

Applied Statistics for Health Care Professionals

HLT-362V

3 Credits

Mar 27 - Apr 30

Course Description

This is an introductory course on concepts of statistics, emphasizing applications to health care professions. The course is designed to prepare learners to understand concepts of statistics and the appropriateness of statistical methods used in published research papers and a variety of settings. Areas of emphasis include an introduction to the statistical analysis concepts of variable/reliability factors; P values; experimental design; descriptive statistics, including mean, median, and mode; sampling methods; and power analysis.

Instructor Contact Information

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Class Resources

Applied Statistics for Health Care

Grand Canyon University (Ed.). (2022). *Applied statistics for health care* (2nd ed.).

Excel for Windows Training

Review "Excel for Windows Training", located on the Microsoft website, and use them as resources for assigned work, as applicable.

<https://support.office.com/en-us/article/excel-for-windows-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb>

The Visual Learner: Statistics

Use "The Visual Learner: Statistics" resource to learn more about the statistical calculations you will be using in this course.

<http://lc.gcumedia.com/hlt362v/the-visual-learner/the-visual-learner-v2.1.html>

LopesWrite

Refer to the LopesWrite webpage for guidance regarding assignments requiring submission to LopesWrite.

<https://support.gcu.edu/hc/en-us/articles/201277380-LopesWrite>

Topic 1: What Is Statistics and Why It Is Important to Health Sciences?

Objectives:

1. Describe an example of each type of measurement: nominal, ordinal, interval, ratio.
2. Define basic statistical terms.
3. Explain the historical application of statistics.
4. Describe the application of statistics in health care quality, safety, health promotion, and leadership.

Mar 27, 2023 - Apr 2, 2023 Max Points: 158

Resources

Introduction

Read "Introduction," and watch the associated videos by Lane, Hebl, Osherson, and Zeimer, from *Online Statistics Education: An Interactive Multimedia Course of Study*.

<http://onlinestatbook.com/2/introduction/introduction.html>

Applied Statistics for Health Care

Read Chapter 1 in *Applied Statistics for Health Care*.

Health

Explore Health page of the United States Census Bureau website.

<https://www.census.gov/topics/health.html>

Evidence-Based Practice for Nursing: Levels of Evidence

Read "Evidence-Based Practice for Nursing: Levels of Evidence," located on the Northern Virginia Community College website.

<https://libguides.nvcc.edu/c.php?g=361218&p=2439383>

Health Topics: Health Statistics

Explore the Health Statistics page of the MedlinePlus website.

<https://medlineplus.gov/healthstatistics.html>

Quality Data Critical to Healthcare Decision-Making

Read "Quality Data Critical to Healthcare Decision-Making," by Nicholson and Penney (2004), located on the American Health Information Management Association (AHIMA) website.

http://library.ahima.org/doc?oid=106428#.XHml_KB7mUk

What Are Variables?

Watch "What Are Variables?" from Ch. 1 of *Sage Research Methods* (2019).

<https://lopes.idm.oclc.org/login?url=https://methods-sagepub-com.lopes.idm.oclc.org/video/what-are-variables>

Health Statistics

Explore the Health Statistics page of the MedlinePlus website.

<https://medlineplus.gov/healthstatistics.html>

The Visual Learner: Statistics

Refer to the "Visual Learner: Statistics" to learn more about the statistical calculations presented in this topic.

<http://lc.gcumedia.com/hlt362v/the-visual-learner/the-visual-learner-v2.1.html>

Data and Statistics

Explore the Data and Statistics page of the Centers for Disease Control and Prevention (CDC) website.

<https://www.cdc.gov/datastatistics/index.html>

Measurement in Nursing Research

Read "Measurement in Nursing Research," by Curtis and Keeler from the *American Journal of Nursing* (2021).

<https://lopes.idm.oclc.org/login?url=http://ovidsp.ovid.com.lopes.idm.oclc.org/ovidweb.cgi?>

Measuring the Quality of Healthcare in the U.S.

Read "Measuring the Quality of Healthcare in the U.S.," by Claxton, Cox, Gonzales, Kamal, and Levitt (2015), located on the Peterson-Kaiser Health System Tracker website.

<https://www.healthsystemtracker.org/brief/measuring-the-quality-of-healthcare-in-the-u-s/#item-start>

Assessments

Summary of Current Course Content Knowledge

Start Date & Time	Due Date & Time	Points
Mar 27, 2023, 12:00 AM	Mar 27, 2023, 11:59 PM	0

Assessment Description

Academic engagement through active participation in instructional activities related to the course objectives is paramount to your success in this course and future courses. Through interaction with your instructor and classmates, you will explore the course material and be provided with the best opportunity for objective and competency mastery. To begin this class, review the course objectives for each Topic, and then answer the following questions as this will help guide your instructor for course instruction.

1. Which weekly objectives do you have prior knowledge of and to what extent?
2. Which weekly objectives do you have no prior knowledge of?
3. What course-related topics would you like to discuss with your instructor and classmates? What questions or concerns do you have about this course?

Class Introductions

Start Date & Time	Due Date & Time	Points
Mar 27, 2023, 12:00 AM	Mar 29, 2023, 11:59 PM	0

Assessment Description

Take a moment to explore your new classroom and introduce yourself to your fellow classmates. What are you excited about learning? What do you think will be most challenging?

Topic 1 DQ 1

Start Date & Time	Due Date & Time	Points
Mar 27, 2023, 12:00 AM	Mar 29, 2023, 11:59 PM	8

Assessment Description

Discuss the historical application of statistics in the field of health care. Describe an example, other than Florence Nightingale's contributions, where statistical application has greatly influenced or changed health care operations or practice.

Topic 1 DQ 2

Start Date & Time	Due Date & Time	Points
Mar 27, 2023, 12:00 AM	Mar 31, 2023, 11:59 PM	8

Assessment Description

Discuss why it is important for a person working in health care to understand statistical concepts. Provide an example of how statistical data is used in your organization or specialty area today and what you are expected to do with this information as a practitioner.

Application of Statistics in Health Care

Start Date & Time	Due Date & Time	Points
Mar 27, 2023, 12:00 AM	Apr 2, 2023, 11:59 PM	100

Assessment Traits

 Requires LopesWrite

Assessment Description

Statistical application and the interpretation of data is important in health care. Review the statistical concepts covered in this topic. In a 750-1,000 word paper, discuss the significance of statistical application in health care. Include the following:

1. Describe the application of statistics in health care. Specifically discuss its significance to quality, safety, health promotion, and leadership.
2. Consider your organization or specialty area and how you utilize statistical knowledge. Discuss how you obtain statistical data, how statistical knowledge is used in day-to-day operations and how you apply it or use it in decision making.

Three peer-reviewed, scholarly or professional references are required.

Prepare this assignment according to the guidelines found in the APA Style Guide, located in the Student Success Center. An abstract is not required.

This assignment uses a rubric. Please review the rubric prior to beginning the assignment to become familiar with the expectations for successful completion.

You are required to submit this assignment to LopesWrite. A link to the LopesWrite technical support articles is located in Class Resources if you need assistance.

Quiz 1

Start Date & Time	Due Date & Time	Points
Mar 27, 2023, 12:00 AM	Apr 2, 2023, 11:59 PM	10

Assessment Traits



Assessment Description

This quiz tests your knowledge on the statistical concepts presented in this topic.

Topic 1 Participation

Start Date & Time	Due Date & Time	Points
Mar 27, 2023, 12:00 AM	Apr 2, 2023, 11:59 PM	32

Topic 2: Population and Sampling Distributions

Objectives:

1. Identify examples of descriptive and inferential statistics.
2. Describe strategies for selecting a sample from a population.
3. Identify key questions you will ask/answer when reading a research study.

Apr 3, 2023 - Apr 9, 2023 Max Points: 168

Resources

Applied Statistics for Health Care

Read Chapter 2 in *Applied Statistics for Health Care*.

Sampling Methods in Clinical Research: an Educational Review

Read "Sampling Methods in Clinical Research: an Educational Review," by Elfil and Negida, from *Emergency* (2017).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5325924/>

Eight Questions to Ask When Interpreting Academic Studies: A Primer for Media

Read "Eight Questions to Ask When Interpreting Academic Studies: A Primer for Media," by Feldman and Wihbey (2015), located on the Journalist's Resource website.

<https://journalistsresource.org/tip-sheets/research/interpreting-academic-studies-primer-media/>

Research 101: Descriptive Statistics

Read "Research 101: Descriptive Statistics," by Conner and Johnson, from *American Nurse Today* (2017).

<https://www.americannursetoday.com/research-101-descriptive-statistics/>

Chapter 9: Sampling Distributions

Read "Chapter 9: Sampling Distributions," and watch the associated videos by Utens et al., from *Online Statistics Education: An Interactive Multimedia Course of Study*.

http://onlinestatbook.com/2/sampling_distributions/sampling_distributions.html

Chapter 8: Strategies for Sampling

Read "Chapter 8: Strategies for Sampling," by Morse, from the online eBook, *Qualitative Nursing Research: A Contemporary Dialogue* (1991), available on the SAGE Research Methods website.

<https://methods-sagepub-com.lopes.idm.oclc.org/book/qualitative-nursing-research/n16.xml>

Article Analysis 1

Use the Article Analysis 1" template to complete the Article Analysis 1 assignment.

Ten Scientific Questions to Ask About Scientific Studies

Read "Ten Scientific Questions to Ask About Scientific Studies," by Smith, from *Greater Good Magazine* (2015).

https://greatergood.berkeley.edu/article/item/10_questions_to_ask_about_scientific_studies

Patient Preference and Satisfaction in Hospital-at-Home and Usual Hospital Care for COPD Exacerbations: Results of a Randomised Controlled Trial

Read "Patient Preference and Satisfaction in Hospital-at-Home and Usual Hospital Care for COPD Exacerbations: Results of a Randomised Controlled Trial," by Utens et al., from *International Journal of Nursing Students* (2013).

Review article in conjunction with the "Article Analysis Example 1" document to help prepare for the article analysis assignment due in this topic.

<https://www-sciencedirect-com.lopes.idm.oclc.org/science/article/pii/S0020748913000941>

Article Analysis Example 1

Review this document in conjunction with the "Patient Preference and Satisfaction in Hospital-at-Home and Usual Hospital Care for COPD Exacerbations: Results of a Randomised Controlled Trial" article to help prepare for the article analysis assignment due in this topic.

The Visual Learner: Statistics

Refer to the "Visual Learner: Statistics" to learn more about the statistical calculations presented in this topic.

<http://lc.gcumedia.com/hlt362v/the-visual-learner/the-visual-learner-v2.1.html>

Assessments

Topic 2 DQ 1

Start Date & Time Due Date & Time Points
Apr 3, 2023, 12:00 AM Apr 5, 2023, 11:59 PM 8

Assessment Description

Select a research article, other than the articles from your assignments, from the GCU library. Provide an overview of the study and describe the strategy that was used to select the sample from the population. Evaluate the effectiveness of the sampling method selected. Provide support for your answer. Include the article title and permalink in your post.

Topic 2 DQ 2

Start Date & Time Due Date & Time Points
Apr 3, 2023, 12:00 AM Apr 7, 2023, 11:59 PM 8

Assessment Description

Using the research article selected for DQ 1, identify three key questions you will ask and answer when reading the research study and why these questions are important. When responding to peers, provide other questions and answers that could be considered in relation to the peers' studies.

Article Analysis 1

Start Date & Time Due Date & Time Points

Apr 3, 2023, 12:00 AM Apr 9, 2023, 11:59 PM 120

Assessment Traits

 Requires LopesWrite

Assessment Description

The interpretation of research in health care is essential to decision making. By understanding research, health care providers can identify risk factors, trends, outcomes for treatment, health care costs and best practices. To be effective in evaluating and interpreting research, the reader must first understand how to interpret the findings. You will practice article analysis in Topics 2, 3, and 5.

For this assignment:

Search the GCU Library and find three different health care articles that use quantitative research. Do not use articles that appear in the topic Resources or textbook. Complete an article analysis for each using the "Article Analysis 1" template.

Refer to the "Patient Preference and Satisfaction in Hospital-at-Home and Usual Hospital Care for COPD Exacerbations: Results of a Randomised Controlled Trial," in conjunction with the "Article Analysis Example 1," for an example of an article analysis.

While APA style is not required for the body of this assignment, solid academic writing is expected, and documentation of sources should be presented using APA formatting guidelines, which can be found in the APA Style Guide, located in the Student Success Center.

This assignment uses a rubric. Please review the rubric prior to beginning the assignment to become familiar with the expectations for successful completion.

You are required to submit this assignment to LopesWrite. A link to the LopesWrite technical support articles is located in Class Resources if you need assistance.

Topic 2 Participation

Start Date & Time Due Date & Time Points

Apr 3, 2023, 12:00 AM Apr 9, 2023, 11:59 PM 32

Topic 3: Clinical Inquiry and Hypothesis Testing

Objectives:

1. Evaluate hypothesis testing approaches and their application to health care.
2. Define dependent and independent variables and their role in hypothesis testing.
3. Describe evidence used to "reject" or "do not reject" the null hypothesis.

4. Evaluate the relationship between hypothesis testing and confidence intervals.

Apr 10, 2023 - Apr 16, 2023 Max Points: 188

Resources

Chapter 11: Logic of Hypothesis Testing

Read "Chapter 11: Logic of Hypothesis Testing," and watch the associated videos by Lane, from *Online Statistics Education: An Interactive Multimedia Course of Study*.

http://onlinestatbook.com/2/logic_of_hypothesis_testing/logic_hypothesis.html

Probability, Proof, and Clinical Significance

Read "Probability, Proof, and Clinical Significance," by Skelly, from *Evidence-Based Spine-Care Journal* (2011).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3506143/>

Article Analysis 2

Use the "Article Analysis 2" template to complete the Article Analysis 2 assignment.

The Difference Between Quality Improvement, Evidence-Based Practice, and Research

Read "The Difference Between Quality Improvement, Evidence-Based Practice, and Research," by Ginex, from *ONS Voice* (2017), located on the Oncology Nursing Society (ONS) website.

<https://voice.ons.org/news-and-views/oncology-research-quality-improvement-evidence-based-practice>

Identifying the Differences Between Quality Improvement, Evidence-Based Practice, and Original Research

Read "Identifying the Differences Between Quality Improvement, Evidence-Based Practice, and Original Research," by Baker et al., from *Journal of Emergency Nursing* (2014).

[https://www.jenonline.org/article/S0099-1767\(13\)00605-3/pdf](https://www.jenonline.org/article/S0099-1767(13)00605-3/pdf)

Chapter 10: Estimation

Read "Chapter 10: Estimation" and watch the associated videos, by Lane, from *Online Statistics Education: An Interactive Multimedia Course of Study*.

<http://onlinestatbook.com/2/estimation/estimation.html>

Chapter 12: Test of Means

Read "Chapter 12: Test of Means" and watch the associated videos, by Lane, from *Online Statistics Education: An Interactive Multimedia Course of Study*.

http://onlinestatbook.com/2/tests_of_means/testing_means.html

Understanding Null Hypothesis Testing

Read "Understanding Null Hypothesis Testing," by Jhangiani and Chiang, from the online eBook, *Research Methods in Psychology* (2013), available on the BC Campus Open Ed website.

<https://opentextbc.ca/researchmethods/chapter/understanding-null-hypothesis-testing/>

Article Analysis Example 2

Review this document in conjunction with the "Patient Preference and Satisfaction in Hospital-at-Home and Usual Hospital Care for COPD Exacerbations: Results of a Randomised Controlled Trial" article to help prepare for the article analysis assignment due in this topic.

Statistical Versus Clinical Significance in Nursing Research

Read "Statistical Versus Clinical Significance in Nursing Research," by El-Masri, from *Canadian Journal of Nursing Research* (2016).

<https://journals.sagepub.com/stoken/default+domain/49wntTs5dFgrX94WR3q6/full>

Patient Preference and Satisfaction in Hospital-at-Home and Usual Hospital Care for COPD Exacerbations: Results of a Randomised Controlled Trial

Review "Patient Preference and Satisfaction in Hospital-at-Home and Usual Hospital Care for COPD Exacerbations: Results of a Randomised Controlled Trial," by Utens et al., from *International Journal of Nursing Students* (2013).

Review this article in conjunction with the "Article Analysis Example 2" document to help prepare for the article analysis assignment due in this topic.

<https://www-sciencedirect-com.lopes.idm.oclc.org/science/article/pii/S0020748913000941>

Chapter 6: Research Design

Read "Chapter 6: Research Design" and watch the associated videos, by Lane, from *Online Statistics Education: An Interactive Multimedia Course of Study*.

http://onlinestatbook.com/2/research_design/contents.html

Probability, Clinical Decision Making and Hypothesis Testing

Read "Probability, Clinical Decision Making and Hypothesis Testing," by Banerjee, Jadhav, and Bhawalkar, from *Industrial Psychiatry Journal* (2009).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3016704/>

Hypothesis Testing, Type I and Type II Errors

Read "Hypothesis Testing, Type I and Type II Errors," by Banerjee, Chitnis, Jadhay, Bhawalkar, and Chaudhury, from *Industrial Psychiatry Journal* (2009).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2996198/>

The Visual Learner: Statistics

Refer to the "Visual Learner: Statistics" to learn more about the statistical calculations presented in this topic.

<http://lc.gcumedia.com/hlt362v/the-visual-learner/the-visual-learner-v2.1.html>

Applied Statistics for Health Care

Read Chapter 3 in *Applied Statistics for Health Care*.

Assessments

Topic 3 DQ 1

Start Date & Time	Due Date & Time	Points
Apr 10, 2023, 12:00 AM	Apr 12, 2023, 11:59 PM	8

Assessment Description

Provide two different examples of how research uses hypothesis testing, and describe the criteria for rejecting the null hypothesis. Discuss why this is important in your practice and with patient interactions.

Topic 3 DQ 2

Start Date & Time	Due Date & Time	Points
Apr 10, 2023, 12:00 AM	Apr 14, 2023, 11:59 PM	8

Assessment Description

Evaluate and provide examples of how hypothesis testing and confidence intervals are used together in health care research. Provide a workplace example that illustrates your ideas.

Article Analysis 2

Start Date & Time	Due Date & Time	Points
Apr 10, 2023, 12:00 AM	Apr 16, 2023, 11:59 PM	130

Assessment Traits



Assessment Description

Search the GCU Library and find two new health care articles that use quantitative research. Do not use articles from a previous assignment, or articles that appear in the topic Resources or textbook.

Complete an article analysis for each using the "Article Analysis: Part 2" template.

Refer to the "Patient Preference and Satisfaction in Hospital-at-Home and Usual Hospital Care for COPD Exacerbations: Results of a Randomised Controlled Trial," in conjunction with the "Article Analysis Example 2," for an example of an article analysis.

While APA style is not required for the body of this assignment, solid academic writing is expected, and documentation of sources should be presented using APA formatting guidelines, which can be found in the APA Style Guide, located in the Student Success Center.

This assignment uses a rubric. Please review the rubric prior to beginning the assignment to become familiar with the expectations for successful completion.

You are required to submit this assignment to LopesWrite. A link to the LopesWrite technical support articles is located in Class Resources if you need assistance.

Quiz 2

Start Date & Time	Due Date & Time	Points
Apr 10, 2023, 12:00 AM	Apr 16, 2023, 11:59 PM	10

Assessment Traits



Assessment Description

This cumulative quiz tests your understanding of concepts, terminology and statistical application presented in

Topics 1-3.

Topic 3 Participation

Start Date & Time	Due Date & Time	Points
Apr 10, 2023, 12:00 AM	Apr 16, 2023, 11:59 PM	32

Topic 4: Statistical Analysis

Objectives:

1. Differentiate among experimental research, quasi-experimental, and nonexperimental research.
2. Identify key differences between qualitative and quantitative research.
3. Differentiate between research and quality improvement.

Apr 17, 2023 - Apr 23, 2023 Max Points: 198

Resources

Is This Quality Improvement or Research?

Read "Is This Quality Improvement or Research?" by Merrill, from *American Nurse Today* (2015).

<https://www.americannursetoday.com/quality-improvement-research/>

The Visual Learner: Statistics

Refer to the "Visual Learner: Statistics" to learn more about the statistical calculations presented in this topic.

<http://lc.gcumedia.com/hlt362v/the-visual-learner/the-visual-learner-v2.1.html>

Applied Statistics for Health Care

Read Chapter 4 in *Applied Statistics for Health Care*.

Chapter 44: Tools and Strategies for Quality Improvement and Patient Safety

Read "Chapter 44: Tools and Strategies for Quality Improvement and Patient Safety," by Hughes, from the online eBook, *Patient Safety and Quality: An Evidence-Based Handbook for Nurses* (2008), available on the

National Center for Biotechnology Information (NCBI) website.

<https://www.ncbi.nlm.nih.gov/books/NBK2682/>

Chapter 14: Regression

Review "Chapter 14: Regression," and watch the associated videos by Lane, from *Online Statistics Education: An Interactive Multimedia Course of Study*.

<http://onlinestatbook.com/2/regression/regression.html>

Focusing on the Fundamentals: A Simplistic Differentiation Between Qualitative and Quantitative Research

Read "Focusing on the Fundamentals: A Simplistic Differentiation Between Qualitative and Quantitative Research," by Rutberg and Boukidis, from *Nephrology Nursing Journal* (2018).

<https://lopes.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=ccm&AN=129106232&site=eds-live&scope=site>

Differentiating Between Research and Quality Improvement

Read "Differentiating Between Research and Quality Improvement," by Gregory, from *Journal of Perinatal and Neonatal Nursing* (2015).

https://www.nursingcenter.com/pdfjournal?AID=3099809&an=00005237-201504000-00005&Journal_ID=54008&Issue_ID=3099787

Assessments

Topic 4 DQ 1

Start Date & Time	Due Date & Time	Points
Apr 17, 2023, 12:00 AM	Apr 19, 2023, 11:59 PM	8

Assessment Description

Provide an example of experimental, quasi-experimental, and nonexperimental research from the GCU Library and explain how each research type differs from the others. When replying to peers, evaluate the effectiveness of the research design of the study for two of the examples provided.

Topic 4 DQ 2

Start Date & Time	Due Date & Time	Points
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Assessment Description

Describe the difference between research and quality improvement. Provide a workplace example where qualitative and quantitative research is applied and how it was used within your organization. When replying to peers, discuss how these research findings might be incorporated into another health care setting.

Quality Improvement Proposal

Start Date & Time Due Date & Time Points

Apr 17, 2023, 12:00 AM Apr 23, 2023, 11:59 PM 150

Assessment Traits

 Requires LopesWrite

Assessment Description

Identify a quality improvement opportunity in your organization or practice. In a 1,250-1,500 word paper, describe the problem or issue and propose a quality improvement initiative based on evidence-based practice. Apply "The Road to Evidence-Based Practice" process, illustrated in Chapter 4 of your textbook, to create your proposal.

Include the following:

1. Provide an overview of the problem and the setting in which the problem or issue occurs.
2. Explain why a quality improvement initiative is needed in this area and the expected outcome.
3. Discuss how the results of previous research demonstrate support for the quality improvement initiative and its projected outcomes. Include a minimum of three peer-reviewed sources published within the last 5 years, not included in the Class Resources or textbook, that establish evidence in support of the quality improvement proposed.
4. Discuss steps necessary to implement the quality improvement initiative. Provide evidence and rationale to support your answer.
5. Explain how the quality improvement initiative will be evaluated to determine whether there was improvement.
6. Support your explanation by identifying the variables, hypothesis test, and statistical test that you would need to prove that the quality improvement initiative succeeded.

While APA style is not required for the body of this assignment, solid academic writing is expected, and documentation of sources should be presented using APA formatting guidelines, which can be found in the APA Style Guide, located in the Student Success Center.

This assignment uses a rubric. Please review the rubric prior to beginning the assignment to become familiar with the expectations for successful completion.

You are required to submit this assignment to LopesWrite. A link to the LopesWrite technical support articles is located in Class Resources if you need assistance.

Topic 4 Participation

Start Date & Time Due Date & Time Points

Topic 5: Discovering Relationships and Building Models

Objectives:

1. Analyze a specified data set.
2. Describe how data influences epidemiological practices.
3. Evaluate data analyzed from research articles using different types of variables.

Apr 24, 2023 - Apr 30, 2023 Max Points: 288

Resources

The Visual Learner: Statistics

Refer to the "Visual Learner: Statistics" to learn more about the statistical calculations presented in this topic.

<http://lc.gcumedia.com/hlt362v/the-visual-learner/the-visual-learner-v2.1.html>

Article Analysis and Evaluation of Research Ethics

Use the "Article Analysis and Evaluation of Research Ethics" template to complete the Article Analysis and Evaluation of Research Ethics assignment.

Ethics in Medical Research and Publication

Read "Ethics in Medical Research and Publication," by Masic, Hodzic, and Mulic, from *International Journal of Preventative Medicine* (2014).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4192767/>

Challenges in Conducting Qualitative Research in Health: A Conceptual Paper

Read "Challenges in Conducting Qualitative Research in Health: A Conceptual Paper," by Khankeh, Ranjbar, Khorasani-Zavareh, Zargham-Boroujeni, and Johansson, from *Iranian Journal of Nursing and Midwifery Research* (2015).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4700679/>

Excel for Windows Training

Review the "Excel for Windows Training" modules, located on the Microsoft Office website, and use them as resources for the Summary and Descriptive Data assignment, as needed.

<https://support.office.com/en-us/article/excel-for-windows-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb>

Chapter 2. Health Databases and Health Database Organizations: Uses, Benefits, and Concerns

Read "Chapter 2. Health Databases and Health Database Organizations: Uses, Benefits, and Concerns," by Donaldson and Lohr, from the online eBook, *Health Data in the Information Age: Use, Discloser, and Privacy* (1994), available on the National Center for Biotechnology Information (NCBI) website.

<https://www.ncbi.nlm.nih.gov/books/NBK236556/>

National Cancer Institute Data

Use the "National Cancer Institute Data" Excel spreadsheet to complete the Summary and Descriptive Statistics assignment.

Secondary Data Analysis: Ethical Issues and Challenges

Read "Secondary Data Analysis: Ethical Issues and Challenges," by Tripathy, from *Iranian Journal of Public Health* (2013).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4441947/>

Ethical Challenges of Researchers in Qualitative Studies: The Necessity to Develop a Specific Guideline

Read "Ethical Challenges of Researchers in Qualitative Studies: The Necessity to Develop a Specific Guideline," by Sanjari, Bahramnezhad, Fomani, Shoghi, and Cheraghi, from *Journal of Medical Ethics and History of Medicine* (2014).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4263394/>

Using Epidemiological Data to Guide Clinical Practice: Review of Studies on Cardiovascular Disease and Use of Combined Oral Contraceptives

Read "Using Epidemiological Data to Guide Clinical Practice: Review of Studies on Cardiovascular Disease and Use of Combined Oral Contraceptives," by Hannaford and Owen-Smith, from *BMJ* (1998).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC28503/>

Applied Statistics for Health Care

Read Chapter 5 in *Applied Statistics for Health Care*.

What Are the Major Ethical Issues in Conducting Research? Is There a Conflict Between the Research Ethics and the Nature of Nursing?

Read "What Are the Major Ethical Issues in Conducting Research? Is There a Conflict Between the Research Ethics and the Nature of Nursing?" by Fouka and Mantzorou, from *Health Science Journal* (2011).

<http://www.hsj.gr/medicine/what-are-the-major-ethical-issues-in-conducting-research-is-there-a-conflict-between-the-research-ethics-and-the-nature-of-nursing.php?aid=3485>

Assessments

Topic 5 DQ 1

Start Date & Time	Due Date & Time	Points
Apr 24, 2023, 12:00 AM	Apr 26, 2023, 11:59 PM	8

Assessment Description

Describe how epidemiological data influences changes in health practices. Provide an example and explain what data would be necessary to make a change in practice.

Topic 5 DQ 2

Start Date & Time	Due Date & Time	Points
Apr 24, 2023, 12:00 AM	Apr 28, 2023, 11:59 PM	8

Assessment Description

Discuss ways your organization uses technology to gather patient and health care information, and how this information and data are used to direct patient care and outcomes.

Article Analysis and Evaluation of Research Ethics

Start Date & Time	Due Date & Time	Points
Apr 24, 2023, 12:00 AM	Apr 30, 2023, 11:59 PM	140

Assessment Traits

 Requires LopesWrite

Assessment Description

Search the GCU Library and find one new health care article that uses quantitative research. Do not use an article from a previous assignment, or that appears in the topic Resources or textbook.

Complete an article analysis and ethics evaluation of the research using the "Article Analysis and Evaluation of Research Ethics" template. See Chapter 5 of your textbook as needed, for assistance.

While APA style is not required for the body of this assignment, solid academic writing is expected, and documentation of sources should be presented using APA formatting guidelines, which can be found in the APA Style Guide, located in the Student Success Center.

This assignment uses a rubric. Please review the rubric prior to beginning the assignment to become familiar with the expectations for successful completion.

You are required to submit this assignment to LopesWrite. A link to the LopesWrite technical support articles is located in Class Resources if you need assistance.

Summary and Descriptive Statistics

Start Date & Time	Due Date & Time	Points
Apr 24, 2023, 12:00 AM	Apr 30, 2023, 11:59 PM	100

Assessment Description

There is often the requirement to evaluate descriptive statistics for data within the organization or for health care information. Every year the National Cancer Institute collects and publishes data based on patient demographics. Understanding differences between the groups based upon the collected data often informs health care professionals towards research, treatment options, or patient education.

Using the data on the "National Cancer Institute Data" Excel spreadsheet, calculate the descriptive statistics indicated below for each of the Race/Ethnicity groups. Refer to your textbook and the topic Resources, as needed, for assistance in with creating Excel formulas.

Provide the following descriptive statistics:

1. Measures of Central Tendency: Mean, Median, and Mode
2. Measures of Variation: Variance, Standard Deviation, and Range (a formula is not needed for Range).
3. Once the data is calculated, provide a 150-250 word analysis of the descriptive statistics on the spreadsheet.
This should include differences and health outcomes between groups.

APA style is not required, but solid academic writing is expected.

This assignment uses a rubric. Please review the rubric prior to beginning the assignment to become familiar with the expectations for successful completion.

You are not required to submit this assignment to LopesWrite.

Topic 5 Participation

Start Date & Time Due Date & Time Points

Apr 24, 2023, 12:00 AM Apr 30, 2023, 11:59 PM 32
