The Influence of Underlying Factors and the Relationship of HIV/AIDS Among African Americans in Shreveport, Louisiana and Surrounding Areas

---

A Thesis

Presented to

The College of Graduate and Professional Studies

Department of Applied Health Sciences

Indiana State University

Terre Haute, Indiana

In Partial Fulfillment

of the Requirements for the Degree

M.S. Health Sciences

By

Frederick T. Ellis Sr.

December 2014

Keywords: AIDS, HIV, Disparity, African Americans, Death, Urban

COMMITTEE MEMBERS

Committee Chair: Eliezer Bermúdez, Ph.D., CP-FS

Associate Professor, Department of Applied Health Sciences

Indiana State University

Committee Member: Matthew Hutchins, Ph.D.

Associate Professor, Department of Applied Health Sciences

Indiana State University

Committee Member: Maureen Johnson, Ph.D., MCHES

Associate Professor, Department of Applied Health Sciences

Indiana State University

ABSTRACT

The significance of this study was to evaluate multiple underlying factors among African Americans in Shreveport, Louisiana and the influence of those factors on their relationship with HIV/AIDS. This is extremely important for two very reasons. First, in the past 30 years since the initial presentation of HIV/AIDS into society, a shift in the demographic of the infected individuals has resulted in African Americans becoming the new face of HIV/AIDS in the United States. Secondly, African Americans are only 12 to 13% of the United States population, but they represent more than 45% of all new HIV/AIDS cases reported annually. In order to evaluate this significance, this study employed multinomial logistic regression to examine the potential influence of specific underlying factors present among African Americans and the relationship of those factors to HIV/AIDS. Such factors, including incarceration, the influence of drugs or alcohol prior to sex, HIV/AIDS under-recognition, stigma, the number of sexual partners, poverty, and inflammatory sexual transmitted diseases were assessed for their significance. The populations defined in this study were sexually active African American adult men and women, aged 18 to 45, residing in predominantly black urban and rural geographical areas within Shreveport, Louisiana. There were 103 participants included in this study among the population previously mentioned. These cases were selected by a cluster of area probability sampling method. The research was quantitative, utilizing primary data from African American adult subjects who reside in predominantly black urban and rural geographical areas via an anonymous online survey. The statistical measures that were used in this study included

descriptive statistics and regression analysis. The results of this study sought to demonstrate an association between the presences of the above mentioned underlying factors and the relationship of HIV/AIDS among African Americans living in Shreveport, Louisiana. Based on the results of this study, it was determined that a relationship between specific underlying factors among African Americans and HIV/AIDS status do exist. More specifically, results indicated that the factors incarceration, substance use prior to sex, and inflammatory sexually transmitted diseases all had statistical influence on the HIV/AIDS status of African Americans in Shreveport, Louisiana.

ACKNOWLEDGEMENT

I want to thank Dr. Eliezer Bermúdez for his leadership and guidance as my thesis chair. I want to personally thank him for taking on that responsibility. I also want to thank the other members of my thesis advisory committee: Dr. Maureen Johnson, and Dr. Matthew Hutchins. I really appreciate their role in serving as an integral part of this project. I also want to give acknowledgement to my current profession of Clinical Laboratory Science. Spending twenty years in this profession at multiple capacities and divisions has entrenched me with a high degree of scientific and biological knowledge which enabled me to possess a basic foundation and understanding of the subject matter composed within this study years before entering the research. I also want to thank the Brotherhood Task Force of Northwest Louisiana; a non-profit organization involved with HIV testing, counseling and education. The opportunity extended to me to serve as Board President and primary educator during seminars and testing campaigns ignited my interest, compassion, and desire in this epidemic from a social perspective; thus spearheading my intent to bring profound awareness to this catastrophe that threatens to destroy the lives of countless black human beings right here within our mist. I also wish to acknowledge Jesus Christ as my personal Lord and savior; none of this would be possible without the abundance of mercy, grace, protection, favor, and spiritual guidance bestowed upon my life all these years, even when I wasn't aware of it; for that I am extremely grateful in the most humble way.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

The human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) epidemic continues to present a challenge for African Americans in the United States. Although a small proportion of the US population, African Americans are over-represented, both in terms of the number of people living with HIV/AIDS, and in terms of new diagnoses and deaths (Oramasionwu, 2009). To date HIV/AIDS has been well studied, documented, and is now generally understood. What still misunderstood is the transformation of what was initially perceived as a disease primarily affecting white people, to arguably now mostly a disease affecting black people. While this reality today may be widely recognized due to the available documentation of overwhelming statistics, it is still perceived that the cause of such disparities is not well understood. This misunderstanding may derive from overlooking several underlying factors that exist within the environments where many African Americans live and their potential influence on the continuing disparity of cases. There are a variety of factors that exist for blacks in the United States that may contribute to these disparities (Oramasionwu,2009). Such factors including incarceration, the influence of drugs or alcohol prior to sex, HIV/AIDS under-recognition, stigma, the number of sexual partners, poverty, and inflammatory sexual transmitted diseases were assessed.

In the United States, increasing proportions of HIV/AIDS occur among black individuals living in the Southern states; such an epidemic is spiraling out of control among this specific

population (Wright, 2008). This is evidenced by the greatest increase in cases reported from predominantly black urban and rural areas of southern states. According to a report by the Louisiana Office of Public Health, at the end of 2010 19 parishes in Louisiana had a prevalence rate of HIV infection greater than 300 per 100,000 populations; the majority of these cases were concentrated in urban areas and composed mostly among African Americans (Louisiana Office of Public Health-HIV/AIDS Program, 2010).

Statement of the Problem

Of the more than 1 million persons living with HIV in the United States, almost 50% are African American (McCree, 2009). African Americans represent 13% of the total US population, but account for about half of new HIV infections, with nearly 25,000 becoming infected each year (McCree, 2009). According to the 2007 HIV/AIDS Surveillance Report by the Center for Disease Control and Prevention (CDC, 2008), African Americans represent a staggering 48% of all HIV/AIDS diagnoses in the United States (Oramasionwu, 2009). More HIV infections occurred among people aged 13-29 than any other age group (Hall, 2008). In 2004, HIV/AIDS was the number one cause of death for African American women aged 25–34 years and the third leading cause of death for all African Americans aged 35–44 years of age (CDC, 2004). These statistics suggest that African Americans in the United States are experiencing an overwhelming disparity in regard to HIV/AIDS.

Reviewed literature has empirically suggested that among African Americans, factors such as incarceration, HIV-AIDS under-recognition, substance use, poverty, sexual behavior, number of sexual partners, and stigma are all considered underlying factors influencing the spread of HIV/AIDS and thus were evaluated (Reif, 2006). In order to curb this problem going forward, the focus must be on the evaluation of these underlying factors from behavioral,

economical, educational and environmental standpoints in order to fully understand exactly how these factors are placing this sub-group of people at an increased risk for HIV/AIDS. Consequently, if the current path continues, the problem African Americans face now potentially becomes significantly much worse in the future and a considerable burden to the country as a whole.

Purpose of the Study

The significance of this study was to evaluate multiple underlying factors among African Americans in Shreveport, Louisiana and the influence of those factors on their relationship with HIV/AIDS. This is extremely important for two very reasons. First, in the past 30 years since the initial presentation of HIV/AIDS into society, a shift in the demographic of the infected individuals has resulted in African Americans becoming the new face of HIV/AIDS in the United States. Secondly, African Americans are only 12 to 13% of the United States population, but they represent more than 45% of all new HIV/AIDS cases reported annually.

Research Question

Do the following factors have a significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana?

1. Incarceration
2. The influence of drugs or alcohol prior to sex
3. The number of sexual partners
4. Stigma
5. Poverty
6. HIV/AIDS under-recognition
7. Inflammatory sexually transmitted diseases

Hypothesis Statement

The factors incarceration, the influence of drugs or alcohol prior to sex, number of sexual partners, stigma, poverty, under-recognition, and inflammatory sexually transmitted diseases have a significant influence on the HIV/AIDS status among African Americans in Shreveport.

Null Hypothesis

The factors incarceration, the influence of drugs or alcohol prior to sex, number of sexual partners, stigma, poverty, under-recognition, and inflammatory sexually transmitted diseases do not have a significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana.

Limitations

Limitations of this study included:

1. The willingness of individuals to complete and submit surveys in a timely fashion.
2. The data collected was based on individual response to survey questions; therefore, the potential for bias and dishonesty was increased due to the sensitive nature of some survey questions.
3. Recall bias may occur due to respondents' inability to accurately recall their past behavior.
4. The results of this study were based on only 103 individuals' responses to an anonymous online administered survey.

Delimitations

This study was delimited to the following:

1. Sexually active African American adult males and females aged 18-45 years of age.
2. The subjects for this study resided within Shreveport, Louisiana.

3. The survey was distributed online; therefore, it only included individuals with access to computers.
4. The survey did not use a random sampling method.
5. The study and the data collected from survey questions relied on volunteers; thus, the sample may not be representative of the target population.

Assumptions

In this study the following assumptions were made:

1. That all of the study participants answered all survey questions in an honest manner.
2. It was assumed that all participants could read and interpret the English language and understand the survey questions.
3. That all participants understood that they were taking part in a research study and that obtained information will not be used for any other reason.
4. All computers used for submission of surveys were used only one time per survey.

Operational Definitions

In this study the following definitions were used:

1. Bisexual: defined as sexual orientation toward males and females.
2. Disparity: defined as the overrepresentation of African Americans regarding HIV/AIDS as suppose other ethnicities in the United States.
3. Heterosexual: defined as sexual orientation toward the opposite sex.
4. HIV/AIDS: defined as a disease of the human immune system caused by infection with
5. Human immunodeficiency virus (HIV) that causes acquired immune deficiency syndrome (Ka, 2001).

6. Homosexual: defined as sexual orientation toward the same sex.
7. Incarceration: defined as locked up in local jails, state, or federal prisons for length of time greater than one month.
8. Inflammatory Sexually Transmitted Diseases: defined as sexually transmitted disease that causes ulcers or inflammatory processes (Galvin, 2004).
9. Poverty: defined as annual income falling below federal poverty guidelines (U.S. Department of Health and Human Services, 2013).
10. Predominantly Black Communities: defined as communities 51% or more populated by African Americans.
11. Sex: defined as the act of sex through vaginal, anal, and/or oral intercourse.
12. Sexually Active: defined as engaging in anal, vaginal, or oral sex by penetration in the past year.
13. Stigma: defined as an undesirable or discrediting attribute that an individual possesses, thus reducing that individual's status in the eyes of society (Brown, 2003).
14. Substance use prior to sex: defined as being under the influence of any amount of drugs or alcohol prior to sex.
15. Under-recognition: defined as undiagnosed HIV infection due to late testing or absence of being currently tested (Oramasionwu, 2009).

Summary

African American people face significant risk of widespread systemic HIV infection. This threat has the potential to cause a never-ending cycle of uncontrolled levels of sickness, disability and death; potentially devastating generations of people for years to come. Today there are over 1 million people currently known to be living with HIV/AIDS in the United States.

Of this amount, African Americans account for 46% of the afflicted, while accounting for only 12% of the total population (CDC, 2008).

CHAPTER 2

REVIEW OF LITERATURE

In order to institute new measures and frameworks to battle against an increasingly emerging HIV/AIDS epidemic among African Americans, an understanding of the source becomes essential to the task at hand. Since the discovery of HIV/AIDS, there have been various shifts in its understanding and perception as well as a shift in what is viewed as the current status of HIV/AIDS. Since its identification as an epidemic in 1981, AIDS has killed over one-half million Americans, a total exceeding all American combat-related deaths in all wars fought in the 20th century (Jaffe, 2004). The literature review suggests that African Americans are disproportionately affected by HIV/AIDS in the United States (CDC, 2007).

Disparity

In the United States, African Americans represent approximately 12 percent of the population but they account for approximately half of the more than one million Americans currently estimated to be living with HIV (CDC,2007). Also, African Americans account for more than 46% of the estimated 56,300 new infections in the United States annually (Hall,2008). African American men continue to bear the greatest burden of HIV/AIDS in the United States. According to 2005 statistics from the CDC, the HIV infection rate among black men was nearly seven times than that of white men. In 2005, the HIV/AIDS infection rate was more than 20 times that of Caucasian women (CDC, 2007). Whites accounted for nearly a third (31 percent) of all new HIV infections in 2010 (14,900), but had a substantially lower HIV

infection rate (8.7 per 100,000) than African Americans or Hispanics (CDC, 2010a). Comparing 2008 to 2010, there was no statistically significant change in overall HIV incidence among whites (CDC, 2010a).When compared to other races/ethnicities, blacks experienced the highest HIV/AIDS prevalence per 100,000 populations: 76.7 for blacks versus 34.6 for Native Hawaiian/other Pacific Islanders, 27.7 for Hispanics/Latinos, 12.8 for American Indians/Alaska Natives, 9.2 for whites, and 7.7 for Asians. As the incidence of HIV/AIDS continues to increase, blacks continue to represent the majority of all new cases (Oramasionwu, 2009). Within the black community, the face of HIV/AIDS is young and old, male and female, straight and gay. This fact illustrates that HIV/AIDS does not discriminate neither does it have a preference. Any individual residing within predominantly black communities, rural or urban, can potentially become infected with HIV/AIDS.

HIV/AIDS Stigma

One CDC report has noted that the stigma of having HIV/AIDS places too many additional African Americans at a higher risk of HIV infection (CDC, 2010b). The same report states that many at risk for HIV infection fear stigma more than they fear knowing their status consequently, they choose to hide their high-risk behavior rather than seek counseling and testing (CDC, 2010b). AIDS-related stigma refers to prejudice, discounting, discrediting, and discrimination directed at people perceived to have AIDS or HIV, as well as the individuals, groups, and communities with which they are associated'' (Darrow, 2009). Stigma apparently arises from fears of contagion, disease, and death (Darrow, 2009). It marginalizes people with HIV/AIDS and further endangers those engaged in risky behaviors (Elmore, 2006). Stigma can also heighten vulnerability to HIV infection because fear of the AIDS stigma and discrimination may deter people from being tested for the disease and from seeking information

and assistance (Elmore, 2006). Stigmatization of people living with AIDS is a key obstacle to HIV prevention and AIDS care. It is now generally accepted that efforts to reduce stigma should be an integrated part of all HIV/AIDS programming (Campbell, 2005).

Incarceration

Another important factor to address is that of incarceration. Mass incarceration of African Americans results in the migration of black men in and out of state and federal lockup, thus contributing to the destruction of black communities by spreading diseases (Wright, 2008). The act of churning so many men in and out of black neighborhoods is itself a disease vector (Wright, 2008). Widespread incarceration is a growing crisis in the African American community. It results from the cumulative effects of poverty and under-education; the loss of the manufacturing job base in urban centers; the breakdown of black families; the war on drugs; and disparate sentencing laws and discrimination within the criminal justice system (Harawa, 2008). These factors contribute to numerous racial/ethnic health disparities, including HIV/AIDS (Harawa, 2008). Incarceration may contribute to high risk sex partnerships because incarceration is a disruptive life event that destabilizes social and sexual networks. Existing literature suggest that 50% to 80% of inmates are in committed relationships at the time of their incarceration and that a substantial proportion of these relationships end during incarceration (Khan, 2011). This increases the incidence of homosexuality in jails and prisons due to a desire for intimacy while incarcerated. Additionally, these high rates of incarceration among African American men decrease the number of available partners for black females; which impacts sexual behavior that dramatically increases risk of HIV infection among them (Harawa, 2008). California and Vermont are the only two states in the country that allow condoms behind bars, a disparity that virtually ensures the spread of sexually transmitted diseases (Wright, 2008).

Another disparity spawned by the influence of incarceration in predominantly black communities is its' effect on the male-to-female ratio. One hypothesis for the disparity of HIV was built upon the low male to female ratio in low income, urban communities (Senn, 2010). There, African-American women outnumber men because of higher rates of incarceration and premature death among African American men (Senn, 2010). This shortage of men has the ability to reduce a women's power in the relationship, possibly compelling her to be tolerant of non-monogamous relationship.

Poverty

The poverty factor in HIV infection has been a long overlooked vehicle as a contributing factor in the HIV/AIDS epidemic among African Americans. Half of African Americans live below 200% of the poverty line (Reif, 2006). Individuals' impoverishment is especially relevant given its associated culture of drugs, prostitution, crime, and illiteracy that have been shown to increase a person's rate of exposure to this deadly virus (Arp, 2004).Under the veil of poverty exist multiple factors that in one way or another serves only to intensify this problem. Factors such as the lack of access to quality health care, housing, and HIV/AIDS prevention and education programs both directly and indirectly increase the risk factors for HIV infection (Laurencin, 2008). Twenty one percent of blacks lack insurance coverage compared to 11% of non-Hispanic whites (Oramasionwu, 2009).

Inflammatory Sexually Transmitted Diseases

Other contributing factors related to poverty are the increase in inflammatory sexually transmitted diseases. Inflammatory sexual transmitted diseases such as gonorrhea have been associated with increased HIV susceptibility and infectiousness (Laurencin, 2008). In 2005, African Americans were 18 times more likely than whites to have gonorrhea,

representing approximately 68% of the total number of cases (Laurencin, 2008). A reduction of HIV/AIDS in the future must also involve the reduction of inflammatory sexually transmitted diseases. While only representing a very small percentage of the US population, African Americans had about 70% of reported gonorrhea cases and almost half of all chlamydia and syphilis cases (Anonymous, 2009). Inflammatory sexually transmitted diseases, both ulcerative (e.g., syphilis and cancroid) and no ulcerative (e.g., gonorrhea, chlamydia, and trichomoniasis), have all shown to increase the risk of HIV transmission approximately three- to five- fold (Oramasionwu, 2009). Inflammatory STDs, such as gonorrhea, have been associated with increased HIV susceptibility and infectiousness by increasing the number of white blood cells in the genital tract or by elaborating cytokines that up-regulate HIV expression and increases the viral load of HIV in the genital tract (Laurencin, 2008). Ulcerative STDs, such as syphilis, afford additional portals of entry through mucosal ulcerations and also recruit inflammatory cells that bind and propagate HIV infection (Laurencin, 2008).

Influence of Drugs or Alcohol Prior to Sex

Additional factors to be considered are the relationships between substance use and sexual behavior, in particular the use of condoms, thus, and its contribution to the relationship of HIV/AIDS. It is understood that substance abuse is particularly common within geographical areas of low socioeconomic status and the majority population in most of these areas are African American. Users of crack cocaine, heroin and marijuana are more likely to engage in high risk sexual behaviors (Schumacher, 2003). In particular, smoking crack induces a strong sense of euphoria and other feelings of mood elevation that may lead to an increased willingness to engage in sexual behaviors which are highly risky, thus increasing the susceptibility to HIV/AIDS infection and other sexually transmitted diseases (Timpson, 2010).

Substance abuse is linked to many new cases of HIV/AIDS infection (Volkow, 2011). The relationship between alcohol consumption and its associated effect on poor sexual decision making has been extensively established through empirical study (Walsh, 2008). For example, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) acknowledges the importance of considering alcohol misuse in order to develop comprehensive HIV prevention strategies (Woolf-king & Maisto, 2011).

Number of Sexual Partners

The probability of acquiring a sexually transmitted disease is the product of several risks factors and the number of concurrent or sexual partners are included (Santelli, Brener, Lowry, Bhatt,& Zabin, 1998). Having multiple partners increases an individual's risk of acquiring a sexually transmitted disease, and concurrency increases the risk of infection among an individual's partners (Senn, 2011). Concurrent sexual partnerships (partner-ships that overlap in time) have emerged as potentially important determinants of sexually transmitted disease dissemination throughout the population (Adimora, Schoenbach, Taylor, Khan, & Schwartz, 2011). With the ability to spread infection through asexual network more quickly than the same number of sequential partnerships, the extent of concurrency contributes to the distribution of sexually transmitted diseases among the population (Adimora et al., 2011).Therefore, researchers have suggested that partner concurrency should be targeted in STD/HIV prevention interventions (Senn, 2011).

Under-recognition (HIV Testing)

One study made the case for widespread testing when attempted to push the mandate of HIV testing becoming a part of routine medical care (Taege, 2011). When testing is not performed routinely, it delays early diagnosis, early treatment, and early partner notification.

Currently, approximately 100,000 people in the African American community are unaware of their positive HIV status (CDC, 2013). It is also estimated that about 1-in-5 HIV-infected individuals in the United States (US) is unaware of their status, and the CDC guidelines were put in place to increase the number of early diagnoses, improve linkage to care, and encourage individuals who test positive to modify their behaviors to reduce transmission (Wong et al., 2013). The Centers for Disease Control and Prevention (CDC) has recommended HIV testing for patients aged 13 to 64 years in all US health care settings (Kennedy, Godin, &Kan, 2010). As previously stated, the African American community bears a disproportionate burden of HIV/AIDS, accounting for only 13% of the population but approximately 50% of all new HIV/AIDS diagnoses (McCree, 2009). Despite this, only about 3-in-5 African Americans has ever been tested for HIV (Wong et al., 2013). Under-recognition causes individuals who are undiagnosed to unknowingly transmit HIV to their partners (Oramasionwu, 2009). Late or lack of testing represent missed opportunities for HIV prevention, and early effective disease management for these individuals (Oramasionwu, 2009). Any serious effort in regard to the control of HIV/AIDS now and in the future must involve widespread HIV/AIDS testing at local, national, and global levels, and the conducting of studies to find better ways to promote testing. One study, the first of its kind, used national surveillance data to describe the epidemic of HIV in urban areas (Hall, 2008).The same study demonstrated that among these areas, 21% of those individuals infected with HIV are unaware of their infection status (Hall, 2008). With this point in mind, a great deal of attention has to be focused on expanding testing by all means; for the non-awareness of testing status is considered an underlying factor facilitating the spread of HIV/AIDS.

Condom Use

Equally important is the analysis and interpretation of data regarding risk factors and their potential influence on behaviors which promote risk. In one study, multiple linear regressions analyses were used to examine predictors of condom use in sexually active juvenile delinquents (Robertson& Levin, 1999). In the study, the proportion of intercourse occasions in which condoms were used in the past 6 months was used as a dependent variable (Robertson & Levin, 1999). The findings demonstrated that condom use at first intercourse predicted subsequent condom use. These findings were determined to be relevant in developing HIV/AIDS prevention programs in juvenile offenders (Robertson & Levin 1999). In another study, a univariate logistic regression analysis was conducted to examine relationships between predictor variables (reasons of importance for condom use) and reported condom use, which was the dependent variable (Schumacher, 2003). It was also performed separately by gender and by drug use type. Results demonstrated several realtionships regarding condom use based on drug use type and gender; one in particular was thatfemale primary marijuana users were more likely than their male counterparts not to use condoms with their main sex partners (9.47% vs 79.35%), and with their other sex partners (62.92% vs. 54.87%; Schumacher, 2003). This is an important finding since there were 56.3% primary marijuana users by self-report via survey.

The challenge of addressing HIV/AIDS in the United States is as multifaceted as the virus itself (Cornelius, 2009). Although to date there has been much increase in the number of people who have been tested and screened for HIV/AIDS and in the number of people who have access to medications, a treatment regimen or vaccine to prevent or cure HIV/AIDS has not been found (Cornelius, 2009). The future now must involve more focus on controlling the spread of the disease. In order to control the spread of HIV/AIDS among African Americans, war must not be waged against HIV/AIDS alone, but on the many underlying factors supporting its spread.

What was once perceived an urban coastal-epidemic centered on the so called gay meccas like New York City, San Francisco, and Los Angeles is now a surprisingly rural, Southern one; such geographical regions consist mainly of individuals who are black, low income, and diagnosed with advanced conditions they do not have the resources to control (Wright, 2008). The urban and rural Southern regions in which black populations predominate may be considered the new epicenter of HIV/AIDS. Health officials in the southern region of the United States recently asserted that "the AIDS epidemic is out of control in the south" (Dawson, 2004, 1178). When considering the top 25 U.S. cities with the greatest proportions of HIV, seven out of the 10 hardest hit cities are in the south (Dawson, 2004). A prime example of the HIV/AIDS devastation in the south would be in the nation's capital, Washington D.C. It is now estimated that three percentof all residents in the District of Columbia are living with HIV/AIDS, with the highest burden of disease among African American males at a rate of 6.5% (Edwards, 2011). If this trend continues, many other cities with a high populations of urban and rural African Americans could possibly be labeled epidemics as well, with at least two cities in Louisiana on the verge of an epidemic.

According to the most recent statistics reported by the State Department of Health and Hospitals in Louisana there were 12,892 blacks living with HIV infection as of December 31, 2012 with 36% percent being female, and 64% being male. African Americans make up 33% of the state's population; however 74% of all new cases of Louisiana residents affected by HIV infection are black, and 68% of all persons living with HIV in Louisiana are black as well (Louisiana Officeof Public Health, 2012). The Shreveport region has the third highest number of new HIV/AIDS diagnoses among blacks in the state of Louisiana (Louisiana Office of Public Health, 2012). The review of literature points to a central theme; that HIV/AIDS is now

widely recognized as a significant public health threat regarding black people. This threat is fueled by multiple underlying factors that suggest responsibility for producing a disparity of HIV/AIDS among blacks which currently shows no signs of abatement.

Summary

The reviewed literature supports the realization that the United States is in the midst of a critical public health crisis. The literature also suggest that there are specific underlying factors among African Americans that are influencing the escalation of the HIV/AIDS crisis, thus also influencing a relationship of disease, sickness, disability, and death. The literature suggest that these factors are incarceration, the influence of drugs or alcohol prior to sex, HIV/AIDS under recognition, stigma, the number of sexual partners, poverty, and sexual transmitted diseases.

CHAPTER 3

METHODOLOGY

Participants

This study sought to determine whether selected underlying factors have an influence on the relationship of HIV/AIDS among African Americans. The population defined for this study was sexually active African American adult men and women age 18 to 45 living in predominantly black urban and rural geographical areas of Shreveport, Louisiana. In this study, 103 participants were included among the populations mentioned. Sample size was based on the current African American population of Shreveport, Louisiana in the age group of 18-45 which was determined to be approximately 41,430 according to United States Census Bureau. Since this study utilized human subjects, approval forms and consent forms were completed in compliance with Indiana State University Institutional Review Board (IRB) regulations and can be found in Appendix A and B.

Instrument Design and Data Collection

The research was quantitative. Data collection occurred via online survey. The company contracted to administer the survey was Survey Monkey.com. Recruitment for the survey occurred via social media and by the distribution and posting of advertisement flyers. Participants were able to assess survey via web address link listed on survey advertisement flyer. Advertisement flyer can be found in Appendix C. Announcements for recruitment were posted on the researcher's personal Facebook page, Twitter, and Instagram accounts. In addition, sites

such as the City of Shreveport, Southern University Shreveport, Louisiana State University Shreveport, Bossier Parish Community College, various social clubs, and faith based institutions were utilized for advertisement postings. Flyers were distributed and posted at faith institutions, universities, recreation centers, shopping malls, night clubs, community stores and parks. Survey response rate was crucial to this study, so in an effort to enhance response rates, an incentive was be offered for participation. In particular, by completing survey, respondents qualified for a $100.00 gift certificate for Amazon.com. The incentive was funded by the principal researcher but administered to the winner by an independent company contracted by SurveyMonkey.com after the closing of the survey period. Participation in the drawing for the incentive was voluntary. To prevent respondents from taking the survey more than once, restrictions were assigned to the survey. Only one survey was submitted per computer. Skip logic was assigned to the first two questions of the survey concerning age and ethnicity. Skip logic allows any respondent not meeting preset qualifications for the survey to be skipped to a disqualification page, and not allowing them to take the survey.

Instrumentation

Specific questions utilized in the survey instrument were derived from the Center for Disease Control and Prevention Evaluation Toolkit: Patient and Provider Perspectives about Routine HIV Screening in Health Care Settings (CDC, 2012). Other questions utilized in the survey regarding stigma were derived from the brief "Measuring HIV Stigma and Discrimination" by the International Center for Research on Women, Washington, DC (Stangl, Brady, & Fritz, 2012). The primary dependent variable used in this study was a dichotomous measure indicating whether respondents reported as positive or negative for their current HIV status. The primary independent variables were mostly dichotomous measures

which included: incarceration, substance use prior to sex, poverty, number of sexual partners, under-recognition (HIV testing), and stigma. All survey questions were categorical variables. Other questions contained in the survey included level of income for the assessment of respondent socioeconomic status, zip code for the assessment of respondent areas of residency, and also relationship status.

Data Analysis

Multinomial logistic regression analysis was employed to evaluate the dependence or casual relationship between these independent variables and the one specific dependent variable previously mentioned. All statistical analyses were conducted with a confidence level of 95% and a predetermined alpha (α) level of $p < 0.05$. Other statistical tests used in this study are descriptive statistics for the evaluation of frequencies. The IBM SPSS statistics version 21 software was employed to carry out all specific statistical tests used in this study.

CHAPTER 4

RESULTS

Description of the Participants

For the current study, there were 103 participants included in the data collection for the current study. Only data from African Americans aged 18-45 were used in this study. Any participant not meeting these criteria was excluded. Table 1 shows participants' demographic information.

Table 1 shows that there were 103 participants for this survey. Among the total number of participants, 97% reported themselves as African American while 3% registered as other. Among age groups, 30% of the participants reported being in the age group 18-25 with 17% being female, and 13% reported being male. In the age group 26-35, 30% of participants reported in this age group with 17% reported being female and 13% reported as male. Lastly, in the age group 36-45 there were 30% of participants reporting in this age group, with 17% reporting as female, and 12% reporting as male respectively. The mean years of age for female participants was 31 years, the mean years of age for male participants were 38 years. Anyone other than African Americans within the age range of 18-45 were disqualified and not allowed to complete the survey. Table 1 also shows the participants' gender. The demographic results showed that more females (n=55) completed the survey than males (n=40).

Among the total number of participants reporting income, the highest proportion of participants reported as having annual income less than $10,000 (n=26, 28%). Furthermore,

24% of participants reporting annual income of $10-20,000, indicating that approximately half of all participants had an annual income of less than $20,000. The next highest number of responses were for the $20-30,000 group (n=22, 23%). The proportions reporting $40-50,000 and greater 21 than $50,000 were 6 and 11%, respectively. There were 9 missing responses for annual income (Table 1).

The majority (52%) of participants reported as having completed a high school education, whereas 12% of participants not having completed a high school education. Among college graduates, there were 28% reported as having a college degree, and 8% reported as having an advanced degree from a graduate or professional school. There were 9 missing responses for education (Table 1).

Among the participant responses, 59% reported as being single (n=57), 34% reported being married, and one percent as separated and 5% as divorced. In terms of participants' sexual orientation, 88 percent of participants reported as straight/heterosexual (n=84) 8% as gay/homosexual and 4% as bisexual. There were 8 missing responses for sexual orientation (Table 1).

Table 1

Demographics Characteristics of the Participants (N=95)

Characteristic	n	%
Gender		
Male	40	42.10
Female	55	57.90
Age (years)		
18-25	32	33.68

Characteristic	n	%
26-35	32	33.68
36-45	31	32.63
Annual income ($)[a]		
0-10000	25	27.40
10,001-20,000	23	24.20
20,001-30,000	22	23.20
30,001-40,000	7	7.40
40,001-50,000	5	6.30
>50,000	11	11.60
Highest education level completed[b]		
Not finish high school	11	12.40
High school graduate	50	51.50
College graduate	26	27.80
Graduate or professional	7	8.20
Marital status		
Single	56	59.40
Married	33	34.40
Separated	1	1.00
Divorced	5	5.20
Sexual orientation[c]		
Straight/Heterosexual	84	87.50

Characteristic	n	%
Gay/Homosexual	8	8.30
Bi-sexual	3	4.20

Note:
[a]There were 9 missing responses for annual income.
[b]There were 8 missing responses for level of education.
[c]There were 9 missing responses for sexual orientation.

Table 2 shows the participant responses to ever being incarceration longer than 1 month. Among the responses, 17 of 94 participants reported as having been incarcerated for longer than month.

Table 2

Incarceration longer than one month (N=94)[a]

Response	N	%
Yes	17	17.90
No	77	82.10
Total	94	100.00

Note:
[a]There were 9 missing responses for incarceration.

Table 3 shows the participants response to the number of different sexual partners in the past 1 year. 38 percent of the participants reported as having three or more different sexual partners in the past year (n=37), 26% (n=24) had two, and 35% (n=33) reported one sexual partner. There were 9 missing responses for reporting number of sexual partners.

Table 3

Number Sexual Partners in the Past Year (N=94)[a]

Number of sexual partners	Male	Female	n	%
0	0	2	2	2.12
1	9	24	33	35.10
2	10	14	24	25.53
3	13	9	22	23.40
4	5	3	8	8.51
5	1	2	3	3.19
6	1	1	2	2.12
Total	39	55	94	100.00

Note:
[a]There were 9 missing responses for sexual partners in the past year.

Table 4 shows that 68% of participants reported as were under the influence of either drugs or alcohol prior to sex (n=65), and 32% (n=30) reported as not. There were 8 missing responses for this survey question.

Table 4

Drug or Alcohol Use Prior to Sex (N=95)[a]

Response	n	%
Yes	65	68.40
No	30	31.60
Total	95	100.00

Note:
[a]There were 8 missing responses for Drug or Alcohol use prior to sex.

Table 5 shows that 34% of respondents reported as having had sex with someone who have been incarcerated longer than 1 month. The remaining 66% reported as not.

Table 5

Sex with Someone Incarcerated Longer than one Month (N=95)[a]

Response	n	%
Yes	32	33.70
No	63	66.30
Total	95	100.00

Note:
[a]There were 8 missing responses for incarceration.

Table 6 showed participant history of inflammatory sexually transmitted diseases. 52 percent of participants reported as being diagnosed with an inflammatory sexually transmitted disease at some point (n=49).

Table 6

History of Inflammatory Sexually Transmitted Diseases (N=95)[a]

Response	n	%
Yes	49	51.60
No	46	48.40
Total	95	100.00

Note:
[a]There were 8 missing responses for inflammatory sexually transmitted disease.

Table 7 shows the participant views in regard to HIV stigma. 85 percent of the participants reported as being ashamed of having HIV/AIDS (n=81). Among the total participants, 96% (n=91) reported they think people are hesitant to be tested due to fears of a positive result. 76 percent of the participants reported they thought people actually did talk bad about people living with or thought to be living with HIV/AIDS (n=72).

Table 7

HIV/AIDS Stigma (N=95)[a]

Stigma element	n	%
Would be ashamed if you had HIV/AIDS		
Yes	81	85.30
No	14	14.70
Hesitant of HIV test for fear testing positive		
Yes	91	95.80
No	4	4.2
People talk bad about those infected with HIV/AIDS		
Yes	72	75.80
No	23	24.20

Note:
[a]There were 8 missing responses for all factors for stigma.

Table 8 shows participant knowledge of sexual partner HIV status. Among the total participants, 62 percent reported as not knowing their partners' HIV/AIDS status (n=59).

Table 8

Knowledge of HIV/AIDS Status of Sexual Partner(s) (N=95)[a]

Response	n	%
Yes	36	37.89
No	59	62.10
Total	95	100.00

Note:
[a]There were 8 missing responses for knowledge of HIV/AIDS status of sexual partner.

Table 9 shows participants' history of HIV test the past 2 years. 55 percent of the participants reported as not having a HIV test performed in the past 2 years (n=52).

Table 9

History of HIV Testing in the Past Two Years (N=94)[a]

Response	n	%
Yes	42	44.21
No	52	54.74
Total	94	100.00

Note:
[a]There were 9 missing responses for HIV testing in the past two years.

The current HIV/AIDS status of the participants is shown in Table 10. Seventy percent of participants reported as HIV negative, 3% (n=3) reported as HIV positive, and 27% (n=25) did not know their status.

Table 10

Participants' current HIV/AIDS Status (N=94)[a]

Response	n	%
Don't know	25	26.60
Positive	3	3.20
Negative	66	70.20
Total	94	100.00

Note:
[a]There were 9 missing responses for current HIV/AIDS status.

Multinomial Logistic Regression Analysis

This study uses multinomial logistic regression analysis to estimate the significance of factors believed to influence the HIV/AIDS status among African Americans. Tables 11 to 16 demonstrate this information in the form of regression models. Table 11 (regression model 1) provides the estimated log-odds for choosing the HIV status of "I do not know" versus "I am

HIV negative" and "I am HIV positive" versus "I am HIV negative" according to variables concerning poverty. These variables were level of education, and annual income. Based on the regression model 1 (poverty) in Table 11, none of the regression coefficients in the model were statistically significant. Since all probabilities were greater than the level of significance level of 0.05, the null hypothesis that the *(B)* coefficient for annual income and level of education was equal to zero for this comparison was not rejected.

Table 11

Multinomial Logistic Regression Predicting HIV/AIDS Status by Poverty Measured as Annual Income and Education Level (N=103)[a]

	Do Not Know HIV Status				HIV-Positive			
Variable	*B*	*SE*	*P*	*OR*	*B*	*SE*	*P*	*OR*
Annual income (reference: ≥ $50,000)								
≤ $10,000	18.26	3024.00	.995	85102406.00	1.11	8116.67	1.00	3.05
$10,001-20,000	18.72	3024.00	.995	134166466.30	19.29	6713.38	.998	238127883.80
$20,001-30,000	17.17	3024.00	.995	28626942.01	.28	8575.25	1.00	1.33
$30,001-40,000	17.66	3024.00	.995	46638448.72	.45	.00	-[b]	1.57
$40,001-50,000	16.91	3024.00	.995	21985754.21	.31	.00	-[b]	1.37
Education(reference: advanced degree)								
Did not complete high school	-.43	1.77	.809	.65	-15.02	5651.50	.998	.00[c]
High school graduate	-1.06	1.60	.510	.35	.05	.000	-[b]	1.05
College degree	-2.18	1.72	.206	.11	-.45	7103.55	1.00	.64

[a] Reference: HIV-negative status

[b] Significance was not reported for this predictor

[c] Rounded exact OR of .0000002988 to .00

Incarceration and HIV/AIDS

Regression Model 2 (Incarceration) estimates the significance of incarceration which is hypothesized to influence the HIV/AIDS status among African Americans. Table 12 provides us the estimated log-odds for choosing the HIV status of "I do not know" versus "I am HIV negative" and "I am HIV positive" versus "I am HIV negative" according to factors concerning incarceration. These variables are incarcerated for longer than 1 month and sex with someone incarcerated longer than 1 month. Based on regression model 2 (Incarceration) in Table 12, all 32 regression coefficients in the model are not statistically significant except the variable being incarcerated longer than 1 month ($p= 0.006$); which is statistically significant. For the other variable having sex with someone who has been incarcerated longer than 1 month, the probabilities were greater than the level of significance of (p-value <0.05), so the null hypothesis that the *(B)* coefficient for having sex with someone incarcerated longer than 1 month was equal to zero for this comparison and was not rejected. The log-odds ratio in this model indicate that participants incarcerated longer than 1 month compared to participants who had sex with someone incarcerated longer than 1 month was 5.040 times more likely to report a HIV status of "I do not know" relative to participants reporting as "I am HIV negative".

Table 12

Multinomial Logistic Regression Predicting HIV/AIDS Status by Time Incarcerated and Sexual Intercourse with Incarcerated Individual (N=103)[a]

	Do Not Know HIV Status				HIV-Positive			
Variable	*B*	*SE*	*p*	*OR*	*B*	*SE*	*P*	*OR*
Incarceration more than one month (reference: No)								
Yes	1.62*	.59	.006	5.04	1.69	1.38	.220	5.44
Had intercourse with incarcerated individual (reference: No)								
Yes	.83	.52	.110	2.29	20.49	.00	-[b]	791591865.00

[a] Reference: HIV-negative status
[b] Significance was not reported for this predictor
* $p < .05$

Substance Use and HIV/AIDS

Regression model 3 (Substance Use) investigates whether drugs or alcohol prior to sex has a significant influence on the HIV/AIDS status among African Americans. Table 13 provides us the estimated log-odds for choosing the HIV status of "I do not know" versus "I am HIV negative" and "I am HIV positive" versus "I am HIV negative" according to substance use. The variables used in this model were under the influence of drugs or alcohol prior to sex and having ever used a needle to inject illicit street drugs. The variable under the influence of drugs or alcohol prior to sex was the only variable that had a regression coefficient in the model that was statistically significant; thus the null hypothesis was rejected. The variable ever used a needle to inject illicit street drugs were not significant. So the null hypothesis that the *(B)* coefficient for the variable ever used a needle to inject illicit street drugs was equal to zero for this comparison was not rejected. The log-odds ratio for this regression model 3 indicate that

participants who are under the influence of drugs or alcohol prior to sex compared to ever used a needle to inject illicit street drugs was 4.44 times more likely to reporting an HIV status of "I do not know" relative to "I am HIV negative".

Table 13

Multinomial Logistic Regression Predicting HIV/AIDS Status by Substance Use (Influence of Alcohol or Drugs) and Needle Use (to Inject Street Drugs) Prior to Sexual Encounter (N=103)[a]

	Do Not Know HIV Status				HIV-Positive			
Variable	*B*	*SE*	*P*	*OR*	*B*	*SE*	*P*	*OR*
Ever under influence of alcohol or drugs (reference: No)								
Yes	1.49*	.67	.026	4.44	17.92**	.00	.000	608010 78.79
Ever use needle to inject street drugs (reference: No)								
Yes	1.36	1.26	.278	3.90	2.97	1.59	.062	19.50

[a] Reference: HIV-negative status

*$p < .05$; **$p < .01$

Inflammatory Sexually Transmitted Diseases and HIV/AIDS

The purpose of Regression Model 4 (STDs) is to investigate whether inflammatory sexually transmitted diseases has a significant influence on the HIV/AIDS status among African Americans. Table 14 provides us the estimated log-odds for choosing the HIV status of "I do not know" versus "I am HIV Negative" and "I am HIV Positive" versus "I am HIV Negative" based on participant's history of inflammatory sexually transmitted diseases. Based on the Regression Model 4 (STDs) in Table 14, the regression coefficients in the model for the variable ever been diagnosed with any sexually transmitted disease such as gonorrhea, syphilis, chlamydia, herpes or genital warts is significant to the model ($p < 0.05$). The p value for this variable was 0.004. The probability was less than the level of significance of ($p < 0.05$), so the

null hypothesis that the *(B)* coefficient for diagnosed with any sexually transmitted disease such as gonorrhea, syphilis, 35 chlamydia, herpes or genital warts was equal to zero for this comparison and was rejected. The log-odds ratio in this model indicate that participants diagnosed with any inflammatory sexually transmitted diseases such as gonorrhea, syphilis, chlamydia, herpes or genital warts compared to participants whom were not were 4.574 times more likely to have an HIV status of "I do not know" relative to an HIV status of "I am HIV negative".

Table 14

Multinomial Logistic Regression Predicting HIV/AIDS Status by Diagnosis of Inflammatory Sexually Transmitted Diseases (N=103)[a]

	Do Not Know HIV Status				HIV-Positive			
Variable	*B*	*SE*	*P*	*OR*	*B*	*SE*	*p*	*OR*
Ever diagnosed with STD (reference: No)								
Yes	1.52**	.53	.004	4.57	19.17[b]	.00	-	211870829.60

[a] Reference: HIV-negative status
[b] Significance was not reported for this predictor
** $p < .01$

Stigma and HIV/AIDS

The purpose of Regression Model 5 (Stigma) is to investigate whether stigma has significant influence on the relationship of HIV/AIDS status among African Americans. Table 15 provides us the estimated log-odds for choosing the HIV status of "I do not know" versus "I am HIV negative" and "I am HIV positive" versus "I am HIV negative" based on feelings regarding the variable stigma. Based on the statistical analysis in Table 15, all regression coefficients concerning stigma were not statistically significant to the model. The probabilities for all variables in the model were greater than the level of significance of ($p < 0.05$), so the null hypothesis that the *(B)* coefficients for would you be ashamed if you had HIV/AIDS,

people hesitant to take an HIV test due to the fear if the test is positive, and do you think people talk 36 badly about people living with or thought to be living with HIV/AIDS to others was equal to zero for this comparison was not rejected.

Table 15

Multinomial Logistic Regression Predicting HIV/AIDS Status by Type of Stigma (N=103)[a]

	Do Not Know HIV Status				HIV-Positive			
Variable	*B*	*SE*	*P*	*OR*	*B*	*SE*	*P*	*OR*
Ashamed if HIV positive (reference: No)								
Yes	.79	.83	.342	2.20	16.21	4566.8	.997	10933265.61
Think people hesitant to take HIV test due to fear of positive result (reference: No)								
Yes	.98	.68	.149	2.66	-.32	1.26	.801	.73
Think people talk badly about people with HIV(reference: No)								
Yes	-.11	1.24	.932	.90	15.12[b]	.000	-	3692330.77

[a] Reference: HIV-negative status
[b] Significance was not reported for this predictor

Under-Recognition and HIV/AIDS

The purpose of Regression Model 6 is to investigate whether Under-Recognition has a significant influence on the HIV/AIDS status among African Americans. Table 16 provides us the estimated log-odds for choosing the HIV status of "I do not know" versus "I am HIV negative" and "I am HIV positive" versus "I am HIV negative" based on variables concerning under recognition. Based on Regression Model 6 in Table 16, all regression coefficients for the variables concerning under-recognition were not statistically significant to the model. The probabilities for all variables in the model were greater than the level of significance of ($p < 0.05$), so the null hypothesis that the *(B)* coefficients for have you had an HIV test in the past

2 years and do you know the current HIV status of your partner was equal to zero for this comparison and was not rejected. Therefore, the log-odd ratios for this model were not reported.

Table 16

Multinomial Logistic Regression Predicting HIV/AIDS Status by Under-Recognition of Current HIV Status in Self or Sexual Partner (N=103)[a]

	Do Not Know HIV Status				HIV-Positive			
Variable	*B*	*SE*	*P*	*OR*	*B*	*SE*	*P*	*OR*
Tested for HIV in past two years (reference: No)								
Yes	-19.70	4517.79	.997	0.00[b]	1.20	1.28	.346	3.33
Knows HIV status of current partner (reference: No)								
Yes	-2.09	1.11	.061	.12	-20.41[c]	.00	-	0.00[d]

[a] Reference: HIV-negative status
[b] Exact odds ratio for this predictor is .000000002775, but was rounded to 0.00
[c] Significance was not reported for this predictor
[d] Exact odds ratio for this predictor is .000000001375, but was rounded to 0.00

Summary

The regression models concerning incarceration, inflammatory sexually transmitted diseases, and the influence of drugs or alcohol prior to sex were all statistically significant to the study; thus the null hypothesis that these variables do not have any significance on the HIV/AIDS status of African Americans in Shreveport, Louisiana was rejected. The regression models concerning stigma, poverty, and under-recognition were not significant to the study; thus the null hypothesis that these variable did not have any significance on the HIV/AIDS status of African Americans in Shreveport, Louisiana was not rejected.

CHAPTER 5

DISCUSSION

Introduction

This study set out to explore the probability that specific underlying factors have significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana. The justification of such a study is based upon reviewed literatures that suggested such factors among African Americans actually exist and were directly influencing such a relationship. Reviewed literature indicated that of the more than 1 million persons living with HIV/AIDS in the United States, almost 50% are African American, yet only representing 13% of the total population (McCree, 2009). In addition to this realization, reviewed literature also suggested this crisis is set to continue due to African Americans accounting for about 50% of all new HIV infections, with approximately 25,000 African Americans becoming infected each year (McCree,2009). Based on these statements, the following research question was asked:

Do the following factors have a significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana?

1. Incarceration
2. The influence of drugs or alcohol prior to sex
3. The number of sexual partners
4. Stigma
5. Poverty

6. HIV/AIDS under-recognition
7. Inflammatory sexually transmitted diseases

Discussion of Findings

The hypothesis formulated for this study suggested that the specific underlying factors previously stated has significant influence on the HIV/AIDS status among African Americans. In order to test this theory, 6 logistic regression models were employed for this study. The results of these models were as follows:

Regression Model 1 (Poverty)

Based on the statistical findings in regression model 1, the level of education and annual income did not have significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana. In this study, poverty did not support the hypothesis and was not a statistically important predictor on the HIV/AIDS status of African Americans. These findings contradict the findings reviewed literature has suggested. Laurencin (2008) suggest poverty is an intensifier of the problem of HIV/AIDS among African Americans due to the host of other issues it has demonstrated to produce, such as drug use, prostitution, poor education, inadequate housing, and limited access to quality health and education. Reif (2006) also strengthens that statement by the suggestion that half of all African Americans live below 200% of the poverty line (Reif, 2006). Arp (2004) also associates the relevance of impoverishment and the culture of drugs, prostitution, crime, and illiteracy that increases ones' rate of exposure to HIV/AIDS. I can only assume that due to the limitations of this study that this has to be the reason for the difference in these findings versus what reviewed literature has suggested.

Regression Model 2 (Incarceration)

Based on the statistical findings in regression model 2, incarceration did indeed have significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana. More specifically, people incarcerated longer than 1 month was a statistically important predictor on the HIV/AIDS status of African Americans; thus a contributing factor. These findings are consistent with what reviewed literature has suggested in regard to incarceration among African Americans and how it specifically influences the HIV/AIDS status among them. Reviewed literature describes incarceration in black communities as a disease vector due to a continuous cycle of ingoing and outgoing of jails and prisons and then migration back into predominantly black communities (Wright, 2008); while many never made aware of their HIV status upon release. This is important because reviewed literature has suggested incarceration contribute to high risk sex partnerships because it destabilizes social and sexual networks (Khan, 2011), and a destabalized social and sexual network unaware of HIV/AIDS statuses would influence the HIV/AIDS status among them.

Regression Model 3 (The influence of drugs or alcohol prior to sex)

Based on the statistical findings in regression model 3, the influence of drugs or alcohol prior to sex also had significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana. In this study, poverty did support the hypothesis and was a statistically important predictor on the HIV/AIDS status of African Americans. Reviewed literature echoes these findings. Literature suggested that users of certain drugs were more likely to engage in high risk sexual behaviors (Schumacher, 2003). In addition to drugs, Walsh (2008) also points out that alcohol consumption and its associated effect of poor sexual decision making has been established as a contributing factor. Such effects among African Americans, coupled

with increased instances not-knowing HIV statuses may have one 41 possible outcome, a statistically significant relationship to HIV/AIDS.

Regression Model 4 (Inflammatory sexually transmitted diseases)

Based on the statistical findings in regression model 4, the factors concerning inflammatory sexually transmitted diseases such as gonorrhea, syphilis, chlamydia, herpes or genital warts, did indeed have significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana. In this study, inflammatory sexually transmitted diseases supported the hypothesis and was a statistically consistent and important predictor on the HIV/AIDS status of African Americans. These findings were in agreement to the findings of reviewed literature. It was indicated that in 2005, African Americans were 18 times more likely than whites to have gonorrhea, (Laurencin, 2008). Gonorrhea is just one example of what literature describes as an inflammatory sexually transmitted disease and how such diseases increases ones' susceptibility to HIV/AIDS, and increases the infectiousness of the already infected (Laurencin, 2008). The results of this model showed that participants with a history of sexually transmitted diseases were more likely to not know their HIV status. When that is coupled with the knowledge that inflammatory sexually transmitted diseases have been shown to increase the risk of HIV transmission approximately three- to five- fold (Oramasionwu, 2009), this results in a statistically significant relationship among the two.

Regression Model 5 (Stigma)

Based on the statistical findings in regression model 5, all factors concerning stigma did not have significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana. In this study, participants' views regarding stigma did not support the hypothesis and not a statistically important predictor on the HIV/AIDS status of African

Americans. Due to the limitations of this study, in particular the small sample size, the results of this model for stigma does not coincide with what reviewed literature has suggested. Reviewed literature suggested that it is now generally accepted that efforts to reduce stigma must be a part of all HIV/AIDS programming (Campbell, 2005). This is important because of the several ways how stigma, according to reviewed literature, has been determined to influence HIV/AIDS among African Americans. For example, deterring people from being tested for the disease which may cause an increased under-recognition of HIV/AIDS status among African Americans (Elmore,2006).

Regression Model 6 (Under-recognition)

Based on the statistical findings in regression model 6, under-recognition did not have significant influence on the HIV/AIDS status among African Americans in Shreveport, Louisiana. In this study, under-recognition did not support the hypothesis and was not a statistically important predictor on the HIV/AIDS status of African Americans. These results differ from those reported by other studies. HIV/AIDS under-recognition is suggested as a risk factor that may increase the chance of unknowingly infecting others (Oramasionwu, 2009), and delay early treatment and disease management.

Conclusion

This study sought to answer the research question by testing the hypothesis that underlying factors did have significant influence on the relationship of HIV/AIDS among African Americans. Based on the results of multinomial logistic regression the answer to the research question is yes. More specifically however, out of the list of underlying factors asked in the research question and statistically assessed, the independent variables incarceration, inflammatory sexually transmitted diseases and the influence of drugs or alcohol

prior to sex were statistically significant to the study and more likely to be a significant predictor on the HIV/AIDS status of the target population.

Recommendations

The findings in this study demonstrate the threat of HIV/AIDS among African Americans and how specific underlying factors among them are indeed influencing outcomes pertaining to HIV/AIDS status. The following recommendations for future research and implications for policy and practice can be drawn from this study:

Recommendations:

- Further research should attempt to assess the same underlying factors proposed in this study using a larger sample size of participants that are HIV positive.
- Further research should attempt to identify whether disparities exist in regard to HIV/AIDS by assessing the same underlying factors suggested in this study using a sample that consist of all ethnic groups.

Implications for Health Educators:

- HIV/AIDS policy: It is suggested that new policies be created and old ones revisited, in addition to funding concerning HIV/AIDS is increased in an effort to reverse the current trends identified in this study.
- HIV Testing: Based on the results of this study there was strong support that under-recognition is playing a significant role in the HIV/AIDS crisis among African Americans. The findings in this report identified that 38% of participants were unaware of their HIV status, and 54% reported as not having an HIV test performed within the past 2 years. These are very significant findings and it is suggested that aggressive

testing and education campaigns specifically targeting African Americans are carried out.

REFERENCES

Adimora, A.A, Schoenbach, V. J., Taylor, E. M., Khan, M. R., & Schwartz, R. J. (2011). Concurrent partnerships, non-monogamous partners, and substance use among women in the United States. *American Journal of Public Health, 101*(1), 128-136.

Anonymous. (2009). STDs highest in women and African Americans. *Perspectives in Public Health, 129*(2), 53-53.

Arp, W. (2004). HIV/AIDS and nondecision in Louisiana: A case study of prevention strategy in three black communities. *Journal of Black Studies, 34*(4), 548-561.

Brown, L. M. (2003). Interventions to reduce HIV/AIDs stigma: What have we learned? *AIDS Education and Prevention, 15*(1), 49-69.

Campbell, C. F. (2005). "I have an evil child at my house": Stigma and HIV/AIDS management in a south african community. *American Journal of Public Health, 95*(5), 808-815.

Center for Disease Control and Prevention. (2013). *HIV among African Americans.* Retrieved from http://www.cdc.gov/hiv/topics/aa/pdf/HIV_among_African_Americans_final.pdf

Center for Disease Control and Prevention (CDC). (2012). Evaluation toolkit: Patient and provider perspectives about routine HIV screening in health care settings. Retrieved from http://www.cdc.gov/hiv/topics/testing/healthcare/index.htm

Center for disease Control and Prevention (CDC). (2010a). *HIV among African Americans.* Retrieved from http://www.cdc.gov/hiv/topics/aa/pdf/HIV_among_African_Americans_final.pdf

Centers for Disease Control and Prevention (2010b). *HIV Surveillance Report, 2010*; vol. 22. Retrieved from http://www.cdc.gov/hiv/topics/surveillance/resources/reports/.

Centers for Disease Control and Prevention (CDC). (2008). *HIV/AIDS Surveillance Report.* Retrieved from http://www.cdc.gov/hiv/topics/surveillance/resources/reports/past.htm#surveillance

Center for Disease Control and Prevention (CDC). (2007). Fighting HIV among African Americans: A heightened national response. *MMWR*, 189-193.

Center for Disease Control and Prevention (CDC). (2004). *Leading causes of death by age group, black females—United States*. Retrieved from www.cdc.gov/women/lcod/04black.pdf.

Cornelius, L. J.-M. (2009). Enduring issues of HIV/AIDS for people of color: What is the roadmap ahead? *Health and Social Work, 34*(4), 243-246.

Darrow, W. W. (2009). AIDS-related stigma among black and hispanic young adults. *AIDS and Behavior,13*(6), 1178-1188.

Dawson, G. A. (2004). HIV/AIDS pandemic out of control in southern United States. *Journal of the National Medical Association, 95*(6), 415.

Edwards, L. V. (2011). Till death do us part: Lived experiences of HIV-positive married African American women. *The Qualitative Report, 5*, 1361-1379.

Elmore, K. (2006). Southern discomfort: AIDS stigmatization in Wilmington, North Carolina. *Southeastern Geographer, 46*(2), 215-230.

Galvin, S. R., & Cohen, M. S. (2004). The role of sexually transmitted diseases in HIV transmission. *Nature Reviews Microbiology, 2*(1), 33-42.

Hall, H. (2008). Estimation of HIV incidence in the United States. *JAMA, 300*(5), 520-529.

Harawa, (2008). Incarceration, African Americans and HIV: Advancing a research agenda. *Journal of the National Medical Association, 100*(1), 57-62.

Jaffe, H. (2004). Whatever happened to the U.S. AIDS epidemic? *Science, 305*(5688), 1243-1244.

Ka, S. (2001). "AIDS—the first 20 years". *New England Journal of Medicine, 344*(23), 1764-1772.

Kennedy, L. A., Godin, F. M., & Kan, V. L. (2010). Assessing targeted screening and low rates of HIVtesting. *American Journal of Public Health*, *100* (9), 1765-1768.

Khan, M. R.-G. (2011). Incarceration, sex with an STI- or HIV-infected partner, and infection with an STI or HIV in Bushwick, Brooklyn, NY: A social network perspective. *American Journal of Public Health, 101*(6), 1110-1117.

Laurencin, C. T. (2008). HIV/AIDS and the African-American community: A state of emergency. *Journal of the National Medical Association, 100*(1), 35-43.

Louisiana Office of Public Health. (2012). Fourth Quarter 2012. *Lousiana HIV/AIDS Surveillance Quarterly Report, 10*(4). Retrieved from http://new.dhh.louisiana.gov/assets/oph/Center-PHCH/Center-PH/hivaids/2012/FOURTHQuarter2012.pdf

Louisiana Office of Public Health-HIV/AIDS Program. (2010). Retrieved from Department of Health and Hospitals: http://new.dhh.louisiana.gov/index.cfm/page/919

McCree, D. H. (2009). A plan of action for tackling HIV/AIDS among African Americans. *American Journal of Public Health, 99* (6), 972-972.

Oramasionwu, C. U. (2009). HIV/AIDS disparities: The mounting epidemic. *Journal of The National Medical Association,101*(12), 1196-1204.

Reif, S. K. (2006). HIV infection and AIDS in the deep south. *American Journal of Public Health, 96*(6), 970-973.

Robertson, A., & Levin, M. L. (1999). AIDS knowledge, condom attitudes, and risk-taking sexual behavior of substance-abusing juvenile offenders on probation or parole. *AIDS Education and Prevention, 11*(5), 450-461.

Santelli, J. S., Brener, N. D., Lowry, R., Bhatt, A., & Zabin, L. S. (1998). Multiple sexual partners among U.S. adolescents and young adults. *Family Planning Perspectives, 30*(6), 271-275.

Schumacher, J. W. (2003). Perceived importance of condom use among African Americans using drugs. *American Journal of Health Studies, 18*(2), 82-91.

Senn, T. E. (2010). The male-to-female ratio and multiple sexual partners: Multilevel analysis with patients from an STD clinic. *AIDS and Behavior, 14*(4), 942-948.

Stangl, A. L., Bray, L., & Fritz, K. (2012). *Measuring HIV stigma and discrimination.* Strive. Retrieved from: http://strive.lshtm.ac.uk/resources/technical-brief-measuring-hiv-stigma-and-discrimination

Taege. (2011). Seek and treat: HIV update 2011. *Cleveland Clinic Journal of Medicine, 78*(2) 95-100.

Timpson, S. C. (2010). Sexual activity in HIV-positive African American crack cocaine smokers. *Archivesof Sexual Behavior, 39*(6), 1353-1358.

Unites States Department of Health and Human Services (2013). *2013 Poverty Guidelines*. Retrieved from: http://aspe.hhs.gov/poverty/13poverty.cfm

Volkow, N. D. (2011). The urgency of providing comprehensive and integrated treatment for substance abusers with HIV. *Health Affairs, 30*(8), 1411-1419.

Walsh, J. A., & Braithwaite, J. (2008). Self-reported alcohol consumption and sexual behavior in males and females: Using the unmatched-count technique to examine reporting practices of socially sensitive subjects in a sample of university students. *Journal of Alcohol and Drug Education, 52*(2), 49-72.

Wong, E. Y., Jordan, W. C., Malebranche, D. J., DeLaitsch, L. L., Abravanel, R., Bermudez, A., & Baugh, B. P. (2013). HIV testing practices among black primary care physicians in the United States. *BMC Public Health, 13*(1), 96.

Woolf-king, S., & Maisto, S. A. (2011). Alcohol use and high-risk sexual behavior in Sub-Saharan Africa: A narrative review. *Archives of Sexual Behavior, 40*(1), 17-42.

Wright, K. (2008). America's AIDS apartheid. *The American Prospect*. Retrieved from http://prospect.org/article/americas-aids-apartheid.

APPENDIX A-IRB EXEMPT STATUS

Institutional Review Board
Terre Haute, Indiana 47809
812-237-3092
Fax 812-237-3092

DATE: February 26, 2014
TO: Frederick Ellis
FROM: Indiana State University Institutional Review Board

STUDY TITLE: [455975-3] The Influence of Underlying Factors and the Relationship of HIV/AIDS Among African Americans in Shreveport, Louisiana and its Surrounding Areas

SUBMISSION TYPE: Revision

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: February 26, 2014

REVIEW CATEGORY: Exemption category # *2*

Thank you for your submission of Revision materials for this research study. The Indiana State University Institutional Review Board has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations (45 CFR 46). You do not need to submit continuation requests or a completion report. Should you need to make modifications to your protocol or informed consent forms that do not fall within the exempt categories, you will have to reapply to the IRB for review of your modified study.

Internet Research: If you are using an internet platform to collect data on human subjects, although your study is exempt from IRB review, ISU has specific policies about internet research that you should follow to the best of your ability and capability. Please review Section L. on Internet Research in the IRB Policy Manual.

Informed Consent: All ISU faculty, staff, and students conducting human subjects research within the "exempt" category are still ethically bound to follow the basic ethical principles of the

Belmont Report: a) respect for persons; b) beneficence; and c) justice. These three principles are best reflected in the practice of obtaining informed consent.
If you have any questions, please contact Dr. Kim Bodey within IRBNet by clicking on the study title on the "My Projects" screen and the "Send Project Mail" button on the left side of the "New Project Message" screen. I wish you well in completing your study.

APPENDIX B: IRB INFORMED CONSENT

You are being invited to participate in a survey in regard to the HIV/AIDS epidemic among Africans. This study is being conducted by Mr. Frederick T. Ellis Sr. under the direction of Dr. Eliezer Bermúdez as thesis chair from the Department of Applied Science at Indiana State University. This graduate student research project is being conducted as part of a Master thesis for partial fulfillment for the degree of Master of Health Sciences. There are no known risks if you decide to participate in this research study. There are no costs to you for participating in the study. The information you provide will be used only to determine if an association exists between underlying factors and the relationship of HIV/AIDS currently experienced by African Americans. The questionnaire will take about 15 minutes to complete. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits to the affected community at large. This survey is anonymous. Do not write your name on the survey. By taking this survey online respondent IP addresses will not be collected. No IP addresses will be included in the results. No one will be able to identify you or your answers and no one will know whether or not you participated in the study, but note that nothing done online is 100% guaranteed. Individuals from the Institutional Review Board may inspect these records. Should the data be published, no individual information will be disclosed. Your participation in this study is voluntary. By completing and submitting the completed survey online, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer for any reason. If you have any questions contact:

Frederick T. Ellis
Principle Investigator
Email: fellis1@sycamores.indstate.edu
Indiana State University Graduate Studies
Phone: (318) 617-3485 Phone: (318) 212-8761

Eliezer Bermúdez, Ph.D., CP-FS
Department Chair, Associate Professor
Department of Applied Health Sciences, Arena B-81
Email: Eliezer.bermudez@indstate.edu
Indiana State University, Department of Applied Health Sciences
Phone: (812) 237-3079

APPENDIX C-RESEARCH QUESTIONNAIRE

1. Are you an African American?

Yes

No

2. Are you in the age group 18 to 45?

Yes

No

3. What is your age? _____

4. What is the area of your residence? Zip code _____

5. What is your gender?

Female

Male

6. What is your annual personal income?

0-10,000

10,001-20,000

20,001-30,000

30,001-40,000

40,001-50,000

Greater than 50,000

7. What is the highest education level you have completed?

Did not complete high school

High school graduate

College degree

Advanced degree

8. Describe your relationship status?

Single

Married

Separated

Divorced

Widowed

9. Describe your sexual orientation?

Straight/Heterosexual

Gay/Homosexual

Bisexual

10. Approximately how many different sexual partners (vaginal or anal sex) have you had in the past year? _____

11. In the past year, have you had either vaginal or anal sex with: (check all that apply?)

Men

Women

Transgender (Male to Female)

Transgender (Female to Male)

12. Are you ever under the influence of any illicit street drugs (example marijuana, cocaine, meth, heroin, ecstasy, prescription narcotics) or any amount of alcoholic beverages prior to sexual encounters?

Yes

No

13. Have you ever used a needle to inject illicit street drugs?

Yes

No

14. Have you ever been incarcerated in jail or prison for longer than 1 month?

Yes
No

15. Have you had sex with someone who has been incarcerated in jail or prison longer than one month?

Yes

No

16. Have you ever been diagnosed with any sexually transmitted disease such as gonorrhea, syphilis, chlamydia, herpes or genital warts?

Yes

No

17. Would you be ashamed if you had HIV/AIDS?

Yes

No

18. In your opinion, are people hesitant to take an HIV test due to the fear if the test is positive?

Yes

No

19. Do you think people talk badly about people living with or thought to be living with HIV/AIDS to others?

Yes

No

20. Do you know the HIV testing status of your sexual partners?

Yes

No

21. Have you taken a HIV test in the past 2 years?

Yes

No

22. What is your current HIV status?

I am HIV positive

I am HIV negative

I do not know

APPENDIX D-SURVEY ADVERTISEMENT FLYER

The Relationship of HIV/AIDS among African Americans

AN INDEPTH INVESTIGATION TO UNDERSTAND WHY

Please help by taking the Anonymous online survey at the link:

https://www.surveymonkey.com/s/stopAIDSnow

Principal Investigator: Mr. Frederick T. Ellis Sr.
Phone: 318-617-3485
Email: fellis1@sycamores.indstate.edu

There is a drawing for a $100.00 Gift card to Amazon.com

to be awarded for participation; details upon completion.