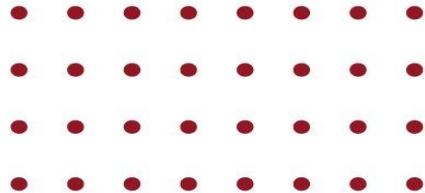


Research Methodology for PhDs



Session 14-1 Topics

- Ethical approach to the Research
 - Business Ethics
 - Research Ethics

Ethics. Terms and Definitions

A set of principles of right conduct.

A theory or a system of moral values.

The study of the general nature of morals and of the specific moral choices to be made by a person; moral philosophy.

Ethics Areas & Questions

How should we live? Shall we aim at happiness or at knowledge, virtue, or the creation of beautiful objects? If we choose happiness, will it be our own or the happiness of all? And what of the more particular questions that face us: is it right to be dishonest in a good causes it wrong to clone a human being or to destroy human embryos in medical research? What are our obligations, if any, to the generations of humans who will come after us and to the nonhuman animals with whom we share the planet?

Ethics deals with such questions at all levels. Its subject consists of the fundamental issues of practical decision making, and its major concerns include the nature of ultimate value and the standards by which human actions can be judged right or wrong.

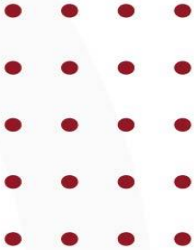


Ethics Approaches

Ethics is the study of how we ought to behave, and why.

There are many different theories of ethics, for example, utilitarianism (we ought to behave so that we maximise benefit for all), or Kantian ethics (we ought to treat all human beings as ends).

Ethics only becomes relevant when our behaviour affects others and not only ourselves.



Hypothetical and categorical rules

- Kant distinguishes in this way between hypothetical rules (these are rules that I follow because I want to achieve a particular end); and categorical rules (these are the moral rules that I follow unconditionally, and not just because I want to achieve some end).
- “Categorical” here means always right. I always have to do the morally right action. I always have to be honest. I always have to refrain from killing other people; and so on.

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Hypothetical and categorical rules

Values tell us
what's good –

- they're the things we strive for, desire and seek to protect.

Principles tell us
what's right –

- outlining how we may or may not achieve our values.

Purpose is your
reason for being –

- it gives life to your values and principles.

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Question-driven Decision-making

1. Would I be happy for this decision to be headlining the news tomorrow?

2. Is there an ethical non-negotiable at play?

3. Will my action make the world a better place?

4. What would happen if everybody did this?

5. What will this do to my character or the character of my organisation?

6. Is this consistent with my values and principles?

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Ethics in Business

Business ethics is the application of ethical values to business behaviour.

Business ethics is relevant both to the conduct of individuals and to the conduct of the organisation as a whole.

It applies to any and all aspects of business conduct, from boardroom strategies and how companies treat their employees and suppliers to sales techniques and accounting practices.

<https://www.ibe.org.uk/knowledge-hub/what-is-business-ethics.html>

Business Ethics Principles

Leadership:

- The conscious effort to adopt, integrate, and emulate the other 11 principles to guide decisions and behavior in all aspects of professional and personal life.

Accountability:

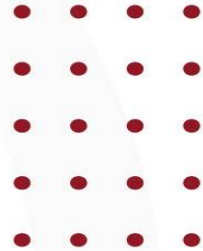
- Holding yourself and others responsible for their actions. Commitment to following ethical practices and ensuring others follow ethics guidelines.

Integrity:

- Incorporates other principles—honesty, trustworthiness, and reliability. Someone with integrity consistently does the right thing and strives to hold themselves to a higher standard.

Respect for others:

- To foster ethical behavior and environments in the workplace, respecting others is a critical component. Everyone deserves dignity, privacy, equality, opportunity, compassion, and empathy.



Business Ethics Principles

Honesty:

- Truth in all matters is key to fostering an ethical climate. Partial truths, omissions, and under or overstating don't help a business improve its performance. Bad news should be communicated and received in the same manner as good news so that solutions can be developed.

Respect for laws:

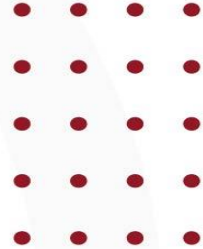
- Ethical leadership should include enforcing all local, state, and federal laws. If there is a legal grey area, leaders should err on the side of legality rather than exploiting a gap.

Responsibility:

- Promote ownership within an organization, allow employees to be responsible for their work, and be accountable for yours.

Transparency:

- Stakeholders are people with an interest in a business, such as shareholders, employees, the community a firm operates in, and the family members of the employees. Without divulging trade secrets, companies should ensure information about their financials, price changes, hiring and firing practices, wages and salaries, and promotions are available to those interested in the business's success.



Business Ethics Principles

Compassion:

- Employees, the community surrounding a business, business partners, and customers should all be treated with concern for their well-being.

Fairness:

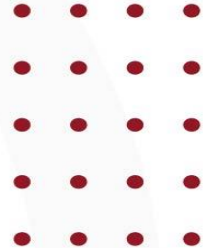
- Everyone should have the same opportunities and be treated the same. If a practice or behavior would make you feel uncomfortable or place personal or corporate benefit in front of equality, common courtesy, and respect, it is likely not fair.

Loyalty:

- Leadership should demonstrate commitment to their employees and the company. Inspiring loyalty in employees and management ensures that they are committed to best practices.

Environmental concern:

- In a world where resources are limited, ecosystems have been damaged by past practices, and the climate is changing, it is of utmost importance to be aware of and concerned about the environmental impacts a business has. All employees should be encouraged to discover and report solutions for practices that can add to damages already done



Why Is It Important

From artificial intelligence to facial recognition technology, organizations face an increasing number of ethical dilemmas.

While innovation can aid business growth, it can also create opportunities for potential abuse.

“The long-term impacts of a new technology—both positive and negative—may not become apparent until years after it’s introduced,” says Harvard Business School Professor Nien-hê Hsieh in the online course Leadership, Ethics, and Corporate Accountability.

“For example, the impact of social media on children and teenagers didn’t become evident until we watched it play out over time.”

©<https://online.hbs.edu/blog/post/business-ethics>

Research Ethics

It refers to the moral principles that govern the conduct of certain activities or a person's behavior.

Now, what's research ethics? It includes guidelines provided for the responsible conduct of research. The aim is to ensure research results aren't falsified or altered.



Research ethics seek to educate and monitor scientists to maintain high ethical standards.

Ethical misconduct poses a considerable risk. It can lead to severe harm or death of people.

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Codes and Policies for Research Ethics

Given the importance of ethics for the conduct of research, it should come as no surprise that many different professional associations, government agencies, and universities have adopted specific codes, rules, and policies relating to research ethics. Many government agencies have ethics rules for funded researchers.

- [National Institutes of Health \(NIH\)](#) 
- [National Science Foundation \(NSF\)](#)  
- [Food and Drug Administration \(FDA\)](#) 
- [Environmental Protection Agency \(EPA\)](#) 
- [US Department of Agriculture \(USDA\)](#) 
- [Singapore Statement on Research Integrity](#) 
- [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](#) 
- [Statement on Professional Ethics \(American Association of University Professors\)](#) 
- [Nuremberg Code](#) 
- [World Medical Association's Declaration of Helsinki](#) 

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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, research sponsors, 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

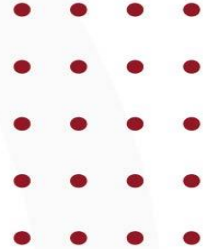
Keep your promises and agreements; act with sincerity; strive for consistency of thought and action.



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.

Principles of Research Ethics



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Openness

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



Transparency

Disclose methods, materials, assumptions, analyses, and other information needed to evaluate your research.



Accountability

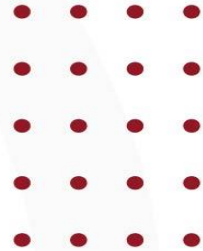
Take responsibility for your part in research and be prepared to give an account (i.e. an explanation or justification) of what you did on a research project and why.



Intellectual Property

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

Principles of Research Ethics



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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

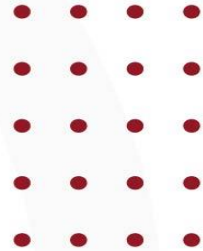
Help to educate, mentor, and advise students. Promote their welfare and allow them to make their own decisions.



Respect for Colleagues

Respect your colleagues and treat them fairly.

Principles of Research Ethics



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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 not related to scientific competence and integrity.



Competence

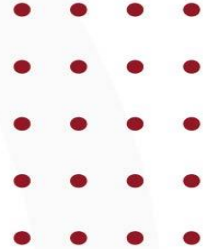
Maintain and improve your own professional competence and expertise through lifelong education and learning; take steps to promote competence in science as a whole.



Legality

Know and obey relevant laws and institutional and governmental policies.

Principles of Research Ethics



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Principles of Research Ethics



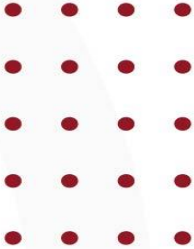
Animal Care

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.



Session 14-2 Topics

- Ethical considerations
- Ethics approval procedures

Goals

The goals of human research often include understanding real-life phenomena, studying effective treatments, investigating behaviors, and improving lives in other ways.

- What you decide to research and how you conduct that research involve key ethical considerations.

These considerations work to

- protect the rights of research participants
- enhance research validity
- maintain scientific or academic integrity



Academic Integrity vs Academic Dishonesty

Academic integrity is the value of being honest, ethical, and thorough in your academic work. It allows readers to trust that you aren't misrepresenting your findings or taking credit for the work of others.

Academic dishonesty (or academic misconduct) refers to actions that undermine academic integrity. It typically refers to some form of plagiarism, ranging from serious offenses like purchasing a pre-written essay to milder ones like accidental citation errors.



Why does Academic Integrity Matter

Unfair to the plagiarized author

Unfair to other researchers who did not cheat

Damaging to your own learning

Harmful if published research contains misleading information

Dangerous if you don't properly learn the fundamentals in some contexts



Common Types of Academic Dishonesty

Plagiarism	Copying someone else's work and passing it off as your own, without giving proper credit	Copying and pasting parts of a source you found online without citing it
Cheating	Using unauthorized sources or devices to help you achieve an outcome you wouldn't have on your own	Copying someone's answers on an exam
Contract cheating	Paying or bribing someone to help you cheat	Buying exam answers, pre-written essays, or admittance to a university
Facilitation of academic dishonesty	Helping others cheat	Giving a friend exam answers or taking an exam in their place
Collusion	Working together with others to cheat	Texting your friends during an online exam to compare answers
Data fabrication	Misrepresenting the results of your research	Modifying experimental data to show a nonexistent correlation that would support your hypothesis
Deceit	Lying or falsifying information	Fabricating an illness to get out of an exam

©<https://www.scribbr.com/plagiarism/academic-dishonesty/>

Types of Ethical Issues

Ethical issue	Definition
Voluntary participation	Your participants are free to opt in or out of the study at any point in time.
Informed consent	Participants know the purpose, benefits, risks, and funding behind the study before they agree or decline to join.
Anonymity	You don't know the identities of the participants. Personally identifiable data is not collected.
Confidentiality	You know who the participants are but you keep that information hidden from everyone else. You anonymize personally identifiable data so that it can't be linked to other data by anyone else.
Potential for harm	Physical, social, psychological and all other types of harm are kept to an absolute minimum.
Results communication	You ensure your work is free of plagiarism or research misconduct, and you accurately represent your results.

AI Misconduct

AI systems are used to generate responses or other data

Extra authority and trustworthiness to machines.

Generative-AI technologies can create convincing scientific data with ease

AI analysis of images, faces, video can be very subjective

AI (ML) learning procedures are closed

AI generated texts of articles and dissertations

De-anonymizing, breaching confidentiality



Potential for Harm

Psychological harm:

- Sensitive questions or tasks may trigger negative emotions such as shame or anxiety.

Social harm:

- Participation can involve social risks, public embarrassment, or stigma.

Physical harm:

- Pain or injury can result from the study procedures.

Legal harm:

- Reporting sensitive data could lead to legal risks or a breach of privacy.



Ethical Approval (mostly in Medicine, but in Social Research as well)

Put the protection of the participants' interests first

Act with honesty and integrity

Follow the appropriate national research governance guidelines and the guidance in Research

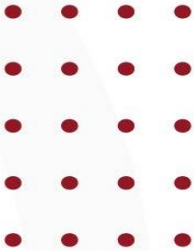
Respecting Autonomy

Providing research participants with sufficient information to make an informed decision as to whether to take part in research (informed consent);

Ensuring that participants are not subject to coercion to take part or penalty for not taking part;

Ensuring that participants are, and are aware that they are, free to withdraw from the research at any time without giving a reason and without a prejudice;

Protecting and respecting personal data provided by participants through rigorous and appropriate procedures for confidentiality and anonymisation



Maximizing Benefits

Designing, reviewing and conducting research in a manner that ensures quality and integrity and maximises the chance of obtaining useful results;

Ensuring that research is effectively and appropriately disseminated;

Ensuring that the aims of the research are transparent and that the methodology used is appropriate to addressing them.



Minimizing Harm

Ethics committees will expect you to have thoroughly considered the potential (and potential severity) for harm to come to research participants or others as part of your research.

You will be expected to consider all possible risks of harm that might be posed by your research, keeping in mind that certain harms, such as distress, embarrassment or anxiety, can be subjective and difficult to predict.

Harm (where identified) should normally be avoided and you will be expected to show how you will do so. Where the risk of harm cannot be avoided, an ethics committee will expect to see that you have taken robust precautions to mitigate the potential for harm and deal with harm should it occur.

It will normally be expected that the degree of risk (and potential severity) of harm should be proportionate to the potential benefits of the research. Research posing a high risk of harm or a risk of severe harm will require careful consideration by the researcher and ethics committee before being approved.





Thank You!
Read the Recommended Readings
You're welcome with your discussions and
questions in VLE!

Read practical cases at

<https://www.niehs.nih.gov/research/resources/bioethics/whatis>

Read

<https://www.nature.com/articles/d41586-024-03542-8>

Please note, that since the recordings are done, some Readings may become unavailable. Inform us immediately in VLE, so we can offer substitutions