

Writing an Abstract

Writing abstracts is useful for authors

writing at the beginning of project. When written before the paper, an abstract gives the author a capsule overview of the whole paper to come, and therefore focuses the author's mind. It prompts the author to step back from the details of the work and see the big picture.

writing after paper is completed. Later rewriting of the early version shows the author the extent of any major changes in emphasis or thinking that has occurred as the paper was written. [This is useful whether it leads to revising the paper or revising the abstract—it leads to thinking carefully again about the study/work as a whole.]

Abstracts are now essential for readers

For decades, readers have relied on abstracts as a major tool in dealing with the medical literature. Now that the science literature is largely managed and available electronically, readers rely more than ever on abstracts to help them decide whether to take the steps necessary to read part or all of the main text. The habits of readers as they read and conduct research by using electronic systems now must shape the content and format of abstracts, which must serve readers of both electronic and paper versions.

Common Problems in Abstracts

[These are common to abstracts for descriptive-intervention studies and hypothesis-driven studies, although the emphasis may be greater on different elements for different kinds of studies.]

Three most common problems. The three most frequent errors identified in manuscripts are *

1. inconsistencies between the abstract and the article
2. information in the abstract that is not in text
3. conclusions not justified by information in the abstract

Other common problems. These three may be the most frequent problems found in abstracts, but several others are common and lead to difficulties for readers and authors. These problems, not in priority or other order, are:

4. abstract does not cover all elements necessary to understand what was done and found
5. is not organized clearly
6. does not accurately reflect the content (or tone) of the paper
7. the problem/hypothesis is not stated
8. information about the results does not align with the information in the Intervention/Methods section
9. major information in Results and Conclusion sections cannot be accounted for in the Intervention/Methods section
10. major information is presented in the Problem/Hypothesis/and the Methods section that is not in Results
11. Conclusion makes claims out of proportion to the findings
12. abstract is written as the opening paragraph of the paper
13. abstract contains material not in the text

* Identification of the three most frequent errors is from Pitkin RM, Branagan MA, Can the Accuracy of Abstracts Be Improved by Providing Specific Instructions? A Randomized Controlled Trial, *JAMA* 1998;280:267-0

Parts of an Abstract

[selected and adapted from an AAMC workshop on abstracts by Georges Bordage, MD, PhD]

Objective

Be explicit about goals or issues of concern

Setting

Name the broader institution and the specific part where innovation took place

e.g., community, university, or teaching hospital
 primary care or specialized clinic
 type of program
 geographic location
 "Framingham" Study [or similar], Registry

Participants

Eligibility criteria; selection procedure, if appropriate

Number of participants

Information about those who refused or dropped out

Intervention

Be specific about what was done, how often, for whom, and by whom

Outcome Measures [if any]

Should be operational, observable

"diagnostic performance" = not sufficient
 number of differential diagnoses
 proportion of irrelevant cues
 diagnostic accuracy

Results

Focus on key results/outcomes

Use parallel structure:

e.g., if 2 goals, then 2 sets of results and 2 conclusions—in same order throughout

Conclusion

Show your reasoning

Commit yourself

"... may provide comparable reduction..." ?

Don't let the readers make inferences about the conclusions. Tell them your thinking directly.

Different kinds of abstracts. Abstracts will have different components, depending on the type of material being presented. Some journals mandate the components, while others leave it to the author to establish the structure. The structure shown here is a basic one, used to illustrate the content of most abstracts, and authors should understand that the abstracts for their papers will likely vary widely depending on the type of report and the journal's requirements.

Writing Tips for Abstracts

Guideposts

Give the reader “guideposts” for each main part of the abstract, to mark the move from one major section to another.

Put the guidepost (“signal”) at the beginning of the first sentence in the new section. (This advice holds true for research reports and is easier to apply in them.)

“We were concerned that our residents ...”

“We designed a new three-part program to ...”

“At the end of the program, the students could ...”

Past tense and present tense

Use the past tense when writing about the intervention/ method and the outcome/results

“My colleagues and I in the clerkship *decided* to create a new ...”

“The evaluation *was* conducted at the end of ...”

Remember: The problem, intervention, and outcome were in the past—write about them in the past tense.

Use the present tense when writing your discussion and similar sections.

“This outcome *is* encouraging because ...”

“We *recommend* that residencies introduce policies that ...”