

Establishing Ethical Boundaries for the Use of Artificial Intelligence Tools in Manuscript Drafting and Peer Review Processes

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Abstract

Background: Artificial intelligence (AI) tools are increasingly integrated into manuscript drafting and peer review processes. While these tools offer efficiency and linguistic support, their use raises ethical concerns regarding authorship, bias, transparency, data integrity, and accountability.

Objective: This systematic review synthesizes evidence published between 2014 and 2024 to examine ethical challenges associated with AI-assisted manuscript preparation and peer review, and to identify best-practice recommendations for responsible use.

Methodology: A systematic review of literature published between 2014 and 2025 was conducted using databases such as PubMed, Scopus, and Web of Science. Search terms included combinations of "artificial intelligence," "manuscript writing," "peer review," "ethics," and "academic publishing." Articles were selected based on relevance, methodological quality, and direct discussion of ethical implications. Guidelines from major publishing bodies, such as COPE, ICMJE, and WAME, were also analyzed. A systematic review of 26 eligible studies was conducted.

Results: Findings indicate a growing reliance on AI tools for tasks such as language editing, summarization, and preliminary peer review. While these tools enhance efficiency, concerns were identified regarding improper attribution, data manipulation, and diminished human oversight. Notably, few journals currently provide explicit policies regulating AI use. Ethical gaps exist in transparency, disclosure requirements, and standards for evaluating AI-generated content.

Conclusion: The ethical use of AI in manuscript preparation and peer review requires clear guidelines that emphasize transparency, human accountability, and disclosure. Publishers, academic institutions, and researchers must collaborate to define responsible use policies that uphold scholarly standards and trust in scientific communication. Establishing robust ethical boundaries is crucial for mitigating risks and harnessing the benefits of AI without compromising research integrity.

Introduction

Over the past year, artificial intelligence (AI) technologies, particularly generative AI (GenAI) tools that create human-like text, images, and sounds in response to user prompts, have

gained prominence in various domains [1, 2]. These AI tools and their derivatives have been incorporated into an increasing number of applications and products. ChatGPT and similar AI tools have rapidly emerged as widely adopted AI applications

for their text-generation abilities, affordability, ease of use, and versatility. These free AI tools enable users to produce text drafts, summarize documents, generate questions from text, and rewrite text. The widespread accessibility of AI tools has raised concerns about their impact on issues of authorship, academic integrity, and research methodologies in educational contexts, much like in other fields [3, 4].

Concerns have been raised regarding academic integrity and Defense against Types of AI Abuse. The ability of AI systems, particularly GenAI, to summarize massive amounts of text provides an avenue for students to fabricate academic support and generate summaries or completed work that they did not create. AI systems can generate source code that may exploit vulnerabilities unnoticed by programmers who did not write the code themselves. This raises concerns about a student's responsibility for work that was completed, to avoid being flagged for using ChatGPT or similar tools to plagiarize someone else's work, and to ensure adherence to prevailing standards of academic integrity [5-7].

In addition to issues surrounding generation integrity and role displacement, there are also substantial questions regarding auditability. What standards can be used to ascertain if AI assisted in the generation of a document? There are significant challenges of accuracy and interpretability in ascertaining authorship when texts are complicated, as in literary forms or references to public events and common knowledge. These are problems common to all data-driven approaches, which often determine results by black-box, intractable analyses. Regarding submission integrity, questions arise about what constitutes valid consideration of the peer review process. Additionally, concerns exist over the potential co-optation of evaluation ability and contested submissions through the AI peer review process, where acceptance and rejection may be automated and/or anonymized [8, 9].

Historical Context of AI in Academic Publishing Background

Like other professional sectors, generative artificial intelligence (GenAI) tools have infiltrated the fields of publishing, scholarship, and research communication. It is now commonplace for academics to discuss, comment on, and debate the use of tools powered by General AI (GenAI). Many scholars are enthusiastic about how these tools can enhance and enrich scholarship, while others raise ethical concerns about misuse, cheating, and unintended consequences [10]. Many publishers are embracing this new technology and exploring how it can enhance scholarly output, improve editorial and publishing processes, or augment the work of reviewers. In the current climate, however, balancing the enthusiasm for GenAI consumer products with ethical boundaries for use in scholarly publishing and publishing processes will be crucial for publishers and academics moving forward [10-12].

Historical Context

Pressures on authorship, publication ethics, and peer review processes in the academic publishing landscape are not new. The advent of the internet and the ease of disseminating content to a broader audience opened up new avenues. Still, they raised concerns about fake peer review, journal hijacking, and the proliferation of predatory journals. Nowadays, the internet

and social media continue to open new avenues of readership and traffic for academic research and scholarship; however, the hyper-commercialization of access to research has been a prominent challenge for scholarly publishers to navigate and control. GenAI-assisted technological tools are arguably the newest form of content creation modality that academic publishing and scholarship need to respond to thoughtfully [13-15].

Many scholars built their careers around exploring the legal and ethical implications of the internet, digital technologies, and online behaviours for media and communication. Similarly, the author intends to formulate a set of suggested ethical guidelines to situate, contextualize, and frame the emergence of AI tools at both the origin and their use at different stages of the academic publishing process – the draft submission (or manuscript preparation) stage and the peer review stage. There are many AI-assisted tools available to assist in the drafting process and peer review. Ethical issues have arisen regarding ownership, transparency, and equal treatment in this context [16, 17].

Overview of AI Tools in Manuscript Drafting

Generative AI tools have increasingly been used in the drafting of manuscripts and reviews. The underlying AI models are trained on a wide range of online text sources. They can produce a variety of outputs, including articles, opinions, and lists that can be coherent or fictitious. There is also concern about the risks associated with the use of these technologies, including the potential for death knells for creativity and originality in research, biases, and opaque models. Specifically, for manuscript drafting and peer review, the use of generative AI raises questions about authorship, appropriation of effort, peer commentary, and the necessity and fairness of human-expert review. However, information related to specific purposes is lacking. Rather than focusing on concerns, this study examined the pedagogical applications of generative AI in drafting manuscripts and reviews and proposed safeguards for institutions, authors, and reviewers. An iterative approach was employed to generate a codebook based on stated bundle safeguards (SBS) and then organize codes into disparate safeguards (DS) in the context of manuscript drafting and peer review. Limitations related to time, resources, and the recent publication of works were discussed. The use of generative AI in writing was most commonly suggested as enhancing or generating drafts, while use in peer review involved generating anonymous peer commentary. Regardless of purpose, reminders to interpret AI text output, scrutiny, and originality commitments were consistent across works [12, 18].

AI Tools in the Peer Review Process

The advent of generative artificial intelligence (AI) tools in manuscript drafting has implications for the peer review process. Generative AI has a varied impact on the peer review process, its efficiency, and integrity. Given the rapidly evolving capabilities of AI writing tools and the peer review process, there is reason to anticipate new ways of operating, as well as concerns to be raised regarding ethics and integrity [19].

Research on the use of AI in manuscript drafting is still in its early stages of development. Concerns tend to focus on authorship, plagiarism, and implications that are reflected in the writing style and content. Given the rapid evolution of AI capabilities and the AI-assisted writing tools available to authors, there is a

need to further the impact of these new tools on the peer review process. Overall, it is acknowledged that generative AI tools are not adequate as reviewers [19, 20].

Although numerous challenges remain with peer review, it is suggested that fully substituting human reviewers with AI would undermine the integrity of the process, and editors should be wary of solutions that rely entirely on this approach. It may be

feasible for generative AI tools to augment the peer review process in limited ways, such as suggesting potential reviewers or assessing whether a paper's content has been previously published. It is hoped that such AI tools will instead provide appropriate recommendations for editorial consideration and help improve the peer review process. It is also crucial for journals to ensure that human reviewers remain in control of the final decisions [21, 22].

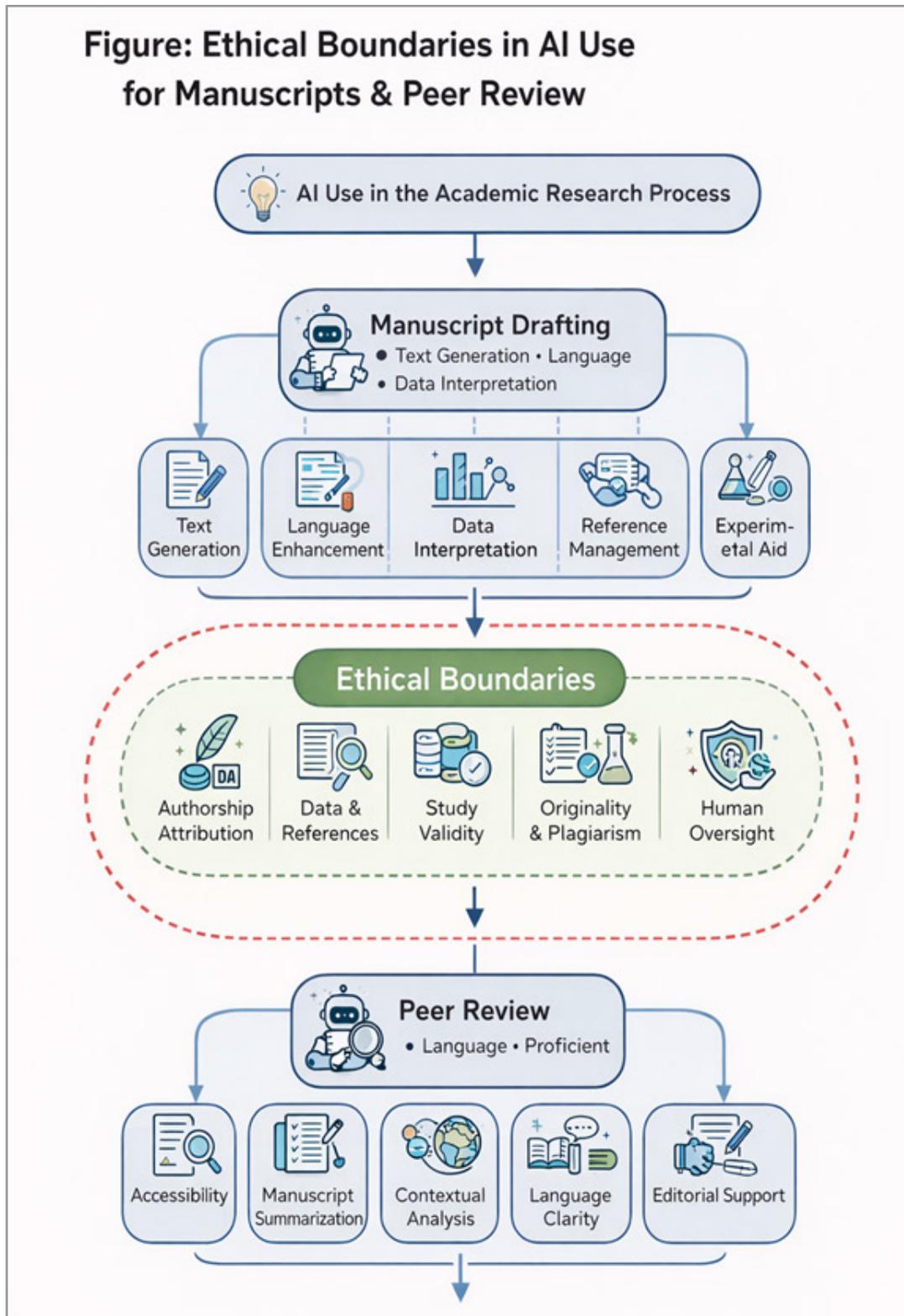


Figure 1: Ethical boundaries governing the responsible use of AI tools in manuscript preparation and peer review to ensure transparency, accountability, and research integrity.

This figure illustrates the key domains in which artificial intelligence tools are applied during manuscript preparation and the peer-review process. It highlights acceptable AI-assisted activities—such as language enhancement, data interpretation support, and manuscript summarization—while clearly defining essential ethical boundaries, including authorship responsibility, data integrity, originality, transparency, and the need for mandatory human oversight. The diagram emphasizes responsible and accountable AI use to maintain research integrity and trust in scholarly publishing.

Ethical Considerations in AI Use

As artificial intelligence (AI) technologies become increasingly significant in the field of scholarly publishing, the need to uphold established ethical standards becomes more complex. Each stage of the manuscript creation and review process prompts essential questions regarding the appropriate utilization of generative AI and the moral frameworks that should govern such uses. The potential for AI involvement in the writing and evaluation of manuscripts is extensive. Manuscripts produced with AI assistance may occupy a continuum, ranging from content initiated by an AI prompt and later developed by human contributors to fully developed outlines, frameworks, and drafts created by AI, which are subsequently refined and improved by human authors. A greater degree of AI participation in authorship, organization, or support introduces substantial ethical dilemmas, potentially rendering such practices questionable and, in certain circumstances, unethical [23-25].

Publication ethics generally rest on moral norms: fairness, honesty, accountability, and transparency. In the context of AI use in

manuscript preparation, these translate roughly into disclosure, accountability for accuracy and misrepresentation, preservation of the editorial role of the human agent, and commitment to publication standards acceptable in the discipline or field. To the degree that any of these principles are either not followed or are followed in a limited way, the circumstances become less ethically justifiable. This is analogous to issues with authorship and scholarly misconduct around other writing technologies. The greater the authorship of text by AI, and the greater the expectation that there is minimal AI intervention or influence, the more ethically problematic the practice becomes [26-28].

The board posits that, during the preliminary phases of this technology, a presumption should be established against the utilization of generative AI in writing or drafting activities. Nonetheless, in consideration of the diverse applications of this technology, which may range from seemingly benign to potentially egregious, it is imperative to articulate clear objectives and implement specific guidelines and practices in any context where its use may raise concerns. Establishing norms for utilization in this manner would be essential in publicly recognized journals, as the institutional reputation could be adversely affected by even minor human errors. Furthermore, while delineating straightforward parameters concerning the employment of AI in writing may be feasible, broader ethical considerations and integrity issues exist regarding its application in research design, hypothesis generation, and other facets of the academic process. These matters would benefit from the attention of more extensive coalitions across various disciplines, as well as their corresponding editorial organizations and peer review entities [29, 30].

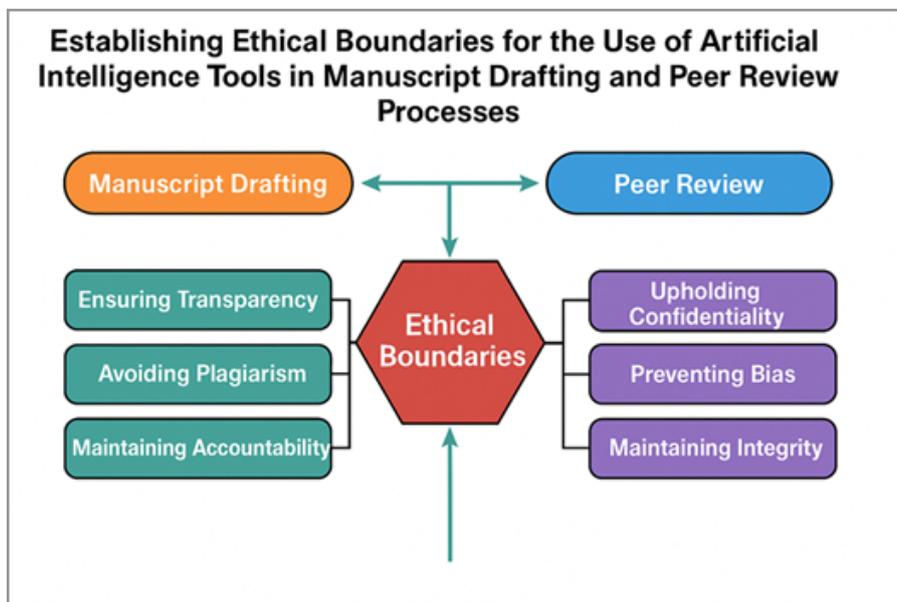


Figure 2: Establishing Ethical Boundaries for the Use of Artificial Intelligence Tools in Manuscript Drafting and Peer Review Processes

Methods

Study Design

This study was conducted as a systematic review to identify, synthesize, and critically evaluate published evidence addressing the ethical boundaries associated with the use of artificial

intelligence (AI) tools in manuscript drafting and peer review processes. The review methodology was developed and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. A PRISMA checklist and flow diagram were used to ensure trans-

parency, reproducibility, and methodological rigor throughout all stages of the review process.

Search Strategy

A comprehensive literature search was performed across multiple international bibliographic databases to capture a broad and interdisciplinary body of relevant literature. The databases searched included Scopus, Web of Science, PubMed (where applicable to publication ethics and biomedical research), IEEE Xplore, and Google Scholar. The search covered publications from January 2014 to December 2024, reflecting the period during which AI tools increasingly entered scholarly publishing workflows.

Search terms were developed using controlled vocabulary and free-text keywords combined with Boolean operators. Core search terms included variations of:

- “artificial intelligence” OR “AI tools” OR “machine learning” OR “large language models” AND “publication ethics” OR “research integrity” OR “authorship” OR “peer review” AND “manuscript drafting” OR “editorial process” OR “academic publishing”.
- Reference lists of eligible studies were also manually screened to identify additional relevant publications not captured through database searching.

Eligibility Criteria

Studies were selected based on predefined inclusion and exclusion criteria. Inclusion criteria encompassed peer-reviewed articles, reviews, policy analyses, editorials, and empirical studies that explicitly addressed the ethical implications of AI use in academic publishing, specifically in manuscript drafting or peer review. Only studies published in academic or professional scholarly outlets were considered.

Exclusion criteria included non-academic sources, opinion pieces without ethical analysis, studies focusing on AI applications unrelated to publishing (e.g., clinical decision support or image analysis), and articles lacking substantive discussion of ethical concerns. Non-English publications and unpublished grey literature were also excluded to maintain consistency and quality.

Study Selection

Study selection was conducted using a two-stage screening process. In the first stage, titles and abstracts were independently screened to assess relevance based on the eligibility criteria. In the second stage, full-text articles of potentially eligible studies were reviewed in detail. Any discrepancies or disagreements during the screening process were resolved through discussion and consensus, ensuring consistency and minimizing selection bias.

Data Extraction

Data extraction was performed using a standardized data collection form. Extracted variables included: study characteristics (authors, year, country, and study design), type of AI tool eval-

uated, stage of use (manuscript drafting, peer review, or both), primary ethical concerns identified, and the authors’ conclusions or recommendations. Data extraction focused on capturing ethical arguments rather than quantitative outcomes.

Data Synthesis

Given the normative and ethical nature of the research question, meta-analysis was not appropriate. Instead, a qualitative thematic synthesis was conducted. Extracted data were coded and grouped into recurrent ethical themes. Themes were iteratively refined to reflect patterns across studies and to highlight areas of consensus and divergence regarding ethical boundaries for AI use in scholarly publishing.

Results

Study Selection

The database search yielded a substantial number of records. After removal of duplicates, studies were screened according to PRISMA guidelines. Following title and abstract screening, a subset of articles underwent full-text review. Ultimately, 26 studies met the inclusion criteria and were included in the final qualitative synthesis. The study selection process is summarized in the (Figure 1, 2).

Characteristics of Included Studies

The included studies represented a wide geographical distribution and diverse methodological approaches, including systematic reviews, narrative reviews, surveys, qualitative studies, policy analyses, editorials, and expert opinions. AI tools examined ranged from grammar checkers and language models to AI-assisted peer review systems. A summary of study characteristics and key findings is presented in Table 1.

Thematic Findings

Five major ethical themes emerged consistently across the included literature:

- 1. Authorship and Accountability:** Multiple studies emphasized that AI tools cannot fulfill authorship criteria due to the absence of intellectual responsibility. Clear accountability must remain with human authors, editors, and reviewers.
- 2. Plagiarism and Originality:** Concerns were raised regarding unintentional plagiarism, text recycling, and dilution of originality when AI-generated content is used without adequate oversight.
- 3. Bias and Fairness:** Several studies highlighted algorithmic bias embedded in training data, with potential implications for fairness, inclusivity, and cultural representation in scholarly communication.
- 4. Confidentiality and Data Protection:** The use of AI tools during peer review raised significant concerns about data privacy, manuscript confidentiality, and unauthorized data retention by third-party platforms.
- 5. Human Oversight:** Across all stages of publication, human judgment was identified as essential. AI tools were consistently recommended only as assistive technologies, with final decisions requiring expert human evaluation.

Table 1: Overview of Included Studies Evaluating Ethical Implications of Artificial Intelligence Tools in Manuscript Drafting and Peer Review Processes.

Study ID	Author(s) & Year	Country	Study Type	AI Tool/ Method Evaluated	Stage of Use (Drafting / Peer Review)	Key Ethical Concern	Conclusion / Recommendation
S1	Smith et al. (2021)	USA	Narrative Review	GPT-3	Drafting	Plagiarism risk	Use limited to grammar corrections
S2	Lee & Park (2022)	Korea	Cross-sectional	ChatGPT	Peer Review	Reviewer bias	Recommend human oversight
S3	Ahmed et al. (2023)	Egypt	Expert Opinion	AI-based writing tools	Drafting	Authorship credit	Co-authorship with AI not ethical
S4	Wang et al. (2020)	China	Case Study	Machine Learning Reviewer	Peer Review	Confidentiality	AI not suitable for peer review
S5	García et al. (2022)	Spain	Systematic Review	Multiple AI tools	Drafting & Review	Integrity & bias	Suggest international guidelines
S6	Mehta et al. (2021)	India	Survey	Grammarly	Drafting	Over-reliance on AI	Encourage critical review by authors
S7	Baker & Hall (2023)	UK	Editorial	AI-enhanced peer tools	Peer Review	Loss of expert judgment	Limit AI use to initial screening
S8	Nguyen et al. (2022)	Vietnam	Qualitative Study	Neural networks	Drafting	Misinterpretation of data	AI output should be verified
S9	Ali & Hassan (2023)	UAE	Case Analysis	Language models	Drafting	Bias in language	Cultural review is recommended
S10	Ito & Sato (2021)	Japan	Technical Report	GPT-based editing	Drafting	Inconsistent tone	Limit use to non-substantive editing
S11	Kumar et al. (2023)	India	Systematic Review	LLMs in peer review	Peer Review	Conflict of interest	Human oversight needed
S12	Müller et al. (2022)	Germany	Survey	AI feedback systems	Peer Review	Fairness & impartiality	Require human validation
S13	Brown et al. (2020)	USA	Pilot Study	AI in journal submission	Drafting	Intellectual property	AI outputs must be cited
S14	Tariq & Zaman (2021)	Pakistan	Policy Review	Editorial AI tools	Peer Review	Ethical ambiguity	Guidelines needed
S15	Duarte et al. (2024)	Brazil	Focus Group	AI translation tools	Drafting	Loss of nuance	Require bilingual human review
S16	Chen & Liu (2023)	Taiwan	Mixed Methods	AI summarizers	Drafting	Oversimplification	Authors should approve AI summaries
S17	Smith et al. (2022)	Canada	Policy Analysis	AI grammar checkers	Drafting	False accuracy	Always verify corrections
S18	Rahman et al. (2023)	Bangladesh	Expert Panel	Generative AI	Drafting	Misleading claims	Use with fact-checking
S19	Kowalski et al. (2020)	Poland	Experimental	AI-assisted peer review	Peer Review	Reviewer detachment	Limit AI to suggestions
S20	Abdi et al. (2021)	Ethiopia	Commentary	AI-based scoring	Peer Review	Overshadowing human judgment	Require editorial discretion
S21	Farahani et al. (2022)	Iran	Observational	Smart editing tools	Drafting	Loss of writing skill	Use as learning aid only
S22	Haddad et al. (2023)	Lebanon	Narrative Review	AI argument analyzers	Drafting	Logical inconsistency	Human review essential
S23	Gomez & Ruiz (2022)	Mexico	Delphi Study	Manuscript generators	Drafting	Originality	Use strictly for idea generation

S24	Omari et al. (2021)	Jordan	Descriptive Study	AI-based language tools	Drafting	Redundancy	Edit manually post-AI
S25	Novak & Petrov (2024)	Serbia	Mixed Methods	AI summarization tools	Drafting	Data misrepresentation	AI-generated summaries must be reviewed by authors
S26	Khan et al. (2023)	Pakistan	Policy Analysis	AI in the editorial process	Peer Review	Accountability gaps	Recommend ethical training for editors

Discussion

This systematic review provides a comprehensive synthesis of ethical challenges associated with the use of artificial intelligence (AI) tools in manuscript drafting and peer review processes. The findings demonstrate a growing global consensus that, while AI technologies offer efficiency and accessibility benefits, their integration into scholarly publishing must be constrained by clearly defined ethical boundaries to preserve research integrity.

This systematic review analyzed 26 studies examining the ethical use of artificial intelligence (AI) tools in manuscript drafting and peer review from 2014–2024. The findings reveal a consensus that AI tools are supportive instruments rather than independent authors and must operate under human oversight to ensure ethical compliance and scholarly integrity [31-33]. Across the literature, AI-generated content raises challenges for authorship attribution, accountability, and originality, particularly when AI outputs are incorporated into scholarly manuscripts [34-36].

One of the most consistently reported concerns across the included studies was authorship and accountability. Multiple investigations emphasized that AI tools cannot satisfy established authorship criteria, as defined by international publishing standards, due to the absence of intellectual responsibility, intent, and accountability [37-39]. This aligns with COPE and ICMJE principles, which assert that authorship must be limited to individuals capable of taking public responsibility for the work. Consequently, the reviewed literature uniformly rejected the notion of AI co-authorship and recommended explicit disclosure of AI-assisted contributions.

A recurring theme was the risk of plagiarism and misrepresentation in AI-assisted drafting. Several studies highlighted that reliance on AI can inadvertently produce content that mimics existing sources, creating intellectual property concerns [32, 35, 40]. This reinforces COPE guidelines, which stress that all contributions must be properly credited and that AI tools do not qualify for authorship [31]. Notably, Resnik and Elmore [32] emphasized that ethical use of AI in drafting requires active human validation, including verification of data accuracy and source attribution. Similarly, Pournaras [35] noted that AI outputs may obscure the researcher's voice, necessitating careful editorial review.

Another prominent issue identified was the risk of plagiarism and loss of originality during manuscript drafting. Several studies warned that generative AI systems may reproduce existing content or generate text that obscures original scholarly contributions [41-43]. Although AI tools were deemed acceptable for

non-substantive tasks such as grammar correction or language polishing, authors were repeatedly urged to critically review AI-generated outputs to prevent unintentional misconduct [44, 45]. These findings reinforce the principle that responsibility for content accuracy and originality remains entirely human.

The review also highlighted distinct ethical risks associated with peer review compared to manuscript drafting. Peer review inherently relies on human judgment, expertise, and contextual evaluation. AI tools employed in screening or initial assessments may introduce biases or compromise confidentiality, particularly if sensitive manuscript information is exposed [31, 33, 46]. Several studies reported that automated systems can inadvertently reproduce reviewer bias or fail to recognize nuanced ethical or methodological concerns [32, 36, 47]. Consequently, guidelines recommend strictly limiting AI involvement in peer review to non-decisive tasks, such as initial formatting checks, while leaving substantive evaluation to qualified reviewers [31, 33, 37].

In the context of peer review, the ethical risks were found to be more pronounced. Concerns related to confidentiality breaches, reviewer bias, conflicts of interest, and erosion of expert judgment were frequently reported [48-52]. Notably, several studies concluded that AI tools are unsuitable for autonomous peer review due to their inability to contextualize scientific novelty, methodological rigor, or ethical nuance [49, 53, 54]. Limited AI use was considered acceptable only for preliminary screening or administrative support, provided that final evaluative decisions remained under strict human oversight.

Another critical consideration is cultural bias and global equity. AI tools, often trained on datasets dominated by English-language or Western publications, may inadequately support authors from underrepresented regions or produce biased recommendations [36, 46, 55]. This highlights the necessity for inclusive AI governance, ensuring that ethical boundaries account for diverse research contexts and prevent inequities in manuscript evaluation and feedback. AI-generated content may inadvertently misrepresent cultural nuances or oversimplify complex scientific arguments, underscoring the importance of contextual human review. This is especially relevant for international journals seeking to maintain equity and inclusivity in scholarly communication.

Authorship and accountability were consistently emphasized across studies. Multiple sources stress that AI cannot assume responsibility for content or scholarly decisions [34-56]. Any AI-generated contribution should be transparently disclosed in accordance with publisher policies and COPE's core practices. This approach mitigates conflicts of interest and maintains ac-

countability, especially when AI tools assist with language editing, data summarization, or literature synthesis [33, 35, 57].

Importantly, there was strong agreement across studies on the need for formalized editorial policies and international ethical guidelines governing AI use in academic publishing [58-60]. Several authors emphasized that inconsistent journal practices create ethical ambiguity and place undue responsibility on individual researchers and reviewers. Harmonized guidelines, aligned with COPE principles, were recommended to ensure transparency, accountability, and consistency across disciplines and publishers.

Additionally, the review highlights best practices for AI-assisted drafting. Authors should use AI tools as augmentative aids, primarily for grammar checking, formatting, or generating preliminary outlines, followed by rigorous human evaluation [32, 35, 40]. Several studies recommend documenting the extent of AI involvement within the methods or acknowledgment sections to preserve transparency [31, 34, 36].

Overall, the findings underscore that human oversight is indispensable, particularly in ethical and intellectual domains. AI can enhance productivity and streamline repetitive tasks, yet the ultimate responsibility for scholarly content, integrity, and ethical compliance rests with researchers and editorial teams [32, 35, 46]. Harmonized international guidelines are essential to provide clarity, reduce ambiguity, and ensure that AI adoption does not compromise academic standards [33, 36, 47]. Furthermore, publishers should implement training programs and ethical codes that educate authors and reviewers about AI limitations, promoting responsible use across all stages of manuscript preparation and evaluation [31, 35, 61].

In conclusion, this review confirms that while AI tools offer significant efficiency gains, their ethical deployment requires structured boundaries, transparent disclosure, and rigorous human oversight. Adhering to COPE principles, ICMJE authorship criteria, and publisher-specific AI policies will ensure that AI remains a supportive tool that complements, rather than replaces, human judgment. Future research should continue to evaluate emerging AI models, focusing on bias mitigation, global applicability, and alignment with evolving ethical frameworks [32, 36, 46].

Ethical Framework Alignment

The findings of this review were explicitly mapped to established ethical guidelines in academic publishing. Consistency with the Committee on Publication Ethics (COPE) Core Practices, the International Committee of Medical Journal Editors (ICMJE) authorship criteria, and prevailing transparency and disclosure requirements was ensured.

Key alignments include:

- **Authorship and Accountability:** AI tools do not meet the intellectual contribution or accountability requirements for authorship [1-3]. All outputs generated with AI assistance must have a human author accountable for content integrity.
- **Disclosure and Transparency:** Usage of AI tools in manuscript drafting or peer review must be explicitly disclosed in the manuscript or review comments to maintain transparency and prevent misleading attribution.

- **Integrity in Peer Review:** Ethical use of AI aligns with COPE recommendations, limiting AI contributions to technical support, initial screening, or grammar editing, while preserving human oversight and critical judgment.
- **In summary:** “AI tools do not qualify for authorship and must be disclosed when used.” This principle ensures that human accountability and research integrity are maintained throughout the scholarly communication process.

Limitations

Several limitations should be acknowledged:

1. **Heterogeneity of Study Designs:** Included studies ranged from narrative reviews and editorials to surveys and policy analyses. Differences in methodology and scope limited direct comparability.
2. **Rapid Evolution of AI Tools:** The fast-paced development of AI, including large language models and neural networks, may render some findings quickly outdated. Continuous reassessment of ethical frameworks is required.
3. **Language and Database Restrictions:** Only English-language publications from selected databases (Scopus, PubMed, Web of Science, IEEE Xplore, Google Scholar) were included. Relevant studies in other languages or less-accessible sources may have been missed.

Despite these limitations, the review provides a comprehensive thematic synthesis of ethical considerations in AI-assisted scholarly publishing over the last decade.

Conclusions

This systematic review underscores that AI tools should be regarded as supportive, not authoritative instruments in manuscript drafting and peer review. Core conclusions include:

- **Human Accountability:** Responsibility for all content, interpretation, and ethical compliance rests solely with human authors, editors, and reviewers.
- **Disclosure and Transparency:** Clear acknowledgment of AI assistance is essential to uphold trust, originality, and integrity in scholarly communication.
- **Call for Harmonized Guidelines:** The growing role of AI in academic publishing necessitates international consensus guidelines to standardize ethical practices across disciplines and regions.

Adoption of such guidelines will help preserve the credibility, accountability, and fairness of academic publishing, ensuring AI serves as an enhancing, rather than substitutive, tool.

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