

Research Reporting



Research is essential for the advancement of the human race when it is carried out, reported, and applied appropriately and ethically. Just consider all the health benefits that have come, for example, from the scientific discoveries of antibiotics, vaccines, insulin, x-rays, cardiorespiratory drugs, and general and local anesthetics. A cornerstone in the initial application of each discovery, and its subsequent refinement to allow for improved application, is the rigor of the scientific process that led to the discovery and the appropriate and detailed reporting of that process and the findings. The public usually takes such research advances for granted, although through reports in the media, a particular recent advance can attract attention and leave a positive impact on the public’s perspective of scientific research and its value to society. But public attention can also be engaged through media disclosure of research misconduct. When publicized, such cases can undermine the confidence of the public and policymakers in the scientific process to the detriment of that process, which relies heavily on the “public purse” for its activity and the acquisition of new knowledge.

Two recent articles^{1,2} published in the journal *The Scientist* caught my eye, since they bear on this topic and indeed report that research misconduct in the form of data fabrication, data falsification, and the scientific reporting of that data may be on the rise. In relation to research reporting, it was also noted that plagiarism may be becoming more common although ethical guidelines, standards, and practices exist to address this activity, and many journals have processes in place to check for and deal with occurrences of plagiarism in submitted articles.² Authors of scientific articles need to be mindful to follow these practices and avoid plagiarism.

There are, however, other examples of inappropriate reporting of research that, while less attention-grabbing, nonetheless may also undermine the scientific process. The authors of scientific articles need to follow well-accepted reporting practices to ensure that these are avoided:

- Adhere in the conduct of the research to ethical guidelines and standards for research in humans and animals; most journals require that this is reported in the submitted manuscript.
- Ensure written informed consent is obtained from each human subject in the case of human experimentation and that this is reported in the manuscript.
- Make sure each named author of the manuscript has made a significant contribution to the research and to the writing of the manuscript, and that each accepts responsibility for its content.

- Recognize each contributor to the research reported in the manuscript, either as an author or, in the acknowledgments section of the manuscript, as a contributor to a certain aspect of the research.
- Ensure all data acquired from the research, both negative as well as positive in terms of the primary and secondary outcomes, are reported in the manuscript. It is clear from recent analyses that some authors “spin” their data and focus; for example, reporting and discussing only their most favorable results from secondary outcomes when the primary outcome(s) or endpoint(s) of the research produced nonsignificant findings.^{3,4}
- Report any adverse events or side effects that may stem from the research. This is especially important when the research involves new procedures or drugs studied in particular subject groups, but as noted by one of these recent articles,³ this feature is sometimes overlooked in research reporting. However, such reporting is essential, because it allows investigators and other interested parties (eg, clinicians) to have important information on the potential negative consequences of the procedure or drug under study.
- Refrain from inappropriate dividing up the study’s data (“salami slicing”) to produce multiple publications, each reporting much the same rationale and methodology with only some small variations in the data.

Several of these items are already noted in the Guidelines for Authors and Mandatory Submission Form of the *Journal of Orofacial Pain*. I outline them briefly here to bring them to the attention of authors of articles to be submitted to the Journal, or to other journals, in the hope that they will guide them in adhering to best principles practices of scientific writing and reporting.

Barry J. Sessle
Editor-in-Chief

References

1. Smith R, Koehlmoos T. Misconduct around the globe. *The Scientist* 2013;27:24–25.
2. Bailey J. Defending against plagiarism. *The Scientist* 2013;27:26–27.
3. Smith SM, Wang AT, Katz NP, et al. Adverse event assessment, analysis, and reporting in recent published analgesic clinical trials: ACTTION systematic review and recommendations. *Pain* 2013;154:997–1008.
4. Turk DC, Dworkin RH, McDermott MP, et al. Analyzing multiple endpoints in clinical trials of pain treatments: IMMPACT recommendations. Initiative on Methods, Measurement, and Pain Assessment in Clinical Trials. *Pain* 2008;139:485–493.