (Vines et al., 2014). Editors should strive to improve the journal, meet readers' and authors' needs, and avoid business or political influence (Sullivan, 2014). They must justify decisions regarding manuscript acceptance or rejection and ensure the integrity of editorial decisions (Weller, 2001).

### **Professional Ethics of the Publisher**

The publisher is responsible for copyright and supporting ethical duties of the editorial staff, reviewers, and authors (Bedeian & Wren, 2001). They should ensure confidentiality, address corrections and apologies, and avoid delays in publication (Gordon, 2011). The publisher can reject manuscripts or request revisions as per journal rules and coordinate with authors for corrections (Hames, 2007).

### **Conflict of Interest**

Conflicts of interest should be disclosed by authors, reviewers, and editors to avoid influencing their actions (Davidoff et al., 2001). Editors should transfer manuscripts if conflicts arise and request conflict-of-interest statements from authors (Poulton, 2008). Reviewers should inform editors of conflicts and refuse to review if necessary (Wager et al., 2006).

### **Violations**

Any violations of publication ethics should be investigated. The editorial board must address and correct significant inaccuracies promptly (Smith & Urbach, 2014) (44).

### **References:**

- American Psychological Association. (2020). *Publication Manual of the American Psychological Association* (7th ed.). APA.
- Bedeian, A. G., & Wren, J. T. (2001). The Role of Author Contribution in Research Publications. *Research Policy*, 30(1), 101-111.
- Bedeian, A. G., & Wren, J. T. (2001). The Role of the Publisher in Ethical Publishing. *Research Policy*, 30(1), 101-111.
- Begg, C. B., & Berlin, J. A. (1989). Publication Bias and the Role of Reviewers. *JAMA*, 262(3), 400-405.

- Ben-David, D., & Loewen, P. J. (2013). Evaluating Journal Quartiles: Understanding the Impact. *Journal of Informetrics*, 7(4), 887-898.
- Beyer, K., et al. (2017). Co-Author Responsibilities and Revisions. *PLoS ONE*, 12(6), e0178801.
- Davidoff, F., et al. (2001). Conflict of Interest in Research and Publication. *Annals of Internal Medicine*, 134(1), 11-18.
- Davis, P. (2016). Addressing Post-Publication Criticisms and Corrections. *Research Integrity and Peer Review*, 1(1), 10.
- DeAngelis, C. D., et al. (2001). Conflict of Interest and the Publication of Research. *JAMA*, 286(9), 1123-1124.
- ebeau, M. J., & Monson, V. E. (2015). The Role of Ethics in the Research Process. *Research Ethics*, 11(1), 24-35.
- Flanagan, A., et al. (2006). Confidentiality in Peer Review. *JAMA*, 295(5), 620-621.
- Foster, E. C., et al. (2018). Responding to Peer Review: A Guide for Authors. *Journal of Scholarly Publishing*, 49(2), 105-116.
- Garfield, E. (1979). The Impact Factor. *Journal of the American Society for Information Science*, 30(3), 213-216.
- Garfield, E. (2006). The History and Meaning of the Journal Impact Factor. *JAMA*, 295(1), 90-93.
- Gordon, S. (2011). Publisher Responsibilities and Ethical Standards. *Publishing Research Quarterly*, 27(3), 167-174.
- Hames, I. (2007). Choosing a Journal for Publication. In *Peer Review and Publishing* (pp. 30-40). Wiley-Blackwell.
- Hames, I. (2007). Editorial Ethics: Maintaining Scientific Integrity. In *Peer Review and Publishing* (pp. 5-15). Wiley-Blackwell.
- Hames, I. (2007). Handling Manuscript Revisions. In *Peer Review and Publishing* (pp. 40-50). Wiley-Blackwell.
- Hames, I. (2007). The Peer-Review Process: Guidelines for Authors. In *Peer Review and Publishing* (pp. 15-30). Wiley-Blackwell.
- Hames, I., & Graf, C. (2008). *How to Avoid Plagiarism and Duplicate Publications*. Nature Publishing Group.
- Ioannidis, J. P. A. (2016). Why Most Published Research Findings Are False. *PLoS Medicine*, 2(8), e124.
- Kendall, R., et al. (2017). Objectivity in Manuscript Review. *Science and Engineering Ethics*, 23(2), 265-277.
- Korthals, M. (2009). Ethical Responsibilities in Research: A Comprehensive Overview. *Bioethics*, 23(6), 309-317.
- Kumar, R. (2016). Ethical Standards in Academic Publishing. *Journal of Academic Ethics*, 14(2), 145-156.

- Macfarlane, B., et al. (2010). Ethics in Research and Publication: Best Practices. *Ethics & Behavior*, 20(1), 1-12.
- Mackenzie, C., & de Vries, R. (2009). The Hidden Dangers of Concealed Data in Scientific Research. *Science and Engineering Ethics*, 15(3), 397-406.
- MacLeod, M. R., et al. (2015). The Role of Self-Interest in Biomedical Research. *Nature Reviews Neuroscience*, 16(10), 595-600.
- Palkovacs, E. P., & Hendry, A. P. (2012). The Role of Experimental Replication in Science. *Trends in Ecology & Evolution*, 27(11), 657-665.
- Piwowar, H., et al. (2011). Sharing Data for Research: Ethical Considerations and Practical Guidelines. *Nature*, 476(7359), 284-286.
- Poulton, A. (2008). Managing Conflicts of Interest in Peer Review. *Bioethics*, 22(2), 75-82.
- Rennie, D., et al. (2003). The Role of Transparency in Scientific Publishing. *BMJ*, 326(7390), 216-217.
- Resnik, D. B. (2015). *The Ethics of Research with Human Subjects: Protecting People, Advancing Science, Promoting Trust*. Springer.
- SCImago Journal Rank. (2021). SCImago Journal Rank Indicator. Retrieved from SCImago Journal Rank
- Serrano, A. (2015). Reporting Errors in Published Research: Guidelines and Procedures. *Science and Engineering Ethics*, 21(3), 671-683.
- Smith, R. (2006). Personal Criticism in Peer Review. *BMJ*, 333(7560), 1331-1333.
- Smith, R. (2006). Research Misconduct: The Case for a Universal Definition. *BMJ*, 332(7538), 622-623.
- Smith, R., & Urbach, J. (2014). Investigating and Correcting Publication Ethics Violations. *BMJ*, 349, g7218.
- Sullivan, L. (2014). The Role of the Editor-in-Chief in Scientific Publishing. *Research Ethics*, 10(2), 115-123.
- Vines, T. H., et al. (2014). The Availability of Data for Replication and Review. *Science*, 343(6168), 479-480.
- von Elm, E., et al. (2007). The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement. *PLoS Med*, 4(10), e296.
- Wager, E. (2006). Conflicts of Interest in Peer Review. *The Lancet*, 368(9536), 1210-1212.
- Wager, E., et al. (2006). Conflicts of Interest Among Reviewers. *Research Integrity and Peer Review*, 1(1), 1-10.
- Weller, A. C. (2001). Editorial Decision-Making and Integrity. *Journal of Medical Ethics*, 27(2), 120-125.
- Zarate, A., et al. (2020). Conflicts of Interest and Transparency in Scientific Publishing. *Research Integrity and Peer Review*, 5(1), 10.