

# IHP 525 Final Project Part I Guidelines and Rubric

## Overview

The final project for this course is divided into two parts. Part I is the creation of an **article review**.

Regardless of their field of interest, health professionals across disciplines need to be able to analyze and use biostatistical data to address health concerns among the populations they serve. They need to be able to identify trends, draw conclusions, and make recommendations for improving health outcomes based on solid evidence. It is also important that they are able to communicate that information effectively to those directly or indirectly impacted. They also need to understand what others are doing in their field, the strengths and limitations of that work, and how it affects their own organization, even if they do not intend to become statisticians.

The two summative assessments for this course lay the foundation for these critical skills—first, by asking you to evaluate the strengths and limitations of existing biostatistical articles and to identify the selection process of appropriate methodologies in different contexts (Part I). You will present your analysis through a written executive summary geared toward an audience of fellow health professionals. Then, in Part II, you will calculate descriptive and inferential statistics of a small data set. You will explain the basic parameters of the data, graph it, and run simple hypothesis tests. You will present your analysis in a statistical report geared toward a non-technical audience, draw conclusions, and make recommendations for further research.

In Part I, you will review and analyze published research that you might encounter as a health professional. You will select two journal articles from the provided list on a topic of interest. You will create an article review that identifies the articles and their relevance to your field; summarizes the articles, including their findings; compares and contrasts the statistical methods used in the articles; explains why the methods used were appropriate; discusses their limitations; and concludes with recommendations for future work.

Part I is divided into **three journals**, which will be submitted at various points throughout the course to scaffold learning and ensure quality final submissions. These article journals will be submitted in **Modules Two, Five, and Six**. The completed article review will be submitted in **Module Eight**.

In this assignment, you will demonstrate your mastery of the following course outcomes:

- Analyze the role of biostatistics for its impact on professional decision making in the public health, nursing, or health science fields
- Interpret key biostatistical metrics, methods, and data for addressing population-based health problems
- Evaluate the quality and limitations of published public health, nursing, and health science research by comparing and contrasting biostatistical methods and analysis used to support a variety of health initiatives
- Communicate biostatistical results, procedures, and analysis to other health professionals and the general public for informing their decisions related to population-based health problems

## Prompt

Imagine you are a biostatistician working at a local health organization. Part of your job is to analyze trends and draw conclusions about health issues that affect your organization. Your supervisor has asked you to do a quick literature search for published research on an upcoming topic as preparation for a new project. The goal is to understand the current biostatistical methods and guidelines being used on similar studies so that you could eventually use that to inform the design of the new study.

Your job is to find a minimum of two research articles on your topic from the Final Project Part I Articles List document, examine the broad health question(s) addressed in each, and critically assess the statistical methods used to analyze the data and arrive at the articles' conclusions. You will present the results of this analysis to your supervisor and peers in an article review.

Specifically, your article review must address the following critical elements:

- I. **Background:** Use this section to provide a brief context for the health problem, issue, or trend you are researching. Specifically, you should answer:
  - A. What **topic** or health question did you research and why is it relevant to public health, nursing, or the health science professions? Give real-world examples to support your answer.
  - B. How can **biostatistics** help inform decision making around your topic? Support your answer with specific examples.
- II. **Article Selection:** In this section, discuss how and why you selected your main article and the related article. Be sure to:
  - A. Explain why you selected these **specific articles** to examine over others in your field that use biostatistical methods and data. Justify your answer.
  - B. Assess each article's importance to health **decision making** in your field. Give real-world examples to illustrate your answer.
- III. **Findings:** This section should highlight the major findings of each of the articles you selected for your supervisor and peers. Specifically:
  - A. What are the findings of each article and what **implications** do they have individually and collectively for solving the health problem in question? Support your answer with specific examples from your field.
  - B. Explain how key **biostatistical calculations** and methods support the conclusions in each article. Cite relevant information from the articles that support your answer.
- IV. **Methods:** Use this section to compare and contrast the methods used in the articles you selected with an eye to assessing the quality and limitations of the findings and informing future research. Specifically, you should:
  - A. Explain **why** the authors of each article selected the methods they did. How appropriate were the methods to the overall purpose of the paper? Justify your response.
  - B. Analyze a **difference and similarity** in the methods chosen with respect to the health question being addressed in the selected articles. Explain your answer using evidence from the articles selected and information you have learned in the course.
  - C. Assess a **strength and limitation** of the different approaches used in the articles you selected. Explain your answer using evidence from the articles you selected and information you have learned in the course.

- V. **Conclusions:** What does your evaluation of the strengths and weaknesses of the articles you selected suggest for future research in this field? Be sure to provide specific suggestions for potential next steps, based on evidence from your analysis, and explain how these suggestions would help improve decision making.

## **Journals**

The journal activities in this course act as milestones that will help you prepare for your Final Project Part I submission.

Module Two Journal: Article Selection

In **Module Two**, you will submit a paragraph to select and explain your articles and health question. **This assignment will be graded using the Journal Rubric.**

Module Five Journal: Article Findings

In **Module Five**, you will explain the findings in the two articles relating to the health question you identified. **This will be submitted as a table and at least two paragraphs. This assignment will be graded using the Journal Rubric.**

Module Six Journal: Article Methods

In **Module Six**, you will complete a table in which you compare the methods used in the two articles. You will also submit explain this comparison. **This assignment will be graded using the Journal Rubric.**

Final Project Part I Submission: Article Review

In **Module Eight**, you will submit your *Final Project Part I: Article Review*. To create this document, revise the journals throughout the course incorporating the feedback from your peers and instructor into one final document that includes all the sections of this article review project. **The final submission will be graded using the Final Project Part I Rubric.**

## IHP 525 Final Project Part I Articles List

Choose one of the following pairs of articles to use in Final Project Part I:

### Option 1

Valiee, S., Fathi, M., Hadizade, N., Roshani, D., & Mahmoodi, P. (2016). Evaluation of feasibility and safety of changing body position after transfemoral angiography: A randomized clinical trial. *Journal of Vascular Nursing*, 34 (Vascular Disease Risk Factors), 106–115.  
doi:10.1016/j.jvn.2016.05.001  
<http://ezproxy.snhu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edselp&AN=S106203031630067X&site=eds-live&scope=site>

Chair, S., Thompson, D., & Li, S. (2007). The effect of ambulation after cardiac catheterization on patient outcomes. *Journal of Clinical Nursing*, 16(1), 212–214.  
<http://ezproxy.snhu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edswsc&AN=000242965000024&site=eds-live&scope=site>

### Option 2

Grunfeld, E., Coyle, D., Whelan, T., Clinch, J., Reyno, L., Earle, C. C., & . . . Glossop, R. (2004). Family caregiver burden: Results of a longitudinal study of breast cancer patients and their principal caregivers. *Canadian Medical Association Journal*, 170(12), 1795–1801.  
doi:10.1503/cmaj.1031205  
<http://ezproxy.snhu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2004-15356-002&site=eds-live&scope=site>

Zarit, S.H., Todd, P. A., & Zarit, J. M. (1986). Subjective burden of husbands and wives as caregivers: A longitudinal study. *Gerontologist*, 26, 260–6.  
[http://gerontologist.oxfordjournals.org/content/26/3/260.abstract?ikey=fa275af15ef94d9e2176cd00687dabb259863591&keytype=tf\\_ipsecsha](http://gerontologist.oxfordjournals.org/content/26/3/260.abstract?ikey=fa275af15ef94d9e2176cd00687dabb259863591&keytype=tf_ipsecsha)

### Option 3

Doering, L. V., McKinley, S., Riegel, B., Moser, D. K., Meischke, H., Pelter, M. M., & Dracup, K. (2011). Gender-specific characteristics of individuals with depressive symptoms and coronary heart disease. *Heart & Lung: The Journal of Critical Care*, 40(3), e4–e14.  
doi:10.1016/j.hrtlng.2010.04.002  
<http://ezproxy.snhu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cmedm&AN=20561880&site=eds-live&scope=site>

Frazier, L., Yu, E., Sanner, J., Liu, F., Udtha, M., Cron, S., & . . . Bogaev, R. C. (2012). Gender differences in self-reported symptoms of depression among patients with acute coronary syndrome. *Nursing Research & Practice*, 1-5. doi:10.1155/2012/109251  
<http://ezproxy.snhu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=86826621&site=eds-live&scope=site>