Research Design and Methodology III

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**Assignment #3 – Essay**

In a 7-10 page essay, use the fictional study to critically analyze key aspects of ethical research, sampling techniques, data collection, data analysis using appropriate software, and the development of a dissertation literature review outline. Reflect on the practical application of these concepts to your dissertation research idea or proposal using the following specific criteria:

Introduction - Compose an overview of the sections of this assignment and justify why they are essential for research design and methodology in dissertation research.

Ethical Research Criteria (1 page) - Evaluate the criteria for ethical research with human participants. Discuss the principles and guidelines researchers must adhere to when conducting research involving human participants. Illustrate the importance of ethical considerations in safeguarding the rights and well-being of research participants. Read and cite the three principles of the Belmont Report. Please review the criteria of OGS’s Institutional Review Board (IRB) published on its website.

Sampling Techniques (1 page) - Assess appropriate sampling and recruitment techniques, including convenience, purposive, and snowball sampling methods. Explain the advantages and limitations of each technique and provide examples of when they might be applied in research studies. Which sampling method would be best for the fictional study?

Data Collection and Analysis (1 page) - Delineate the data collection and analysis process, emphasizing appropriate software tools. Discuss the importance of maintaining data integrity and the role of software in streamlining data analysis. Provide examples of how specific software tools can enhance the research process. Which data collection and analysis methods and tools would be best for the fictional study?

Literature Review Outline (2-3 pages) - Develop an outline for conducting a comprehensive literature review for the fictional study. Discuss the key components and organization of the literature review section of a dissertation, considering its role in supporting the research objectives. Provide examples of how effective literature review outlines contribute to the clarity and depth of the dissertation.

Reflection on Personal Dissertation Idea (1-2 pages): Apply the concepts and insights from the analysis to your dissertation research idea or proposal. Discuss how ethical research criteria, sampling techniques, data collection and analysis, and the development of a literature review outline can inform and strengthen your research plans.

The assignment should be 7-10 pages long. Cite research design experts from your developmental readings and use proper APA formatting.

**Introduction**

The fictional study, “Religiosity and Social Behavior in a Diverse Community,” has the following integral components: ethical research, sampling techniques, data collection and analysis, and literature review to consider when collectively analyzing the underpinnings of a rigorous and contextualized research study. To begin with, ethical research is a foundational pillar of dissertation research design, ensuring the responsible and respectful treatment of participants. This section outlines the ethical principles, guidelines, and safeguards researchers adhere to throughout the study. It protects the rights and well-being of participants by establishing clear ethical guidelines that foster trust and credibility, ensuring the study’s integrity (Protections (OHRP), 2018). Ethical research practices contribute to the validity of findings and the researcher’s reputation, underscoring the ethical foundation as indispensable in maintaining the highest standards in academic research.

Next, sampling techniques outline the strategies employed to select participants for the study. It explores various sampling methods, such as convenience sampling, snowball sampling, or purposive sampling, based on the research objectives and characteristics of the population. Sampling techniques directly affect the generalizability and external validity of study findings. A well-designed sampling strategy ensures the representation of diverse perspectives within the target population enhancing the study’s relevance. Careful consideration of sampling methods is essential for minimizing bias and generating results that can be projected to broader contexts, thus strengthening the sturdiness of the research design (SooleenAbbas, 2023).

Then, data collection and analysis are considered. This section outlines the procedures for gathering and processing data. It discusses the selection of instruments, survey methods, interviews, or observations, and the subsequent analytical techniques, quantitative or qualitative, to derive meaningful insights from the collected data. Data collection and analysis are the core processes for addressing research questions. A well-structured data collection plan ensures the acquisition of relevant information while appropriate analysis methods determine the validity and reliability of the study’s conclusions. Software programs like PSPP mimic SPSS very closely and play a pivotal role in streamlining data analysis, allowing for real-time processing and facilitating complex computations, thus improving efficiency and accuracy and contributing to the overall rigor and credibility of the research (Salkind & Frey, 2019, pp. 321-431; 450).

Finally, there is the literature review. The literature review section comprehensively synthesizes existing scholarly work relevant to the research topic. It establishes the theoretical framework, guiding the formulation of research questions and hypotheses. A thorough literature review is vital for situating the study within the academic landscape. Additionally, a well-structured literature review serves as the intellectual foundation of the study, displaying the researcher's understanding of the subject matter and contributing to the coherence and scholarly depth of the dissertation (Snyder, 2019, p. 2).

In summary, these sections—ethical research, sampling techniques, data collection and analysis, and literature review constitute the essential elements of a robust research design and methodology. Collectively, they ensure the responsible, rigorous, and contextually informed execution of the study, supporting the reliability and authenticity of the research findings in academic scholarship.

**Ethical Research Criteria**

When conducting research involving human participants, researchers must adhere to specific criteria, including informed consent, voluntary participation, privacy and confidentiality, risk-benefit ratio, justice, respect for persons, scientific rigor, and approval by an ethical review board to ensure the research is conducted ethically (Protections (OHRP), 2018). Therefore, before agreeing to participate, informed consent is paramount. Participants must be informed about the study’s purpose, procedures, risks, and benefits. In addition, the participation should be voluntary, without coercion or undue influence. Participants should be free to withdraw at any point without consequences (Protections (OHRP), 2018).

According to Kang & Hwang (2021), most research on human beings focuses on advancing human well-being, knowledge, culture, and general understanding (p. 1). This is admirable because many humans depend on scientific or social research to lessen anguish, dissipate ignorance, evaluate policy, comprehend human behavior, and so much more (Kaiser, 2009) (p. 1). However, researchers and institutions must identify that such freedom carries essential responsibilities, encompassing the urge to ensure that the study compromising human partakers meets high ethical and scientific standards (Anderson, 2017) (Kang & Hwang, 2021, p. 1). Therefore, the conduct of researchers is closely monitored to ensure fair distribution of the benefits and burdens of research.

Researchers must avoid the exploitation of vulnerable populations and strive for inclusivity and equal treatment of partakers. Researchers should minimize potential risks and ensure that the benefits of the research outweigh any potential harm to participants, and any risk should be reasonable and justifiable. In addition, the researcher must treat participants with respect, acknowledge their autonomy, and protect those with diminished autonomy, such as children or individuals with cognitive impairments (Protections (OHRP), 2018). Also, researchers must have clear accountability to certify that they identify and safeguard the rights and well-being of the research partakers regardless of the nature of the research (Kang & Hwang, 2021, p. 2).

Moreover, although researchers conduct scientifically valid research to advance human well-being and increase knowledge, culture, and general understanding, they cannot do so at the expense of others. Therefore, before initiating the research, they must seek approval from institutional review boards (IRB) or ethics committees and demonstrate compliance with the ethical standards (Protections (OHRP), 2018).

In conclusion, researchers must abide by ethical behaviors and duties, such as honesty, integrity, accountability, openness, and application of professional standards (Ramos, 1989) (Kang & Hwang, 2021, p. 2). They are required to follow ethical behaviors to protect the welfare of participants, minimizing any possible harm, mental or physical discomfort, social harm, and danger. Researchers should remember that ethical behaviors minimize the likelihood of negligence claims and are in keeping with the nonmaleficence principle of “do no harm” (Kang & Hwang, 2021, p. 2).

**Sampling Techniques**

Sampling is a crucial aspect of qualitative research. Each one is unique and chosen based on the researcher's needs at the time. Sampling determines the representativeness and credibility of the collected data (SooleenAbbas, 2023). Researchers often use several sampling techniques in qualitative research: convenience, purposive, and snowball. Each of these techniques has advantages and limitations to them. The first method, called Snowball sampling, is also called referral sampling. It is used with initial participants who meet the eligibility criteria and asks them to refer others they know who also fit the requirements. Then, the sample size grows as referrals are added (SooleenAbbas, 2023). Snowball sampling can produce in-depth and detailed data from participants with common characteristics or experiences. Because referrals are made within a network of individuals who share similarities, researchers can gain deep insights into a specific group’s attitudes, behaviors, and perspectives (SooleenAbbas, 2023).

The second method called Convenience sampling, which is as it sounds. Researchers use this method when time and resources are limited. It is a non-probability sampling technique whereby participants selected are based on their accessibility and willingness to participate rather than their suitability for the research question. Qualitative research uses Convenience sampling to generate various perspectives and experiences. For example, it was used during the pandemic because of the situation's urgency, and time and resources were limited (SooleenAbbas, 2023). Convenience sampling has the advantage of being efficient; however, researchers need to acknowledge its limitations. One of the primary drawbacks of convenience sampling is that it is susceptible to selection bias (SooleenAbbas, 2023).

A third method commonly used in qualitative research is Purposive or judgmental sampling, a non-probability sampling technique. In purposive sampling, researchers intentionally select participants with specific characteristics or unique experiences related to the research question. The goal is to identify and recruit participants who can provide rich and diverse data to enhance the research findings. In addition, Purposive sampling is used when researchers seek to identify individuals or groups with particular knowledge, skills, or experiences relevant to the research question (SooleenAbbas, 2023). However, researchers should also be aware of potential bias when using purposive sampling. The researcher’s judgment may influence the selection of participants, resulting in a biased sample that does not accurately represent the broader population. Another disadvantage is that purposive sampling may not be representative of the more general population, which limits the generalizability of the findings (SooleenAbbas, 2023).

The fictional religiosity dataset is interested in participants’ religiosity levels, social behaviors, and active participation in their community. It used a mixed-method research design, allowing for surveying and participation in a focus group discussion. Therefore, the purposive sampling method would be the best for this study. Purposive sampling targets individuals who meet specific criteria, such as participants who interact socially with their neighbors and connect with their community. It allows for rich discussion around specific criteria, which allows the researcher to obtain detailed interviews on a niche topic.

In conclusion, choosing a method depends on the research goals. Convenience allows for quick insights, purposive methods are used for specific criteria, and snowball methods are used for hidden populations where traditional methods may falter.

**Data Collection and Analysis**

Data collection and analysis are consistent with qualitative and quantitative research. Both use different methods. For qualitative research, interviews, observations, and focus group discussion (FGD) are the methods used (Islam & Aldaihani, 2022, p. 5). However, the most common data collection method social scientists use is interviews. Qualitative research uses three main types of interviews: structured, semi-structured, and unstructured. Structured interviews allow a researcher to prepare administered questionnaires where predetermined questions (for respondents) are listed with no scope of follow-up questions (Islam & Aldaihani, 2022, p. 5). The interview explores the experiences, views, opinions, ideas, beliefs, or/and motivations of entities/individuals on particular objects, issues, or occurrences. In this regard, interviews provide ‘deeper’ ideas or understanding of social issues or events (Islam & Aldaihani, 2022, p. 5). Therefore, the interview method is the most appropriate when researchers are little known to one or more than one study phenomenon or issue. Furthermore, interview methods are also suitable for researchers when the topics are sensitive and participants or respondents want to express their opinions or ideas verbally.

Qualitative data analysis (QDA) includes interpreting, identifying, and examining patterns and themes in textual data. It determines how these themes and patterns help understand an issue or occurrence in a more profound way to answer the research questions at hand. The qualitative analysis emphasizes ‘sense-making’ or understanding a phenomenon rather than predicting or explaining it. There are different types of QDA methods. In the fictional research on religiosity, the thematic analysis was clarified by collecting data from the focus group discussion (Islam & Aldaihani, 2022, p. 6).

This fictional study's quantitative data collection tool could have been the DUREL, which refers to the Duke University Religion Index (Koenig & Büssing, 2010). This tool is a five-item measure of religious behavior and belief. Standard components include Organizational Religious Activity, Non-Organizational Religious Activity, Intrinsic Religiosity, Subjective Religiosity, and Religious Support. “Researchers use DUREL as a concise and standardized instrument to collect data on religious involvement within diverse populations. Its brevity makes it particularly suitable for large-scale studies where efficiency is crucial. Researchers analyze the collected data to understand the role of religion in individuals’ lives and its potential impact on various outcomes (Koenig & Büssing, 2010).”

In summary, there are varied data collection methods and tools at social scientists' disposal, and proper data analysis is equally important. However, maintaining data integrity is crucial for producing reliable research outcomes, and software tools like SPSS or PSPP play a pivotal role in streamlining data analysis by ensuring accuracy, efficiency, and advanced analytical capabilities. The choice of specific software depends on the research's nature and the data being analyzed. It allows for real-time processing and facilitating complex computations, thus improving efficiency and accuracy, especially for quantitative analysis (Salkind & Frey, 2019, pp. 321-431; 450). They also provide features like text search, coding matrices, and visualization tools, making identifying patterns and relationships within the data easier, like ad-hoc testing. Because qualitative designs are descriptive statistics, t-tests, regression analysis, and more aid in data exploration and hypothesis testing. A software program like SPSS can handle large datasets efficiently and generate graphical representations, simplifying the interpretation of research findings (Salkind & Frey, 2019, pp. 321-431; 450). Therefore, when data integrity is maintained, researchers can make informed decisions that uphold the credibility of research results and foster trust among peers, stakeholders, and the broader academic community while contributing to the resilience of research conclusions.

**Literature Review Outline**

Develop an outline for conducting a comprehensive literature review for the fictional study.

I. Introduction

   A. Background of the Study

   B. Rationale for the Research

   C. Purpose Statement

   D. Research Questions

II. Theoretical Framework

   A. Overview of Religiosity Theories

   B. Connection between Religiosity and Social Behavior

   C. Relevance to Diverse Communities

III. Literature on Religiosity

   A. Historical Perspectives

   B. Contemporary Studies

   C. Variations in Religiosity across Cultures

IV. Literature on Social Behavior

   A. Theoretical Frameworks on Social Behavior

   B. Empirical Studies on Social Behavior

   C. Cultural Influences on Social Behavior

V. Mixed-Methods Research Design

   A. Explanation of Mixed-Methods Approach

   B. Justification for the Chosen Design

   C. Integration of Qualitative and Quantitative Components

VI. Integration of Religiosity and Social Behavior

   A. Studies Exploring the Relationship

   B. Gaps in Existing Research

   C. Theoretical Synthesis

VII. Research Methodology

   A. Participants and Sampling

   B. Data Collection Procedures

   C. Data Analysis Techniques

VIII. Ethical Considerations

   A. Protection of Participants

   B. Informed Consent

   C. Confidentiality

IX. Significance of the Study

   A. Contribution to Existing Literature

   B. Practical Implications

   C. Recommendations for Future Research

X. Conclusion

   A. Recap of Key Findings

   B. Implications for the Field

   C. Closing Remarks

Discuss the key components and organization of the literature review section of a dissertation, considering its role in supporting the research objectives.

1. Introduction
2. Background
3. Conceptual Framework
4. Themes or Categories
5. Methodological Approaches
6. Key Findings
7. Critical Evaluation
8. Synthesis
9. Research Gaps
10. Conclusion

A literature review has several vital components and is organized in a way that supports and sets the stage for the research objective of the dissertation. One of the things that the literature review does is critically analyze and synthesize existing scholarly works, articles, books, and other sources relevant to a particular research topic. A good literature review will contextualize the topic by providing background information in its introduction to the academic or practical domain. The literature review should also explain the importance of the topic and its timely relevance. This helps the reader understand the significance of the study in the broader academic context. The review should also explain or define specific aspects of the topic covered in the dissertation and the rationale for focusing on those areas. Moreover, the literature review will contribute to filling knowledge gaps, informing the reader of the research questions, and evaluating different theoretical perspectives, which will help pave the way for proposing new research directions.

Then, the review will discuss the methodological approach, the criteria used to select and analyze the literature, the inclusion and exclusion criteria, quality assessment, and data extraction techniques. Overall, the organizational structure of the literature review includes a thematic, chronological, and theoretical framework that provides a roadmap for what the readers can expect in subsequent sections. Finally, the literature review should explicitly connect the researcher's questions, goals, hypotheses, and objectives as the researchers write the report to spread their findings from the review. (Xiao & Watson, 2019, p. 10). Consequently, as with all research, the value of an academic review depends on what was done, what was found, and the clarity of reporting (Snyder, 2019, p. 2). An effective outline facilitates synthesizing information from various sources, allowing the writer to connect ideas and draw meaningful conclusions linking studies that support or challenge other’s findings.

In conclusion, another essential purpose for writing a literature review is to provide a framework for relating new findings to previous findings in the discussion section of one’s dissertation (J. Randolph, 2019, p. 2). Randolph (2019) makes it clear that “without establishing the state of the previous research, it is impossible to establish how the new research advances the previous research (J. Randolph, 2019, p. 2).” The literature review is labor-intensive and often requires three to six months of effort (J. Randolph, 2019, p. 1). Finally, Randolph (2019) also states that the literature review is a “legitimate and publishable scholarly document” (LeCompte & colleagues, 2003, p. 124) (J. Randolph, 2019, p. 2).

**Reflection on Personal Dissertation Idea**

Using the strategies and concepts aforementioned in a research study on the Montessori Method’s impact on academic achievement for lower-income students and students of color would begin with an introduction that provides background information on the Montessori Method and its principles. Then, it would define key terms like academic achievement, economic lower-income students, and students of color. Next, it would state the purpose of the literature review, which is to examine existing research on the impact of the Montessori Method on academic achievement, mainly focusing on lower-income students and students of color. Then, it would move to the theoretical framework to explore theories related to educational approaches and their impact on diverse student populations (J. Randolph et al., 2023, p. 3). It would also discuss theories underpinning the Montessori Method and its suitability for addressing the needs of economically disadvantaged and racially diverse students. Then, it would move to methodological approaches where reviews used quantitative, qualitative, or mixed-methods approaches to assess the academic outcomes of students in Montessori schools, especially those from lower-income backgrounds or belonging to minority groups ( J. Randolph et al., 2023, pp. 39–46). It would also evaluate the strengths and limitations of different research methodologies used in this context. The dissertation will outline group literature with critical themes related to academic achievement outcomes, socioeconomic factors influencing educational attainment, cultural responsiveness in education, and the effectiveness of the Montessori Method in diverse settings. It would discuss studies highlighting the benefits and challenges of implementing the Montessori Method in schools serving economically disadvantaged and racially diverse student populations (Denervaud et al., 2020). Furthermore, the dissertation will critically analyze the findings of relevant studies, comparing academic achievement outcomes between Montessori and traditional education settings for students from diverse backgrounds. Moreover, it would identify gaps in existing literature, such as limited research on specific demographic groups within economically lower-income or racially diverse populations. Finally, the dissertation would summarize critical findings regarding the impact of the Montessori Method on academic achievement for lower-income students and students of color, being sure to discuss implications for educational policy and practice, suggesting areas for further research to address knowledge gaps and improve educational outcomes for marginalized student groups.

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