

Anatomy of a Paper (Nir Menachemi)

1. Intro- 3 (rarely 4) paragraphs
 - a. Para 1- general overview of the situation of interest; broad
 - i. Understand something about each concept
 - ii. Provide definitions if necessary
 - iii. What is the 'epidemiology' of the topic (what are the trends, incidence, prevalence, etc)
 - iv. Nothing in this paragraph should be controversial
 - v. Everything should be factually correct
 - b. Para 2- What is the specific literature gap (what do we know and not know) (this part might be two paragraphs if the knowledge on the topic is robust and nuanced)
 - i. Review the literature about what we know about the relationship between x and y
 - ii. Walk through the literature and cite each statement
 - iii. The last sentence should end with what we don't know
 - c. Para 3- How will this study help; specific
 - i. What does your specific paper do "The purpose of this paper is to..."
 - ii. How does your paper do this "by looking at x data and analyzing y outcomes"
 - iii. 1-2 sentences describing who will benefit from these results and why (policy makers, clinicians, administrators, etc) "Of study will be of interest to x and y, especially in x populations, etc" because 'x, y, z'
 - iv. The primary focus on this is your paper, so there might not be citations in the third paragraph
2. Background
 - a. Unspecified number of paragraphs
 - b. Write what the readers need to know
 - c. Think of this as educating the readers about your topic and concepts/conceptual framework or the 'mechanism of action'
3. Methods (one of the simplest sections to write)
 - a. Overview statement about study design and type of data used (e.g. primary, secondary, qualitative)
 - b. Describe population, provide justification for population selected
 - c. Details about dataset's methods
 - i. Primary- inclusion/exclusion, why, incentives
 - ii. Secondary- who and how data were collected, where does it come from, citations for more info about the data
 - d. Was IRB approval obtained (shift to more specific focus) "IRB approval obtained from the institution of the first author" OR "deemed not human subjects because it is this category)
 - e. Describe each variable
 - i. Main dependent variable is x measured by... (continuous, Likert, binary)
 - ii. Main independent variable is y measured by ...
 - iii. Were measures manipulated for analysis (transformed, conflated, etc)
 - f. Explicate statistical approach-
 - i. Data scanned for anomalies with descriptive statistics
 1. reassure the reader that the data is plausible
 - ii. Describe bivariate analyses (t tests, Chi squares, etc)
 - iii. Describe any multivariate analyses (model specification, controlled for x, y, z)
4. Results
 - a. Para 1- describe sample and refer to Table 1 (demographic or organizational characteristics); these characteristics should be described in the same unit of analysis (organization, people, observations, person-years, etc). Highlight big picture of sample "512 people were included, majority were white (78.2%...."
 - b. Para 2-x- describe bivariate relationships between variables: t test, ANOVA, correlation coefficients
 - c. Para x-x- describe multivariate relationships related to purpose of paper
 - d. Para z- describe multivariate relationships not closely related to purpose of paper (e.g. control variable was significantly related to outcome variable). If you add this paragraph, be sure to address in the discussion section
5. Discussion

- a. Summarize the intro (all 3 paragraphs) and purpose of study (optional)
- b. What are the main findings (what do they mean, and how do they tie into existing literature) "The main finding of the paper is..." - directly address the purpose statement, "this echos the results of other studies..."
"this is in contrast to the results of other studies..."
 - i. Seminal literature in the intro, may include seminal or smaller/more nuanced literature in the discussion
- c. What are the secondary findings
- d. Limitations (strengths optional)- list them frankly, in the order of importance (most important first)
- e. Areas for future research (optional)
- f. Conclusion or implications for managers/clinicians/policy makers/etc (how does someone act upon this new knowledge)

- A discipline perishes if there is not new knowledge (the discipline becomes a trade that applies the knowledge of other disciplines)
- "Art" of writing= eloquent, poetic, good 'crafter of text' -- this enhances your writing, but it's not necessary to publish
- "Science" of writing= how you structure your publication, the anatomy -- this part is necessary
- You should have half-way decent ideas correctly structured to add to the understanding of a topic
- The article should be published in the Least Publishable Unit (LPU) or the least information that can stand alone
- I(cf)MRD- Intro, (concept framework/background), Methods, Results, Discussion
 - Conceptual framework/background section might have a different title; it will be included if the paper is making a contribution to conceptualization (theory or how to see the world)
- INTRODUCTION
 - This is the hardest part, and the anatomy matters the most in the intro section
 - Sets the stage and requires the most thinking
 - Write an introduction after you have analyzed the data -- have a feel for the results
 - **Purpose** of the introduction:
 - Must motivate the reader to read the paper (you don't 'hook' the reader, get to the point; you are getting the motivated reader to read your paper; you also want people un-interested in your paper to stop reading your paper early on)
 - Assist editors and reviewers to assess the importance of the paper (what is the gap)
 - Explain why the work was done and why the reader should care
 - Easy enough for a novice to understand and well-informed enough to convince an expert you are well-versed
 - Novice: educated person that knows nothing about your topic
 - Easy way to alienate a novice = "jargon monoxide"
 - Avoid jargon
 - Experts: use references that demonstrate you are aware of current literature
 - Cite strong references
 - Synthesize what is known in the literature
- BACKGROUND/CONCEPTUAL FRAMEWORK/THEORY (requires time, but shouldn't be difficult to write)
 - Not all papers have this section, clinical papers do not have this information
 - Public Health, Healthcare Management, Nursing Administration may or may not have this section (HCMR does have Background, JHM does not)
 - **Purpose** of the Background:
 - Provide the reader with a rich understanding of the phenomenon being studied
 - Introduce theory
 - Describe tenets from multiple relevant theories
 - Otherwise, build arguments from a review of relevant literature (perhaps with hypotheses generation)
 - This shouldn't be controversial, just tell the reader what they need to know to understand the rest of the paper, think about the mechanism of action, what is the relationship between x and y, what are the assumptions
 - Think about the background section as teaching
 - Before you conduct the research, what do you expect to happen and why
 - If qualitative question was guided by theory, describe the theory; otherwise, might not need background section
- METHODS
 - **Purpose:** Must give a clear overview of what was done
 - In basic science, need enough information that someone can replicate the study
 - In HPM, enough information that they can evaluate the internal and external validity
 - Tension between brevity and completeness

- Should give readers info regarding generalizability (e.g. sample selection)
 - Include info on design, population studied, data source and variables described/measured, data analysis
- RESULTS
 - If the result doesn't align with your purpose, it doesn't belong in the paper. (If it should be included, re-write your purpose)
 - Don't editorialize (i.e. don't use "surprisingly", "as we expected", etc)
- DISCUSSION
 - Tie your findings back into the existing literature (especially 2nd paragraph of introduction)
 - Describe strengths and limitations
 - Discuss implications of your findings