Research Methodology
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Ethical Norms

- Most people learn ethical norms at home, at school, in place of worship, or in other social settings.

- Although most people acquire their sense of right and wrong during childhood, moral development occurs throughout life and human beings pass through different stages of growth as they mature.

- Ethical norms are so ubiquitous that one might be tempted to regard them as simple commonsense.

- On the other hand, if morality were nothing more than commonsense, then why are there so many ethical disputes and issues in our society?

Why?

- why it is important to adhere to ethical norms in research. First, norms **promote the** <u>aims of research,</u> such as knowledge, truth, and avoidance of error.

- For example, prohibitions against fabricating, falsifying, or misrepresenting research data promote the truth and minimize error.

- ethical standards promote the **values that are essential to collaborative work**, such as trust, accountability, mutual respect, and fairness

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

Ethical Norms

- Most societies have legal rules that govern behavior, but ethical norms tend to be broader and more informal than laws.

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

- One may also define ethics as a **method, procedure, or perspective** for deciding how to act and for analyzing complex problems and issues.

Ethical Norms

- Ethical norms may be defined as standards for behaviour that suit their particular aims and goals

- We discuss ethical norms that should guide scientific reasoning and conduct.

Ethical norms

Honesty

Scientists should practice honesty in research and publication, and in their interactions with peers, research sponsors, oversight agencies, and the public.

Objectivity

Scientists should strive for objectivity in research and publication, and in their interactions with peers, research sponsors, oversight agencies, and the public.

Openness

Scientists should share data, results, ideas, methods, tools, techniques, and resources.

Ethical norms

Freedom

Scientists should be free to conduct research without political or religious intimidation, coercion, or censorship

- This norm applies to institutions and organizations that support and oversee science, as well as the political systems in the countries where science is conducted.

- Freedom is vital to innovation, discovery, and criticism in science, since scientists need to be free to develop or pursue new ideas and to question old ones.

Ethical norms

Fair credit allocation

Scientists should give credit, but only where credit is due.

This principle is important in promoting scientific collaboration and cooperation, since people who work together on a project or publication deserve to receive credit for their contributions.

Respect for colleagues

Scientists should treat their peers, subordinates, students, and supervisors with respect.

This norm is important for building and maintaining cooperation and trust among scientists, and is supported by the moral requirement to respect persons.

Ethical norms

Respect for property

Scientists should respect physical and intellectual property belonging to individuals, institutions, and organizations.

- Physical properties in research include such items as cell and tissue samples, reagents, organisms, scientific instruments, and computer technology.
- Intellectual properties include data, patented inventions, and copyrighted original works.

Ethical norms

Respect for laws

Scientists should comply with the laws, regulations, policies, and guidelines that pertain to their work.

- Laws and other rules govern many areas of research, such as experimentation on human or animal subjects, laboratory practices, radiation safety, conflict of interest, harassment, discrimination, controlled substances, restricted biological agents, technology transfer, record-keeping, management of funds, fraud, and intellectual property.
- Even though scientists have an obligation to adhere to laws and other rules that govern their work, they have a right to protest or deliberately violate laws they believe to be immoral, unjust, or antithetical to scientific progress.
- Conscientious objection sometimes has a place in scientific research. Ex. Galileo disobeyed the Church in the name of scientific progress.

Ethical norms

Stewardship of research resources

Scientists should take appropriate care of physical, human, technological, and financial resources used in research.

- For example, in studying the remains of an ancient city, it is important for archeologists to avoid damaging the site, so that other researchers may also study it.
- If scientists mismanage or waste public funds, then the public will be less inclined to trust them with public money in the future.

Social responsibility

Scientists engage in activities that enhance or promote social goods, such as human health, public safety, education, agriculture, transportation, and scientists therefore should strive to avoid harm to individuals and society.

Ethical norms

- Some of the most significant events in the history of modern science have involved researchers exercising what they regarded as their responsibilities to society.

- For instance, during the Second World War, Albert Einstein wrote to President Franklin Roosevelt urging him to develop the atomic bomb before Nazi Germany would be able to develop the weapon.

- After the war, many scientists who were involved in the effort to develop atomic weapons turned their attention to preventing the spread of nuclear weapons and promoting peaceful uses of nuclear power.

ethical principles relate to respect for human subjects in research

- Informed consent (human subjects should not be used in research without their informed consent or the consent of their legal representatives);

- Beneficence (researchers should promote the welfare of human subjects and implement procedures designed to minimize harm to human subjects);

- Privacy (researchers should protect the privacy and confidentiality of human subjects);

- Justice (researchers distribute the benefits and burdens of research fairly and should select subjects equitably);

- Scientific validity (researchers should not enroll human subjects in experiments that are poorly designed and are unlikely to yield scientifically useful results).

Examples

- There are many ethical norms in research, such as <u>guidelines for authorship</u>,

- copyright and <u>patenting policies</u>,

- data sharing policies, and

- confidentiality rules in peer review,

- are designed to protect intellectual property interests while encouraging collaboration.

Example: Global Warming

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

- While an economist might examine the cost and benefits of various policies related to global warming, an environmental ethicist could examine the ethical values and principles at stake.

- Signal to some one may be Noise to others!!!

Example - American Association of University Professors (Statement of Ethics)

- Professors, guided by a deep conviction of the worth and dignity of the advancement of knowledge, recognize the special responsibilities placed upon them.
- Their primary responsibility to their subject is to seek and to state the truth as they see it.
- To this end professors devote their energies to developing and improving their scholarly competence.
- They accept the obligation to exercise critical self-discipline and judgment in using, extending, and transmitting knowledge.
- They practice intellectual honesty.
- Although professors may follow subsidiary interests, these interests must never seriously hamper or compromise their freedom of inquiry.

Example – Singapore Statement of Research Integrity

- **Principles**
- Honesty in all aspects of research
- Accountability in the conduct of research
- Professional courtesy and fairness in working with others
- Good stewardship of research on behalf of others

Responsibilities

- 1. Integrity: Researchers should take responsibility for the trustworthiness of their research.

- 2. Adherence to Regulations: Researchers should be aware of and adhere to regulations and policies related to research.

- 3. Research Methods: Researchers should employ appropriate research methods, base conclusions on critical analysis of the evidence and report findings and interpretations fully and objectively.

- 4. Research Records: Researchers should keep clear, accurate records of all research in ways that will allow verification and replication of their work by others.

- 5. Research Findings: Researchers should share data and findings openly and promptly, as soon as they have had an opportunity to establish priority and ownership claims.

- 6. Authorship: Researchers should take responsibility for their contributions to all publications, funding applications, reports and other representations of their research. Lists of authors should include all those and only those who meet applicable authorship criteria.

- 7. Publication Acknowledgement: Researchers should acknowledge in publications the names and roles of those who made significant contributions to the research, including writers, funders, sponsors, and others, but do not meet authorship criteria.

- 8. Peer Review: Researchers should provide fair, prompt and rigorous evaluations and respect confidentiality when reviewing others' work.

- 9. Conflict of Interest: Researchers should disclose financial and other conflicts of interest that could compromise the trustworthiness of their work in research proposals, publications and public communications as well as in all review activities.

- 10. Public Communication: Researchers should limit professional comments to their recognized expertise when engaged in public discussions about the application and importance of research findings and clearly distinguish professional comments from opinions based on personal views.

- 11. Reporting Irresponsible Research Practices: Researchers should report to the appropriate authorities any suspected research misconduct, including fabrication, falsification or plagiarism, and other irresponsible research practices that undermine the trustworthiness of research, such as carelessness, improperly listing authors, failing to report conflicting data, or the use of misleading analytical methods.

- 12. Responding to Irresponsible Research Practices: Research institutions, as well as journals, professional organizations and agencies that have commitments to research, should have procedures for responding to allegations of misconduct and other irresponsible research practices and for protecting those who report such behavior in good faith. When misconduct or other irresponsible research practice is confirmed, appropriate actions should be taken promptly, including correcting the research record.

- 13. Research Environments: Research institutions should create and sustain environments that encourage integrity through education, clear policies, and reasonable standards for advancement, while fostering work environments that support research integrity.

- 14. Societal Considerations: Researchers and research institutions should recognize that they have an ethical obligation to weigh societal benefits against risks inherent in their work.