Introduction to Scientific Writing: Writing results sections

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Preamble

- Personally, I find the results section the easiest of all sections to write
- Why? It is the most 'recipe-driven' section
- Although the nature of the results section will be somewhat driven by the type of study (RCT, Cross-section, cohort Case-control etc), but even these different types of studies follow the same (general) recipe

Conventions

Conventions:

Note:.....

Things to note given in a green box

Pitfalls:.....

Common mistakes and things to watch out for given in a red box

What we cover today (this session)

1. Introduction
2. Describing the sample
3. Main inferential analysis
4. Subsiduary analyses

Role of the results section

Like all sections of a scientific paper, if we remember the **ROLE** of the results, it is much easier to write. So what is the role of the results section:

Simple: To convey what WE found

If you remember this simple fact, it is much easier to write them

Structure of a (typical) results section

Typically, there are three main parts of the results section:

1. Description of the sample (which may or may not compare groups)
2. Main inferential analysis
3. Subsiduary analyses

I will go through these subsections one at a time

Providing a description of the sample

- As the name suggests this analysis is **despriptive**
- In this respect it is **NOT INFERENTIAL**
- What do I mean by that? The focus is on the sample characteristics, NOT the population from which the sample was drawn
- This section can have two main purposes:
  1. To convince the reader that our sample is indeed representative of the population
  2. To provide evidence for the balance (or lack of balance) between groups considered in the study (especially in RCTs or studies involving a study effect)

Pitfall: As the name suggests: descriptive

A common mistake authors make is to FORMALLY compare groups using statistical tests. This should NOT be done.

Main inferential analysis

- This is the section from where you will provide the main statements (key findings) in your paper
- Typically (in an observational study), it will include both a bivariate, and a multivariable analysis
- So we should expect table(s) of crude and adjusted measures of associations (e.g. OR, RR etc) in this section, along with the statements pertaining to the analysis.

Subsiduary analyses

Often there is a reason we may have to look into our data a little more deeply. Examples include:

- Effect modification: A significant interaction suggests evidence of effect modification. That is, our association of interest is not constant across groups, so we perform a subgroup analysis (i.e. run the models for different strata of our sample)
- We are worried about biases introduced by missing values in our data, so we replicate our analysis on imputed dataset(s)
- We may have secondary outcomes and we want to provide analyses of these

Hints for writing results sections

- Put the headings for the three sections I outline, and remove them just before the end (helps flow)
- Again, bullet points first
- Matter-of-fact language. Don't be flowery in any way. A plain and clear statement of the results is all that is needed
- Make sure tables and figures are STAND ALONE (Shouldn't need to refer to the text to understand them)
- Don't include a table or figure not mentioned in the text
- Unless it is vital, try not to link the different analyses together
- It is about OUR results only, NEVER mention the results of any other study here
- FOLLOW the instruction to authors EXACTLY

Any questions??????

Thank-you!!!!!!

QUESTIONS???