



**FEDERL UNIVERSITY,  
NDUFU ALIKE, IKWO**



# ETHICS IN RESEARCH AND PUBLICATION

**Prof Dr. Johnny Ogunji**  
**Faculty of Agriculture, FUNAI**

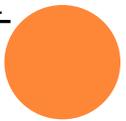
# DEFINITION

- The most common way of defining "ethics": **norms for conduct** that distinguish between acceptable and unacceptable behavior (Resnik 2015).
- Research ethics involves the application of fundamental ethical principles to a variety of topics involving research, including scientific research (Wikipedia 2016).
- In addition, research ethics educates and monitors scientists conducting research to ensure a high ethical standard
- Research ethics is most developed as a concept in medical research.



- The broad principles that guide research have long been established, and they are regarded as vital to all researchers, institutions and the society.
- Central to these are the maintenance of high ethical standards, and validity and accuracy in the collection and reporting of research findings.



- **Communication between collaborators, maintenance of, and reference to, research records,**
  - **presentation and discussion of work at meetings of experts, publication of results including the important element of peer review, and**
  - **the possibility that investigations will be replicated or extended by other researchers, all contribute to the intrinsically self-correcting and ethical nature of research.**
  
  - It is expected that those engaged in research should act in accordance with the highest standards of integrity whether they are employees, researchers, students or assistants.
- 

- **BACKGROUND OF MODERN RESEARCH ETHICS**
- The first attempt to craft regulations began during the Doctors Trial of 1946-1947.
- The Doctors Trial was a segment of the Nuremberg Trials for Nazi war criminals.
- In the Doctors Trial, 23 German Nazi physicians were accused of conducting abhorrent and torturous “experiments” with concentration camp inmates.
- The accused physicians tortured, brutalized, crippled, and murdered thousands of victims in the name of research.
- To prosecute the accused Nazi doctors for atrocities they committed, a list of ethical guidelines for the conduct of research – the **Nuremberg Code** – were developed.



PHOTO OF THE NUREMBERG PALACE OF JUSTICE  
PHOTO BY: THOMAS J. DODD PAPERS, DODD RESEARCH  
CENTER, UNIVERSITY  
LIBRARIES, UNIVERSITY OF CONNECTICUT



The Nuremberg Code consisted of ten basic ethical principles that the accused violated.

- **The 10 guidelines were as follows:**
- 1. Research participants must voluntarily consent to research participation
- 2. Research aims should contribute to the good of society
- 3. Research must be based on sound theory and prior animal testing
- 4. Research must avoid unnecessary physical and mental suffering
- 5. No research projects can go forward where serious injury and/or death are potential outcomes
- 6. The degree of risk taken with research participants cannot exceed anticipated benefits of results
- 7. Proper environment and protection for participants is necessary
- 8. Experiments can be conducted only by scientifically qualified persons
- 9. Human subjects must be allowed to discontinue their participation at any time
- 10. Scientists must be prepared to terminate the experiment if there is cause to believe that continuation will be harmful or result in injury or death

- **The Nuremberg Guidelines paved the way to the Helsinki Declaration.**
  - The Helsinki Declaration was the next major initiative designed to promote responsible research with human subjects,
  - The Helsinki Declaration was developed by the World Medical Association and has been revised and updated periodically since 1964, with the last update occurring in 2000.
  - **The document lays out basic ethical principles for conducting biomedical research and specifies guidelines for research conducted either by a physician, in conjunction with medical care, or within a clinical setting.**
- 

- The Helsinki Declaration (World Medical Organization, 1996) contains all the basic ethical elements specified in the Nuremberg Code but then advances further guidelines specifically designed to address the **unique vulnerabilities of human subjects** solicited to participate in clinical research projects.



## **The unique principles developed within the Helsinki Declaration include:**

- The necessity of using an independent investigator to review potential research
- Employing a medically qualified person to supervise the research and assume responsibility for the health and welfare of human subjects
- **The importance of preserving the accuracy of research results**
- Suggestions on how to obtain informed consent from research participants
- Rules concerning research with children and mentally incompetent persons
- Evaluating and using experimental treatments on patients



- Following the Helsinki Declaration, the next set of research ethics guidelines came out in the **Belmont Report of 1979** from the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research.
- The *Belmont Report* (The Belmont Report 1978) summarizes ethical principles and guidelines for research involving human subjects.
- Three core principles are identified:
  - i) respect for persons, ii) beneficence, and iii) justice.
- Three primary areas of application are
  - i) informed consent, ii) assessment of risks and benefits, and iii) selection of subjects.



## • Why is Ethics in Research Important?

Resnik (2015) pointed out four out of several reasons why it is important to adhere to ethical norms in research. They include:

**1;** norms promote the aims of research, such as knowledge, truth, and avoidance of error. For example, prohibitions against fabricating, falsifying, or misrepresenting research data, promote the truth and avoid error.

**2;** since research often involves a great deal of cooperation and coordination among many different people in different disciplines and institutions, ethical standards promote the values that are essential to collaborative work, such as trust, accountability, mutual respect, and fairness.

**3;** many of the ethical norms help to ensure that researchers can be held accountable to the public.

**4;** many of the norms of research promote a variety of other important moral and social values, such as social responsibility, human rights, animal welfare, compliance with the law, and health and safety.



## **Codes and Policies for Research Ethics**

Considering the importance of ethics for the conduct of research, many different professional associations, government agencies, and universities have adopted specific codes, rules, and policies relating to research ethics.

The following is a rough and general summary of some ethical principles that various codes address. This is adapted from Shamoo and Resnik (2009).



## **Honesty**

Strive for honesty in all scientific communications. Honestly report data, results, methods and procedures, and publication status. Do not fabricate, falsify, or misrepresent data. Do not deceive colleagues, granting agencies, or the public.

## **Objectivity**

Strive to avoid bias in experimental design, data analysis, data interpretation, peer review, personnel decisions, grant writing, expert testimony, and other aspects of research where objectivity is expected or required. Avoid or minimize bias or self-deception. Disclose personal or financial interests that may affect research.

## **Integrity**

Keep your promises and agreements; act with sincerity; strive for consistency of thought and action.

## **Carefulness**

Avoid careless errors and negligence; carefully and critically examine your own work and the work of your peers. Keep good records of research activities, such as data collection, research design, and correspondence with agencies or journals.

## **Openness**

Share data, results, ideas, tools, resources. Be open to criticism and new ideas.

## **Respect for Intellectual Property**

Honor patents, copyrights, and other forms of intellectual property. Do not use unpublished data, methods, or results without permission. Give credit where credit is due. Give proper acknowledgement or credit for all contributions to research. Never plagiarize.

## **Confidentiality**

Protect confidential communications, such as papers or grants submitted for publication, personnel records, trade or military secrets, and patient records.

## **Responsible Publication**

Publish in order to advance research and scholarship, not to advance just your own career. Avoid wasteful and duplicative publication.

## **Responsible Mentoring**

Help to educate, mentor, and advise students. Promote their welfare and allow them to make their own decisions.

## **Respect for colleagues**

Respect your colleagues and treat them fairly.

## **Social Responsibility**

Strive to promote social good and prevent or mitigate social harms through research, public education, and advocacy.

## **Non-Discrimination**

Avoid discrimination against colleagues or students on the basis of sex, race, ethnicity, or other factors that are not related to their scientific competence and integrity.



## **Competence**

Maintain and improve your own professional competence and expertise through lifelong education and learning; take steps to promote competence in science as a whole.

## **Legality**

Know and obey relevant laws and institutional and governmental policies.

## **Animal Care**

Show proper respect and care for animals when using them in research. Do not conduct unnecessary or poorly designed animal experiments.

## **Human Subjects Protection**

When conducting research on human subjects, minimize harms and risks and maximize benefits; respect human dignity, privacy, and autonomy; take special precautions with vulnerable populations; and strive to distribute the benefits and burdens of research fairly.



## **Ethical Decision Making in Research**

Although codes, policies, and principals are very important and useful, like any set of rules, they do not cover every situation, they often conflict, and they require considerable interpretation.

**It is therefore important for researchers to learn how to interpret, assess, and apply various research rules and how to make decisions and to act in various situations. The vast majority of decisions involve the straightforward application of ethical rules.**



## **Some deviations from acceptable research practices**

- Publishing the same paper in two different journals without telling the editors
  - Submitting the same paper to different journals without telling the editors
  - Not informing a collaborator of your intent to file a patent in order to make sure that you are the sole inventor
  - Including a colleague as an author on a paper in return for a favor even though the colleague did not make a serious contribution to the paper
  - Discussing with your colleagues confidential data from a paper that you are reviewing for a journal
  - Trimming outliers from a data set without discussing your reasons in paper
  - Using an inappropriate statistical technique in order to enhance the significance of your research
- 

- Bypassing the peer review process and announcing your results through a press conference without giving peers adequate information to review your work
- Conducting a review of the literature that fails to acknowledge the contributions of other people in the field or relevant prior work
- Stretching the truth on a grant application in order to convince reviewers that your project will make a significant contribution to the field
- Stretching the truth on a job application or curriculum vita
- Giving the same research project to two graduate students in order to see who can do it the fastest
- Overworking, neglecting, or exploiting graduate or post-doctoral students



- Failing to keep good research records
- Failing to maintain research data for a reasonable period of time
- Making derogatory comments and personal attacks in your review of author's submission
- Promising a student a better grade for sexual favors
- Using a racist epithet in the laboratory
- Making significant deviations from the research protocol approved by your institution's Animal Care and Use Committee or Institutional Review Board for Human Subjects Research without telling the committee or the board
- Not reporting an adverse event in a human research experiment
- Wasting animals in research



- Exposing students and staff to biological risks in violation of your institution's biosafety rules
- Rejecting a manuscript for publication without even reading it
- Sabotaging someone's work
- Stealing supplies, books, or data
- Rigging an experiment so you know how it will turn out
- Making unauthorized copies of data, papers, or computer programs
- Owning over \$10,000 in stock in a company that sponsors your research and not disclosing this financial interest
- Deliberately overestimating the clinical significance of a new drug in order to obtain economic benefits



These actions would be regarded as unethical by most scientists and some might even be illegal. Most of these would also violate different professional ethics codes or institutional policies.

**It is important all researchers desist from and not even contemplate doing them**



## Authorship

- ❑ Authorship is the process of deciding whose names belong on a research paper (**UMCB 2003**).
- ❑ Like we know most researches are undertaken through collaboration and assistance between experts and colleagues.
- ❑ As such some of the assistance will require acknowledgement and some will require joint authorship



The guidelines to be followed according to International Committee of Medical Journal Editors (ICMJE) ([www.icmje.org](http://www.icmje.org)) are as follows:

**Authorship credit should be based only on**

- 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;**
- 2) drafting the article or revising it critically for important intellectual content; and**
- 3) final approval of the version to be published.**

Conditions 1, 2, and 3 must all be met.

Acquisition of funding, the collection of data, or general supervision of the research group, by themselves, do not justify authorship.

All the contributing co-authors of an article must jointly decide the order of the listing of names.

The first person listed should be the person most closely involved with the research (Bhopal et al. 1997).

The authors should then decide the order of the remaining authors in accordance with the criteria of the publishing journal, and be prepared to answer questions about why the order is as it appears



# Plagiarism

Oxford University (2016) explains plagiarism as presenting someone else's work or ideas as your own.

This may happen, with or without their consent, by incorporating it into your work without full acknowledgement.

All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition.



Plagiarism may be intentional or reckless, or unintentional.

Under the regulations for examinations, intentional or reckless plagiarism is a disciplinary offence.

As serious as this may be Ebonyi State University Post graduate school regulation enshrined on **Regulation 79: Plagiarism** that “Any Postgraduate student that runs foul of the plagiarism laws is liable to criminal prosecution and forfeiture of his/her studentship in EBSU”.



According to Oxford University (2016) the following are types of plagiarism

➤ **Verbatim (word for word) quotation without clear acknowledgement**

➤ **Cutting and pasting from the Internet without clear acknowledgement**

➤ **Paraphrasing**

➤ **Collusion**

This can involve unauthorised collaboration between students, failure to attribute assistance received, or failure to follow precisely regulations on group work projects.



➤ **Inaccurate citation**

➤ **Failure to acknowledge assistance**

➤ **Use of material written by professional agencies or other persons**

You should neither make use of professional agencies in the production of your work nor submit material which has been written for you even with the consent of the person who has written it. **It is vital to your intellectual training and development that you should undertake the research process unaided.**



## **Auto-plagiarism**

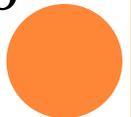
You must not submit work for assessment that you have already submitted (partially or in full), either for your current course or for another qualification of this, or any other, university, unless this is specifically provided for in the special regulations for your course. Where earlier work by you is citable, ie. it has already been published, you must reference it clearly.

**Redundant publications** constitute a special type of plagiarism. **Redundant or duplicate publication is publication of a paper that overlaps substantially with one already**



## CONCLUSION

- Central to broad principles that guide research are the maintenance of high ethical standards, and validity and accuracy in the collection and reporting of research findings.
- It is expected that those engaged in research should act in accordance with the highest standards of integrity whether they are employees, researchers, students or assistants.
- Everyone is required to uphold the highest standards.
- These standards are also expected of those engaged in setting of research priorities, and in the assessment of research. It is important that we all should begin to pay attention.



THANK YOU FOR LISTENING

