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The Impact of Stigma on HIV/AIDS Testing Among Kenyan Diaspora women

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Abstract

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by

Phyllis Nyotta

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Public Health and Epidemiology

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Abstract

Researchers have considered HIV/AIDS in Kenya as the largest HIV pandemic in the

world, with about 6.3 million individuals living with the disease as of 2013. About 25%

of new HIV patients are adult women, aged 15 to 24 years old. Guided by the health

belief model (HBM), the purpose of this quantitative cross-sectional survey research

study was to explore the influence of various dimensions of HIV/AIDS stigma (public,

self, enacted, and structural) on the uptake of HIV testing among Kenyan Diaspora

women in United States. Multiple linear regression analysis was used to test if there was

a correlation between HIV/AIDS stigma and the uptake of HIV testing on Kenyan

Diaspora women. Preliminary analyses showed the relationships were approximately

linear with the residuals normally distributed, as assessed by skewness and kurtosis

statistics, and there were no outliers. The results for these four research questions were

not significant. The results of the study indicated that perceived levels of stigma among

Kenyan Diaspora women living with HIV/AIDS did not correlate with differing levels of

uptake for testing and treatment. This study promoted positive social change through

encouraging HIV testing by raising awareness and understanding about HIV/AIDS,

especially during the early stages of the disease. Thus, promoting positive social change

in encouraging Kenyan Diaspora women to engage in HIV testing to ensure they were

safe for sexual encounters or to breastfeed their children. Similar studies could carry out

research to examine the influence of factors other than stigma on uptake of testing and

treatment for those living with HIV/AIDS.

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Chapter 1: Introduction to the Study

Introduction

Researchers have considered the prevalence of HIV/AIDS in Kenya the largest HIV pandemic in the world, with about 6.3 million individuals living with the disease as of 2013 (AVERT, 2013). About 25% of new HIV patients are infected as adult women, aged 15 to 24 years old (AVERT, 2013). According to 2014 statistics, the prevalence rate for women equaled 7%, as opposed to a prevalence of 5% for men (Kohler et al., 2014). This finding indicated that there existed a higher percentage of Kenyan women suffering from HIV/AIDS, as opposed to men. Various underlying societal issues remain that may help to explain this disparity, including prostitution and gender discrimination (Kohler et al., 2014). The high prevalence rates of HIV among women presents a major health challenge, in part because a woman's ability to carry a life also extends the effects of HIV/AIDS to newborn or infant babies, especially in circumstances lacking proper pre and postnatal care (Kohler et al., 2014).

The government of Kenya has spearheaded the fight against HIV/AIDS. The government has provided free HIV testing and counseling to assist women in early detection of the disease to prevent spreading the disease to offspring (Kohler et al., 2014). However, a significant number of women, specifically in rural areas of Kenya, do not avail themselves of free HIV/AIDS testing (Akullian et al., 2014). It remains unquestionable that the fight against the pandemic must start with voluntary testing (Akullian et al., 2014). Knowledge of one's HIV status remains crucial for the purposes of managing the disease and preventing its spread (Akullian et al., 2014). Stigma may

influence low HIV testing rates (Akullian et al., 2014). Akullian et al. (2014) described HIV stigma as a mark of discredit or disgrace associated with HIV/AIDS.

Many people fear testing due to the shame they may feel from social stigma associated with testing positive (Akullian et al., 2014). Stigma, such as prejudice, negative attitudes, and the experiences of abuse and maltreatment, affects the war against HIV/AIDS in a myriad of ways, including the deliberate intention by HIV positive individuals to hide their statuses from a sexual partner due to fear of disclosure (Akullian et al., 2014). The immigrant populations from Kenya in Sub-Saharan Africa present an equally complicated dimension regarding the fight against HIV/AIDS (Akullian et al., 2014). The traditional association of HIV/AIDS with Africa and the larger Black community has significantly contributed to HIV stigma among immigrant groups (Akullian et al., 2014). Diaspora women deal with issues associated with their immigrant status, such as their status as minorities or being new to a community (Aarts, Chalker, & Weiner, 2014). They have trouble adjusting to the cultural and social environments (Wouters, Masquillier, & le Roux Booysen, 2016). The knowledge of HIV/AIDS infection worsens the situation for these women because of how people within the community react and treat people infected with the disease (Wouters et al., 2016).

Most researchers have focused on a cure, leaving a gap in knowledge, especially on how HIV stigma affects testing and the overall fight against the disease (Smith & Larson, 2015). Therefore, there exists a gap in fostering a better understanding of the pandemic in this dimension and subsequently open evidence-based interventions, curbing HIV-stigma. Moreover, with more evidence informing the public about HIV, I aimed to

help curb the stigma associated with testing positive for this disease. I promoted positive social change through encouraging HIV testing by raising awareness and understanding about HIV/AIDS, especially during the early stages of the disease. Moreover, identifying this disease early can prevent further infection from spreading to unknown victims (Smith & Larson, 2015). The need for this study derived from the need to increase HIV testing among Diaspora Kenyan women who refuse testing or seeking treatment due to fear of stigma. The focus of this study was on the extent of the influence of HIV stigma on the uptake of HIV testing to help develop programs that could promote HIV testing, specifically on Diaspora Kenyan women.

Chapter 1 provides a background of the current study. This chapter also provides a brief discussion of the problem statement and justification for this study. I will use and provide a discussion of the purpose of the study, significance of the study, and a brief introduction to the research methodology. Chapter 1 will also include a presentation of the assumptions, limitations, and delimitations, as well as the terms used in the study. The chapter will end with a transition to Chapter 2 that will include a summary and a discussion of the organization of the remainder of the study.

Background

The issue of HIV stigmatization has grown with the increased population of HIV positive patients because stigmatization has increased the patients' vulnerabilities to the negative influence of the illness (Wouters et al., 2016). Stigmatization consists of a condition where an individual stands as unworthy of participation and recognition because of a perceived fault in his or her character and behavior; it remains a prevalent

aspect of the lives of most Kenyans who live with HIV/AIDS (Akullian et al., 2014).

Stigma and discrimination of the HIV population remains one aspect that bridges social

divides. It can be self-internalized; cause government, employment, social, and household

stigmatization; and cause restrictions on travel (Akullian et al., 2014). These all represent

healthcare stigmas, which interplay to create a sense of worthlessness across the

individuals or populations of a target (Kenya National Bureau of Statistics, 2010). With

this interplay, the challenges that these populations face are not only those that relate to

care access, but also those limited to interventions from the communities or government.

These can have a negative influence on their social and economic lifestyles because

limitations, such as discrimination in employment, means that they will find it hard to

acquire employment (Institute of Economic Affairs, 2008).

In Kenya, there exists a generalized feeling that women living with HIV represent

not only a disgrace to the communities, but they also represent the major cause of its

prevalence within the society (Kohler et al., 2014). Healthcare workers and the

government in Kenya need to focus on the cultural stigmas that cause them to regard

women as a lesser gender, while shifting blame on them, such as the prevalence of HIV

(Wouters et al., 2016). For instance, some in society consider women, who cannot bear

children, as worthless regarding their family statuses, social responsibilities, and

wellbeing (Wouters et al., 2016). Within this cultural view, women living with HIV are at

higher risk of mortality in bearing children, which further increases the prevalence of

passing this disease through mother-to-child transmission. The chance of transmission is

greater if the baby is exposed to HIV-infected blood or fluids, which often occurs during

difficult births, as well as high risks of mortality for the mothers (Wouters et al., 2016). In a similar cultural view, women are regarded as monogamous, while the same cultures allow men to practice polygamy under the guise of seeking potential wives (Wouters et al., 2016).

According to a report by the Kenya National Bureau of Statistics (2010), up to 21.5% of men in rural Kenya, between the ages of 15 and 49 years, participate in polygamous relationships (Kenya National Bureau of Statistics, 2010). The prevalence or risk of infection remains high in polygamous marriages or relationships. This prevalence tends to influence women heavily, as the cultural design requires that women in polygamous relationships remain entitled to one man; however, the men can experiment with as many women as they wish (Kohler et al., 2014). This aspect means that the risk of infection increases for women because all those under one man face exposure to equal chances of infection, despite that the transmission from women to men remains lower, as compared to that from men to women (Kohler et al., 2014).

The fear of disclosure also influences women in polygamous relationships. In most instances, women in such relationships often blame their cowives for infections (Kohler et al., 2014). In the instance of disclosure, there exists a high likelihood that their husbands will abandon them in preference of disease-free wives (Kohler et al., 2014). In this regard, as women fear abandonment and the consequences, such as social insecurity and abandonment of their children by the husband, women tend to avoid disclosure (Kohler et al., 2014). This aspect tends to increase the rate of transmission across the polygamous family and further burdens the society with increased prevalence, especially

for undiagnosed populations and those under no treatment (Kenya National Bureau of Statistics, 2010).

These statistics show that the Sub-Saharan Africa still lags in terms of fighting HIV/AIDS pandemic. A panoramic look at the status of HIV/AIDS in the region shows that various counter forces exist that continue to negate the intentions of the government, nongovernmental organizations (NGOs), and the larger international community to curb HIV/AIDS infection in Sub-Saharan Africa (Kenya AIDS Indicator Survey, 2012). Kenya presents a typical exemplar, where the efforts placed by the government did not commensurate with bringing the disease under control (Kenya AIDS Indicator Survey, 2012).

The Kenyan government has done appreciably well concerning HIV/AIDS sensitization and prevention through various mechanisms, such as campaigns, free testing, free antiretroviral drugs, and informative communication (Kenya AIDS Indicator Survey, 2012). The country has made appreciable strides in terms of fighting child-mother infections through prenatal HIV testing (Kenya AIDS Indicator Survey, 2012). Despite these efforts, the disease continues as a major healthcare problem in the country (Kenya AIDS Indicator Survey, 2012).

Overwhelming evidence continues to hold HIV/AIDS-related stigma as a major suspect for the increasing rates of HIV in most Sub-Saharan countries. HIV/AIDS-related stigma has hampered the fight against HIV/AIDS in Kenya (Liamputtong, 2015). This stigmatization has been deeply rooted in the societal mindset due to various misconceptions around the disease. For instance, in most parts of the world, researchers

have associated HIV/AIDS with loose sexual behaviors; therefore, this aspect has compromised willingness to test for HIV/AIDS (Piot et al., 2015). Equally, misconceptions regarding the modes of disease spread have led to an increase in HIV stigma, especially in rural African society, due to a lack of adequate knowledge on how HIV spreads or how to incorporate people living with the disease into society (Liamputtong, 2015).

This stigma affects people living with HIV/AIDS in a multidimensional manner, touching on the social and economic spheres of their lives. Before many communities in Sub-Saharan Africa came to understand the importance of equal treatment for people living with HIV/AIDS, various corporate and government sectors laid off workers suspected as living with the disease because of reduced economic productivity and the fear of spreading the disease to other persons (Liamputtong, 2015). Socially, women in most Sub-Saharan African, rural communities, especially in Kenya, have taken the blame from their spouses for the disease (Piot et al., 2015). A misconception, created around circumcision, stands that circumcised men cannot acquire the disease through sexual intercourse; hence, in most rural populations in Kenya, women have taken the blame (Liamputtong, 2015).

HIV/AIDS-related stigma remains multidimensional with race also influencing propagating HIV-related stigma, especially in multiracial societies (Katz et al., 2013). For instance, the historical association of HIV/AIDS with Africa has traditionally seen the level of stigma comparatively faced by drug addicts (Ojikutu et al., 2014). The misconception that the disease began in Africa has seen many Blacks in multiracial

societies, such as America, Britain, and the larger West, suffer from the negative attitude that people living with the disease face from the larger public (Ojikutu et al., 2014).

Stigma has been a major drawback toward fighting HIV/AIDS in most Sub-Saharan countries, including Kenya. Stigma has severe effects in the fight against HIV/AIDS (Katz et al., 2013) because patients refuse to seek professional help and support for their conditions (Ojikutu et al., 2014). Apart from this, stigma also compromises safe sexual behaviors, in the sense that an infected partner may fail to disclose to their illness due to fear of stigma, or infected mothers passing the disease to their offspring through continuing to breastfeed their children to prevent social pressure (Katz et al., 2013). Although existing literature has determined that the HIV/AIDS stigma has negative effects on patients and people they engage with, it remains unclear how each different form of stigma relates to the willingness of Kenyan Diaspora women to participate in HIV testing. I sought to examine the influence of various dimensions of HIV/AIDS stigma, which included public stigma of prejudice, self-stigma of negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment, on the uptake of HIV testing among Kenyan Diaspora women to encourage development of campaigns to promote the prevention or the fight against the disease.

Public Stigma

Public stigma presents as the root form of stigma, feeding the development and perpetuation of other types of stigma (Katz et al., 2013). Multitudes of authors have described the HIV positive individuals' experiences with public stigma. Bird and Voisin (2013) conducted a qualitative study involving HIV positive Black men living in

Chicago. Public stigma in the form of negative or judgmental ideas about HIV positive individuals stands in the literature. Men, who participated in qualitative interviews, reported that friends and family expressed opinions that their HIV infection reflected a form of punishment for their immoral behavior (Bird & Voisin, 2013; Jeffries et al., 2015).

Lawson, Bayly, and Cey (2013) studied social judgment regarding HIV positive individuals as residing from a lower class. They asked American college students to rate the parental fitness of women with randomly assigned medical conditions. Participants rated women with HIV as less fit to parent compared with women with other medical conditions, suggesting negative stereotyped assumptions regarding pregnant women with HIV (Lawson et al., 2013). Liu, Canada, Shi, and Corrigan (2012) found employers' perceptions of workers with HIV, as being incompetent would deter them from interviewing an applicant known to have HIV.

Self-Stigma

It remains understandable that having an awareness of public attitudes of stigma regarding one's HIV positive status, in addition to previous experience of negative treatment based upon this status, may lead individuals to anticipate stigmatized treatment in relation to their diagnosis. The literature contains several descriptions of such experience by persons with HIV. A very common expression of anticipated stigma by persons with HIV was the fear that others would reject or shun them if they revealed their HIV positive status (Bird & Voisin, 2013; Jeffries et al., 2015; Liu et al., 2012; Molina & Ramirez-Valles, 2013). Gay men who participated in qualitative interviews expressed a

sense of anticipated stigma and rejection associated with serosorting, which reflects a process practiced in online dating venues in which HIV-negative men specify that they are only interested in dating other HIV-negative men (Skinta, Brandrett, Schenk, Wells, & Dilley, 2014). Other participants expressed concern that disclosing their HIV positive status would result in discrediting their work, or in others automatically associating their diagnosis with death (Bird & Voisin, 2013).

Enacted Stigma

Bird and Voisin (2013) found that abandonment by friends and family represented a common and painful form of enacted stigma related to one's HIV status. Similarly, Jeffries et al. (2015) conducted qualitative interviews with American young men, who have sex with men (MSM,) regarding their experiences with HIV stigma. The result of the interviews determined that many of their friends and family terminated their relationships with them once they revealed their HIV positive status. These men also noted that in the relationships, there was often a subtle change in the ways that others interacted with them, once their HIV status was known, such as differing body language or tones of voice that communicated tension or discomfort (Jeffries et al., 2015).

Structural Stigma

Participants more frequently reported incidents of structural stigma, pertaining to HIV stigma in Sub-Saharan Africa, compared with participants from other regions of the world in the literature reviewed for this study. In a survey of 486 HIV positive individuals in South Africa, participants reported they faced exclusion from church services and membership because of their HIV status, and reported losing their jobs or

being forced to move out of their current homes or apartments because of having HIV (dos Santos, Kruger, Mellors, Wolvaardt, & van der Ryst, 2014).

Both healthcare workers and recipients of medical care reported HIV stigma exhibited within the healthcare arena. Okoror, BeLue, Zungu, Adam, and Airhihenbuwa, (2014) conducted a qualitative study, using focus groups to explore the healthcare-related stigma experiences of 51 South African women with HIV. Okoror et al. indicated healthcare workers behaved in ways that communicated endorsement of stigmatized views of HIV positive individuals. Women reported they received treatment in medical clinics, where healthcare professionals called attention to their stigmatized status as HIV patients (Okoror et al., 2014). These healthcare professionals would use different colored medical files (differing from the color of other patient files) for HIV positive patients, force the patients to sit in a specified area of the waiting room away from the other patients, and would examine the patient in rooms only used for HIV positive patients (Okoror et al., 2014). Dos Santos et al. (2014) stated some participants reported health insurance denials, and medical professionals would violate their confidentiality rights by disclosing their HIV status without consent. Healthcare workers from Ethiopia who participated in a study regarding HIV stigma, acknowledged having illegally divulged patients' HIV positive diagnoses, referring patients with HIV to other clinics for treatment, and refusing to treat patients with HIV (Feyissa, Abebe, Girma, & Woldie, 2012).

Problem Statement

HIV/AIDS prevalence continues to rise, especially in Sub-Saharan Africa, notwithstanding the various mechanisms to curb the spread of the disease and manage it for those who remain infected. According to World Health Organization and Joint United Nations Programme on HIV/AIDS (2012), there was an increase of HIV/AIDS infections in Sub-Saharan Africa from 2009 to 2011 with statistics showing an increase from 22.5 million to 23.5 million. Amid a widespread campaign to curb the spread of the disease, notably from mother to child, women continue to form a major risk group, with 58% of new incidence of HIV infections occurring in women (Wettstein et al., 2012). Within this region, researchers have termed HIV/AIDS as an expanding epidemic (Wettstein et al., 2012), which occurs amid robust efforts and measures to lower the spread of the disease.

Among populations in the United States, individuals living with HIV or those who are at risk identified stigmatization as one of the major barriers to combating the prevalence of HIV (Smith & Larson, 2015). The focus of this study was to investigate how HIV/AIDS stigma related to the uptake of HIV testing among the population of Diaspora Kenyan women in United States. I helped identify reasons for the increased prevalence of HIV/AIDS among Diaspora Kenyan women, despite the continuous efforts of various groups in controlling and supporting HIV/AIDS patients or those who remained at risk.

Researchers of the status of the HIV/AIDS pandemic in Kenya have further demonstrated the general problem considered in this study. Since the first discovery of the disease in Kenya, the government, NGOs, international health organizations, and the

larger international community have initiated numerous efforts; however, these initiatives have negatively influenced perception of HIV/AIDS (Turan et al., 2011). Kenya has one of the largest HIV/AIDS pandemics in the world, and the HIV/AIDS statistics in the country remain high despite all efforts (Turan et al., 2011). This issue accentuates the need to capture a holistic picture of the pandemic in the country, digging deeper into the social dimensions of the disease for larger insight into refashioning the war against the disease (Turan et al., 2011).

HIV stigma remains widespread; this issue may represent a feasible explanation as to why the war against the pandemic has been a struggle. HIV stigma encompasses aspects, such as prejudice, negative attitudes, abuse, and maltreatment associated with the disease. According to Turan et al. (2011), stigma has compromised the ability of the country's health sector to fight the disease, affecting all strategies employed to fight the disease, such as free testing, counseling, drugs, and increased availability of HIV-related services. This phenomenon leads to new infections among adults, teenagers, and mother-to-child infections. Stigma has also compromised the quality of life for persons living with the disease, further increasing the death toll of the disease (Turan et al., 2011). HIV stigma remains associated with a refusal to undertake HIV testing due to the fear that comes with the diagnosis of the disease. Stigma compromises safe sexual behaviors due to the fear of disclosing HIV status to a sexual partner (Turan et al., 2011). Various mothers, in rural parts of Kenya, refuse to undertake antenatal testing due to stigma or continue to breastfeed their children, despite having a prior knowledge of an HIV/AIDS diagnosis (Turan et al., 2011).

Researchers have differentiated dissimilar types of stigma as anticipated stigma, enacted stigma, and internalized stigma (Gray et al., 2005). People who face HIV-related stigma and discrimination can experience the following: prejudice, negative attitudes, abuse, and maltreatment directed at people living with HIV (Chinkonde, Sundby, & Martinson, 2009). Researchers have analyzed the perceptions of stigma among women living with or without HIV, though little has been documented about the influence stigma has on HIV testing in diaspora Kenyan women (Ramjee & Daniels, 2013). The focus of this study was to address the gap in literature: Researchers have yet to investigate the influence of HIV stigma on the uptake of HIV testing among Diaspora Kenyan women in United States. Through this study, I could help develop programs on how to reduce stigma and promote HIV testing.

Purpose of the Study

The purpose of this quantitative study was to explore the influence of various dimensions of HIV/AIDS stigma, which included prejudice, negative attitudes, abuse, and maltreatment, on the uptake of HIV testing among Kenyan Diaspora women in United States. The independent variables in this study included the four HIV/AIDS stigma measures, which included public stigma, self-stigma, enacted stigma, and structural stigma, while the dependent variable was the uptake of HIV testing among Kenyan Diaspora women. Women represent a highly vulnerable group in terms of HIV/AIDS spread in the Kenyan Diaspora (Kohler et al., 2014). Testing is one of the crucial strategies for fighting HIV/AIDS, and the fight against the disease can remain difficult without increased testing rates, notably in women, because women with

HIV/AIDS may subject an extra individual to the disease through mother-to-child infection (Kohler et al., 2014). However, HIV/AIDS stigma has compromised the fight against the disease, especially when it comes to testing (Kohler et al., 2014). There is an apparent fear of stigma that comes with the diagnosis of the disease, and women remain comparatively more affected by this aspect compared to men (Kohler et al., 2014). Although various researchers have studied HIV/AIDS, a gap existed concerning exploring the effect of stigma on HIV/AIDS testing uptake among women that I sought to address.

Research Questions and Hypotheses

The general research question that I addressed in this study included the following: Is there a correlation between HIV/AIDS stigma and the uptake of HIV testing on Kenyan Diaspora women after controlling for the covariates of immigration status, and access to care, age, marital status, education level, and social economic status? Specifically, the focus of this study was to address the following research questions and to test the following hypotheses:

Research Question 1: Is there a correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, marital status, age, and access to care, education level, and social economic status?

$H_0 1$: There is no correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women.

$H_1 1$: There is a correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women.

Research Question 2: Is there a correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, and access to care, age, marital status, education level, and social economic status?

$H_0 2$: There is no correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women.

$H_1 2$: There is a correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women.

Research Question 3: Is there a correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, and access to care, age, marital status, education level, and social economic status?

$H_0 3$: There is no correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women.

$H_1 3$: There is a correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women.

Research Question 4: Is there a correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates immigration status, and access to care, age, marital status, education level, and social economic status?

H_04: There is no correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women.

H_14: There is a correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women.

Theoretical Framework

The sociocognitive theory posits that humans learn and acquire knowledge from the environment, people, and behaviors of their physical and social interactions, which guided this study (Bandura, 2011). These social and physical environments could include friends, family, colleagues, and the public with whom HIV-positive individuals interact with daily. In the aspect of HIV stigma, whether that which is inflicted by the public or that which is self-inflicted, people living with HIV tend to develop responses or attitudes that are based on perceptions of the people around them (Bandura, 2011). The views and opinions of the public, regarding people living with HIV, tend to shape how society members treat HIV positive individuals (Nöthling & Kagee, 2013). If HIV positive individuals perceive that they receive treatment in such a manner as to imply their condition remains abnormal or perceivable as less human, then they tend to respond by withdrawing from the public, even limiting their ability to seek care (Nöthling & Kagee, 2013).

A deeper look at the influence of the social-cognitive relation with stigma and prevalence of HIV will aid in laying out strategies for prevention or management of HIV. The environment, people, and behaviors of the larger society reflect the will to accommodate HIV positive individuals and give them a fair chance to manage their

conditions without societal limitations (Nöthling & Kagee, 2013). Nöthling and Kagee (2013) used the health belief model (HBM) to state that an individual remains likely to undertake a health-related behavior and action only when they have received information that the condition stands as controllable and manageable from a self-care view. The society around them must provide a positive expectation for them that the recommended action will help them manage their condition (Nöthling & Kagee, 2013). Researchers, using the social-cognitive theory, have claimed the HBM model provides a much better perspective on which the aspects of environment, people, and behaviors can stand as influential in avoiding or increasing stigma levels for HIV positive individuals (Nöthling & Kagee, 2013). The HBM model shows the rationale and strategy on which the key stakeholders, seeking to help the people living with HIV to manage their condition, can prioritize and implement that identified action plan.

Nature of the Study

The purpose of this quantitative study was to explore the influence of various dimensions of HIV/AIDS stigma, which included public stigma of prejudice, self-stigma of negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment, on the uptake of HIV testing among Kenyan Diaspora women. The participants of this study consisted of Kenyan Diaspora women from the United States. A survey method was used to measure variables of the dimensions of HIV/AIDS stigma, as well as the uptake of HIV testing. I used the responses in the survey to analyze whether a relationship existed between the identified variables. I considered a quantitative correlational research design because the purpose of this study was to explore potential relationships between

identified variables. A correlational research design allows a researcher to focus on identifying whether a relationship exists between independent and dependent variables (Babbie, 2012). The independent variables considered in this study included the dimensions of HIV/AIDS stigma: public stigma of prejudice, self-stigma of negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment. The dependent variable considered in this study was the uptake of HIV testing. I considered controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status.

I used a convenience sampling technique to recruit participants for the study. A convenience sampling technique consists of a nonprobability sampling method, based on the willingness and the availability of the potential participants to volunteer in the study (Baker et al., 2013). I invited prospective participants to volunteer in the study and included those who agreed to participate in the data collection phase. Based on the calculation using G*Power (Charan & Biswas, 2013), it was necessary to gather at least 85 participants for this study.

I used an informed consent form to ensure that participants agreed to participate in the study. I directed only participants who volunteered in the study to the survey questionnaire. The survey questionnaire included items on the dimensions of HIV/AIDS stigma, such as public stigma of prejudice, self-stigma of negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment, as well as the uptake of HIV testing. I employed the Dimensions of Stigma Scale Instrument, used by Bresnahan and Zhuang (2011) in this study. The survey questionnaire also included questions on

demographic characteristics of participants to describe the sampled participants. At the end of the data collection phase, I compiled and organized the data using SPSS statistical software for data analysis, as suggested by researchers (Nimon & Oswald, 2013). I employed descriptive statistics, as well as multivariate analysis, to test the hypotheses in this study. I used a significance level of .05 for all analyses.

Definition of Terms

Abuse: Abuse involves treating a person with violence or cruelty (Aarts et al., 2014).

*Diaspora***:** Diaspora implies a group of people living in other countries, away from their nation of birth or that of their ancestors (Aarts et al., 2014). Many variables are health constant for the purposes of identifying the correlation between the dependent and the independent variables of the study (Liamputtong, 2015).

Maltreatment: Maltreatment refers to cruel or unkind treatment toward an animal or a person (Aarts et al., 2014).

Negative attitudes: Negative attitudes represent an unfavorable perception toward a circumstance, phenomenon, or person (Aarts et al., 2014)

Prejudice: Prejudice involves a preconceived judgment against a phenomenon, an object, or a person that is unfounded or based on faulty information, reasoning, and experience (Aarts et al., 2014).

*Stigma***:** A stigma consists of a disgrace or discredit associated with a quality, circumstance, or a person (Aarts et al., 2014).

Assumptions

I presumed several aspects, including the assumption that all respondents would honestly respond to the survey questionnaire. I also assumed that all participants would understand the existence of HIV/AIDS and the stigma of prejudice, negative attitudes, abuse, and maltreatment. I also assumed that the survey instrument used in this study would reliably measure the constructs considered in this study. I further assumed that cultural values and beliefs remained similar across the Kenyan communities, and I assumed that participants could read and speak the English language to respond to the questionnaire.

Scope and Delimitations

Several factors delimited this study. I focused on studying Diaspora Kenyan women in the United States. The sampling of this study derived from prospective participants who had shown willingness and availability to participate in the study. This study was delimited to the four HIV/AIDS stigmas, namely public stigma, self-stigma, enacted stigma, and structural stigma. I did not focus on all Kenyan communities, but I included Kenyan women who were highly affected by the pandemic. I did not focus on women below 18 years old or above the age of 60 years to ensure high literacy levels within the sample. The study included Kenyan Diaspora women who could read and write English. I collected the sample by using convenience sampling. This study remained generalizable to the population of Diaspora Kenyan women within the population of United States considered in this study. I did not consider Diaspora Kenyan women in other geographic locations in this study.

Limitations

Various undermining of cultural values might have compromised women participants' abilities to disclose information they considered private regarding their perceptions of HIV/AIDS. This issue might have undermined collection of vital information that remained significant to the research. Kenya consists of a multilingual society, with different rural societies having varied linguistic patterns. An inability to communicate effectively in English might have undermined the effectiveness of this study. This issue might have also posed biases in terms of sampling because I could not achieve random sampling. However, I described demographic characteristics to check whether the sample remained representative of the total population or not.

The responses of participants could have stayed biased toward responding based on what they expressed as the socially desirable answer, rather than what really reflected their experience. This bias remained limited through ensuring participants that their responses would remain confidential and anonymous; therefore, they could stay honest with their responses without any negative influences. Lack of adequate time for data collection, coupled with other contingencies that might have led to delays, could have limited chances of collecting adequate information.

I also checked the items in the questionnaire for readability to ensure that participants could understand and respond to the items appropriately. The grade readability level was at ninth grade English. I strengthened the validity of the study through ensuring timeliness of data collection. The timely collection of data ensured that data were still relevant after drawing conclusions for the study.

Significance of the Study

This study was of importance to NGOs, community members, and various government ministries, as it outlined the influence of different dimensions of stigma (e.g., public stigma of prejudice, self-stigma of negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment) on HIV/AIDS testing among Diaspora Kenyan women. This study could provide relevant information on which to formulate policies to improve the uptake of HIV/AIDS testing among Kenyan Diaspora women. Formulation of policies, touching on any disease eradication, begins with a sound understanding of the disease from all dimensions (Stepan, 2013).

Evaluating the influence of HIV stigma among Kenya Diaspora women would potentially help in improving their health, economy, and social outcome, and it might increase early detection and treatment of HIV (Ojikutu et al., 2014). I aimed to add more information to the body of knowledge regarding the role of stigma in this community, as it related to women living with HIV/AIDS and positively affected the war against the disease. This knowledge should be useful to other academics, researchers, and the larger bodies charged with the role of formulating policies and practices aimed at eradicating the disease. This research provided a basis for other researchers to study the effects of how stigma and other cultural influences affected HIV/AIDS testing or other disease treatments.

In my review of literature, I found no other studies that addressed the influence of various dimensions of stigma (e.g., public stigma of prejudice, self-stigma of negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment) on HIV/AIDS

testing among Diaspora Kenyan women. Therefore, this study was significant in its potential contribution to the existing literature. This research filled this gap by identifying how stigma affected the uptake of HIV testing among Kenyan Diaspora women.

The prevalence of HIV among Kenyan women has risen due to women refusing HIV testing and not seeking treatment (Larsson et al., 2009). The results of this study could aid in establishing programs or resources to ease the stigma experienced by Kenyan Diaspora women and other immigrants; in turn, it could help increase HIV testing by informing against the stigma. This study can promote positive social change in encouraging Kenyan Diaspora women to engage in HIV testing to ensure they are safe for sexual encounters or to breastfeed their children. The results of this study may help develop campaigns to promote HIV testing. Understanding the underlying perceptions, attitudes, and opinions toward HIV testing by Kenyan Diaspora women can increase early treatment of HIV and decrease prevalence of HIV among immigrants. Decreased prevalence rate will ensure that women are safe for sexual encounters or to breastfeed their children.

Summary

HIV/AIDS remains a major issue among the Kenyan population. Both the government and NGOs have placed effort into addressing this issue; however, it has continuously grown over time. The Kenyan government has initiated efforts toward fighting the epidemic (Kenya AIDS Indicator Survey, 2012); however, one may question whether the efforts influence the issue. Despite this effort, the spread of this disease has been a challenge to government, health professionals, and HIV positive individuals. With

this challenge, I focused on addressing the gap in literature in terms of managing,

controlling, and supporting the people living with or without HIV through analyzing the

relationship of HIV stigma on the uptake of HIV testing. HIV testing remains critical to

early detection of HIV cases. This detection allows HIV patients to seek medical support

in terms of handling their illnesses. This study promoted positive social change in

encouraging Kenyan Diaspora women to engage in HIV testing to ensure they were safe

for sexual encounters or to breastfeed their children.

      Chapter 2 includes a discussion of relevant literature on HIV/AIDS stigma, as

well as the uptake of HIV testing, specifically on the population of Diaspora Kenyan

women in Sub-Sharan Africa. Chapter 2 also includes a summary of available literature

on HIV/AIDS to highlight the gap in the literature, which I sought to address. Chapter 3

includes a discussion of the research methodology, which I employed to address the

research questions posed in this study.

Chapter 2. Literature Review

Introduction

The prevalence of HIV/AIDS in Sub-Saharan Africa continues to rise despite substantial efforts to curtail transmission of the HIV virus (AVERT, 2013). Women are disproportionately affected by HIV/AIDS, and they represent an important risk population because of the potential for transmission of the virus from mother to child (AVERT, 2013; Elsheikh, Crutzen, & Van den Borne, 2015). Researchers have investigated the root causes of the continued difficulties in reducing the transmission of HIV, and they have found HIV stigma as a prominent factor that continually arises as an impediment to reduction of HIV/AIDS prevalence in Sub-Saharan Africa (Ayiga, Nambooze, Nalugo, Kaye, & Katamba, 2013; Mwaura, 2008; Otieno et al., 2010).

Kenya has one of the highest HIV/AIDS prevalence rates worldwide, and Kenyan women face several cultural conditions that may increase their risk of HIV infection and the risk that they will transmit the virus to children or partners (AVERT, 2013; Elsheikh et al., 2015; Gnauck et al., 2013). An essential component of risk reduction regarding HIV/AIDS transmission is awareness of one's diagnostic status obtained via testing. However, Kenyan women have exhibited reluctance to participate in HIV testing because of various types of stigma associated with the procedure, which perpetuates their high-risk status regarding HIV infection and transmission (Asiedu & Myers-Bowman, 2014; Low et al., 2013; Mwaura, 2008). Diaspora Kenyan women may also experience higher risks of HIV infection related to social conditions, such as stigma, but the effects of

stigma on Diaspora Kenyan women's health behavior regarding HIV/AIDS need investigation.

The purpose of this quantitative study was to explore the influence of various dimensions of HIV/AIDS stigma, which include prejudice, negative attitudes, abuse, and maltreatment, on the uptake of HIV testing among Kenyan Diaspora women. A sizeable amount of research shows that women remain a highly vulnerable group in terms of HIV/AIDS spread in the Kenyan Diaspora (AVERT, 2013). Testing includes one of the crucial strategies for fighting HIV/AIDS. People cannot win the fight against the disease without increased testing rates, notably in women, because women with HIV/AIDS potentially subject an extra individual to the disease through mother-to-child infection (Larsson et al., 2009). However, HIV/AIDS stigma has compromised the fight against the disease, especially when it comes to testing (Larsson et al., 2009). An apparent fear of stigma exists that comes with the diagnosis of the disease, and women seem comparatively affected by this aspect more compared to men. Although various researchers have studied HIV/AIDS, a gap existed in terms of exploring the effect of stigma on HIV/AIDS testing among Diasporas Kenyan women.

I obtained references to support this literature review by searching several databases for relevant research published in peer-reviewed journals exclusively. Databases searched were PsycINFO, ERIC, Psychology and Behavioral Sciences Collection, Medline, HealthSource: Nursing/Academic Edition, and Academic Search Premier. Search terms used included *HIV/AIDS stigma, HIV stigma*, as well as Boolean combinations of *HIV/AIDS* and *prejudice*, *negative attitudes, abuse, violence,*

maltreatment, and *health belief model*. To best capture the current conditions related to this study's research questions, I prioritized articles published in the last four years in the search. Of the 75 articles were obtained for this review, 68 articles (91%) were published between 2012 and 2015, and seven articles (9%) were published prior to 2012.

Following this section, I will discuss the theoretical foundation for the study and its relevance to the research questions. I will then discuss relevant research and critically analyze it, including discussions of various forms of stigma and its effects on emotions, thought, and behavior regarding HIV/AIDS prevention and care. Additionally, I will discuss the effects of HIV stigma on women, with attention to women in Kenyan and other Sub-Saharan African cultures. This chapter will conclude with attention to the gap in existing research literature that the present study intended to investigate.

Theoretical Foundation

The HBM functioned as the theoretical framework for the present study. Several psychologists in the 1950s developed the HBM to represent the psychological processes that support or interfere with a person's participation in health-promoting behaviors and services (Abraham & Sheeran, 2007). The model's precepts include that a person's perceptions of a health concern interact with personal circumstances relative to the health concern to produce a higher or lower likelihood of acting to address the concern (Neff & Crawford, 1998). The primary components of the model include *perceived severity, perceived susceptibility, perceived benefits, perceived barriers,* and *cues to action* (Abraham & Sheeran, 2007).

Perceived severity refers to the seriousness of risk a person believes a health condition to present; perceived susceptibility refers to the level of personal risk individuals believe themselves to experience regarding the health conditions; perceived benefits refers to how helpful seeking medical assessment or care for a condition might be; and perceived barriers include obstacles to seeking care (Abraham & Sheeran, 2007; Neff & Crawford, 1998). Cues to action are events or conditions that may trigger a person to seek assessment or care for a condition. Researchers added to the model with *self-efficacy*, or individuals' appraisals of their own capacity to carry out behavior change regarding the medical condition (Abraham & Sheeran, 2007).

The HBM has been widely used to evaluate intent to carry out health-promoting behaviors based on perceptions associated with a health issue (Abraham & Sheeran, 2007). For example, Asare and Sharma (2012) conducted a study involving 412 African immigrants living in the United States. The authors found evidence that individuals were more likely to communicate with partners about sexual history and safe sex practices if they perceived themselves as having higher susceptibility of risk for contracting HIV, if they perceived higher benefits resulting from open talk about sexual issues, and if they experienced relevant cues to action regarding HIV prevention. However, researchers found perceived severity of HIV was an insignificant predictor of safe sexual behavior and communication with partners (Asare & Sharma, 2012).

Similarly, Zhao et al. (2012) investigated Chinese sex workers' condom use within a HBM framework and found little indication that perception of HIV as being severe had a motivating effect on participants to practice safe sex. However, the

researchers found condom use was more likely if participants perceived high susceptibility to HIV, high benefits to using condoms to prevent HIV infection, and low barriers to practicing safe sex with customers. The authors noted the perception of severity component of the HBM was not associated with health-promoting behavior change in the HIV prevention research literature, indicating a weakness of this aspect of the model to promote HIV testing in the present study (Zhao et al., 2012).

Researchers conducted a study that utilized the HBM framework to specifically investigate the effects of perceived benefits of participation in medical trials for either cancer or HIV/AIDS, and they found evidence of the motivational aspects of perceived benefits for both personal and altruistic outcomes (Dhalla & Poole, 2013). Researchers conducted another study that investigated motivators for voluntary HIV testing in Kenyan youth, which indicated that perceptions of susceptibility to HIV infection significantly predicted participants' choices to test for HIV (Kabiru, Beguy, Crichton, & Zulu, 2011). Researchers investigated the interaction between attitudes of HIV stigma and appraisal of one's own risk of HIV infection and found that young people in Ghana who endorsed stigmatized views of HIV also perceived their own risks of infection as low (Riley & Baah-Odoom, 2012). The researchers hypothesized that the appraisal of HIV risk was associated with perceptions of the "type" of person who contracted HIV, resulting in lower perceptions of risk for individuals who did not view themselves as fitting within that stereotype (Riley & Baah-Odoom, 2012). The possibility of interactions between stigma attitudes, reflecting stereotyped views of persons with HIV and perceptions regarding HBM components, was important to consider within the present study.

The present study was concerned with the relationship between HIV stigma and Diaspora Kenyan women's participation in testing for the virus. Stigma is a varied psychological phenomenon that can affect a woman's perceptions of risk related to HIV/AIDS, as well as perceptions of the benefits and barriers to seeking diagnosis and medical care (Bos, Reeder, Pryor, & Stutterheim, 2013; Kabiru et al., 2011). Because this study focused on the effects of multiple psychological processes on a specific health behavior, HIV testing, the HBM was an appropriate framework for inquiry.

Literature Review Related to Key Variables or Concepts

The HIV/AIDS epidemic in Sub-Saharan Africa is the largest in the world (AVERT, 2013). There is great variability in prevalence rates across the nations of this region, ranging from 0.5% in Senegal to 27.4% in Swaziland, which has the highest prevalence rate worldwide (AVERT, 2013). Kenya has an HIV/AIDS prevalence of 6%, which is the fourth highest in the world (AVERT, 2013). Government action in Kenya and other nations in Sub-Saharan Africa aimed at reducing HIV infection rates have been substantial, and include increasing the numbers of testing facilities, providing HIV awareness education to children in schools, and distributing condoms (AVERT, 2013). Despite these efforts, the number of people living with HIV/AIDS has continued to rise, with 1.5 million new infections in Sub-Saharan Africa reported for 2013, 100,000 of which occurred in Kenya (AVERT, 2013). Although education, material resources, and preventive services appear to be plentiful, a persistent obstacle to HIV prevention in Sub-Saharan Africa and many other parts of the world includes the stigma associated with

HIV and persons who have the virus (Kalichman et al., 2009; Przybyla et al., 2013; Reif et al., 2014; Wong, 2013).

Stigma as a General Construct

Stigma is a construct introduced by Goffman in 1963, which he described as referring to a "spoiled social identity" (as cited in Bos et al., 2013, p. 1). Stigma is social, in that it arises from one's role in relation to others; the core meaning of stigma for the individual is a designation of being deviant from what is considered normal and desirable, and occupying a socially devalued role (Bos et al., 2013). Stigma can be signified by social behavior toward the stigmatized person that communicates non-belonging or negative judgment (i.e., rejection and social avoidance), and it can also be signified by less obvious social behavior regarding the person, such as body language that communicates dislike or discomfort with the person (Bos et al., 2013).

Types of Stigma

Theorists have broken stigma into four distinct subtypes : *public stigma*, *self-stigma*, *stigma-by-association*, and *structural stigma* (Bos et al., 2013). Public stigma refers to the beliefs, attitudes, and actions of people toward stigmatized persons or groups; *enacted stigma* is a subtype of public stigma that specifically refers to negative behavior toward stigmatized persons (Bos et al., 2013). Self-stigma refers to the experience of stigmatized persons, and it can include their feelings about themselves related to their stigmatized status and to their expectations or concerns about being subject to behavior by others due to stigma (Bos et al., 2013). Subtypes of self-stigma include *internalized stigma*, which refers to feelings of lowered social value or worth, and

anticipated stigma, which refers to a person's expectations of negative treatment because of a stigmatized status (Bos et al., 2013). Stigma-by-association refers to social treatment of people who are associated with a stigmatized person and to these people's own internal experience due to their association with a stigmatized person (Bos et al., 2013). People who experience stigma-by-association, typically family members, will often encourage the stigmatized person to conceal their stigmatized condition to protect their own social statuses (Bos et al., 2013). Finally, structural stigma refers to actions of societal institutions that reflect or communicate approval or validation of attitudes of stigma toward certain persons or groups of people (Bos et al., 2013).

For purposes of the present study, I utilized an additional stigma schema to frame and interpret experiences of stigma. I discussed four types of stigma: *prejudice*, *negative beliefs or attitudes*, *abuse*, and *maltreatment*. Prejudice refers to beliefs or judgments of a person or group that are not rooted in facts, and could underlie any of the four main types of stigma discussed previously (Bos et al., 2013). Negative beliefs or attitudes are those that are disapproving or critical of a person or group; such beliefs or attitudes are the essential foundation of any form of stigma, whether directed toward others or toward the self (Bos et al., 2013). Abuse refers to overt harmful actions toward a person, and would be considered public stigma if targeted at the stigmatized person by private individuals or groups (Bos et al., 2013). Abuse could also remain perpetrated against a person known to be associated with a stigmatized person, which would be a form of stigma-by-association (Bos et al., 2013). Additionally, representatives of social institutions could perpetrate abuse, which would represent a form of structural stigma (Bos et al., 2013). Lastly,

maltreatment refers to harmful or hurtful behavior toward others, and it can constitute public stigma, structural stigma, or stigma-by-association, depending on the person or parties engaging in the (Bos et al., 2013).

The adverse psychological effects of stigma are many and have been widely researched. To avoid the unpleasant and hurtful experience of public stigma, stigmatized individuals avoid social situations in which they may encounter mistreatment or negative social judgment, which often results in the stigmatized person becoming isolated and lonely (Bos et al., 2013). Self-isolation or social avoidance can result in the stigmatized person losing the benefits of social support of various types (Bos et al., 2013). The stigmatized person's mental health is often adversely affected by chronic exposure to negative treatment. Mental health issues, such as depression and anxiety, may develop, as well as internalization of beliefs and attitudes related to the person's stigmatized status, which can compound the effects of stigma over time (Bos et al., 2013). The various emotional, cognitive, and behavioral effects of stigma associated with HIV/AIDS were of concern in the current study. The following sections will include a more thorough discussion of this subject.

Stigma Specific to HIV/AIDS

A review of the literature pertaining to HIV/AIDS and stigma indicated that HIV/AIDS was a stigmatized condition across the world's cultures, and people living with the disease experienced a wide range of negative treatment because of their illnesses (Bird & Voison, 2013; Hasan et al., 2012; Park, Van Leeuwen, & Chochoreleu, 2013). In their discussion of stigma, Bos et al. (2013) pointed out that stigmatized conditions that

seemed personally dangerous to others in the community might cause them to respond with fear and anger, which could represent a substantial piece of the emotional foundation for HIV stigma worldwide. Individuals with HIV who participated in qualitative interviews regarding their experiences of stigma reported that they often encountered fear and anger from others that seemed rooted in concerns about their own personal risks of infection with what they perceived as a contagious and deadly disease (Odimegwu, Adedini, & Ononokpono, 2013). I further elaborate on this and other expressions and experiences of HIV stigma later in this dissertation.

HIV Stigma in Cultures Outside of Sub-Saharan Africa

   Public stigma. Public stigma represents the root form of stigma feeding the development and perpetuation of other types of stigma (Bos et al., 2013). Multitudes of authors have described the experiences of people with HIV with public stigma around the world. Bird and Voison (2013) conducted a qualitative study involving HIV positive Black men living in Chicago and found that abandonment by friends and family was a common and painful form of enacted stigma related to their HIV statuses. Similarly, Jeffries et al. (2015) conducted qualitative interviews with American young MSMs regarding their experiences with HIV stigma, and they found that many of their friends and family terminated their relationships, once they had their HIV positive status revealed. These men also noted that in the relationships that they did maintain, there was a subtle change in the ways that people interacted with them once they knew their HIV statuses, such as body language or tone of voice that communicated tension or discomfort (Jeffries et al., 2015).

Researchers who conducted a study involving college students in Finland suggested that discomfort with people with HIV was not only associated with fears of infection or contamination, but also that higher levels of HIV stigma attitudes endorsed by participants were associated with lower levels of knowledge about HIV (Houtsonen, Kylmä, Korhonen, Välimäki, & Suominen, 2014). The association between lack of HIV knowledge and enacted stigma based on fear of contamination might be observed in the accounts of men with HIV whose friends and family threw away dishes they had eaten from or heavily disinfected areas of their homes in which the men had been present (Jeffries et al., 2015). Also reflecting an exaggerated public fear of infection related to proximity to persons with HIV, employers in Chicago, Hong Kong, and Beijing shared they might decline to interview a job applicant if they knew the person had HIV for fear of contamination (Liu et al., 2012).

Public stigma, in the form of negative or judgmental ideas about people with HIV, was also reflected in the literature (Bird & Voison, 2013; Jeffries et al., 2015). Men who participated in qualitative interviews reported that friends and family had expressed opinions that their HIV infection was a form of punishment for their immoral behavior (Bird & Voison, 2013; Jeffries et al., 2015). Researchers asked American college students to rate the parental fitness of women with randomly assigned medical conditions. The participants indicated that social judgment, regarding HIV infected people as being of lower value or character, represented a real aspect of the disease. Participants rated women with HIV as less fit to parent compared with women with other medical conditions, suggesting negative stereotyped assumptions regarding pregnant women with

HIV (Lawson et al., 2013). Liu et al. (2012) found those employers' perceptions of workers with HIV, as acting incompetent, would deter them from interviewing an applicant known to have HIV.

Structural stigma. Researchers have also described structural stigma, which they have viewed as a form of public stigma carried out by societal institutions. Cain et al. (2014) investigated the stigma experiences of people living with HIV in Ontario and found that some participants felt excluded from participating in community groups solely because of their HIV status. Participants requesting HIV testing in clinics in the Midwestern United States observed a change to a more tense or distant interactive tone by reception workers when they learned the purpose of the participants' visits to the clinic, or perceived negative judgment by workers based on reported sexual behavior or drug use (Meyerson et al., 2014). One man who intended to share his HIV status with the members of his church in an act of self-empowerment was advised by his pastor to conceal his HIV status from the congregation, and the pastor warned that disclosing his illness would result in feeling ridiculed and ostracized within the church (Bird & Voison, 2013).

Stigma-by-association. HIV infected people may feel urged to conceal stigmatized status, which also represents an experienced form of stigma-by-association (Bos et al., 2013). Family members of men with HIV often encouraged them to keep their HIV status a secret, and they expressed concerns that they, themselves, might feel mistreated or shunned if members of their community or social network remained aware of their family member's HIV-positive status (Bird & Voison, 2013). Gay men with HIV

in San Francisco described experiences with family members who would distance themselves from them socially or encourage them to hide their HIV status to avoid social judgment (Skinta et al., 2014). In the same study, one man reported that a parent strongly urged him to conceal his HIV status because the parent feared a loss of business if community members became aware that he was HIV positive (Skinta et al., 2014).

  Self-stigma. Having an awareness of public attitudes of stigma regarding one's HIV positive status, in addition to previous experience of negative treatment based on this status, may lead persons with HIV to anticipate stigmatized treatment relating to their diagnosis. The literature contains several descriptions of such experiences by persons with HIV. A common expression of anticipated stigma by persons with HIV was the fear that others would reject or shun them if they revealed their HIV positive status (Bird & Voison, 2013; Jeffries et al., 2015; Molina & Ramirez-Valles, 2013). Gay men who participated in qualitative interviews expressed a sense of anticipated stigma and rejection associated with serosorting, which entailed a process practiced in online dating venues in which men who were HIV negative specified that they were only interested in dating other HIV-negative men (Skinta et al., 2014). Other participants expressed concern that disclosing their HIV positive status would result in discredit of their work or in others automatically associating their diagnosis with death (Bird & Voison, 2013).

  Some described the experience of keeping one's HIV status secret as a form of self-injury with damage that accrues over time (Skinta et al., 2013). This conceptualization of self-injury seems apt, and researchers have suggested that chronic experience of public stigma and related anticipated stigma furthers the development of

internalized stigma, which can be particularly injurious psychologically (Molina &

Ramirez-Valles, 2013). For example, in a study involving Latino gay or bisexual men and

transgender women with HIV living in Chicago or San Francisco, chronic anticipated

stigma related to social rejection was associated with high self-ratings on internalized

stigma, as well as low self-esteem, reduced social support, and unsafe sexual behavior

(Molina & Ramirez-Valles, 2013). Similarly, a researcher investigated stigma

experiences of persons with HIV in Bangladesh and found high-internalized stigma was

associated with both social withdrawal and a lower likelihood of seeking medical care

(Hasan et al., 2012).

Participants in other studies also reported medical self-neglect as a correlate of

internalized HIV stigma. In a study investigating experiences of stigma in a sample of

African American men with HIV, the authors found that participants who reported more

frequent experiences of stigma-related discrimination because of their HIV status were

less likely to adhere to antiretroviral therapy (ART) regimens (Wagner, Bogart, Galvan,

Banks, & Klein, 2012). Similarly, researchers found that indigent South Floridians with

HIV who abused substances were more likely to adhere to ART regimens if they reported

lower levels of internalized stigma (Levi-Minzi & Surratt, 2014).

Researchers often described internalized stigma as a psychological state that could

result from the experience of other forms of stigma over time (Jeffries et al., 2015). For

example, American MSMs expressed that they felt a sense of damaged identity because

of their HIV positive status, and some suggested this damage was because they had

internalized the public stigma belief that MSM contract HIV as a punishment for

engaging in immoral sexual behavior (Jeffries et al., 2015). Researchers also commonly noted the development of depression in response to stigma in the literature; in Canadian older adults, depression was associated with both anticipated and internalized stigma, showing an internal psychological process in response to stigma that leads to this disorder (Emlet et al., 2013). Depression and anxiety were associated with internalized stigma in other participant groups as well (Herek, Saha, & Burack, 2013; Levi-Minzi & Surratt, 2015).

Coping with stigma. Because the experience of stigmatization is inherently hurtful and stressful, persons with HIV, a stigmatized condition, employ coping methods and strategies to alleviate stress (Bos et al., 2013). Participants in the studies, described in the previous sections pertaining to stigma (Herek et al., 2013; Levi-Minzi & Surratt, 2015), reported utilizing many different methods to cope with the stress associated with having a stigmatized identity; although some methods appeared to enhance wellbeing, other methods of coping seemed to place the person at some form of personal risk in the long term.

Coping methods that seemed to have the most benefit to the person involved seeking out or maintaining social support (Levi-Minzi & Surratt, 2014). Emotional and informational social support were associated with lower levels of enacted, internalized, and anticipated stigma for participants in one study (Emlet et al., 2013). Researchers found such coping methods as protective of self-esteem in another study (Varni, Miller, McCuin, & Solomon, 2012). Some individuals reported adherence to their ART regimen as a means of coping and self-support (Levi-Minzi & Surratt, 2014); promoting one's

physical health would seem to have clear benefits for one's ability to withstand stressors, but researchers found that poorer health in persons with HIV was associated with more frequent experiences of enacted stigma (Emlet et al., 2013).

Many of the coping methods described in the literature were harmful or potentially harmful to the person with HIV and others in both the short and long term. Because the experience of marginalization and devaluation, associated with being recognized as HIV positive, is so emotionally painful, many individuals with HIV reported coping with their distress by not disclosing their HIV status, even to current and prospective sexual partners (Bird & Voison, 2013; Herek et al., 2013; Jeffries et al., 2015). As noted earlier, some individuals with HIV have described concealing their HIV statuses as a form of chronic self-injury; however, this coping method creates a higher risk of transmission of the virus to others (Bird & Voison, 2013; Herek et al., 2013; Jeffries et al., 2015).

Self-isolation or avoidance of social situations, in which one encounters negative treatment due to HIV status, are other common methods of coping with the emotional difficulty associated with being stigmatized (Hasan et al., 2012; Herek et al., 2013). Although this method of coping relieves the person of the pain of experiencing negative treatment, it also places the person at risk of becoming socially isolated and lonely over time, as well as missing the benefits of social support that are associated with more successful coping with a stigmatized status (Emlet et al., 2013; Hasan et al., 2012). For example, a man with HIV, urged to conceal his diagnosis from his fellow church members, chose to leave his church, which deprived him of a source of meaningful group

involvement and social support (Bird & Voison, 2013). Another example of coping that is harmful is increased drug use, which researchers have associated with higher levels of internalized stigma in persons with HIV who abuse substances (Levi-Minzi & Surratt, 2014). Researchers have found that coping strategies, considered maladaptive and associated with higher levels of internalized stigma, indicated a reciprocal effect between self-destructive coping and internal notions of being unworthy or of lesser social value (Emlet et al., 2014).

As stated previously, I utilized an additional stigma schema in the present study to frame and interpret stigma experienced by persons with HIV/AIDS, using the categories of prejudice, negative beliefs and attitudes, abuse, and maltreatment. In the literature reviewed above, examples of prejudice include avoiding proximity with persons who are HIV-positive, disinfecting areas occupied by persons with HIV, and discarding dishes used by people with HIV for fear of contamination (Jeffries et al., 2015). These negative behaviors toward people with HIV appear rooted in fears of infection that are not supported by facts, which is the core of prejudice, as defined for the purposes of this study.

Participants of the studies, reviewed above, indicated that negative beliefs and attitudes, regarding persons with HIV, were common. These statements included the belief that HIV represented a punishment for immoral behavior, assumptions that HIV positive persons remained incompetent on the job, and that pregnant women with HIV remained unfit to parent (Bird & Voison, 2013; Jeffries et al., 2015; Lawson et al., 2013; Liu et al., 2012). Participants, including abandonment by friends and family, exclusion

from community groups, and denial of inclusion rights by an authority figure (Bird & Voison, 2013; Emlet et al., 2013; Jeffries et al., 2015), reported maltreatment of various forms. Notably, participants with HIV did not report abuse in the form of physical violence or cruelty in reviewed literature pertaining to HIV stigma in cultures outside of Sub-Saharan Africa.

The experience of HIV stigma, reported in the literature pertaining to cultures outside of Sub-Saharan Africa, showed potentially devastating influences on an individual's sense of self and social identity (Emlet et al., 2013; Jeffries et al., 2015). The harmful effects ranged from lost relationships and group memberships to lost credibility; over time, these issues even influenced the stigmatized person's own self-concept and degraded the individual's sense of self-worth (Bird & Voison, 2013). Withdrawing from social life and neglecting one's own medical care seemed to indicate a decreased level of regard and caring for oneself (Hasan et al., 2012; Wagner et al., 2012).

The decision of many participants to conceal their HIV positive status, placing sexual partners at risk as a means of avoiding stigma and rejection, highlights the severity of harm associated with experiencing a stigmatized identity. This may occur because the risk that the person chooses to introduce for their partner remains outweighed by the risk of their own isolation (Herek et al., 2013; Jeffries et al., 2015). Because stigma is a fundamentally social process, its forms may vary based on the cultural context that informs social behavior. Because the present study is concerned specifically with HIV stigma experienced by women from Kenya, the following section will review and discuss

the literature pertaining to stigma contextualized within Kenya and other Sub-Saharan African cultures.

HIV Stigma in Sub-Saharan Africa

Public stigma. Researchers have reported enacted stigma toward persons with HIV in multiple studies pertaining to stigma experiences of people with HIV living in Sub-Saharan Africa. Researchers conducted a survey of 486 people living with HIV in South Africa regarding their experiences with stigma (dos Santos et al., 2014). Most participants (73%) were female, with an age range of 15 to over 50 years; few participants identified as gay or lesbian (0.8%) or as MSM (2.3%; dos Santos et al., 2014). Researchers found that within the last year, participants experienced verbal harassment, being the subject of gossip, sexual and other social rejection, exclusion from family events, exclusion from social groups, and physical assault because of their HIV positive status (dos Santos et al., 2014). Jacobi et al. (2013) conducted a survey of people living with HIV in Cameroon; sample statistics did not include sexual orientation, but 69% of participants were female; 26% were under age 25; 37% were between 30 and 39 years of age; and 22% were between 40 and 49 years old. Researchers found that a majority of the 200 participants felt gossiped about and verbally insulted within the previous year, most commonly by family members (Jacobi et al., 2013).

Surveyed respondents also reported public stigma related to negative beliefs about people with HIV; for example, women with HIV from Ghana who participated in qualitative interviews reported feeling stigmatized by others who perceived their HIV positive status as a death sentence (Iwelunmor & Airhihenbuwa, 2012). A qualitative

study that explored the attitudes of youths in Ghana toward HIV indicated that one effect

of public educational campaigns aimed at HIV prevention further stigmatization HIV as a

death sentence (Oduro & Otsin, 2013). Participating youths reported that the language

and imagery used in such educational campaigns, such as skeletons, skulls, and

crossbones, bodies with sores and rashes, and warning signs urging them to "Flee from

HIV/AIDS" or "Run for your life" (Oduro & Otsin, 2013, p. 147), created a frightening

impression of people with HIV as dangerous people. Participants also expressed that

language and imagery in HIV prevention campaigns evoked the notion of retribution in

their perception, which described stereotyped people with HIV who deliberately infected

others with the virus so that they would not feel forced to suffer and die from HIV/AIDS

alone (Oduro & Otsin, 2013).

  Structural stigma. Incidents of structural stigma were more frequently reported

by participants pertaining to HIV stigma in Sub-Saharan Africa compared with

participants from other regions of the world in the literature reviewed for this study. In a

survey of 486 people with HIV in South Africa, participants reported that they felt

excluded from church services and membership because of their HIV status, and they

reported losing their jobs or being forced to move out of their current homes or

apartments because of having HIV (dos Santos et al., 2014).

  Both healthcare workers and recipients of medical care reported HIV stigma

exhibited within the healthcare arena. A qualitative study that used focus groups to

explore the healthcare-related stigma experiences of 51 South African women with HIV

indicated that healthcare workers behaved in ways that communicated endorsement of

stigmatized views of people with HIV (Okoror et al., 2014). Women reported treatment

that called attention to their stigmatized status as HIV patients. This mistreatment

included having medical files of a different color from other patients' folders, having to

sit in a specific area of the waiting room at their clinic away from other patients, and

meeting the clinician in specific rooms of their clinic only used for patients with HIV

(Okoror et al., 2014). In another study, some participants reported leadership denying

them health insurance and having medical professionals or clinicians violate their

confidentiality rights by disclosing their HIV status without consent (dos Santos et al.,

2014). Healthcare workers from Ethiopia who participated in a study regarding HIV

stigma acknowledged having illegally divulged patients' HIV positive diagnoses,

unnecessarily referring patients with HIV to other clinics for treatment, and refusing to

treat patients with HIV (Feyissa et al., 2012).

Stigma-by-association. Participants of a study in South Africa reported that their

partners and family members had experienced stigma-by-association (dos Santos et al.,

2014). Specifically, 23.8% of the 438 participants reported that a husband, spouse, or

other household member experienced discrimination within the previous 12 months

because of their association with a person with HIV (dos Santos et al., 2014). However,

the authors did not indicate the specific nature of the discrimination (dos Santos et al.,

2014).

Self-stigma. I found accounts of self-stigma associated with HIV infection

throughout the literature, pertaining to HIV stigma in Sub-Saharan African countries.

Jacobi et al. (2013) conducted a survey of 200 people with HIV living in Cameroon and

found that over half the participants reported internalized stigma in the form of shame and guilt related to their illness, as well as withdrawal from social and romantic relationships, and choosing not to have children. Similarly, South African individuals with HIV reported feeling guilty and ashamed because of their illnesses, blaming themselves for having HIV, having a negative view of themselves, and feeling suicidal due to their HIV positive status (dos Santos et al., 2014). Higher levels of internalized stigma were associated with failure to adhere to ART regimens (Lyimo et al., 2014). Individuals with HIV in Nigeria who participated in a qualitative study exploring relationships between HIV stigma and ART treatment expressed a sense of internalized stigma related to having a physically weakened or sickly appearance because of HIV/AIDS (Okoror et al., 2013).

Coping with stigma. As discussed previously, social support represented an effective means of coping for persons with HIV and remained protective of development of internalized stigma over time (Takada et al., 2014). Authors reported cognitive reframing as a helpful coping strategy for women with HIV in South Africa, who found reassurance in thinking of HIV as just one of many different diseases and reminding themselves of the treatment opportunities available to help them manage their illnesses (Iwelunmor & Airhihenbuwa, 2012). Individuals with HIV from Tanzania expressed that religious coping was helpful to them, and authors reported that religious coping was associated with self-acceptance (Lyimo et al., 2014). Although some people with HIV reported concealing their disease status as a way of coping with stigma, participants in a study in Cameroon reported feeling empowered by disclosing their HIV-positive statuses

(Jacobi et al., 2013). Researchers investigating stigma, related to psychological disorders, noted that empowering effects of disclosing stigmatized identities were often weighed against the social costs of disclosing versus concealing (Corrigan, Kosyluk, & Rüsch, 2013). Therefore, I expected that people who stood to experience more severe consequences of disclosure would find the potential for empowerment outweighed by the costs of being open about their illnesses.

Reported approaches to coping were not always associated with improvements to health and functioning. Denial and alcohol use were coping methods found associated with internalized stigma (Lyimo et al., 2014). Researchers also found self-stigma led to withdrawing from social activities, avoiding relationships, and declining to seek medical care as a means of avoiding the public stigma associated with being an obvious user of HIV treatment clinics and services (dos Santos et al., 2014). Similarly, women with HIV reported foregoing use of medication to treat pain because they must pick up their prescriptions at offsite pharmacies where community members can learn of their HIV positive statuses (Okoror et al., 2014). Women who experienced stigmatization by healthcare workers also described avoiding medical care as a means of coping (Okoror et al., 2014). A longitudinal study indicated that people who tended to internalize stigma were more likely to experience decreased social support over time (Takada et al., 2014).

The HIV stigma experiences of persons living in Sub-Saharan Africa remained framed within the stigma schema used in the present study. Prejudice or judgments that do not derive from facts can remain detected in behavior and attitudes toward persons with HIV that exaggerate their infectiousness. For example, requiring patients with HIV

to avoid proximity with other patients in clinic waiting rooms or social messages urging

that one "Flee from HIV/AIDS" seem rooted in inaccurate beliefs about the

contagiousness or mechanisms of transmission of HIV (Oduro & Otsin, 2013; Okoror et

al., 2014). Researchers have documented the association between lack of knowledge

about HIV and high stigma attitudes in Sub-Saharan African cultures repeatedly (Girma

et al., 2014; Gurmu & Etana, 2015). Negative attitudes and beliefs were reflected in

social messages, showing that people with HIV may attempt to deliberately infect others

and that HIV is a death sentence (Iwelunmor & Airhihenbuwa, 2012; Oduro & Otsin,

2013).

Compared with the literature pertaining to HIV stigma in regions of the world

outside of Sub-Saharan Africa, the literature related to experiences in Sub-Saharan Africa

seemed to contain more experiences of maltreatment. For example, being verbally

insulted, treated as dangerously infectious by healthcare workers, and feeling excluded

from family events were examples of maltreatment (Jacobi et al., 2013). In addition,

researchers stated that maltreatment evolved to more severe forms in Sub-Saharan

African communities compared with those in other parts of the world. These evolutions

included people forcing the infected to move out of their home or neighborhood because

of HIV-positive status, terminating them from jobs, excluding them from church

membership, refusing them medical care because of HIV diagnosis, or denying them

health insurance because of HIV (dos Santos et al., 2014; Okoror et al., 2014). The fact

that social institutions perpetrated much of this maltreatment might also confer additional

severity on these actions. Finally, abuse in the form of physical assault remained in the

HIV stigma literature related to Sub-Saharan Africa; however, researchers did not report on HIV stigma in other regions of the world (dos Santos et al., 2014).

Summary. To summarize this section, the categories of stigma as experienced by people with HIV in Sub-Saharan Africa are the same as those experienced by people with the disease in other parts of the world, but the severity of stigma experiences occurring in Sub-Saharan Africa seemed much greater compared with typical stigma experiences elsewhere. For example, physical assault, gross abuses of patients' rights within healthcare establishments, and the absolute dislocation from family, social, and community life for an individual with HIV all seemed to speak of a profound sense of degradation of the status of the individual on both a personal and societal level (dos Santos et al., 2014; Okoror et al., 2014). The power of personal social networks and societal organizations, such as healthcare clinics and property owners to override the personal needs and civic rights of individuals once diagnosed with HIV, almost shows a nullification of the person's status as a citizen. Some of the studies reviewed included small samples of participants who shared subjective experiences of HIV stigma (Okoror et al., 2014), which may create a question about the generalizability of the findings of these studies. However, the consistency of findings with those of studies with larger samples and quantitative approaches (dos Santos et al., 2014) shows that the findings of the smaller qualitative studies had validity.

People living with HIV in Sub Saharan Africa reported experiencing a wide range of stigma-related experiences that adversely affected their psychological health, public standing, relationships, and membership in their communities (dos Santos et al., 2014;

Jacobi et al., 2013; Okoror et al., 2014). These significant challenges to living with HIV may affect whether undiagnosed persons seek testing for HIV (Low et al., 2013), which was of primary concern within the present study. Given that traditional male-dominated views are prevalent in Sub-Saharan African cultures, the combined effects of HIV stigma and women's status as subordinate citizens were of interest; the following section includes a discussion of this subject.

HIV Stigma and Gender in Sub-Saharan Africa

The literature pertaining to HIV stigma for persons living in Sub-Saharan African countries showed the widespread and harmful effects of such stigma on people with HIV living in this region of the world; additionally, Sub-Saharan African women may be at increased risk of harm because of their subordinate status in male-dominated cultures (Kohler et al., 2014). As the less empowered gender, women may be subject to severe consequences from both their spouses and society because of HIV positive status; for example, women may be beaten, sexually abused, and abandoned by spouses if they have HIV (Kohler et al., 2014). Abandonment by a spouse might create a particularly difficult set of circumstances for a woman without financial means in a male-dominated culture (Gnauck et al., 2013).

Additionally, lack of sexual empowerment within their relationships with spouses along with the common practice of polygamy by men may increase a woman's risk of exposure to HIV and limit her control over utilization of safe sexual practices to prevent transmission of the disease (Gnauck et al., 2013; Kohler et al., 2014). Because of the additional consequences women experience due to HIV infection compared with men in

Sub-Saharan Africa, women with HIV from this region are found to experience higher

levels of internalized stigma compared with men (Ky-Zerbo et al., 2014; Radcliffe,

2015). Women have reported taking extra measures to hide their HIV-positive status

compared with men, such as transferring ART medications to plastic bags so that others

cannot identify the purpose of the medication (Okoror et al., 2013). Because I focused on

the effects of HIV stigma upon Diaspora Kenyan women, I specifically considered the

HIV stigma experiences of women living in Kenya.

   Kenyan women and HIV stigma. Kenyan women, both with and without

HIV/AIDS, expressed concern about significant forms of HIV stigma they feared or had

experienced associated with the disease. Several forms of HIV stigma reported by

Kenyan women as a risk of HIV infection directly related to their subordinate status as

women relative to men. For example, women without HIV expressed a sense of ongoing

vulnerability to HIV exposure related to their spouse's polygamous relationships or

possible extramarital activities with sex workers (Gnauck et al., 2013). The risk of

physical assault by their spouses because of HIV infection represented a form of enacted

stigma discussed in focus groups involving 60 Kenyan women, and women emphasized

this stigma who were financially dependent on their spouses (Gnauck et al., 2013).

Women, involved in business activities, expressed less concern about the potential for

physical abuse by their spouses compared with women who had no financial means of

their own. The authors suggested that the heightened fear of physical assault by women

who did not work might have reflected traditional attitudes toward gender within their

family (Gnauck et al., 2013). Abandonment by spouses represented a consequence of

HIV infection, discussed in interviews. This issue seemed to contain an element of risk for female businesspersons. This risk may have occurred because a spouse disowning their other will ruin the good reputation a woman developed in her community as a successful businessperson (Gnauck et al., 2013).

A qualitative study involving 54 Kenyan women with HIV contained a range of negative experiences these women had endured because of the disease. An overarching theme of their experiences of stigma was being removed from their social context in symbolic and actual ways (Kako & Dubrosky, 2013). Women expressed that they no longer felt a sense of belonging; instead, they felt relegated to a group solely associated with their HIV diagnosis (Kako & Dubrosky, 2013). The authors noted that Kenya has a communal culture. Therefore, experiences, such as exclusion from group meals, using separate dishes from others, and having to keep their personal possessions in a separate area away from the belongings of others in the household, represented forms of enacted stigma that they experienced as additionally harmful because of the symbolic rejection from the collective these actions communicated (Kako & Dubrosky, 2013). Some women also reported actual separation from groups as a form of enacted stigma they had experienced; for example, women reported having their spouses left them, being required to access medical services in a building that was separate from the main medical clinic, experiencing exclusion from community meetings, and being forced out of their homes and neighborhoods (Kako & Dubrosky, 2013).

Other forms of public stigma, reported by Kenyan women with HIV, included women becoming the subject of gossip, being ridiculed, being called cursed, and losing

business because others did not want to touch food items they sold for fear of contamination (Kako & Dubrosky, 2013). In addition to these forms of enacted stigma, women remained exposed to negative stereotyped ideas about their HIV status in the form of others' assumptions that they acquired the virus by being sexually unfaithful to their husbands or engaging in prostitution (Kako & Dubrosky, 2013). In keeping with such notions about women and HIV, other researchers have noted that the public viewed women as the source of the infection who created a risk of infection for their sexual partners (Paudel & Baral, 2015).

The prejudice, negative attitudes and beliefs, abuse, and maltreatment experienced by Kenyan women because of HIV positive status can place them at risk of physical harm and complete dislocation from their social networks (Gnauck et al., 2013; Kako & Dubrosky, 2013). Kenyan women with HIV reported social rejection, ridicule, and blame for HIV infection (Kako & Dubrosky, 2013; Paudel & Baral, 2015). Participants discussed risks, such as abandonment by spouses and loss of financial means, as resulting from HIV diagnosis (Gnauck et al., 2013).

The severity of these risks associated with HIV stigma may incline a woman in Kenya to conceal HIV-positive status or avoid HIV testing altogether to keep from facing a decision about disclosure (Elsheikh et al., 2015; Kohler et al., 2014). Although these coping strategies may protect the woman from assault and from being cast out of her family and community, failure to attend to or divulge one's HIV positive status creates a risk to the woman's health due to lack of appropriate medical care (Chan, Tsai, & Siedner, 2015). It also creates a risk of transmission of the virus to children, spouse, or

other sexual partners, and to the other wives of spouses who engage in polygamy (Otieno et al., 2010).

Summary. In the studies reviewed for this section, researchers did not inquire specifically about the effect of HIV stigma upon women's intentions to obtain HIV testing. The adverse influence of HIV stigma upon a woman's psychological functioning, physical safety, and membership in family and community may deter undiagnosed women from obtaining HIV testing (Low et al., 2013), which was of primary concern within the present study. Therefore, addressing HIV stigma remains an extremely important part of HIV prevention. I discuss methods to address HIV stigma at various levels in the following sections, as well as research specifically investigating the correlates of HIV testing behavior.

Methods to Address HIV Stigma

Interventions to address lack of knowledge about HIV. I considered addressing lack of knowledge about HIV through interventions as an important approach for reducing stigma associated with HIV because researchers have often correlated high stigma attitudes with lack of knowledge about HIV/AIDS (Derose et al., 2014). Many researchers have found significant correlations between high levels of HIV stigma and a lack of knowledge about HIV; for example, Ugarte et al. (2013) conducted a large cross-sectional survey in Nicaragua and found that lower levels of knowledge about HIV were associated with higher levels of stigma attitudes toward people with HIV (Ugarte et al., 2013). In another study, researchers found that some participants responding to a survey in Mozambique had no knowledge about how HIV remains transmitted; results also

indicated an association between low knowledge about HIV and higher stigma attitudes (Mukolo et al., 2013). Odimegwu et al. (2013) conducted a survey in Nigeria and found a correlation between misconceptions related to HIV and higher scores on a HIV stigma measure. Feyissa et al. (2012) conducted a study on healthcare workers in Ethiopia and found that those with less knowledge about HIV and less history of contact with patients with HIV were more likely to refuse treatment to patients with HIV. Conversely, researchers who conducted studies in Kenya and South Africa found that participants who were personally acquainted with a person who had HIV endorsed lower levels of stigma (Mall, Middlekoop, Mark, Wood, & Becker, 2013; Mugoya & Ernst, 2014). A related finding was that high knowledge levels about HIV were associated with lower levels of stigma beliefs (Mukolo et al., 2013).

Because researchers have associated the lack of accurate HIV knowledge with stigma in healthcare settings, they have also considered interventions to address HIV stigma in the medical arena as important (Li, Liang, Wu, Lin, & Guan, 2014). Researchers implemented a stigma reduction intervention titled "White Coat, Warm Heart" in hospitals in China, in which 40 randomly selected hospitals were broken in to matched pairs. Researchers studied one hospital randomly assigned to the intervention condition and the other hospital assigned to the control condition (Li, Lin et al., 2014). Randomly selected workers in the hospitals receiving the intervention participated in weekly groups for one month and then three follow-up meetings for the next year to discuss universal precautions, anti-stigma information, and methods for disseminating and promoting anti-stigma information throughout their work groups (Li, Lin et al.,

2014). A total of 1760 participants across conditions completed HIV stigma measures

before the intervention and then 6 and 12 months following the intervention, which

indicated a significant reduction in stigma attitudes in 13 of the 20 hospitals receiving the

intervention (Li, Lin et al., 2014). The authors observed that smaller hospitals were more

likely to show improvements in HIV stigma attitudes compared with larger hospitals, but

this difference was not statistically significant (Li, Lin et al., 2014).

Interventions within established organizations, such as hospitals, may be effective

ways of reaching their employees or members, but widespread public stigma requires

intervention at the community level. A community-based intervention in a small town in

South Africa that attempted to increase HIV knowledge as a means of affecting stigma

utilized a 3-year community HIV knowledge program, implemented alongside an ART

treatment program (Mall et al., 2013). The educational intervention included sketches, as

well as instructional approaches, that corrected common misconceptions or myths related

to HIV, provided basic knowledge about HIV, and promoted HIV testing and counseling

(Mall et al., 2013). The authors obtained participants via a 10% random sampling of

households within the town, in which all residents of the household, aged 14 or older,

participated. The first round of surveys in 2004 included 725 participants, and the second

round of surveys in 2008 included 1281 participants (Mall et al., 2013). The authors

conducted surveys before and after the knowledge intervention and ART program's

initiation that measured HIV knowledge, stigma attitudes, and participation in HIV

counseling and testing services (Mall et al., 2013). The instrument, used to assess stigma

attitudes in participants, was a dichotomous choice (yes or no) survey that asked

questions, such as "Would you be willing to share a meal with a person you knew had HIV/AIDS?" or "If you became infected with HIV, would you want it to remain a secret?" (Mall et al., 2013, p. 20).

Compared with the survey responses in 2004, which was prior to the intervention, responses in 2008 indicated a greater sense of access to knowledge about HIV both in the media and in medical clinics (Mall et al., 2013). There was a small increase in actual knowledge about HIV from first to second measurement, but the authors note that this may have been partially due to the "relatively good" knowledge levels reflected in the 2004 surveys (Mall et al., 2013). Compared with the 2004 survey results, the 2008 surveys indicated a lower level of HIV stigma attitudes and a higher frequency of obtaining HIV tests (Mall et al., 2013). Because the educational intervention and ART campaign were conducted concurrently, it was not possible to determine the degree to which the intervention alone affected knowledge, attitude, or behavioral outcomes; however, the combined effects of the program were associated with desirable changes relative to HIV stigma (Mall et al., 2013). I specifically investigated the effects of ART on HIV stigma and discussed these in the following section.

ART and its effects on HIV stigma. Researchers have studied the effects of ART on various forms of HIV stigma with scopes of inquiry ranging from the individual to societal levels. In a study of people living with HIV/AIDS in Nigeria, participants reported that the improvements to their health and appearance resulting from ART improved the way they felt treated by others and reduced their own internalized stigma (Okoror et al., 2013). The improved treatment these participants received, they

interpreted as a response of others to the decrease in physical indicators of the participants' illnesses (Okoror et al., 2013). Chan et al. (2015) noted that ART has the effect of prolonging life, reducing symptoms, maintaining the health necessary to keep working, and maintaining a healthy physical presentation, which they suggested might reduce the "death sentence" association of HIV/AIDS in public perception.

On a broader level, a study of 21 Sub-Saharan countries that provided ART to people with HIV/AIDS indicated that the provision of ART had the effect of reducing HIV stigma in each region (Chan et al., 2015). The authors analyzed population data from 2003 through 2013 to evaluate changes in HIV stigma attitudes over a period in which ART remained increasingly available in these countries (Chan et al., 2015). Researchers, via online databases and reports, accessed periodic population surveys for each country, as well as data that indicated ART availability by country on a year-by-year basis (Chan et al., 2015). In their longitudinal study, the authors found that as ART coverage increased within a country, stigma attitudes within that country decreased (Chan et al., 2015).

ART has also been associated with negative effects on HIV stigma. Researchers conducted a study involving 476 men and women with HIV living in Uganda that investigated participants' stigma experiences utilizing the HIV/AIDS Stigma Instrument-PLWA (Nattabi, Thompson, Orach, & Earnest, 2011). This instrument includes a 33-item survey that asks about HIV stigma as broken into received stigma (i.e., stigma communicated through others' actions toward the participant) and internal stigma (i.e., attitudes or beliefs about the self), as related to HIV status (Nattabi et al., 2011). Analysis

of results indicated that participation in ART was associated with higher levels of all

forms of stigma, and longer periods of having been on ART were associated with the

highest levels of stigma (Nattabi et al., 2011). However, the authors noted that the ART

clinic was not private or disguised, and anyone who used the clinic was easily identifiable

by members of the community (Nattabi et al., 2011). In another study that surveyed

female heads of household in Mozambique, participants expressed negative attitudes

toward ART, while also expressing awareness of the positive health effects of ART for

persons infected with HIV (Mukolo et al., 2013). The authors suggested that because

ART rid the infected person of physical indicators of illness, some people might feel

uncomfortable because they could not easily identify people with HIV/AIDS by looking

for physical signs of the disease (Mukolo et al., 2013).

Researchers found attitudes toward HIV were responsive to both targeted

interventions and societal changes regarding treatment availability (Mall et al., 2013;

Okoror et al., 2013). Informational interventions and widespread availability of ART

treatment may be helpful in reducing HIV stigma (Chan et al., 2015; Li et al., 2014). As

stigma attitudes toward persons with HIV decline, people with HIV may experience a

lower level of distress related to negative treatment by others, which can deter the

development of the internalized stigma attitudes that are so harmful to a person's sense of

self (Hasan et al., 2012; Herek et al., 2013; Molina & Ramirez-Valles, 2013). These

findings were important within the present study because these might provide guidance

on ways to increase the uptake of HIV testing by decreasing stigma associated with HIV

(Low et al., 2013); however, researchers did not specifically investigate how likelihood

of obtaining HIV testing related to HIV stigma attitudes. This gap represents an area of knowledge that may remain enhanced by the findings of the present study. HIV stigma also affects those not infected or unaware of their infection status, which makes the connection between HIV stigmas and testing behavior important to understand. This will represent the focus of the following section.

Stigma and HIV Testing

HIV testing is a vital piece of the HIV care and prevention process (Kabiru et al., 2011). If HIV status is unknown, then people who are unknowingly HIV-positive cannot experience the health benefits of medical treatment and can create an increased risk of transmission of the virus to unborn children and sexual partners (Mbonye et al., 2013; Otieno et al., 2010). This section will review studies pertaining to HIV stigma and testing behavior in cultures outside of Sub-Saharan Africa and within Sub-Saharan African cultures.

In many studies, researchers have found a relationship between HIV stigma and testing behavior (Golub & Gamarel, 2013). For example, a survey of HIV-negative MSMs living in New York found that higher scores on a measure of anticipated HIV stigma correlated with a lower likelihood of testing, reflecting a hesitance to discover disease status that might introduce the distress of stigma into participant's lives (Golub & Gamarel, 2013). Similarly, a survey of American post-secondary students living in Georgia indicated that those with non-stigmatizing attitudes toward HIV were more likely to participate in HIV testing and counseling (Djibuti, Zurashvili, Kasrashvili, & Berg, 2015). Findings from a study, involving 93 individuals participating in methadone

maintenance programs in the northeastern United States, indicated the likelihood of seeking HIV testing was lower for individuals whose survey responses indicated high stigma attitudes (Earnshaw, Smith, Chaudoir, Lee, & Copenhaver, 2012). Importantly, high HIV stigma attitudes were associated with stereotyped ideas about high-risk populations (Earnshaw et al., 2012). Even among participants whose HIV-risk behavior was high, perceptions of themselves as being low risk due to non-membership in a stereotyped high-risk population were associated with fewer voluntary HIV tests (Earnshaw et al., 2012). Based upon these findings, the authors suggested that stereotypes were a dominant driver of non-testing behavior in people who declined to test related to high stigma attitudes (Earnshaw et al., 2012).

Several of the authors of articles, reviewed to inform the present study, investigated the relationship between HIV stigma in Sub-Saharan Africa and HIV testing behavior. Pitpitan (2012) conducted a study in South Africa that surveyed individuals in establishments where people drank alcohol, and they found that higher stigma attitudes were associated with not receiving testing for HIV. Odimegwu et al. (2013) found that higher stigma attitudes were associated with a lower likelihood to utilize HIV testing and counseling services in Nigeria. Similarly, Elsheikh et al. (2015) conducted a study involving Sudanese women and found that participants who reported lower levels of knowledge about HIV remained less likely to seek HIV testing compared to participants who reported higher levels of HIV knowledge. Because low levels of HIV knowledge are often associated with HIV stigma attitudes, it is conceivable that this result indicates a

correlation between HIV stigma and lower likelihood of participating in testing for the disease (Elsheikh et al., 2015).

Kabiru et al. (2011) conducted a study in Kenya and used the HBM as a framework to investigate factors associated with HIV testing along with identified motivators to test or not test within a sample of 4028 male and female youths. Interviewers asked the participants a range of questions, including whether they had participated in HIV testing, when their last HIV test was taken, reasons for getting tested or not getting tested, their perceived level of susceptibility to contracting HIV, and their levels of worry about becoming infected (Kabiru et al., 2011). The authors also asked participants questions to determine their attitudes toward condom use and their levels of HIV knowledge, such as "In your opinion, can a person get HIV/AIDS from being bitten by mosquitoes or other insects?" (Kabiru et al., 2011, p. 685).

Results for both males and females indicated that participants were more likely to have sought testing if they had higher levels of HIV knowledge, had previous sexual experience, had been pregnant or made someone pregnant, and were moderately worried about infection from HIV (Kabiru et al., 2011). About 60% of the females with previous sexual experiences had their HIV tests because they were pregnant and/or as a part of antenatal care (Kabiru et al., 2011). Additionally, females were more likely to have obtained HIV testing if they were aware that condoms could prevent transmission of the virus and perceived their chance of infection to be about 50% (Kabiru et al., 2011). Regarding motivators to test or not test for participants who had previous sexual experiences, 37% of males and 43% of females had not sought testing because they felt

that they remained not at risk for infection. About 20% of all respondents had not received testing because they did not want to know their status, which might indicate an effect of HIV stigma on testing intentions (Kabiru et al., 2011).

Interventions, targeted at increasing HIV testing by circumventing certain aspects of HIV stigma, were also tested and described within the literature pertaining to HIV stigma and testing behavior. In one study, HIV testing and counseling were made available for all employees on two designated "wellness days" at a factory in South Africa (Houdmont, Munir, & Grey, 2013). The rationale for this intervention was that making the testing and counseling available to everyone, onsite at the factory, would reduce workers' senses of being specifically associated with the stigmatized action of obtaining HIV testing, thereby increasing testing turnout (Houdmont et al., 2013). On the initial wellness day, 2,138 employees participated, but on the second wellness day, one year later, only 406 workers participated (Houdmont et al., 2013). The authors noted that employees who had tested positive for HIV on the first wellness day were unlikely to return for follow-up evaluation and counseling one year later; however, the intervention represented an effective means of overcoming obstacles to obtaining an initial test (Houdmont et al., 2013).

Another approach, aimed at increasing HIV testing rates by reducing HIV stigma effects described in the literature, is opt-out antenatal testing, which is HIV testing offered to pregnant women as a part of antenatal care that is presented as a routine procedure that the patient has the option of declining (Chung & Rimal, 2015). Researchers investigated the effect on testing frequency of an opt-out antenatal HIV

testing policy implemented in Uganda in 2006 and found that the rate of agreement to test increased from 10% in 2003 and 21% in 2006 to 58.5% in 2009 (Larsson et al., 2009). The authors additionally noted 71% of participants indicated they would agree to the test if it remained offered in the same clinic instead of at a separate clinic, to which the authors referred participants for the HIV test in this study (Larsson et al., 2009). Another analysis showed the effect of an opt-out agreement process, stipulated by a change to national policy on rates of antenatal HIV testing, and was conducted using data from 1330 women in Zimbabwe and 4043 women in Malawi who sought antenatal care (Chung & Rimal, 2015). Population data from each country indicated that antenatal HIV testing increased in Malawi from 13% to 60% from 2004 through 2010, and from 21% to 43% from 2006 through 2011 in Zimbabwe (Chung & Rimal, 2015). Regression analysis results indicated the increase in rates of antenatal testing was related to the policy change, as women showed higher rates of agreement to participate in testing despite their scores on measures that evaluated HIV stigma attitudes (Chung & Rimal, 2015).

Summary. To summarize, decisions to test or not test for HIV, reflected in participant responses in this section (Earnshaw et al., 2012; Golub & Gamarel, 2013; Kabiru et al., 2011), indicated a range of motivators driving testing behavior. Multiple studies included participants who reported unwillingness to test due to fear of knowing the diagnosis, and participants who engaged in risky behavior but failed to test because they felt that they were not at significant risk (Earnshaw et al., 2012; Golub & Gamarel, 2013; Kabiru et al., 2011). The association between high stigma attitudes and poor or inaccurate knowledge about HIV and lower likelihood of testing indicated that HIV

stigma might adversely affect testing behavior (Odimegwu et al., 2013; Pitpitan, 2012), which was the primary concern within the present study. Researchers did not specifically investigate Diaspora Kenyan women's HIV stigma attitudes and the relationship to their HIV testing behavior. This gap was an area of knowledge that I anticipated enhancing using the present study. The areas of identified weakness in participants' decision-making processes regarding HIV testing may provide useful direction for development of future interventions (Odimegwu et al., 2013; Pitpitan, 2012). The HBM is a useful framework for analysis of motivators for and against various health-promoting behaviors; findings related to HIV stigma and testing behavior will occur within the HBM framework in the following section.

HIV Testing and the Health Beliefs Model (HBM)

The HBM is a model that breaks a person's overall motivation for or likelihood of engaging in a health-promoting behavior (i.e., cancer screening and weight loss) into separate categories of psychological processing regarding the behavior (Abraham & Sheeran, 2007). The model shows a person's overall likelihood to participate in a health behavior represents a function of how severe he or she perceives the associated health condition. It also proposes the level of perceived susceptibility to develop or acquire the condition, their perceptions regarding barriers to engaging in health behavior, and their perceptions of their own self-efficacy or ability to carry out the health behavior (Abraham & Sheeran, 2007). Researchers have previously indicated that the components of the HBM are helpful in predicting one's likelihood of participating in HIV testing and counseling (Nöthling & Kagee, 2013). I remained concerned with how HIV stigma

attitudes related to the health-promoting behavior of HIV testing; therefore, I discussed the previous review of literature pertaining to these topics within the HBM framework in this section.

Perceived severity of HIV/AIDS. The severity of HIV/AIDS as a life-threatening illness seems widely recognized and overstated in social messages that equate HIV with a "death sentence" or depict HIV pictorially with skeletons and scarred bodies (Bird & Voison, 2013; Iwelunmor & Airhihenbuwa, 2012; Oduro & Otsin, 2013). Medical treatment, including ART, has altered the course of HIV/AIDS, transforming it from the once quickly devastating disease to a chronic illness that can be effectively managed (Iwelunmor & Airhihenbuwa, 2012; Okoror et al., 2013). Researchers have not found consistent evidence to support perception of HIV/AIDS as a severe condition as a predictor of health-promoting behavior such as HIV testing (Asare & Sharma, 2012; Elsheikh et al., 2015; Zhao et al., 2012). This aspect may indicate a weakness of the model to predict certain types of health behavior, but it is also possible that the frightening social representations of HIV/AIDS relate to denial, which shows a correlate of declining to seek HIV testing, even when participants' behaviors placed them at risk (Golub & Gamarel, 2013; Kabiru et al., 2011).

Perceived susceptibility to risk for contracting HIV. Perception of susceptibility to risk of contracting HIV was a significant predictor of seeking out HIV testing for some participants; in some cases, participants reported a lower likelihood of receiving testing due to inaccurate assessment of their own level of risk for contracting the virus (Earnshaw et al., 2012; Kabiru et al., 2011). Lack of HIV knowledge may have

contributed to underestimation of personal risk of acquiring HIV. However, researchers also suggested that stereotyped views of what "type" of person contracted HIV might result in individuals having an artificially low perception of risk for contracting the virus if they did not view themselves as members of a stereotyped high-risk group (Earnshaw et al., 2012). Researchers have further demonstrated this association between HIV stereotypes and inaccurate assessment of risk by responses from Sudanese women who stated that they would not be inclined to seek testing for HIV if they had not done anything "wrong" (Elsheikh et al., 2015). Negative stereotyping of people with HIV/AIDS (e.g., beliefs that people with HIV are immoral) is integral to the stigmatization process and was also found to influence people who view themselves as "good people" to underestimate their risk of contracting the virus (Riley & Baah-Odoom, 2012).

Perceived barriers related to HIV testing. Some participants mentioned concrete barriers to obtaining an HIV test, such as long distance from a testing center (Elsheikh et al., 2015). Researchers documented in several studies the association between higher levels of HIV stigma and lower intent to obtain HIV testing, which they considered a perceived social barrier to testing (Elsheikh et al., 2015; Odimegwu et al., 2013; Pitpitan, 2012). Women in Sub-Saharan Africa face such harsh consequences for being HIV positive that some decline to obtain testing simply to avoid having to face the reality of a positive test (Elsheikh et al., 2015; Kohler et al., 2014). The consequence of a stigmatized life following a positive test for HIV should remain considered a barrier to testing created by HIV stigma. The power of this social barrier may be reflected in the

finding that half the 200 participants with HIV in a study conducted in Cameroon reported that they only sought HIV testing once they started showing symptoms, and they had declined to get tested prior to this for fear of testing positive (Jacobi et al., 2013).

Perceived benefits associated with HIV testing. Women reported that the possibility of protecting an unborn child from infection with HIV would be a motivator to obtain testing (Elsheikh et al., 2015). Although the potential benefit of accessing medical care including ART is great, researchers did not mention it as a motivator to seek testing in any other the articles reviewed for this study.

Perceived self-efficacy related to HIV testing. Researchers did not specifically address perceptions of self-efficacy related to HIV testing in any of the articles reviewed for this study. Therefore, I did not utilize the perceived self-efficacy component of the HBM within the present study. However, the HBM remained relevant to the literature reviewed to support the present study, which was concerned with the relationship between HIV stigma and testing behavior. Perception of severity of HIV/AIDS was not a predictor of health-promoting behavior, such as HIV testing (Asare & Sharma, 2012; Elsheikh et al., 2015; Zhao et al., 2012). Perception of susceptibility to risk of acquiring HIV infection did predict uptake of HIV testing for some participants; in some cases, individuals did not accurately assess their own level of risk (Earnshaw et al., 2012; Kabiru et al., 2011). Inaccurate risk assessment was often the result of lack of accurate information about HIV (Earnshaw et al., 2012). HIV stigma remained perceived as a barrier to seeking testing in multiple studies (Elsheikh et al., 2015; Odimegwu et al.,

2013; Pitpitan, 2012). Finally, protection of unborn children was a perceived benefit that predicted a higher likelihood of participants obtaining HIV testing (Elsheikh et al., 2015).

Summary and Conclusions

Stigmatization of HIV/AIDS is a social process that occurs worldwide in varying forms and severity. Across all cultures and forms of HIV stigma, the described experiences of persons with HIV are universally difficult and painful, with effects that permeate the individual's sense of self and radiate outward affecting members of the social network and larger community. An effect of HIV stigma with consequences for the individual and others around the individual is refusal or reluctance to obtain HIV testing, which can cause negative health effects for the individual and increase risk of transmission of the virus to others (Kohler et al., 2014).

Stigma associated with HIV has taken the form of public stigma, such as insults, social rejection, exclusion from family relationships, and beliefs that HIV is a punishment for immorality (Bird & Voison, 2013; Jeffries et al., 2015). Family members encouraged people with HIV to conceal their diagnoses in an expression of stigma-by-association, and church inclusion rights remained denied as a form of structural stigma (Bird & Voison, 2013). People with HIV often internalized negative treatment and ideas about HIV as well, which could lead to mental health problems, such as depression (Molina & Ramirez-Valles, 2013). People with HIV reported positive forms of coping with stigma such as seeking out social support, but also reported harmful coping strategies, such as social withdrawal and concealing their HIV-positive status from others, even sexual partners (Bird & Voison, 2013; Emlet et al., 2013).

Researchers have reported similar experiences of stigma from people with HIV in Sub-Saharan African cultures but with notably more experiences of structural stigma, such as differential treatment within the healthcare arena and being forced to leave their homes by proprietors (dos Santos et al., 2014; Okoror et al., 2014). Women in Sub-Saharan cultures experienced comparatively severe forms of HIV stigma, including physical assault by spouses, being cast out of family and other social networks, and being forced to leave their homes with little to no means of economic self-support (Gnauck et al., 2013; Kako & Dubrosky, 2013).

The motivation to avoid HIV stigma influenced participants in Sub-Saharan Africa and other parts of the world to avoid HIV testing altogether (Golub & Gamarel, 2013; Kabiru et al., 2011). Women in Kenya and other parts of Sub-Saharan Africa reported declining to take an HIV test for fear of learning the result and concealing their statuses to avoid the harsh consequences associated with HIV (Kohler et al., 2014; Low et al., 2013). These findings are of concern because of the high prevalence of HIV in Kenya and other parts of Sub-Saharan Africa, as well as the potential for infected women to transmit the virus to children and partners (Kohler et al., 2014).

Stutterheim et al. (2012) investigated the HIV stigma attitudes of African and Afro-Caribbean diaspora communities in the Netherlands and found evidence many of the same forms of HIV stigma were found in the original cultures of these communities; however, there was no such investigation of HIV attitudes within Kenyan Diaspora communities. Understanding the nature of HIV stigma for these women could increase the likelihood that programs or interventions aimed at reducing stigma are properly

targeted toward actual root causes and avoid unintended consequences (Bos et al., 2013;

Masquillier, Wouters, Mortelmans, & le Roux Booysen, 2015; Rael, 2015). Because

stigma is a fundamentally social process, promotion of cultural acceptance of positive

attitudes and behavior regarding HIV testing are most successful if contextualized within

women's families and community networks (Airhihenbuwa, Ford, & Iwelunmor, 2014;

Anafi, Mprah, & Asiamah, 2014).

Because HIV stigma experiences may affect Kenyan women's decisions about

obtaining HIV testing, I aimed determine how their experiences of HIV stigma

influenced their uptake of HIV testing to identify points of intervention to promote

healthy behavior. The following chapter will explain the methods used in the present

study to measure Diaspora Kenyan women's experiences with HIV stigma in the form of

prejudices, negative beliefs or attitudes, abuse, and maltreatment.

Chapter 3. Research Methodology

The purpose of this quantitative study was to explore the influence of various dimensions of HIV/AIDS stigma, which include prejudice, negative attitudes, abuse, and maltreatment, on the uptake of HIV testing among Kenyan Diaspora women. The participants of this study were Kenyan Diaspora women from the United States. I used a survey method to measure variables of the dimensions of HIV/AIDS stigma as well as the uptake of HIV testing. I used the responses in the survey to analyze whether a relation existed between the identified variables. I sought to answer the central research question, which stated the following: Is there a correlation between HIV/AIDS stigma and the uptake of HIV testing on Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status?

This chapter provides a detailed discussion of the methods that I used to conduct the present research study. I discuss the research method and design first, followed by the participants and sample size. Then, I present the instrumentation along with the data collection methods, validity and reliability, the operational definition of the variables, data analysis methods, and ethical assurances.

Research Design and Rationale

I considered a quantitative correlational research design because the purpose of this study was to explore potential relations between identified variables. A correlational research design focuses on identifying whether a relationship exists between independent and dependent variables (Babbie, 2012). The independent variables, considered in this

study, included the dimensions of HIV/AIDS stigma that include public stigma of prejudice, self-stigma of negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment. The dependent variable considered in this study was the uptake of HIV testing. Moreover, I controlled for the covariates of immigration status, age, access to care, education level, and social economic status. I used a quantitative correlational research design because this study identified linear relationships between variables, as described by Bryman (2012). A correlational research design helps researchers answer three questions:

1. The identification of the existence of relationship between the independent variables and the dependent variables;

2. A question whether there is a significant relationship between the independent variables and dependent variable; and

3. A question whether the variables follow a linear relationship (Yule, 1907).

I used a nonexperimental design because there was no manipulation of variables involved. I collected data in the participants' natural setting, and there was no intervention involved. A non-experimental study was appropriate because the focus of the study was not to identify causal relationships between variables, but to examine potential linear or direct relationships between the independent and the dependent variables (Bryman, 2012). Moreover, I chose a non-experimental study because I focused on the dimensions of HIV/AIDS stigma, which occurred in a natural setting. According to Babbie (2012), a nonexperimental study represents a study where the author observes participants in their natural setting, and no manipulation of variables is involved. Thus, it

would be difficult, if not impossible, to randomly assign participants to control and treatment groups. A nonexperimental study also requires less time to complete, as opposed to an experimental study. Because I had to complete this study within 1 academic year to ensure relevance of data, I chose a nonexperimental study.

I used a survey technique, in accordance with Marshall and Rossman (2008), to collect data responses from participants in this study. I used a survey questionnaire on HIV/AIDS stigma and the uptake of HIV testing to measure the variables of the dimensions of HIV/AIDS stigma, which included public stigma of prejudice, self-stigma of negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment, as well as the uptake of HIV testing. The responses of participants were coded using numeric variables to examine statistically whether a relationship existed between the variables.

Methodology

Quantitative research involves the use of surveys, questionnaires, and other statistical techniques to analyze information about a phenomenon (Yilmaz, 2013). Researchers take an objective approach concerning the gathered data by using numeric values to measure the constructs of the study. I specifically utilized a correlational technique and a multivariate analysis to identify whether there was a relationship between the dimensions of HIV/AIDS stigma and the uptake of HIV testing, while controlling for the covariates of immigration status, age, access to care, marital status, education level, and social economic status. The use of a multivariate analysis allows researchers to identify linear relationships of independent factors with single dependent variables, while

controlling for covariates (Yilmaz, 2013). In this study, the variables considered involved continuous, dichotomous, or ordinal types of data. Because I used numeric values in this study to represent variables, I deemed that a quantitative study remained most appropriate.

Population

The target population for this study consisted of Kenyan Diaspora women. I gathered the samples specifically from Kenyan Diaspora women within the geographic area of the United States. The participants were at least 18 years old, Kenyan, and women who were dispersed from their original homeland.

Sampling and Sampling Procedures

I used a convenience sampling technique to recruit participants for the study. A convenience sampling technique is a nonprobability sampling method, which derives from the willingness and the availability of the potential participants to participate in the study (Leedy & Ormrod, 2010). Prospective participants were at least 18 years old, Kenyan, and women who were dispersed from their original homeland. The inclusion criteria were included in the survey to determine eligibility of participants. Prospective participants needed to read and understand ninth grade written English to respond to the survey questionnaire. I provided all prospective participants with an invitation to enroll in the study. However, I only considered those who agreed to participate in the study in the data collection phase, as suggested by researchers (Leedy & Ormrod, 2010).

G*Power v3.1.0 was used to conduct a prior power analysis to determine the minimum number of participants needed in this study. Based on the power analysis, at

least 85 participants were necessary to provide statistically valid results, as suggested by researchers (Faul, Erdfelder, Buchner, & Lang, 2009). The power analysis involves the use of several factors, namely the type of analysis used for the study, effect size, significance level, and desired power. For the present of this study, I employed a multivariate analysis with five covariates to examine the relationship between the dimensions of HIV/AIDS stigma and the uptake of HIV testing.

The effect size measures the strength of relationship between independent and dependent variables (Cohen, 1988). I considered a medium effect size for this study because this ensured that the analysis was not too strict nor too lenient in identifying significant relationships. The significance level involves the confidence that the statistical result is true (Cozby, 2009). For this study, I used a 5% significance level. The power of the analysis was set at 80% because this is the standard considered in most research studies. Based on the factors considered, the G*Power calculation was that at least 85 participants were needed for the study. Thus, I invited the Kenyan Diaspora women through a Kenyan Diaspora website to participate in the study to ensure that at least 85 participants completed the survey questionnaire employed in this study, considering a response rate of 30%.

Procedures for Recruitment, Participation, and Data Collection

The data collection process during research provides the investigator with the information needed to evaluate the study being conducted (Leedy & Ormrod, 2010). Furthermore, this process must remain specifically outlined for future researchers to duplicate the study. The data collection process lasted for 4weeks (Leedy & Ormrod,

2010; Whitlatch, 1992). I obtained a list of prospective participants from a Kenyan

Diaspora organization. I sent a formal invitation letter to the organization to seek

permission to gather information from Kenyan Diaspora women.

Once I received permission, I sent an email invitation to prospective participants

using blind-carbon-copy emails. The email invitation contained a brief description of the

study, as well as the role of participants in the study. An informed consent form was also

included in the invitation email to allow participants to decide whether they agreed to

participate in the study. I asked prospects who agreed to participate in the study to click

the link to the online survey in SurveyMonkey (https://www.surveymonkey.com/). I only

directed invitees who agreed to participate in the study by clicking the link to the survey

questionnaire used in this study. The survey questionnaire included items on the

dimensions of HIV/AIDS stigma including public stigma of prejudice, self-stigma of

negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment, as well

as the uptake of HIV testing. The survey questionnaire also included questions on

demographic characteristics of participants to describe the sampled participants. After

completing the survey, I thanked the participants for their participation. There were no

debriefing or follow-up questions involved in the study.

At the end of the data collection phase of the study, I compiled and organized the

gathered data by using SPSS statistical software for data analysis, as suggested by

researchers (Hamburg & Babinec, 1991; Nimon & Oswald, 2013). I categorized the raw

data according to the demographic information asked during the data collection phase of

the study, which included immigration status, age, marital status, and access to care,

education level, and social economic status. I also considered the demographic

characteristics of participants as covariates in the analyses.

Instrumentation and Operationalization of Constructs

This study included an existing validated survey questionnaire to measure the

dimensions of HIV/AIDS stigma, while I used a demographic questionnaire to identify

the demographic characteristics of participants and the uptake of HIV testing. I used the

Dimensions of Stigma Scale, developed by Bresnahan and Zhuang (2011). I sought

permission to use the instrument from the authors. I sent an intent letter to the authors of

this survey instrument. This questionnaire contained 27-items with five-point Likert-type

responses ranging from 1 = *strongly disagree,* 2 = *disagree,* 3= *undecided*, 5 = *agree*, and

5 = *strongly agree*.

The questionnaire consisted of six subscales: labeling, negative attribution,

distancing, status loss, and controllability. For this study, public stigma of prejudice was

measured using the labeling subscale; self-stigma of negative attitude and beliefs was

measured using distancing; and structural stigma of maltreatment was measured using

negative attribution, while enacted stigma of abuse was measured using the status loss

subscale. For this study, I did not utilize the controllability subscale.

The scale reliabilities ranged from 0.80 to 0.91 across subscales (Bresnahan &

Zhuang, 2011). The second study on the same scale showed similar reliabilities, which

indicated that the questionnaire was reliable in measuring the constructs. The scale was

previously used to investigate the dimensions of stigma for undergraduate students

(Bresnahan & Zhuang, 2011). There are six items for labeling, seven items for negative

attribution, six items for distancing, and four items for status loss (Bresnahan & Zhuang, 2011). The demographic information included variables of immigration status, age, access to care, education level, and social economic status. These variables remained categorical in nature, represented numerically for analyses. However, I considered age and educational level as continuous in nature.

The dimensions of HIV/AIDS stigma included prejudice, negative attitudes, abuse, and maltreatment. These variables were measured using the mean scores of the items in the questionnaire and were considered as continuous variables. I considered the uptake of HIV testing as one of the items in the questionnaire and as a continuous variable. I defined the uptake of HIV testing as the number of times that the participant agreed to test for HIV/AIDS.

Data Analysis Plan

This study sought to address the following research questions and to test the following hypotheses:

Research Question 1: Is there a correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, marital status, age, and access to care, education level, and social economic status?

$H_0 1$: There is no correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women.

$H_1 1$: There is a correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women.

Research Question 2: Is there a correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, and access to care, age, marital status, education level, and social economic status?

$H_0 2$: There is no correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women.

$H_1 2$: There is a correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women.

Research Question 3: Is there a correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, and access to care, age, marital status, education level, and social economic status?

$H_0 3$: There is no correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women.

$H_1 3$: There is a correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women.

Research Question 4: Is there a correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates immigration status, and access to care, age, marital status, education level, and social economic status?

$H_0 4$: There is no correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women.

$H_1$4: There is a correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women.

I imported the data collected from this study to SPSS v21.0 to prepare for data analyses. The data were analyzed using descriptive and inferential statistics. I presented the demographic characteristics of participants using frequency and percentages because these were categorical in nature. Conversely, I presented study variables of the dimensions of HIV/AIDS stigma and the uptake of HIV testing using measures of central tendencies, such as mean, standard deviation, and range values. I also conducted reliability analyses to determine whether the survey items could measure the constructs of this study.

I used inferential statistics to test the hypotheses posed in this study. I used correlation analysis to analyze the direct linear relationships between variables. I planned to utilize Pearson's correlation analyses if the data collected for dimensions of HIV/AIDS stigma and uptake of HIV testing were normally distributed. However, I planned to use Spearman's correlation analysis if the data collected were non-normally distributed. Moreover, a multivariate analysis considering the four dimensions of HIV/AIDS stigma as independent variables, the uptake of HIV testing as dependent variable, and variables of immigration status, marital status, age, access to care, education level, and social economic status as covariates were conducted to examine further the existence of relationships between the variables. I considered demographic characteristics as covariates because these were uncontrollable variables in the study, which might have had an influence on the dependent variable. The result of the multivariate analysis

determined whether there were significant relationships between the identified variables while controlling for covariates. I used a significance level of .05 to determine whether correlations were significant for all analyses. This indicated that a significance level of less than .05 determined statistically significant correlation between the variables.

Threats to Validity

The threats to internal validity were limited through conducting the study following the period of 4 weeks to ensure that data collected in this study were timely and relevant, as suggested by researchers (Leedy & Ormrod, 2010). The validity of this study also depended on the validity and reliability of the questionnaires used. As such, I used a validated instrument, the HIV/AIDS Stigma Instrument – people living with HIV/AIDS, developed by Uys et al. (2009), to ensure the questions used were appropriate in measuring the constructs in this study. Maintaining the confidentiality and anonymity of participants also encouraged participants to respond to the survey questionnaire items honestly. Moreover, I used statistical tests for the reliability and validity of the survey questionnaire to strengthen the validity of the survey items. I also controlled the threats for statistical validity for using tests for assumption, such as normality tests. I conducted this study in a timely manner to control for construct validity. I ensured the timeliness of data collection and analyses, guaranteeing that data remained relevant at the time when conclusions occurred. The minimum sample size calculation, required to perform the analysis, was determined as 85 to achieve a power of 80%; thus, the existence of missing data was not deemed significant.

Ethical Procedures

This study involved the use of human participants; therefore, I ensured that ethical standards were followed. I protected confidentiality and anonymity of participants throughout the study. In this study, I protected the confidentiality of participants with an informed consent form. The informed consent form included the conditions of the study. I asked prospective participants to agree to an informed consent form prior to their participation in the study to make sure that they agreed to the terms and conditions of the study. The informed consent form included a description of the rationale for the study, the premise of the study, and the purpose of the study. The informed consent form also informed the participants that they were free to withdraw from the study at any time without reprisal or loss of benefit or penalty. The informed consent form also showed the results of the study might be published in academic journals. However, there would be no identifiable information from the participants, and all data would remain confidential and anonymous. I presented only aggregate data in these published papers. This study did not have any foreseeable risks. Prior to directing participants to the study, I asked participants to agree to the electronic informed consent form uploaded in the SurveyMonkey website (https://www.surveymonkey.com/).

I sought permission from the Institutional Review Board (IRB) prior to data collection. This included ensuring that all ethical considerations remained properly covered in this study. Recruitment instruments as well as the permission to use the survey questionnaire were included in the review of the IRB. All collected data were stored in a password-protected computer and safely kept inside a locked room. Only I could access

the data collected in this study. I did not ask participants to provide any personal information. All surveys and documentation that I used for the current study are to be stored for only 5 years after the completion of this study. All information, documents, and files are to be deleted and discarded after the 5 years retention period. I plan to shred paper documents. I would only make aggregate and statistical data from the study available on request.

Summary

I used this non-experimental quantitative correlational research to explore the influence of various dimensions of HIV/AIDS stigma, which include prejudice, negative attitudes, abuse, and maltreatment, on the uptake of HIV testing among Kenyan Diaspora women. The target participants of this study included Kenyan Diaspora women from the United States. At least 85 participants were necessary to ensure that statistical tests for this study were valid. I used a survey method to measure variables of the dimensions of HIV/AIDS stigma, as well as the uptake of HIV testing. I used the HIV/AIDS Stigma Instrument – people living with HIV/AIDS, developed by Uys et al. (2009), to measure the dimensions of HIV/AIDS stigma among people living with HIV/AIDS. I used a demographic questionnaire to measure the demographic characteristics, as well as the uptake of HIV testing. I used the responses in the survey to analyze whether a relationship existed between the identified variables. I employed descriptive statistics, correlation analysis, and multivariate analysis to test the hypotheses posed in this study. I utilized a significance level of .05 for all statistical tests.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to explore the influence of various dimensions of HIV/AIDS stigma, which includes prejudice, negative attitudes, abuse, and maltreatment, on the uptake of HIV testing among Kenyan Diaspora women. To address the problem and purpose of the study, the following research questions and hypotheses were proposed:

Research Question 1: Is there a correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, marital status, age, and access to care, education level, and social economic status?

$H_0 1$: There is no correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women.

$H_1 1$: There is a correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women.

Research Question 2: Is there a correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, and access to care, age, marital status, education level, and social economic status?

$H_0 2$: There is no correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women.

$H_1$2: There is a correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women.

Research Question 3: Is there a correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, and access to care, age, marital status, education level, and social economic status?

$H_0$3: There is no correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women.

$H_1$3: There is a correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women.

Research Question 4: Is there a correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates immigration status, and access to care, age, marital status, education level, and social economic status?

$H_0$4: There is no correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women.

$H_1$4: There is a correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women.

The following chapter contains the descriptive statistics of the continuous variables and tests of normality. Multiple regression was conducted to address the research questions presented for this study. Other assumptions that were tested included linearity, outlier detection, and normality.

Data Collection

Permission from Bresnahan and Zhuang (2011) to use their questionnaire was granted, and within one day the study was inputted into the SurveyMonkey website (https://www.surveymonkey.com/). A formal invitation letter was sent to the organization to seek permission to gather information from Kenyan Diaspora women. After a week, permission was received. The data collection process lasted for four weeks. Kenyan Diaspora websites were used to post the study where interested participants were directed to a list of screening questions which included the informed consent form. Participants then were directed to the survey questionnaire through the SurveyMonkey website (https://www.surveymonkey.com/). The survey questionnaire included items on the dimensions of HIV/AIDS stigma including public stigma of prejudice, self-stigma of negative attitudes, enacted stigma of abuse, and structural stigma of maltreatment, as well as the uptake of HIV testing. The survey questionnaire also included questions on demographic characteristics of participants to describe the sampled participants. G*Power v3.1.0 was used to conduct an a priori power analysis to determine the minimum number of participants that should be collected in this study. Based on the power analysis, at least 85 participants are necessary to provide statistically valid results (Faul et al., 2009). A total of 181 participants responded to the study, however, due to missing information, there was a minimum of 92 valid cases in which the analysis was performed. The minimum sample size calculation required to perform the analysis was determined to be 85 to achieve a power of 80%, thus the existence of missing data was not deemed significant.

What now follows are the descriptive statistics of the study variables, which include measures of central tendency (mean) and standard deviation for continuous variables, as well as frequencies for categorical data. Table 1 (below) lists descriptive statistics for the continuous variables.

Table 1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. deviation
Uptake of HIV testing	92	.00	2.00	1.52	.54
Prejudice	93	1.00	5.00	2.69	.99
Negative attitudes	93	1.00	4.83	2.98	.79
Enacted stigma of abuse	93	1.50	5.00	3.69	.72
Maltreatment	93	1.00	4.13	1.73	.64

Uptake of HIV testing ranged from 0.00 to 2.00 ($M = 1.52$, $SD = 0.54$). A zero for Uptake of HIV testing indicated that the participant never had any testing. A 1 indicated that they were tested at least one time, and a 2 indicated that they were tested at least twice. 88 (95.65%) females stated that they were tested at least once and 4 (4.35%) were never tested. Prejudice ranged from 1.00 to 5.00 ($M = 2.69$, $SD = 0.99$). Negative attitudes ranged from 1.00 to 4.83 ($M = 2.98$, $SD = 0.79$). Enacted stigma of abuse ranged from 1.50 to 5.00 ($M = 3.69$, $SD = 0.72$). Maltreatment ranged from 1.00 to 4.13 ($M = 1.73$, $SD = 0.64$).

Tables 2 through 6 depict frequencies and percentages for the categorical variables of age group, education level, income level, immigration status and marital status. Most participants were between 26 to 40 years old (62.4%), had some college education (16.6%), had an income level of $50K to $74,999, and were a permanent

residence of the United States (53.1%). 52 females (56.3%) were married; 27 (29.3%)

were single and smaller percentages were divorced, separated, or widowed. Further

breakdowns are depicted in Tables 2 through 5.

Table 2

Age Statistics

Age Range	Frequency	Percent	Valid Percent	Cumulative Percent
18-25	4	2.2	2.2	2.2
26-40	113	62.4	62.4	64.6
56-65	7	3.9	3.9	99.4
65 or older	1	.6	.6	100.0
Total	181	100.0	100.0	

Table 3

Educational Attainment Statistics

Education	Frequency	Percent	Valid percent	Cumulative percent
High school or equivalent	6	3.3	6.1	6.1
Vocational/technical school (2 year)	5	2.8	5.1	11.2
Some college	31	17.1	31.6	42.9
Bachelor's degree	30	16.6	30.6	73.5
Master's degree	21	11.6	21.4	94.9
Doctoral degree	3	1.7	3.1	98.0
Professional degree (MD, JD, etc.)	1	.6	1.0	99.0
Other	1	.6	1.0	100.0
Total	98	54.1	100.0	

Table 4

Household Income

Income	Frequency	Percent	Valid percent	Cumulative percent
Under $10,000	2	1.1	2.0	2.0
$10,000 - $19,999	5	2.8	5.1	7.1
$20,000 - $29,999	10	5.5	10.2	17.3
$30,000 - $39,999	10	5.5	10.2	27.6
$40,000 - $49,999	7	3.9	7.1	34.7
$50,000 - $74,999	23	12.7	23.5	58.2
$75,000 - $99,999	17	9.4	17.3	75.5
$100,000 - $150,000	18	9.9	18.4	93.9
Over $150,000	6	3.3	6.1	100.0
Total	98	54.1	100.0	

Table 5

Immigration Status

Immigration status	Frequency	Percent	Valid Percent	Cumulative percent
Student	2	1.1	2.0	2.0
Permanent residence	52	28.7	53.1	55.1
Naturalized citizen	42	23.2	42.9	98.0
Visitor	2	1.1	2.0	100.0
Total	98	54.1	100.0	

Table 6

Marital Status

Marital status	Frequency	Valid Percent	Cumulative Percent
Divorced	4	4.3	4.3
Living with another	1	1.1	5.4
Married	52	56.5	62.0
Separated	6	6.5	68.5
Single	27	29.3	97.8
Widowed	2	2.2	100.0
Total	92	100.0	

Normality

One requirement to perform multiple regression is that the residuals should be normally distributed. To test this, the skewness and kurtosis statistics were calculated for the continuous variables, as well as visual inspection of P-P plot. Skewness statistics greater than 2 indicate strong non-normality, while kurtosis statistic above 7 also indicates non-normality (West, Finch, & Curran, 1995). The skewness and kurtosis statistics fall within acceptable ranges. The residuals had a kurtosis value of -.812 and skewness of -.198. The P-P plot appears below in Figure 1. It shows no significant violations of the normality assumption.
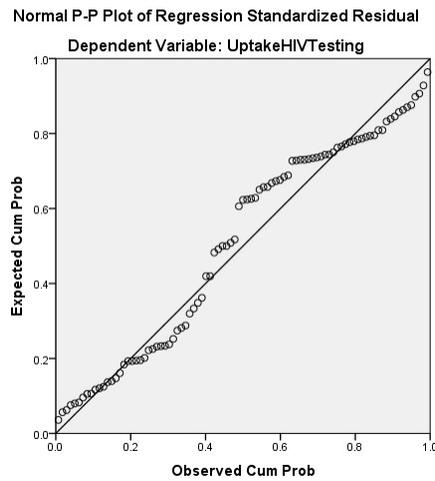
Figure 1. Normal P-P plot of regression standardized residual.

Outlier Detection

Outliers were assessed by converting scores to standardized values. Any value larger than +/- 3was deemed an outlier due to the very small probability of it occurring by chance. The standardized residuals for the continuous variables ranged from -2.59 to 2.59, which indicated no evidence of outliers (Hair, Anderson, Tatham, & William, 1995).

Multicollinearity

Multicollinearity occurs when the independent variables are highly correlated with each other (Hair et al., 1995). This leads to problems with understanding which independent variable contributed to the variance explained in the dependent variable. To test for multicollinearity, variance inflation factors (VIFs) were calculated. Any VIF (for the continuous variables) larger than 10 was cause for concern (Hair et al. 1995). There were no VIFs of the independent variables that fell outside this range, and thus no issues with multicollinearity.

Outcome of Results

Research Question 1

Multiple regression was conducted to investigate the first research question: Is there a correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status? There was linearity (Berry, 1993), as assessed by partial regression plots (see Figure 2) and a plot of standardized residuals against the predicted values. The predicted values were linearly related to each of the independent variables, as shown by the approximate linear trend of the partial regression plots. There was homoscedasticity (Berry, 1993), as assessed by visual inspection of a plot of standardized residuals versus unstandardized predicted values (see Figure 3). The assumption of homoscedasticity was that the residuals were equal for all values of the predicted dependent variable.
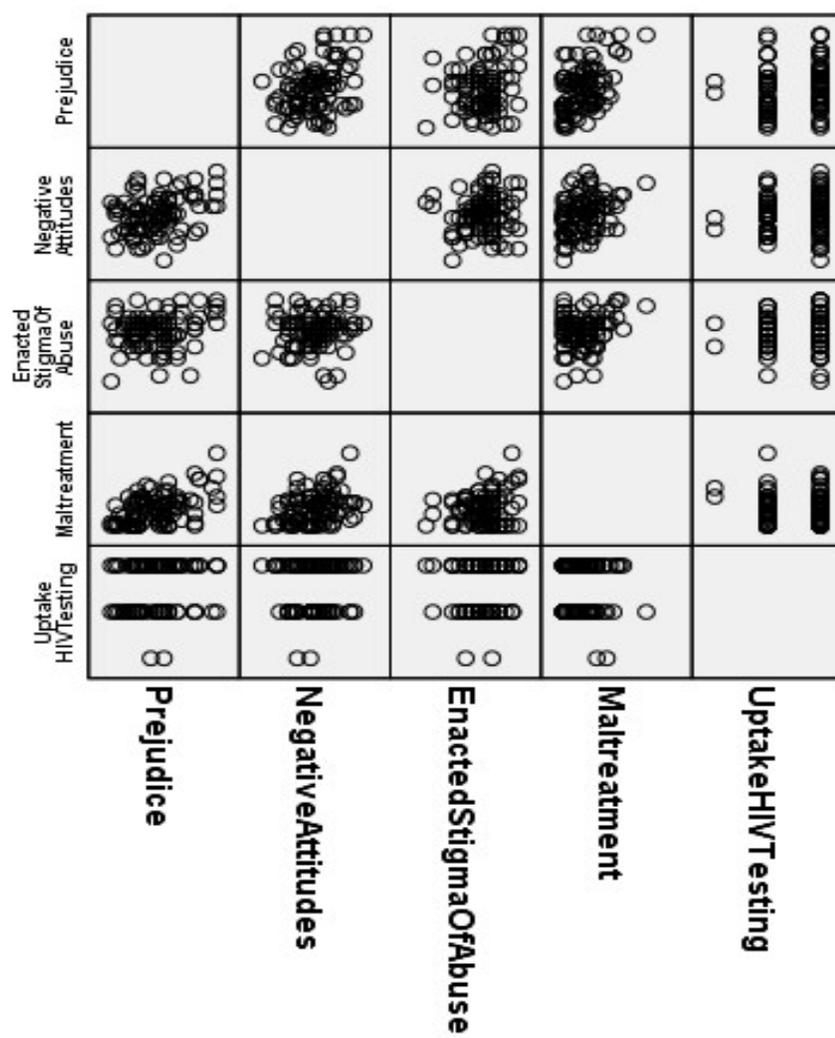
Figure 2. Partial regression plot.
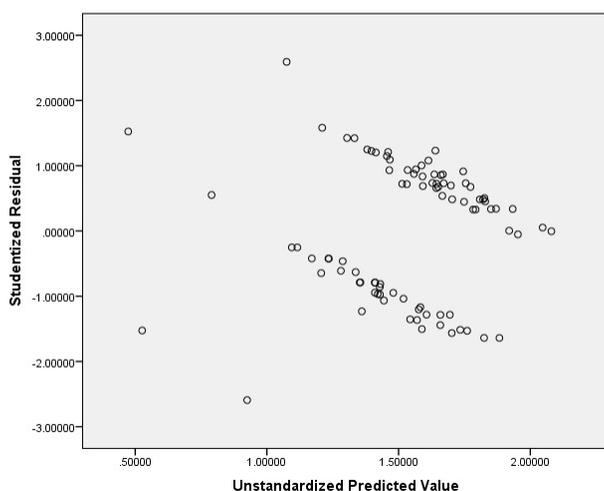
Figure 3. Plot of standardized residuals versus unstandardized predicted values.

There was no evidence of multicollinearity, as assessed by tolerance values greater than 0.1. There were no standardized deleted residuals greater than ± 3 standard deviations. The assumption of normality was met, as assessed by Q-Q Plot C (Berry, 1993).

The control variables of immigration status, marital status, age, access to health care, education level, and social economic status were entered in the first block (Model 1), and the independent variable prejudice was entered into the second block, which formed the full model (including the control variables and the independent variable). The full model was not statistically significant, $R^2 = .280$, $F(68, 90) = 1.202$, $p = .276$; adjusted $R^2 = .047$. Although the full model was not significant in predicting the uptake of HOV testing, age was a statistically significant predictor ($p \leq .05$). In all age categories, a one-unit increase in age category increased the number of uptakes in HIV testing. On average, the 26 to 40 age group had an HIV testing uptake of 1.073; in addition, the 41 to 55 age group increased by .982 and the 56 to 65 age group by 1.327.

Tables 7 through 10 depict the significance levels, as well as coefficients for the two regression models. There was no significant correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status.

Table 7

RQ1 Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics					DurbinWatson
					R Square Change	F Change	df 1	df 2	Sig. F Change	
1	.529[a]	.280	.060	.52779	.280	1.275	21	69	.223	
2	.529[b]	.280	.047	.53150	.000	.041	1	68	.839	.316

Table 8

RQ1 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.460	21	.355	1.275	.223[b]
	Residual	19.221	69	.279		
	Total	26.681	90			
2	Regression	7.472	22	.340	1.202	.276[c]
	Residual	19.209	68	.282		
	Total	26.681	90			

Note. a. Dependent Variable: Uptake HIV Testing.

Table 9

RQ1 Coefficients for Model 1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	.339	.702		.483	.630	-1.061	1.740		
Naturalized Citizen	.141	.438	.130	.323	.748	-.733	1.015	.065	15.449
Permanent Resident	.138	.422	.127	.327	.745	-.703	.979	.069	14.499
Student	.643	.632	.174	1.017	.313	-.618	1.903	.356	2.805
Age26_40	1.079	.411	.878	2.626	.011	.259	1.900	.093	10.721
Age41_55	.988	.434	.768	2.274	.026	.121	1.854	.091	10.934
Age56_65	1.373	.687	.264	1.999	.050	.002	2.743	.597	1.675
Do you have access to health care?	-.030	.300	-.015	-.102	.919	-.629	.568	.479	2.087
High School	-.226	.277	-.104	-.818	.416	-.778	.326	.649	1.540
Vocational School	-.151	.292	-.064	-.518	.606	-.733	.430	.694	1.442
Some College	-.184	.163	-.156	-1.135	.260	-.509	.140	.555	1.801
Masters	-.079	.170	-.062	-.467	.642	-.418	.260	.597	1.675
Doctoral	-.650	.342	-.214	-1.900	.062	-1.333	.032	.820	1.220
Professional Degree	-.757	.554	-.146	-1.366	.176	-1.862	.349	.917	1.090
IncomeUnder10K	-.296	.473	-.080	-.625	.534	-1.239	.647	.637	1.569
Income10K_19999	.657	.467	.178	1.406	.164	-.275	1.589	.652	1.533
Income20K_29999	.212	.332	.117	.639	.525	-.450	.875	.311	3.213
Income30K_39999	.260	.330	.143	.788	.434	-.398	.918	.315	3.171
Income40K_49999	.141	.305	.070	.464	.644	-.466	.749	.465	2.152
Income50K_74999	.303	.271	.236	1.118	.267	-.238	.844	.234	4.266
Income75K_99999	-.132	.269	-.093	-.490	.626	-.669	.405	.292	3.427
Income100_150K	.227	.254	.167	.895	.374	-.279	.734	.299	3.341

Note. a. Dependent Variable: UptakeHIVTesting.

Table 10

RQ1 Coefficients for Model 2

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	.302	.730		.414	.680	-1.154	1.759		
Naturalized Citizen	.151	.444	.138	.340	.735	-.735	1.036	.064	15.627
Permanent Resident	.148	.427	.136	.345	.731	-.705	1.000	.068	14.686
Student	.625	.642	.169	.974	.333	-.656	1.907	.350	2.854
Age26_40	1.073	.415	.874	2.586	.012	.245	1.902	.093	10.775
Age41_55	.982	.438	.764	2.241	.028	.108	1.856	.091	10.976
Age56_65	1.327	.728	.255	1.823	.073	-.126	2.779	.539	1.855
Do you have access to health care?	-.041	.306	-.020	-.133	.895	-.652	.570	.466	2.146
High School	-.219	.281	-.100	-.780	.438	-.780	.341	.639	1.566
Vocational School	-.154	.294	-.065	-.523	.603	-.740	.433	.692	1.444
Some College	-.189	.165	-.159	-1.144	.257	-.519	.141	.545	1.834
Masters	-.068	.180	-.053	-.375	.708	-.428	.292	.537	1.863
Doctoral	-.637	.351	-.210	-1.816	.074	-1.337	.063	.791	1.264
Professional Degree	-.740	.564	-.143	-1.313	.194	-1.866	.385	.898	1.113
IncomeUnder10K	-.283	.480	-.077	-.589	.558	-1.241	.675	.627	1.596
Income10K_19999	.666	.473	.180	1.409	.163	-.277	1.610	.646	1.548
Income20K_29999	.210	.335	.116	.628	.532	-.458	.878	.311	3.216
Income30K_39999	.259	.332	.143	.780	.438	-.404	.922	.315	3.171
Income40K_49999	.138	.307	.068	.451	.654	-.474	.751	.464	2.157
Income50K_74999	.305	.273	.237	1.116	.268	-.240	.850	.234	4.269
Income75K_99999	-.125	.273	-.088	-.458	.648	-.670	.420	.287	3.479
Income100_150K	.230	.256	.169	.899	.372	-.281	.741	.298	3.352
Prejudice	.015	.071	.026	.203	.839	-.128	.157	.633	1.580

Note. a. Dependent Variable: UptakeHIVTesting.

Research Question 2

Multiple regression was conducted to investigate the second research question: Is there a correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and

social economic status? The control variables of immigration status, marital status, age, access to health care, education level, and social economic status were entered in the first block (Model 1), and the independent variable Negative Attitudes was entered into the second block that formed the full model (including the control variables and the independent variable). The full model was not statistically significant, $R^2 = .281$, $F(68, 90) = 1.209$, $p = .270$, adjusted $R^2 = .049$. Although the full model was not significant in predicting the uptake of HIV testing, age was a statistically significant predictor ($p \leq .05$). In all age categories, a one-unit increase in age category increased the number of uptakes in HIV testing. On average, the 26 to 40 age group had an HIV testing uptake of 1.068; in addition, the 41 to 55 age group increased by .973 and the 56 to 65 age group by 1.334.

Tables 11 through 14 depict the significance levels, as well as coefficients for the two regression models. There was no significant correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status.

Table 11

RQ2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
						Change Statistics				
1	.529[a]	.280	.060	.52779	.280	1.275	21	69	.223	
2	.530[b]	.281	.049	.53108	.002	.148	1	68	.701	.323

Table 12

RQ2 ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.460	21	.355	1.275	.223[b]
1	Residual	19.221	69	.279		
	Total	26.681	90			
	Regression	7.502	22	.341	1.209	.270[c]
2	Residual	19.179	68	.282		
	Total	26.681	90			

Note. a. Dependent Variable: UptakeHIVTesting.

Table 13

RQ2 Coefficients for Model 1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	.339	.702		.483	.630	-1.061	1.740		
Naturalized Citizen	.141	.438	.130	.323	.748	-.733	1.015	.065	15.449
Permanent Resident	.138	.422	.127	.327	.745	-.703	.979	.069	14.499
Student	.643	.632	.174	1.017	.313	-.618	1.903	.356	2.805
Age26_40	1.079	.411	.878	2.626	.011	.259	1.900	.093	10.721
Age41_55	.988	.434	.768	2.274	.026	.121	1.854	.091	10.934
Age56_65	1.373	.687	.264	1.999	.050	.002	2.743	.597	1.675
Do you have access to health care?	-.030	.300	-.015	-.102	.919	-.629	.568	.479	2.087
High School	-.226	.277	-.104	-.818	.416	-.778	.326	.649	1.540
Vocational School	-.151	.292	-.064	-.518	.606	-.733	.430	.694	1.442
Some College	-.184	.163	-.156	-1.135	.260	-.509	.140	.555	1.801
Masters	-.079	.170	-.062	-.467	.642	-.418	.260	.597	1.675
Doctoral	-.650	.342	-.214	-1.900	.062	-1.333	.032	.820	1.220
Professional Degree	-.757	.554	-.146	-1.366	.176	-1.862	.349	.917	1.090
IncomeUnder10K	-.296	.473	-.080	-.625	.534	-1.239	.647	.637	1.569
Income10K_19999	.657	.467	.178	1.406	.164	-.275	1.589	.652	1.533
Income20K_29999	.212	.332	.117	.639	.525	-.450	.875	.311	3.213
Income30K_39999	.260	.330	.143	.788	.434	-.398	.918	.315	3.171
Income40K_49999	.141	.305	.070	.464	.644	-.466	.749	.465	2.152
Income50K_74999	.303	.271	.236	1.118	.267	-.238	.844	.234	4.266
Income75K_99999	-.132	.269	-.093	-.490	.626	-.669	.405	.292	3.427
Income100_150K	.227	.254	.167	.895	.374	-.279	.734	.299	3.341

Table 14

RQ2 Coefficients for Model 2

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	.256	.739		.347	.730	-1.218	1.730		
Naturalized Citizen	.147	.441	.135	.333	.740	-.733	1.027	.065	15.467
Permanent Resident	.146	.425	.135	.343	.732	-.702	.993	.069	14.534
Student	.639	.636	.173	1.004	.319	-.631	1.908	.356	2.806
Age26_40	1.068	.415	.869	2.574	.012	.240	1.895	.093	10.779
Age41_55	.973	.439	.757	2.219	.030	.098	1.848	.091	11.015
Age56_65	1.334	.699	.257	1.910	.060	-.060	2.728	.584	1.711
Do you have access to health care?	-.033	.302	-.016	-.108	.915	-.635	.570	.479	2.088
High School	-.217	.280	-.099	-.776	.441	-.775	.341	.644	1.553
Vocational School	-.155	.294	-.065	-.527	.600	-.740	.431	.693	1.443
Some College	-.187	.164	-.158	-1.144	.257	-.514	.139	.554	1.804
Masters	-.070	.173	-.055	-.408	.684	-.415	.274	.586	1.706
Doctoral	-.646	.345	-.213	-1.874	.065	-1.333	.042	.819	1.221
Professional Degree	-.749	.558	-.144	-1.343	.184	-1.863	.364	.916	1.092
IncomeUnder10K	-.278	.478	-.075	-.583	.562	-1.232	.675	.632	1.583
Income10K_19999	.686	.476	.186	1.440	.154	-.264	1.636	.636	1.572
Income20K_29999	.211	.334	.116	.630	.531	-.456	.878	.311	3.213
Income30K_39999	.258	.332	.142	.777	.440	-.405	.921	.315	3.172
Income40K_49999	.148	.307	.073	.483	.631	-.464	.761	.463	2.159
Income50K_74999	.309	.273	.241	1.131	.262	-.236	.855	.234	4.279
Income75K_99999	-.126	.271	-.088	-.463	.645	-.667	.416	.291	3.439
Income100_150K	.230	.256	.170	.901	.371	-.280	.740	.299	3.345
Negative Attitudes	.028	.074	.042	.385	.701	-.119	.176	.900	1.111

Research Question 3

Multiple regression was conducted to investigate the third research question: Is there a correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social

economic status? The control variables of immigration status, marital status, age, access to health care, education level, and social economic status were entered in the first block (Model 1), and the independent variable, Enacted Stigma of Abuse, was entered into the second block that formed the full model (including the control variables and the independent variable). The full model was not statistically significant, $R^2 = .287$, $F(68, 90) = 1.243$, $p = .244$; adjusted $R^2 = .056$. Although the full model was not significant in predicting the uptake of HIV testing, age was a statistically significant predictor ($p \leq .05$). In all age categories, a one-unit increase in age category increased the number of uptakes in HIV testing. On average, the 26 to 40 age group had an HIV testing uptake of 1.124; in addition, the 41 to 55 age group increased by .1.021 and the 56 to 65 age group by 1.528.

Tables 15 through 18 depict the significance levels, as well as coefficients for the two regression models. There was no significant correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status.

Table 15

RQ3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.529[a]	.280	.060	.52779	.280	1.275	21	69	.223	
2	.536[b]	.287	.056	.52900	.007	.687	1	68	.410	.323

Table 16

RQ3 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.460	21	.355	1.275	.223[b]
1	Residual	19.221	69	.279		
	Total	26.681	90			
	Regression	7.652	22	.348	1.243	.244[c]
2	Residual	19.029	68	.280		
	Total	26.681	90			

Table 17

RQ3 Coefficients for Model 1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	.339	.702		.483	.630	-1.061	1.740		
Naturalized Citizen	.141	.438	.130	.323	.748	-.733	1.015	.065	15.449
Permanent Resident	.138	.422	.127	.327	.745	-.703	.979	.069	14.499
Student	.643	.632	.174	1.017	.313	-.618	1.903	.356	2.805
Age26_40	1.079	.411	.878	2.626	.011	.259	1.900	.093	10.721
Age41_55	.988	.434	.768	2.274	.026	.121	1.854	.091	10.934
Age56_65	1.373	.687	.264	1.999	.050	.002	2.743	.597	1.675
Do you have access to health care?	-.030	.300	-.015	-.102	.919	-.629	.568	.479	2.087
High School	-.226	.277	-.104	-.818	.416	-.778	.326	.649	1.540
Vocational School	-.151	.292	-.064	-.518	.606	-.733	.430	.694	1.442
Some College	-.184	.163	-.156	-1.135	.260	-.509	.140	.555	1.801
Masters	-.079	.170	-.062	-.467	.642	-.418	.260	.597	1.675
Doctoral	-.650	.342	-.214	-1.900	.062	-1.333	.032	.820	1.220
Professional Degree	-.757	.554	-.146	-1.366	.176	-1.862	.349	.917	1.090
IncomeUnder10K	-.296	.473	-.080	-.625	.534	-1.239	.647	.637	1.569
Income10K_19999	.657	.467	.178	1.406	.164	-.275	1.589	.652	1.533
Income20K_29999	.212	.332	.117	.639	.525	-.450	.875	.311	3.213
Income30K_39999	.260	.330	.143	.788	.434	-.398	.918	.315	3.171
Income40K_49999	.141	.305	.070	.464	.644	-.466	.749	.465	2.152
Income50K_74999	.303	.271	.236	1.118	.267	-.238	.844	.234	4.266
Income75K_99999	-.132	.269	-.093	-.490	.626	-.669	.405	.292	3.427
Income100_150K	.227	.254	.167	.895	.374	-.279	.734	.299	3.341

Note. a. Dependent Variable: UptakeHIVTesting.

Table 18

RQ3 Coefficients for Model 2

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	.616	.779		.791	.432	-.938	2.170		
Naturalized Citizen	.112	.441	.103	.254	.800	-.767	.991	.064	15.551
Permanent Resident	.134	.423	.124	.318	.752	-.709	.978	.069	14.501
Student	.701	.637	.190	1.100	.275	-.571	1.973	.352	2.840
Age26_40	1.124	.416	.915	2.705	.009	.295	1.954	.092	10.906
Age41_55	1.021	.437	.794	2.336	.022	.149	1.893	.091	11.028
Age56_65	1.528	.714	.294	2.142	.036	.104	2.952	.556	1.800
Do you have access to health care?	.024	.308	.012	.079	.937	-.590	.639	.457	2.189
High School	-.294	.289	-.135	-1.017	.313	-.871	.283	.598	1.673
Vocational School	-.126	.294	-.053	-.430	.669	-.712	.460	.686	1.457
Some College	-.191	.163	-.161	-1.173	.245	-.517	.134	.554	1.805
Masters	-.113	.175	-.088	-.646	.521	-.463	.236	.565	1.771
Doctoral	-.677	.344	-.223	-1.964	.054	-1.364	.011	.813	1.230
Professional Degree	-.730	.556	-.141	-1.312	.194	-1.840	.380	.914	1.094
IncomeUnder10K	-.341	.477	-.092	-.715	.477	-1.293	.611	.629	1.590
Income10K_19999	.649	.468	.176	1.386	.170	-.286	1.584	.652	1.533
Income20K_29999	.147	.342	.081	.431	.668	-.535	.830	.295	3.390
Income30K_39999	.217	.335	.119	.647	.520	-.452	.885	.308	3.250
Income40K_49999	.072	.317	.035	.228	.821	-.560	.704	.432	2.314
Income50K_74999	.259	.277	.202	.937	.352	-.293	.812	.226	4.427
Income75K_99999	-.197	.281	-.138	-.700	.486	-.757	.364	.269	3.716
Income100_150K	.199	.257	.146	.775	.441	-.313	.711	.294	3.402
EnactedStigmaOfAbuse	-.081	.098	-.107	-.829	.410	-.277	.114	.632	1.582

Note. a. Dependent Variable: UptakeHIVTesting.

Research Question 4

Multiple regression was conducted to investigate the forth research question: Is there a correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates immigration status, age, marital status, access to care, education level, and social

economic status? The control variables of immigration status, marital status, age, access to health care, education level, and social economic status were entered in the first block (Model 1), and the independent variable Maltreatment was entered into the second block that formed the full model (including the control variables and the independent variable). The full model was not statistically significant, $R^2 = .280$, $F(68, 90) = 1.200$, $p = .278$; adjusted $R^2 = .047$. Although the full model was not significant in predicting the uptake of HIV testing, age was a statistically significant predictor ($p \leq .05$). In all age categories, a one-unit increase in age category increased the number of uptakes in HIV testing. On average, the 26 to 40 age group had an HIV testing uptake of 1.079; the 41 to 55 age group increased by .988 and the 56 to 65 age group by 1.374.

Tables 19 through 22 depict the significance levels, as well as coefficients for the two regression models. There was no significant correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates immigration status, age, marital status, access to care, education level, and social economic status.

Table 19

RQ4 Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.529[a]	.280	.060	.52779	.280	1.275	21	69	.223	
2	.529[b]	.280	.047	.53166	.000	.000	1	68	.993	.319

Table 20

RQ4 ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.460	21	.355	1.275	.223
1	Residual	19.221	69	.279		
	Total	26.681	90			
	Regression	7.460	22	.339	1.200	.278
2	Residual	19.221	68	.283		
	Total	26.681	90			

Note. a. Dependent Variable: UptakeHIVTesting.

Table 21

RQ4 Coefficients for Model 1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	.339	.702		.483	.630	-1.061	1.740		
Naturalized Citizen	.141	.438	.130	.323	.748	-.733	1.015	.065	15.449
Permanent Resident	.138	.422	.127	.327	.745	-.703	.979	.069	14.499
Student	.643	.632	.174	1.017	.313	-.618	1.903	.356	2.805
Age26_40	1.079	.411	.878	2.626	.011	.259	1.900	.093	10.721
Age41_55	.988	.434	.768	2.274	.026	.121	1.854	.091	10.934
Age56_65	1.373	.687	.264	1.999	.050	.002	2.743	.597	1.675
Do you have access to health care?	-.030	.300	-.015	-.102	.919	-.629	.568	.479	2.087
High School	-.226	.277	-.104	-.818	.416	-.778	.326	.649	1.540
Vocational School	-.151	.292	-.064	-.518	.606	-.733	.430	.694	1.442
Some College	-.184	.163	-.156	-1.135	.260	-.509	.140	.555	1.801
Masters	-.079	.170	-.062	-.467	.642	-.418	.260	.597	1.675
Doctoral	-.650	.342	-.214	-1.900	.062	-1.333	.032	.820	1.220
Professional Degree	-.757	.554	-.146	-1.366	.176	-1.862	.349	.917	1.090
IncomeUnder10K	-.296	.473	-.080	-.625	.534	-1.239	.647	.637	1.569
Income10K_19999	.657	.467	.178	1.406	.164	-.275	1.589	.652	1.533
Income20K_29999	.212	.332	.117	.639	.525	-.450	.875	.311	3.213
Income30K_39999	.260	.330	.143	.788	.434	-.398	.918	.315	3.171
Income40K_49999	.141	.305	.070	.464	.644	-.466	.749	.465	2.152
Income50K_74999	.303	.271	.236	1.118	.267	-.238	.844	.234	4.266
Income75K_99999	-.132	.269	-.093	-.490	.626	-.669	.405	.292	3.427
Income100_150K	.227	.254	.167	.895	.374	-.279	.734	.299	3.341

Note. a. Dependent Variable: UptakeHIVTesting.

Table 22

RQ4 Coefficients for Model 2

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	B	Std. Error	Beta
(Constant)	.341	.745		.458	.648	-1.145	1.828		
Naturalized Citizen	.141	.446	.129	.316	.753	-.749	1.030	.063	15.758
Permanent Resident	.137	.427	.127	.322	.749	-.714	.989	.068	14.642
Student	.642	.637	.174	1.009	.317	-.628	1.913	.356	2.806
Age26_40	1.079	.414	.878	2.605	.011	.253	1.906	.093	10.730
Age41_55	.988	.438	.769	2.254	.027	.113	1.862	.091	10.972
Age56_65	1.374	.710	.265	1.937	.057	-.041	2.790	.568	1.761
Do you have access to health care?	-.030	.303	-.015	-.100	.921	-.636	.575	.475	2.103
High School	-.227	.281	-.104	-.808	.422	-.787	.333	.640	1.562
Vocational School	-.151	.295	-.064	-.514	.609	-.739	.436	.689	1.451
Some College	-.184	.165	-.155	-1.120	.267	-.513	.144	.550	1.819
Masters	-.080	.174	-.062	-.457	.649	-.428	.268	.575	1.738
Doctoral	-.651	.349	-.215	-1.863	.067	-1.348	.046	.798	1.252
Professional Degree	-.757	.563	-.146	-1.345	.183	-1.882	.367	.901	1.110
IncomeUnder10K	-.296	.476	-.080	-.621	.537	-1.246	.655	.637	1.569
Income10K_19999	.656	.478	.178	1.372	.175	-.298	1.610	.632	1.582
Income20K_29999	.212	.335	.117	.634	.528	-.456	.880	.311	3.213
Income30K_39999	.260	.333	.143	.780	.438	-.405	.924	.314	3.182
Income40K_49999	.141	.311	.069	.453	.652	-.479	.761	.452	2.210
Income50K_74999	.303	.274	.236	1.106	.273	-.244	.850	.233	4.294
Income75K_99999	-.132	.273	-.093	-.484	.630	-.677	.413	.288	3.478
Income100_150K	.227	.256	.167	.888	.378	-.283	.738	.299	3.344
Maltreatment	-.001	.103	-.001	-.009	.993	-.207	.205	.711	1.406

Note. a. Dependent Variable: UptakeHIVTesting.

Summary

Multiple regression was performed to address the research questions. Preliminary analyses showed the relationships were approximately linear with the residuals normally distributed, as assessed by skewness and kurtosis statistics, and there were no outliers. The results for these four research questions were not significant:

There was no significant correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status. In addition, there was no significant correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status. Moreover, there was no significant correlation between experiencing the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status. There was also no significant correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative correlational study was to explore the influence of various dimensions of HIV/AIDS stigma, which include prejudice, negative attitudes, abuse, and maltreatment, on the uptake of HIV testing among Kenyan Diaspora women in the United States. I looked for answers to the following central research question: Is there a correlation between aspect of HIV/AIDS stigma and the uptake of HIV testing on Kenyan Diaspora women after controlling for the covariates of immigration status, age, marital status, access to care, education level, and social economic status? This question could lead to reduced transmission of HIV and better lives for women and men who were disease free. This chapter will provide a discussion of this study's findings, including an examination of responses to the research questions in relation to the theoretical framework and relevant literature. Recommendations for practice and implications for future research emerging from this study's findings are also discussed.

Summary of the Findings

The findings of the study are summarized to orient and focus this chapter, where after the findings are interpreted in the next section. Broadly taken, no significant correlation was found to any of the four research questions.

Research Question 1

The first research question asked whether there was a correlation between public stigma and the uptake of HIV testing on Kenyan women after controlling for the co-variates of immigration status, access to care, age, marital status, education level and social-economic status. The following hypotheses were tested: (a) There is no correlation

between experiencing the public stigma of prejudice and the uptake of HIV among Kenyan Diaspora women, and (b) there is a correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women. The findings in answering this question, based on logistic regression analysis, showed no significant correlation between experiencing the public stigma of prejudice and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates.

Research Question 2

This research question asked if there was a correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among the diaspora of Kenyan women after controlling for the covariates of immigration status, access to care, age, medical status, educational status, and social economic status. The findings for this question, based on logistic regression analysis, showed no significant correlation between experiencing the self-stigma of negative attitudes and beliefs and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates.

Research Question 3

The third research question asked whether a correlation existed between the enacted stigma of abuse and the uptake of HIV testing among Kenyan Diaspora women after controlling for the above-mentioned co-variables. The findings in answering this question, based on logistic regression analysis, showed no significant correlation between

the enacted stigma of abuse and the uptake of HIV testing after controlling for the covariates.

Research Question 4

The fourth research question asked whether a correlation existed between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women after measuring for the previously mentioned covariables. The results showed no significant correlation between experiencing the structural stigma of maltreatment and the uptake of HIV testing among Kenyan Diaspora women after controlling for the covariates.

Interpretation of the Findings Related to Literature

Examining the ways in which factors related to population characteristics, variables, and procedures might have affected differences between the outcomes of the dissertation's study and the findings of the literature review. Several elements of this dissertation might have influenced the study's results in this regard.

Population Sample

Looking at the population characteristics of the women in the study, as opposed to those in the literature reviewed in the dissertation, the most notable factor was that the population reviewed by this study was exclusively focused on Kenyan Diaspora women in the United States. However, the populations sampled by the various studies, cited in the literature review, included both males and females, as well as various (non-Diaspora) populations in the United States, University students in a European nation (Finland) (Houtsonen et al., 2014), those living in other Sub-Saharan African countries—Cameroon

(Jacobi et al., 2013), Ghana (Iwelunmor & Airhihenbuwa, 2012; Oduro & Otsin, 2013), Nigeria (Lyimo et al., 2014), South Africa (Okoror et al., 2014), Sudan (Elsheikh et al., 2015), other North American countries—Canada (Liu et al., 2012), Nicaragua (Ugarte et al., 2013), and one Asian country—Bangladesh (Hasan et al., 2012). The various cultural factors that reflected the ways in which surveyed persons in each of these countries responded to questions regarding reported levels of stigma as related to uptake of treatment for HIV would contribute to a high level of variance in the results of the studies carried out in these countries. This finding might reveal a stronger positive correlation between stigma and uptake as compared to the results of this dissertation, showing that the correlation between these two variables was not significant.

Variables Measured

The dependent and independent variables measured in this dissertation included those of immigration status, age, access to care, education level, socioeconomic status, marital status. In contrast, studies examined in the literature review measured variables related to healthcare maintenance among those living with HIV/AIDS, public knowledge about susceptibility and risk of contraction related to HIV/AIDS in countries such as Cameroon (Jacobi et al., 2013), Nigeria (Lyimo et al., 2014), Ghana (Iwelunmor & Airhihenbuwa, 2012; Oduro & Otsin, 2013), South Africa (Okoror et al., 2014), Sudan (Elsheikh et al., 2015), Canada (Liu et al., 2012), Nicaragua (Ugarte et al., 2013), and Bangladesh (Hasan et al., 2012), in which the studies were carried out, and variables related to gender (Kohler et al., 2014) and perceived stigmatization (Akullian et al., 2014). The differing variables measured by this dissertation, as opposed to those

measured in the literature, presented another contributing factor to differences in the correlation between reported levels of stigma and uptake of treatment for HIV/AIDS between my study and the studies reviewed in the literature.

Procedural Considerations

The sampling procedure used in this dissertation—the way in which participants were chosen for the study—was conducted by an outreach to a Kenyan Diaspora organization which provided an e-mail list of persons who were contacted to represent the dissertation's population sample. Information regarding sampling procedures for other studies discussed in the literature review was not universally present; however, many of the studies referred to in the literature were deemed qualitative studies (Bird & Voisin, 2013; Jeffries et al., 2015; Skinta et al., 2014; as opposed to this dissertation, which is quantitative) and were carried out through publicly distributed questionnaires that often needed fieldworkers to facilitate completion, rather than through the discreet method of e-mail used in this dissertation (Akullian et al., 2014; Kohler et al., 2014). Differences in the ways in which surveyed persons would respond to a qualitative as opposed to a quantitative survey (those responding to the former might be willing to share less information versus the latter; Akullian et al., 2014; Kohler et al., 2014; Masquillier et al., 2015) represent another contributing factor to differing results between this dissertation and studies included in the survey's literature review.

Another procedural difference is that some of the studies conducted in Sub-Saharan Africa necessitated the use of trained interviewers (Lyimo et al., 2014), as the respondents were not fluent in English. In other cases, the respondents did not read well

enough to self-administer the questionnaires, and it had to be read to them. These situations cause surveys to take on an element of face-to-face interviews as there is another person involved which could influence the responses of the participants.

Theoretical Framework

Comparing the findings with Chapter 2 peer-reviewed literature and how the results fit within the HBM calls for an analysis of the data analysis model used for each question. Such a comparison would illuminate how the findings extended existing knowledge in the field of HIV/AIDS, if the findings were corroborated or contradicted by the existing literature, and how the result reached for each question compared with the specific literature addressing that question. The findings of this research contradicted many of the studies in the overview of the peer-reviewed literature. Elsheikh et al. (2015) showed a correlation between higher levels of public stigma associated with HIV/AIDS and lower reported intent to obtain HIV testing among women in Sub-Saharan Africa. Low et al. (2013) made use of a large sample of Kenyan females over a large geographical area. Two groups of recently pregnant women were recruited (a) females attending community clinics for treatment of HIV/AIDS and (b) rural females who were visited at their homes. Both groups self-identified their HIV/AIDS status. Two types of stigma were explored namely internalized and externalized stigma. In both groups determining stigma—external or internal—proved to be difficult and a lower intent of the uptake of testing and intervention, weighed against the social costs, was reported. A qualitative study conducted in Tanzania by Lyimo et al. (2014) indicated that women who self-reported their status to people other than the clinic staff were less likely to suffer

from internal stigma and more likely to adhere to treatment and testing regimens. Those women who did not self-disclose their status to others were subject to external stigma and mostly used negative coping mechanisms such as denial and alcohol in addition to nonadherence to the treatment and testing regimens.

In terms of the socio-cognitive theory of Bandura (2011) and the HBM of Nöthling and Kagee (2013), it followed that people's beliefs about HIV/AIDS would influence those living with the disease in two ways. A high stigma society with a low expectation that testing and treatment could make a difference would lead to reduced uptake of testing and treatment among those living with HIV/AIDS (Elsheikh et al., 2015). Conversely, lower stigma and increased expectations that the treatment could make a difference in the affected person's life would lead to increased uptake of testing and treatment (Low et al., 2013). In the case of Low et al.'s (2013) findings, interventions changed the attitudes of the community leaders. Given the importance of the community leaders in rural communities it can be expected—according to the socio-cognitive theory—that the attitudes of the community members may change over time. Lastly, higher levels of open self-reporting of HIV/AIDS status resulted from lower levels of internal stigma and higher uptake of testing and treatment (Lyimo et al., 2014). In terms of the HBM is can be expected that the group of respondents in the Lyimo et al. (2014) study had gained more insight in the HIV/AIDS condition and more trust in the treatment regimen. This finding may have led to their increased uptake of testing and treatment irrespective of the community opinion.

Design Factors

Examining how the findings of this study fit within the context of factors such as instrumentation, research design, and theoretical framework there are several elements of these factors within this study, which might contribute to differences between the dissertation's findings and the findings of the peer-reviewed literature. Other studies attested to the correlation between high levels of stigma and lower levels of uptake for HIV testing and treatment while my study did not. For instance, Golub and Gamarel (2013) showed a correlation between anticipated HIV stigma and lower likelihood of testing. Djibuti et al. (2015) included post-secondary students in Georgia, which indicated that those with nonstigmatizing attitudes toward HIV were more likely to participate in HIV testing and counseling. Finally, Earnshaw et al. (2012) found that one holding stereotypes of HIV, associated with high-risk behavior, was correlated with higher incidences of declining to test.

Given that the aforementioned studies (except the study of Elsheikh et al., 2015, which was conducted in Sub-Saharan Africa) only surveyed respondents in the United States, the studies (cited in the literature review of this dissertation) also included other surveys of those living in Sub-Saharan Africa. Similar results were found, showing a correlation between higher levels of reported stigma and lower levels of uptake for HIV testing and treatment which is in contradiction with the findings of my study. For example, Pitpitan (2012) focused on South Africa in establishments where people drink alcohol and found that higher stigma-related attitudes were associated with a lower likelihood to receive treatment for HIV-testing. Odimegwu et al. (2013) found higher

stigma attitudes were associated with a lower likelihood to utilize HIV testing and counseling services in Nigeria. Furthermore, two different groups of researchers in Ghana; namely, Iwelunmor et al. (2012) and Oduro and Otsin (2013) reported public stigma linked to negative attitudes about HIV, which could be linked to lower levels of treatment uptake. Several researchers found similar findings in other Sub-Saharan African countries, including Jacobi et al.'s (2013) study in Cameroon and Feyissa et al.'s (2012) study in Ethiopia.

Extending or Contradicting Extant Literature

The other peer-reviewed literature mentioned in the dissertation can be subdivided in (a) studies addressing the overall problem statement and research questions of this current study and (b) studies either contradicting or corroborating the results of this study. AVERT (2013) and Larsson et al. (2009) highlighted both the severity of the Kenyan AIDS epidemic and the specific vulnerability of Kenyan women to infection as well as the necessity of testing as one of the crucial strategies for combatting the epidemic. These studies speak directly to the problem statement of the current study regarding the increasing prevalence of the HIV/AIDS epidemic among Kenyan Diaspora women and the need for more effective strategies to both combat the epidemic itself as well as the related stigma. Neff and Crawford (1998) and Abraham and Sheeran (2007) highlighted the role of perceived severity, perceived susceptibility, and self-efficacy with regards to the likelihood of participants seeking treatment for a medical condition, such as HIV/AIDS. These researchers addressed the dissertation's second research question regarding the interconnection between experiencing self-stigma and the likelihood of

uptake for treatment and testing. This self-stigma would play into the aforementioned factors of perceived severity and susceptibility as well as self-efficacy which would in turn have an effect on the likelihood of effected persons receiving testing and treatment.

Other studies addressed the problem statement's general theme of stigma and its influence on the likelihood of receiving treatment. These include Turan et al. (2011) who found that despite efforts on the part of the Kenyan government, NGOs, and other international bodies to combat HIV/AIDS related stigma, these efforts have only promoted a negative perception of those living with the condition. This result stands in sharp contrast with the aim of these efforts; namely to contribute to the improvement of the lives of those living with HIV/AIDS.

Another key construct discussed in the literature review relates to the connection between self-perception of risk related to HIV/AIDS infection and perception/belief about the moral/personal qualities of those who develop HIV/AIDS, particularly the study carried out by Kabiru et al. (2011) among youth in Kenya. Asare and Sharma (2012) conducted a study among African immigrants living in the United States. In addition, Zhao et al. (2012) conducted one in China to speak about the interconnection between perceived susceptibility, self-efficacy, and reported levels of stigma, as these related to the likelihood of uptake for testing and treatment. Findings indicated that perceived severity of HIV was an insignificant predictor of safe sexual behavior among sex workers, thus increasing the possibility of further infections. Moreover, Zhao et al. (2012) found that high level of stigma reduced the possible uptake of testing and treatment available due to the high social cost involved. Several of the other studies noted

in the literature review speak to the correlation between persons holding stigmatizing views of HIV/AIDS in countries with high rates of infection and lower reported levels of self-perceived likelihood of contracting HIV/AIDS. In this regard, the findings of Riley and Baah-Odoom (2012) in Ghana is worth noting—young Ghanaians who endorsed stigmatized views of HIV perceived their own risk of infection as low. Other peer-reviewed literature examined in the review of this dissertation noted the gender-specific aspects of HIV/AIDS related stigma in Kenya specifically, and Sub-Saharan Africa more generally. Kohler et al. (2014) discussed how Sub-Saharan African Women with HIV/AIDS face increased risk for harm due to their subordinate status in male-dominated cultures. This includes being beaten, sexually abused, or abandoned by spouses who find out they are HIV-positive.

Gnauck et al. (2013) noted how this risk of abandonment creates a difficult set of circumstances for women without financial means in a male-dominated culture. These researchers additionally remarked on how women in Kenyan and other Sub-Saharan African societies suffer from a lack of sexual empowerment and a culture of double standards, particularly the practice of polygamy among men which increases women's risk of contracting HIV/AIDS and limit their control of safe sexual practices to prevent transmission of the disease. The sexual disempowerment of women, increased risk of HIV/AIDS infection, and the physical harm they may face due to an HIV/AIDS positive status led me to expect that stigma would negatively influence the uptake of testing and treatment of the participants. The fact that no significant correlations were found in my

research was surprising and further investigation is needed to examine my results in the face of earlier contradicting results.

Limitations of the Study

There were several limitations of this study—the most notable of these were (a) cultural values which compromise women participants' abilities to disclose information they consider private, (b) inability to effectively communicate in English, as Kenya is a multilingual society, with different rural societies and different linguistic patterns, and (c) the lack of adequate time for data collection, as far as these factors limited collection of adequate information. Other significant limitations within the dissertation included response-related bias on the part of the surveyed women, as they might have responded with answers based on what they believed to be socially desirable rather than what they felt reflected their experiences. Sampling biases presented a further limitation as random sampling was not achieved in the study. Readability of the survey also constituted a significant limitation of the study—the grade readability of the survey is ninth grade English, which could potentially limit the ability of some women to fully participate in the study. Therefore, it might be possible that this impacted on the results, should the participants not fully understand a survey question they might either provide an inappropriate response or not fully voice their opinions due to a language barrier. Ideally, interpretation services would be preferable although that might put strain on some of the participants due to their fear of public stigma.

The results of this study did not confirm previous findings as expected. However, this may be a result of successful education on HIV/AIDS that significantly changed

public and self-stigma. Further research with a larger sample and across different population groups is needed to establish more conclusively what the influence of public and self-stigma is on the uptake of testing among females with HIV/AIDS.

Recommendations

In suggesting recommendations for future dissertations of a similar nature, similar studies could carry out research which examines the influence of factors other than stigma on uptake of testing and treatment for those living with HIV/AIDS. Future studies should also extend research to other demographics including men in the Kenyan Diaspora, those in the diaspora of other Sub-Saharan African Countries, and those living with other serious illnesses. Additional recommendations for research and practice based on the findings of this study include that future studies of a similar nature could consider the ways in which cultural factors related to perceptions regarding healthcare might lead to different responses as they relate to correlation between perceived levels of stigma and uptake of treatment for HIV/AIDS.

Recommendations for practice, regarding how future studies of similar nature could be carried out, include the use of a larger and more randomly selected sampling size. A researcher using a different sampling size may yield survey results in closer alignment with the peer-reviewed literature, thereby showing a positive correlation between higher levels of HIV-related stigma and lower reported uptake of testing and treatment. Recommendations for theory and practice among policymakers and healthcare workers involved with decision making in the healthcare and lives of persons with HIV/AIDS should include (a) pass legislation, which would ensure the affordability of

both testing and treatment/medications for women living with HIV/AIDS; (b) promulgate laws designed to protect the human rights of those living with the disease, and for the latter to actively promote safer sex practices to limit the spread of HIV/AIDS; and (c) develop programs to raise the overall awareness of treatment options for Kenyan Diaspora women living with HIV/AIDS. Additionally, based on the literature consulted it is recommended that healthcare workers engaged in treatment of patients with HIV/AIDS among Kenyan Diaspora women be aware of the influence of stigma as it relates to overall likelihood of seeking medical attention.

Recommendations could also be made in terms of the overall research methodology used by future studies of a similar nature, which could potentially have yielded results in greater alignment with those of this dissertation's literature review. Specific recommendations relating to the methodology would include using other statistical models besides the regression analysis model used in this study. Econometric and deterministic models can be included as these may have yielded more random sampling which in turn might have allowed for results more accurately representing the wider swathe of experiences among Kenyan Diaspora women in the United States living with HIV/AIDS and potentially showing greater significance in HIV/AIDS related stigma relating to lower likelihood of testing.

Most important in terms of evaluating recommendations which could be made based on the findings of the dissertation, a great deal of the literature reviewed showed the high reported levels of HIV/AIDS related stigma in Western and First World Countries, countries which purport themselves to be "progressive" in terms of their

perspectives on persons living with HIV/AIDS. These studies include those conducted by

Liu et al. (2012), which surveyed employers in Chicago, Beijing, and Hong Kong, who

indicated greater likelihood of turning down a job candidate with HIV/AIDS due to fear

of contamination; in Finland, Houtsonen et al. (2014) revealed a connection between

HIV/AIDS related stigma and fear of association-based contamination from HIV/AIDS

infected persons. These studies indicated the imperative need for greater education and

awareness in these countries to combat stigma.

Implications of the Findings

The results of the study indicated that perceived levels of stigma among Kenyan

Diaspora women living with HIV/AIDS did not necessarily correlate with differing levels

of uptake for testing and treatment. Successful HIV/AIDS education could have led to

positive social change in that the women who suffer from HIV/AIDS do not suffer from

intrinsic stigma and are thus more willing to openly self-disclose their status. According

to the findings of Lyimo et al. (2014), women who do not blame themselves for their

HIV/AIDS status are more willing to adhere to testing and treatment regimens.

Further research in developed and developing countries is needed to determine the

success of reducing internal stigma and increased possibility to adhere to testing and

treatment regimes. The study of Low et al. (2013) is worth mentioning because the

researchers had varying degrees of success with intervention—community leaders'

perceptions and attitudes about persons living with HIV/AIDS indicated some change

after intervention whereas the community members did not show noteworthy changes.

The success of HIV/AIDS training campaigns in reducing internal stigma, could be taken

into consideration by international, governmental, and regional healthcare agencies when developing training material. Raising social awareness of the benefits of testing and treatment for those women living with HIV/AIDS, together with education on the spreading of the disease, to reduce external and internal stigma is indicated if the results of this study indeed are indicative of gains made on reducing internal stigma due to training. The Kenyan Diaspora women affected by HIV/AIDS should be targeted to reduce levels of internal stigma thereby empowering them to keep to the testing and treatment regimens offered, as suggested by Lyimo et al. (2014). Even though the findings of this study did not indicate a significant correlation between stigma and the uptake of testing and treatment, campaigns designed to combat stigma that affects the overall quality of life for Kenyan Diaspora women living with HIV/AIDS is indicated as a reduction in external stigma may increase their quality of life.

In terms of the HBM, there are considerable implications for healthcare workers and others working for agencies that serve the Kenyan Diaspora population in terms of assessing actual levels of uptake for testing and treatment of HIV/AIDS. The reported levels of uptake in this study differed significantly from results of previous studies pertaining to higher levels of correlation between HIV/AIDS related stigma and lower levels of uptake for testing and treatment. Insofar the findings of this study may be indicative of gains through HIV/AIDS education campaigns, those working within healthcare-related NGOs and international bodies, such as the World Health Organization, which seek to raise awareness and improve the lives of those living with

HIV/AIDS, may redesign the training material to focus more on stigma reductions, especially internal stigma.

Conclusion

This study was a dissertation using quantitative and correlational analysis with the purpose to examine the relationship between levels of stigma related to HIV/AIDS and uptake of testing and treatment among Kenyan Diaspora women. The theoretical framework that guided the study was the HBM. The results of the study showed the perceptions of the Kenyan Diaspora women surveyed regarding their own healthcare. According to extant literature, the perceptions indicated the levels of stigma encountered by these women continued to present a considerable barrier to receiving effective healthcare, as well as just treatment within wider society. The literature reviewed in the study showed a correlation between higher levels of HIV/AIDS related stigma and lower levels of uptake for testing and treatment, findings that were not matched by the results of this study. The discrepancy between the results of this survey and the literature on the subject underscored the possibility that HIV/AIDS education could reduce the levels of internal stigma, thereby empowering Kenyan Diaspora women living with HIV/AIDS to openly self-identify their statuses and increase the uptake of testing and treatment.

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