

Tables and Figures in Research Report

Part - I

Pre - Ph.D. Course Work

I

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Tables and Figures in Research Report

- ▶ **Research is of little use if the results are not effectively communicated. Data visualized in tables and figures are key components of any scientific report**
- ▶ **Tables and figures are important tools for effectively communicating information and data contained in your research paper to the readers. They present complex results in a comprehensible and organized manner.**
- ▶ **Tables and figures play a critical role in enhancing the overall quality and impact of a research manuscript.**
- ▶ **Both graphical displays and tables are useful for presenting information that would be difficult to interpret if described in narrative format, such as large amount of numerical data**
- ▶ **Tables and figures are an integral part of a well-written scientific paper**

Tables

- ▶ **Tables are any graphic that uses a row and column structure to organize information**
- ▶ **Tables are the simplest way to represent data**
- ▶ **Tables are efficient in presenting a large amount of data and may be designed to show comparisons, trends or patterns**
- ▶ **For the readers, a research paper that is dense and text-heavy can be tiresome – conversely, tables not only encapsulate your data lucidly, it also provides a visual relief to the readers**
- ▶ **They add value to the layout of your paper**
- ▶ **Besides, and more importantly, reviewers often glance at your tabled data and illustrations first before delving into the text**
- ▶ **Tables can be the initial draw for a reviewer and deliver a positive impact about your research paper**

General Guidelines to Produce Effective Tables

- ▶ A text box consisting of one row and one column is not a table in APA style
- ▶ Ensure that tables in your research manuscript are self-explanatory, self-supporting and can be understood independent of text
- ▶ Although it is easier to understand information given in the table, but tables usually take more space than words and so should be used only when they communicate more effectively than words
- ▶ A well-designed table includes an informative title, accurate columns and rows, headings, an organized data field, and additional information sufficient for readers to understand the table
- ▶ Do not repeat the content of your tables within the text. Instead, use text to focus on the significant or key points of tables
- ▶ Conventionally, comparisons are made between adjacent columns and rows; interlaced comparisons are difficult and should be avoided
- ▶ Number, words, letters and symbols can be used in data field

Elements of Tables

Table 1

Means and Standard Deviations on the Measure of Self-Direction in Learning as a Function of Age in Adult Students

Age group	n	Inventory score	
		M	SD
20-34	15	65	3.5
35-40	22	88	6.3
50-64	14	79	5.6
65-79	7	56	7.1
80+	-- ^a	--	--

Note. The maximum score is 100.

^a No participants were found for the over 80 group.

Use horizontal lines under the title, headings, and the body, but no vertical lines.

Table Number

Title

Stub

Inventory score

Column Spanner

Headings

Cell

Body

Notes

Elements of Tables

Diagram illustrating the elements of a table structure:

- header column with row headings
- columns
- spanner headings
- border
- rules
- grid (intersecting lines)
- body (grey background fill)
- cell

Table #8. ORs for gender for baseline prevalence and 1-year incidence for treatments to restore sinus rhythm.

Treatment	Baseline						One-year follow up					
	Women		Men		Women vs men		Women		Men		Women vs men	
	N	%	N	%	OR	95% CI	N	%	N	%	OR	95% CI
Pharmacological cardioversion	511	20,2	716	18,6	1,24	(1,08 to 1,41)	132	5,4	180	4,8	1,25	(0,99 to 1,59)
Electrical cardioversion	379	14,9	795	20,6	0,78	(0,68 to 0,90)	144	5,9	329	8,8	0,82	(0,67 to 1,01)
Ablation (pulmonary vein isolation)	84	3,3	243	6,3	0,72	(0,56 to 0,94)	68	2,8	170	4,5	0,88	(0,66 to 1,19)
Surgical therapy for atrial fibrillation	10	0,4	36	0,9	0,45	(0,22 to 0,93)	6	0,2	19	0,5	0,52	(0,20 to 1,31)

footer ORs are age and country adjusted.

APA Table Example

Table 1

Numbers of Boys and Girls by Age Group

Grade	Boys	Girls
4	115	126
5	130	119
6	117	124
Total	362	369

Note. Adapted from *Example Book*, by J. Smith, 2016, p. 115. Copyright 2016 by Scribbr.

Elements of Tables

Number

1. Arabic numerals are used to number tables in the order in which they appear in the text
2. Table number (e.g., – table 1) appears above the table title and body in bold font and flush with the left margin
3. Typically, bold or underscore the word ‘Table’ and the associated number in the caption

Title

1. Table titles appear one double - spaced line between the table numbers. Give each table a brief but descriptive title and capitalize the table title in italic case, flush left
2. The caption is presented in plain text with only the initial letters of the caption and any proper names in the caption capitalized
3. Always concentrate on completeness and correctness as you caption the tables
4. Do not be afraid to use lengthy captions for the table

Headings

1. A table may include a variety of headings depending on the nature and arrangement of data.
2. All tables should include column headings, including a sub-heading (heading for the left most or stub, column)

Body

1. Table body includes all the rows and columns of a table (including the headings row)
2. Table body may be single-spaced, one-and-a-half-spaced or double spaced, considering readability in your line spacing decision

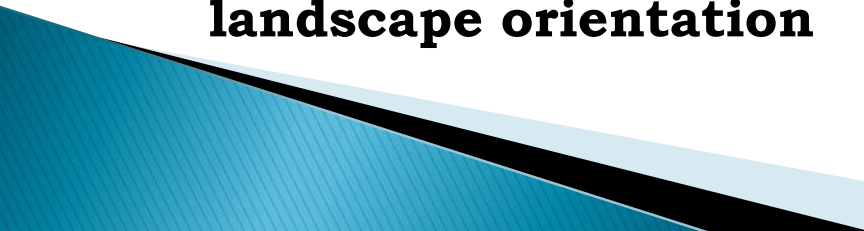
Note

1. Place directly below the table, italicize the word 'Note' with a full stop
2. If you are using data from a source in your table, be sure to *cite* the source after the table.
3. Information regarding abbreviations or symbols used in a table, copyright information and probability must be placed in a note below the table
4. If your table is essentially the same as or based on another author's, but you have re-created or adopted it, is standard to include the words 'Adapted from' followed by the author's name and a citation at the end of the caption
5. Include a copyright statement at the end of the note

Table Borders

- 1. Limit the use of borders or lines in a table to those needed for clarity. In general, use a border at the top and bottom of the table, beneath column headings and above column spanners**
- 2. Do not use vertical borders to separate data**
- 3. Do not use border around every cell in a table**

Long and Wide Tables

- 1. If a table is longer than one page use the tables feature of your word processing program to make the headings row repeat on the second and subsequent pages**
 - 2. If a topic is too wide to fit in on one page, use landscape orientation on the page with the wide table. It does not matter if the page header also moves when switching to landscape orientation**
- 

Placement of Table in a paper

1. There are two options for placement of tables in a paper:

Option 1- Place tables throughout the text, close to the parts of the text that refers to them

Option 2– Place them all together at the end of your text (after the reference list) to avoid breaking up the text

2. An embedded table may take upon entire page of the text

3. If the table is short, text may appear on the same page as the table. In that case, place the table either or the top or bottom of the page rather than in the middle.

4. Add one double spaced line between the table and any text to improve the visual presentation.

5. Double-spaced before and after the table

Font Size

Use the same font in tables as in the rest of your paper

PREPARING TABLES for Research Papers



Finalize the results that are required to be presented in tabular form.



Include the data or results that are relevant to the main aim of the study without being choosy and including only those results that support your hypothesis.



“ ”



Create each table in a lucid manner and style without cluttering it with in-table citations.



Number the tables in a sequence according to their occurrence in the text.

Don't mix tables with figures. Maintain separate numbering systems for tables and figures.



Create tables in a storytelling manner. Remember that your tables communicate a story to the reader that runs parallel to the text.



If you are using or reproducing tables from other published articles, obtain permission from the copyright holder (usually the publisher) or/and acknowledge the source.

Do not repeat the tabular contents in the text again; that will create confusion among readers.



Take extra care while extending the data in your tables. If you have too many tables, consider using them as appendices or supplementary materials.



Use clear and informative text for each table title.

Create tables with sufficient spacing in the layout so that they do not look messy, crowded, or cluttered.



Do not forget to spell out abbreviations used in the tables, ideally in the footnotes.

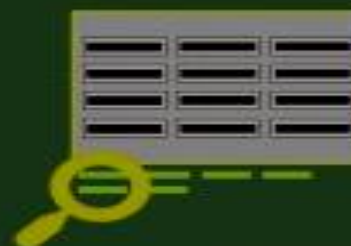


Table Checklist

(Taken from the *Publication Manual of the American Psychological Association*, 7th ed., Section 7.20)

- **Is the table necessary?**
- **Does it belong in the print and electronic versions of the article, or can it go in an online supplemental file?**
- **Are all comparable tables presented consistently?**
- **Are all tables numbered with Arabic numerals in the order they are mentioned in the text? Are the table numbers bold and left-aligned?**
- **Are all tables referred to in the text?**
- **Is the title brief and explanatory? Is it presented in italicized title case and left-aligned?**
- **Does every column have a column heading? Are column headings centered?**
- **Are all abbreviations, special use of italics, parentheses, and dashes and special symbols explained?**

Contd...

- **Are the notes organized according to the convention of general, specific, probability?**
- **Are table borders correctly used (top and bottom of table, beneath column headings, above table spanners)?**
- **Does the table use correct line spacing (double for the table number, title, and notes; single, one and a half, or double for the body)?**
- **Are entries in the left column left-aligned beneath the centered stub heading? Are all other column headings and cell entries centered?**
- **Are confidence intervals reported for all major point estimates?**
- **Are all probability level values correctly identified, and are asterisks attached to the appropriate table entries? Is a probability level assigned the same number of asterisks in all the tables in the same document?**
- **If the table or its data are from another source, is the source properly cited? Is permission necessary to reproduce the table?**



A good rule of thumb is to produce table and text that can both stand alone: the text should be readable without table, and vice versa.

References

- <https://www.editage.com/insights/6-easy-guidelines-for-preparing-tables-and-figures-for-a-research-manuscript>
- <https://web.cortland.edu/hendrick/APA%20Making%20Tables%20and%20Figures.pdf>
- <https://thesis.extension.harvard.edu/humanities-tables-figures-and-other-graphics>
- <https://www.pubmanu.com/preparing-tables-research-papers/>
- <https://heart.bmj.com/content/heartjnl/early/2017/10/31/heartjnl-2017-311581.full.pdf>
- https://www.e-education.psu.edu/styleforstudents/c4_p12.html
- <https://www.scribbr.com/apa-style/tables-and-figures/>

Part – II to be continued...