Research Design and Methodology III

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**Assignment #3 – Essay**

Answer the following questions in an essay format, with 1-2 fully developed paragraphs for each question. Include citations/references from your Developmental Reading log.

1. Review the OGS PhD/DPhil Prospectus Tutorial. You will develop your prospectus in a later course.

2. Describe data collection and analysis procedures for the following research designs. Include data cleaning/preparation, descriptive statistics, and assumptions testing. Focus on the steps required to collect and prepare the data for statistical testing rather than the procedures.

3. Describe the three principles of the Belmont Report and why they are important for protecting human participants in social science research.

Develop prospective drafts of the following three documents:

4. Review the OGS IRB and Informed Consent templates. Create a prospective Informed Consent Agreement and Site Permission Request letter for your dissertation using the templates.

5. Develop an outline for your dissertation Literature Review (Chapter 2). Which theoretical/conceptual frameworks might best inform your research problem and purpose? Who are the seminal authors in the field? What topics might you need to explore to establish a foundation for your original research? Your outline should be 3-5 pages long, and note specific literature sources. Include a references page.

Include a title page, well-developed introduction and conclusion paragraphs, a references page, and in-text APA-formatted citations to support your responses.

**Review the OGS PhD/DPhil Prospectus Tutorial**

I have reviewed the OGS PhD/DPhil Prospectus Tutorial and have started to develop my prospectus and believe I will have SR 852-62 Prospectus term B this semester to fully develop my dissertation prospectus.

**Data Collection and Analysis Procedures**

In my research of evaluating the relationship between land use/land cover (LULC) and illness, I will be using archival/secondary data of diagnosis (illness) data at the patient zip code (Lee et al, 2023) level and land cover data at the Zip Code Tabulation Area (ZCTA) (Habibir et al, 2022), which are geographic boundary areas based on postal zip codes developed by the U.S. Census Bureau. The illness data will be retrieved from the Centers for Disease Control and Prevention (CDC), (Gobaud, et al., 2022) PLACES data set, which is health data based on small geographic areas such as ZCTA level (Benavidez et al., 2024). The land cover data at the ZCTA level will be retrieved from open ICPSR (Inter-university Consortium for Political and Social Research) National Neighborhood Data Archive (NaNDA): Land Cover by ZIP Code Tabulation Area, United States.

The two data sets will be merged together into a dataset that will be analyzed in a statistical software package such as R or SPSS (Zengt et al., 2022). In merging the data of zip codes and ZTCA, there will be a need to evaluate the unmatched codes and decisions will be made to determine how to handle such issues, this is all part of the data cleaning and preparation process. Descriptive statistics and assumptions testing will be performed before performing Pearson correlation coefficients (Embury, 2022) and linear regression to analyze the data and evaluate the relationship between land use/land cover and illnesses. Geographic products such as maps and geo-analysis will also be used.

**Three principles of the Belmont Report**

The Belmont Report was written by a national commission on ethical treatment of human research subjects in 1979. The commission was convened to develop a set of ethical principles to guide research involving human subjects, in particular in the biomedical and behavioral research fields. They identified three basic principles in order to conduct ethical human subject research. The commission identified the basic ethical principles that should underline the conduct of biomedical and behavioral research involving human subjects. The three principles are: respect for persons, beneficence, and justice. These three principles carry applications for the researcher, and they are: informed consent, assessment of risk and benefits, and selection of subjects (The Belmont Report, 1979).

The importance of these three principles to researchers is to protect research participants, which, given the historical blatant unethical scientific studies conducted in the U.S. and worldwide, such as the Tuskegee syphilis study, eugenics, and science experiments conducted by Nazi Germany scientist, had ethical disregard for the human subjects. Therefore, an ethical standard in research was needed for researchers and scientists to abide by. Humans have intrinsic worth and need to be treated as such in research. The Belmont Report provides researchers with the ethical scientific standard of conducting human subject research.

**IRB and Data Use**

The Internal Review Board (IRB) review should be limited given that archival/secondary data is being used for this research. The data that will be used will be summary level data, so no patient or individual level data will be included. Nevertheless, in dealing with healthcare information, it is good to have an understanding of healthcare data security, such as Protected Health Information (PHI) and Health Insurance Portability and Accountability Act (HIPAA), (Delmelle et al, 2022), to which I am familiar with given I work in healthcare analytics. There are times when a Data Use Agreement (DUA) or a Data Transfer Agreement (DTA), (Swales, Gooden, & Thaldar, 2024) is needed to ensure data from an organization is handled properly by the researcher. Some data available on the web for researchers to use, may have a Term of Use, that the researcher must read and agree to before they could download or use the data, such was the case with the land cover by ZTCA from Interuniversity Consortium for Political and Social Research (ICPSR).

**Develop an outline for your dissertation Literature Review**

The dissertation literature review section follows the following layout: Introduction, Literature Search Strategy, Background of the Problem, Theoretical Framework, Sociological Perspectives, Faith Perspectives, Synthesis of Current Literature, Variant Perspectives, Literature Gap, and Summary and Conclusion. Thus, the outline follows such logic.

I. Introduction

A. Intent of Research

1. To propose a macro level understanding of how environmental and socio-economic factors are related to population-based health (Cockerham, 2013), (Barr, 2019)

B. Context of Geography and Health (Emch, et al, 2017), (Hazen & Anthamatten, 2020)

C. Actionable Knowledge (Thompson, 2018), (Buraway, 2021), (Agger, 2011)

1. This research proposes how this knowledge can be applied to understanding and the practice of population health

II. Literature Search Strategy

A. Search of Research

1. Pro Quest

2. Google Scholar

3. Boise State University Library and Database

4. Library of Congress

B. Key Words

1. Health, Illness, Disease, Land Use, Land Cover, Zip Code, Zip Code Tabulation Area, Geohealth, Health Geography, Social Drivers of Health, Medical Sociology, Sociology of Health and Illness

C. Visual Sociology

 1. Geographical Products

 2. Visual Landscapes and Communities

III. Background of the Problem

A. State of Health in the U.S. (Cockerham, 2013), (Barr, 2019)

B. How Health is Related to Geography and Geography is Related to Social-Economic Issues

C. Understanding Land Use and Health is an Understanding of Environmental and Social-Economic Aspects that Influence Health

D. The Statements

 1. Problem Statement

 2. Purpose Statement

 3. Research Question

 4. Research Design (Walshe & Brearley, 2020)

IV. Theoretical Framework

A. Medical Sociology (Bloom, 2002), (Monaghan & Gabe, 2022) (Cockerham, 2010)

B. Social Theories of Health and Illness (Cockerham, 2013)

C. Geohealth Theories

D. Health Lifestyle Theory

 1. Cockerham (Cockerham, 2013)

 2. Bourdieu (Bourdieu, 1993)

V. Sociological Perspectives

A. The Sociological Perspective

B. Sociological Imagination (Mills, 1959)

C. Healthcare system

VI. Faith Perspectives

A. Health and Wellness

B. Culture of Caring

C. Scripture

VII. Synthesis of Current Literature

A. Intent of Research

B. Current Literature

C. Multi-Discipline Topic and Approach

VIII. Variant Perspectives

A. Limited Perspectives

B. Lack of Sociological Perspectives

IX. Literature Gap

A. The Gap in Research

B. The Need for Macro Level Insight

X. Summary and Conclusion

A. Literature Review Findings

B. The Need for this Research

C. Actionable Knowledge (Thompson, 2018), (Buraway, 2021), (Agger, 2011)

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