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Ethical Issues in Science Research Writing in Nigeria

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Abstract:

To ensure the ethical conduct of research and the welfare of research participants, ethical considerations in research are of the utmost importance. The ethical problems with research writing are examined in this journal from a scientific viewpoint. It focuses on the fundamental ethical principles that ought to direct research, underlines the particular difficulties experienced by Science researchers, and provides tactics for encouraging ethical research writing in Nigerian settings. The quality and legitimacy of scholarly work are critically dependent on ethical considerations in research writing. This abstract examines the scientific viewpoint on ethical issues in research writing, highlighting significant difficulties and potential remedies to provide suitable challenges. It is imperative to uphold research ethics in public and private Institutions with particular reference to the sciences in Universities, Polytechnics and Research Institutes, where all Master's and Doctoral candidates' reports are checked for plagiarism using Turnitin or other plagiarism-checking Instruments. These issues demand attention to foster transparency in authorship contributions, raise awareness about reputable publishing outlets, disclose funding sources, and promote research that respects the diverse cultural contexts within and outside Nigeria. In conclusion, this abstract underscores the urgency of addressing these ethical challenges to uphold research conduct standards and maintain credibility among scientific scholars.

Keywords: Research ethics, plagiarism, authorship, researchers, academic integrity, science

1. Introduction

The foundation of academic and scientific advancement is research, but to uphold confidence, credibility, and integrity, research must be conducted ethically. Science provides particular ethical issues in research writing due to the encompassment of the discipline. This publication tries to clarify these difficulties and provide perceptions of moral issues in scientific research. The importance of conducting research and publishing findings is stressed in every facet of academic endeavor. Because of this, the research's primary goal is to further our knowledge by adding to what is already known (contribution to Knowledge). However, only when it is shared with other people or academics will such knowledge make sense. Journal articles, theses, dissertations, and books are used to spread this knowledge. Researchers must follow ethical standards in all facets of academic writing when carrying out and distributing their research (Blumberg, Cooper & Schindler, 2005). This necessitates that the exercise be carried out in a sound and moral manner based on established ethical norms.

1.1. Background Study of Ethics

Ethics is a branch of philosophy that explores questions about what is morally right and wrong, good and bad, and how individuals and societies should behave. It deals with the fundamental principles that govern human conduct and decision-making. The study of ethics has a rich and complex history that spans thousands of years and has been shaped by various philosophical traditions, cultures, and historical contexts. In this discussion, we will delve into the background of ethics, its historical development, key philosophical theories, and contemporary relevance.

2. Historical Development of Ethics

2.1. Ancient Ethics

- **Greek Philosophy:** The foundations of Western ethics can be traced back to ancient Greece. Philosophers like Socrates, Plato, and Aristotle made significant contributions to ethical thought. Plato's "Republic" discusses justice and the ideal state, while Aristotle's "Nicomachean Ethics" provides a comprehensive examination of virtue ethics, emphasizing the importance of character development and moral virtues.
- **Virtue Ethics:** Virtue ethics, championed by Aristotle, emphasizes the cultivation of virtuous character traits such as courage, honesty, and wisdom. It focuses on the moral development of individuals rather than strict rules or consequences. (Aristotle, 1985 "Nicomachean Ethics")

2.2. Modern Ethics

- Enlightenment Philosophy: The Enlightenment period ushered in a new era of moral philosophy. Thinkers like Immanuel Kant and Jeremy Bentham developed deontological and utilitarian ethical theories, respectively. Kant's "Groundwork for the Metaphysics of Morals" laid the groundwork for deontological ethics, emphasizing moral duty and the categorical imperative. Bentham's utilitarianism focused on maximizing overall happiness and pleasure as the basis for moral decisions.
- Social Contract Theory: Philosophers such as Thomas Hobbes, John Locke, and Jean-Jacques Rousseau explored social contract theory, which addresses the relationship between individuals and society, as well as the obligations and rights that arise from this contract. (Kant & Immanuel, 1958)

2.3. Contemporary Ethics

- Metaethics and Normative Ethics: Contemporary ethics involves a wide range of philosophical approaches. Metaethics examines the nature of ethical statements and the foundations of moral language, while normative ethics addresses how we ought to behave. Prominent normative ethical theories include consequentialism, deontology, virtue ethics, and various forms of applied ethics like medical ethics and environmental ethics.
- Feminist Ethics: Feminist ethics has gained prominence, critiquing traditional ethical theories for their gender biases and exploring issues related to gender equality, care ethics, and the ethics of care.
- Ethics in Practice: Ethics is not just a theoretical pursuit; it has real-world applications. It plays a critical role in fields such as medicine, business, law, and politics. Ethical considerations are central to debates on topics like abortion, euthanasia, environmental conservation, and social justice. (J. Bentham., 2017)

3. Types of Research

Research is a systematic and organized process of inquiry aimed at acquiring knowledge or understanding, solving problems, or testing hypotheses. There are various types of research methodologies, each with its own characteristics, objectives, and approaches. These theses explain some of the most common types of research, along with citations and references to authoritative sources for further exploration:

- Descriptive Research: Descriptive research aims to provide a detailed and accurate account of a phenomenon, situation, or group. It describes the characteristics, behaviors, and relationships among variables. (Neuman, W. L. (2014)
- Exploratory Research: Exploratory research is conducted when there is little or no prior knowledge about a research problem. It helps understand the issue's nature and scope and generates initial insights. (Creswell, J. W., & Creswell, J. D., 2017)
- Explanatory (Causal) Research: Explanatory research seeks to establish causal relationships between variables. It investigates why and how certain events or phenomena occur. (Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002)
- Correlational Research: Correlational research examines the statistical relationship between two or more variables without manipulating them. It determines if there is a positive, negative, or no correlation. (Leedy, P. D., & Ormrod, J. E., 2018)
- Experimental Research: This involves the manipulation of one or more independent variables to observe their effect on dependent variables. It aims to establish cause-and-effect relationships. (Rosenthal, R., & Rosnow, R. L., 2008). "Essentials of Behavioral Research: Methods and Data Analysis." McGraw-Hill Education.

4. Ethical Research Writing

Ethical research writing is of paramount importance in the academic and scientific communities. It refers to the practice of conducting and reporting research in a manner that upholds ethical principles and standards. Ethical research writing encompasses various aspects, including the treatment of research subjects, data handling, authorship, plagiarism, and the dissemination of findings. This article explores the significance of ethical research writing and provides citations and references to support its importance. It ensures the protection of human subjects involved in research studies, which is achieved through obtaining informed consent, maintaining confidentiality, and minimizing potential harm. Ethical guidelines such as the Declaration of Helsinki and the Belmont Report emphasize the importance of respecting the autonomy and rights of research participants. (World Medical Association, 2013)

Ethical research upholds the integrity of the scientific process. Researchers must conduct studies honestly and accurately without manipulating data or results. Fraudulent practices like fabrication, falsification, or plagiarism undermine the trust and credibility of research. National Academies of Sciences, Engineering, and Medicine (2017) promote transparency in reporting methods and results. Detailed and accurate reporting allows other researchers to replicate and build upon previous studies. Transparency is essential for advancing knowledge and preventing the spread of misinformation (Nosek, B. A., et al. (2015) it also ensures that credit is given where it is due. Proper attribution of ideas, data, and sources through accurate citation practices acknowledges the work of others and prevents plagiarism. This fosters fairness and respect within the academic community. (American Psychological Association, 2020)

This contributes to the credibility and impact of research findings. Reliable research is more likely to be accepted, cited, and used by other researchers, policymakers, and practitioners. Ethical research, therefore, has a greater potential to make a positive difference in society. (Bouter, L. M. et al., 2016)

5. Plagiarism

Plagiarism is a grave violation of academic integrity and ethics. It occurs when a person presents someone else's work, ideas, or intellectual property as their own without proper attribution or permission. It is a serious breach of academic integrity that has far-reaching consequences for individuals and institutions. It is essential to educate students about plagiarism, implement preventative measures, and foster a culture of honesty, fairness, and respect to upholding academic integrity in educational settings. Park, C. (2003). Maintaining academic integrity is essential for the credibility and reputation of educational institutions and the individuals within them. This article explores plagiarism and its various forms, consequences, prevention, and the broader concept of academic integrity. (Roig, M., 2001)

5.1. Forms of Plagiarism

- Firstly, Direct Plagiarism is the most blatant form of plagiarism, where a person copies and pastes another's work verbatim without citation.
- Secondly, Paraphrasing Plagiarism, which involves the text being reworded, is still considered plagiarism if the structure and core ideas remain the same without proper citation.
- Thirdly, Self-Plagiarism, where reusing one's own work without citation, is often found in cases where a student submits the same paper for multiple courses or a researcher republishes their work without acknowledgment.

6. Authorship and Collaboration

Authorship and collaboration are fundamental aspects of academic and scientific research. Properly crediting contributors and understanding the dynamics of collaboration are critical for the integrity of research and the advancement of knowledge (International Committee of Medical Journal Editors, 2021). This article explores authorship criteria, issues related to authorship, the importance of collaboration, and ethical considerations regarding authorship. Determining who should be listed as an author on a research paper can be a complex process, but there are general criteria and guidelines that help establish authorship. Common criteria include: Substantial Contribution, drafting and revising, final approval and accountability. Authorship and collaboration are integral components of research that demand careful consideration and ethical practice. Properly crediting contributions and fostering collaborative relationships enhance the quality and impact of research, while adherence to authorship criteria and ethical guidelines ensures transparency and fairness in the academic and scientific communities.

6.1. Issues Related to Authorship

- Ghost Authorship: This occurs when someone has made a significant contribution but is not listed as an author. It can be problematic as it diminishes transparency and accountability.
- Gift Authorship: Gift authorship involves including individuals as authors who did not substantially contribute. It may be done as a favor, for political reasons, or to increase the chances of publication.
- Author Order: The order in which authors are listed can vary by discipline and culture. In some fields, the first author is the primary contributor, while in others, the corresponding author is the senior researcher overseeing the project. (Cronin, B., & LaBarre, D, 2008)

7. The Importance of Collaboration

Collaboration allows researchers to draw on a broader range of expertise and perspectives, leading to more comprehensive and innovative research. This involves sharing resources, data, equipment, and funding, which can reduce costs and enhance the quality of research. Collaborative research helps to bring researchers from different backgrounds and disciplines with diverse perspectives to the research, leading to more robust findings and solutions; this also helps to reach a wider audience and have a greater impact, as it often leads to more significant publications and contributions to the field.

8. Data Management

Data management is a critical aspect of research, business, and various other domains involving the acquisition, storage, processing, and preservation of data. Effective data management is essential for ensuring data integrity, accessibility, security, and usability. In this comprehensive discussion, we will explore the principles, practices, and significance of data management, supported by citations and references from authoritative sources. Data management is a multifaceted discipline with principles and practices that are essential for organizations and researchers. It ensures data quality, security, and accessibility, ultimately contributing to informed decision-making, innovation, and organizational success. (Schmarzo, B. 2017)

9. Dissemination of Research Findings

Dissemination of research findings is an integral part of the research process. Information on research findings can be delivered/communicated to the private sector, the government, and the wider community. For others to benefit from the research results, they must trust in the report's accuracy. Dissemination of research findings can occur in three ways:

- Paper: Research work can be published in one or several publications and used as a means of education or research reference guide for students, researchers and consumers' needs of the study. Aspects of interest include recruiting participants, data analysis, theory building, and the strengths and weaknesses of the method used in the research. (Michelle Bryne, 2001)

- Poster: A well-structured poster presented with visualizations like graphs, charts, and tables gives a clearer overview of the research. This has helped individuals with similar research to collaborate and discuss the research. Posters are also a way for educators to present the research findings of others that answer specific clinical questions. (Sherbinski, L.A. et al., 1992)
- Oral Presentation – Research work can be communicated with the use of spoken language to an audience or in a project, which outlines the research findings and the analysis of those findings. This can help to facilitate collaboration among researchers. Planning, writing and completing are the three key elements in an oral presentation process. (Ginny Putscher, 2019)

10. Recommendation

Ethical issues in research writing are important in ensuring the integrity, credibility, and trustworthiness of academic dispensations. In Physics, where research plays a crucial role in addressing societal and developmental challenges to advance knowledge, it is pertinent to uphold the highest ethical standards in Physics and other various academic Institutions.

11. Conclusion

The suggestions are made for tackling ethical difficulties in research writing from a scientific viewpoint. This, however, highlights how crucial it is to keep ethical standards in academic and scientific activities. Researchers, organizations, and governments in Nigeria can improve research integrity, protect research participants, and promote reliable and trustworthy research outputs by following these recommendations. By solving urgent problems and developing knowledge, ethical research procedures not only improve the academic and scientific standing of the country but also guarantee that research activities have a good impact on society. By adopting these suggestions, Science researchers would ultimately have a stronger ethical foundation, encouraging a climate of openness, responsibility, and respect for all parties participating in the study process.

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