How to Successfully Publish a Manuscript

A Step-by-Step Guide

Islam Mohammad Shehata
Omar Viswanath
Editors

Springer

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To my father, who raised me to be something
To my mom, who taught me how to be a good thing
To my family, for whom I'd like to be a great thing
I especially thank Prof. Hamdy Awad who told me that I can, and Prof. Alan Kaye who has helped me to do what I can!

Islam Mohammad Shehata

16 Things this Book Will Help You Achieve

Validate your ideas

★

Create a compelling Title

★

Compose an interesting Introduction

★

Craft a competent Discussion

★

Master the Artwork

★

Simplify Referencing

★

Write a well-structured Abstract

★

Find an appropriate Journal

★

Submit like a professional author

★

Respond to reviewers comprehensively

★

Manage Funding challenges

★

Use AI tools like a pro

★

Build a great team

★

Report publishable cases

★

Conduct systematic review and meta-analysis

★

Avoid ethical violations

Introduction

To our readers,

There are very few books on the market for those looking for help in successfully writing a scientific paper. No matter what country you may come from, clinical research is becoming a necessary part of the clinical knowledge and learning that is normally associated with medical graduate studies. With these students and medical professionals in mind, we believe this new, step-by-step guide, including both print and digital content, will enable those in the medical field to achieve similar success in the clinical research world as they progress through their studies and training. This book includes many easy-to-follow tables and figures, and it is written in an easily digestible format for both novices and experienced practitioners and researchers.

The goal of *How to Successfully Publish a Manuscript: A Step-by-Step Guide* is to provide practical guidance for novice researchers to allow them to follow a systematic guide to achieving publication success from experts in the field.

For professional authors, you will find many tips and tricks to perfect your work and increase the efficiency of the whole writing and publication process

Step by step
Bit by bit
Brick by brick

The book guides you with a full chapter for every single step required to start with a research topic and end with a formal manuscript accepted for publication. We have also included basic information about AI and practical ways to use it in every chapter. We hope that would help change the way research is done by making complex tasks faster and more efficient, allowing you to focus on the core of your project.

Unlike other books, one does not have to read the whole book to start; it is intentionally designed to provide ongoing benefits as you are reading it. Therefore, we recommend that the author start writing their own manuscript while reading our chapters.

Thank you,
Islam Mohammad Shehata, MD/PhD
Omar Viswanath, MD

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About the Editors

Islam Mohammad Shehata, MD, PhD is a cardiac anesthesiologist and critical care clinical consultant practicing in Cairo, Egypt.

He was born and raised in Kom Hamada city, El Beheira Governorate, which is a costal governorate in Egypt. He obtained his bachelor's degree in medicine, and master's and doctoral degrees in anesthesiology from the Faculty of Medicine, Ain Shams University, Cairo, Egypt. He then completed his visiting scholarship in cardiac anesthesia at Ohio State University Wexner Medical Center, Columbus, Ohio. He also obtained the European Diploma in Anaesthesiology and Intensive Care examination.Currently, he is a lecturer of anesthesiology in anesthesia department at Ain Shams University, and a research assistant at the Faculty of Medicine, Modern University for Technology and Information, Cairo, Egypt. He currently serves as an associate editor in the anesthesia section of *Annals of Medicine* journal and a reviewer for many well-known journals. His relevant links are as follows:
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https://scholar.google.com/citations?user=tIbA7HQAAAAJ&hl=en

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Ethics of Research

1

Rodayna Wael Elsayed, Ahmed Atef Ahmed, Islam Mohammad Shehata, Omar Viswanath, and Randy Richardson

Ethics is knowing the difference between what you have a right to do and what is right to do.

—Potter Stewart

1.1 Definition

A set of ethical and moral principles guiding research practices [1].

1.2 Role

– It ensures that researchers act ethically with their study participants. This involves treating them with dignity and respect, which should foster trust and confidence in the integrity of the research and data it yields, which can ultimately guide, shape, and change clinical practice.

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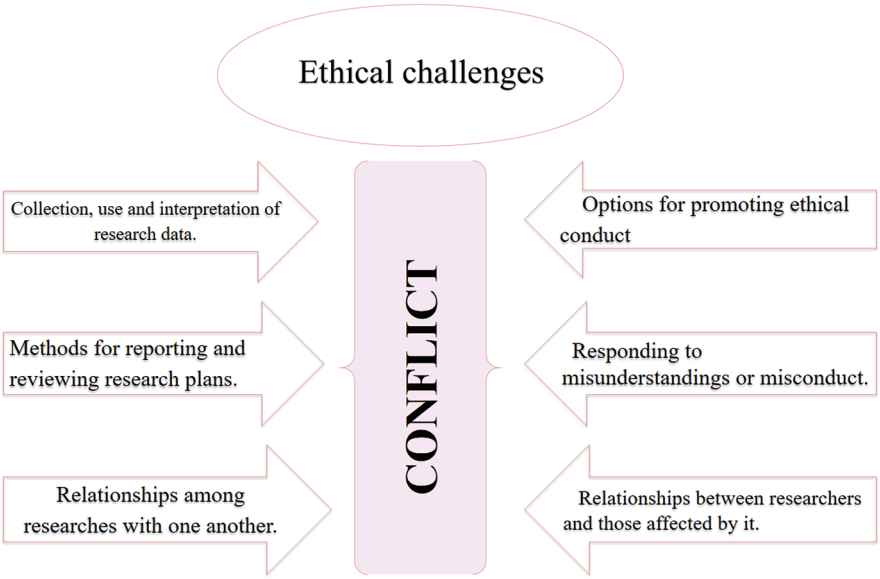

Fig. 1.1 Ethical challenges leading to conflict in research. [1]

– It regulates the relationships between the authors, peer reviewers, and journals.
– It ensures that the literature contributes positively to the community and does not violate any rights [1].

Figure 1.1 presents ethical challenges encountered in research.

1.3 History

1.3.1 Ancient Egypt and the Foundations of Medical Ethics (Oath of Imhotep)

One of the earliest known codes of medical ethics was the Oath of Imhotep, named after the renowned Egyptian physician and architect who lived around 2600 BCE. The Oath laid out the fundamental principles of medical practice, including the duty to protect the confidentiality of patients, the obligation to provide care to the best of one's abilities, and the prohibition against engaging in harmful or unethical practices.

Muslim scholars and physicians built upon the foundation laid by ancient Greek thinkers, such as Hippocrates and Galen, and further expanded the ethical principles governing the practice of medicine.

The concept of the "sanctity of life" was central to medical ethics, with physicians being required to uphold the principle of preserving life and avoiding harm.

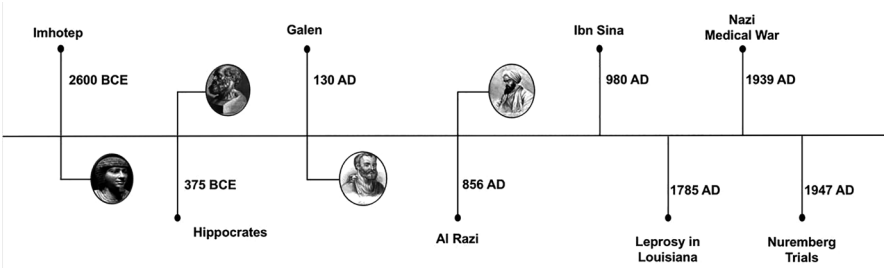

Fig. 1.2 Medical ethics history map. From Imohotep (2600 BCE) to the twentieth century

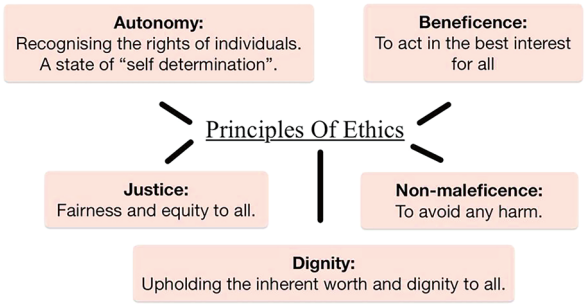

Fig. 1.3 Principles of ethics: autonomy, beneficence, justice, nonmaleficence, and dignity

One of the most influential figures in this regard was the Persian physician and philosopher Avicenna (also known as Ibn Sina) in the eleventh century. His seminal work, the Canon of medicine (law), addressed the importance of ethical considerations in health care. Avicenna emphasized the physician's duty to act with compassion, honesty, and respect for patient autonomy, echoing the Hippocratic tradition [2].

Figure 1.2 shows the medical ethics history map (from Imohotep (2600 BCE) to the twentieth century).

1.4 Principles of Ethics

Figure 1.3 presents the principles of ethics: autonomy, beneficence, justice, nonmaleficence, and dignity.

1.5 Key Ethical Considerations

Figure 1.4 *presents key ethical considerations: ethical approval, authors, plagiarism, and citations.*

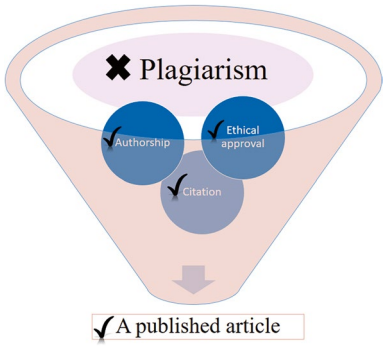

Fig. 1.4 Key ethical considerations: ethical approval, authors, plagiarism, and citations

1.5.1 Authorship

> Authorship is not a trade, it is an inspiration; authorship does not keep an office, its habitation is all out under the sky and everywhere the winds are blowing and the sun is shining and the creatures of God are free. (Mark Twain)

Definition Authorship is for each author who significantly advances science during the course of a study and contributes to it. They also share responsibility and accountability for the results of the published research.

Authorship credit carries significant academic, societal, and economic implications and is governed by regulations to ensure transparency and prevent ethical violations. Proper documentation of research findings is essential for future researchers and enhances the credibility of the work. Attention must be given to the type of study being conducted, and evaluations should be made based on the findings. The writing process can be both rewarding and demanding [3].

Key ethical concerns include:

1. **Ghost author**: Removed author to mask financial conflict of interest
2. **Guest author**: Adding a well person to increase the credibility
3. **Gift/honorary author**: Co-authorship awarded to a person who has not contributed significantly to the study
4. Sharing confidential data from peer reviews
5. Assigning the same project to multiple students to race for completion
6. Overburdening or exploiting graduate and post-doctoral students, which can harm their well-being and academic progress [3]

1.5.2 Citations [4]

Definition In research papers or speeches, quoting or paraphrasing someone else's ideas requires proper credit, helping readers locate the source [5].

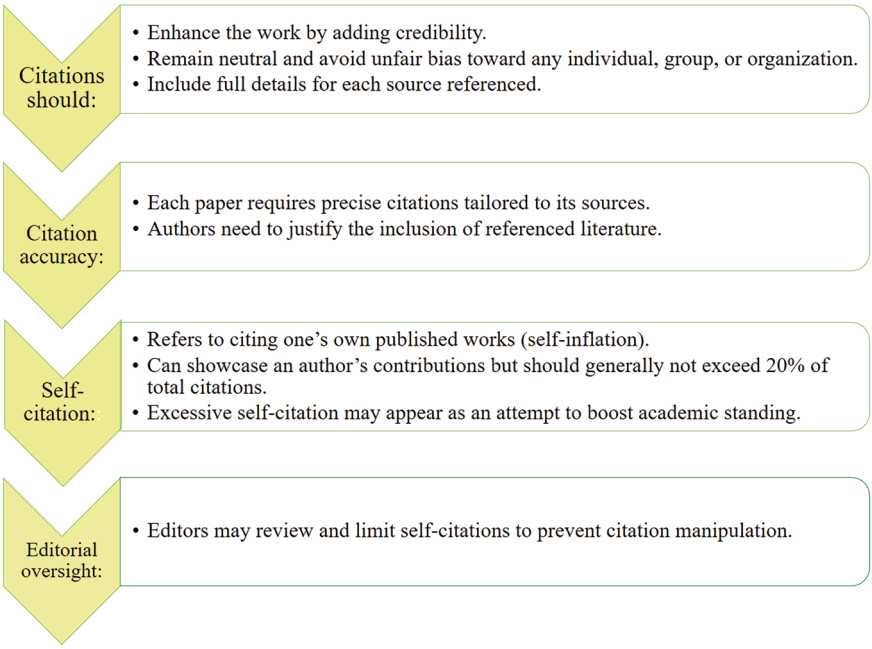

Fig. 1.5 Citations: how to properly credit someone else's work. [5]

Figure 1.5 presents citations on how to properly credit someone else's work.

1.5.3 Generative AI (Refer to Chap. 17)

The use of generative AI in research is inevitable and valuable. However, it raises many ethical concerns, particularly around confidentiality, data protection, and accountability. Generative AI models cannot take responsibility for their contributions or ensure adherence to ethical standards, making them unsuitable as substitutes for expert reviewers. Therefore, researchers must follow specific rules and ethical standards to keep the integrity of medical research.

1.5.4 Plagiarism [6]

Plagiarism is defined as the intentional or unintentional duplication of another person's words or ideas. It is unethical and may result in disciplinary actions, including expulsion.

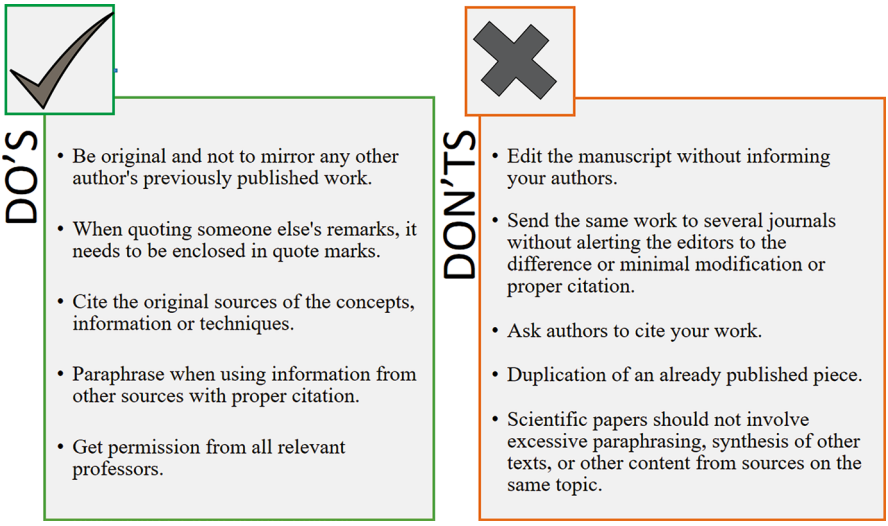

Fig. 1.6 Plagiarism: what to do and what not to do. [7].

- **Importance of proper credit**.
  - Researchers should understand citation practices and take accurate notes.
  - Plagiarism has consequences, even if it is unintentional.
- **Consequences of plagiarism**.
  - If a document contains over **25%** plagiarized content, it may be rejected and republished with a disclaimer.
  - If plagiarism is discovered post-publication, editors may issue an "Editor's Note" or retract the piece, informing the publisher and readers.
- **Types of plagiarism**:
  - **Self-plagiarism**: Reusing one's own work without proper citation.
  - **Direct plagiarism**: Copying a passage word-for-word from another's work without acknowledgment or quotation marks.
  - **Mosaic plagiarism**: Incorporating concepts, viewpoints, or phrases from a source without credit, often with slight word changes but keeping the original structure, also known as "patch writing."
  - **Accidental plagiarism**: Failing to properly cite sources, misquoting, or paraphrasing too closely by accident. It is treated with the same severity as intentional plagiarism [7].

  Figure 1.6 presents plagiarism: what to do and what not to do.
  Figure 1.7 presents ways to avoid plagiarism.

- ***Websites to help you in paraphrasing:*** (all are free to use but some have word limit).
  https://quillbot.com/grammar-check
  https://www.paraphraser.io/

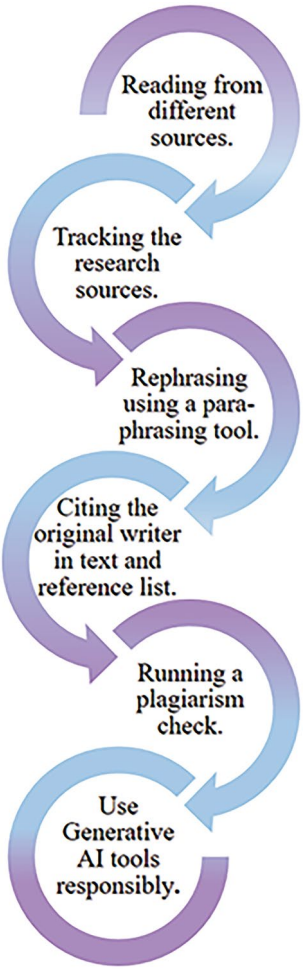

Fig. 1.7 Ways to avoid plagiarism [8]

https://www.prepostseo.com/
https://rephrasetool.com/

- ***Websites for detecting the percentage of plagiarism:*** (all are free to use but some have word limit).
  https://www.grammarly.com/plagiarism-checker
  https://justdone.ai/try/humanize-ai
  https://www.prepostseo.com/

1.5.5 Duplicate Publications [9]

Definition Duplicate publication occurs when an author publishes a paper substantially similar to a previously published one without acknowledging the source or

obtaining permission from the original copyright holder. Differences may include a new title or modified abstract, but the data and findings remain the same.

Issues

- Copyright violation: The copyright typically belongs to the journal, not the authors, preventing free republication.
- Self-plagiarism: Using material from another work without attribution [10].

1.6 Ethical Declarations That Authors Should Provide at the Journal Submission Stage [11]

- **Presubmission Considerations Related to Authorship**
  - All authors must agree on the authorship, read, and approve the manuscript.
  - The order of authors should be mutually agreed upon before submission.
  - The title page must include full names, institutional affiliations, highest degrees, and email addresses of all authors. ORCID IDs and LinkedIn profiles may also be included.
  - A corresponding author should be designated, responsible for all manuscript-related communication, and their detailed institutional affiliation (including postal address, phone number, fax number, and email) should be provided [10].
- ***Other Important Declarations***
  - Authors' contribution
    - Specify individual contributions (e.g., study design, data acquisition, experiments, data analysis, and manuscript writing).
    - Follow journal-specific guidelines for declaring contributions.
  - Acknowledgments
    - Acknowledge those who provided technical help, general support, or manuscript preparation assistance.
    - If no acknowledgments are needed, state "Not applicable."
  - **Funding**
    - Declare all funding sources and their roles in the research.
    - Provide the names of funding agencies and grant numbers.
    - If no funding was received, state this.
  - **Competing Interests/Conflict of Interest**
    - Declare all financial and nonfinancial competing interests.
    - Include political, personal, religious, ideological, academic, and intellectual interests.
    - Disclose any potential conflicts of interest, including funding sources or affiliations.
    - Authors from commercial organizations should declare these interests.
  - Data Integrity
    - Ensure the accuracy and integrity of the data presented.
    - Be transparent about research methods and procedures.

- Affiliation Policy
  - All relevant affiliations (approved/supported/conducted) should be listed.
  - Moving to another affiliation (double affiliation):
    - The original one (conducted to paper) + the current one.
  - If there is no current: independent status.
- **Ethical Approval**
  - Obtain and mention ethics approval for studies involving human or animal subjects.
  - Include informed consent statements if applicable.
- Declarations Specific to Article Type:
  - Reviews: Do not require ethical approvals or informed consent. Authors should state why these are not needed for transparency.
  - Clinical Trials: Must follow CONSORT guidelines for health-related interventions. Authors should confirm adherence to these guidelines and provide the trial registry and registration number (e.g., ISRCTN).
- Statements of ethical approval for studies involving human subjects and/or animals:
  If your study involves human subjects and/or animals and also if your manuscript includes case reports/case series
  - Ethical Approval: Provide the name of the ethical approval committee/Institutional Review Board and the approval number/ID.
  - Informed Consent: State that written informed consent was obtained from study participants. If verbal consent was used, explain why written consent was not obtained.
  - Case Reports/Series: For minors, confirm written consent from legally authorized representatives/parents/guardians. If verbal consent was used, provide reasons.
  - Privacy: Do not include identifying information (e.g., images, names, initials, and hospital numbers) unless essential for scientific purposes. Obtain written consent for publication of such information. If consent is not obtained, remove personal details before submission [10].

The foundation of ethical research lies in maintaining integrity, transparency, and respect for both the scientific process and the rights of all individuals involved. As researchers, we bear the responsibility not only to uphold rigorous standards but also to foster trust within the broader community. By diligently observing ethical guidelines in authorship, citation, the responsible use of AI, and the prevention of plagiarism, we contribute to a body of work that is both credible and impactful. As science continues to evolve, so too must our commitment to ethical practices, ensuring that future generations inherit a research environment defined by respect, accountability, and a dedication to the truth.

In conclusion, Fig. 1.8 shows what should be avoided while writing a research paper.

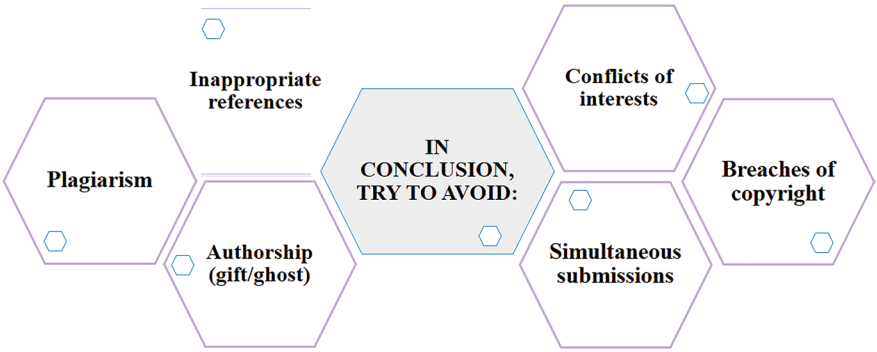

Fig. 1.8 What should be avoided while writing a research paper?

Appendix

History Map inspired by:

- Figure 2: Imhotep 2600 BCE.
  - PhilMasiello. (2023, April 15). *The Pharoah Ptahhotep: Ancient entrepreneur*. Phil Masiello Startup & Business Coach. https://philmasiello.com/the-pharoah-ptahhotep-ancient-entrepreneur/
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- Figure 2: Hippocrates 375 BCE.
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- Figure 2: Galen 130 AD.
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- Figure 2: Al Razi 865 AD.
  - *Portrait of rhazes (Al-Razi) (AD 865–925), physician and Alchemist who lived in Baghdad*. Wellcome Collection. (n.d.-a). https://wellcomecollection.org/works/vv9w9wg4
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- Figure 2: Ibn Sina 980 AD.
  - Amr, S. S., & Tbakhi, A. (2007b). *Ibn Sina (Avicenna): The prince of physicians*. Annals of Saudi medicine. https://pmc.ncbi.nlm.nih.gov/articles/PMC6077049/
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- Figure 2: Nazi medical war 1939 AD.

– *Pseudo-medical experiments in Hitler's concentration camps*. Pseudo-medical experiments in Hitler's concentration camps | Medical Review Auschwitz. (n.d.). https://www.mp.pl/auschwitz/journal/english/170062,pseudo-medical-experimens-in-hitlers-concentration-camps.
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How to Find a Meaningful Research Question

2

Neveen A. Kohaf, Esraa Y. Salem, Islam Mohammad Shehata, Omar Viswanath, and Alan David Kaye

In the realm of knowledge, every question plants the seed of research; choose yours wisely.

Abbreviations

AI Artificial Intelligence
PICO Population, Intervention, Comparison, Outcome

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FINERMAPS	Feasible, Interesting, Novel, Ethical, Relevant, Manageable, Appropriate, Potential Value, Publishable, Systematic
PubMed	Public/Publisher Medline
PROSPERO	International Prospective Register of Systematic Reviews
INPLASY	International Platform of Registered Systematic Review and Meta-analysis Protocols

2.1 Introduction

A hypothesis in research methodology is a tentative, testable explanation or prediction about the relationship between variables in a study. It serves as a guiding statement for the research, proposing a potential outcome based on existing knowledge or theories. This educated conjecture directs the investigation and can be either supported or refuted through systematic data collection and analysis. Hypotheses play a crucial role in shaping the research design, determining appropriate methods, and providing a framework for interpreting results [1, 2].

2.1.1 Characteristics of a Good Hypothesis

- *Testability*: An effective hypothesis necessitates validation through empirical data collection and analysis.
- *Variables*: It distinctly defines the independent and dependent variables pertinent to the study.
- *Clarity*: The hypothesis must be articulated in a concise and understandable language, eliminating ambiguity.

2.2 Definition

The research question is the foundation upon which the entire study is built. It determines the scope and focus of the investigation, shapes the methodology, and ultimately influences the significance and contribution of the findings [3].

2.3 Importance

Formulating an effective research question is a crucial first step of any research endeavor. A well-crafted research question not only provides clear direction for the study but also serves as a guidepost throughout the research process (Fig. 2.1) [4].

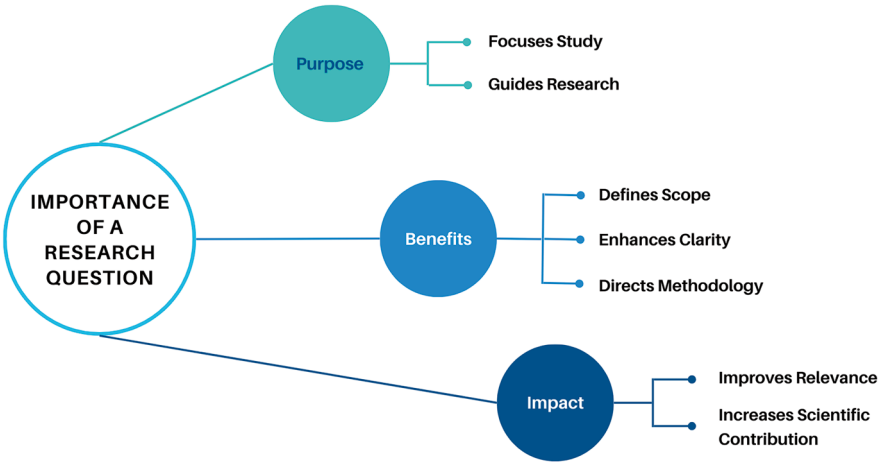

Fig. 2.1 Importance of research questions

2.4 Characteristics of Research Questions

Identifying a meaningful and impactful research question can be a challenging task, as it requires [5]:

1. A well-rooted understanding of the existing literature
2. An awareness of current research trends
3. The ability to identify knowledge gaps

Furthermore, an effective research question should be precise and complex enough to warrant in-depth analysis, rather than a simple "yes" or "no" answer. It should also be arguable or testable, with the potential for multiple interpretations and the ability to withstand scrutiny [6]. This ensures that the research question is not merely a statement of fact but a genuine inquiry that can be explored through rigorous investigation (Fig. 2.2) [7].

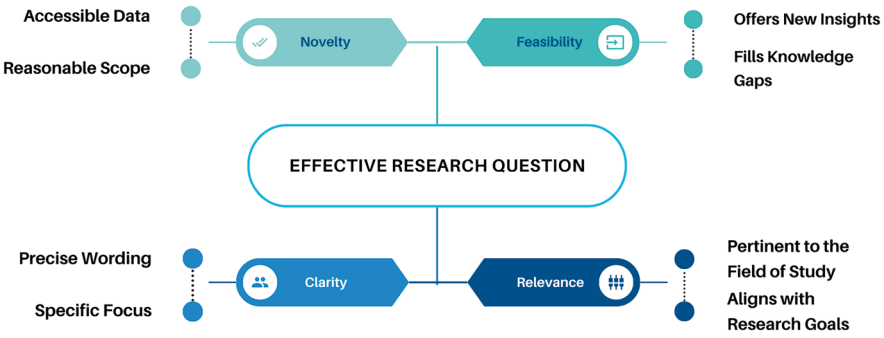

Fig. 2.2 Characteristics of effective research questions

2.5 Strategies for Identifying Research Questions

Identifying a meaningful research question often requires a multifaceted approach. Here are three strategies you can follow:

1. Conducting a **thorough review** of the existing literature:
   This involves not only reading the relevant studies but also analyzing the gaps, limitations, and unanswered questions within the field. By identifying these knowledge gaps, researchers can develop specific research questions that have the potential to make a significant contribution to the existing body of knowledge.
   Example: meta-analysis/systematic review [8, 9].
2. **Up to date** with the latest trends and developments in the field:
   This can be achieved by regularly reading academic journals, attending conferences, and engaging with the research community. Being informed of the current state of the field allows researchers to identify the emerging areas of interest and formulate research questions that address pressing issues or unexplored topics.
   Examples: Techniques: hypotensive predictive index [10], COVID: proceed or postpone [11].
3. Inspiration from **your own observations**, experiences, and intuitions:
   By reflecting on your own interests, curiosities, and personal experiences, you can identify research questions that resonate with yourself and have the potential to generate meaningful insights. This approach can lead to the development of unique and innovative research questions that challenge existing assumptions and push the boundaries of the field.
   Examples: Case report: pneumothorax [12].