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Indian Journal of Forensic and Community Medicine

Journal homepage: https://www.ijfcm.org/

Editorial

Writing an effective Title and Abstract for a Research Paper

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ARTICLE INFO

Article history:
Received 26-10-2024
Accepted 12-11-2024
Available online 26-11-2024

1. Writing an Effective Title

The title is the "first detail" or "face" of the paper that a reader sees while perusing the table of contents of a journal issue, whether it is available online or in hard form.[1–7]

The best titles for research articles are those that, when read alone, effectively and succinctly summarize the research activity. It might be difficult to write scientific titles that are both aesthetically pleasing and educational.

Multiple factors, as mentioned below (which are, at times, a bit conflicting or contrasting), need to be considered while formulating a title, and hence this should not be done in a hurry.

1. While formulating a title, firstly, the author should describe the paper in about three sentences, avoiding the results and ensuring that these sentences contain important scientific words/keywords that describe the main contents and subject of the paper.
2. Then the author should join the sentences to form a single sentence, shorten the length (by removing redundant words or adjectives or phrases), and finally edit the title (thus drafted) to make it more accurate, concise (about 10–15 words), and precise.
3. The title needs to be simple and direct. Lengthy titles can be boring and appear unfocused, whereas very short titles may not be representative of the contents of the article; hence, optimum length is required to ensure that the title explains the main theme and content of the manuscript.
4. The title should be interesting and informative to upgrade the knowledge of the researcher.
5. The title should be specific, accurate, and functional (with essential scientific "keywords" for indexing). Important terms/keywords should be placed in the beginning of the title.
6. Although Descriptive titles are preferred to declarative or interrogative titles. Interrogative titles, if framed correctly, spark a sense of inquiry that leads to further reading of the research paper.
7. The title should neither be misleading or misrepresentative nor should it have any whimsical or amusing words.
8. The title should be SPICED; that is, it should include the Setting, Population, Intervention, Condition, End-point, and Design.
9. The title should try to incorporate the Patients, Interventions, Comparisons, and Outcomes (PICO).
10. Some journals require that the study design be included in the title, and this may be placed (using a colon) after the primary title.
11. Place of the study and sample size should be mentioned only if it adds to the scientific value of the title. The place of the study may be included in the title (if absolutely necessary), that is, if

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https://doi.org/10.18231/j.ijfcm.2024.030

the patient characteristics (such as study population, socioeconomic conditions, or cultural practices) are expected to vary as per the country (or the place of the study) and have a bearing on the possible outcomes.

12. Abbreviations (except the standard or commonly interpreted ones such as HIV, AIDS, DNA, RNA, CDC, FDA, ECG, and EEG) or acronyms should be avoided in the title, as a reader not familiar with them may skip such an article, and nonstandard abbreviations may create problems in indexing the article.
13. Also, too much technical jargon or chemical formulas in the title may confuse the readers, and the article may be skipped by them.
14. Numerical values of various parameters (stating study period or sample size) should also be avoided in the titles (unless deemed extremely essential). It may be worthwhile to take an opinion from an impartial colleague before finalizing the title.
15. Many journals ask the authors to draft a “short title” or “running head” or “running title” for printing in the header or footer of the printed paper. This is an abridged version of the main title of up to 40–50 characters, which may have standard abbreviations and helps the reader to navigate through the paper.
16. Authors should adhere to the word count and other instructions as specified by the target journal.

2. Few Examples of Properly written Titles of Research paper

1. A prospective antibacterial utilization study in surgical intensive care unit of a tertiary referral centre.
2. Ventilator-associated pneumonia in a paediatric intensive care unit
3. Isolated infective endocarditis of the pulmonary valve: An autopsy analysis of fifteen cases.

3. Writing an Effective Abstract for a Research Paper

The abstract, which provides an overview of the entire research study, must share characteristics of the title. The abstract should be simple, direct, particular, functional, clear, objective, honest, succinct, exact, self-sufficient, thorough, academic, balanced, and free of deceptive language[8–13]

Multiple factors, as mentioned below need to be considered while writing an abstract:

1. Simple phrases and language (instead of sentences) should be used in the abstract.
2. It should follow the target journal’s structure (subheadings), be coherent, and be instructive.
3. Abstracts with structure are better than those without structure.
4. Abstracts needs to be self-sufficient, full, and stand-alone.
5. Abstracts should be succinct, engaging, objective, truthful, well-rounded, and accurate.
6. Abstracts should be in line with the paper’s main body and not be deceptive or inaccurate (particularly when a revision is done).
7. Abstracts should make use of the journal’s entire word limit (usually 250 words) so that the abstract primarily conveys the main paper’s factual facts. It should also prominently display the core point.
8. Abstracts should avoid nonstandard abbreviations and (if possible) the passive voice.
9. Beneath the abstract, authors should provide relevant "keywords" (keywords are used for indexing purposes).

Abstracts can be broadly classified into unstructured abstracts and structured abstracts.

1. Unstructured abstracts: Unstructured (or non-structured) abstracts are free-flowing, do not have predefined subheadings, and are commonly used for papers that (usually) do not describe original research.
2. Structured abstracts. Structured abstracts are followed by most journals, are more informative, and include specific subheadings/subsections under which the abstract needs to be composed..
   (a) These subheadings usually include context/background, objectives, design, setting, participants, interventions, main outcome measures, results, and conclusions.
   (b) Some journals stick to the standard IMRAD format for the structure of the abstracts, and the subheadings would include Introduction/Background, Methods, Results, and (the Conclusion/s).
   (c) Structured abstracts are more elaborate, informative, easy to read, recall, and peer-review, and hence are preferred; however, they consume more space and can have the same limitations as an unstructured abstract.
   (d) The choice of the type of the abstract and the subheadings of a structured abstract depends on the particular journal style and is not left to the author’s wish.
   (e) Separate subheadings may be necessary for reporting meta-analysis, educational research, quality improvement work, reviews, or case studies.
   (f) Clinical trial abstracts need to include the essential items mentioned in the CONSORT (Consolidated Standards of Reporting Trials) guidelines.
   (g) Similar guidelines exist for various other types of studies, including observational studies and

studies of diagnostic accuracy.

(h) A useful resource for the above guidelines is available at equator-network.org (Enhancing the quality and transparency of health research).

Table 1: The four-point structured abstract or the eight-point structured abstract

The four-point structured abstract	**Background and/or Objectives**: These states why the work was undertaken and is usually written in just a couple of sentences. The hypothesis/study question and the major objectives are also stated under this subheading. **Methods**: This subsection is the longest, states what was done, and gives essential details of the study design, setting, participants, blinding, sample size, sampling method, intervention/s, duration and follow-up, research instruments, main outcome measures, parameters evaluated, and how the outcomes were assessed or analysed. **Results/Observations/Findings**: This subheading states what was found, is longer, is difficult to draft, and needs to mention important details including the number of study participants, results of analysis (of primary and secondary objectives), and include actual data (numbers, mean, median, standard deviation, "P" values, 95% confidence intervals, effect sizes, relative risks, odds ratio, etc.) **Conclusions:** The take-home message (the "so what" of the paper) and other significant/important findings should be stated here, considering the interpretation of the research question/hypothesis and results put together (without overinterpreting the findings) and may also include the author's views on the implications of the study
The Eight-point structured abstract:	Eight subheadings – 1. Objectives, 2. Study Design, 3. Study Setting, 4. Study, Participants/ Patients, 5. Methods/Intervention, 6. Outcome Measures, 7. Results, and 8. Conclusions. The instructions to authors given by the particular journal state whether they have to use the four- or eight-point abstract.

This editorial is an effort to provide helpful guidance for creating a suitable title and a comprehensive abstract for a research paper.

4. Conflict of Interest

None.

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Cite this article: Yadav SK, Piyush AR. Writing an effective Title and Abstract for a Research Paper. *Indian J Forensic Community Med* 2024;11(4):138-140.