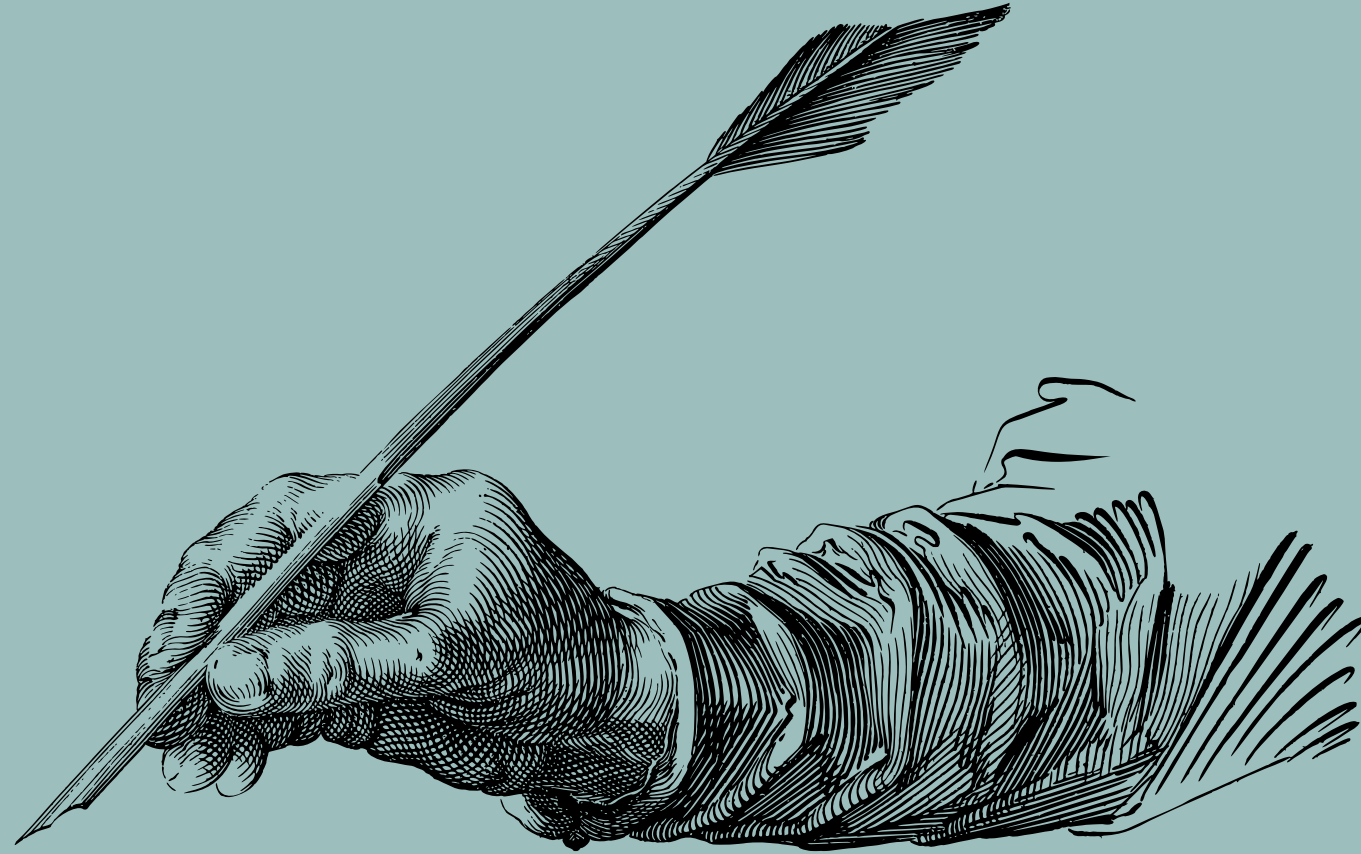




WRITING WORKSHOP: LET'S WRITE A MANUSCRIPT! — PART 1

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Marta Bornstein, Ph.D.

Rachel Davis, Ph.D.

Courtney Monroe, Ph.D.

TODAY'S PRESENTATION

Goal: To provide advice about and share strategies for writing scientific manuscripts.

We will touch on the following topics in today's session:

- What is a manuscript?
- Finding a manuscript idea
- Authorship
- Journal selection
- General scientific writing tips
- Norms to consider for different social science disciplines
- Your questions!



DISCLAIMER

We will share our personal opinions and experiences.

For many of these topics, there are no set ways of doing things that everyone agrees upon.

We all have different expectations based on our training and experiences.

We encourage you to seek out other people's opinions and suggestions.



A MANUSCRIPT IS A STORY

At its core, a manuscript is a story.

Thinking of it as a story will hopefully help you to:

- Right-size the stress and amount of work needed
- Select a theme based on your research questions
- Gauge how long or short the story will be
- Identify the primary elements to include/exclude
- Think about your audience
- Choose an appropriate journal
- Focus on the chosen theme throughout the manuscript
- Ensure that the reader walks away with the key points



MANUSCRIPT VS. DISSERTATION/GRANT PROPOSAL



Focus on the most interesting story.

You are not obligated to structure the manuscript in the same way that you set up the original idea or dissertation or grant proposal, etc.

Focus the manuscript story on what the most exciting findings were.

6 TYPES OF MANUSCRIPTS

Commentary or editorial:

- Shorter; usually written by experienced scientists who are leaders in the field; authors are often invited

Research brief or research note:

- Shorter; typically presents findings from a single, small experiment; not all journals publish these

White paper:

- Longer; typically describes conceptual thinking, theory development, and/or research experiences; may include limited data (e.g., anecdotal data) but does not focus on data analysis; harder to publish

Literature review:

- Longer; can be unstructured or highly structured (e.g., SCOPUS reviews have a specific methodology)

Empirical/original research:

- Longer; most common format for peer-reviewed journals; focuses on presenting findings from analyses of qualitative or quantitative data; data may be drawn from primary or secondary sources

Meta-analysis:

- Longer; sub-type of empirical; uses specific types of analyses to draw conclusions from findings across multiple studies

FINDING A STORY IDEA

As you read papers that interest you:

- Write down questions that come to mind
- Pay attention to the discussion section (e.g., “additional research is needed on ...”)

Ask your professors if they:

- Have manuscripts in mind or in progress that you can help with
- Have data that you can use to write a manuscript together

Look for available sources of data:

- Data you already have or could collect yourself
- Data provided through archives, such as [The Inter-University Consortium for Political and Social Research \(ICPSR\)](#), of which USC is a member
- Publicly available data sets (e.g., government-funded surveys)

A FEW WARNINGS ABOUT FINDING A STORY IDEA

Make sure that the data provide sufficient information for you to tell a good story (e.g., the key variables are present, the right kinds of participants were represented in the data set, interesting themes emerged, etc.).

The note above is especially true if you are using secondary data that were collected for a different purpose, as the limitations are sometimes too great to overcome to write a publishable manuscript (i.e., that reviewers will accept).

If you are early in your career, make sure that you are interested enough in the topic for it to have a starring role on your CV (e.g., pet therapy).



START WITH YOUR RESULTS

How do you know if you have a good story to tell?

1. Start thinking about your manuscript by drafting:

- Quantitative: The shell tables and/or figures to display your results, but do not write the results text
- Qualitative: The results text, including any accompanying tables or figures
- Note: Most journals limit the number of tables/figures you can include (often @ 5 total)

2. Look to see if you have enough interesting results to warrant a manuscript:

- Will the results be interesting and useful to other people who are not part of your study team?
- Do the results improve general knowledge or understanding about the topic?

3. If you have too many interesting results to adequately describe in one manuscript:

- Consider whether the results can be grouped into more than one distinct story
- If you have more than one distinct story, think about sharing the results in separate manuscripts

START WITH YOUR RESULTS

4. Share your draft (tables and figures/result text) with co-authors:
 - Ask for input on the quality of the story (e.g., is it too much? Is the focus on the right outcome?)
 - Solicit feedback on the presentation of the results (e.g., is the presentation clear?)
5. If you have a good story, proceed to write the rest of the manuscript.

Note: The steps recommended above assume that you are familiar with your topic. For quantitative work, draft the introduction and methods sections before you do the data analyses if you don't know much about your topic. This will help you to learn about the extant literature, shape the hypotheses/questions you pursue, and make decisions about how you conduct the analyses.

AVOID SALAMI PUBLISHING!

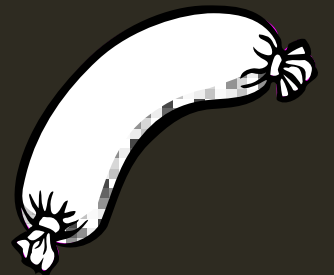
“**Salami publishing**” (AKA “salami slicing”) is an unethical practice in which authors try to “slice” results from a single study into the smallest publishable units that they can, but there is overlap in the hypotheses/research questions, methods, and results.

It does not matter if the writing is different.

Thus, some or all of the same research findings are presented more than once, often without referencing the other published paper(s).

This is an ethical transgression because: (1) it is done solely to benefit the authors; and (2) it can skew scientific understanding if some studies are overrepresented.

Duplicate publications are similarly considered unethical.



AUTHORSHIP RULES

* Highly variable across disciplines!

The first author is generally the person who wrote the manuscript.

If the first author is a mentee (e.g., student, postdoctoral fellow), the mentor is generally listed as the second author or the last/senior author.

Other authors are listed in the order of the extent of their contributions to the manuscript.

Requests for assistance with manuscript development should be commensurate with each person's anticipated authorship order.

Journals are increasingly asking authors to describe the role each author had in developing a manuscript to justify authorship.

Advancing Health Equity in Community-Based Climate Action: From Concept to Practice

Brian L. Cole, DrPH, Irish Del Rosario, MPH, Astrid Hendricks, PhD, and David P. Eisenman, MD, MSHS

AUTHORSHIP RULES, CONT'D

In some social science fields, scientists are encouraged to publish as much as possible as a single author or with no more than one co-author.

In health promotion, it is common to include:

- Multiple authors
- The Principal Investigator for the original study during which the data were collected as a senior author (e.g., last author), even if they have a minor role in developing the manuscript
- All Co-Investigators for the original study during which the data were collected as co-authors for main outcome manuscripts (e.g., findings that address specific aims) but to exclude them as authors for secondary outcome manuscripts if their involvement is limited
- Anyone who had a sufficiently large role in data collection or study design as a co-author, even if they have a minor role in developing the manuscript (this does not apply to paid data collectors, such as professional interviewers or survey companies)
- Collaborators from data collection sites and/or community partners as co-authors

NEGOTIATING AUTHORSHIP



Have direct, clear communication about authorship.

Decide who will be the first author before starting the work.

Ask your mentor who needs to be included as a co-author.

Decide the final order of other co-authors at the end of manuscript development, after you know the levels of their contributions.

CHOOSING A JOURNAL

Identify a journal or set of target journals as early in the writing process as possible.

Different journals:

- Have different word limits
- Include different things in the word limits (e.g., tables, references)
- Include/exclude different types of content
- Publish different manuscript formats
- Have different expectations for writing style and content, e.g.:
 - Including an in-depth theoretical background
 - Stating hypotheses (vs. leaving them implied)
 - Expecting brief introductions with a standard number of paragraphs
 - Requiring bullets listing implications for health promotion practice



CHOOSING A JOURNAL, CONT'D

Look at the journals included in the references you cite.

Ask your co-authors for suggestions.

If you have a draft of the abstract, you can use a journal finder (most publishers have their own versions).

Once you have some ideas, look at potential journals' websites to:

- Make sure the journal is peer-reviewed
- Look up the journal's impact factor (it may be easier to find this on other sites)
- Read about the journal's aims and scope to assess content fit
- Look at a sample of published papers to assess content fit and writing style
- Review the guidelines for authors
- Find out if the journal requires you to share your data and/or your software code (e.g., SAS code)
- Know what, if any, fees will be charged to authors



TIPS FOR SCIENTIFIC WRITING

Tips based on common
challenges and mistakes

USE A SYNTHESIZED WRITING STYLE

When you are summarizing findings from previous literature (usually in the introduction and discussion), use a synthesized writing style.*

Synthesized writing = You (the author) summarize findings from other studies and convey to the reader what the implications of those findings are for the current work.

Do not describe a series of studies in separate sentences and paragraphs, as this approach asks the reader to do the work of synthesizing, which they likely won't do, since this is your job as the writer.

* Writing a description of each study may help you earlier in the writing process, before you are ready to synthesize across studies.

EXAMPLE OF NON-SYNTHESIZED TEXT

Smith (2017) conducted a study of 216 Aboriginal children in Australia in which the children were tracked from aged 3 through 45. During that time, he found that children who were overweight at age three were more likely to be overweight at age 45 than children who were at a healthy weight at age three. In another study, researchers looked at medical records from 1,100 children in New York City (Puffwaffen & Stiles, 2010). They tracked variables such as height, weight, age, and cognitive function. Then, they looked later to see if weight at age three predicted adult weight. They found ... Similarly, Arabella and DesLimoges (2001) found ... Etc.

EXAMPLE OF SYNTHESIZED TEXT

Childhood obesity tracks through adulthood (Smith, 2017; Puffwaffen & Stiles, 2010) and is associated with increased risk of cancer incidence (Jones, Oswego, & Ruiz, 2008) and mortality (Arabella & DesLimoges, 2001; Ravenside et al., 2005). Many behaviors associated with pediatric obesity develop in early childhood (Tarken et al., 2011; Orkin & Nolls, 2003); thus, interventions for preschool-aged children may be optimal to prevent obesity and reduce long-term disease risk.

BUILD PARAGRAPH SANDWICHES

Paragraph sandwiches make it easier for the reader follow your main arguments.

Structure each paragraph in your introduction and discussion in this order:

- Main point (e.g., “Research is needed to identify how to effectively teach students about writing”)
- Evidence, evidence, evidence (e.g., make arguments to support your main point with supporting evidence by citing existing studies in the literature)
- Summarize what the evidence indicates re: your study in a concluding main point



AVOID ABBREVIATIONS

It's okay to have a few abbreviations, especially for terms that you use frequently in the manuscript and/or abbreviations that are well known in the field (e.g., “BMI”).

But, when possible, avoid other abbreviations so your readers can focus on the content without having to look them up.

CITING AND REFERENCING

Use peer-reviewed sources.

Read any original sources you plan to cite.

Use appropriate citing, referencing, and paraphrasing techniques to avoid plagiarism.

When in doubt, cite.

You CAN self-plagiarize: Published works are copyrighted by the publishers.

It is perfectly appropriate to cite your own work! (Not gratuitously, of course)

If you refer to other studies or other researchers, cite examples to support your claim (e.g., “Many researchers have proposed that ... [need citations of those researchers]”).

Put the citations exactly where they belong – especially in a list:

- Ex: “Writing can make people happy (cite studies that show evidence of this part of the sentence), but only when they enjoy the topic (cite studies that show evidence of this part of the sentence) and feel that they have adequate time to get it done (cite studies that show evidence of this part of the sentence)”

When saying something controversial, include citations to support your statements.

MANUSCRIPT TITLE AND ABSTRACT

Manuscript title:

- Choose a manuscript title that accurately reflects what the story focus will be.

Abstract:

- Write an abstract that will entice readers to want to know more – make it interesting!
- Some journals require structured abstracts with set headings and other parameters, while other journals accept unstructured abstracts.
- Keep the background and methods sections specific and brief.
- Include a line at the end of the conclusion that states the most interesting, important takeaway message(s) from your manuscript (do not just say “more research is needed”, as that is almost always true!).

INTRODUCTION

Pose a strong rationale for why your study needed to be done – saying that no research has been done on your topic is important but is not a sufficient rationale for doing a study.

Pay attention to whether the journal expects a particular format or content (e.g., stating hypotheses, providing a theoretical model).

If there is insufficient theory or literature about the topic to propose directional hypotheses, describe your study as exploratory.

Don't mention every relevant study that exists – just enough to support your arguments.

Be explicit in showing your thinking about how constructs may be related (e.g., don't just say “xx is related to yy” without describing how this might happen conceptually).

Don't use language that comes across as biased (e.g., “the goal of this paper is to prove that xx is related to yy”).

Clearly state the goals of the study described in the manuscript at the end of the introduction.

METHODS

Be clear and specific about the methods used. Remember that for many public health disciplines, an MPH is the most prevalent degree.

Provide all of the key information. Don't just tell readers to look at another paper/source for a description of the methods.

Pay attention to how your target journal expects the methods section to be structured (e.g., in some fields, sample characteristics are described in the participants section, while in other fields sample characteristics are presented in the results section).

When describing the measures, start with your primary outcomes (dependent variables), followed by the independent variables, and, lastly, control variables (typically sociodemographics).

Report indicators of internal consistency reliability for scales (e.g., alphas).

Some journals allow use of first-person language (e.g., "we did ..."), while others do not.

RESULTS

Simply and clearly describe what you found – any commentary about the findings should be saved for the discussion, not here.

Don't duplicate your findings in the text and in the tables/figures.

Use variable names that are easily interpretable to readers (e.g., say “intrinsic motivation” instead of something like “IM” or “IntMot6”).

Whenever possible, refer to your variables using the same names or phrases. This should be consistent across the methods, results, discussion, and tables and figures.

DISCUSSION

Do not overstate your findings. For example, it is highly unlikely that your findings will be generalizable to all other populations, contexts, and settings.

Do not present findings that were not described in the results section.

Contextualize your findings within the pre-existing literature (e.g., are your findings similar or different from what other studies have observed?).

Describe potential study limitations so readers can consider your findings with those potential caveats in mind.

HAVE A CONSISTENT STORY FLOW

The story you are telling should logically flow from section to section:

- Introduction → Methods → Results → Discussion

Use the same order of ideas within each section:

- Ex: If you have 2 main outcomes, A and B, discuss Outcome A first and Outcome B second within every section of the manuscript.

Make sure the results and discussion answer the hypotheses/questions you posed in your introduction.

Everything in the manuscript should contribute to the story.

If something is not pertinent to the story, leave it out!



FIND WHAT WORKS FOR YOU

Every person is unique - find what works for you.

Examples of strategies that work for some people:

- Writing simultaneously with a writing partner, virtually or in person
- Writing alone
- Creating an outline before starting to write (most people find this helpful)
- Free writing (e.g., writing down your stream of consciousness with your thinking about your topic without worrying about writing or grammar, to expand your thinking before attempting to write polished text)
- Working with the USC Writing Center

Don't force yourself to use strategies that aren't working for you (even from a well-meaning mentor!).





QUESTIONS?

LET'S WRITE A MANUSCRIPT! — PART 2

March 14, 2024

12:00-1:00 pm

Discovery 331 and Zoom

All ASPH graduate students are welcome!

