ISSN: 2091-2889 (online)
2091-2412 (print)

Received: 23 Mar 2025
Accepted: 15 Apr 2025
Published: 30 Apr 2025

DOI: 10.54530/jcmc.1655

OPEN ACCESS

# Citation and referencing in research writing publication: A guide for selecting the reference management software

**Ashesh Malla[1], Jay N Shah[2], Bibek Giri[3], Kamal Khadka[1], Sanyukta Gurung[4]**

[1]School of Public Health and Department of Community Medicine, Chitwan Medical College, Bharatpur, Nepal
[2]Prof, Head of Department of Surgery, Editor in Chief of Journal of Chitwan Medical College, Nepal; Editor Journal of Nepal Health Research Council; Ex-Editor in Chief of Journal of Patan Academy of Health Sciences and Journal of Society of Surgeons of Nepal; Ex-president of Nepal Association of Medical Editors
[3]Research Institute for Collaborative Development, Kathmandu, Nepal
[4]Department of Physiology, Patan Academy of Health Sciences, Lalitpur, Nepal



Peer reviewed

## Abstract

Students and individual researchers in medical school and academia face the challenge of managing vast literature, citations and referencing in research writing a publication. Efficient, accurate citation and reference management are crucial. Among many 'reference management software (RMS)' available, Zotero, Mendeley, and EndNote are some of the popular choices. This review evaluates these three RMS across nine criteria. Zotero's accessibility, EndNote's collaborative teamwork, and Mendeley's PDF-centricity fulfil the needs of different audiences. A practical recommendation will benefit from choosing RMS tools for scholarly research writing and publication, especially in low- and middle-income countries where availability, cost, ethical values and institutional support vary widely.

## How to cite

Malla A, Shah JN, Giri B, Khadka K, Gurung S. Citation and referencing in research writing publication: A guide for selecting the reference management software. Journal of Chitwan Medical College. 2025;15(52):91-100.

## Correspondence

Ashesh Malla, School of Public Health and Department of Community Medicine, Chitwan Medical College, Bharatpur, Nepal.
Email: malla.ashesh@cmc.edu.np, Telephone: +977 9855056851

## Introduction

In evidence-based medicine, proper citation of research, guidelines, and reviews enriches academic work, respects contributions, and strengthens arguments. While essential, manual referencing is time-consuming and error-prone, highlighting the need for efficient reference management software (RMS) and adherence to appropriate styles to ensure accuracy and streamline the process.[1–3] Also known as bibliographic software, citation management software, or personal bibliographic file managers, the RMS simplify the process by systematising citation generation automatically, organising bibliographies to meet the various styles required by the journals, saving time, enabling seamless collaboration, and ensuring academic integrity by preventing errors and plagiarism.[4–8]

There are numerous RMSs- Connotea[9]; ProCite[10]; RefWorks[11]; Mendeley[12]; Afforai[13]; Zotero[14]; Paperpile[15]; Citationsy[16]; JabRef[17]; EndNote[18]; and BibTeX.[19] Medical students and faculty tend to struggle during their busy time in finding the best tool during the research writing and publication (RWP) process.[20] The research-oriented medical school curricula have their relevance in nurturing undergraduates in preparation for the future physician-scientists.[21] Accurate citations and references are necessary to verify the credibility of information.[22–24] Failing to cite, inappropriate citing or wrong references may constitute plagiarism.[25] Citation acknowledges others' work and helps avoid being a plagiarist.[25,26]

Among various RMSs, the cost, functionality, and learning curves are some of the dilemmas.[27–31] Careful consideration for usability, collaboration, citation style support, and integration serves as a guide to make informed choices.

## Method

The analysis of three popular RMSs—Zotero, EndNote, and Mendeley was performed. Multiple sources (Google Scholar, PubMed, and web pages) in English, irrespective of time frame, were searched. Peer-reviewed articles, reviews, and policies along with Google Trends and hands-on testing, were included to evaluate these three RMSs across 8-areas. These areas were based on recurring themes and practical needs of medical students, especially in low- and middle-income countries like Nepal.[32–36]

The 8-areas include: (i) cost and accessibility; (ii) functioning modality and accuracy; (iii) usability and learning curve: user-friendly and the time required to master; (iv) reference management and citation styles: ability to handle references and support citation styles; (v) collaboration features: capabilities for team-based projects and shared libraries; (vi) database and tool integration: compatibility with academic workflows and databases like PubMed; (vii) mobile and cross-platform compatibility: accessibility across devices and operating systems; and (viii) privacy, data security and ethical concern.

## Findings and implications

Globally, around 3/4$^{th}$ of users preferred Zotero, slightly less for Mendeley, and about 1/3 for EndNote, while only 1/4$^{th}$ of users preferred other RMSs, Figure 1.[37,38]

Zotero (https://www.zotero.org), created at the Center for History and New Media at George Mason University in 2006 as a non-profit open-source tool, was further developed by Corporation for Digital Scholarship.[39]

EndNote (https://endnote.com) is a commercial software developed by Niles & Associates in 1989, was acquired by Thomson Corporation in 2000, and then by Clarivate in 2016.[40]

Mendeley (https://www.mendeley.com) founded in 2007 by German PhD students, is a proprietary tool of Elsevier since 2013.[41]

There are key differences among Zotero, EndNote, and Mendeley across the following 8-areas,[27–31,42]:

### 1. Cost and accessibility

Zotero is free, open-source, with unlimited local storage but limited to 300MB for free cloud

space and sync, is a popular tool for students and independent researchers prioritising affordability. EndNote is a paid software (~$250), often institution-dependent, creating cost barriers. Mendeley provides 2GB of free cloud storage (requires paid upgrades) can complicate usability due to frequent interface changes.[4,8,35]

**2. Functioning modality and accuracy**

Zotero excels in web and database citation capture (e.g., PMID/DOI/ISBN imports) and PDF metadata extraction. It may struggle with large PDF libraries due to limited cloud storage, and occasionally has formatting issues for annotations and snapshots.[14,29]

EndNote is the most reliable for direct database exports (e.g., PubMed/Web of Science) and offers powerful full-text Boolean searches, but lacks native PDF annotation tools.[29,32]

Mendeley's optimised PDF annotations and AI-assisted metadata suggestions are less reliable (than EndNote). It supports moderate search capabilities but relies heavily on Elsevier's ecosystem.[28,32]

For accuracy and advanced searches, EndNote leads; for annotations, Mendeley is best; and for seamless web citation capture, Zotero shines.

**3. Usability and learning curve**

Zotero is user-friendly, with simple browser integration and drag-and-drop features, making it suitable for beginners.[27-29]

EndNote has a steep learning curve, suited for experienced researchers.[39,42]

Mendeley lies between Zotero and EndNote in complexity and user friendliness.[8,28]

**4. Reference management and citation styles**

Zotero supports over 10,000 citation styles but has limited customisation.[28] EndNote offers extensive formatting options and flexibility for customisation. Mendeley provides fewer citation styles and less customisation.[28,42]

**5. Collaboration features**

Zotero is best for cost-free small-team collaboration, EndNote excels in institutional or complex research settings, and Mendeley offers a middle ground with networking features.[7,12,14,38]

**6. Database and tool integration**

Zotero supports dedicated browser connectors (Chrome, Edge, Firefox, etc) and other repositories (PubMed, etc). EndNote's strength is its direct exports from PubMed and Web of Science, streamlining literature reviews.[40] Mendeley also integrates with the browsers, but is controlled by Elsevier and struggles with a non-proprietary platform.[28]

**7. Mobile and cross-platform compatibility**

Zotero excels in cross-platform compatibility (Windows, macOS, Linux) but lacks an official mobile app, relying on third-party solutions like Papership, which may not fully meet on-the-go needs.[28] EndNote offers robust paid mobile apps for iOS and Android, but excludes Linux users. Mendeley provides a fully functional iOS app with real-time syncing, making it convenient for mobile users. It works with Windows and macOS, but discontinued Linux support in 2020.[29]

**8. Privacy, data security and ethical concern**

Zotero ensures privacy and academic transparency through open-source development and user-controlled local storage, making it ideal for independent, privacy-conscious researchers. EndNote's reliance on institutional cloud policies and costly subscriptions limits its accessibility and individual control, underpinning inequities in research access. Mendeley's ties to Elsevier raise ethical concerns over data mining and commercialisation.[8,29,31,35] Evaluating the key 8-areas, assigning 1 to 3 scores for high to low recommendation, gives a comparison (SpiderWeb) chart ranking these three RMS, Zotero, EndNote and Mendeley, Figure 2, Table 1, Table 2 and Table 3.

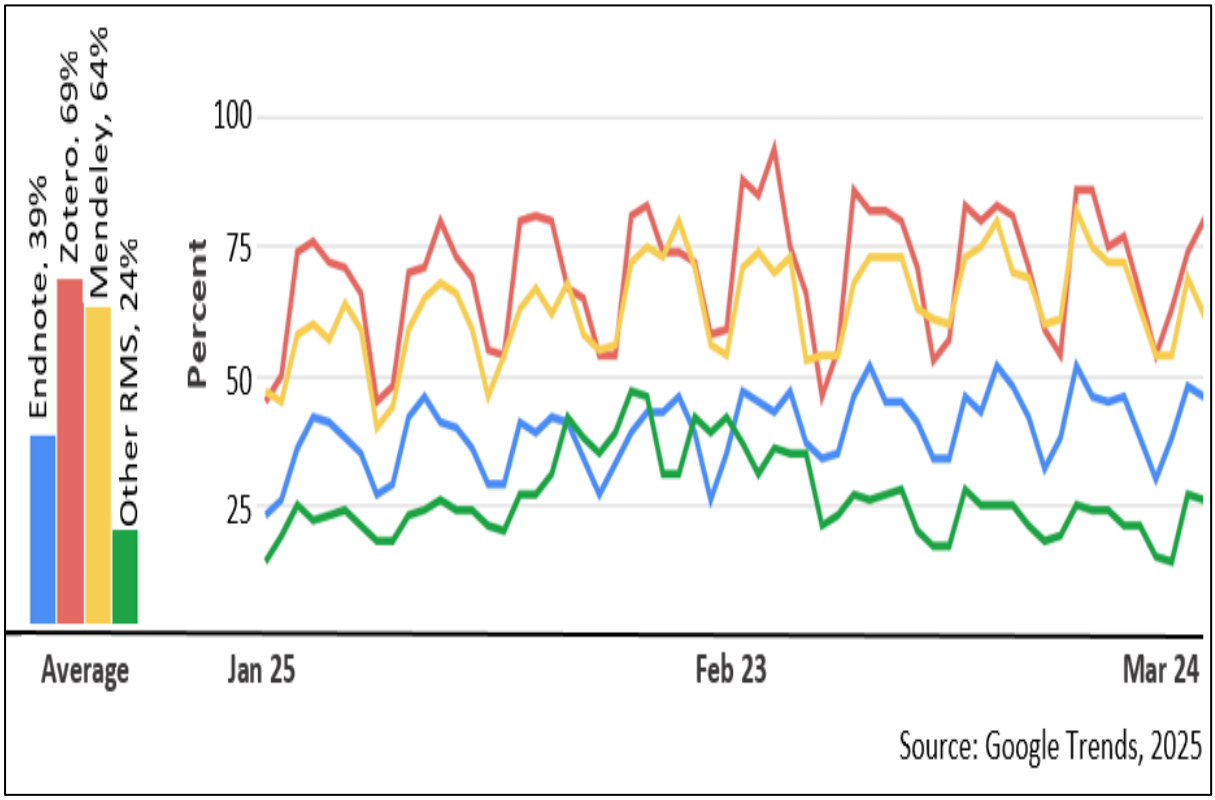


**Figure 1. Google Trends showing software search interest worldwide**

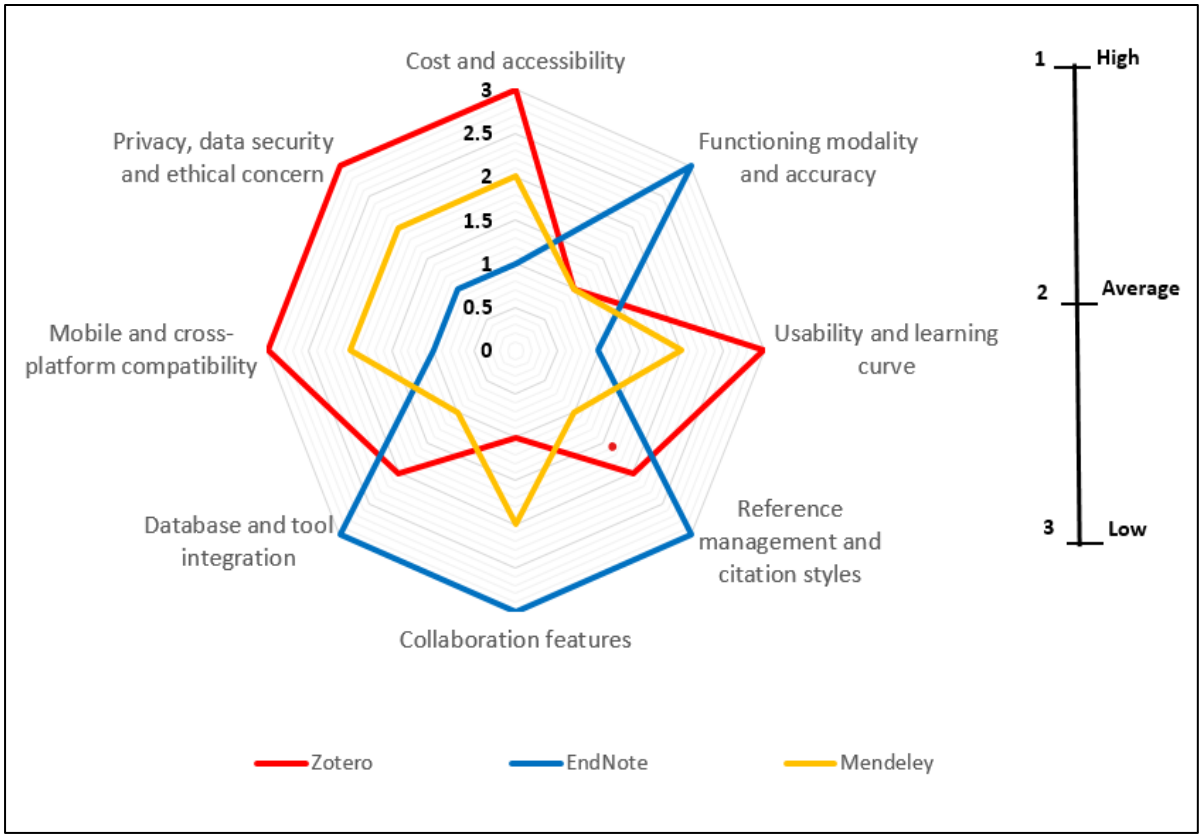


**Figure 2. Recommendations for selecting RMS for researchers based on eight key criteria**

**Table 1. Strengths and limitations of Zotero**

| Characteristics | Strengths | Limitations |
|---|---|---|
| **Cost** | Free and open-source | |
| **Ease of use** | User-friendly | |
| **Citation styles** | Supports a wide range of citation styles | Difficult to edit output styles |
| **PDF management** | Attach/search PDFs, snapshots, and facilitate annotations | Struggles with large PDF libraries due to the limit for cloud storage and sync |
| **Organization** | Allows through groups, group sets, tags and collections | Limitations in handling large databases |
| **Collaboration** | Best free option for a small group, working from multiple computers or locations, group libraries and sharing citations | Free tier has limits for online storage and sync |
| **Storage** | Unlimited local storage and limited cloud storage | Free cloud storage of 300 MB only |
| **Offline access** | Fully functional offline | |
| **Mobile app** | | No official mobile app (Third-party only) |
| **Platform support** | Windows, macOS, Linux; Good (Word, LibreOffice) | |
| **Advanced search** | | Basic search only |
| **Database integration** | Best browser integration with dedicated connectors for databases such PubMed, Scopus etc; LaTeX/BibTeX support | |
| **Systematic reviews** | | Not designed for reviews |
| **Ethics/privacy** | Open-source; no corporate ties | |
| **Support** | Active community forums | No official hotline |

**Table 2. Strengths and limitations of EndNote**

| Characteristics | Strengths | Limitations |
|---|---|---|
| Cost | | Expensive (~$250); cost-prohibitive for individual users, creates inequities for scientific research |
| Ease of use | Best for advanced users | Steep learning curve; not ideal for beginners |
| Citation styles | Supports extensive formatting options and citation styles -easy editing of output styles | |
| PDF management | Attach/search PDFs | No native annotation tools |
| Organization | Advanced tools for managing large libraries and complex projects. | Limited to custom, fields, group sets and groups |
| Collaboration | Best if all users have institutional access | Requires institutional license for real-time sharing |
| Storage | Unlimited local storage and cloud storage with subscription | |
| Offline access | Fully functional offline | |
| Mobile app | Yes | Requires subscription |
| Platform support | Windows, macOS; strong integration with Word, best ("Cite While You Write") | No Linux support |
| Advanced search | Powerful (full-text, filters, Boolean) | |
| database integration | PubMed/Web of Science exports, Embase, Cochrane Library | Limited browser integration- requires a plugin |
| Systematic reviews | Gold standard (PubMed export, AMA styles) | |
| Ethics/privacy | | High cost creates inequities |
| Support | Institutional support (access to technical support, training/workshops, official hotline) | Newer versions may not work smoothly with older libraries and older operating systems, creating problems when upgrading |

**Table 3. Strengths and limitations of Mendeley**

| Characteristics | Strengths | Limitations |
|---|---|---|
| **Cost** | Free basic functions | Premium plans available |
| **Ease of use** | User-friendly | Frequent interface changes, relatively difficult to set up and use (than Zotero) |
| **Citation styles** | | Supports fewer styles (than Zotero/EndNote), difficult to edit |
| **PDF management** | Attach/search PDFs, snapshots; best for annotations/highlights | |
| **Organization** | Allows through groups, group sets, tags and notes | Not as robust (as EndNote) in handling large databases. |
| **Collaboration** | Social networking, working from multiple computers or locations, creating group libraries and sharing citations | Shared groups are restricted in the free version |
| **Storage** | Unlimited local storage and 2 GB free cloud storage for basic functionality | Paid upgrades for storage and advanced functions |
| **Offline access** | Fully functional offline | |
| **Mobile app** | Official app (functional) | |
| **Platform support** | Windows, macOS | Linux dropped in 2020; frequent interface changes can disrupt workflows |
| **Advanced search** | Moderate search capabilities | |
| **database integration** | | Struggles with non-Elsevier databases |
| **Systematic reviews** | | Not designed for reviews |
| **Ethics/privacy** | | Affiliation with Elsevier raises ethical concerns about data mining and profit-driven updates |
| **Support** | Elsevier support, official hotline | Elsevier-backed (updates can be disruptive) |

## Recommendation

Zotero is a free, open-source solution perfect for independent researchers, students, and beginners. It offers a one-click citation capture, PDF annotations, and small-scale collaboration. Users should manually back up libraries (online storage and sync is limited to 300 MB). While browser connectors simplify saving, metadata may require verification.

EndNote is a rigorous, academia-trusted tool, especially in medicine, offering advanced search, complex citation styles, and seamless MS Word integration. It is ideal for systematic reviews and large collaborations. However, it is a paid software, and users should verify version compatibility to avoid the functionality of cloud-synced folders and library becoming corrupt. For smooth operation, use of genuine MS Word and its built-in sync for EndNote or local backups.

Mendeley is a proprietary RMS, with better PDF annotations and academic networking, has storage limits (2 GB free) and ethical concerns due to Elsevier's ownership.

Citation and referencing have become easier with the availability of software. However, RMS-generated references may not always be accurate for metadata and should always be verified for names, dates, and journal titles during research, writing and publication.

## Conclusion

Reference management software is indispensable for efficient research writing and publication, which requires accurate citation and referencing. Functionality and accessibility are key considerations while selecting tools. Zotero is free, easy to use and privacy-focused, and has emerged as the most inclusive and ethical choice for all types of researchers. It is suitable for small group collaborative work. EndNote is a proprietary subscription-based, suited for large-scale collaborative research projects. Mendeley is a proprietary tool, partially free and provides better annotation for PDF and networking.

Regardless of the efficiency of these reference management software, manual verification and cleaning for accurate metadata like author names, dates, and journal titles are needed to meet the requirements of a specific journal.

## Author contribution

Concept Design: AM, JNS; Literature Search: All; Data Collection: All; Data Analysis: All; Draft Manuscript: All; Final Manuscript and Accountability: All

## Acknowledgment

Saurav Diyali for his support in hyperlinking references

## Conflict of interest

None

## Funding

None

## Declaration

We utilised DeepSeek, a large language model (LLM) artificial intelligence (AI) tool for identifying relevant studies and their findings. We reviewed the content for relevancy.

## References

1. Masic I. The importance of proper citation of references in biomedical articles. Acta Informatica Medica. 2013 Sep;21(3):148. DOI PubMed Google Scholar Full Text
2. Masic I. Writing and Editing of Scientific Papers Using BOMRAD Structured Form and Proper Style of Reference's Citation. Int J Biomed Healthc. 2021 Mar;9(1):4-14. Google Scholar Full Text
3. Panjaitan AO, Novelyn S, Angreni F. The Impact of Proper Citation on Academic Integrity and Scholarship. Asian Journal of Advanced Research and Reports. 2024;18(10):192-201. Google Scholar Full Text

4. Lorenzetti DL, Ghali WA. Reference management software for systematic reviews and meta-analyses: an exploration of usage and usability. BMC medical research methodology. 2013 Dec;13:1-5. DOI PubMed Google Scholar Full Text
5. Tremblay P, Walker TP. Reference - Management Software. A Guide to the Scientific Career: Virtues, Communication, Research and Academic Writing. 2019 Nov 26:577-90. Google Scholar Full Text
6. Williams L, Woods L. Reference management practices of students, researchers, and academic staff. The Journal of Academic Librarianship. 2024 May 1;50(3):102879. DOI PubMed Google Scholar Full Text
7. Murphree L, White M, Rochen Renner B. Reference managers that support collaborative research: Dreaming of the perfect fit. Medical Reference Services Quarterly. 2018 Jul 3;37(3):219-33. DOI PubMed Google Scholar Full Text
8. Panda S. Reference management software for assisting researchers: A comparative analysis of usage and usability. Library Technology with New Perception. 2023 May 5:191-206. Google Scholar Full Text
9. Rethlefsen ML. Connotea. Journal of the Medical Library Association: JMLA. 2008 Apr;96(2):175. DOI PubMed Google Scholar Full Text
10. Saxton ML. 2001. Procite 5.0. Google Scholar Full Text
11. Zhang Y. A Review of the New RefWorks. Doody's Collection Development Monthly. 2016. Google Scholar Full Text
12. Asbari M, Nugroho YA, Sasono I. Mendeley Software Training in Improving the Quality of Scientific Articles for Private Higher Education Lecturers. Journal of Community Service and Engagement. 2022 Apr 29;2(2):44-50. Google Scholar Full Text
13. Afforai - Research anything with AI. AppSumo. 2025. Link
14. Zotero | Your personal research assistant. 2025. Link
15. Paperpile Reference Manager. Paperpile. 2025. Link
16. Citationsy. Create citations, reference lists, and bibliographies. 2025. Link
17. JabRef - Free Reference Manager - Stay on top of your Literature. 2025. Link
18. EndNote training | Clarivate. 2025. Link
19. BibTeX Guide: Mastering Reference Management for Bibliographies. BibTeX. 2025. Link
20. Nguyen A. 7 Best Reference Management Software For 2024 And Beyond. Afforai. 2024. Link
21. Shah J, Baral G, Dangal G, Neupane HC. Research oriented medical school curricula to nurture undergraduates in preparation for the future physician scientists: Relevance for developing countries. Journal of Chitwan Medical College. 2021 Sep 30;11(3):1-5. Google Scholar Full Text
22. Shah JN. How to write “references” in scientific journal articles. Journal of Patan Academy of Health Sciences. 2019 Jun 30;6(1):1-5. DOI Google Scholar Full Text
23. Shah J. Appropriate citation and accuracy of references: read full text before citing. Journal of Patan Academy of Health Sciences. 2022 Jun 17;9(1):1-4. DOI Google Scholar Full Text
24. Shah JN, Shah J, Gupta A, Joshi NP, Malla A, Shah S. Accuracy of references in a journal article. Journal of Chitwan Medical College. 2025 Mar 13;15(1):1–6. DOI Google Scholar Full Text
25. Shah JN, Shah J, Baral G, Baral R, Shah J. Types of plagiarism and how to avoid misconduct: Pros and cons of plagiarism detection tools in research writing and publication. Nepal Journal of Obstetrics and Gynaecology. 2021;16(2):3–18. DOI Google Scholar Full Text
26. Shah JN. Science of writing for publication in scientific journals: Steps and resources. Journal of Patan Academy of Health Sciences. 2020 Dec 25;7(3):1-5. DOI Google Scholar Full Text
27. Productivity Z. Review of the Best Citation Managers and How to Choose One – Zen Productivity. 2025. Link
28. Choosing reference management software: Endnote, Zotero, Mendeley?. Zotero Forums. 2017. Link
29. Hayes L. Library Guides: Which reference manager?: Comparison of EndNote, Mendeley and Zotero. 2023. Link
30. What is the best reference manager? - Paperpile Reference Manager. 2025. Link
31. Kratochvíl J. Comparison of the accuracy of bibliographical references generated for medical citation styles by EndNote, Mendeley, RefWorks and Zotero. The Journal of Academic Librarianship. 2017 Jan 1;43(1):57-66. DOI Google Scholar Full Text
32. Choosing reference management software: Endnote, Zotero, Mendeley?. Zotero Forums. 2017. Link
33. Zhang Y. Comparison of select reference management tools. Medical reference services quarterly. 2012 Jan 1;31(1):45-60. DOI PubMed Google Scholar Full Text
34. Williams L, Woods L. Reference management practices of students, researchers, and academic

staff. The Journal of Academic Librarianship. 2024 May 1;50(3):102879. Google Scholar Full Text
35. Gilmour R, Cobus-Kuo L. Reference management software: A comparative analysis of four products. Issues in science and technology librarianship. 2011 Sep 1;66(66):63-75. DOI Google Scholar Full Text
36. Ivey C, Crum J. Choosing the right citation management tool: EndNote, Mendeley, RefWorks, or Zotero. Journal of the Medical Library Association: JMLA. 2018 Jul 1;106(3):399. DOI PubMed Google Scholar Full Text
37. Google Trends. Google Trends. 2025. Link
38. ACAP Learning Resources: Reference Management Software: Zotero. 2025. Link
39. Mitchell-Botts H. LibGuides: EndNote: Home. 2025. Link
40. EndNote - The Best Citation & Reference Management Tool. EndNote. 2024. Link
41. Mendeley - Reference Management Software. 2025. Link
42. Chawla VI, Gupta MO. Reference Management Softwares: A Study Of Endnote, Mendeley, Refwork, Zotero. Kaav International Journal of Science, Engineering & Technology: A Peer Review Quarterly Journal. 2017;4(3):8-12. Google Scholar Full Text