The Ethics of Research, Writing, and Publication

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Nothing is more exciting than seeing your name in print as the author of a well-written article in a respected, peer-reviewed, scholarly journal. A published article is the ultimate goal of a research project, an evidence-based design project, a case study, or an opinion or theory article that reviews and analyzes previous literature and makes recommendations for future projects or research studies. As co-editors, Kirk Hamilton and I gain great satisfaction in seeing the growth and evolution of HERD with the submission of more rigorous and robust research articles that disseminate knowledge to be used by others. The integrity of HERD is dependent on ethically conducted research reported in ethically written articles and published after ethically conducted peer-review and editing.

Ethics in research, writing, and publication are critical in medicine and nursing—decisions that affect human lives often are influenced by knowledge that is disseminated in healthcare journals. While it may seem less critical that healthcare design adhere to strong ethical principles in research, writing, and publication of findings, huge and costly decisions are made in the design and construction of healthcare facilities. Findings from previous research in healthcare design can be operationalized in the design of other facilities with either a positive or negative effect on organizational, patient family, or healthcare provider outcomes. The influence of published findings in articles is widespread, therefore, transparent reporting and dissemination of research findings and evidence-based design case studies is critical.

Ethics in Research and Reporting

According to Resnik (2011), many people think of ethics as a set of rules distinguishing right from wrong, but actually the term “ethics” refers to norms of conduct or of action and in disciplines of study. Research ethics or norms pro-
mote the “knowledge, truth, and avoidance of error” (p. 1) and protect against “fabricating, falsifying, or misrepresenting research data” (p. 1). Editors and publishers are accountable to the public along with the researchers in ensuring that all aspects of the research process and dissemination of findings are transparent, honest, and trustworthy. Research ethics and guidelines promote moral and social value to protect human and animal subjects’ safety and health and ensure that the public can trust the “quality and integrity of the research” (Resnik, 2011, p. 1).

A number of professional associations, government agencies, and universities have developed specific codes of ethics related to research. Some of the ethical principles that have been articulated are important for research integrity, including honesty, objectivity, carefulness, respect for intellectual property, confidentiality, nondiscrimination, transparency, social responsibility, respect for colleagues, and protection of human and animal subjects (Resnik, 2011; Shamo & Resnik, 2009). Resnik (2011) outlines a number of examples of deviation or misconduct in ethical research practices that are worthy of review by any researcher, author, or editor to prevent inadvertent unethical behaviors. Guidelines have been developed to aid researchers in reporting and publishing their findings.

**Guidelines for Reporting Research Findings**

Good research should significantly add to the field of knowledge and address a need in the industry or a question confounding those interested in healthcare design. Similar to a facility design project, a good research project is well planned using an appropriate research design method and is ethically approved by an independent party to protect human subjects and privileged organizational and personal information. All research should have an established protocol that helps the investigator answer specific research questions rather than just collecting data. The methodology should be so well described in the published documents that anyone could follow the same methodology and have similar results, assuming that the research setting and participants are similar. The intent of publishing research is to disseminate new knowledge to others who can use the research findings in their own projects or replicate the study in their own settings, making the evidence stronger through the replication.

There are a number of protocols in place in the publication process to ensure the transparency of the accepted articles, and one would like to think that all of the published findings in HERD and other scholarly journals are ethically written. Unfortunately in some disciplines or fields of study, there is some misconduct in research and scientific publication with misrepresentation of study methods, data collected, the analysis of the data, or even the conclusions drawn from the data. There are many reasons for this type of misconduct, including pressure to conduct research and publish for career advancement, or even to advance a hospital’s or a design firm’s reputation. Faculty researchers in academic settings often are pressured to publish for advancement or tenure. Researchers in design firms may be pressured to publish to advance the name of their firm as a leader in evidence-based practice or design research. Hospital executives may be pres-
sured in their market sectors to be recognized as the most state-of-the-art facility among their competitors.

There are a number of reasons researchers might be motivated to misrepresent their methods or findings and there have been examples of this in the healthcare industry, pharmaceutical companies, equipment and furniture companies, bio-science, medicine, and nursing. Certainly, there is opportunity for misrepresenting findings and outcomes in healthcare design as well.

In 1997, the Committee on Publication Ethics (COPE) developed guidelines on good publication practice that addressed issues of ethics in research and publication (Committee on Publication Ethics, 2014). The guidelines address the authorship, conflicts of interest, study design methods, ethical approval by an independent review board, data analysis, transparency and reporting findings, and plagiarism. COPE not only addressed the ethics of writing a manuscript but also provided guidelines for editors, including guidelines for the peer review process, accepting or rejecting articles, and the publication process including advertising and media relations. Researchers were also encouraged to identify funding sources for a research project, so that readers can identify potential biases that may have had an affect on the research question, study design, or findings. Identification of funding sources should apply to all types of articles, including research articles, systematic reviews of the literature, letters to the editors, editorials, and even commentaries on articles in a journal article (Graf, Wager, Bowman, Flack, Scott-Lichter, & Robinson, 2007). COPE guidelines provide detailed information related to each of these issues and can be helpful to authors, peer reviewers, and editors.

**Reporting Observational and Qualitative Studies**

In some healthcare design projects, researchers use observational methods to collect data related to the healthcare delivery process and to identify ways to improve the process through the architectural design. Observational studies present challenges because of the potential biases in the observational process, but they are also a very effective tool in enhancing the investigators understanding of the variability in healthcare delivery practices. In a consensus statement of the American Medical Association (Stroup et al., 2000) on reporting observational studies, it was recommended that the following components be included in disseminating findings from observational studies:

1. The background, including the definition of the research question or problem to be studied, a hypothesis statement or expected outcomes, and the type of observation to be used.
2. Search strategies in published research, including keywords used.
3. Research methods including how the data will be coded and quantified, how confounding factors will be reviewed and analyzed, and the statistical methods used to analyze the data. The method section would also include a description of observational situations that are outliers that are different from the “norm.”
4. Results, including graphical summaries of the findings.
5. A discussion of potential biases and confounding issues that may have affected the quality of the findings.
6. Conclusions and implications for practice that can be inferred from the findings.
7. Possible alternative explanations for the observed results.

The authors concluded that a pre-established checklist can be a useful tool for the researchers in planning the observational research and in writing the manuscripts for dissemination of findings.

A similar checklist for reporting on the findings from qualitative studies can be found in the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Tong, Sainsbury, & Craig, 2007), which is a useful guide to investigators using a qualitative research design.

**Reporting on Quality Improvement and Evidence-Based Projects**

The healthcare industry makes a distinction between evidence-based projects (EBPs) and formal research and differentiates quality improvement projects (QIPs) from EBPs. An evidence-based project uses existing evidence to answer a clinical question or to guide changes in a clinical practice or protocol. A quality improvement project uses data and measurement methods to identify the effect of practice changes in improving outcomes. Both of these methodologies yield rich data that can be disseminated and used by others in their own projects. Publication guidelines for QIPs and EBPs have been developed and are published as SQUIRE (Standards for Quality Improvement Reporting Excellence) guidelines (Davidoff, Batalden, Stevens, Ogrinc, & Mooney, 2014). These guidelines can serve as an outline or format for writing publishable papers about the EBP process and outcomes.

**Reporting Findings from a Systematic Review of the Literature and Meta-Analyses**

As the field of knowledge grows within a particular discipline, enough published evidence accumulates that it can be systematically reviewed and synthesized into a published report. The quality of evidence from a systematic review is considered to be very high because of the synthesis from multiple report findings. Similarly, a meta-analysis combines the findings from multiple quantitative studies and analyzes the data in an aggregated fashion. Guidelines on writing publishable papers generated from a systematic review of the literature and meta-analyses are outlined in a document called the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement (Moher, Liberati, Tetzlaff, & Altman, 2009) and can be found on www.prisma-statement.org.
A Discipline Is Only as Good as Its Science

A discipline, as the name implies, is a field of study that is founded on a developed and rigorously controlled science that yields findings to guide practice. The reporting of the findings in peer-reviewed, scholarly journals requires as much ethical conduct as does the actual research design, data collection, and analysis. All aspects of research and the publication of research findings require ethical conduct from the research investigators, authors, editors, peer reviewers, and publishers. Without such ethical conduct and transparent reporting of the findings, a solid foundation of evidence cannot be established.

References


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