

A COMPARATIVE ANALYSIS OF WRITING SCIENTIFIC REFERENCES MANUALLY AND BY USING ENDNOTE BIBLIOGRAPHIC SOFTWARE

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ABSTRACT

By writing scientific paper, one gradually starts the academic career. Academic staff members, most often have no choice but to engage in scientific writing to fulfill the requirements for selection or promotion in their academic career. Those who do not find themselves competent enough to write, at times indulge in plagiarism. The present study was conducted to compare writing references for scientific paper manually and by using EndNote software, which is quite helpful for the authors. In this study time consumed in inserting twenty references in a paper manually was compared with putting references using EndNote software.(version 9) In addition, the format of references was changed in different manners to find out the time required for making these changes. Comparison of time spent for inserting one reference or all references in both formats Vancouver and Harvard showed significant difference ($P<0.001$). The study showed that persuading the authors to use electronic software for writing references and scientific papers would significantly improve the quality of the manuscripts besides enlarging the scope of medical journalism.

KEY WORDS: Scientific writing, Medical Journalism, EndNote Software, References.

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INTRODUCTION

One of the commonest reasons mostly stated by authors for not preparing scientific papers is that they have no time. However, by using electronic software and availing the facilities available on the net enables one to accomplish a lot provided a sincere attempt is made.

In today's fast moving world where everyone has to work hard to earn living, a lot of time is spent on activities related to job which leaves very little time for academic activities like writing scientific papers. It is not only time but also quality time, which is required to engage oneself in academic pursuits. With the every passing day the requirements regarding published scientific papers is increasing that has a direct bearing on one's academic career. Higher the

number of papers ensures that more are the chances of further promotions, which also strengthens one's CV. Most of the universities and academic institutions give too much importance to the number as well as quality of scientific papers published while considering academic staff for further promotions. Some academic institutions require that even the graduate students during their studies must prepare some scientific papers to be eligible to present and defend their Thesis. In order to meet this requirement some authors find an easy way and do not hesitate to copy some one else's published work thereby indulging in plagiarism.¹⁻³

Some try to fulfill this requirement by writing papers in haste with the result that their manuscripts are full of mistakes or fail to follow the format and instructions for authors of the journal to which they submit their manuscripts. A study by Jawaid SA et al showed that an analysis of 342 manuscripts which they had accepted for publication, the most common deficiency was inappropriate Vancouver format of references in 259(75.7%) of the articles.⁴ At times it results in rejection or serious objections from the reviewers, editors. The authors can certainly avoid this trauma to their manuscripts if they study the pattern and format of the journal besides following the instructions of that particular journal. International Committee of Medical Journal Editors (ICMJE) has formulated guidelines for submission to biomedical journals which are revised after every two years.⁵ Most of the well known biomedical journals published from all over the world usually follow these guidelines while a few have made some minor modifications. Hence, those authors who are familiar with the ICMJE guidelines find it much easier to write a scientific paper and references or alternatively one can attend some workshop or seminar on Medical Writing, which can be extremely helpful.

The aim of the present study was to compare the time allocated for writing the references of a paper and arrange them in accordance with the format of a given journal, as well as the time specified for changing the format in case of

rejection of the paper, by two method writing manually and by using Endnote software.

METHODOLOGY

In this study, a paper with 20 references was considered. To determine the exact time required for writing or changing the format of a paper a study design was prepared wherein first, the references were written manually, and the time spent for writing each reference and all the twenty references was recorded. Obviously, all the references had already been collected, each related paragraph was written, and the reference was ready to be inserted in the reference section manually and also mark it in the text. Secondly, given that all these reference are included in a specific file in the EndNote (Version 9) and are ready to be inserted, the time spent was recorded for each and all the references. For easy comparison, all time units were converted into minutes.

The next step was that we assumed that this paper was rejected by a particular journal and we had to change the format of references according to that journal's requirements. Since most of the journals throughout the world, follow either Vancouver or Harvard style in arranging their references, we analyzed all different formats i.e. changing from Vancouver to Harvard, Harvard to Vancouver, and deleting or adding one reference to Vancouver format. It is worth mentioning that Vancouver style is based on inserting reference number in the text, as they come instead of alphabetical arrangement for reference section. However, in Harvard style while writing references, the year is inserted after the name of the authors.

The last step was to add or delete a reference into/from the text. In Harvard style there is no problem because the references are arranged alphabetically and deleting or adding one or more references does not cause any problem for the authors(s). Hence, we recorded the time required for following the Vancouver style only. Data was analyzed by SPSS version 11.5. Independent sample t test was used to find out significant difference between two groups.

RESULTS

Table-I shows the time spent for writing one or all the references in both the formats manually or by using EndNote Software. Writing one reference manually took 5.4 ± 0.52 minutes as compared to 0.34 ± 0.028 minute by using Endnote software [$p<0.001$]. Changing from Harvard to Vancouver and Vancouver to Harvard also shows significant difference (Table-I). The results showed that much more time was required for writing the references manually and this difference was statistically significant ($P<0.001$).

DISCUSSION

Scientific paper writing must include a publication strategy and the authors must look at the format of papers accepted by the journal in which he or she intends to submit this. Not only that it is also important to religiously follow the instructions to authors of that particular journal. One of the most important reasons for rejection is failure of authors to comply with the journal instructions. Even otherwise from writing a paper to its eventual publication, it takes lot of time which may vary from journal to journal depending upon their peer review process,

efficiency of editorial staff and the number of manuscripts which they are receiving. Jawaid SA in their study have reported that mean acceptance time for Pakistan Journal of Medical Sciences was 4.88 ± 2.21 months and mean publication time was 9.29 ± 2.82 months.⁴

It is very rare that the manuscript is accepted after peer review as such. In many cases, the authors are asked to revise and resubmit the manuscript responding to the reviewer's comments and suggestions after peer review or the manuscript may also be rejected. In case the authors are asked to revise and resubmit, it depends on the authors how soon they can revise and resubmit and all this requires time, which is not easy to find in today's busy life. However, there is no short cut if one has to publish. Most of these problems can be over come if the authors attend some course or workshop on Medical Writing or are fortunate to have some experienced authors as friends who are willing to help them. Most of the authors in developing countries are not used to using electronic software's like EndNote or Reference Manager. However, if they can use these facilities, it can be extremely helpful and improve the quality of their manuscripts and they will not have to resort to plagiarism.^{6,7}

Table-I: Time spent in writing references manually or by using EndNote software Version 9

Reference Writing	Manual changes	Using Endnote	P Value*
	Time (min)(Mean± SD)	Time (min) (Mean± SD)	
Writing the reference			
One reference	5.4±0.52	0.34±0.028	<0.001
All 20 references (sum)	108	6.8	
Changing from Vancouver to Harvard			
One reference	2.21± 0.44	0.057±0.003	<0.001
All 20 references (sum)	44.2	1.14	
Changing from Harvard to Vancouver			
One reference	2.5± 0.38	0.038 ±0.004	<0.001
All 20 references (sum)	50	0.77	
Deleting or adding one reference from/ to Vancouver style			
All 20 references (sum)	5.6	0.5	

* Independent sample t test was applied between the groups

Results of this study showed that using EndNote software or any other similar electronic software could help the authors overcome most of the problems they face while writing references for scientific papers. Since most of the authors in developing countries are not aware of or conversant with using these software's, it is essential that teaching institutions must include the use of such software in the training programmes or it should be made a part of Medical Writing, Research Methodology workshops which should be made mandatory for the postgraduates as well as faculty members. Our study we hope will encourage the authors to use these software's.

Time required for deleting or adding one reference to the text in Vancouver style depends on the position of that particular reference. The more are the references in front of the text, the longer time it may take. We worked out this time required by deleting just one reference and then the total time required was worked out for twenty references. As such if more references have to be inserted or deleted in the text, it will certainly require more time. In case the manuscript is a Review article or Clinical Update in which the number of references are much more up to sixty or eighty, the time needed to make all these additions and deletions manually will be certainly much greater but if all this is done using electronic software like EndNote, it will be much quicker.

In conclusions, we believe that the authors should be encouraged to use the electronic

software like EndNote while writing references for scientific papers. This will not only make the authors life easy but will also overcome lot of stress and strains which the reviewers and editors have to undergo while reviewing and editing these manuscripts.

REFERENCES

1. CSE's White Paper on Promoting Integrity in Scientific Journal Publications. Editorial Policy Committee. March 29, 2009 [Cited 2010, Jan 10]. Council of Science Editors. Available from: http://www.councilscienceeditors.org/editorial_policies/white_paper.cfm
2. Anonymous. Facts about plagiarism. Cited [2010 Jan 15]. Available from: http://www.plagiarism.org/plag_facts.html
3. Washington State University [Internet]. Washington, USA. [Updated 2009 Jun 16; cited 2010 Jan 11]. Available from: <http://www.wsulibs.wsu.edu/plagiarism/main.html>
4. Jawaid SA, Jawaid M, Jafary MH. Deficiencies in original articles accepted for publication in Pakistan Journal of Medical Sciences: A retrospective analysis. *Pak J Med Sci* 2009;25(11):1-6.
5. International Committee of Medical Journal Editors [Internet]. Uniform requirements for manuscripts submitted to biomedical journals. Writing and Editing for biomedical publications. [Updated 2008 Nov; cited 2010 Jan 10]. Available from: <http://www.icmje.org/>
6. Rokni MB. How to discover plagiarism. In: Proceedings of First National Conference on Medical Editing. Rawalpindi. 23-25 April 2007. Pakistan Medical Journalists Association, Karachi. 2007:64-68.
7. The Committee on Publication Ethics (COPE) [Internet]. UK. [Updated 2009 Nov 30; cited 2010 Jan 8]. Available from: <http://publicationethics.org/>