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Plagiarism and Self Plagiarism in Occupational Health Research : Insights and Current Perspectives

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Abstract

Background: Integrity is the most crucial element for the reputation of scientific research and publication. Plagiarism is a significant contributor to unethical publications and retractions among research in regions of Asia (namely South, East and Southeast). Self-plagiarism is a form of plagiarism. The number of scientific journals published per year has been steadily increasing, so have the occurences of plagiarism and self-plagiarism in medical research.
Methods: In March 2025, we conducted basic search techniques within all fields in Cochrane, Google Scholar and Scopus. We searched PubMed using an advanced search technique with medical terms (MeSH terms). We counted sources from scientific journals published in English between 2018 and 2025.
Results: Plagiarism is a prevalent type of research misconduct in which an author presents another individual's work (such as ideas, data, results, or text) as their own, without giving credit or obtaining consent from the original source. Self-plagiarism can be found when an author duplicates text/ results from his own previous publications. There are three practical steps to avoid plagiarism: cite everything properly, synthesize, and contribute your analysis.
Conclusions: Researchers can learn about different types of plagiarism (i.e. self-plagiarism) by taking appropriate training in scientific writing. They can encourage the utilization of plagiarism detection tools, resulting in a significant decrease in the issue. By synthesizing knowledge, methodologies, and perspectives from different disciplines, the risk of unintentional plagiarism can be minimized.
Keywords: plagiarism, self-plagiarism, ethics, occupational health research, medical research

Abstrak

***Latar belakang**: Integritas dalam penelitian dan publikasi ilmiah merupakan unsur yang paling esensial untuk menentukan reputasinya. Plagiarisme masih menjadi penyebab umum penerbitan dan pencabutan yang tidak etis di kawasan Asia (terutama Asia Selatan, Timur, dan Tenggara). Plagiarisme diri merupakan salah satu bentuk plagiarisme. Jumlah jurnal-jurnal ilmiah yang diterbitkan setiap tahun terus meningkat, demikian pula dengan kejadian plagiarisme dan plagiarisme diri dalam penelitian medis.*
***Metode**: Pada bulan Maret 2025, kami melakukan teknik pencarian dasar di semua bidang di Cochrane, Google Scholar, dan Scopus. Kami mencari di PubMed menggunakan teknik pencarian lanjutan dengan istilah medis (istilah MeSH). Jurnal-jurnal tersebut diterbitkan dalam bahasa Inggris kapan saja mulai dari tahun 2018 hingga dan termasuk tahun 2025.*
***Hasil**: Plagiarisme merupakan salah satu bentuk pelanggaran penelitian yang paling umum, di mana karya orang lain (ide, data, hasil, atau teks) disajikan oleh seorang penulis seolah-olah menjadi karyanya sendiri, tanpa mengakui atau meminta izin dari orang/sumber aslinya. Plagiarisme diri dapat terjadi ketika seorang penulis menduplikasi teks/hasil dari publikasi miliknya sendiri sebelumnya. Ada tiga langkah praktis untuk menghindari plagiarisme: mengutip semuanya dengan benar, melakukan sintesis, dan memberikan kontribusi analisis Anda.*
***Kesimpulan**: Peneliti dapat mempelajari berbagai jenis plagiarisme (yaitu plagiarisme diri) dengan mengikuti pelatihan yang tepat dalam penulisan ilmiah. Mereka dapat mempromosikan penggunaan alat pemeriksa plagiarisme, yang mengarah pada pengurangan substansial dalam masalah tersebut. Dengan mensintesis pengetahuan, metodologi, dan perspektif dari berbagai disiplin ilmu, risiko plagiarisme yang tidak disengaja dapat diminimalkan.*
***Kata kunci**: plagiarisme, plagiarisme-diri, etika, penelitian kesehatan kerja, penelitian medis*

Background

Integrity is the most crucial element for the reputation of scientific research and publication. It is essential for medical and research institutions to promote good clinical practice among investigators and establish institutional ethics committees to oversee research.[2] An occupational health institution is one of the medical institution that focuses on the health and safety of workers in a specific workplace or industry. According to Coggon (2001), ethical considerations in medical research are of high public importance in the UK lately. Occupational health research can be considered less controversial than some other areas of research. Most of these studies involve human subjects which is part of observational studies. Observational studies focus on observing or measuring outcomes without manipulating variables, whereas experimental studies involve interventions and can carry more risks. Nonetheless, ethical issues in occupational health research, including study design, data interpretation, and application of findings, are becoming increasingly complex. These issues extend to the acceptability and limitations of epidemiological methods used in the field, sparking debates about their rigor and potential biases.[3] It is important to consider research misconduct.

Plagiarism is a significant contributor to unethical publications and retractions among research in regions of Asia (namely South, East and Southeast).[1] There is a lack universal consensus on acceptable plagiarism levels in manuscripts. Generally, a text similarity of 5% or less is considered tolerable, while most academic bodies and editors see anything above 10- 20% as unacceptable. However, even if similarity percentage is low, if a significant portion of the text is copied verbatim, it can still be considered a serious form of plagiarism.[2] Self-plagiarism is a form of plagiarism. COPE categorized self-plagiarism in to redundancy type. Self-plagiarism is defined as recycling the author's own work without proper attribution.[4]

The number of scientific journals published per year has been steadily increasing, so have the occurrences of plagiarism and self-plagiarism in medical research. This review begins with an overview of key definitions used in relation to this topic. In the methods section we figure the steps we used to conduct our review, including our search criteria. In the results section, we describe about research integrity, research misconduct, plagiarism and self- plagiarism. We summarize this topic from an occupational health sciences perspective and interdiscliplinary approach.

Methods

We consulted four databases in March 2025, listed in alphabetical order: (a) Cochrane;(b) Google Scholar: (c) PubMedPubMed; and (d) Scopus. We conducted basic search techniques within all fields in Cochrane, Google Scholar and Scopus for key terms "plagiarism", "self plagiarism", "self-plagiarism", "ethics in occupational health research" and "ethics in medical research", using quotation marks to focus the search. We search PubMedPubMed using an advanced search technique with medical terms (MeSH terms) for key terms "plagiarism", "plagiarism" AND "self-plagiarism" (hyphenated), "plagiarism" AND "self plagiarism" (not hyphenated).

To focus our study on relevant research, we excluded non-scholarly sources like newspapers and blogs, duplicate entries, and sources that were primarily artistic or literary with no research focus. We also limited their search to sources where our keywords appeared in the title or abstract. We counted sources from scientific journals published in English between 2018 and 2025. We specified our search to medical research databases, but some of the results included sources from related fields like social sciences. Inclusions refers to the research journals that meet predefined inclusion criteria and are therefore included in the analysis. While the exclusion criteria are various journals failing to meet established selection criteria.

Results

We found five pertinent sources in total: four review articles and an e-book of recommendation. The four review articles, listed from recent published order: (a) Effective Strategies for Avoiding Plagiarism in Academic Writing: An Interdisciplinary Approach by Bhatta, 2024; (b) The Cultural Context of Plagiarism and Research Misconduct in the Asian Region by Rodrigues et al, 2023; (c) Publication Ethics by Mishra and Dabas, 2021; (d) Self- Plagiarism Research Literature in the Social Sciences: A Scoping Review by Eaton and Crossman, 2018. An e-book of recommendation is en-

titled CSE's Recommendations for Promoting Integrity in Scientific Journal Publications by Editorial Policy Committee, published in 2025. While none of these sources discussed about plagiarism and self-plagiarism in occupational health research specifically.

In general, plagiarism and self-plagiarism in occupational health research is defined as in other scientific research. Integrity in occupational health research, requires that the researcher adhere to the goal of pursuing truth. To achieve this, the researcher has a duty to prevent misconduct throughout the process of addressing a research question. The ethics of medical research prioritize the well-being and rights of participants, particularly when potential risks or disadvantages outweigh personal benefits. This means ensuring that research activities are ethically sound and that participants are protected from harm. Nonetheless, the range of ethical issues in occupational health research increases wider than just the design and conduct of studies.[3]

Research integrity requires honesty and ethical conduct. Research misconduct is defined as fabrication, falsification, or plagiarism when proposing, performing, or reviewing research, or when reporting research results.[5] These three actions are considered as principal sins of research conduct. Fabrication in research refers to the deliberate act of making up data, observations, or results that never actually existed. This can involve reporting experiments that were never conducted, creating fictitious data points, or even faking participant information in studies. The key element of fabrication is the intentional misrepresentation of research outcomes. Falsification is defined as the alteration or manipulation of research data, protocols or results, in an attempt to give a false perception. Fabrication and falsification are two points along a spectrum, but both are serious forms of misconduct because they result in a scientific record that does not accurately reflect observed truth.[6]

A systematic review by Fanelli[7] (2009), determined that in a total of 18 surveys, a pooled weighted average of 1.97% (N=7, 95%CI: 0.86-4.45) of scientists had self-admitted to have fabricated, falsified or modified data at least once and up to 33.7% admitted other questionable research practices. In surveys asking about the behaviour of colleagues, admission rates were 14.12% (N= 12, 95% CI: 9.91–19.72) for falsification, and up to 72% for other questionable research practices. The authors concluded that, the actual frequencies of misconduct could be higher than this.[7]

Plagiarism is a prevalent type of research misconduct in which an author presents another individual's work (such as ideas, data, results, or text) as their own, without giving credit or obtaining consent from the original source.[2] The Editorial Policy Committee (2025) characterizes plagiarism as a type of theft that encompasses the unauthorized usage or near replication of the words (including figures, images, or tables) and ideas of others, while presenting them as if they are one's own original creations without obtaining permission or crediting the source of these materials.[6] Plagiarism, in essence, means taking someone else's thoughts, methods, findings, or language without providing proper attribution.[8] Plagiarism has been categorized by COPE into three distinct types: (a) Obvious plagiarism (the uncredited use of substantial sections of text and/or data, presented as someone's own original work); (b) Minor replication of brief phrases (for instance, a section of a research paper discussion); (c) Redundancy (such as using material from the author's previously published work, which is also known as self-plagiarism).[4]

Rodrigues et al[1] (2023) found that insufficient training in scientific writing and research ethics, pressure to publish, lenient attitudes, and poor regulatory frameworks are the main factors contributing to research misconduct in scientific literature. Their research indicated that plagiarism continues to be a frequent reason for unethical publications and retractions in parts of Asia, specifically in the South, East, and Southeast. Many researchers are not adequately trained in scientific writing, and there are significant gaps in their understanding of different types of plagiarism, which significantly exacerbate the issue. An overview of the common causes of plagiarism in South, East, and Southeast Asia is shown in Figure 1.[1]

Self-plagiarism is a controversial topic within the realms of research publishing and academia. It is also known by various terms such as duplicate publication, dual publication, overlapping publication, prior publication, repetitive publication, and text recycling.[9] Instances of self-plagiarism occur when an author reproduces text or results from their own earlier works. When an article is published, the copyright of the originally published work is transferred to the new publisher. Any reproduction of that work, even if it's the author's own, is deemed copyright infringement. Redundant publication entails publishing complete articles or significant parts of them multiple times

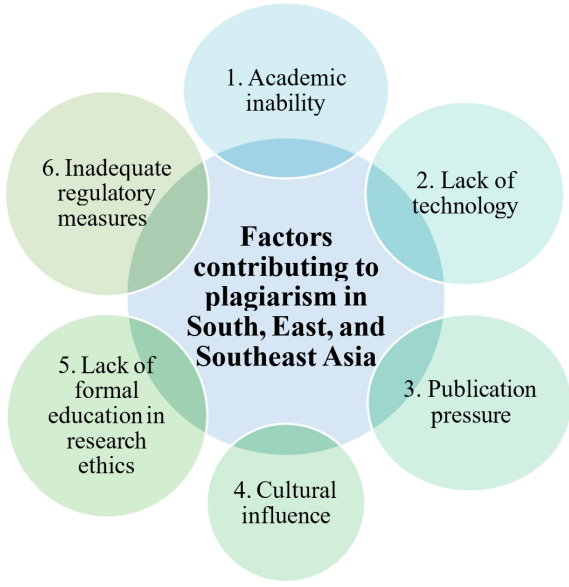

Figure 1. Elements leading to plagiarism in South, East, and Souteast Asia

without proper notification or cross-referencing, which misleads readers into thinking that it is the original work.[4] Text recycling represents a form of self-plagiarism in which the author reuses short excerpts of text or certain figures from their prior works across different publications.[5]

A primary publication is regarded as the initial comprehensive report on the main findings of a study, while secondary publications refer to additional reports on secondary objectives, subgroup analyses, or post hoc evaluations. Reports classified as secondary analyses must clearly indicate their nature as secondary and cite the original primary publications. The primary article must always be approved for publication prior to the release of other reports on secondary endpoints. Such secondary publications should prevent duplication and avoid unjustified fragmentation of findings across multiple articles. Salami- slicing represents another form of self-plagiarism, where identical research or a set of experiments is divided into parts and published as separate papers, with the aim of increasing the total number of publications.[5]

Eaton and Crossman (2018) conducted research to illuminate the types of evidence regarding self-plagiarism in the academic literature, particularly within the social sciences. Their findings indicated that editorial content predominates the conversation surrounding this subject, emphasizing publication ethics. The literature suggests that professors often find it challenging to comprehend the complexities of self-plagiarism, and although they feel a duty to mentor their students, they may lack the knowledge to do so effectively. A notable disparity exists between the straightforward definition of self-plagiarism presented in academic calendars, which prohibits students from submitting the same work for credit in multiple courses, and the interpretations relevant to individuals in research and academic careers post- graduation, where self-plagiarism primarily concerns previously published works. Additionally, there appears to be an area of ambiguity, largely overlooked by both editorial and research efforts, concerning the distinction between unpublished student submissions and published works by professionals.[10]

In Indonesia, plagiarism is widely viewed as a significant issue that individuals undermine their own learning process and inhibit the development of original ideas. Looking into the steps taken to stop plagiarism in Indonesian higher education from national to institutional level, Akbar and Picard (2019) stated that the university policy hasn't changed much from what's written at the Ministry level. This is because of the documents have strict rules and levels of authority. So, the idea of what counts as plagiarism is still pretty general, and there's no clear explanation of different

types of plagiarism or what happens if someone is found guilty of it. This could cause problems when trying to create good ways to stop plagiarism from happening.[11] Basrowi[13] (2021) reported that there are still not many open access journal articles available in the field of community and occupational medicine. The Indonesian Journal of Community and Occupational Medicine (IJCOM) was started by The Association of Alumni of Occupational Medicine Magister Faculty of Medicine Universitas Indonesia (ILUNI MKK FKUI) and is an open access journal purposing to spread knowledge about community and occupational medicine and to give authors a place to publish their research.[12] In the field of special nutrition in Indonesia, there is The Journal of Indonesian Specialized Nutrition (JISN) that provide a useful resource helping different groups like authors, academics, students, and health professionals share their scientific work related to nutrition, including both community and clinical aspects. Both journal managers of IJCOM and JISN have to improve the quality of the journals and prevent plagiarism so that the journals meet all the requirements for nationally accredited journals and eventually becomes respected international journals.

Bhatta[14] (2024) described some strategies and examples to avoid plagiarism with an interdisciplinary approach:

- Broadening sources of inspiration: By engaging with different disciplines, we can gather diverse insights. For instance, combining literary theory with psychology might give us new angles to analyze character development in a novel. Example: Analyzing Shakespeare's Hamlet through both psychology (Freudian analysis of Hamlet's hesitation) and philosophy (existentialism and the theme of life's meaning) leads to an original interpretation that blends ideas from two fields.
- Using different research methods: Different disciplines often use distinct research methodologies. Integrating these can help produce unique findings. Example: In a research paper on the ethics of AI, we might combine computer science's technical approach with philosophy's ethical frameworks. This method would result in an analysis that reflects multiple, often underexplored, perspectives.
- Exploring unique perspectives: By examining a topic from multiple disciplines, we can bring fresh perspectives to existing conversations. Example: In the study of climate change, instead of repeating ideas from environmental science, we could incorporate economics (the cost of climate action), sociology (how different communities are affected), and politics (the policy-making challenges). Each discipline adds depth to the analysis, making it our own.
- Creating new connections: Interdisciplinary work often involves connecting ideas that haven't been widely linked before, leading to new frameworks and insights. Example: When researching human identity, combining neuroscience (the biological basis of behavior) with literature (representation of identity in the narrative) can create new conversations on how personal identity is constructed both in the brain and in society.
- Combining disciplines: A research paper that explores the environmental impact of literature could combine ecology and literary analysis. By examining how authors represent nature, the work not only draws from literary theory but also incorporates scientific studies on environmental issues.
- Cross-pollinating ideas: Artists might study psychology to understand the emotional impact of color in their work. By integrating psychological principles into the artistic process, they create a unique style rather than replicating existing artworks.
- Citing multiple perspectives: A thesis on the effects of social media on mental health could integrate sociology, psychology, and communication studies. By citing research from each of these fields, the argument becomes more robust and avoids over-reliance on a single source.
- Developing new methodologies: A researcher studying migration patterns might combine geography and sociology to create a new framework for understanding the social dynamics of communities. This original methodology can lead to new insights and prevent the use of established theories without attribution.
- Creating original case studies: In a public health project, one could draw from both public policy and health sciences to develop a case study on the effectiveness of a new health initiative. By framing the analysis through both lenses, the work becomes original rather than derivative.

- Utilizing creative formats: A historian could incorporate graphic design to present historical data visually. By creating infographics that merge historical facts with visual storytelling, the output is innovative and less likely to be plagiarized.
- Engaging with different media: A film studies scholar might analyze a film using insights from sociology and gender studies, examining how societal norms influence character development. This approach enriches the analysis and fosters original thought.
- Exploring cultural contexts: In a literature review, one could explore how cultural studies and anthropology illuminate the themes in a novel, examining cultural artifacts alongside the text. This multi-faceted perspective can yield fresh interpretations.

There are three practical steps to avoid plagiarism through interdisciplinary work:[14]

- Cite everything properly: Ensure that all sources, even from multiple disciplines, are properly credited.
- Synthesize, don't copy: Bring ideas together and show how they interact or contrast, rather than repeating verbatim from each source.
- Contribute your analysis: Always add your own critical thinking and analysis to the conversation, rather than just summarizing other's work.

Conclusion

It is important to uphold high research ethics standards and follow journal policies to protect participants and maintain scientific integrity. Researchers can learn about different types of plagiarism (i.e. self-plagiarism) by taking appropriate training in scientific writing. They can encourage the utilization of plagiarism detection tools, resulting in a significant decrease in the issue. Nevertheless, there is a need for more empirical evidence to understand plagiarism because of the lack of a clear definition and the wide range of practices involved, particularly within the field of occupational health research.

There are some strategies using an interdisciplinary approach to avoid plagiarism by encouraging original thought and allowing us to draw from multiple sources and fields. By synthesizing knowledge, methodologies, and perspectives from different disciplines, the risk of unintentional plagiarism can be minimized.

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