Chapter 3: Research Methods

Introduction

The purpose of this qualitative study is to research and evaluate the prevalence, impact and factors that impact African American students’ poor academic performance in predominately African American high schools. This research is a response to a serious gap in the literature that the indicators and implications for poor performance amongst African American high school students is poorly understood. This chapter will review the problem under examination and the research questions. This chapter will also describe the rationale for methodology, the population and sample, instruments, data collection methods and analysis strategies.

This qualitative systematic review is designed to analyze the relationship between African American students who exhibit poor academic performance scores and the contributing factors that can lead to poor academic performance. Many studies have been conducted on academic performance, poor academic performance, and student learning achievement (Dudovitz et al., 2017; De Brey et al., 2019; Hill et al., 2018).Nevertheless, some African American students in predominantly African American high schools seem to have more difficulties than other students, which suggest the necessity of determining the reasons that African American students struggle more than other students. The relationship, if any, between African American students and poor high school performance scores will be investigated. This could lead to a plan for African American students to increase their academic performance scores in order to achieve greater success in predominantly African American high schools. Most African American students do not want to struggle with lower proficiency levels (Jordan, 2019; De Brey et al., 2019*).* Most African American students want to succeed in life and know that academic achievement is an important proficiency (De Breyet al., 2019; Jordan, 2019*).*

Research Methodology and Design

This qualitative systematic review is designed to analyze the factors that can contribute to poor academic performance among African American students in predominantly African American high schools in the United States (De Brey et al., 2019: Garcia & Serra, 2019; Hill et al., 2018). This study will use qualitative methodology with a descriptive phenomenological design. The phenomena to be studied are the contributing factors impacting poor academic performance amongst African American students attending predominantly African American high schools **in the** United States. Contributing factors include student behavioral problems, parental support, summer learning loss, and teacher educational styles and student academic performance, which contribute to poor academic achievement. A qualitative systematic review is designed to research and evaluate indicators that impact the student’s academic performance, for the purpose of this study a thorough, comprehensive review of the literature will be conducted. This will be achieved by employing a Hermeneutic method and the data for this study will be collected through a comprehensive search, review, analysis and interpretation of the literature to uncover new meaning (Creswell, 2003; Easton, 2010; Wilberg, 2006). This study will seek to identify key themes, perspectives and meanings that include the described methods of study. The literature review examines information on poor academic performance amongst African American students identifying the effects of this phenomenon across the academic domains in which they operate. Data will be analyzed to capture themes and patterns important to the research questions of this study. The use of qualitative methodology provides the researcher with an opportunity to better examine themes related to the phenomena being looked at. Quantitative studies use deductive reasoning techniques to support a theory and are not appropriate for this study (Creswell, 2003; Ridder, 2012). The use of qualitative methodology and research design creates an opportunity insight into the issue being studied and used to identifying trends (Creswell, 2003; Ridder, 2012). Qualitative methodology also enables researchers to more thoroughly analyze the data which is gathered and present data in a shared way, which is more reflective of the participants’ perceptions (Patton, 2015). As this study’s objective is to explore attributing factors towards poor academic performance amongst African American students within a predominantly African American high school population, a qualitative method will be the most appropriate choice. There is a great deal of literature on this topic however there are no clear outcomes.

The methods for collecting qualitative data typically comes from unstructured or semi-structured techniques that are conducted by researchers through interviews, focus groups or online technology where the behaviors and reactions of the participants are observed and recorded (Creswell, 2003; Yin, 2009). To employ a pure interview method for this research would not be appropriate because the ethical challenges including the ensuring of anonymity which could not be maintained if an interview-based approach were used. This systematic review is designed to be thorough, reproducible, and unbiased when it comes to the interpretation of the results (Ayorinde et al., 2020). During any research process, bias can occur anywhere from deciding which findings should be published to choosing the research question or deciding how to determine the outcomes (Ayorindeet al.,2020; Dekkers et al., 2019; Rombey et al., 2019). Meta-analyses are designed to eliminate publication bias by including individual participant data, unpublished and published studies which are relevant to the study (Ahmed,  Riley  & Sutton, 2012). However, publication bias can be misleading due to positive results from published studies that are most likely to be used because they have higher impact factors that have been published earlier (Ahmed,  Riley  & Sutton, 2012; Goyalet al., 2019; Nakamura et al.,2019). The purposes of meta-analysis are to analysis independent studies to establish a trend from multiple studies overall which is a statistical procedure that is intended to use statistics from multiple studies and combine them into a single conclusion (Ahmed,  Riley  & Sutton, 2012; Goyalet al., 2019; Nakamura et al.,2019).

To reduce or eliminate bias in this systematic review, the researcher will individually assess the quality of each study. The researcher will also evaluate potential bias by making sure the research question meets the PICO framework which are “problem or population or patient; intervention or exposure; comparison, and outcomes” (Buscemi et al.,2006) this will help reduce bias in this systematic review. Locating studies that are relevant such as arbitrary search limiters for instance year of publication, or the study geographical location will also reduce bias (Buscemi et al.,2006; Goyalet al., 2019). A systematic review (SR) is intended to respond to research questions by gathering information pertaining to the subject matter and summarizing that information, which includes retrieving, synthesizing, and evaluating the existing information pertaining to the subject at hand (Møller & Myles, 2016; Tricco et al., 2016). A meta-analysis has been defined as a statistical method used to increase the reliability in an SR by analyzing and combining the results that are significant to the study (Møller & Myles, 2016; Tricco et al., 2016). Research has shown that a larger sample size seems to offer greater reliability (i.e., accuracy) pertaining to any treatment effect (Dekkers et al., 2016; Tricco et al., 2016; Møller & Myles, 2016).

Population and Sample

Population. The population for this study includes African American students in the United States who attend predominantly African American high schools with poor academic performance scores. The population will consist of public high school students from difference cities in the United States. The search criteria will use keywords related to African American students’ poor academic performance scores such as African American high school academic achievement gap, African American students’ behavioral problems in school, and African American students’ parental support in school. The primary purpose of this study is to explore factors contributing to a percentage of African American students attending predominantly African American high schools **failing to meet the** standards of academic performance **required** to determine academic achievement.

Sample. This study will use qualitative hermeneutic methodology for sampling. Hermeneutic analysis is a name for various methods of analysis, which are based on interpreting. The strategy forms an opposite to those research strategies which stress objectivity and independence of interpretations in the formation of knowledge. Hermeneutic research includes various different approaches. Qualitative research allows researchers to gain insight and understanding through the already existing literature that is examined individually, in a systematic way and then discovering themes (Paterson & Higgs, 2005; Ridder, 2012; Yin, 2009). Creswell (2003) recommends a high range of 25 participants in case studies, however the actual number of studies will be determined when saturation is reached. Saturation is when the research is able to determine that adding more participants to the study does not result in additional information, data, or perspectives (Creswell, 2003). The target sample size for this study is 20-25 studies per research question for a total of approximately 100 articles (Creswell, 2003). More studies will be examined if the data saturation has not been reached.

Sampling Procedure. This study will follow a structured and comprehensive literature review process allowing for the identification of studies. Specifically, the subject and scope of the investigation is studies specific to African American student performance in high schools and high schools where the study body is predominantly comprised of African American’s. Keywords will be developed based on initial examination and review of the topic. Studies will be gathered from Northcentral University databases including Social-Science Citation Index, ProQuest, PsycINFO, reports, thesis and dissertations, peer-reviewed journal articles, conference papers, and official and government publications. Google Scholar will also be employed to yield further results. A digital copy of the data collected by the researcher will be saved to the researcher’s personal computer and will be kept for a period of three years from the completion of the study, at which time the data will be permanently deleted.

Materials and Instruments

For this study, a literature map will be used and a spreadsheet will be created to classify the literature under the appropriate headings. Each article will be examined for inclusion or exclusion based on their significance to the research question. Data will be recorded on the researcher’s personal computer and also uploaded to the cloud following university policy, IRB requirements and Federal law.

Systematic Review Guide. A literature review guide has been created for this study (see Appendix A). The purpose of the guide is to allow the researcher to create a structured approach that is predefined in terms of inclusion and exclusion criteria for the studies being examined (Singh, Kour, & Jayaram Mahesh, 2012). The systematic review guide will guide the inclusion or exclusion of all data. The inclusion criteria included: 1. Topic: The literature must relate directly to one of the research questions; 2. Recency: The literature should have been published between 2016 and 2020; 3. Age-Range: The literature should be related to high school students 14-18; 4. Geographical Spread: Literature should relate primarily to studies in the US; 5. Research base: Literature must be based upon empirical research (qualitative or quantitative); 6. Transparency: The methodology of the research upon which the research is based must be made explicit (e.g., sample size, instruments, analysis); 7. Reliability/Validity: As far as can be determined, the findings upon which the literature is based must be valid and reliable and trustworthy, taking into account the type of study.

**Study Procedure and Data Collection.**

The search criteria will be gathered from difference studies by using a number of keywords related to African American students’ poor academic performance scores such as African Americanhigh school academic achievement gap, African American students’ behavioral problems in school, and African American students’ parental support in school. The target sample size for this study is 20-25 studies per research question which is approximately 150 in total. More studies will be examined if the data saturation has not been reached.

The researcher will obtain approval from the NCU Internal Review Board (IRB) before proceeding with any research or data collection. Once the researcher obtains IRB approval the researcher will begin collecting data. Throughout the course of collecting data, the research will keep a research journal in order to make notes and also a spreadsheet of articles reflective of the systematic review guide (See Appendix A), which will be tested by 2-3 individuals who are experts in instrumentation and psychometrics including dissertation committee members and an external subject matter expert. The feedback from the review and testing of the guide will be included in the IRB application. The feedback of experts (e.g., committee members) will be used to finalize the guide prior to the collection of articles.

**Analysis**

The analysis of this study will follow the strict and widely held principles of qualitative methodology which is based on interpreting text (Crist & Tanner, 2003; Ware, 2008). As noted by Yin (2016) it is recommended that the utilization and focus of theoretical proposition guide the study, connecting the gathered data across common themes as found in case study methodology. The researcher will examine existing content for essential meaning to provide new understandings of a phenomenon related to the research questions. The ecological systems theory will drive the analysis along with descriptive hermeneutic methodology. A hermeneutic content analysis is a well-accepted method that joins the principles of content analysis such as coding, categorization, and interpretation with an examination, reflection, and understanding which guided the analysis of the study (Vieira & De Queiroz, 2017). In this study, secondary data in the existing literature will be examined, and the analyses will be shaped based on the subjective comparison of the results of comparative analysis and thematic review (Creswell, 2003).

Hermeneutic rules, as outlined in work by Vieira and de Queiroz (2017), are employed as follows: 1. A preliminary interpretation that considered the publication of text to have an opinion about the text and to write on the general sense or ‘first impression' of the text; 2. Interpretation of the immanent text to search for the meaning of words and grammatical relations, to observe text logic and contradictions; and, 3. Coordinated interpretation to find the context of the text and to observe affirmations and negation of the hypothesis. Incorporating the hermeneutic rules as foundational elements for evaluation, and process will then be conducted for each article included in the study (see Appendix A). Specifically Vieira and de Queiroz (2017) identify that to increase the rigor for scientific works as follows: 1. Ensure all text is read; 2. Study the text sentence by sentence and impression after impression; 3. Re-read the text as a whole; 4. Consult secondary text where possible from the same author; 5. Note reflections from the general text; 6. Create a sketch for all text; 7. Create a draft (summary) for each part of the text; and 8. Re-read the text for a final time.

The use of validated and reliable NVIVO© software will be utilized to meet the collection and analysis of the systematic review. NVIVO© is a computer-assisted qualitative data analysis software designed to support researchers by organizing and analyzing non-numerical or unstructured data. It supports the research to manage sources, identify themes, search for keywords, and helps to make connections between sources and also assists in removing bias. NVIVO© works by coding both the researchers note and sources to various themes, examine relationships in the data and combines analysis with linking, shaping, searching and modeling. NVIVO© supports a number of research methods including conversation analysis, phenomenology, hermeneutics, discourse analysis and ground theory.

To address research bias, the researcher will review the articles and notes from the review several times following the procedures identified by Vieira and de Queiroz (2017) prior to NVIVO© coding. After this, the researcher will upload the data into NVivo software or organize the qualitative data and facilitate the analysis process. Then the researcher will examine the data in NVivo through six steps that include familiarization with the data; assigning codes; searching for patterns and themes in the codes across the various summaries; review the themes; defining and naming themes; and producing the data manuscript (Yin, 2009). Throughout the analysis process, a focus on themes that will arise from the text from the various articles and include any notes that were taken thought the review process. **Assumptions**

Some assumptions were made for this study. There is an assumption that poor school performance occurs when a percentage of students in a school achieve low or below-normal scores compared to the scores required based on nationwide grade-level standards (Davis et al., 2018; Garcia & Serra, 2019). There is another assumption that the key to understanding the underachievement of African American children is the interface between attendant economic and social disadvantages and racism and classism (De Brey et al., 2019; Hill et al., 2018; Davis et al., 2018).

**Limitations**

This study had some limitations. This study will include boundaries for the research variables, such as poor academic performance and contributing factors, including students’ behavioral problems, students’ personal life issues, parental support, and educator teaching styles, all of which can lead to poor academic performance. As such the study is limited to the existing literature and the applicability to a subset of the population could be problematic. The sample populations among the research articles used will be limited to African American students who have poor academic performance scores and attend predominantly African American high schools and limits generalization to other vulnerable populations that are not African American (Hill et al., 2018; Davis et al., 2018). As there is no identifying information obtained in secondary data research, there is no way to verify if the self-reported information is accurate.

**Delimitations**

This study is delimited to data obtained through secondary research and focused on research of African American students who have poor academic performance scores and attend predominantly African American high schools in the United States. The delimited data results will be tailored to African American students who have poor academic performance scores and attend predominantly African American high schools in the United States (Davis et al., 2018; Hill et al., 2018; Theofanidis, Dimitrios & Fountouki, Antigoni, 2019). Generalizability has been defined as the research sample results founded on African American students who have poor academic performance scores and attend predominantly African American high schools to represent the whole population of African American students in the United States (Daviset al., 2018*;* Hillet al., 2018; Kukull, & Ganguli, 2012). Generalizability relates to the accuracy of the results from the study which can be used or transferred to other similar studies (Daviset al., 2018*;* Hillet al., 2018; Kukull, & Ganguli, 2012).

Ethical Assurances

The researcher has completed the web-based training course from the National Institutes of Health called “Protecting Human Research Participants.” An application was made to the IRB of Northcentral University, and no research was conducted until final approval was granted. The advantage of this qualitative systematic review study is that the data collected may meet the requirements of an “exempt review” because according to Northcentral University IRB, this study contains no human subjects, which means the research contains **secondary use of data** (Summers, 2016; [Dienes,](https://www.emerald.com/insight/search?q=Dominik%20Dienes) [Sassen,](https://www.emerald.com/insight/search?q=Remmer%20Sassen) & [Fischer,](https://www.emerald.com/insight/search?q=Jasmin%20Fischer) 2016). The information collected is not be considered human subjects research. This means the researcher may not be obligated to submit the qualitative systematic review study for IRB approval as long as the dataset collected in the study has no identifiers such as linked code numbers or private information (Boiral, Heras-Saizarbitoria, Brotherton, & Bernard, 2018; Summers, 2016; [Dienes,](https://www.emerald.com/insight/search?q=Dominik%20Dienes) [Sassen,](https://www.emerald.com/insight/search?q=Remmer%20Sassen) & [Fischer,](https://www.emerald.com/insight/search?q=Jasmin%20Fischer) 2016). For instance, private information can be viewed as a person’s behavior, which requires no observation. This type of study does not require IRB approval, because it is not seen as human subjects research (Boiral, Heras-Saizarbitoria, Brotherton, & Bernard, 2018; Summers, 2016).

Summary

This qualitative systematic review examines factors that may impact academic underachievement in some predominantly African American schools in the United States. The primary purpose of this study is to explore the factors contributing to a percentage of African American students attending predominantly African American high schools **failing to meet the** standards of academic performance **required** in their state. The goal of the proposed qualitative systematic review is to provide information to educators, students, parents, and others about the factors contributing to poor academic performance scores and to suggest solutions and resources that can be used to address these concerns. In this systematic review study, the limitation is generalizations. Careful consideration was given to ensure that the assumptions, delimitations, limitations, and ethical assurances meet the highest possible standards. Chapter 4 will present the findings of the proposed research and the analysis of those data.