Guides to:
1) Interpreting Data Results
2) Reading (and Understanding) a Social Science Journal Article
Guide to Interpreting Data Results

Evaluating studies
NADAC's Guide to Interpreting Data Results is intended for individual new to social science research. Using this guide and being informed about how to interpret data results can help you avoid common pitfalls that can lead to drawing incorrect conclusions about data results. This guide is intended to act as a reference to avoid such mistakes. You may also print the guide for future reference.

To analyze and interpret a survey research is a complex and important task that takes into account many different elements of the survey's methodology.

In this guide, data users can learn how to evaluate some critical elements of social science research:
- Questionnaires
- Sampling Methods
- Response Rates
- Sample Sizes
- Versions of the Data

IMPORTANT NOTE: Data users need to be aware that not all social science research meets the ideal conditions for drawing accurate conclusions based on the results. However, even data collected in suboptimal conditions can prove useful for testing hypotheses, publishing initial findings, and for conducting new studies or collecting new waves of existing studies (as long as notes warning readers about the survey conditions are included as appropriate).

Questionnaires
Questionnaires are one of the most common tools that researchers use to gather data from a population of interest. A well-designed questionnaire can be a very useful tool to inform your evaluation and interpretation of the data.

The wording of questions is crucial in ensuring that data collectors obtain the information that is appropriate for their study and data analyses. Researchers should recognize that the wording can impact how respondents answer these questions. Questions must be asked in a language that is appropriate to the audience. They must be clear and simple to avoid ambiguity, double meanings, and jargon.

Questions should be written carefully so that they do not lead respondents to a "right" answer. Such questions can sometimes be easy to identify. For instance, a questionnaire may ask respondents whether they think that "Libraries are a necessary resource for their communities because they host educational programs and provide a wealth of materials that provide education about any topic they are interested in." The question should have simply asked whether respondents think that libraries are a necessary resource for the community.

Order bias pertains to issues that arise from the order of questions in a survey instrument. Order bias can sometimes be subtle. If a question about support for a publicly funded art and music program for children were asked immediately after a question about the important of cultural appreciation, people could respond differently than if they were instead asked about local taxes and the community’s
financial situation. Data producers and data users should try to look out for order biases when evaluating questionnaires and note any possible sources of bias.

**Sampling Methods**
One of the key strengths of sampling is that accurate estimates of a population and its characteristics can be obtained by properly surveying a small proportion of the population. Therefore, sampling methods are another important element to consider before evaluating a study’s results. Studies that randomly select participants from the most diverse and representative populations are more likely to have results that can be used to make inferences about the entire population. The random sampling method is commonly used in social science research.

In some cases, such as when certain smaller groups are being studied, a random sample may not be feasible. Studies that were not based on random samples should not be used to make inferences about any larger population. In any case, before analyzing results from a study, it is important to check and note what sampling method was used.

For examples and descriptions of survey sampling methods, please refer to StatPac’s [Survey Sampling Methods](#) page.

The sampling procedure, if provided, can be found in the Study Description for each study available through NADAC.

**Response Rates**
Many social science researchers document their surveys’ response rates. A response rate is the percentage of individuals or entities who were contacted and chose to both participate in and complete the survey. Whenever applicable, data users should check the response rate in conjunction with the study’s sampling methods.

Those who respond to surveys may differ in important ways from non-respondents; thus, surveys with lower response rates may be less representative than those with higher response rates. This concept is usually called "nonresponse bias."

The lowest acceptable response rate for a study has been heavily debated within the social science community and may never be resolved. Data users should know that studies with low response rates, such as those less than 20%, should be interpreted cautiously. On the other hand, it is still unclear if a response rate closer to 50% would be sufficient for data users to draw inferences within a reasonable margin of error. Nonetheless, knowing the survey’s response rate will influence data users’ confidence in interpreting the survey findings.

If a study’s response rate was explicitly provided in the documentation, it will be listed in the Study Description on the NADAC website.

**Sample Sizes**
Before reporting results from a study, data users must check the survey’s sample size. Studies that were conducted with large samples are more likely to be representative of the populations from which the samples were drawn. Therefore, larger samples are preferable to smaller samples, all else being equal.
A large sample size is not always feasible. For example, a population being studied could be small. If the sample size of a study is small, data users need to understand the limitations and use caution when analyzing the data and the results.

Sample sizes are reported in the Study Description for each study available through NADAC.

**Versions of the Data**

Occasionally, data archived at NADAC may be different from the version of the data used in published report. Before running any analyses, it is important to check the ICPSR Codebook and the Study Description pages for any known discrepancies between the archived data and the version used in prior publications.

After a data collection is deposited with NADAC, a data archivist reviews the documentation and data, builds a study description, enhances and quality-checks the data, approves the data collection for distribution on the ICPSR website, and archives the data for long-term preservation.

For more information, please refer to the details and resources on the Data page of the NADAC website.
How to Read (and Understand) a Social Science Journal Article

What is an academic journal article?
Academic journals are periodicals in which researchers publish their work. They are typically peer-reviewed journals, meaning that the work is reviewed and evaluated by other scholars prior to publication in an effort to ensure that only the best, most rigorously researched articles are published.

Journal articles offer a window into the inner workings of a discipline. They demonstrate how social scientists formulate hypotheses, design empirical studies, analyze the observations they collect, and interpret their results.

Journal articles can appear daunting and often make for dense, dry reading, but they generally follow a standardized format. Once you understand the structure of each article, knowing where to look for important information and understanding the content becomes much easier.

Anatomy of a journal article
A journal article is composed of inter-related parts. Together, they tell a story about a piece of research.

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<thead>
<tr>
<th>Element</th>
<th>What it is</th>
<th>What it tells you</th>
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<tbody>
<tr>
<td>Title</td>
<td>The title presents a concise statement of the theoretical issues investigated.</td>
<td>What is this article about?</td>
</tr>
<tr>
<td>Abstract</td>
<td>One paragraph that appears before the article. It provides a summary of the entire article.</td>
<td>What is this article about? What topic is the author studying? What was her primary finding?</td>
</tr>
<tr>
<td>Introduction</td>
<td>This section introduces the topic of the article and discusses what the article contributes to existing knowledge on the topic.</td>
<td>What is this article about? What does the author plan to do in the paper? Why should we care about this problem/study? What is the author trying to test or show? How does she intend to contribute to the field?</td>
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<tr>
<td>Literature Review</td>
<td>The purpose of a literature review is to discuss previous work on the topic, point out what questions remain, and relate the research presented in the rest of the article to the existing literature. There should also be a clear discussion of the author’s research hypotheses.</td>
<td>What do we already know about this topic and what is left to discover? What are some of the most important past findings on this topic? How have these past studies led the author to do this particular study? What are the research hypotheses?</td>
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<tr>
<td>Methods and data</td>
<td>The methods section provides information about the individuals that the author studied and the way that she conducted her analysis. It includes information about the participants, the procedures, the instruments and the variables that were measured.</td>
<td>What data did the author use and how did she analyze them? Who were the participants in this sample? What makes them unique? Is the sample a good representation of the entire population? If not, how are they different? Is the study qualitative (based on interviews, ethnography, participant observation, or content analysis), quantitative (based on statistical analysis), or multi-method (includes both qualitative and quantitative analysis)?</td>
</tr>
<tr>
<td>Results</td>
<td>The results section explains what the author found.</td>
<td>What did the author find?</td>
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Frederique Laubepin, PhD
Inter-university Consortium for Political and Social Research, 2013
When it comes to reading journal articles, reading linearly (like you would a novel, starting at the beginning and reading word for word until you reach the end) is often not the most efficient approach. Depending on your goal, you may need to cut through peripheral details, ignore sophisticated statistics with which you may not be familiar, and focus on the central ideas.

**How, then, should you read an article?**

1. **Determine your purpose**
   Before you even start reading, take a moment to think about what you need to get out of the article. Is this an assignment for class discussion, an article you want to use in a term paper (if so, how much of it will you need to use), or one about which you need to write a critique/review? Are you interested in the author’s theoretical perspective? Her findings? Her methods? Her data? Are you interested in getting a sense of the research that has been done on a specific topic/issue? Knowing the answer to these questions will determine your reading strategy.

2. **Devise a reading strategy**

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<td>Abstract</td>
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<td>Literature review</td>
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<td>Methods/data</td>
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<td>Results</td>
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<td>Discussion/Conclusion</td>
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<td>References</td>
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<th>Element</th>
<th>What it is</th>
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<tr>
<td>Discussion &amp; conclusion</td>
<td>Articles typically end by discussing in &quot;plain English&quot; what the results mean and how the study contributes to existing knowledge. Here the research questions are answered and it should be clear at this point whether the hypotheses were supported. The conclusion is the final section. It relates the research back to the larger context, and suggests avenues for future research.</td>
<td>What does it all mean and why is it important? What were the authors' overall findings? Why are these findings important? What limitations of the study do the authors identify (if any)? What suggestions for future research do the authors make (if any)?</td>
</tr>
<tr>
<td>References</td>
<td>This section lists all of the articles and other sources cited within the article.</td>
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3. Understand the difference between structural reading and close reading

*Structural reading* is "a form of close reading applied to the overall structure of an extended text (usually a book). We focus on what we can learn about the book from its title, introduction, table of contents" (Paul and Elder 2008). The overview that this approach provides gives perspective. It helps the reader to determine whether she wants to spend time reading the text and how closely she wants to read it. It also guides her reading, like a mental scaffolding.

When reading structurally, ask these questions:
- What does the title tell me about this article?
- What is the main idea in the article? (skim the abstract and introduction)
- What are the parts of the whole? What are the sections of the article?
- In light of my structural reading, what questions would I pursue during close reading?

*Close reading* is exactly as the name suggests. It requires that the reader get up-close and personal with the text. When reading closely, you may want to stop after every paragraph to summarize what is being said, reflect on the arguments being made, and evaluate the quality of the evidence being presented. This requires active engagement (or dialogue) with the text. Take ownership of what you read: mark the text up, jot down questions, comments or observations in the margins, highlight important passages/quotes, and take notes as you go. Interacting with the text in these ways makes it more likely that you will remember the information as well.

4. Don't waste time!

Very few articles in a field are so important that every word needs to be read carefully. It's okay to skim and move on 😊

**Sources:**