Reporting Your Research: Tips & Guidelines

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Evidence-based medicine relies on studies that are accurate, transparent, and reproducible. Each year, researchers publish millions of scientific articles of varying quality. Poorly reported research with problems that include missing information, ambiguities, and misrepresentations can have a negative effect on everyone from the investigator to the patient. Thankfully there are several tools available to researchers to promote high-quality reporting.

Reporting Your Results

Authors are expected to deliver concise quantitative and narrative reports on their study estimates, the strength of the figures, outcome measurements, the effects of confounding variables, and other findings in the study. This information may be conveyed with statistical models and tests that will vary by research question and study design. Authors should understand and use appropriate estimates and models for their research questions. Check out the range of books on biostatistics available at Galter for help on presenting a more complete and accurate picture of your research results and findings.

Eliminating Bias

Bias is "any influence or action at any stage of a study that systematically distorts the findings " and can occur at any stage of the research process. One study identified 235 different types of biases in biomedical research , including such common forms as selection, confounding, reporting, and publication biases. We see other forms of bias related to datasets and outcomes. Key biases to watch for are bias through ignorance, by design, and by misrepresentation. Authors can take steps to identify and eliminate bias in their studies, including the development of a detailed protocol, such as the PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) for authors pursuing a systematic review.

Assessing Article Quality

Several tools are available for quality assessment of articles, particularly those used in a systematic review. Use the critical appraisal tools from the Center for Evidence-based Medicine to get started. Other common scales are GRADE (Grading of Recommendations Assessment, Development and Evaluation), Jadad for randomized controlled trials, and Newcastle-Ottawa for non-randomized studies.

Find more risk of bias and QA tools for reviewers on the Galter Library website.

Reporting Conflicts of Interest

To promote transparency, remember to offer a Conflicts of Interest disclosure statement even if no conflicts exist.

Reporting Guidelines

Reporting guidelines are tools to identify methodological weaknesses and promote transparency. They are not intended to dictate the design of a study or the conduct of investigators, instead offering recommended frameworks for investigators to consider as they report their research. Reporting guidelines provide "a minimum list of information" (EQUATOR Network) to help readers form "a clear and complete account of the research " and are usually developed around a specific study design. Most guidelines have a supplemental explanation and elaboration (E&E) document which gives a description of each item and examples on how to report the item in a manuscript. Many peer reviewers use reporting guidelines to help them assess the manuscript, so consider submitting the reporting guideline with comments on where you addressed that item in the manuscript along with an excerpt of that section. These extra steps could aid the peer-review and revision process.

Where can you find reporting guidelines? The EQUATOR Network endorses over 400 guidelines while the library's GalterGuide, Reporting Research and Evaluating Studies, lists guidelines for common study types. You may also want to visit your target journal's instructions for authors to see if it recommends a specific reporting guideline. And if you use one, remember to cite it.

For more tips and resources on reporting research, see the Galter Library's related guide or take the library's Reporting Research & Evaluating Studies class.