RESEARCH METHODOLOGY IN SE

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RESEARCH ETHICS AND ITS NECESSITY

- What is Ethics in Research?
- Distinguish between Ethics and Law.
- Why is it Important?
- What are the Ethical norms in Research?
- How to interpret and practice Ethical Norms in Research?

Acknowledgement: **David B. Resnik, J.D., Ph.D**
https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm

RESEARCH ETHICS

When most people think of ethics (or morals),

Rules for distinguishing between right and wrong, such as

- ✓ the Hadith ("Do unto others as you would have them do unto you"),
- ✓ a code of professional conduct like the Hippocratic Oath ("First of all, do no harm"),
- ✓ a wise aphorisms like the sayings of Confucius.

The most common way of defining "ethics":

Norms for conduct that distinguish between acceptable and unacceptable behavior.

- ✓ Most people learn ethical norms at home, at school, in mosques/churches, or in other social settings.

!!! However, moral development occurs throughout life and human beings pass through different stages of growth as they mature.

- Ethical norms are ubiquitous! Therefore, **Simple common-sense**.
- However, if morality were nothing more than commonsense, then why are there so many ethical disputes and issues in our society?

One plausible explanation

- ✓ All people recognize some common ethical norms but
- ✓ interpret, apply, and balance them in different ways in light of their own values and life experiences.

For example,

Murder is wrong but ***the morality of abortion*** can have disagreement due to different understanding.

Most societies also have legal rules that govern behavior, but ethical norms are much broader!

Ethics and law are not the same.

An action may be legal but unethical or illegal but ethical.

Defining 'ethics' focuses on the **disciplines that study** standards of conduct, such as philosophy, theology, law, psychology, or sociology.

For example, a "medical ethicist" is someone who studies ethical standards in medicine.

Define ethics as a **method, procedure, or perspective** for deciding how to act and for analyzing complex problems and issues.

For instance, in considering a complex issue like global warming, one may take an economic, ecological, political, or ethical perspective on the problem.

There are several reasons **why it is important to adhere to ethical norms in research**.

First, 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 minimize error.

Second, ethical standards promote the **values that are essential to collaborative work**, such as trust, accountability, mutual respect, and fairness. Research is all about collaboration.

For example, guidelines for authorship, copyright and patenting policies, data sharing policies, and confidentiality rules in peer review.

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

For instance, policies on research misconduct, conflicts of interest, the human subjects protections, and animal care and use are necessary to hold researchers accountable.

Fourth, ethical norms in research also help to build **public support** for research.

People are more likely to fund a research project if they can trust the quality and integrity of research.

Finally, many norms of research induces other important **moral and social values.**

Such as social responsibility, human rights, compliance with the law, and public health and safety.

Ethical lapses may bring disasters!

- a researcher who fabricates data in a clinical trial may harm or even kill patients, and
- a researcher who fails to abide by regulations and guidelines relating to radiation or biological safety may jeopardize his health and safety or the health and safety of staff and students.

CODES AND POLICIES FOR RESEARCH ETHICS

- ✓ Different professional associations, government agencies, and universities have adopted specific codes, rules, and policies relating to research ethics.
- ✓ US govt. agencies adopted their own ethical rules for research, such as
  - ✓ the National Institutes of Health (NIH),
  - ✓ the National Science Foundation (NSF),
  - ✓ the Food and Drug Administration (FDA),
  - ✓ the Environmental Protection Agency (EPA), and
  - ✓ the US Department of Agriculture (USDA).

- ✓ Other influential research ethics policies include

Singapore Statement on Research Integrity, the American Chemical Society, The Chemist Professional's Code of Conduct, Code of Ethics (American Society for Clinical Laboratory Science) American Psychological Association, Ethical Principles of Psychologists and Code of Conduct, Statements on Ethics and Professional Responsibility (American Anthropological Association), Statement on Professional Ethics (American Association of University Professors), the Nuremberg Code and the World Medical Association's Declaration of Helsinki.

Adapted from Shamoo A and Resnik D. 2015. Responsible Conduct of Research, 3rd ed. (New York: Oxford University Press).

The following is a rough and general summary of some ethical principals:

Honesty

- Honestly report data, results, methods and procedures, and publication status.
- Do not fabricate, falsify, or misrepresent data. Do not deceive colleagues, research sponsors, or the public.

Objectivity

- 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.

Integrity

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

Adapted from Shamoo A and Resnik D. 2015. Responsible Conduct of Research, 3rd ed. (New York: Oxford University Press).

Carefulness

- 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 and Acknowledge patents, copyrights, and other forms of intellectual property.
- Do not use unpublished data, methods, or results without permission.

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.

Responsible Mentoring

- Help to educate, mentor, and advise students. Promote their welfare/acknowledge their contributions.

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.

Adapted from Shamoo A and Resnik D. 2015. Responsible Conduct of Research, 3rd ed. (New York: Oxford University Press).

Non-Discrimination

- Avoid discrimination against colleagues or students on the basis of sex, race, ethnicity.

Competence

- Maintain and improve your own professional competence and expertise through lifelong education and learning.

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.

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.