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ABSTRACT

ANGELA MARIE HOLLIDAY: A Correlational Investigation of Black Females' Education and Their Reproductive Health

Research supports that people who dropout of high school do substantially worse than those who graduate (Anderson & Pörtner, 2014) based upon research on the consequences of dropping out of high school. High school dropouts “earn less, report lower levels of happiness, commit more crimes, and suffer from poorer health” (Anderson & Pörtner, 2014, p. 113). Dropout rates have a massive impact on employment rates, individual earnings, and crime rates (thinkimpact.com, 2020, para. 7). Students who dropout of high school “face social stigma, fewer job opportunities, lower salaries, and higher probability of involvement with the criminal justice system” (Mass. Dept. of Education, 2009, para. 2).

The odds are stacked against females even more regarding their health, including reproductive health. “Female dropouts may be more susceptible to contracting Sexually Transmitted Infections because they partner with significantly different types of people than non-dropouts” (Anderson & Pörtner, 2014, p. 113). Furthermore, “despite significant strides in women’s reproductive health, disparities in access and outcomes remain, especially for racial-ethnic minorities in the United States” (Journals.lww.com, 2020, para. 2). According to Dr. Veronica Gillispie-Bell, “implicit bias among health care professionals leads to disparities in how health care is delivered” (Obstetrics & Gynecology, 2021, para. 1). This disparity in healthcare was highlighted only recently with the number of Black lives lost due to COVID-19.

It is imperative to examine whether there is a clear correlation between Black female patients who dropout of high school and their reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, and whether they are greater in number than White females with the same level of education. The study aimed to identify a relationship between Black females’ level of education, specifically if they dropped out of high school, and whether their reproductive health outcomes (STIs, STDs, or unintended pregnancies) are greater in number than White females with the same level of education.

The purpose of the correlational study aimed to identify a relationship between Black female patients’ education (dropped out of high school) and the services they utilized at a women’s reproductive health care provider, using an “explanatory mixed methods design, which is a sequential, two-phased mixed method” (Creswell & Plano-Clark, 2011, p.12). The mixed-methods design is for the “procedure of collecting, analyzing, and mixing or integrating both quantitative and qualitative data at some stage of the research process within a single study” (Creswell & Plano-Clark, 2011, p.12).

The researcher found that for every three White female dropouts there was one Black female dropout based upon the reproductive health services used during the last two years. The researcher also found that more patients with higher degrees utilized the reproductive healthcare provider’s services than patients without college degrees.

KEYWORDS: Education, Females, Reproductive Health, Disparity, Outcomes

Order Number: _____

A CORRELATIONAL INVESTIGATION OF BLACK FEMALES' EDUCATION AND THEIR REPRODUCTIVE
HEALTH

Angela M. Holliday, Ed.D.

Lynn University

2022, by Angela Holliday

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Thank you, God, for loving me more than I could ever love myself and seeing me to this day. He is my constant and carries me when my strength fails. Thank you to my Chair, Dr. Susan Saint John, and to my committee members, Dr. Jennifer Lesh, and Dr. Ruthe Francis. I am forever grateful for your time, patience, edits, laughter, and guidance. I, of course, would not be writing this if it was not for Dr. Francis. Thank you for encouraging me to apply to Lynn University and for believing that I could do this. To my family and friends, thank you for your encouragement during this process and for enduring my tears, impatience, and absence; none of this would have been possible. And lastly, thank you to my two classmates, Dr. Amanda Evans, and Gregory Murphy, who told me I could not quit when I doubted myself after our second class. They are forever part of my life.

DEDICATION

"It has taken 232 years and 115 prior appointments for a Black woman to be selected to serve on the Supreme Court of the United States, but we've made it! We've made it — all of us."

-Justice Ketanji Brown Jackson

I dedicate this to all the women, particularly women of color, who were told they could not, should not, and ought not to dream beyond the boundary's others set for them. Never stop dreaming and reaching for the impossible!

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CHAPTER I: INTRODUCTION

“The most disrespected person in America is the Black woman. The most unprotected person in America is the Black woman. The most neglected person in America is the Black woman.” -Malcolm X, 1962

While Black women are the most educated bloc of Americans, according to a 2014 study that cites the “percentage of Black women enrolled in college in relation to their other race-gender groups” (Katz, 2020, para. 6), the above statement by Malcolm X rings true when it comes to healthcare and more importantly, reproductive healthcare for Black women in the United States (Chandler, R. et al., 2020).

According to the authors Rasheeta Chandler and Dominique Guillaume et al. (2020), “Black women not only have elevated rates of STI acquisition and are five times as likely as White women to become infected with chlamydia and gonorrhea but are disproportionately affected by adverse sexual and reproductive health outcomes compared with women of other races and ethnicities” (p. 205). “African-American women are three times more likely to die of pregnancy-related causes than white women” (Taylor, 2019, para. 4), and the “African-American infant mortality rate is twice the rate for white infants” (Taylor, 2019, para. 4).

Even with improved access granted by the Affordable Care Act (ACA, 2010), the disparities in health outcomes between African Americans and Whites are glaring. “African Americans still experience illness and infirmity at extremely high rates and have lower life expectancy than other racial and ethnic groups” (Taylor, 2019, para. 3).

A 2018 Issue Brief by National Partnership.org stated, “Black women experience higher rates of many preventable diseases and chronic health conditions including diabetes, hypertension, and cardiovascular disease” (para. 3). “Black women in the United States experience unacceptably poor

maternal health outcomes, including disproportionately high rates of death related to pregnancy or childbirth” (Nationalpartnership.org, 2018, para. 1). Black women are more likely to experience barriers to healthcare, are more likely to be uninsured, face more significant financial barriers to care when they need it, and are less likely to access prenatal care than White women (Nationalpartnership.org, 2018, para. 3).

The Problem

Student performance and high school graduation rates within the United States, particularly for Black, Indigenous, and people of color (BIPOC), have been discussed for years amongst education professionals. Even before the 1983 “A Nation at Risk Report” commissioned by Education Secretary Terrel H. Bell, there were surveys (1966 Equality of Educational Opportunity by James S. Coleman) to examine the equality of education within the United States for “Negroes,” “American Indians,” “Oriental Americans,” and “Whites other than Mexican Americans and Puerto Ricans” (1966).

Due to progress in education, “it was estimated that 3,650,000 students will have graduated from high school in 2020” (Thinkimpact.com 2020, para. 11). Of those graduating, 79% were Black students, 81% were Hispanic students, and 89.7% were White students who graduated on time (Thinkimpact.com, 2020). While still 6.3 points below the national average, “Black students’ graduation rates increased by 12 percentage points, and Hispanic students’ graduation rates, while still 4.3 points below the national average, increased by 10 percentage points” (Thinkimpact.com, 2020, para. 8).

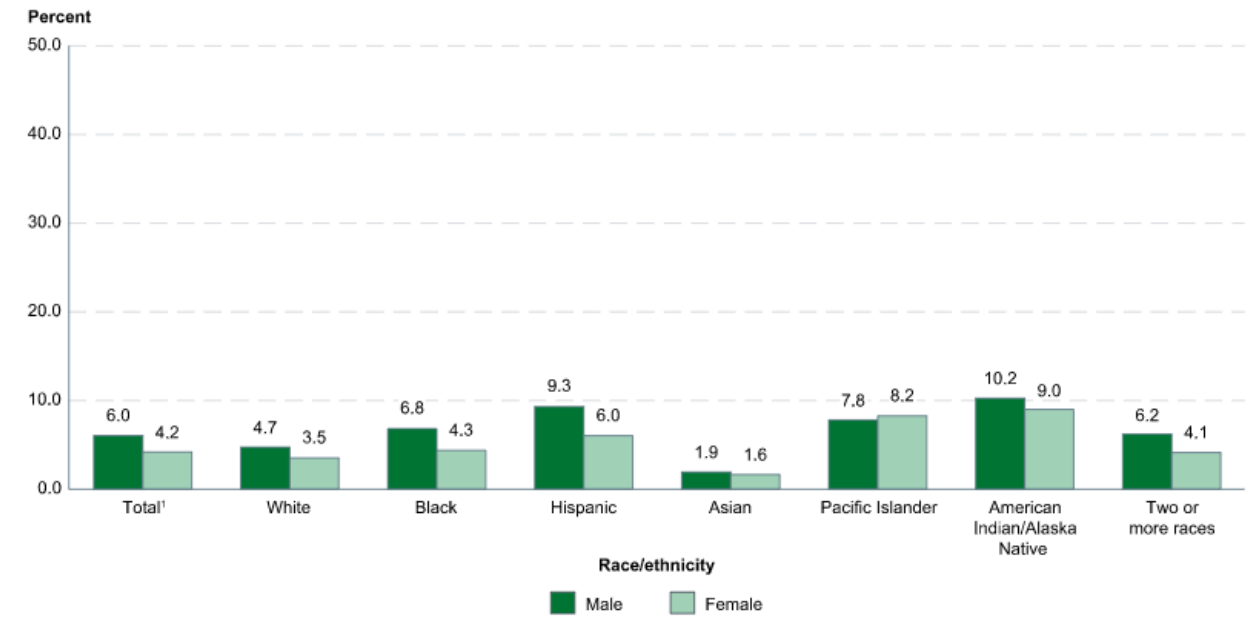
What happens, however, to students who do not graduate from high school? According to the National Center for Education Statistics, “Hispanic (7.7 percent) and Black (5.6 percent) dropout rates (16–24-years-old) remained higher than the White (4.1 percent) dropout rate” (2021). In “Teen

Pregnancy & High School Dropout: What Communities Can Do to Address These Issues,” Lisa Shuger states that “four in 10 minorities do not complete high school with their class” (2012).

Research supports that people who dropout of high school do substantially worse than those who graduate (Anderson & Pörtner, 2014) based on research on the consequences of dropping out of high school. High school dropouts “earn less, report lower levels of happiness, commit more crimes, and suffer from poorer health” (Anderson & Pörtner, 2014, p. 113). Dropout rates have a massive impact on employment rates, individual earnings, and crime rates (thinkimpact.com, 2020, para. 7). Students who dropout of high school “face social stigma, fewer job opportunities, lower salaries, and higher probability of involvement with the criminal justice system” (Mass. Dept. of Education, 2009, para.2).

Figure 1 below represents the dropout rates of youth and young adults, ages 16-24, by race/ethnicity (U.S. Department of Commerce, 2019).

Figure 1. Status Dropout Rates of 16-24-Year-Olds, By Race/Ethnicity and Sex: 2019



¹ Includes respondents who wrote in some other race that was not included as an option on the questionnaire.

NOTE: The status dropout rate is the percentage of 16- to 24-year-olds who are not enrolled in school and have not earned a high school credential (either a diploma or an equivalency credential such as a GED certificate). Data are based on sample surveys of the entire population residing within the United States, including both noninstitutionalized persons (e.g., those living in households, college housing, or military housing located within the United States) and institutionalized persons (e.g., those living in prisons, nursing facilities, or other healthcare facilities). Race categories exclude persons of Hispanic ethnicity. Although rounded numbers are displayed, the figures are based on unrounded data.

SOURCE: U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2019. See *Digest of Education Statistics 2020*, table 219.80.

The odds are stacked against females even more regarding their health, including reproductive health. Mark Anderson and Calus C. Pörtner found “strong evidence that dropping out causes both males and females to be more sexually promiscuous and increases the risk of contracting sexually transmitted diseases (STDs) for females” (2010, para. 1). “Female dropouts may be more susceptible to contracting Sexually Transmitted Infections because they partner with significantly different types of people than non-dropouts” (Anderson & Pörtner, 2014, p. 113). Certain sexually transmitted infections (STIs) can lead to cancer, infertility, and sometimes death (HPV, AIDS).

Black (5.6 percent) student dropout rates, ages 16 to 24, are higher than the White (4.1 percent) student dropout rate (2021). For this study, the researcher asks what happens to Black females who dropout of high school and their reproductive health?

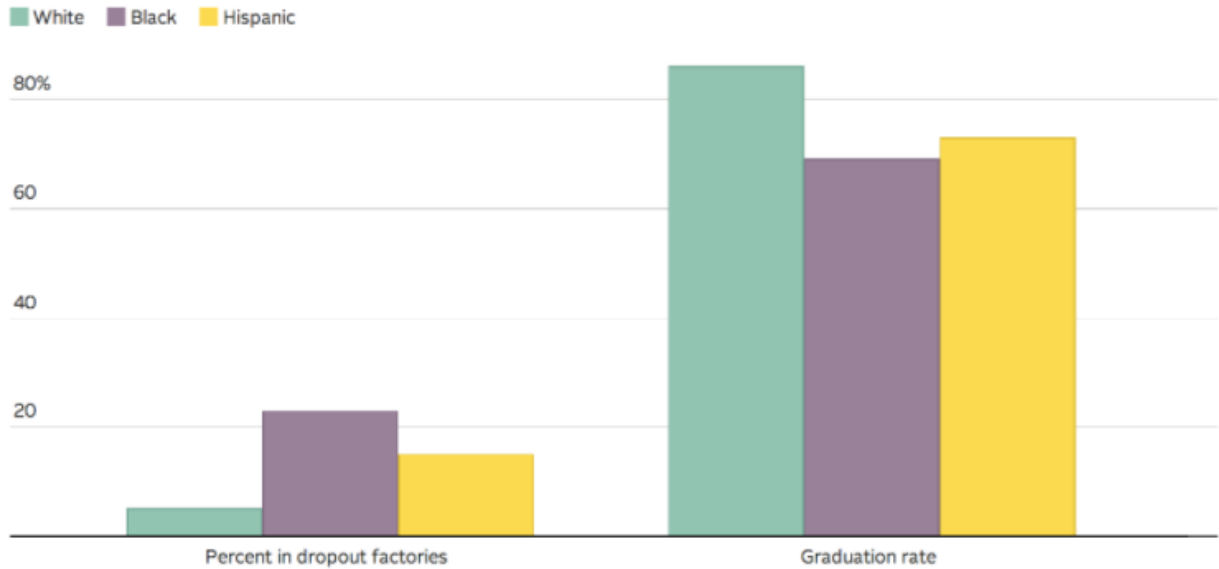
Even with high school dropout rates declining (Florida Department of Education 2018-2018 Dropout Rate) and Black women “enrolled in and graduating from school in the highest percentages across racial and gender lines” (Katz, 2020, para. 6), the problem is that dropping out of high school may increase the likelihood of reproductive health outcomes, i.e., STIs, STDs, or unplanned pregnancies for Black females that are greater in number than White females with the same level of education. This is in addition to the current reproductive health disparities for women of color.

Background of the Problem

“Every year, over 1.2 million students drop out of high school in the United States alone” (Miller, 2015, para. 3). For Black students, there are various reasons to drop out of school. According to the National School Boards Association, in 2018, “nearly one-third of Black students lived in poverty (32%), compared with 10% of White students in families living in poverty and, the percentage of Black students who lived in a household where the highest level of education attained by either parent with a bachelor’s or higher degree was 27%, compared with 69% of Asian students and 53% of White students” (2020, para. 4). The “Black Students in the Condition of Education 2020” report listed poverty, lack of internet at home, high-poverty schools, and lack of representation as only a few reasons for Black students’ low performance and dropout rate. “Additionally, 22% of Black 18- to 24-year-olds were neither enrolled in school nor working, which was much higher than the percentage of all U.S. 18- to 24-year-olds youth (14%)” (NSBA, 2020, para. 12).

Figure 2 below depicts high school graduation rates based on racial inequality (U.S. Education Department, 2014).

Figure 2. High School Graduation and Racial Inequality



Source: Building a GradNation 2014; US Education Department



Important to mention, “despite significant strides in women’s reproductive health, disparities in access and outcomes remain, especially for racial-ethnic minorities in the United States” (Journals.lww.com, 2020, para. 2). According to Dr. Veronica Gillispie-Bell, “implicit bias among health care professionals leads to disparities in how health care is delivered” (Obstetrics & Gynecology, 2021, para. 1). This disparity in healthcare was highlighted only recently with the number of Black lives lost due to COVID-19. While COVID-19 is a “new disease, the reason for the health disparity is the same as maternal morbidity and mortality: implicit bias and structural racism” (Obstetrics & Gynecology, 2021, para. 1).

Significance of the Study

It is imperative to examine whether there is a clear correlation between Black female patients who drop out of high school and their reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, and whether those outcomes are greater in number than White females with the same level of education. The study aims to identify a relationship between Black females' level of education, specifically if they dropped out of high school, and whether their reproductive health outcomes (STIs, STDs, or unintended pregnancies) are greater in number than White females with the same level of education.

Rationale

The purpose of the correlational study aims to identify a relationship between Black female patients' education (dropped out of high school) and the services they utilized at a women's reproductive health care provider, using an "explanatory mixed methods design, which is a sequential, two-phased mixed method" (Creswell & Plano-Clark, 2011, p. 12). The mixed-methods design is for the "procedure of collecting, analyzing, and mixing or integrating both quantitative and qualitative data at some stage of the research process within a single study" (Creswell & Plano-Clark, 2011, p. 12). The researcher's directional hypotheses are that Black female patients who drop out of high school experience reproductive health outcomes (STIs, STDs, or unintended pregnancies) greater in number than White females with the same level of education. The study aims to uncover if there was a correlation between the level of education and whether a lack of a high school diploma is a predictor of Black females' reproductive health outcomes (STIs, STDs, or unintended pregnancies).

Research supports that people who drop out of high school do substantially worse than those who graduate (Anderson & Pörtner, 2014) based on the consequences of dropping out of high school. High school dropouts "earn less, report lower levels of happiness, commit more crimes, and suffer from poorer health" (Anderson & Pörtner, 2014, p. 113). Dropout rates have a massive impact on

employment rates, individual earnings, and crime rates (thinkimpact.com, 2020, para. 7). Students who drop out of high school “face social stigma, fewer job opportunities, lower salaries, and higher probability of involvement with the criminal justice system” (Mass. Dept. of Education, 2009, para. 2).

The odds are stacked against females even more regarding their health, including reproductive health. “Female dropouts may be more susceptible to contracting Sexually Transmitted Infections because they partner with significantly different types of people than non-dropouts” (Anderson & Pörtner, 2014, p. 113).

With permission to review data granted from the provider’s Chief Operating Officer, the first phase of the study will include a quantitative research design, which will collect patient data (01/2019 to 1/2022) for statistical analysis of variables such as patient age, sex, race, service received, and the highest level of education achieved. The level of education will be used as the predictor for STIs, STDs, or unintended pregnancies. The patient’s age, race, and sex will be collected to ensure the data is for Black females, ages 18-24 only.

The second phase of the study, qualitative research design, will use audiotaped one-on-one interviews of Health Center Managers for the voice of the study. Managers will be asked open-ended questions to initiate the conversation around the quantitative results, the health case managers’ experiences and observations surrounding the study’s central group (Black females with less than a high school diploma and White females with the same level of education).

Theoretical and Conceptual Framework

For the study, the theoretical framework structure will follow *A Conceptual Framework for Reproductive Empowerment: Empowering Individuals and Couples to Improve Their Health* (Edmeades, J., Hinson, L., Sebany, M. et al., 2018) and Bronfenbrenner’s Ecological Systems Theory (Office for Multicultural Learning, 2021). To understand the potential impact on reproductive health or the interruption of education, particularly for Black women, we must first understand the concept of

reproductive health and the impact of an individual's environment and whether it determines their outcome.

“There are few events more consequential to the lives of men and women than those tied to reproduction” (Edmeades, J., Hinson, L., et al., 2018, p. 1). In almost all societies, “sexual behavior and the act of having children are important markers and determinants of social status, meaning that one's ability to shape those experiences is vitally important” (Edmeades, J., Hinson, L., et al., 2018, p. 1). Since 1994, the United Nations Conference of Population and Development has stated that reproduction is the “right of individuals to freely make decisions about their reproductive lives has been a cornerstone of sexual and reproductive health (SRH) programming” (Edmeades, J., Hinson, L., et al., 2018, p. 1). Over the past two decades, there has been increasing recognition that reproductive health is strongly related to one's overall empowerment; however, if Black females experience disparities in healthcare and education, do they have reproductive empowerment?

Reproductive empowerment is defined as “both a transformative process and an outcome, whereby individuals expand their capacity to make informed decisions about their reproductive lives, amplify their ability to participate meaningfully in public and private discussions related to sexuality, reproductive health, and fertility, and act on their preferences to achieve desired reproductive outcomes, free from violence, retribution or fear” (Edmeades, J., Hinson, L., et al., 2018, p. 1-3).

According to Edmeades, J., Hinson, L., et al., there are six components of the reproductive empowerment framework, as seen in table 1. They are:

Table 1. Six Components of the Reproductive Empowerment Framework

<ul style="list-style-type: none"> • Agency, including the critical elements of voice, choice, and power;
<ul style="list-style-type: none"> • Individuals as embedded in a wide range of social structures, including friends, family, and the state;
<ul style="list-style-type: none"> • Agency and empowerment as inherently relational concepts experienced and expressed in relationships at different social levels;
<ul style="list-style-type: none"> • Empowerment is a process that fluctuates over the life course as individuals pass through various life stages;
<ul style="list-style-type: none"> • Resources as ‘enabling factors’ that act as catalysts for empowerment within specific relationships; and
<ul style="list-style-type: none"> • The expression of reproductive agency in three key ways: SRH decision-making, leadership and collective action.

Source: Edmeades, J., Hinson, L., et al., 2018

Bronfenbrenner’s Ecological Systems Theory “is one of the most accepted explanations regarding the influence of social environments on human development” (n.d., para.1). The theory argues that the environment an individual grows up in effects every aspect of their life. “Social factors determine your way of thinking, the emotions you feel, and your likes and dislikes” (Office for Multicultural Learning, 2021, para. 1). Put simply; the theory states that if a person changes their environment, they will change their life. Furthermore, the theory states five systems changes, as seen in table 2 below. They are:

Table 2. Bronfenbrenner’s Ecological Systems Theory Five Systems Changes

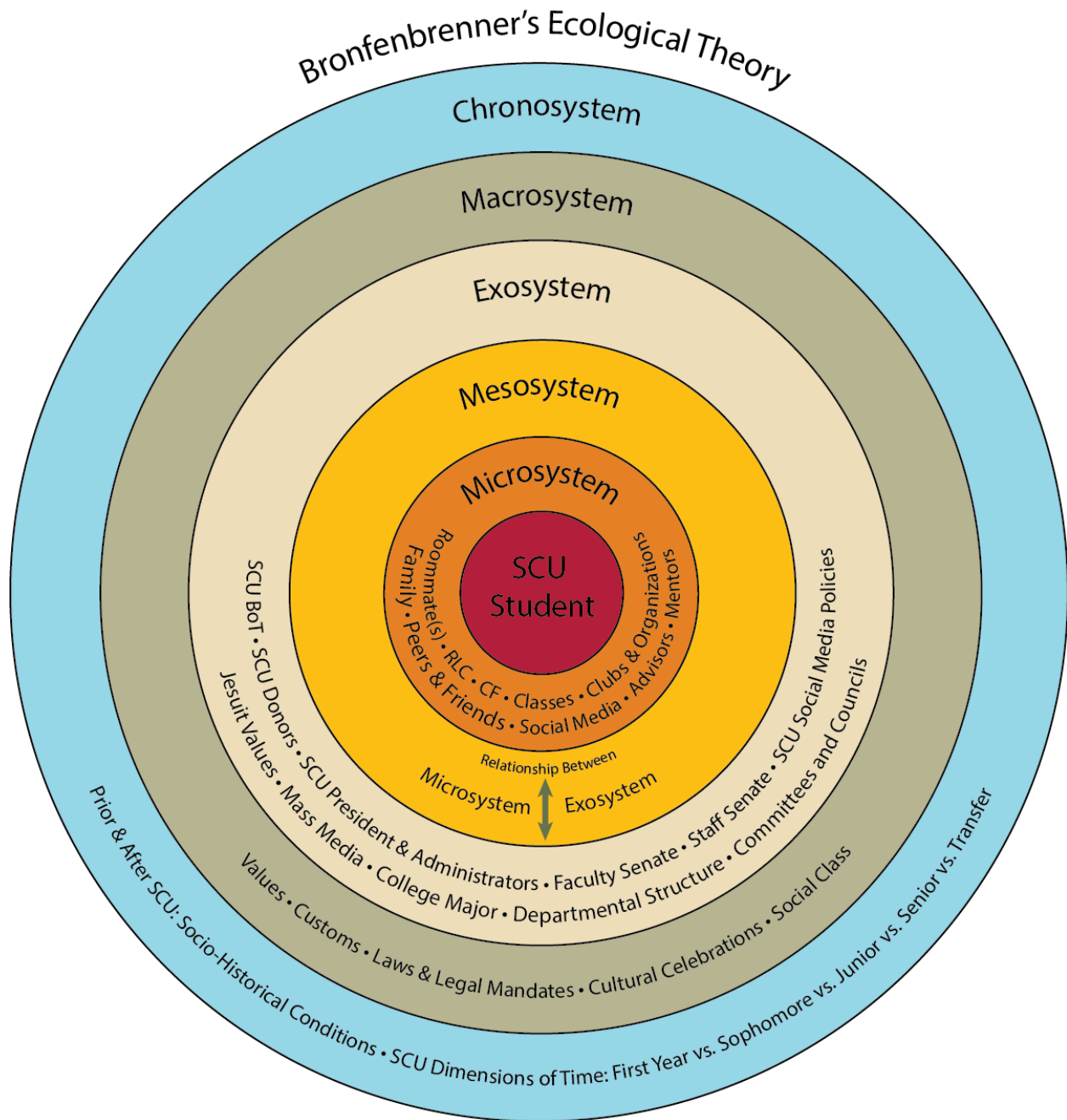
<ul style="list-style-type: none"> • Microsystem: Made up of the groups that have direct contact with the
<ul style="list-style-type: none"> • Mesosystem: The relationships between the groups from the first system.
<ul style="list-style-type: none"> • Exosystem: Factors that affect an individual’s life but, the elements of this system don’t have a direct relationship with the individual.
<ul style="list-style-type: none"> • Macrosystem: Contains those cultural elements that affect the individual and everyone around them.
<ul style="list-style-type: none"> • Chronosystem: The stage of life that the individual is in regarding the situations they are going through.

Source: <https://www.scu.edu/oml/about-us/theoretical-framework/>

The theoretical framework below supports the researchers' hypotheses that reproductive empowerment is a transformative process that happens during one's life and that the influence of an individual's environment sets about their social outcomes. As Bronfenbrenner simply states, "change your environment, change your life" (Office for Multicultural Learning, 2021, para. 2). See figure 3 below.

Figure 3.

Bronfenbrenner's Ecological Theory Model



Source: <https://www.scu.edu/oml/about-us/theoretical-framework/>

With that in mind, Black women who drop out of high school never have the luxury of developing reproductive empowerment since it is a transformative process over one's life and since

research shows that those who drop out of high school are more likely to have STDs and lower income than those who do not, their life is already determined.

Purpose of the Study

The study examines whether Black females who drop out of high school experience reproductive health outcomes (STIs, STDs, or unintended pregnancies) greater in number than White females with the same level of education and by interviewing Health Center Managers (experts in reproductive health outcomes), to understand the quantitative results.

Research Questions

The research questions are as follows:

1. What reproductive health outcomes do Black females experience?
2. Is there a correlation between Black female patients' level of education and the number of unintended reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies?

The researcher assumes a negative relationship between Black female patients' level of education and reproductive health outcomes such as STIs, STDs, or unintended pregnancies. Therefore, the higher the Black female patients' level of education, the lower the number of said reproductive health outcomes.

3. Is there a difference in the number of reproductive outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White females who drop out of high school?

The researcher assumes a statistical difference in the number of reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White female patients who drop out of high school.

Assumptions

The researcher assumes a deductive methodological assumption for the theory that there was a correlation between Black female patients with less than a high school diploma and their reproductive health outcomes. This assumption allows the researcher to develop directional hypotheses that Black female patients who drop out of high school experience reproductive health outcomes (STIs, STDs, or unintended pregnancies), and those outcomes are greater in number than White females with the same level of education. After carefully collecting and analyzing the provider's data, the researcher will observe a correlation that confirms the directional hypotheses.

Definitions of Terms

BIPOC: Black, Indigenous, and people of color. Specific to the United States, it is a term intended to center the experiences of Black and Indigenous groups and demonstrate solidarity between communities of color. "People are using the term to acknowledge that not all people of color face equal levels of injustice" (Merriam-webster.com, n.d., para. 1).

H.I.P.A.A.: Health Insurance Portability and Accountability Act of 1996. A federal law requiring the creation of national standards to protect sensitive patient health information from being disclosed without the patient's consent or knowledge (cdc.gov, 2018).

Reproductive Health: Reproductive health is a state of complete physical, mental, and social well-being. It is not merely the absence of disease or infirmity in all matters relating to the reproductive system and its functions and processes. Reproductive health implies that people can have a satisfying and safe sex life and can, reproduce, and have the freedom to decide if, when, and how often to do so (Who.int, n.d.).

STI (Sexually Transmitted Infection): An STI is an infection passed from one person to another through sexual contact. An infection is when a bacteria, virus, or parasite enters and grows in or on the

body. STIs are also called sexually transmitted diseases, or STDs. Some STIs can be cured, and some cannot (womenshealth.gov, 2019).

STD (Sexually Transmitted Disease): Generally acquired by sexual contact. The organisms (bacteria, viruses, or parasites) that cause sexually transmitted diseases may pass from person to person in blood, semen, or vaginal and other bodily fluids (mayoclinic.org, 2019).

Unintended Pregnancy: An unintended pregnancy is a pregnancy that is either unwanted, such as the pregnancy that occurred when no children or no more children were desired. Or the pregnancy is mistimed, such as the pregnancy occurred earlier than desired (cdc.gov, 2021).

Organization of the Dissertation

The study will examine whether Black women who drop out of high school experience reproductive health outcomes (STIs, STDs, or unintended pregnancies) and whether those outcomes are greater in number than White females with the same level of education.

With permission to review data granted from the provider's Chief Operating Officer, the first phase of the study will include a quantitative research design, which collected patient data (01/2019 to 01/2022) for statistical analysis of variables such as patient age, sex, race, service received, and the highest level of education achieved. The level of education will be used as the predictor for STIs, STDs, or unintended pregnancies. The patient's age, race, and sex will be collected to ensure that the data is for Black females, ages 18-24.

The second phase of the study, qualitative research design, will use audiotaped interviews of Health Center Managers for the voice of the study. Managers will be asked open-ended questions to initiate the conversation around the quantitative results and their experiences and observations surrounding the study's central group (Black females with less than a high school diploma and White females with the same level of education).

CHAPTER II: LITERATURE REVIEW

To provide a complete theoretical framework of the study, this literature review examined the background of the problem, the problem, the impact, the outcomes, and the summary. The research questions were as follows:

1. What reproductive health outcomes do Black females experience?
2. Is there a correlation between Black female patients' level of education and the number of unintended reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies?

The researcher assumed a negative relationship between Black female patients' level of education and reproductive health outcomes such as STIs, STDs, or unintended pregnancies. Therefore, the higher the Black female patient's level of education, the lower the number of said reproductive health outcomes.

3. Is there a difference in the number of reproductive outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White females who drop out of high school?

The researcher assumed a statistical difference in the number of reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White female patients who dropped out of high school.

Background

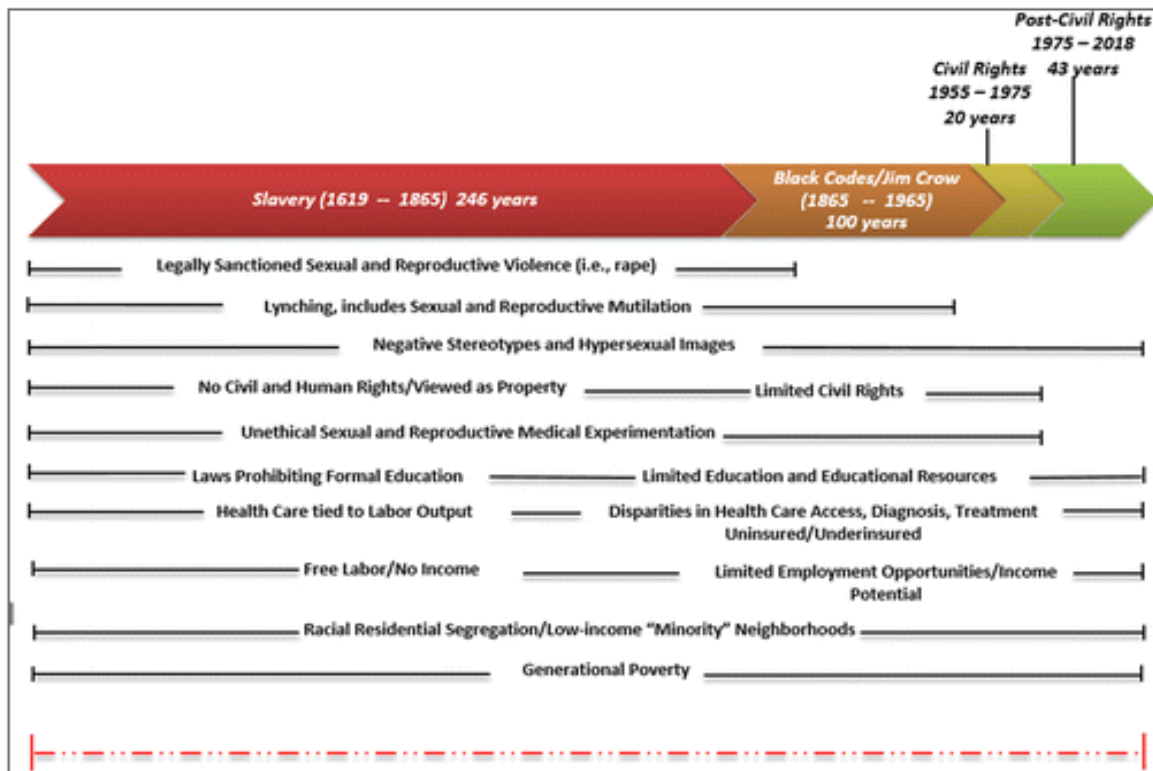
"Every year, over 1.2 million students drop out of high school in the United States alone" (Miller, 2015, para. 3). There are various reasons for Black students who dropping out of school. According to the National School Boards Association, in 2018, "nearly one-third of Black students lived in poverty (32%), compared with 10% of white students in families living in poverty and, the percentage of Black students who lived in a household where the highest level of education attained by either parent with a

bachelor's or higher degree was 27%, compared with 69% of Asian students and 53% of white students" (2020, June, para. 4). The "Black Students in the Condition of Education 2020" report listed poverty, lack of internet at home, high-poverty schools, and lack of representation as only a few of the reasons for Black students' low performance and dropout rate. "Additionally, 22% of Black 18- to 24-year-olds were neither enrolled in school nor working, which was much higher than the percentage of all U.S. 18- to 24-year-olds youth (14%)" (NSBA, 2020, para. 12).

Additionally, "despite significant strides in women's reproductive health, disparities in access and outcomes remain, especially for racial-ethnic minorities in the United States" (Journals.lww.com, 2020). According to Dr. Veronica Gillispie-Bell, "implicit bias among health care professionals leads to disparities in how health care is delivered" (Obstetrics & Gynecology, 2021, para. 1). This disparity in healthcare was highlighted only recently with the number of Black lives lost due to COVID-19. While COVID-19 is a "new disease, the reason for the health disparity is the same as maternal morbidity and mortality: implicit bias and structural racism" (Obstetrics & Gynecology, 2021, para. 1).

Figure 4 is a visual representation of key historical and contemporary social conditions experienced by African American women in the United States.

Figure 4. Timeline of Key Historical and Contemporary Racial and Social Experiences of Africans and their American Descendants in the United States



Source: Liebertpub.com

Problem

For years, there has been much discussion amongst professionals about student performance and high school graduation rates within the United States. Even before the 1983 “A Nation at Risk Report” commissioned by Education Secretary Terrel H. Bell, there were surveys (1966 Equality of Educational Opportunity by James S. Coleman) to examine the equality of education within the United

States for “Negroes,” “American Indians,” “Oriental Americans,” and “whites other than Mexican Americans and Puerto Ricans” (1966).

As a result of progress, according to Thinkimpact.com, in 2020, “it was estimated that 3,650,000 students will have graduated from high school” (2020). Of those graduating, 79% were Black students, 81% were Hispanic students, and 89.7% were white students who graduated on time (thinkimpact.com, 2020, para. 8). While still 6.3 points below the national average, “Black students’ graduation rates increased by 12 percentage points, and Hispanic students’ graduation rates, while 4.3 points below the national average, increased by 10 percentage points” (thinkimpact.com, 2020, para. 8).

With “Black (5.6 percent) status dropout rates (16–24-years-old) higher than the White (4.1 percent) dropout rate” (2021), what happens to Black students who drop out of high school? More specifically, what happens to Black females who drop out of high school and their reproductive health? “Female dropouts may be more susceptible to contracting STIs because they partner with significantly different types of people than non-dropouts” (Anderson & Pörtner, 2014, p. 113). Certain STIs can lead to cancer, infertility, and sometimes death. Mark Anderson and Calus C. Pörtner found “strong evidence that dropping out causes both males and females to be more sexually promiscuous and increases the risk of contracting an STD for females” (2010, p. 113).

With high school dropout rates declining (Florida Department of Education 2018-2018 Dropout Rate) and with Black women “enrolled in and graduating from school in the highest percentages across racial and gender lines” (Katz, 2020, para. 6), the problem is dropping out of high school may increase the likelihood of reproductive health outcomes, i.e., STIs, STDs, or unplanned pregnancies for Black females that are greater in number than White females with the same level of education. This is in addition to the current reproductive health disparities for women of color.

Impact

The researcher hoped to examine the level of education and reproductive health outcomes for Black females compared to White females and learn how healthcare providers and educators can learn and implement ways of shrinking the disparity gap in education and healthcare for BIPOC.

Outcomes

The benefit of the study was awareness, at the very least. However, the researcher hoped that the study would provide insight into the disparities for Black females in both education and healthcare. The researcher also hoped that the study would set the platform for discussing the impact of inequality overall.

Summary

The purpose of the correlational study was to investigate if there was a relationship between Black females who drop out of high school and the services utilized at a women's reproductive health care provider, using an "explanatory mixed methods design, which is a sequential, two-phased mixed method" (Creswell & Plano-Clark, 2011, p. 12). The mixed-methods design was for the "procedure of collecting, analyzing, and mixing or integrating both quantitative and qualitative data at some stage of the research process within a single study" (Creswell & Plano-Clark, 2011, p. 12). The researcher's directional hypotheses asked if Black females who dropped out of high school had reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, and were those outcomes greater in number than White females with the same level of education. The goal was to uncover if there was a correlation between the two and explore how dropping out of high school may predict future circumstances that impact Black females' reproductive health.

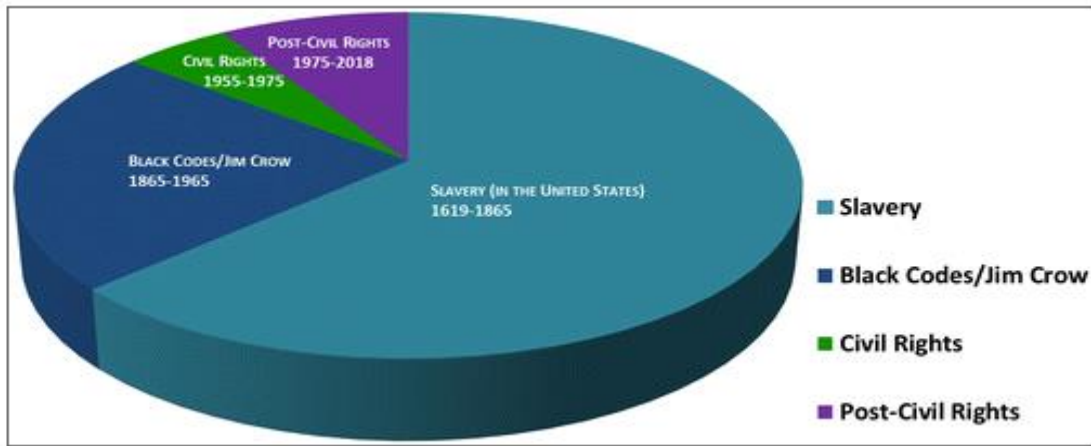
There is no question whether there are health disparities for Black women and their health which was front and center during the pandemic. With COVID-19, Black Americans died at higher rates than White Americans. According to authors Tamara Rushovich and Sarah Richardson in an op ed for the Boston Globe, “it is well understood that the driver of these racial disparities is racism and social inequality, not genetics” (2021, para. 1). Moreover, according to WebMD, “the difference in death rates between Black women and White women is more than triple that between White men and White women” (2021, p. 1). Despite reports that men are dying at greater rates due to COVID-19 than women, 19thnews.org states that “Black women are dying of coronavirus at three times the rate of both White and Asian men in Georgia and Michigan (2021, para. 3).

Thirty years ago, “Kimberlé Crenshaw coined the term intersectionality to describe how Black women face a unique form of oppression resulting from living at the intersection of racism and gender-based discrimination” (Rushovich et al., 2021, para. 1). Black women and many women of color “have to grapple with negative stereotypes and attitudes that affect how they are treated at work, whether they can provide care for their families, and whether they can access the quality health care that they need without bias and discrimination” (Americanprogress.org, 2020, para. 1).

The disparity in health care is evident in reproductive healthcare for Black women both past and present. “The sexual and reproductive health of African-American women has been compromised due to multiple experiences of racism, including discriminatory healthcare practices from slavery through the post-Civil Rights era; however, studies rarely consider how the historical underpinnings of racism negatively influence the present-day health outcomes of African-American women” (Prather et al., 2018, para. 1).

Figure 5 “presents a time period spanning 399 years (1619-2018) beginning in 1619 when enslaved Africans were brought to the United States and includes slavery, Black Codes/Jim Crow, Civil Rights, and post-Civil Rights” (Prather et al., 2018, para. 9).

Figure 5. Key Periods of Africans and their American Descendants in the United States



Source: Liebertpub.com

Table 3 below represents the experiences contributing to disparities in sexual and reproductive health for African American women.

Table 3. Historical and Contemporary Sexual-And Reproductive-Related Health and Healthcare Experiences of African American Women

Period	Time span	No. of years	Personal experiences of AAW that contribute to disparities in sexual and reproductive health	Healthcare experiences of AAW that contribute to disparities
Slavery	1619–1865	246	Public, nude physical auction examinations to determine reproductive ability ^{15,20} ; raped for sexual pleasure and economic purpose ^{19,23} ; purposely aborting pregnancies where rape occurred; Jezebel stereotype emerged of black women being hypersexual ¹¹⁵ ; generational poverty	Nonconsensual gynecological and reproductive surgeries performed at times repeatedly on female slaves without anesthesia, including cesarean sections and ovariectomy to perfect medical procedures ^{27,28}
Black Codes/ Jim Crow	1865–1965	100	Rape ³⁵ ; lynching (genitalia/reproductive mutilation) ^{36,37,40} ; uncertain/unequal civil rights ³⁵ ; stereotypes and negative media portrayals continued; generational poverty	Nonconsensual medical experiments continued ²⁷ ; poor or no healthcare for impoverished blacks; compulsory sterilization ⁴⁷ ; Jim Crow laws enforced lack of access to quality healthcare services and opportunities; effects of Tuskegee Untreated Syphilis Study on women ^{49,50}
Civil Rights	1955–1975	20	Lynching, uncertain/unequal civil rights and violence against women to show superiority and control ³⁵ ; stereotypes and negative hypersexual media portrayals continued; generational poverty	Nonconsensual medical experiments continued ^{27,132} ; compulsory sterilization ⁴⁷ ; effects of Tuskegee Untreated Syphilis Study on women ⁵⁰ ; unequal healthcare services ³⁰
Post-Civil Rights	1975–2018	43	Black exploitation movies, media's hypersexual images continued ^{116–117} ; generational poverty	Unequal healthcare continued ³⁰ ; targeted sterilizations, hysterectomies, abortions, and birth control ^{42,43,47,53,54}
Total no. of years	1619–2018	399		

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“The historical context of racism continues to shape the sexual and reproductive health of African American women” (Prather et al., 2018, para. 5). According to the CDC, “African American women experience a high burden of STIs, including HIV, and in 2012, compared with white women, African American women were more likely to be diagnosed with primary or secondary syphilis, gonorrhea, or chlamydia” (Prather et al., 2012, para. 19). In addition, “African American women were also two to three times as likely as White women to have pelvic inflammatory disease, and if left

undiagnosed or untreated, these conditions can lead to pregnancy complications and infertility” (Prather et al., 2018, para. 17). The “CDC reported that African American women had an HIV incidence rate that was 20.1 times greater than that of white women in 2010 and are more likely to have delayed HIV treatment compared with women of other races” (Prather et al., 2018, para. 19).

“Health care for Black women is hugely affected by racism” (Douglas, 2020, para. 4). In 2021, progress in recognizing the ills of our past was made; however, as the literature proves, there is still a long way to go to eliminate racial health care disparities for Black women.

To provide a complete theoretical framework of the study, this literature review examined the background of the problem, the problem, the impact, the outcomes, and the summary. The research questions were as follows:

1. What reproductive health outcomes do Black females experience?
2. Is there a correlation between Black female patients' level of education and the number of unintended reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies?

The researcher assumed a negative relationship between Black female patients' level of education and reproductive health outcomes such as STIs, STDs, or unintended pregnancies. Therefore, the higher the Black female patient's level of education, the lower the number of said reproductive health outcomes.

3. Is there a difference in the number of reproductive outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White females who drop out of high school?

The researcher assumed a statistical difference in the number of reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White female patients who dropped out of high school.

Background

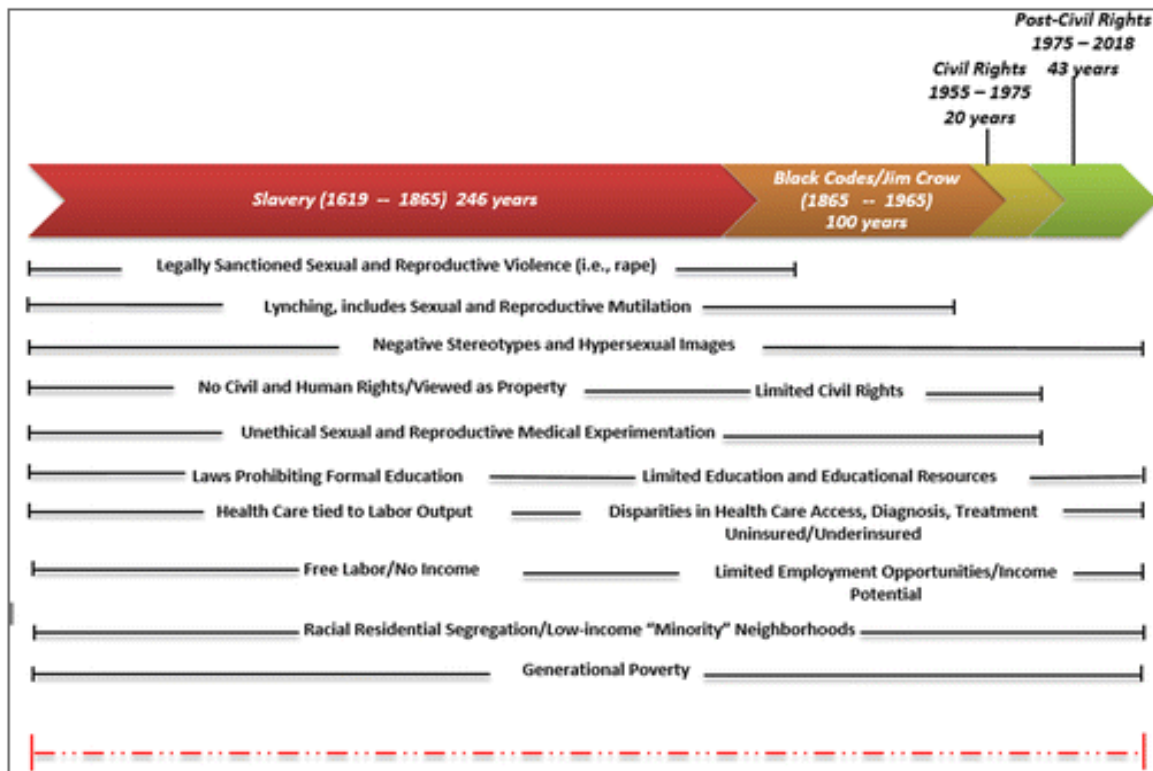
"Every year, over 1.2 million students drop out of high school in the United States alone" (Miller, 2015, para. 3). There are various reasons for Black students dropping out of school. According to the National School Boards Association, in 2018, "nearly one-third of Black students lived in poverty (32%), compared with 10% of white students in families living in poverty and, the percentage of Black students who lived in a household where the highest level of education attained by either parent with a bachelor's or higher degree was 27%, compared with 69% of Asian students and 53% of white students"

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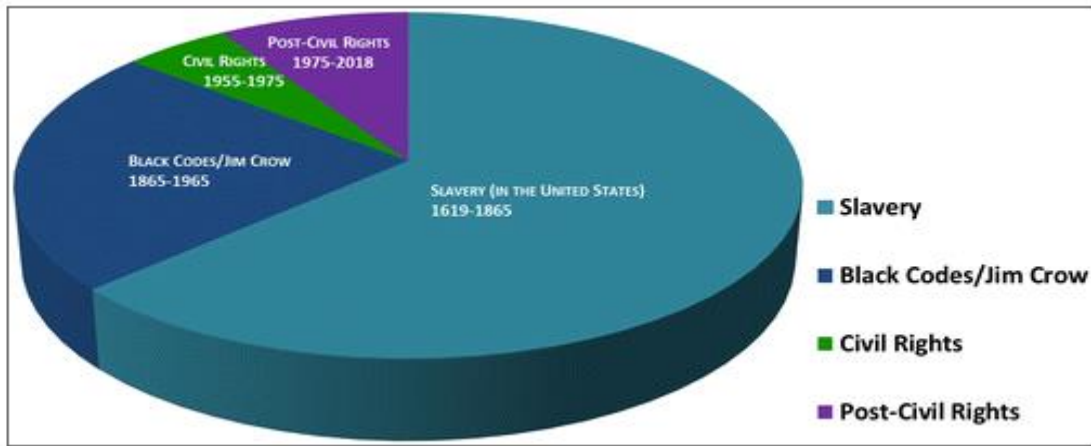
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CHAPTER III: METHODOLOGY

Introduction

The mixed-methods study (Creswell & Plano-Clark, 2011, p. 12) investigated if there was a relationship between Black females' education (less than a high school diploma) and the services they utilized at a women's reproductive health care provider, using an "explanatory mixed methods design, which is a sequential, two-phased mixed method" (Creswell & Plano-Clark, 2011, p. 12). The mixed-methods design was for the "procedure of collecting, analyzing, and mixing or integrating both quantitative and qualitative data at some stage of the research process within a single study" (Creswell & Plano-Clark, 2011, p. 12). The researcher's directional hypotheses were that Black females who dropped out of high school experienced reproductive health outcomes, including STIs, STDs, or unintended pregnancies. The study aimed to uncover a correlation between the two and explore if the lack of education was a predictor of future reproductive health outcomes.

With permission to review data granted from the provider's Chief Operating Officer (Appendix F), the first phase of the study included the quantitative research design, which collected non-identifying patient data (01/2019 to 01/2022) of over 100 patients, for statistical analysis of variables such as patient age, sex, race, service received, and the highest level of education.

The second phase of the study, qualitative research design, used audiotaped one-on-one interviews of health center managers for the voice of the study. Dependent upon the analysis of data by the researcher, the managers were asked for their observations of Black female patients with less than a high school diploma and their reproductive health outcomes (STIs, STDs, or unintended pregnancies) and if they believed those outcomes were greater in number than White females with the same level of education if that was true based on the data.

Philosophical Perspective

If we examine reproductive health inequities for Black women, then we should begin with Dr. J. Marion Sims, “the father of modern gynecology,” who used Black women as guinea pigs for his untested surgical experiments. Dr. Sims believed that Black women “did not feel pain,” and between 1848 and 1849, he operated on at least 10 enslaved women without anesthesia (Wall, 2006). An enslaved woman, Anarcha, endured at least 30 surgeries without anesthesia. We also examined the “Jezebel” stereotype that has continued to exist today for Black women. Dr. David Pilgrim, Professor of Sociology at Ferris State University, described the Jezebel concept as the “belief that Blacks are sexually lewd and one that predates the institution of slavery in America” (2012). William Smith described African women on the coast of Guinea as “fiery and warm hot constitution’d Ladies who were continually contriving stratagems how to gain a lover” (Pilgrim, 2012). During slavery, the Jezebel concept “was used as a rationalization for sexual relations between white men and black women, especially sexual unions involving slavers and slaves” (Pilgrim, 2012). A quote by Andrea Williams sums up the sexual exploitation of Black women best “perhaps she remembers her great-great-grandmother who wanted to protest but only rolled her eyes and willed herself not to scream when the White man mounted her from behind” (2001).

With a constructivist lens, the researcher’s philosophical perspective was that there were severe reproductive health outcomes such as STIs, STDs, or unplanned pregnancies for Black females who dropped out of high school. In addition, the researcher believed those outcomes were greater in number than those of White females with the same level of education.

Research Questions

1. What reproductive health outcomes do Black females experience?
2. Is there a correlation between Black female patients' level of education and the number of unintended reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies?

The researcher assumed there was a negative relationship between Black female patients' level of education and reproductive health outcomes i.e., STIs, STDs, or unintended pregnancies. Therefore, the higher the Black female patient's level of education, the lower the number of said reproductive health outcomes.

3. Is there a difference in the number of reproductive outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White females who drop out of high school?

The researcher assumed a statistical difference in the number of reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White female patients who dropped out of high school.

The researcher's directional hypotheses were that Black females who dropped out of high school experienced reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, and those outcomes were greater in number than White females with the same level of education. The study's goal was to uncover a correlation between the two and explore how the lack of education may predict future reproductive health circumstances that were greater in number than White females with the same level of education.

Context/Setting of the Study

The mixed-method study investigated if there was a relationship between Black female patients' education (dropped out of high school) and the services they utilized at a women's reproductive health care provider and explained those results. Using an "explanatory mixed methods design, which is a sequential, two-phased mixed method" (Creswell & Plano-Clark, 2011, p.12), the researcher sought to understand and explain Black female patients' reproductive health care choices. The mixed-methods design was for the "procedure of collecting, analyzing, and mixing or integrating both quantitative and qualitative data at some stage of the research process within a single study" (Creswell & Plano-Clark, 2011, p. 12). The researcher's directional hypotheses were that Black female patients who dropped out of high school had reproductive health outcomes (STIs, STDs, unintended pregnancies), and those outcomes were greater in number than White females with the same level of education. The study aimed to uncover any correlation between the level of education and whether a lack of a high school diploma was a predictor of Black females' reproductive health outcomes (STIs, STDs, or unintended pregnancies).

With permission to review data granted from the provider's Chief Operating Officer (Appendix F), the first phase of the study included a quantitative research design, which collected patient data (01/2019 to 01/2022) for statistical analysis of variables such as patient age, sex, race, service received, and the highest level of education achieved. The level of education was used as the predictor for STIs, STDs, or unintended pregnancies. The patient's age, race, and sex were collected to ensure the data was for Black and White females, ages 18-24 only.

The second phase of the study, qualitative research design, used audiotaped one-on-one interviews of Health Center Managers for the voice of the study. Managers were asked for their observations of Black female patients with less than a high school diploma and their reproductive health

outcomes (STIs, STDs, or unintended pregnancies). They were also asked about the data analysis outcomes and their thoughts.

Description of Population and Sample

The researcher included over 100 female patients who utilized the services of a women's reproductive health care provider from 01/2019 to 01/2022. The economic or professional background was not included. The purpose of the study was to examine the correlation between Black female's education (dropped out of high school) and their reproductive health outcomes (STIs, STDs, or unintended pregnancies) and whether those outcomes were greater in number than White females with the same level of education, and one-on-one interviews were to add a voice of experience and opinion.

The Chief Operating Officer was asked for authorization for the researcher to review the provider's data. Following the Health Insurance Portability and Accountability Act (H.I.P.A.A.), names were not included in the study, and each data line item was assigned a fictitious number for study purposes. Names were not used for the Health Center Managers in the study. Instead, the researcher asked random managers if they would consent to participate in the study. Each manager was assigned a letter, such as Manager A, Manger B, and Manager C, and no more than three managers were asked to participate. If a manager did not want to participate in the study, the researcher asked another manager. The rationale behind speaking with the managers was to learn firsthand their observations while working in the health centers.

Once receiving access to the provider's data, the researcher reviewed patient information based on the variables of age, sex, race, services provided, and the highest level of education to sort out data necessary for the study. Once the data was reduced to race, age, sex, services provided, and level of education and reduced to STIs, STDs, or unintended pregnancies, the researcher tabulated the numbers for the category of less than a high school diploma to develop the percentage for each category. This was to prove the researcher's directional hypotheses. Also included were the audiotaped one-on-one

interviews with the health center managers to add a voice to the study. The results were written after both stages of the study were completed.

Research Design - Rationale for Design

With permission to review data granted from the provider's Chief Operating Officer (Appendix F), the first phase of the study included the quantitative research design, which collected patient data (01/2019 to 01/2022) for statistical analysis of variables such as patient age, sex, service received, and the highest level of education.

The second phase of the study, qualitative research design, used audiotaped one-on-one interviews of health center managers for the voice of the study. Open-ended questions (Appendix C) were asked to initiate the conversation around the quantitative results, the Health Center Managers' experiences, and observations surrounding the study's central group (Black females with less than a high school diploma and White females with the same level of education).

The researcher's directional hypotheses were that Black females who dropped out of high school experienced reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, and those outcomes were greater in number than White females with the same level of education.

Data Collection

The researcher reviewed the provider's data of independent variables (age, sex, race, the highest level of education, and service received) to develop the directional hypotheses. Based on the data and analysis, grounded theory was a possibility; however, the researcher believed it was necessary to understand the experiences and opinions of the Health Center Managers before developing an argument based on the data alone.

Ethical Considerations

Following H.I.P.A.A. laws, names were not included in the study, and each data line item was assigned a fictitious number for study purposes. Names were not used for the Health Center Managers in the study. Instead, each manager was assigned a letter such as Manager A, Manger B, and Manager C. The rationale behind speaking with the managers was to learn firsthand their observations while working in the health centers.

Risks & Benefits

The risks were minimal; however, the researcher recognized that the topic of race, minority student performance, and reproductive health could be a sensitive one for examination and discussion, especially with the current climate within the United States; however, for the purposes of learning and education, the researcher believed it was appropriate to study the topic, and the benefits outweighed the risks.

In the second phase of the study, the researcher expected there would be hesitation by the participants. The researcher also expected the participants to be reluctant to mention anything unfavorable about either the patients or the organization while being recorded. The researcher emailed an Informed Consent form to the participants to sign to ensure their confidentiality and that the researcher understands the sensitive nature of the material. If an interviewee was uncomfortable or the discussion served as a trigger for the participant and wished to discontinue their involvement, resources (Employee Assistance Program (EAP), mental health telehealth...) were provided for the participant to use.

The study examined Black women's education level and reproductive health outcomes to provide insight for healthcare workers and educators on ways to improve both for Black women. There were no benefits for participants; however, they may have enjoyed knowing they were assisting with building the literature around Black females' reproductive health care outcomes.

How Data Was Secured

All data and materials were stored in a locked file cabinet in the researcher's office. The researcher was the only one with a key. Consent forms were also stored in the locked file cabinet. Once the study was completed, all materials in the researcher's possession were destroyed in a cross-cut shredder.

Anonymity & Confidentiality

The researcher was not provided patient names by the health care provider. As such, fictitious numbers were created by the researcher for each line item of patient data.

The risks to those participating in the study were minimal since the data from the reproductive healthcare provider was anonymous and did not include any identifiable H.I.P.A.A. markers.

Given the sensitivity of the data, confidentiality was of the utmost importance. Therefore, the managers' names were not used in the study. Instead, those who participated in the study's second phase were identified as Manager A, Manager B, and Manager C.

Quality of Data

The Phase 1 and Phase 2 data was triangulated to make meaning of the essence of the overarching research questions.

Data Analysis

For the first phase of the study, the researcher used cross-tabulation to analyze the relationship between the variables of education, race, age, sex, and service provided to the female patient. For research question 1, the researcher used descriptive statistics (mean, mode, median, range, standard deviation) and determined that the data set was evenly distributed. For research question 2, the researcher used *Pearson R* correlations, and for research question 3, the researcher used *Sample T-test*. The researcher used the Statistical Package for Social Sciences (SPSS) to run all analyses in Phase 1. The researcher ran a power test and distribution command to run inferential statistics to determine if

enough data points and variables were evenly distributed. Statistical significance was determined if a result was $p < .05$.

For the second phase of the study, the researcher used a one-on-one interview semi-structured question design for the recorded interviews of the Health Center Managers, interviewed via Zoom. The researcher used Otter.ai to ensure recordings. Semi-structured interview questions (Appendix C) were devised after the analysis from Phase 1. Permission was obtained, via consent forms, from the participants before they were recorded. From the recordings, the researcher created transcriptions and changed any identifying names participants used during the recordings. The researcher used Otter.ai to create the transcriptions. Once the transcriptions were created, the researcher emailed them back to each participant for member-checking (Creswell & Creswell, 2018). Participants had one week to respond with any corrections; if the researcher did not hear from the participants within one week, it was assumed the participants were okay with the transcription. Once the transcriptions were checked, the researcher began the process of organizing them into codes to generate three to five themes.

Limitations and Delimitations

The age of female patients was collected as part of the researcher's directional hypotheses. Also, sex, services provided, and race were included variables for purposes of the study. Limitations may have included uneven data sets and/or a small number of focus group members. The temporal delimitation was from 01/2019 to 02/2022.

Summary

The purpose of the correlational study was to investigate if there was a relationship between Black females who dropped out of high school and the services utilized at a women's reproductive health care provider, using an "explanatory mixed methods design, which was a sequential, two-phased mixed method" (Creswell & Plano-Clark, 2011). The mixed-methods design was for the "procedure of collecting, analyzing, and mixing or integrating both quantitative and qualitative data at some stage of

the research process within a single study” (Creswell & Plano-Clark, 2011). The researcher’s directional hypotheses asked if Black females who dropped out of high school had reproductive health outcomes (STIs, STDs, or unintended pregnancies) and if those outcomes were greater in number than White women with the same level of education. The goal was to uncover a correlation between the two and explore how dropping out of high school may predict future circumstances that impact Black females’ reproductive health.

CHAPTER IV: RESULTS

Introduction

The purpose of this correlational investigation was to discover whether there was a statistically significant difference between Black females and White females who did not complete high school and the number of reproductive health outcomes such as STDs, STIs, or unintended pregnancies each group experienced. Secondary analyses were completed to investigate data provided by a reproductive healthcare provider based on race, age, sex, level of education, and service provided to female patients for the period of 01/2019 to 01/2022. Semi-structured interview questions were developed from the quantitative analyses, and one-on-one interviews were conducted with each Health Center Manager.

This chapter describes the data collected and analyzed to investigate the research questions and presents the results of both the data and one-on-one interview analyses. Each quantitative research question from the first phase of the study is restated and is followed by the results and analyses relating to each question. Only statistically significant results at the $p < .05$ level were reported as many variables required multiple tests of significance, and there was a large amount of patient data. Qualitative semi-structured questions are stated from the second phase of the study and are followed by the themes from the one on one interview answers. The results from phase one and phase two were then triangulated.

Summary of Analyses

For the first phase of the study, the researcher used cross-tabulation to analyze the relationship between the variables of education, race, age, sex, and service provided to the female patient. For research question 1, the researcher used descriptive statistics (mean, mode, median, range, standard deviation) to determine if the data set was evenly distributed. For research question 2, the researcher used *Pearson R* correlations, and for research question 3, the researcher used *Sample T-test*. The

researcher used Statistical Package for Social Sciences (SPSS) to run all analyses in Phase 1. The researcher ran a power test and distribution command to run inferential statistics to determine if enough data points and variables were evenly distributed.

For the second phase of the study, the researcher used a semi-structured question design for the recorded one-on-one interviews of the participants, interviewed via Zoom. Once the transcriptions were created, the researcher emailed them back to each participant for member-checking (Creswell & Creswell, 2018). The participant responses allowed the researcher to organize them into three to five themes which were then used to create meaning around the research questions.

Results for Phase 1 (Quantitative)

The reproductive healthcare provider's database consisted of 41,030 patients. Of those patients, 8,816 were identified as African American or Black (including Black/Other, Black or African American, multi-racial, and Black or African American), 25,584 were identified as White (including both not Hispanic/Latino and Hispanic/Latino), 82 were identified as American Indian or Alaska Native, 915 were identified as Asian, 518 multi-racial, 969 more than one race, 2,394 identified as other race, 8 Pacific Islander, and 1,744 patients were listed with an unknown race or other.

There were 2,915 males and 38,115 females in the provider's database. Of the 38,115 females, 29,914 sought family planning services (STI and STD testing or treatment), and 7,587 females were identified as abortion patients. Of the 38,115 females (including all races) who received family planning or abortion services, 13,567 patients were between the ages of 18 to 24, and of those there were 45 who had an 8th grade or less education, 849 had a 9th-12th grade education (no diploma), 3,037 had a high school diploma or GED, 961 patients had an associate's degree, 694 had a bachelor's degree, 10 had a doctorate (Ph.D. or Ed.D.) or professional degree (MD, DDS, DVM), 75 patients had a master's degree, and 3,379 had some college credit, but no degree.

Due to the provider’s extensive database of 41,030 patients from 01/2019 to 01/2022, and for an even distribution amongst Black and White females, the researcher deleted all males and every third patient for the racial identifier of White. The total number of patients for each race was limited to 154, for a total of 328 for the study. Figure 6 illustrates the purity of the data that was used for analysis.

Figure 6. Case Processing Summary

	Case Processing Summary					
	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
race * service	328	100.0%	0	0.0%	328	100.0%

Results for Research Questions

A cross-tabulation analysis was run on the variable’s "race" and "service." The sample was controlled for females only, Black, White race, ages 18-24, and the patients with less than a high school diploma.

Figure 7 below illustrates the services provided based on a patient’s race.

Figure 7. Cross Tabulation

Race/Service Cross Tabulation

			service			Total
			Abortion Patient	Family Planning	Telehealth	
race	Black or African American	0	26	138	0	164
	White	1	24	137	2	164
Total		1	50	275	2	328

The lambda measurement of the agreement was added to the analysis as both controlled variables were nominal, and the researcher was looking for any association between race and service.

Figure 8 below illustrates symmetric and the dependents of race and service.

Figure 8. Directional Measures

Directional Measures ^f						
			Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Nominal by Nominal	Lambda	Symmetric	.014	.008	1.740	.082
		race Dependent	.018	.010	1.740	.082
		service Dependent	.000	.000	. ^c	. ^c

Results for Research Question 1

RQ1: What reproductive health outcomes do Black females experience?

It was imperative to examine whether there was a clear correlation between Black female patients who dropped out of high school and their reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, and whether those outcomes were greater than White females with the same level of education. The study aimed to identify a relationship between Black females’ level of education,

specifically if they dropped out of high school, and whether their reproductive health outcomes (STIs, STDs, or unintended pregnancies) were greater in number than White females with the same level of education.

As illustrated in figure 9 below, Black females visited the provider for more family planning services than abortion services.

Figure 9. Race and Service Crosstabulation

Race/Service Crosstabulation

		service				
		Abortion Patient	Family Planning	Telehealth	Total	
race	Black or African American	0	26	138	0	164
	White	1	24	137	2	164
Total		1	50	275	2	328

Figure ten below demonstrates the services used by both Black and White females by frequency, percent, a valid percent, and cumulative percent.

Figure 10. Percentages by Race

		Race			Cumulative Percent
		Frequency	Percent	Valid Percent	
Valid	Black or African American	164	50.0	50.0	50.0
	White	164	50.0	50.0	100.0
Total		328	100.0	100.0	

Results for Research Question 2

RQ2: Is there a correlation between Black female patients’ level of education and the number of unintended reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies?

The researcher assumed a negative relationship between Black female patients' level of education and reproductive health outcomes such as STIs, STDs, or unintended pregnancies. Therefore, the higher the Black female patients' level of education, the lower the number of said reproductive health outcomes.

Of the 38,115 females (including all races) who received family planning or abortion services, 13,567 patients were between the ages of 18 to 24, and of those 45 had an 8th grade or less education, 3,037 had a high school diploma or GED, 849 had a 9th-12th grade education (no diploma), 961 patients had an associate's degree, 694 had a bachelor's degree, 10 had a doctorate (Ph.D. or Ed.D.) or professional degree (MD, DDS, DVM), 75 patients had a master's degree, and 3,379 had some college credit, but no degree.

Results for Research Question 3

RQ3: Is there a difference in the number of reproductive outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White females who drop out of high school?

The researcher assumed a statistical difference in the number of reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White female patients who dropped out of high school.

There was no statistically significant difference between services provided to Black and White females, between 18-24, with less than a high school diploma from 2019 to 2022.

Figure 11 below illustrates the non-statistical result.

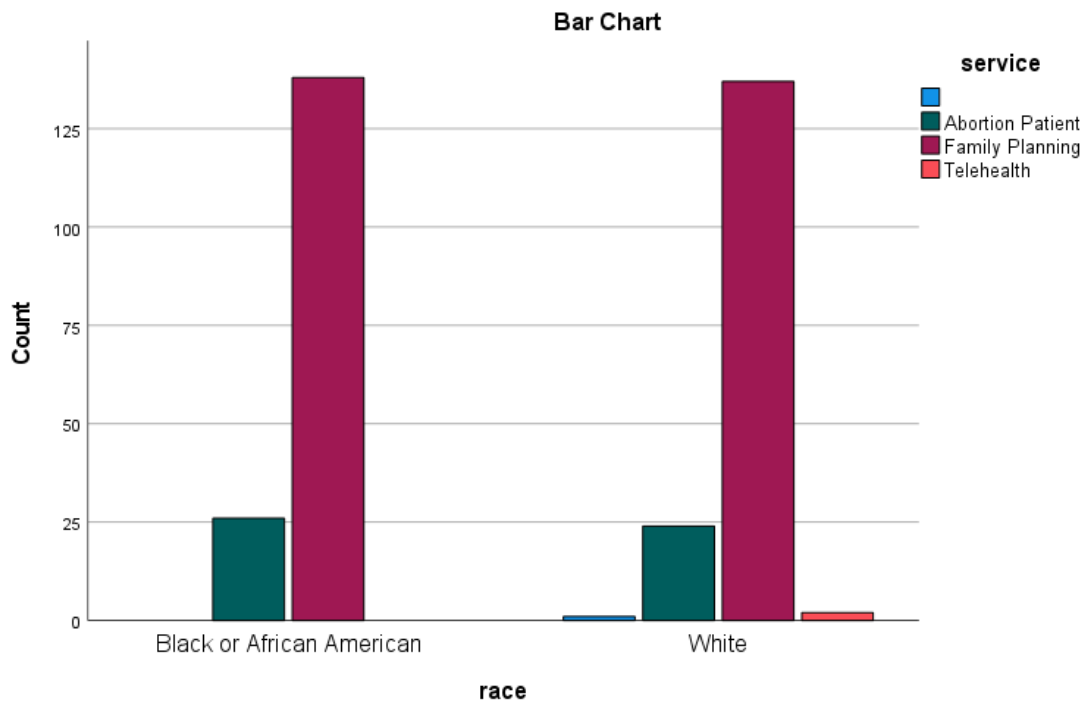
Figure 11. No Statistically Significant Difference

Race/Service Cross Tabulation

		service				
		Abortion Patient	Family Planning	Telehealth	Total	
race	Black or African American	0	26	138	0	164
	White	1	24	137	2	164
Total		1	50	275	2	328

Table 4 below displays the differences between Black and White females and the provider services.

Table 4. Black and White Females and the Provider Services Received



Qualitative Analysis-Phase 2

For the study's second phase, the researcher conducted recorded one-on-one interviews of each Health Center Manager interviewed via Zoom with a semi-structured question design. Below is a figure describing the health center managers who participated in the one-on-one interviews (30-35, race: Black and Hispanic). After the Interviews, the researcher transcribed each audiotape and sent it back to each participant for member checking. Figure 12 lists the participant questions.

Figure 12. Qualitative Analysis-Phase Two Questions

Question 1: The first result I found was that there were three White female dropouts for every one Black female dropout based on the reproductive health services used during the last two years. Why do you think I received this result?
Question 2: The following result I found was that more patients with higher degrees utilized the organization's services than patients without college degrees. Why did I receive this result?
Question 3: The third result I found was that there was not a statistically significant difference between White and Black female patients who dropped out of high school in STIs, STDs, or unintended pregnancies. Why did I receive this result?
Question 4: Did the findings impact you, in any way, in your role as a Health Center Manager?
Question 5: Overall, are there any organizational changes that should be implemented based on these results? Why or why not?

Researcher Observations of Interviews

The researcher observed that the participants appeared at ease when responding to the interview questions during the one-on-one interviews. The managers' answers were authentic and seemed to be heartfelt. They believed it was their mission and duty to educate patients on their bodies.

Interview Questions and Themes

The researcher organized data analysis of participants' interview question responses that were then organized into codes to generate five common themes seen below.

IQ1: The first result I found was that there were three White female dropouts for every one Black female drop out based on the reproductive health services used during the last two years. Why do you think I received this result?

Theme 1: Education

Manager A 3:12: "I guess I shouldn't be that surprised because I've seen it on Facebook and things, but you know, I don't feel like Facebook is a reputable resource. Where it's like Black, African American females are the most educated group of people in America, but you don't see it publicized anywhere else. We're taught to believe that if you don't see it on any major news networks or from other reputable sources, it's not easily accessible."

Manager B 1:02: "I think the Black race was really urged to learn. In my opinion, it was really pressed upon them to finish school. It was very important that we continue to be better than the last generation. So, I feel like that is the main reason why more Black females would graduate than White just out of the pure drive and push from the family structure to be as successful as we can as a race; to be more successful than our predecessors.

Manager C 1:27: Manager C could not answer the question.

IQ2: The next result I found was that more patients with higher degrees utilized the organization's services than patients without college degrees. Why did I receive this result?

Theme 2: Accessibility

Manager A 4:20: "I think because people with higher degrees take the time to do their research. So, they know that we have providers who go to the same schools that their private providers go to. They understand that you can get the same amount of care, the same level of care, that you would get at a private provider with lower costs if you don't have insurance. We'll work with you even if you don't have insurance. So, I feel like they just don't do research around what is out there; I find that the people who are uneducated listen more to hearsay or don't go here, don't go there because they're not real people, they're not real doctors. I find that a lot because I must educate some of our people that they are in the same pool that private providers are. We have higher standards because we have a whole team of people to ensure that we're practicing at the highest level possible."

Manager B 2:24: “Yeah, that is something I heard in another interview, access, access to information, probably more access to information. They just seek the information more than others would be my thought.”

Manager C 2:36: “So in terms of like family planning, the only reason I could think of why you would have more people with higher degrees accessing services is I think it's more around education. Being more aware of the necessity of receiving medical services and being more in tune with their health than someone who's possibly like at a high school or college level. They just have more resources. Again, I think just being in tune and a little more education, more awareness, for their reproductive health, that's what I think.”

IQ3: The result I found was that there was no statistically significant difference between White and Black female patients who dropped out of high school in STIs, STDs, or unintended pregnancies. Why did I receive this result?

Theme 3: Awareness

Manager A 7:16: “Um, whether you're educated or not, I feel like everybody needs health care. And sometimes, education doesn't play a role in your sexual reproductive health. Sometimes that is led by emotion. In many cases, everybody can relate to that on some level, regardless of the level of education we've received.”

Manager B 3:20: “Yeah, sex has no barriers. It affects Blacks and Whites in that respect. To me, either they know about protection, or they don't. So that can affect either race equally, in my thought.”

Manager C 4:05: “So I think there's a lot of misconceptions, just from my own experience working with patients. I think there's a lot of misconception that if you are White, you just have more resources than if you are a Black female. But just from working in the community that I work in; I don't feel that is true. Just looking at the patient population we service, I think it's close to 50% White females compared to Black females. Just being attuned to your own body and what you need, race really has

nothing to do with it. I think if you grow up in a community where the poverty level is high, the accessibility is the same. Your struggles are the same. You know, resources will be the same as well, looking for employment access and other resources of income, I think are the same.”

IQ4: Do the findings impact you, in any way, in your role as a Health Center Manager?

Theme 4: Inclusivity

Manager A 9:31: “No, not necessarily because I feel the organization is inclusive of everyone regardless of education, race, or anything like that.”

Manager B 3:56: “Oh, yes! You know, especially in the area that I am in with the college-age groups. They need the services and STI testing and treatment regularly, and it is just that age group where they're more experimental. They're trying to figure themselves out. They may be careful, but they're still scared. So, they are always concerned. So, the STI testing and treatments are relevant.”

Manager C 6:31: “I obviously can only refer to the center that I currently manage, and it's a very high poverty level center. So, I don't look at race as being a factor. I look at the community and what resources we can offer the community, young women, whether they be White or Black, and the level of education and support they receive within the community. So, again, just in my clinic, I would say that 50% of the population is White, and the other 50% are women of color, so I don't see that race plays a role here. I think it's more about accessibility, education, and the community they live in.”

IQ5: Overall, are there any organizational changes that should be implemented based on these results?
Why or why not?

Theme 5: Social Responsibility

Manager A 8:18: "Not necessarily. I try to care for every patient and give them help with whatever they might need, regardless of whatever they come in with or what they don't come in with."

Manager B 5:01: "We have put forth a huge effort to ensure that the communities know that we are here for those purposes. They do a good job of spreading the information about the available services and teaching the community that they can have safer sex. We have education programs that go out to the schools, even middle school. So, the organization is doing a great job of getting the information out and letting people know what we do as far services."

Manager C 7:49: "Because we're such a vital part of our community, obviously, many women, especially the uninsured population, come to seek out our services. I feel as an organization; we should do a better job at educating all communities. We focus a lot on high schools and high school students, but I think there's a whole portion of the population that we miss, the undocumented population. As an organization, we should focus a good portion of our time on reaching and educating those females and those individuals because many women are uneducated about reproductive health and their resources are very limited. By the time they come into the clinic, their problems are more aggravated than they could have been with more education and more resources. Had it been handled, it could have been treated, and it wouldn't have resulted in a case such as cancer."

Triangulation

Phase 1 and Phase 2 data was triangulated to make meaning of the essence of the overarching research questions.

As a result of data analyses in the first phase of the study, the researcher found one Black female dropout for every three White female dropouts based on the reproductive health services used

during the last two years. The researcher also found that more patients with higher degrees utilized the reproductive healthcare provider's services than patients without college degrees. Moreover, lastly, the researcher found no statistically significant differences between Black and White females who dropped out of high school in the treatment for STIs, STDs, or unplanned pregnancies.

The results listed above proved the researcher's hypotheses to be, in fact, incorrect. There were no statistically significant differences between Black and White females who dropped out of high school to treat STIs, STDs, or unplanned pregnancies. This was a monumental discovery! While the argument that the data was from only one provider could be made, the results still provided a rejection of the narrative that is often espoused by many.

Additionally, the themes uncovered from the researcher's one-on-one interviews highlighted the organization's slogan of "Care. No Matter What.," as the heart of the business for the Health Center Managers who find it their duty to educate and possibly liberate individuals in to making decisions of what is best for them.

Summary of Results

The researcher's directional hypotheses were that Black female patients who dropped out of high school experienced reproductive health outcomes (STIs, STDs, or unintended pregnancies) greater in number than White females with the same level of education. The study aimed to uncover a correlation between the level of education and whether a lack of a high school diploma may have predicted Black females' reproductive health outcomes (STIs, STDs, or unintended pregnancies).

Research supports that people who dropout of high school do substantially worse than those who graduate (Anderson & Pörtner, 2014) based on research on the consequences of dropping out of high school. High school dropouts "earn less, report lower levels of happiness, commit more crimes, and suffer from poorer health" (Anderson & Pörtner, 2014, p. 113). Dropout rates have a massive impact on employment rates, individual earnings, and crime rates (thinkimpact.com, 2020, para. 7). Students who

dropout of high school “face social stigma, fewer job opportunities, lower salaries, and higher probability of involvement with the criminal justice system” (Mass. Dept. of Education, 2009, para. 2).

The odds are stacked against females even more regarding their health, including reproductive health. “Female dropouts may be more susceptible to contracting Sexually Transmitted Infections because they partner with significantly different types of people than non-dropouts” (Anderson & Pörtner, 2014, p. 113).

The research asked the following questions to answer the hypotheses:

1. What reproductive health outcomes did Black females experience?
2. Was there a correlation between Black female patients’ level of education and the number of reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies?

The researcher assumed a negative relationship between Black female patients’ level of education and reproductive health outcomes such as STIs, STDs, or unintended pregnancies. Therefore, the higher the Black female patients’ level of education, the lower the number of said reproductive health outcomes.

3. Was there a difference in the number of reproductive outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White females who dropped out of high school?

The researcher assumed there is a statistical difference in the number of reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White female patients who dropout of high school.

As a result of data analyses in the first phase of the study, the researcher found one Black female dropout for every three White female dropouts based on the reproductive health services used during the last two years. The researcher also found that more patients with higher degrees utilized the reproductive healthcare provider’s services than patients without college degrees. Moreover, lastly, the

researcher found no statistically significant differences between Black and White females who dropped out of high school, in the treatment for STIs, STDs, or unplanned pregnancies.

Based upon the results of the second phase of the study, the one-on-one interviews, the researcher found the common themes of education, accessibility, awareness, inclusivity, and social responsibility amongst the interview question answers.

Figure 13 represents the reproductive health services provided to the total number of patients seen from 01/2019 to 01/2022.

Figure 13. Services By Age

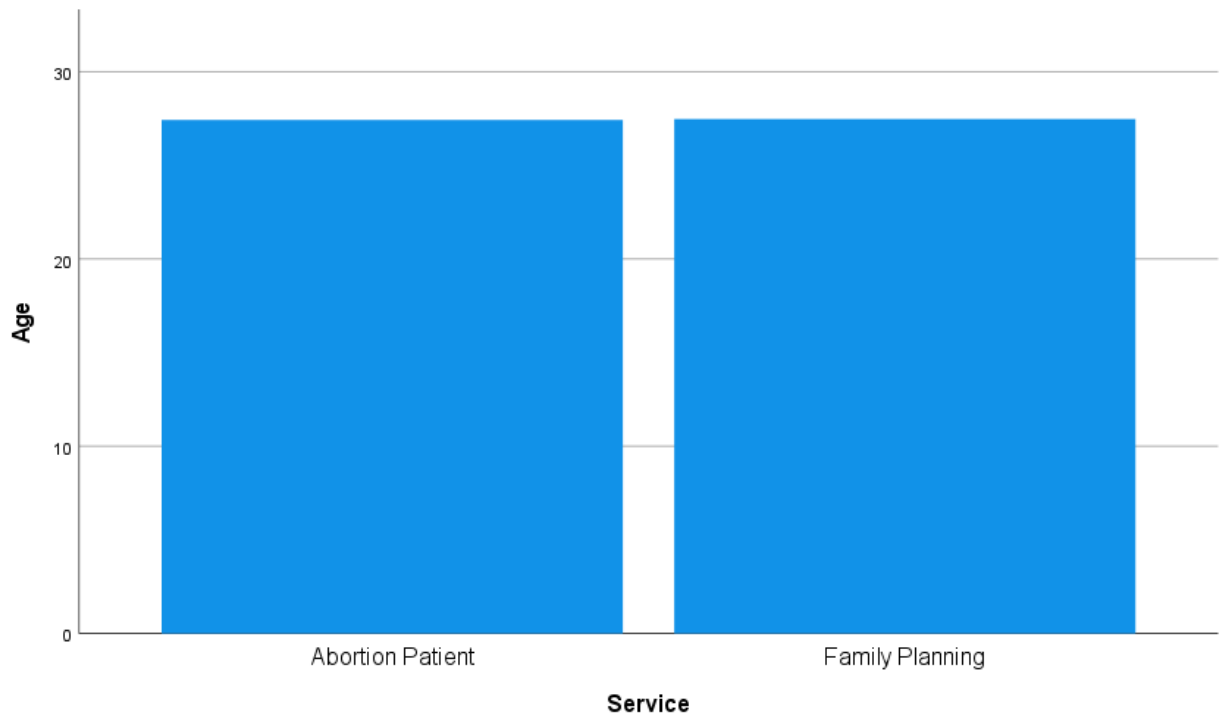


Figure 14 represents the level of education for all patients seen, of all ages, during the period of 01/2019 to 01/2022.

Figure 14. Patient's Level of Education Based on Age

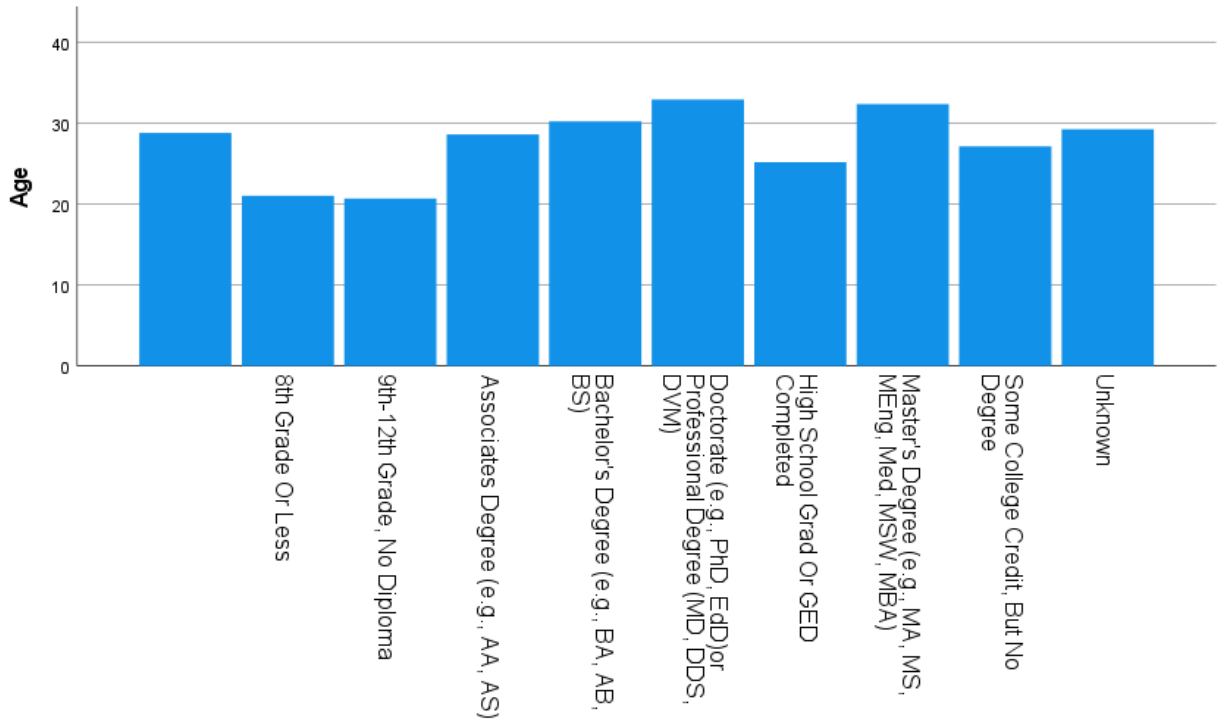
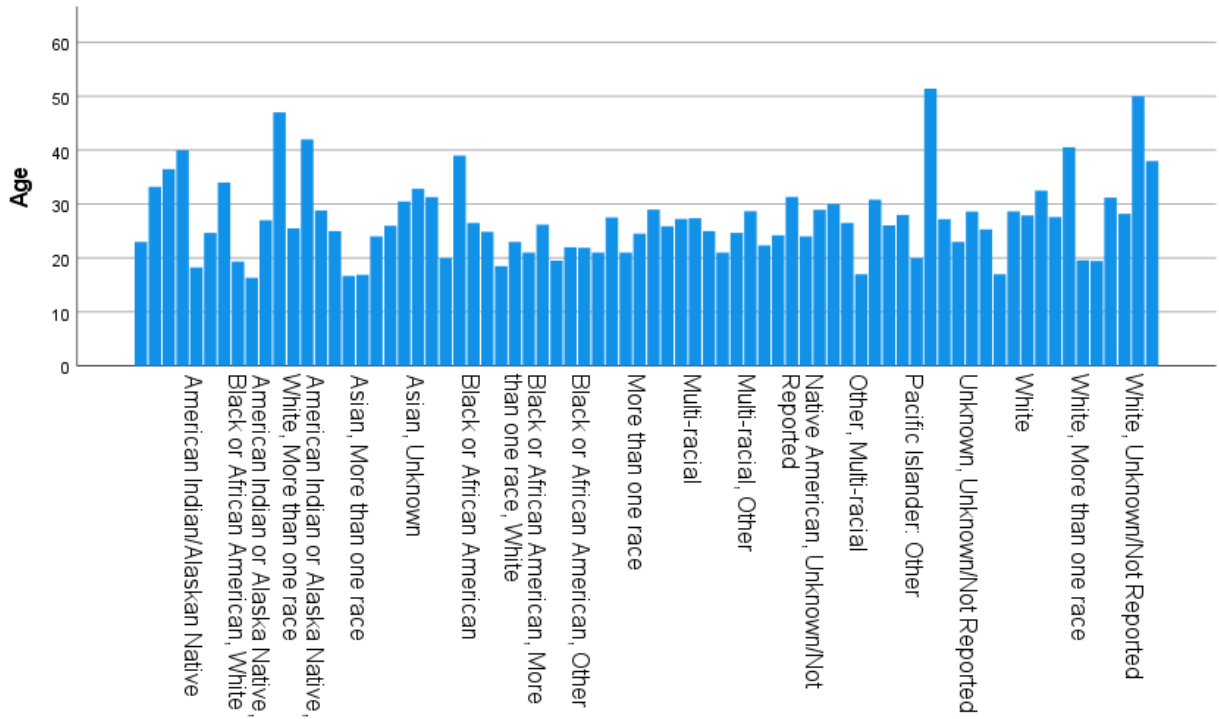


Figure 15 represents the race of every patient seen for reproductive health services from 01/2019 to 01/2022.

Figure 15. Patient Race Based on Age



CHAPTER V: CONCLUSIONS

Introduction

This correlational investigation aimed to discover whether there was a statistically significant difference between Black females and White females who did not complete high school and the number of reproductive health outcomes such as STDs, STIs, or unintended pregnancies each group experienced. Secondary analyses were completed to investigate data provided by a reproductive healthcare provider based on race, age, sex, level of education, and services provided to female patients from 01/2019 to 01/2022. Semi-structured interview questions were developed from the quantitative analyses, and one-on-one interviews were conducted of each Health Center Manager.

Summary of Results

The researcher's directional hypotheses were that Black female patients who dropped out of high school experienced reproductive health outcomes (STIs, STDs, or unintended pregnancies) greater in number than White females with the same level of education. The study aimed to uncover a correlation between the level of education and whether a lack of a high school diploma may have predicted Black females' reproductive health outcomes (STIs, STDs, or unintended pregnancies).

Research supports that people who drop out of high school do substantially worse than those who graduate (Anderson & Pörtner, 2014) based on research on the consequences of dropping out of high school. High school dropouts "earn less, report lower levels of happiness, commit more crimes, and suffer from poorer health" (Anderson & Pörtner, 2014, p. 113). Dropout rates have a massive impact on employment rates, individual earnings, and crime rates (thinkimpact.com, 2020, para. 7). Students who drop out of high school "face social stigma, fewer job opportunities, lower salaries, and higher probability of involvement with the criminal justice system" (Mass. Dept. of Education, 2009, para. 2).

The odds are stacked against females even more regarding their health, including reproductive health. “Female dropouts may be more susceptible to contracting Sexually Transmitted Infections because they partner with significantly different types of people than non-dropouts” (Anderson & Pörtner, 2014, p. 113).

The researcher asked the following questions to answer the hypotheses:

1. What reproductive health outcomes did Black females experience?
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The researcher assumed a negative relationship between Black female patients’ level of education and reproductive health outcomes such as STIs, STDs, or unintended pregnancies. Therefore, the higher the Black female patients’ level of education, the lower the number of said reproductive health outcomes.

3. Was there a difference in the number of reproductive outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White females who dropped out of high school?

The researcher assumed there is a statistical difference in the number of reproductive health outcomes, i.e., STIs, STDs, or unintended pregnancies, between Black and White female patients who drop out of high school.

The researcher found that for every three White female dropouts, there was one Black female dropout based upon the reproductive health services used during the last two years. The researcher also found more patients with higher degrees utilized the reproductive healthcare provider’s services than patients without college degrees. Moreover, lastly, the researcher found no statistically significant differences between Black and White females who dropped out of high school in the treatment for STIs, STDs, or unplanned pregnancies.

Based on the results of the second phase of the study, the one-on-one interviews with Health Center Managers, the researcher found the common themes of education, accessibility, awareness, inclusivity, and social responsibility, among the interview question answers.

Discussion of Results

Research supports that people who drop out of high school do substantially worse than those who graduate (Anderson & Pörtner, 2014) based on the consequences of dropping out of high school. High school dropouts “earn less, report lower levels of happiness, commit more crimes, and suffer from poorer health” (Anderson & Pörtner, 2014, p. 113). Dropout rates have a massive impact on employment rates, individual earnings, and crime rates (thinkimpact.com, 2020, para. 7). Students who drop out of high school “face social stigma, fewer job opportunities, lower salaries, and higher probability of involvement with the criminal justice system” (Mass. Dept. of Education, 2009, para. 2).

The odds are stacked against females even more regarding their health, including reproductive health. “Female dropouts may be more susceptible to contracting Sexually Transmitted Infections because they partner with significantly different types of people than non-dropouts” (Anderson & Pörtner, 2014, p. 113).

Analyses of the data proved the researcher’s hypotheses to be, in fact, incorrect. There were no statistically significant differences between Black and White females who dropped out of high school to treat STIs, STDs, or unplanned pregnancies. This was a monumental discovery! While the argument that the data was from only one provider could be made, the results still provided a rejection of the narrative that is often espoused by many.

Additionally, the themes uncovered from the researcher’s one-on-one interviews highlighted the organization’s slogan of “Care. No Matter What.,” as the heart of the business for the Health Center Managers who find it their duty to educate and possibly liberate individuals to make decisions of what is best for them.

Recommendations for Future Research

“Black women in the United States experience unacceptably poor maternal health outcomes, including disproportionately high rates of death related to pregnancy or childbirth” (Nationalpartnership.org, 2018, para. 1). Furthermore, “despite significant strides in women’s reproductive health, disparities in access and outcomes remain, especially for racial-ethnic minorities in the United States” (Journals.lww.com, 2020, para. 2). According to Dr. Veronica Gillispie-Bell, “implicit bias among health care professionals leads to disparities in how health care is delivered” (Obstetrics & Gynecology, 2021, para. 1). This disparity in healthcare was highlighted only recently with the number of Black lives lost due to COVID-19.

At the beginning of this study, the researcher desired that the study would provide insight into the disparities for Black females in both education and healthcare. In addition, the researcher also hoped that the study would create a platform for a discussion on the impact of inequality overall, particularly in reproductive healthcare for Black women.

At the very least, it is the researcher’s aspiration that this study will be used to resist contempt before investigation by all.

Summary

The researcher’s data analyses discovered one Black female dropout for every three White female dropouts based upon the reproductive health services used during the last two years. The researcher also found that more patients with higher degrees utilized the reproductive healthcare provider’s services than patients without college degrees. And lastly and perhaps most monumental, the researcher found no statistically significant differences between Black and White females who dropped out of high school to treat STIs, STDs, or unplanned pregnancies.

While the above results are to be applauded, it does not erase the reality that there is still work to be done in the fields of healthcare and education. Beyond the scientific opinions cited in this

document of what happens to students' reproductive health, particularly students of color, who drop out of school, the question of what happens to Black females remains fully answered.

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APPENDIX A: EMAILS TO GAIN STUDY/PARTICIPANT ENTRY

Dear Health Center Manager,

I would like to invite you to participate in a one-on-one interview on whether there is a correlation between Black Females' Education and their Reproductive Health. The interview should last no longer than one hour.

The interview will allow you to discuss your observations in your current role as Health Center Manager. In particular, I would like to know if there is a correlation between Black females' education and reproductive health based on their health services from a reproductive health care provider.

If you would like to participate, please let me know by contacting me at [REDACTED] or emailing me at (aholliday@email.lynn.edu).

Sincerely,

Angela Holliday
Doctoral Candidate
Lynn University
AHolliday@email.lynn.edu

APPENDIX B: CONSENT FORM

Dear Health Center Manager,

The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that you are free to decide not to participate or withdraw without affecting the relationship with the researcher or study.

The purpose of the research study, A CORRELATIONAL INVESTIGATION OF BLACK FEMALES' EDUCATION AND THEIR REPRODUCTIVE HEALTH, is to investigate if there is a relationship between Black females who dropout of high school and the services utilized at a women's reproductive healthcare provider. I hope to discover future communication tools for educators and medical providers to use with females of color around reproductive health. I want to ask for your help with my study in connection with this.

The purpose of this study is also to understand whether there is a correlation between the level of education and reproductive health of Black females. The information gathered from the Health Center Managers may assist in training and professional development for educators and/or medical providers. Participating may have minimal risks, such as possibly feeling uncomfortable or anxious by question content. At any time, you may stop and choose not to participate. Any contributions you made during the focus group will be destroyed based on your identifier (Manager A, B, or C). Do not hesitate to ask any questions about the study before, during, or after participating in the focus group. After completing the research, I will be happy to share my findings with you. Your identity as a participant is confidential. All data and materials will be stored in a locked file cabinet in the researcher's office. The researcher is the only one with a key. Consent forms will also be stored in the locked file cabinet. Once the study is completed, all materials in the researcher's possession will be destroyed in a cross-cut shredder.

Please sign the consent with full knowledge of the nature and purpose of the study. A copy of this consent form will be given for you to keep.

Sign Name Here

Print Name Here

Thank you for your participation,

Principal Investigator:

Angela Holliday

Doctoral Candidate

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IRB Chair:

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APPENDIX C: SURVEY PROTOCOLS - INTERVIEW QUESTIONS

Question 1: The first result I found was there were three white female dropouts for every one black female dropout based on the reproductive health services used during the last two years. Why do you think I received result?

Question 2: The next result I found was that more patients with higher degrees utilized the organization's services than patients without college degrees. Why did I receive this result?

Question 3: The result I found was that there was no statistically significant difference between white and black female patients who dropped out of high school in STIs, STDs, or unintended pregnancies. Why did I receive this result?

Question 4: Do the findings impact you, in any way, in your role as a Health Center Manager?

Question 5: Overall, are there organizational changes that should be implemented based on these results? Why or why not?

APPENDIX D: IRB APPROVAL



Institutional Review Board
3601 North Military Trail
Boca Raton, FL 33433
T: 561-237-7012 | lynn.edu
Melissa Knight, MA. Chair

Date: 2/4/2022

TO: Angela Holiday
From: Melissa Knight
Project Number: 21.08

Protocol Title: A Correlational investigation of Black Females' Education and Productive Health
Project Type: New
Review Type: Expedited Review
Action: Approved
Approval Date: 2/4/2022
Expiration Date: 2/4/2023

Thank you for your submission for this research study. The Lynn University IRB has APPROVED your NEW Project. This approval is in accordance with 45 CFR §46.111 Criteria for IRB approval of research. All research must be conducted in accordance with this approved submission.

It is important that you retain this letter for your records and present upon request to necessary parties.

- This approval is valid for one year. **IRB Form 4: Application to Continue (Renew) a Previously Approved Project** will be required prior to the expiration date if this project will continue beyond one year.
- Please note that any revision to previously approved materials or procedures must be approved by the IRB before it is initiated. Please submit **IRB Form 5 Application for Procedural Revisions of or Changes in Research Protocol and/or Informed Consent Form 1 of a Previously Approved Project** for this procedure.
- All serious and unexpected adverse events must be reported to the IRB. Please use **IRB Form 6 Report of Unexpected Adverse Event, Serious Injury or Death** for this procedure.
- At the completion of your data collection, please submit **IRB Form 8 IRB Report of Termination of Project**.

If you have any questions or comments about this correspondence, please contact the chair of the Lynn University IRB, Jennifer Lesh (jlesh@lynn.edu).

Melissa Knight, Institutional Review Board Chair

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