

CHECKLIST

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Purpose: To help the reader identify some of the essential elements to be considered when reading a scientific research article.

Description: This tool presents a simplified version of the Score Sheet. Here, the reader can use a list of key considerations for each of the components of a research article as a base structure to guide their reading and analysis process.

How to use this tool?

1. After reading each structural component of the research article (title, abstract, introduction, etc.), pause and mark the "Yes" or "No" boxes to indicate whether it satisfies the listed criteria.
2. Once completed, you can use this tool as a starting point for the preparation of other assignments, such as scientific articles' discussions, presentations, or reports.

| 1. TITLE | YES | NO |
|--|--------------------------|--------------------------|
| Compelling: Captures the reader's attention. | <input type="checkbox"/> | <input type="checkbox"/> |
| Informative: Sufficiently clear, specific, and concise. | <input type="checkbox"/> | <input type="checkbox"/> |
| Accurate: Indicates what the scientific paper is about. | <input type="checkbox"/> | <input type="checkbox"/> |
| Includes abbreviations and unnecessary information. | <input type="checkbox"/> | <input type="checkbox"/> |

| 2. ABSTRACT | YES | NO |
|--|---|--------------------------|
| Persuades the reader to read further and learn more. | <input type="checkbox"/> | <input type="checkbox"/> |
| Presents a clear and brief description of the research outcomes being reported. | <input type="checkbox"/> | <input type="checkbox"/> |
| Understandable by non-specialists. | <input type="checkbox"/> | <input type="checkbox"/> |
| All the information in this section matches that provided throughout the paper. | <input type="checkbox"/> | <input type="checkbox"/> |
| Includes: | Introductory statement. | <input type="checkbox"/> |
| | Justification of the study. | <input type="checkbox"/> |
| | Objective(s). | <input type="checkbox"/> |
| | Hypothesis. | <input type="checkbox"/> |
| | Overall description of the experimental design and methodological approach. | <input type="checkbox"/> |
| | Main findings. | <input type="checkbox"/> |
| | Brief statement about the study's impact and potential implications. | <input type="checkbox"/> |

| 3. INTRODUCTION | YES | NO |
|--|---|--------------------------|
| Briefly situates the reader in context and clearly indicates the problem to be addressed and its importance. | <input type="checkbox"/> | <input type="checkbox"/> |
| Provides: | A rationale: What is the need ? | <input type="checkbox"/> |
| | A rationale: What is the importance of the study? | <input type="checkbox"/> |
| | A rationale: Who will be benefited from it? | <input type="checkbox"/> |
| | Up to date background information related to the objective(s) pursued . | <input type="checkbox"/> |
| | A hypothesis . | <input type="checkbox"/> |
| | Research proposal to fill the gap. | <input type="checkbox"/> |
| | The main goal of the research. | <input type="checkbox"/> |
| Helps the reader to understand: | Gap in knowledge. | <input type="checkbox"/> |
| | Deficiencies/limitations of previous and current approaches. | <input type="checkbox"/> |
| | What is the research question . | <input type="checkbox"/> |
| | What is the (potential) relation between the different variables considered. | <input type="checkbox"/> |

| 4. METHODS | | YES | NO |
|---|---|--------------------------|--------------------------|
| Describes how the study objectives were approached and data obtained and evaluated. | | <input type="checkbox"/> | <input type="checkbox"/> |
| Clearly indicates: | Study design. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Analyzed variables . | <input type="checkbox"/> | <input type="checkbox"/> |
| | All the assays and experiments conducted for obtaining each of the results. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Briefly indicates the purpose of each method and technique used. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Presented in a concise way but with sufficient level of detail to allow reproducibility by others. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Main experimental conditions are clearly described. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Methods and techniques selected are suitable for the type of samples and variables analyzed. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Potential sources of bias were avoided or otherwise indicated. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Controls and reference groups were considered. | <input type="checkbox"/> | <input type="checkbox"/> |
| | A description of their conditions was included. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Indicates sample size . | <input type="checkbox"/> | <input type="checkbox"/> |
| | Includes the source of drugs, reagents, materials, instruments and animal models. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Indicates the statistical methods utilized for data processing. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Statistical analysis was appropriate for the type of sample and experiment developed. | <input type="checkbox"/> | <input type="checkbox"/> |
| If animal testing was conducted, the following must be specified: | Species. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Strain. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Age. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Weight. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Housing conditions. | <input type="checkbox"/> | <input type="checkbox"/> |
| | The ethics committee that approved the methodology was indicated. | <input type="checkbox"/> | <input type="checkbox"/> |

| 5. RESULTS | | YES | NO |
|---|--|--------------------------|--------------------------|
| Are presented in a clear, concise and unbiased fashion, highlighting the key findings and main differences observed between the groups of study. | | <input type="checkbox"/> | <input type="checkbox"/> |
| Follows the same order as in the methods section. | | <input type="checkbox"/> | <input type="checkbox"/> |
| Unexpected results were also described. | | <input type="checkbox"/> | <input type="checkbox"/> |
| Overuse of "Data not shown" legend. | | <input type="checkbox"/> | <input type="checkbox"/> |
| Figures and tables: | Are self-explanatory . | <input type="checkbox"/> | <input type="checkbox"/> |
| | Clearly and properly labeled , including appropriate units. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Concise and with sufficient level of detail . | <input type="checkbox"/> | <input type="checkbox"/> |
| | Easily legible . | <input type="checkbox"/> | <input type="checkbox"/> |
| | Visually engaging . | <input type="checkbox"/> | <input type="checkbox"/> |
| | Figure legends and table headings clearly describe what is being presented. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Include measures of uncertainty (e.g. standard error, confidence interval) and sample size . | <input type="checkbox"/> | <input type="checkbox"/> |
| | Figures and tables present the same information. | <input type="checkbox"/> | <input type="checkbox"/> |

| 6. DISCUSSION | YES | NO |
|---|--------------------------|--------------------------|
| Focuses on whether or not the objectives of the study were achieved . | <input type="checkbox"/> | <input type="checkbox"/> |
| Provides an interpretation and potential explanations for the obtained results. | <input type="checkbox"/> | <input type="checkbox"/> |
| Results were further compared to previously reported studies. | <input type="checkbox"/> | <input type="checkbox"/> |
| Potential explanations to discrepancies and/or similarities with previous reports were provided. | <input type="checkbox"/> | <input type="checkbox"/> |
| Practical implications of the results obtained are mentioned. | <input type="checkbox"/> | <input type="checkbox"/> |
| Importance of the findings was appointed but no overstated. | <input type="checkbox"/> | <input type="checkbox"/> |
| Limitations of the study and methodology were stated. | <input type="checkbox"/> | <input type="checkbox"/> |
| Potential improvements were proposed. | <input type="checkbox"/> | <input type="checkbox"/> |
| Indicates what further research questions have been derived from the study. | <input type="checkbox"/> | <input type="checkbox"/> |

| 7. CONCLUSION | YES | NO |
|---|--------------------------|--------------------------|
| Briefly states the main contributions of the research study. | <input type="checkbox"/> | <input type="checkbox"/> |
| Drawn from the results obtained and discussed in the research study conducted. | <input type="checkbox"/> | <input type="checkbox"/> |
| Indicates relevance and potential future impact in the research field. | <input type="checkbox"/> | <input type="checkbox"/> |
| States implications . | <input type="checkbox"/> | <input type="checkbox"/> |

| 8. REFERENCES | YES | NO |
|--|--------------------------|--------------------------|
| Recent and relevant to the study. | <input type="checkbox"/> | <input type="checkbox"/> |
| Original research papers are preferred sources of reference over review papers. | <input type="checkbox"/> | <input type="checkbox"/> |
| Cited where necessary. | <input type="checkbox"/> | <input type="checkbox"/> |
| Includes research from several different groups rather than a few. | <input type="checkbox"/> | <input type="checkbox"/> |
| All references cited in the article were included in the reference list. | <input type="checkbox"/> | <input type="checkbox"/> |