



Writing for “internal orthopaedics”: referencing quality citations

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Referencing

Writing a scientific paper is a fantastic job with strict rules and principles [1, 2]. In scientific writing, referencing (citation) is the information that is necessary to the reader to acknowledge, identify and trace the sources used in the study. It is the practice to acknowledge that the information is derived from an external source; failure to reference others' academic work is a serious offence and a fraud in scientific writing. It is a respect to the original author or researcher and avoids claims of plagiarism [3–5]. The word citation is defined as “an act of quoting” that is “to speak or write from another usually with credit acknowledgment” [6]. Referencing should be employed when using direct quotations and when paraphrasing or summarizing published text. It helps the authors put their work in the context of the related literature, to acknowledge and give credit to others' work, to contextualize study findings, to distinguish an author's ideas from others, to direct readers to original sources of information and to avoid plagiarism [7, 8]. It helps the readers to understand the work, to justify the conclusions, to judge the novelty and scope of the manuscripts, to critically evaluate what contribution the study makes and to source further information on the research and health topics [7–9]. Referencing must be accurate, complete and consistently applied, as per the journal's instructions; however, the most important challenge of referencing is the selection of sources for citation. The large number of publications on a topic makes this selection difficult [10–15]. Additionally, “...the whole process of citing references is very idiosyncratic and a reflection of author biases...” [16].

Reference managers

The entire manuscript needs to be cited in the text and at the end of the article. There are many different referencing styles, and the format of a citation in the text and the references list depends on the submission journal. The most common referencing style for medical journals is the Vancouver style and the Harvard style [3, 17]. Reference or citation managers such as EndNote (Clarivate Analytics, Philadelphia, PA), Mendeley (Elsevier, Amsterdam, the Netherlands) and Zotero (George Mason University, Fairfax, VA) are software designed to catalogue, organize and utilize references. Modern reference managers allow for rapid creation, organization and classification of a curated collection of reference articles that can be made available anywhere. This collection of articles can then be used for learning, teaching and writing. In this respect, reference managers have evolved into powerful tools for education [3, 17, 18]. However, references are added to the reference managers by the authors themselves. Therefore, a reference manager may assist the writing process but cannot choose the references or ensure the quality of citations.

Choosing citation references

Many authors take referencing lightly. Instead, the references list should be considered an integral part and continuum of the article, and referencing should be a fundamental aspect of content development and traceability of scientific information. Therefore, referencing should be driven by the quality of the cited papers and not by social factors or strategic considerations, as they provide an insight into the ethics of the paper and the author and reflect the overall quality and integrity of writing, editing and publishing [19].

It is well known that < 20% of the papers included in the references list of a submitted paper are actually read by the authors; 4 to 67% (median, 38%) of references have errors; and references are often chosen for convenience rather than for appropriateness [20, 21]. Common practices are

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to cite reviews and bad papers (easy to criticize), easily available papers (open access), papers written in English language and classic papers (>25% of standard references); another common practice is "...I cite you, you cite me...". Instead of these practices, the authors should verify all references against the original sources, and they should search and read the original full-text publication of a referenced paper. All data or information reported within a publication needs to be verified for accuracy against the original source document. When writing the paper has finished, it is recommended the authors to compile a file of referenced documents. This will allow anyone wanting to verify the accuracy of the described information to easily find evidence supporting claims made in the main publication and will be useful in future writing [22].

Certain references should be avoided for lack of credibility, lack of peer review and proof of information correctness. The most valid and available sources for referencing are published peer-reviewed original research articles. Review papers can be referenced when original articles are not available or if a summary for elaborating research problem is more effective. However, citation of review articles rather than the original papers should be limited because it fails to provide credit or acknowledge the effort of the authors of original research papers [23, 24]. Less valid sources such as theses, conference proceeding papers, unpublished data, abstracts and personal communications are not recommended unless they contain essential information not available from public sources [10]. In case of referencing unpublished data or personal communications, the written permission of the author is required to ensure the accuracy of the data and prior approval from the authors. Sources that cannot be traced such as meeting abstracts and posters should not be used [6, 25]. Referencing without retrieving and reading the full texts, giving multiple similar references to support a single statement or using a single source to support multiple statements are among examples of inaccurate referencing [10, 26]. Since an abstract is a brief summary of the work, its content may not accurately present details reported in the text, and therefore, it is a poor practice to cite references after skimming results of the abstract rather considering the whole text [6].

Spurious citation, biased citation and over self-citation are also common problems of citation. Self-citation, defined as citing one's own work in a scientific paper, is a common practice and is an essential part of scientific communication, which represents the continuous and cumulative nature of the research process [27]. When a researcher works on a specific topic for years, 25% self-citation is not uncommon [24]. However, either irrelevant self-citation or over self-citation are considered unethical practices, which affect the precision of the paper [27,

28]. Potentially coercive self-citation by peer reviewers is another concern, ranging up to 29% per journal [29]. Self-citation in peer reviews may reflect a combination of appropriate citation to research that should be cited in published articles and inappropriate citation intended to highlight the work of the peer reviewer. Providing instructions to peer reviewers about self-citation and asking them for constructive recommendations are necessary. Open peer review could discourage peer reviewer self-citation; however, there are other advantages and disadvantages to consider in using open peer review, and it is not commonly employed [30–33].

The spurious citation occurs where sources are not needed but are included anyway, e.g. over-citation or redundant citation (i.e. where the extra sources do not add any value beyond the first source), or citing an obscure, historical reference to give an impression of erudition [6, 7].

Errors in referencing

Errors in referencing are common and reflect seriously on the validity of the study, the credibility of the authors and the reputation of the authors and the publishing journal; importantly, it may reflect underlying flaws of the published research. The range of errors in referencing range from 4 to 67% per journal, with approximately 50 to 70% of references of published papers contain at least one error [6, 20, 21, 34, 35]. The consequences of errors in referencing include difficulty in reference retrieval, limitation for the reader to read more widely, failure to credit the cited work and inaccuracies in citation indexes [6]. Errors in references can be divided into bibliographic errors (inaccurate bibliographic information) and quotation errors (discrepancies between an author's writing and the cited reference). Quotation errors can frustrate the readers and weaken the author's argument. Inaccurate quotations are misleading the readers and initiate circulation of false facts [6]. Major bibliographic errors in referencing prevent the source articles being retrievable [7, 36]. With minor errors such as punctuation and spelling mistakes in the name of authors, title, journal, volume, year and page numbers, source articles can still be retrieved [7, 37]. Potential pitfalls of reference manager software may also cause citation errors. In general, the authors are responsible for the final checking of the accuracy of the bibliographic details and should correct reference manager databases before the references are exported to the final references list [10]. However, the high rate of inaccurate citations indicates that all parties involved in biomedical publication should pay more attention to minimize errors and improve the accuracy of referencing [21, 35].

Title, abstract and keywords

There are ways to improve referencing of a scientific paper. In writing a paper, the author refers to the literature on the topic of his work [38, 39]. The extraction of information from the literature is mostly based on keywords that are digitized in online libraries and databases. Selecting scientifically analysed keywords, specific for the message conveyed by a paper and computing beforehand the theoretical chances of citation, might increase the citations obtained, the retrieval of important scientific and innovative information. A rational use of keywords narrows the target and favours the referencing of articles published on prestigious journals. The title of the paper is also crucial; the title cannot be generic; it should contain reference to the main point reached and to as many secondary points as possible. The title of the paper should be consistent with the keywords. The abstract of the paper is also critical; the authors should be aware that some readers read only the abstract because they do not have access to the full text or just because they do not have the time to read the full text. People searching in the literature and first attracted by an appealing title will then read the abstract. They will not download the paper if the abstract does not strongly suggest, therefore, limiting the possibility the paper to be cited. Therefore, it is very important that the authors search the literature through their selected keywords and write the title, abstract and keywords in close agreement with the main message of the paper [40].

The editors and publishers perspective

All contributors of scholarly articles are currently encouraged to upgrade their skills in referencing, analysing relevance and managing references to ensure the accuracy of citations and completeness of references lists. Technically correct and thoroughly validated references add to the quality of reference lists. Journal editors may detect and avoid irrelevant or coercive citations and particularly those related to peer review. By ensuring relevance of citations and proper credits to publicized facts and ideas, editors ensure the quality of their published papers. Publishers may also implement strategies of proper referencing by providing modes of citations to their own journal articles and upgrading their instructions for authors. It is increasingly important to highlight ethical principles of referencing original research articles. Using alert services, the authors are informed about citations to their articles appearing in other journals and tracked by references software. Enhancing visibility of references is another tool

that may increase authors' responsibility over referencing. Importantly, by acknowledging the substantial role of referencing, large subscription publishers have opened access to the reference lists of their published papers, leaving the rest of the subscription articles behind the paywalls [9].

At *International Orthopaedics*, we feel responsible to our readers for publishing honest research and useful papers on specialized topics, as well as general orthopaedic knowledge. In this context, we aim to ensure relevance of quality references for the papers published in the journal. Unavoidably, some papers will have errors in referencing. We try to keep this number low with quality peer review and appropriate reference manager software. We routinely inform the authors submitting their papers for consideration for publication at *International Orthopaedics* for references relevant to their work and recommend inclusion in the text and references list, if the authors consider appropriate. We also recommend references from the journal, because this will increase the visibility and prestige of the journal; yet, we also try to keep the number of self-citations within the allowed limit. Last, when we detect inappropriate practices in referencing by the authors or in peer review, we communicate with the authors and the reviewers with the intention to avoid misconduct.

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