

Unlike research papers, which only use information from published materials like books and articles, reports describe the findings of an original empirical study—one that you have carried out either in the field or in a lab.

In addition to following basic APA formatting and using APA style for citations, empirical reports in psychology follow a particular structure.

### Abstract

This is a brief (150-250 word) paragraph that summarizes the four main sections of your report, which are described below. It usually includes

- the purpose of your study and problem under investigation
- the participants and key characteristics
- the main features of the method and procedure used in your study (with a focus on unique/important features)
- the main results
- the significance of the results

Because an abstract summarizes the rest of the report, you may want to write the abstract last, even though it will appear at the beginning of your document.

### Introduction

This is the first section that will appear in the main body of your report. Because it comes at the beginning, you don't have to label this section (i.e. don't use the title "Introduction"), but you should discuss the following:

- describe the problem you're investigating, with a focus on how it affects people and/or society
- explain why the problem is important and needs further research
  - will this research help solve a social problem or treat a psychological disorder? are results from past studies inconclusive or contradictory? are you testing or applying a new theory?
- review previous research that is relevant to your study (see handout on *Writing Literature Reviews in the Social Sciences*)
  - begin by discussing the study that is the broadest or most distant to your study, and end by discussing the study that is closest and most relevant to your own study: that way, your study will seem to logically or inevitably follow from those that came before it
- show how your study is different from or similar to previous studies
  - what unique factors, relationships, or problems are you investigating? what unique methods are you using to explore previously studied problems? what gaps or contradictions in previous studies are you looking into?
- state any hypotheses you had before you carried out the study, and the reasons for these hypotheses
  - are your hypotheses support by previous findings or discussions, or by certain theories?
  - use the past tense when describing hypotheses: e.g. "It was anticipated that ..." "It was expected that ..."
- describe how these hypotheses have affected the design of your study
  - i.e. how does your method allow you to test these hypotheses?

## Method

- this section usually contains the subsections listed below
- in each subsection, include enough detail so that the reader is able to understand and could even replicate the study

### Participants

- who was eligible to take part in this study?
- describe the demographics of participants.
  - typically, this includes age, gender, and number (total number of participants, breakdown by gender). If relevant to your study, you may also want to mention sexual orientation, ethnicity/race, level of education, socioeconomic status, language preference, disability status, etc.
- how were participants selected? out of the number of people you approached, what percentage actually participated?
- were the participants paid to participate in this study?
- what measures did you take to ensure that these human participants were treated ethically and safely during the study?
  - did you seek approval from a research ethics board? did you obtain informed consent from participants? were the results collected anonymously and confidentially?

### Procedure

- where was the experiment carried out? describe the setting, including the physical environment and location, if relevant
- describe what the researchers and participants did, in the order that these events actually occurred
  - it's helpful to describe the events from the participants' point of view
  - in your description, make sure that it is clear what the dependent variables (DVs) and independent variables (IVs) are in your study
- if participants were sorted into different groups, how were they assigned to those groups?
- were participants put in a situation where conditions were manipulated, or were they just observed naturally?
  - if the conditions were manipulated, how and when did you intervene or manipulate the conditions? what instructions, if any, were given to participants? how many sessions of activity or events took place? how long were these sessions?
  - if participants were sorted into different groups, describe what happened to the treatment groups versus the control groups, the different conditions or activities they each participated in, etc.
- what outcomes were you measuring?
  - were you measuring changes or effects between participants, or within the same participant?
- what methods did you use to collect the data? (e.g. questionnaires, interviews, observations)

### Materials or Apparatus [if required]

- describe any tests, questionnaires, written prompts or images, software, or equipment you used

## Results

- describe any instruments you used to measure the data or outcome during analysis
- summarize the data that you collected in a neutral way, without interpreting it—save your interpretation for the next section
- start by discussing the finding that is most important or most relevant to your hypothesis
- first describe your findings using words; then, if required, report the results of any statistical tests (including significance levels) using graphs or tables
- try to use aggregated data instead of sharing individual scores (unless individual results are being used as examples)
- make sure to include any results that contradicted your expectations (i.e. negative results), and any effects that were smaller than anticipated
- is any data missing? if so, why?
  - e.g. did all the participants follow through with the experiment?

## Discussion

- evaluate and interpret the results of your study
- how do the results compare to your original hypothesis/es?
  - if the results do not support your hypotheses, speculate why. Were there any biases or reasons why the validity of the results were compromised? were your measures imprecise? were there other weaknesses or limitations of your study? did your actual implementation of this study differ from your plan?
- can these results be generalized? in other words, are the findings representative of a wider group?
  - in the end, did the participants represent your target population for this study?
  - were there enough participants for you to extrapolate these results?
  - are the findings applicable to circumstances that are different from this study?
- are your results consistent with those of similar studies?
- how do your findings advance or challenge existing theories?
- what is the practical significance of your findings, if applicable? what larger issues might be implicated by your findings? what phenomena do these findings help explain?
- what problems remain, or what new problems have been uncovered in this study? in other words, how will this study direct future research?

## References

Give a list of references that includes all the sources that you referred to directly in your report (just like you would for a research paper). Most of these sources will have been mentioned in the literature review section of your introduction.

## Appendices

- appendices are often list of materials or instruments, detailed descriptions of the demographics of subpopulations in the study, copies of questionnaires or interview questions, etc.
- if you have one appendix, just label it Appendix; if you have more than one appendix, label each one with a capital letter (e.g. Appendix A)
- each appendix will appear on a separate page at the end of your report
- make sure you mention these appendices in the body of your report (e.g. See Appendix A) so that the reader knows to refer to them