

BOX 9.1 Reviewing your research paper—checklist

Title page

- Does the title page include the article title, author names (with their addresses), and keywords?
- Does the title conform to the length limit stipulated in the instructions supplied?
- Is the title descriptive of the content of the article?
- Are there any superfluous words in the title that can be removed to improve conciseness and clarity?
- Are the authors' names and initials presented in the correct format requested by the journal?
- Are the keywords strongly associated with the content of the article and therefore suitable for indexing and retrieval purposes?

Abstract

- Does the abstract conform to the length limit stipulated in the instructions supplied?
- Does the abstract conform to the style stipulated in the instructions (i.e. structured abstract or single paragraph)?
- Does the abstract include the four elements: purpose, methodology, results, and conclusions, arranged in this order?
- Is the abstract free from references, illustrations, and unnecessary abbreviations?
- Are there any unnecessary words or sentences in the abstract that can be removed to improve conciseness and clarity?
- Can the abstract be understood without reference to any further information?

Introduction

- Does the Introduction provide an up-to-date account of the background to the problem you are studying?
- Does the Introduction provide a clear statement of the key objectives of the study?
- From the Introduction, is it clear which gap in the literature the study is addressing and why it is important to study it?
- Is the Introduction structured so that it starts by introducing the scope of the paper, moves on to summarize the current understanding of the problem, and ends with the key objectives of the study?

Materials and methods

- Are the subjects under investigation clearly identified?
- Are the experimental procedures described in sufficient detail to allow another

competent scientist to repeat the experiments?

- Are quantitative aspects of the study included (e.g. volumes, quantities, concentrations, incubation times, etc.)?
- Are supplier locations for materials and specialist equipment included?
- Are methods of analysis described in sufficient detail?
- If standard methods have been used, have you supplied a reference?
- If modifications have been made to any standard procedures, have you described the modifications clearly?

Results—figures and tables

- Have you chosen the best way in which to summarize your numerical data (e.g. averages, percentages, ratios)?
- Have you chosen the best format in which to present your numerical data (e.g. tables or graphs)?
- Are all the illustrations necessary to understand your conclusions?
- Are there any illustrations that can be combined to produce a single multipart figure?
- Does each table have a number, title, and explanatory footnotes (as necessary)?
- Does each figure have a number, title, and a descriptive legend?
- Have you included standard deviations or standard errors where required?
- Are all figures and tables appropriately labelled (e.g. each column or axis) with the correct units of measurement where necessary?
- Have you explained any symbols, abbreviations, colour, or shading you may have used?
- Can each illustration be understood without reference to the main text of the article?
- If your figures are related, have you used symbols, shading, and line styles consistently?
- Have you saved the images in the correct format, resolution, colour mode, and size according to any instructions you have been supplied with?
- Will the figure and table information still be legible if it is reduced in size at publication?
- Have you obtained permission for any tables or figures you have reproduced for publication purposes?

Results—text-based descriptions

- Have you checked the accuracy of all the data you are reporting?
- Are all the figures and tables cited in the text?
- Have you described your key findings, trends, and comparisons in the text?

- Are these descriptions clear and concise or do they need further drafting?
- Have you backed up any qualitative statements such as 'markedly increased' with quantitative evidence?
- If you have used the word 'significant' have you backed it up with statistical evidence?

Discussion

- Are all the conclusions made supported by factual evidence?
- Have you considered all possible interpretations of the data?
- Have you compared your results with published literature and attempted to discuss how they support or contradict each other?
- Have you discussed the wider theoretical and/or practical implications of your work?
- Have you made recommendations for further work?
- Have you differentiated clearly between speculation and what is based on factual evidence?
- Is your discussion free from excessive speculation?
- Does the discussion link back to the questions posed in the Introduction?
- Does your discussion identify clearly how your work has added to the body of knowledge in the field you are working in

Acknowledgements

- Have you acknowledged the assistance provided by people and institutions?
- Have you acknowledged all the sources of funding that supported your research?
- Does the acknowledgement format conform to the guidelines provided by the journal?

References

- Are your sources of information authoritative?
- Are your references relevant and up to date?
- Are all the sources you have used appropriately acknowledged in the text?
- Are all the sources cited in the text also listed at the end in the reference list?
- Have you used a consistent style of referencing both in the text and in compiling the reference list?
- Does the format of the references conform to any guidelines provided?

Supplementary material

- Is the supplementary material beneficial to the reader in understanding the study (without it being essential)?
- Is the supplementary material cited in the main text of the article?

- Have you checked the accuracy of this material?

Coherence and organization of your writing

- Have you used appropriate sub-headings to structure the article?
- Does each paragraph cover one topic only?
- Do the paragraphs follow in a logical manner so that the line of reasoning is clear?
- Are appropriate transitions used to link each successive paragraph?
- Are there any unclear or long sentences that can be rewritten to improve clarity?
- If you have used any abbreviations, symbols, or units are they in the correct format and consistent in style?
- Have you defined any abbreviations at first use?
- Have you checked for mistakes in spelling, grammar, and punctuation?
- Have you checked the layout of the document (e.g. font and size, spacing, margin size) to see that it conforms to any guidelines provided?

Submission of your manuscript for editorial assessment and peer review

- Are the text, figures, and tables in the format required by your target journal?
- Are all the appropriate forms and declarations included (conflict of interests, ethical approval information, co-author signatures)?
- Have you included a covering letter to the editor (if necessary)?