



How to Read a Paper

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Overview

- Types of Studies
- Highlights of Types of Literature
- Statistics for Reading
- Tips on quickly reading for a paper or class



Top 10 Mistakes in Reading and Using Papers

10. I'm sure the rest of the article is sound, I'll just read the conclusion.
9. I won't check the sample size, it's probably OK.
8. I know the article is 20 years old, but there probably haven't been any changes since then.
7. I don't need to remember the authors names. It will never come up.
6. The author probably summarized their original source material correctly, so I won't read it.



Top 10 Mistakes in Reading and Using Papers

5. I'll just assume when they say subjects that they included my target population.
4. I'll just read the abstracts for my paper. They are way shorter.
3. This author sure has published a lot. I'll just use her stuff for my paper.
2. I'm not so sure about this article, but it supports my conclusion so I'll use it anyway.
1. It's in a journal so it must be true.

Types of Studies

■ Primary

- Laboratory experiments
- Animal experiments
- Clinical trials
- Cross Sectional Surveys
- Cohort Study
- Case Control Study

■ Secondary

- Reviews
- Systematic Reviews
- Meta-analysis
- Clinical Practice Guidelines/Decision Analyses

Primary Studies

- Laboratory/Animal experiments
 - Effect of intervention on whole organisms
 - Precede human experiments.
- Trials
 - Phase I – small number of healthy volunteers
 - Phase II – small number of selected patients w/o control
 - Phase III – Large, long term trial. Randomized control, double or single blind.
 - Phase IV – Post marketing trails on large number of patients

Primary Studies (con't)

■ Cross Sectional Surveys

- Examine study characteristic and outcome at the same time

■ Cohort Study

- Two or more groups selected on bases of differing exposure
- Groups are followed for a long time

■ Case Control Study

- Patients are matched with individuals from the general populations

Secondary Study

- Reviews (non-systematic)
 - Summaries by experts
- Systematic reviews
 - Find all relevant studies
 - Synthesize findings
- Meta – analysis
 - Statistical technique unifying many different studies
- Clinical Practice Guidelines/Decision analyses
 - Evidence based serial statements to assist in program or policy development



Review Article

- Systematic look at a selection of articles
- Excellent starting place for lit reviews
- Same articles can result in different analysis
- <http://www.cochrane.org/>



Meta-analysis

- Statistical technique
- Effectiveness of interventions by combining data from two or more trials
- Estimate of treatment effect using a large sample size



Quantitative studies

- Based on numerical data
- Large sample sizes
- Reproducible
- Statistical analysis techniques
- Useful for justifying need and explaining the makeup of an issue or population



Qualitative studies

- Fill out and explain quantitative data
- Small sample sizes
- Analysis more subjective
- Useful for explaining the background and root causes of an issue



Opinion Policy statements

- Organizations release agreed upon opinions
- Useful for discussing opinions/perceived need in the field



Statistics for reading

- Population v sample
- P-value
- Odds Ratio
- Relative Risk
- Confidence interval

Why am I reading this?

- For class
- In preparation for a paper
- To add to my knowledge

In real life, you will read papers for a few more things. The next seminar “How to Effectively Utilize Scientific Writing” will cover these



How to read an article

The abstract

- Why they did it
- How they did it
- What they found
- What it means



What's the hardest thing about reading a paper?

- What is the point of this article?
- Why did my professor have me read this?
- Can I use this for a paper?
- Is this a valid source?



Tips and tricks

- Read the abstract then the last few paragraphs
- Write all over your article
- Write the key word for the article at the top and highlight them
- Keep a post-it note of terms you don't know
- Organization: EndNote or RefWorks



Questions?