Ethical Research Primer for the Novice Researcher

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Abstract

As the research process is embarked upon, it is important that a novice researcher become well versed in ethical standards. Maintaining the highest level of ethical conduct is of paramount importance at all stages of the endeavor. Unethical behavior compromises research quality, slows the advancement of knowledge, and undermines societal trust. Thus, development of familiarity and expertise surrounding ethical complexities will enhance the chances of a successful and worthwhile research project. The purpose of this article is to create awareness of the ethical dilemmas novice researchers are faced with in maintaining the academic integrity of published works. The article explores the literature related to ethics in research, and provides a discussion of a number of ethical issues which threaten research quality.

Key Words: *Academic Integrity, Research Ethics, Informed Consent, IRB, Plagiarism, Risk Assessment*

Introduction

Research must be conducted with care and integrity, and researchers should always adhere to published ethical guidelines and regulations. It is especially important that a novice researcher become well versed in ethical standards before embarking on a research journey. Unethical behavior compromises research quality, slows the advancement of knowledge, and undermines societal trust. Development of familiarity and expertise surrounding ethical complexities will enhance the chances of a successful and worthwhile research project. The purpose of this article is to create awareness of the ethical dilemmas novice researchers are faced with in maintaining the academic integrity of published works. The article explores the literature related to ethics in research, and provides a discussion of a number of ethical issues which threaten research quality.

Literature Review

The National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine collaboratively published an excellent resource guide on ethics for the beginning researcher in 2009. The authors presented a broad range of formal and informal methods available for ensuring responsible conduct within the research environment. Ethical issues addressed included, but were not limited to, scientific misconduct, mistakes and negligence, conflicts of interests, treatment of data, advising and mentoring, protecting research participants, laboratory safety, and authorship. The guide also provided answers to potential questions novice researchers might have regarding how to conduct responsible research. In addition, a number of ethical dilemmas were presented to stimulate discussion on appropriate ethical behaviors and foster ethical decision making practices (National Academy of Sciences, 2009).

In 2010, the American Psychological Association (APA) published one of the most comprehensive resources available on ethical conduct. The Ethical Principles of Psychologists and Code of Conduct (2010), referred to as the Ethics Code, contains Five General Principles and numerous Ethical Standards. The General Principles consist of the principles of Beneficence and Nonmaleficence, Fidelity and Responsibility, Integrity, Justice, and Respect for People's Rights. The principles are considered aspirational goals, but are unenforceable. However,

the Ethical Standards are considered enforceable rules of conduct, and all members of the APA must comply with their provisions. Research and publication standards can be found specifically in Section 8 of the Ethics Code (American Psychological Association, 2010).

In their work, Federman, Hanna, and Lyman Rodriguez (2002) attempted to clarify the roles and responsibilities of ethical research. The authors provided a number of helpful suggestions for minimizing the risk of harm to interview participants in a research study. In order to protect the welfare of every study participant, they recommended that all research involving human subjects take place in settings where the culture is exemplified by ethical leadership. The informed consent process, data and safety monitoring, confidentiality, managing conflicts of interest, and the necessity of ethics review boards are a few of the issues addressed in the publication (Federman et al., 2002).

Research by Juyal, Thawani and Thaledi (2015) pointed to the "pressure to publish" as a reason many academic scholars commit ethical violations such as plagiarism. The authors suggested that, because of the importance publishing plays on career advancement and promotion, "misconduct has crept into scientific writing with the result that research misconduct, plagiarism, misappropriation of intellectual property, and substantial unattributed textual copying of another's publication have become common" (Juyal et al., 2015, p. 77). Grif Alspach (2014) and Natarajan (2015) also provided recent articles examining the way plagiarism continues to manifest itself in peer-reviewed journal publications and the role reviewers have to prevent the unethical practice. Natarajan (2015) argued that a journal publication should be the final culmination of honest and ethical research. His research suggests that the motto "publish or perish" has resulted in a number of researchers "churning" out articles without truly advancing science (Natarajan, 2015). Grif Alspach (2014) also discussed the seriousness of plagiarism and used a case of plagiarism and subsequent article retraction from a 2013 nursing journal to illustrate the importance of validating research through a peer-review process. Both authors suggested that manuscript reviewers employ mechanisms such as plagiarism-detection software to pick up plagiarized writing and protect the integrity of a journal (Grif Alspach, 2014; Natarajan, 2015).

The unethical behavior of graduate students was examined in a study by Stokes, Marcuccio and Arpey (2011). The authors explored cheating in the culture of the American education system and the role educators play in strengthening the moral integrity of students. Most students indicated a willingness to conform to high ethical standards. However, as emphasized by Stokes et al. (2011), universities must hold students accountable by consistently enforcing the institutional policies and procedures regarding those standards. In an article by Lindorff (2010), she explored the role of ethical review committees in non-medical research and the responsibilities researchers have to facilitate and improve the review process. According to the author, ethical principles should apply to all types of research, and no research should be exempt from ethical review. In non-medical research, there is not only a risk of harm to participants, but a potential conflict of interest for researchers (Lindorff (2010). Cozby and Bates (2012) also provided excellent guidance on protecting human subjects in research. The authors indicated that research should always embody the principles of respect for persons, beneficence, and justice, and honor the autonomy and dignity of research participants. In addition, a research study should be carefully designed to ensure compliance with federal and state laws and regulations (Cozby & Bates, 2012).

Varnhagen et al. (2005) provided an empirical study assessing the effectiveness of informed consent documents in Web-based research. The authors asked the question, "how informed is informed consent obtained on the Web?" (p. 30). The goal of their research was to examine the way participants reacted to online consent documents as compared to paper documents and to determine whether participant outcomes were consistent given the two different formats (Varnhagen et al., 2005). The authors argued that the oral communication in face-to-face research enables researchers to clarify any misconceptions about the process and enhance participants' understanding of what is being asked. However, results of their study suggested that, although participants were not always aware of what they were consenting to in the informed consent documents, there were no significant differences between the consent obtained online versus the face-to-face presentations.

Plagiarism

Education in research ethics typically begins with a discussion of plagiarism. In research, an enormous amount of time is spent critiquing the work of other scholars in the field of study. Plagiarism can be intentional or unintentional, but both are serious offenses. According to Juyal et al. (2015), the honest and original contribution scholars make to the existing body of knowledge is egregiously undermined by plagiarism. The APA's Ethics Code specifically addresses plagiarism in Section 8.11 by simply stating that its members should never present another person's work as their own (American Psychological Association, 2010). To ensure the academic integrity of one's work, every idea that is not original should be cited. Blatant plagiarism involves using previously published work without giving any reference to the original author (Natarajan, 2015). However, failing to cite the work of others is not the only type of plagiarism. Improper paraphrasing is a form of plagiarism. Improper paraphrasing exists when the words and phrases used are copied verbatim or resemble the original author's work too closely (Grif Alspach, 2014). Although subtle, self-plagiarism is also an unethical practice and is considered a form of plagiarism. According to Natarajan (2015), authors seeking to build their resume through published works often commit self-plagiarism by tweaking one or two items and submitting virtually identical papers to multiple journals at the same. Grif Alspach (2014) argues that manuscript reviewers should go the extra mile to ensure the integrity of published work by conducting at least a spot check of familiar phrases, employing plagiarism-detection software, and requiring researchers to sign disclosure statements concerning the originality of their work.

Risk Assessment

Building ethics into one's research design involves assessing the potential risks and benefits of the planned research on study participants. In 1979, the National Commission for the Protection of Human Subjects in Biomedical and Behavioral Research issued the Belmont Report, which provided behavioral and medical researcher's guidelines for applying ethical standards in their work (Cozby & Bates, 2012). The three basic ethical principles defined within the report included principles of beneficence, autonomy, and justice. According to Cozby and Bates (2012), in applying the principle of beneficence, an assessment of risk will inform ethical decisions by maximizing benefits and minimizing harm to research participants. Potential risks to research subjects might include loss of privacy, psychological stress, or physical harm. Mechanisms such as informed consent and IRB approval are intended to mitigate those risks. Risks must also be weighed against the benefits to participants as well as the scientific importance of the research. Monetary compensation, medical treatment for a health problem, or the acquisition of a new skill are examples of benefits participants might receive (Cozby & Bates, 2012). Weighing the costs and benefits before carrying out a study will reduce the chances of conducting unethical research.

Informed Consent, Privacy and Confidentiality

Informed consent is an important mechanism for protecting the rights of study participants. An effective informed consent process promotes understanding of study procedures and identifies potential benefits and risks of enrollment. In turn, research subjects are able to make well-informed decisions regarding participating in a study. According to Federman et al. (2002), investigators and prospective participants should engage in an ongoing and interactive dialogue regarding relevant information of a study through "clear, simple, unclouded, unhurried, and sensitive disclosure" (p. viii) so that trust and confidence is established and informed decisions can be made. To ensure that potential subjects can truly make informed decisions about whether to take part in research, issues of comprehension, language, and culture need to considered. Informed consent includes both the process of sharing information and documentation that the process took place. Documenting the consent is

a crucial part of the process. Consent forms should indicate that participants were provided relevant information and voluntarily agreed to enroll in the study (Cozby & Bates, 2012). A pivotal aspect of ethical research also involves maintaining the privacy and confidentiality of study participants. Participants have a right to privacy and an investigator should never breach that right or violate their confidentiality (Federman et al., 2002). Cozby and Bates (2012) suggest that confidentiality is especially important in studies involving sensitive questions about participants' private lives. For example, when researchers ask questions regarding sexual behavior, drug use, divorce, or any other sensitive family matters it is crucial that the data provided is kept completely anonymous.

Data Handling and Reporting

Two central elements of conducting ethical research involve data handling and reporting. Many times novice researchers have received "little to no formal training in recording, analyzing, storing, or sharing data" (National Academy of Sciences, 2009, p. 9). Researchers must maintain the trust of others by treating data correctly and never manipulating it to present a case stronger than what the data warrants. If data are altered in deceiving ways, the entire research process is undermined. Careless measurements or poor experimental design may also produce unreliable data and skew study results. Managing data is especially important in today's Internet age. Modern technology enables an "almost uncontrollably fast and extensive spread of information to an increasingly broad audience" (National Academy of Sciences, 2009, p. 8), thus proper handling of data is critical. Methodological procedures used to produce the data should always be spelled out in research studies so that reviewers are able to evaluate the validity of the data and the conclusions drawn (National Academy of Sciences, 2009).

Mistakes and Negligence

Researchers are human, and therefore all research is susceptible to error (National Academy of Sciences, 2009). However, there is a difference between an error and negligence. Errors are the result of honest mistakes, whereas negligence is due to carelessness. The need to make a judgement call or interpret complex data can make research particularly vulnerable to errors for the novice researcher. In addition, the creation of new knowledge through experimental techniques sometimes produces confusing and contradictory data and can make it difficult to accurately interpret results. However, all researchers have a duty to exercise care in the design and implementation of their studies to ensure they meet the scientific standards of their discipline (National Academy of Sciences, 2009). As such, researchers should adhere to methods and practices specifically designed to minimize the possibility of mistakes such as checking and double-checking their work and submitting it to colleagues for review and feedback. The APA's Ethics Code addresses errors when reporting research results in Section 8.10. The Code states that when significant errors in published data are discovered by one of their members, reasonable steps should be taken to rectify the error with a "correction, retraction, erratum, or other appropriate publication means" (American Psychological Association, 2010, p. 11).

IRB Approval and the Review Process

Approval of proposed research by an independent committee is a key element in protecting participants' rights. The Institutional Review Board (IRB) is the independent body charged with approving proposed research projects in the United States. Every institution that conducts research and receives federal funding has an IRB, and its committee is composed of at least five members; with at least one member from outside the institution (Cozby & Bates, 2012). The IRB review can be a lengthy process; and investigators should plan accordingly, allowing sufficient time for the approval process. Although initially created to review medical research in the

United States, the policies and procedures governing IRB operations now apply to all areas of research, and no research receiving federal funding is exempt from ethical review (Halavais, 2011). Institutional approval is addressed in the APA's Ethics Code in Section 8.01. Pursuant to the standard, APA members must provide accurate information concerning their research proposal to the appropriate review board and obtain their approval before any research is conducted (American Psychological Association, 2010, p. 11).

Review committees play an essential role in ensuring research quality and should not be viewed in a negative connotation. As indicated by Macfarlane (as cited in Lindorff, 2010), "discussions of research ethics should not be limited to avoiding review, or even avoiding the unethical" (p. 52); rather, they should center on the nature of what it means to be an ethical researcher and conduct ethical research, and the role of the review committee in adding value to the process. When researchers become fully engaged and involved in the decision making process of the ethics review bodies, the entire process is improved (Lindorff, 2010).

Conclusion

The importance of maintaining a research environment which embraces ethical values cannot be overemphasized. Novice researchers have a far-reaching responsibility to develop expertise regarding ethical complexities and to maintain integrity in their work. As illustrated in the above discussion, research is a collective achievement involving the collaboration and cooperation of many stakeholders, and ethical lapses can be detrimental to the entire research process. Engaging in unethical research practices wastes resources and undermines potential contributions to the overall body of knowledge within a given discipline. The broad societal context in which researchers create knowledge extends well beyond the internal community and necessitates an ethical appraisal of all research protocols.

References

American Psychological Association. (2010). *Ethical principles of psychologists and code of conduct*. Retrieved from http://www.apa.org/ethics/code/index.aspx

Cozby, P. C. & Bates, S.C. (2012). *Methods in behavioral research,* (11th ed.). Boston, MA: McGraw Hill Higher Education.

Federman, D. D., Hanna, K. E., & Rodriguez, L. L. (2002). *Responsible research: A systems approach to protecting research participants*. Washington, D.C.: The National Academies Press.

Grif Alspach, J. (2014). A case of plagiarism: Lessons for editors, authors, reviewers, readers, and plagiarists. *Critical Care Nurse, 34*(5), 12-16. doi:10.4037/ccn2014786

Halavais, A. (2011). Social science: Open up online research. *Nature, 480*(7376), 174-175. doi:10.1038/480174a

Juyal, D., Thawani, V., & Thaledi, S. (2015). Plagiarism: An egregious form of misconduct. *North American Journal of Medical Sciences, 7*(2), 77-80. doi:10.4103/1947- 2714.152084

Lindorff, M. (2010). Ethics, ethical human research and human research ethics committees. *Australian Universities' Review*, *52*(1), 51-59.

Natarajan, S. (2015). Plagiarism - one disease, many manifestations. *Indian Journal of Ophthalmology*, *63*(4), 299. doi:10.4103/0301-4738.158060

National Academy of Sciences, National Academy of Engineering, and Institute of Medicine (2009). *On being a scientist: A guide to responsible conduct in research* (3rd ed.). Washington, DC: The National Academies Press.

Stokes, L. E., Marcuccio, E. A., & Arpey, J. W. (2011). Ethical intervention during the college years: Increasing the moral awareness of future business leaders. *Mustang Journal of Business and Ethics,* 2, 152-161.

Varnhagen, C., Gushta, M., Daniels, J., Peters, T., Parmar, N., Law, D., Hirsch, R., Sadler Takach, B., & Johnson, B. (2005). How informed is online informed consent?. *Ethics & Behavior*, *15*(1), 37-48.