2015

Psycho-social Resilience and Risky HIV Behaviors among Black Males who have Sex with Males

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This is to certify that the doctoral dissertation by

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2015

Abstract

Psychosocial Resilience and Risky HIV Behavior Among African American Males Who Have Sex with Males

by

Wilson Iyokho

MS, The New School University, 2004

BS, York College, 1999

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

January 2015

Abstract

The incidence rate of HIV among Black males having sex with Black males (BMSM) is high compared to that of other racial groups. Researchers have established the association between inappropriate sexual practices, age, income, and environmental determinants and HIV positive status among BMSM. Guided by resilience theory, the purpose of this study was to examine the relationship between HIV risk behavior and resiliency with the goal of identifying a new intervention to mitigate the HIV infection rate in the BMSM community. The theoretical framework used for this study was the resilience theory. This theory is concern with the phenomenon of why some people thrive after period of catastrophic adversity while others do not. A quantitative research design was used to test for a correlation between psychosocial resilience and HIV risk behavior. Fifty seven respondents were included in the study, 28 who were HIV positive, and 29 who were HIV negative. The Risky Behavior Questionnaire and the Resilience Survey were used to collect study data. The main study finding was a significant correlation between resilience and sex-related HIV risk behaviors, including unprotected sex, a lack of awareness of HIV status, multiple male sexual partners, and alcohol and drug use during sex. According to study findings, BMSM with higher resilience might be less likely to engage in sex-related HIV risk behaviors than those with low resilience. Strategies to mitigate HIV transmission could include resilience training. The benefit to the society would be reduced HIV infections transmission due to reduced risky HIV behaviors. The population social change would be the importance of the resiliency practice among BMSM in an effort to dispel the fear about the disease.

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Acknowledgements

I want to extend my special thanks to the following committee members whose encouragement and support enabled me to complete this research study.

Dr. Vibha Kumar-Committee Chairperson

Dr. Janice Williams-Committee Member

Dr. Rodney Bowden- URR Member

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Chapter 1: Introduction to the Study

Background of the Study

Each year, there are approximately 50,000 people in the United States who are newly infected with HIV (Prejean et al., 2011). The incidence and prevalence of HIV infection is disproportionally greater among males who have sex with males (MSM). This group accounts for more than 50% of the new HIV cases in the United States each year (Prejean et al., 2011). In 2010, among males who were diagnosed, an estimated 77% of HIV infections resulted from sexual contact between two males (Center for Disease Control and Prevention [CDC], 2012). Within the MSM population, there is an ethnic and racial disparity for HIV incidence, with Black males at much greater risk of HIV infection; HIV prevalence among Black MSM (BMSM) has expanded more quickly than among any other subpopulation in the United States (CDC, 2008; Prejean et al., 2011).

Living in poor communities with elevated crime levels and higher levels of stress and despondency are associated with HIV risk behavior among inner city residents (Booysen & Summerton, 2011; Dinkelman, Lam, & Leibbrandt, 2008; Nattrass, 2009). Blacks, and individuals with a lower socioeconomic status, are exposed to more life stressors (Kasper et al., 2008; Krueger & Chang, 2008) and have a greater chance for experiencing criminal victimization, violence in their community, and ethnic bias (Catalano, 2008; Drake, Lee, & Jonson-Reid, 2009; Finkelhor, 2008; Lauritsen & Heimer, 2010; Maniglio, 2009; Rivaux et al., 2008; Wilson 2009). Chaotic surroundings and household earning discrepancies potentially amplify parents' exhaustion and anxiety, which weakens their progeny's capability to obtain mechanisms for coping and managing

stressors (Danziger & Lin, 2009; Wadsworth & Santiago, 2008). Demanding and traumatic experiences may increase the possibility that young people make suboptimal decisions about how they conduct themselves, particularly if in their behaviors could offer a momentary break from environmental stressors (Buunk, Gibbons, & Buunk, 2013; Seiffge-Krenke, 2013).

Researchers who have examined HIV risk behavior included psychosocial factors unique for the MSM community (Bybee, Sullivan, Zielonka, & Moes, 2009; Safren, Blashill, & O'Cleirigh, 2011). Engaging in risky HIV behavior is a complex phenomenon driven by many factors (Mutchler et al., 2008; Warren et al., 2008). Researchers identified factors associated with risky sexual behavior, including emotional distress (Seth et al., 2009), incarceration (Khan et al., 2008), alcohol dependence (Mason et al., 2010), substance abuse (Darke et al., 2008), perceived risk and personal responsibility (Adefuye et al., 2009), sexual activity with unknown or unidentified partners (Mayer et al., 2010), setting or place (Grov et al., 2013), and sexual sensation seeking (Newcomb, Clerkin, & Mustanski, 2011). However, there is little research on the association between psychosocial resilience and HIV risk behavior.

Problem Statement

HIV/AIDS is one the most deadly chronic diseases that has affected the Black population, especially BMSM (CDC, 2012). The incidence rate of HIV among BMSM is 14.7% compared with 2.5% among Whites males and 3.5% among Hispanic males (Malebranche, 2003). Much public health research has been conducted on understanding the association between factors such as inappropriate sexual practices, age, education,

and environmental determinants and HIV positive status among BMSM. Other potential aggravating factors include personal bias in assessment of risky activities (i.e., "it will not happen to me"); increased prevalence of sexual contacts; and increased infections among sexual partners, all of which suggest an underlying psychological susceptibility to HIV virus (Holahan et al., 2001; Kelly et al., 2013).

Many social and economic factors place BMSM at risk for HIV/AIDS infection. The risk factors include drug use, male prostitution, race, a lack of condom use, poverty, unemployment, sexual preferences, income, discrimination, a lack of education, and environment (Hart & Peterson, 2004). According to CDC (2011), the numbers of Black people who have died of AIDS due to HIV virus have exceeded more than 230,000 people. The CDC further indicated that the estimated lifetime risk of becoming infected with HIV is 1 in 16 for Black males and 1 in 30 for Black females, which is a far higher risk than for White males (1 in 104) and White females (1 in 588). Although this disease have been researched by several researchers, and their findings have led to some policy interventions and development of public health programs in the Black communities, BMSM continue to contract HIV at a disproportionate rate (Kelly et al., 2013).

Kelly et al. (2013) reported significant risky HIV behavior, as measured by the number of unprotected anal intercourse (UAI), for people with lower psychosocial resilience. Psychosocial resilience is defined as the amount of emotional, cognitive, and cognitive resources available to withstand life stressors and overcome challenges as measured by a 25-item scale originally developed by Wagnild and Young (1993). Holahan et al. (2001) found that sequential stressful life events reduce life effectiveness

and increase risky behavior. Cognitive therapy and similar therapies have shown promise to improve psychosocial resilience or life effectiveness (Hoffman, 2011). Therefore, cognitive therapy might be an intervention strategy to help reduce risky HIV behavior for the BMSM population. There was a gap in the literature on the association between resilience and risky HIV behavior among BMSM. In this study, I tested for an association between psychosocial resilience and risky HIV behavior in a population of BMSM.

Purpose of the Study

The purpose of this study was to improve the understanding of the association between psychosocial resilience BMSM and risky HIV behavior with the goal of identifying new intervention protocols to reduce the spread of HIV among BMSM (Kelly et al., 2013).

Theoretical Framework

Resilience theory served as the study's theoretical framework. Resilience theory was developed from studies of children who were able to overcome dire, often life threatening childhood circumstances. Initial researchers sought to identify factors and develop frameworks to explain the behavior and understand how resilience was developed (Pearlin & Schooler, 1978). Resiliency in children is defined as the capacity of those who are exposed to identifiable risk factors to overcome those risks and avoid negative outcomes, such as "delinquency and behavioral problems, psychological maladjustment, academic difficulties, and physical complications" (Rak & Patterson, 1996, p. 368).

Some researchers who studied the phenomenon of resilience used medical models to explain resilience. Pathogenic models dominate the study of health and medicine. Pathogenesis models begin with the assumption that humans are in a healthy state of homeostasis and order (Antonovsky, 1984). When defensive systems are insufficient to resist attacks from "microbiological, physical, chemical, and/or psychosocial stressors, vectors or agents," disease results (Antonovsky, 1984, p. 114). Salutogenic models are used to explain why certain individuals remain healthy in the face of extraordinary attacks. The salutogenic paradigm is used to study the exceptions or those who remain healthy, to understand the mechanism for resistance.

The capacity of an individual to cope during difficulty is central to his or her resilience. Pearlin and Schooler (1978) defined coping as "the thing that people do to avoid being harmed by lifestrain" (p. 109). Resilience is often defined in terms of protective factors, such as personal, social, familial, and institutional safety nets that create resources to be drawn upon to mitigate the effect of life stress. Polk (1997) suggested that there are four patterns of individual resilience: dispositional, relational, situational, and philosophical. Antonovsky (1984) created the Salutogenic Model of Health as a theoretical framework to understand the sources of individual resilience (p.114). According to the salutogenic model of health, studies on interventions can be used to demonstrate the practical and clinical value of resilience theories. Cognitive therapy that promotes positive, constructive coping skills make significant changes to patient ideation and to more frequent resilient behaviors. The improved coping is present, despite no change in the underlying stressful conditions (Kline & Snow, 1994).

There is substantial literature on resilience in the context of HIV infection. The body of research includes works on the related concepts of vulnerability, the stages of resilient behavior, and the efficacy of treatment to increase the frequency and character of resilient behavior (DeSantis, 2011). There was a gap in the literature regarding the association between resilient behavior and HIV risk behavior. In this study, I explored the association between psychosocial resilience and HIV risk behavior. Future researchers might explore the effectiveness of coping skills treatment/education on HIV risk behavior.

Nature of the Study

The quantitative research design method was used to test for an association between psychosocial resilience and risky HIV behavior among BMSM. Psychosocial behavior was measured using the 25-item scale for resilience originally developed by Wagnild and Young (1993). HIV risk behavior was measured using the Chicago State University HIV Risk Behavior Questionnaire (Balogun et al., 2009). Descriptive researchers, according to (Belson, 1981), considers one variable at a time sequentially (i.e., multivariate analysis), and may imply a causal relationship between variables.

Research Questions and Hypotheses

1. What is the relationship between psychosocial resilience and HIV risk behavior for BMSM?

$H_0 1$: There is no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, as measured by the RBQ.

2. After controlling for education, age and relationship status, what is the relationship between psychosocial resilience and HIV risk behavior in a sample of HIV positive BMSM?

$H_0$2: There is no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, as measured by the RBQ, for a sample of HIV positive BMSM, after controlling for age, education, and relationship status.

H_1 and H_2 were tested using partial Pearson Correlation statistics.

Significance of the Study

Understanding the association between psychosocial resilience for HIV positive BMSM and risky HIV behavior may lead to new intervention protocols to reduce the spread of HIV among BMSM (Kelly et al., 2013). BMSM are much more likely to be infected by HIV and develop AIDS than any other subgroup (Wilson & Moore, 2008). Researchers who sought opportunities to mitigate the spread of HIV infection focused on this high-risk group. To ensure that HIV/AIDS interventions targeting BMSM are effective, it is necessary to comprehend and address those predisposing factors. BMSM exhibit a high and disproportionate rate of HIV infection in the United States relative to other groups (Valleroy et al., 2000).

In three epidemiologic studies conducted within the past 10 years, researchers highlighted this point. First, Valleroy et al. (2000) employed a multisite, cross-sectional, venue-based survey methodology to collect behavioral and seroprevalence data from more than 3,400 MSM between the ages of 15 and 22 years. Valleroy et al. reported that 14% of the Black MSM in the sample was HIV positive, the highest prevalence among

the five ethnic groups represented in the sample. Black MSM were more than 6 times more likely than White MSM to be HIV positive. In other research, Millett et al. (2007) discussed the characteristics of the sexual partners of Black MSM (e.g., older age, Black race, HIV positive status) which were found to be important factors in explaining heightened HIV risk among Black gay males. Likewise, Malebranche (2003) suggested increasing public health research to identify new treatment regimens to mitigate the HIV/AIDS epidemic among BMSM. A comprehensive solution may require an examination of sexual networks, males' understandings of masculinity and sexuality, health care access, and an understanding of the impact of an HIV positive diagnosis on resilience (Malebranche, 2003). There was a gap in the literature regarding the association between resilient behavior and risky HIV behavior. The study provided an original contribution by studying the association between resilient behavior and risky HIV behavior in a population of BMSM. The aim of the study was to identify resilience training as a potential intervention strategy for mitigating HIV transfer by reducing HIV risk behavior. The benefit to society would be reduced transmission of HIV due to the reduced risky HIV behavior.

Types and Sources of Information or Data

Participants were recruited in collaboration with a Southern city's local community organization that provides HIV prevention and social and testing services to BMSM. The sample was collected during the planning for a nonprofit AIDS-related event that attracted thousands of individuals from the community. Both HIV positive and HIV negative samples were collected with the help of the organization.

Limitations

The study had the following limitations:

1. Response bias: Participants responding to survey may not accurately provide data
2. Intellectual rigor is subject to variability
3. Data analysis and interpretation is time consuming and subject to researcher error
4. Survey instruments may not be reliable

Delimitations

The study was delimited as follows:

1. HIV risk behavior is complex and varies. Researchers have shown that many factors affect HIV risk behavior, including socioeconomic status, employment status, ethnicity and culture, among others. Only the association between psychosocial resilience, age, education, and relationship status current relationship status were studied
2. The RS and RBQ have little data on retest reliability and may be subject to significant random error. In this study, I did not seek to validate the validity or reliability of either instrument
3. The ability to generalize the study results to other ethnic groups or to similar populations may be limited by the small sample.

Summary

The research design was a quantitative, correlation study using a convenience sample of BMSM to examine the relationship between psychosocial resilience and HIV risk behavior. The incidence rate of HIV among BMSM, while not increasing for the past decade, is 14.7% compared to 3.5% among Hispanic males. Significant research has been done on the association between certain factors, such as inappropriate sexual practices, age, income, and environmental determinants and HIV positive status among BMSM. However, little research exists on the association of resilient behavior and HIV risk behavior. The purpose of this study was to improve the understanding of the potential for HIV risk behavior to be associated with the lack of resilience behavior that, if a positive correlation exists, would have the potential for a new treatment modality to reduce the spread of HIV in the BMSM community.

In Chapter 1, I presented the background of the study; statement of the problem; rationale for the study; and overview of the study, which includes the major research questions, objectives, outline, and operational definitions of key terms. In Chapter 2, a literature review, I present information on resiliency theory, HIV risk behavior and its correlates, and factors associated with HIV transmission. The chapter also includes a section on the implications of related research for the focus and methodology of this study.

Chapter 2: Literature Review

A review of existing resilience research and HIV/AIDS literature provides the conceptual framework for studying psychosocial resilience and Black males who engage in risky MSM sexual behavior. Historical research on the origins and development of resilience theory begins the review. I then discuss salient research on resilience theory to provide insight into the psychological, sociological, and contextual aspects of behavior. In addition, researches on pathogenic models are provided in order to provide a frame of reference for the study of males who are not HIV positive. Moreover, a description of salutogenic models is also included in order to put into context questions surrounding health and well-being outcomes for males who expose themselves to risky behavior. Next, life events and health outcomes are examined in order to study how both negative and positive life events affect risky behavior and ultimately health and well-being. I then focuses on potential factors that could provide a foundation for understanding the psychological, behavioral, and contextual variables associated with HIV-infected MSM who engage in risky sexual behavior. Lastly, HIV risk behavior among Black males is outlined to further refine the scope of the investigation.

Resiliency Theory

Resiliency theory is built primarily within the adolescent psychology field of study. This theory includes the study of defense mechanism concepts as they relate to how individuals tolerate stress or conflict within their social environments. The focus of the resiliency theory is developmental and is used to examine subjects at multiple points during their lifespan. This theory is used to explain why certain individuals prevail over

adversity while others fail (Goldstein & Brooks, 2012). Resiliency theorists examine the advancement of healthy personality development based on milestones. Childhood and adolescent development was the initial focus of resiliency theory, and only recently have the studies in this area been used to examine at-risk adults (Atkinson, Martin, & Rankin, 2009; Goldstein & Brooks, 2012; Leyro, Zvolensky, & Bernstein, 2010; Ungar, 2008; Van Vliet, 2008; Walsh, Fortier, & DiLillo, 2010; Windle, Markland, & Woods, 2008; Zautra, Hall, & Murray, 2010).

Resiliency theory began as research involving repeated observations of children at risk, as opposed to the previous method of acquiring data, which relied on clinical observations and case studies. The original studies were also influenced by the medical model (Norris et al., 2008). Werner and Smith's (2008) observations of 698 infants (including those of Hawaiian and Asian descent) over an extended period of time offered an empirical base for the launching of resiliency ideas and set the stage for additional studies. Rutter's early studies conducted on Romanian children in institutions who exhibited early onset of mental disorders laid much of the groundwork for the resilience field of study (Rutter & Sonuga-Barke, 2010). The focus of the Hawaiian study was on subjects who overcame childhood adversity by the time they got to adulthood, which had an impact on the salutogenic nature of resilience theory. Much of the early formation of resiliency ideas and concepts were derived from these initial studies, and researchers continued to focus on the psychological study of changes that occur to people over the course of their lives (Masten & Obradovic, 2008). Other areas of focus for resiliency researchers were within the psychiatric field, along the developmental psychopathology

route. In addition, scholars examined theories addressing family stress and adjustment within the social work context. In the late 1950s, a large portion of the research in this area was initiated and early results being first released in the 1980s.

As the theory evolved, and researchers examined the reasons why certain subjects were able to overcome trauma and unfavorable life events, such as family separations and other issues provoked by war. These topics were chosen as the studies were conducted after World War II either during or immediately following the Korean and Vietnam Wars (MacDermid-Wadsworth, 2010, Masten, & Narayan, 2012). Subsequently, as social work teachers and academics concentrated more on how people managed stress and maintained their health based on their inherent strengths (Black & Lobo, 2008), practical models were advanced in social work theory focusing on environmental factors (Ellis et al., 2011). Resilience theory concepts and experimental studies have continued to be used with social workers (Greene, 2011) and in psychology and behavioral science writings (Ferguson et al., 2013; Nkhata, Breen, & Freimund, 2008). Lately, these ideas have been used either with an environmental perspective (Dearing, 2008; Haight, 2012) or outside of any particular academic context. Moreover, various social workers have recognized the validity of resiliency theory as a construct and have applied it in research (Davydov, Stewart, Ritchie, & Chaudieu, 2010; Goldstein, & Brooks, 2012; Quiros, 2010; Ungar, 2008) and education (Lundholm & Plummer, 2010; Sterling, 2010).

Resilience theory was originally used to explain comparative resistance to normal psychological development when someone is exposed to risk experiences in a social environment (Goldstein & Brooks, 2012). In addition, resilience theory has also been

described as an ongoing process of an individual growing and developing in a positive way while facing adverse environmental conditions (Leipold & Greve, 2009). Resilience theory has also been used to describe methods of dealing with changes that result in the recognition and strengthening of defense mechanisms in response to imposed conditions (Davydov et al., 2010; Masten, 2009). Studies on reactions from stress that have ramifications for teaching professionals have also influenced this field of study (Everly & Lating, 2013; Figley & Kiser, 2013; Ozer et al., 2008; Rice, 2011). Therefore, resilience is recognized as the ability to overcome misfortune independent of the social environment. Even though a handful of various resiliency models have been tested, academics and practitioners tend to concur that the ideas are relevant in the context of adapting to hardships, but only in a social environment context (Naglieri, LeBuffe, & Ross, 2013; Riley et al., 2008).

Scholars in the resiliency field of study have focused on a handful of factors (risk, vulnerability, and protective), as well as mechanisms used to cope with those factors. There are a number of risk factors; discrete adverse events in and of themselves or as the circumstances of hardship (ie. poverty); developmental delays associated with behavior or mental illness; or as factors that function to lessen the resistance to stress or misfortune.

Protective factors and protective processes are characteristics, situational features, qualities, or intercessions that improve resistance or that could work to prevent the negative result of risk factors. Additionally, protective factors and mechanisms are defined as factors for which there have been observed verifications of a connection with

well-being and useful developmental conclusions. Rutter (1987) proposed that defensive processes may function in one of four different manners: by lessening harmful reactive by-products to stimulus; by encouraging resiliency characteristics (such as self-belief and hopefulness, as opposed to vulnerability factors); and by putting people in a position for new opportunities for achievement. Lessening the impact of stimulus by learning to overcome milder traumatic occurrences is important. Protective processes, as well as risk systems, differ depending upon the kind of misfortune or trauma, the type of resilient result achieved, and the time in a person's life being examined. Finally, risk factors in one situation may provide protection in other situations (Bottrell, 2009; Fleming & Ledogar, 2008; Rutter 2012).

Research on resilience suggests a positive connection between social capital, social support, household earnings, spirituality, and personal characteristics. A negative correlation has been established with failing at school, legal troubles and mental disorders among children, adolescents, and young adults (Bowes et al. 2010; British Academy Working Group, 2009; Cohn et al. 2009; Jindal-Snape, & Miller, 2008; Lyons et al. 2009; Rutter, 2011). Studies conducted on military families that were coping with family split ups due to war and the stress associated with war has found links between resilience and comparable defensive systems (Palmer, 2008; Park 2011; Qouta, Punamäki, & El Sarraj, 2008; Riggs & Riggs, 2011; Saltzman et al., 2011).

Resilience theory describes learning processes and makes predictions about which individuals are more likely to remain well-adjusted in the face of difficulties. The ideas and processes of resiliency theory have been broadly utilized by social workers who

frequently combine this theory flexibly with a host other theoretical viewpoints. For example, this theory has been combined with the systems theory perspective (Greene, 2011); the social development theory (Herrenkohl et al., 2003); the ecosystem's viewpoint (Cutter et al., 2008; Norris, et al., 2008), and the differential resiliency theory (Cicchetti & Rogosch, 2009). Resiliency theory was built on observation and later incorporated elements from biology and neuroscience, to create new fields of study such as neuroplasticity (Atkinson, Martin, & Rankin, 2009). This theory has started to reveal that it has a wide usefulness and relevance in most human service situations, practical applications, throughout different periods in life and across personal development paths (Greene, 2008).

A significant constraint of this field of study is its limitation due to its being applied only to groups in hardship or to groups facing elevated levels of stress. In addition, its conceptual underpinnings may be used in the wrong way in either practice or in research. Some researchers have disparaged the concept of plasticity as a tautological. Furthermore, many of the salience theory ideas and methods are not always defined the same way from study to study, thus restricting the legitimacy and dependability of the research (Bottrell, 2009). However, sizeable effort has been undertaken by foremost resiliency experts to make these definitions clearer and more consistent wherever they are used in order to counter this criticism. Other criticisms of this theory included the fact that the ideas and models that have been used to date, rejected introspection and intuitive knowledge and observations, and have a substantial predisposition towards linear descriptive paradigms based on unsurprising and foreseeable hierarchical associations

between risk factors and protective factors (Ungar, 2008). This predisposition could reduce its usefulness in extending these concepts to dissimilar cultures and other groups. However, the initial observational foundation for the advancement of the theory was largely comprised of research on ethnic minority and cross-cultural populations, which may serve to argue against this criticism.

As outlined earlier in this study, the theory of resilience has been built on an observational basis, with the two primary original pieces of research conducted by Werner and Smith's research on newborn children in Hawaii (Werner & Smith, 1982) and Rutter and ERA's (1998) study of Romanian children with institutional syndrome who were subsequently adopted (Rutter & ERA, 1998). The empirical findings based on resiliency theory have been valuable in the enhancement of significant practice and modalities utilized in social work. For example, resiliency theory implied a change in the focal point on family therapy to evaluate the disparate effect of communication patterns within families on each individual family member, as influenced by various individual susceptibility factors and different peer group determinants (Greene, 2011; Rutter, 2011). Riggs (2011) observed three distinct groups of resiliency research: the initial group was concerned with discovering resilient traits in people and in their environment, the subsequent group was interested in identifying resilient mechanisms that are helpful in overcoming disadvantaged situations, and the third and current group was focused on specifying inherent transformational mechanisms (p.675). Resiliency theory paradigms and mechanisms continue to evolve in numerous areas, but most notably in social work (Gitterman, 2012; Greene, & Kropf, 2011; Rooney, Rooney, & Strom-Gottfried, 2011).

Researchers have identified a number of resilience factors associated with those individuals who were able to function competently in stressful situations, and engaged in fewer HIV risk behaviors (Yuen et al., 2013). Individuals with high self-esteem were more likely to engaged in health-promoting behaviors', such as condom use, while those with low self-esteem and depressed were more likely to engaged in unprotected sex (MacDonald & Martineau, 2003; Shahmanesh, Patel, Mabey & Cowan, 2008). Self-efficacy which refers to an individual's belief in their ability to achieve desired goals, has also been found to protect individuals against life's stresses and promote overall well-being (Fava & Ruini,2003).

Results from two large scale surveys investigating life stress, coping and psychological distress found that participants that employed one or more coping strategies in response to stressors reported lower levels of emotional distress and engaged in less HIV risk behavior (Lau et al., 2010). The results were validated by the qualitative portion of the study in that participants with resilience traits were at reduced risk of psychological problem, fewer HIV risk behaviors and better psychological well-being (Lau et al., 2010). Thus, the active engagement of positive psychology and resilience that strengthen and promote personal resources may provide a new direction for remediating stress, promoting self-esteem and safe sex.

The results from several controlled studies that examined adult resilience training, found significant improvement in participants' psychological well-being and lowered distress. Well-being therapy was compared to cognitive-behavioral strategies by using a population of 111 randomly selected college students (Ruini et al., 2006). Both Well-

being therapies that were compared to cognitive-behavioral strategies resulted significant improvement in resilience behavior and psychological well-being (Ruini et al., 2006). In another controlled study, college students were randomly assigned to experimental (n = 30) and wait-list control (n = 27) groups. The experimental group received a psycho educational intervention using Transforming Lives through Resilience Education in 4 two-hour weekly sessions. The control group was found to demonstrate increased resilience, coping strategies, and cognitive strategies (Steinhardt & Dolbier, 2008).

While the studies above demonstrated long-term improvements in psychological outcomes, there are limitations to generalizing the results to a marginalized group of BMSM with or without an HIV infection that face specific but different sets of stressors and life circumstances than the populations studied.

Pathogenesis & Salutogenesis

The principal paradigm used in both health and medicine has traditionally been pathogenesis, otherwise known as the 'origins of disease.' Not only has this historically been the case, but it largely continues to this day. The pathogenic model takes the position that healthiness is the steady state or the expected condition and that this healthy state tends to persist until a particular bug or blend of bugs is caught (Antonovsky, 1998). Studies conducted in the pathogenic area have been designed to determine why individuals contract certain diseases and why particular individuals become sick (Strümpfer, 1990). The primary assumption of pathogenesis is that individuals typically operate in a balanced state of orderliness and homeostasis (Antonovsky, 1984). This steady state may fluctuate to some degree from one individual to the next, but it is

sustained by a mixture of interrelated complex regulatory systems (Strümpfer, 1990). Sickness comes about when these processes and systems are insufficient to defend against the assaults of physical, biological, neurological, chemical, environmental, psychosocial agents, stressors, conditions or events, (Antonovsky, 1984). As a result, these agents, stressors, conditions or events, other people, microorganisms, certain substances, environmental conditions or psychosocial in nature are to be considered bad and as such, should be kept away from or eliminated.

For pathogenic research, the primary question revolves around trying to ascertain how stressors create detrimental health results (Antonovsky & Bernstein, 1986). When conducting this type of research, the result being examined is some kind of illness. Illness barriers or shields may be introduced as a way to manage or handle the sickness being studied; increasing the weight of the study, but the sickness itself is always the outcome variable. The original emphasis of this line of thinking was on wellbeing as opposed to sickness, on getting by rather than giving in. These original research paradigms were subsequently followed by changes in thoughts, but not by changes in the lines of attack. In a study on the connection between individual character traits, social support, coping mechanisms and social, psychological, and behavioral symptoms, the focus of the study was on the preservation of well-being highlighting the way in which individual facilitates healthiness (Holahan & Moos,1985).

Both the public health and clinical paradigms are significant and essential components of any comprehensive health care system, but neither of these two groups view disease in the same manner. The public health professional wishes to keep

individuals from contracting a sickness, while the clinician wishes to identify an illness and cure the patient (Antonovsky, 1979). Research in this area has overlooked the essential question of well-being and has stuck instead on the question of sickness. The nonexistence of sickness or the nonexistence of psychological abnormalities as opposed to the existence of healthiness or the existence of well adapted psychological functioning had become the definition of health. Defining an idea in terms of the absence of something produces significant theoretical hurdles as one thing cannot be accurately defined as negating another thing. Using a technical perspective, a particular occurrence has to be examined directly while seeking to evaluate its intricacy as precisely as is feasible (Thoresen & Eagleston, 1985).

On the other hand, salutogenesis makes a completely contrary philosophical declaration about the way things work (Antonovsky, 1998). As opposed to the pathogenic model, which postulates that everyone is essentially healthy until acted upon by an exogenous stressor and seeks to determine why people get sick, the salutogenic model seeks to find out why certain individuals remain healthy while other individuals get sick when they are all exposed to the same stressors (Strümpfer, 1990). Another way to look at it is that the salutogenenic model looks to explain why individuals remain healthy as opposed to looking at how individuals become ill. Antonovsky further postulated that an individual's "sense of coherence" dictated their resilience to difficult situations (Alivia, Guadagni, & di Sarsina, 2011).The basic questions asked in salutogenesis are foreign concepts that fall outside of pathogenic ideas or theories. Other research conducted on female concentration camp survivors, the researchers discovered much to their surprise

that a certain subgroup within the study was not only well adapted, but genuinely happy as opposed to the individuals in the larger control group who were poorly adapted when everyone in the study faced the same trauma and hardship (Antonovsky & Bernstein, 1986). The name 'salutogenesis' was created by a medical sociologist over thirty years ago. The word highlighted the very beginning of health or freedom from disease. The literal translation of the word salutogenesis from its Greek and Latin roots means the 'origins of health' (de Bruin, & Crous, 2010). Salutogenesis presents a model for considering resilience, as well as sickness and health that is distinctly different from the prevailing pathogenic model.

Healthiness has commonly been associated with quality of life as an objective (Mittelmark & Bull, 2013; Veenhoven, 2008) and portrayed as a requisite component needed to make sure that life goes on day by day (Eyles & Williams, 2008). Seeman (1989) presented a fairly robust model of positive healthiness. Positive healthiness was portrayed in his research as thriving individual functioning using the notion of "organismic integration." The expression "organismic" refers to an all-encompassing process combining all of an individual's behavioral subsystems. The term "integration" means cooperation among the subsystems in such a way that all of the subsystems send the same information all the way through the entire system (Seeman, 1989).

Lau et al. (2010) examined the relationship between mental health issues; including depression and low self-esteem, and HIV risk behaviors among female sex workers (FSWs). The study used an anonymous cross-sectional survey on a sample of 293 Chinese FSWs. The study found a high prevalence of mental health issues:

substance use (40.4%), depression (53.9%), self-harm tendencies (34–38%), poor self-esteem (48–52%), and pessimistic future outlook (46–47%). HIV risk behavior was common including the lack of condom use (51% with clients, 23% with one-night-stand sex partners, and 73% with boyfriends. Multivariate analyses indicated that psychological problems were significantly associated with inconsistent condom use and other HIV risk behavior. The association between psychological well-being and HIV risk behavior was very strong and has implications BMSM who have similarly high prevalence of substance abuse, depression, and poor self-esteem (Kelly, et al., 2013).

Life Events and Health Outcomes

Stressful or negative events that occur during an individual's life have been connected with consequences to individual health. There is a large body of research on children, teen-agers, young adults, and adults associating depression with traumatic experiences. Trauma during development are associated with substance abuse (Ford et al., 2010; Kingston & Raghavan, 2009), attempted suicide (Arun & Chavan, 2009; Cho & Haslam, 2010), drug overdose (DeJong, Overholser & Stockmeier, 2010; Patel, et al., 2008), mental illness and depression (Fan et al., 2011; Thoits, 2013), as well as a reduction in the general well-being (Vigil & Geary, 2008; Zielinski, 2009). Research that investigated the association between traumatic life events outside individual control and sexual risk taking by young people found that young people were more prone to participate in risky sexual behaviors if they had relatively low social support when exposed to uncontrollable stressors (Brady et al., 2009).

Individuals self-medicate using alcohol, marijuana, and narcotics to escape negative emotions (Leeies et al., 2010). MSM that use drugs engage in risky HIV behavior significantly more frequently than those who do not use drugs (Du Bois & McKirnan, 2012). Research suggests "cognitive escape" enabled by drug use is both a cause and a mediating factor in risky HIV behavior (Alvy, et al., 2011; Nemeroff, Hoyt, Huebner & Proescholdbell, 2008).

According to research, in order for individuals to cope with the various stresses of life, people may occasionally turn to sex as a coping mechanism (Arreola, Neilands & Diaz, 2009). For individuals that employ this technique, using sexual behavior as a way to deal with negative sentiments or bad feelings was linked to engaging in more activities that could potentially impair their sexual health such as using sex to barter for money or drugs (Towe, Zafar & Sherman, 2009; Weitzer, 2009). In other studies, young Americans of European descent were less likely than young American's of African descent to admit to dealing with negative sentiments or bad feelings by using sex, but traumatic experiences were specifically excluded from the research (Brady, Dolcini, Harper & Pollack, 2009; Fomby, Mollborn & Sennott, 2010). Other studies have associated sexual risk taking to violence exposure (Ben-Zur & Zeidner, 2009; Brady, Dolcini, Harper & Pollack, 2009). However, these studies are cross-sectional and did not examined adolescent stressors longitudinally. One particular study looked at how exposure to stressors that accumulated over an individual's lifetime increased the probability of participating in a combination of behaviors that could potentially impair individual's

health and well-being including substance abuse and risky sex, but this research failed to look at sexual behavior in isolation.

Living in poor communities with elevated crime levels and higher levels of stress and despondency are associated with risky HIV behavior among inner-city residents (Booysen & Summerton, 2011; Dinkelman, Lam & Leibbrandt, 2008; Nattrass, 2009). Belonging to the African American ethnic group and having a low socioeconomic status are independently connected to increased exposure to life stressors outside of one's control and feeling stressed throughout youth (Kasper et al., 2008; Krueger & Chang, 2008). Young people growing up in communities with low socioeconomic status have greater chance for experiencing criminal victimization, violence in their community, and ethnic bias (Catalano, 2008; Drake, Lee & Jonson-Reid, 2009; Finkelhor, 2008; Lauritsen & Heimer, 2010; Maniglio, 2009; Rivaux et al., 2008; Wilson 2009). People who live in middle and upper income communities are less apt than people who live in low income communities to live in noisy, crowded neighborhoods, or to live in substandard housing, or to lack a familiar schedule in their residence. Chaotic surroundings and household earnings discrepancies potentially amplify parents' exhaustion and anxiety, which weakens their progeny's capability to obtain mechanisms for coping and managing stressors (Danziger & Lin, 2009; Wadsworth & Santiago, 2008). Demanding and traumatic experiences may potentially amplify the possibility that young people will make suboptimal decisions about how they conduct themselves, particularly if in their mind dangerous behaviors could potentially offer a momentary break from stressors (Buunk, Gibbons & Buunk, 2013; Seiffge-Krenke, 2013).

There have only been a handful of studies that have looked at the relationship between positive life events and health results. To date, the majority of studies in this area have focused on positive life events and their effect on healthy and well-adjusted psychological results. In an extensive, community-based research project, favorable experiences in life were not surprisingly linked with a positive health and well-being trajectory (Aspinwall & Tedeschi, 2010; Carver, Scheier & Segerstrom, 2010; Zautra, Hall & Murray, 2010). Happy experiences and successful milestone achievement such as pregnancy, entering into a new partnership or relationship, and graduating have not unexpectedly been connected with high levels of subjective happiness (Diener, Oishi & Lucas, 2009; Park, 2010). Research regarding young people experiencing psychological disorders found that people with clinical depression experienced considerably less favorable life experiences when contrasted against the control group (Horesh, Ratner, Laor & Toren, 2008). In research conducted on older populations, higher life satisfaction and lower in depressive symptoms have been linked to happy experiences (Pavot & Diener, 2008). Similar results were found for adolescents as well (Proctor, Linley & Maltby, 2009)

Celebration or partying is often the direct result of positive life events. For example, "celebration intoxication," which is where people drink heavily or abuse marijuana or narcotics in order to commemorate a milestone experience, holiday or sporting event (Brister, Wetherill & Fromme, 2010; Fromme, Wetherill & Neal, 2010). A study has shown that a situational factor that has been linked to risky sexual behaviors in

sexual encounters associated with the celebration of positive life events (Semple, Strathdee, Zians & Patterson, 2010).

Homosexual and bisexual youth have significantly higher incidence of negative health outcomes than same age heterosexuals (Berlan et al., 2009; Russell et al., 2011; Sanchez, 2011). The negative health outcomes include: attempted suicides (Haas, et al., 2010), substance abuse (Marshal, et al., 2008), psychological issues including depression (Cochran& Mays, 2009), STDs, and HIV/AIDS, (Gangamma et al., 2008). Those results continue into adulthood (Arreola et al., 2008; Rostosky, Riggle, Horne & Miller, 2009).

Psychosocial Aspects of Risky Sexual Behavior

There is growing research interest in psychological factors associated with risky sexual behavior, particularly why individuals practice safer sex or choose to engage in HIV transmission behaviors. Miner et al. (2009) noted the relative lack of research that examined predictors of unprotected anal sex among HIV-infected MSM. Reisner et al. (2009) noted that unprotected anal intercourse (UAI) remains the riskiest sexual transmission behavior for HIV acquisition and/or transmission among MSM. One research study evaluated sexual risk behaviors of men living in New York City and San Francisco and discovered that men who engage in UAI felt little responsibility to keep their anal receptive partners safe from HIV. In contrast, those men who did report protected anal intercourse were less likely to use amyl nitrate inhalants, less tempted to engage in unsafe sex, and less likely to have HIV-negative or unknown-status partners. Other studies have specifically linked the use of crystal methamphetamine and unsafe sex among gay and bisexual men (Grov, Parsons & Bimbi, 2010).

Engaging in risky HIV behavior is a complex phenomenon driven by many factors (Warren, et al., 2008; Mutchler, et al., 2008). Researchers identified a large number of factors associated with risky sexual behavior, including:

- emotional distress (Seth et al., 2009);
- incarceration (Khan, , et al. 2008);
- alcohol dependence (Alex Mason, et al., 2010; Woolf & Maisto, 2009);
- substance abuse (Darke, et al., 2008; González-Guarda et al., 2008; Harawa, et al., 2008);
- perceived risk and personal responsibility (Adefuye et al., 2009; Mills, Reyna & Estrada, 2008);
- sexual activity with unknown or unidentified partners (Mayer et al., 2010; Semple, Zians, Strathdee & Patterson, 2009);
- setting or place (Grov & Crow, 2012; Grov et al., 2013); and
- sexual sensation seeking (Newcomb, Clerkin & Mustanski, 2011).

Research in this area originally focused on a specific set of psychological factors associated with risky sexual behavior. More recently, research included a comprehensive and descriptive assessment of risk factors associated with HIV transmission sexual behavior, with a particular focus on HIV-infected MSM exhibiting risky HIV behavior (Grov, Parsons & Bimbi, 2010). Data suggested that when HIV status is known, there is often a decrease in risky sexual behavior (Gilbert, et al., 2008; Thornton, 2008). However, other researchers reported that as much as 30% (or more) of HIV-infected MSM continue to partake in risky sexual behaviors after they are aware of their serostatus

it would be unclear what factors are connected with sexual risk or what is disrupting the uptake of HIV prevention messages. Some researchers suggested complacency stemming from the success of antiretroviral therapy (CDC, 2012), and HIV preventions and safer-sex fatigue (Ostrow, et al., 2008; Dessie, Gerbaba, Bedru & Davey, 2011). Given the large number of factors associated with risky HIV behavior, no single factor seems decisive.

Recent research into risky HIV behavior has included psychosocial factors unique to the MSM community (Bybee, Sullivan, Zielonka & Moes, 2009; Safren, Blashill & O'Cleirigh, 2011). Factors studied also included "coming out" experiences, involvement in gay communities, and attitudes toward coming out. The term "coming out" refers to people's self-identification and disclosure of their homosexual sexual orientation. Older research has established that gay men are more likely to use condoms when they have already come out, have favorable attitudes toward coming out, and identify with homosexual communities and social networks that overtly support community health issues, disease preventive communication, and safer sex customs (Flores et al., 2009).

HIV Risk Behavior among Black Men

Each year, almost 50,000 Americans come down with HIV infection (Prejean et al., 2011). Since its initial detection in the United States over 30 years ago, HIV/AIDS has disproportionally infected men who have sex with men. This group continues to account for the majority of new HIV cases (Prejean et al., 2011). In 2010, among males

who were diagnosed, an estimated 77% of HIV infections resulted from sexual contact between two males (CDC, 2012). Furthermore, within the homosexual or bisexual male population, there is also a distinct ethnic and racial disparity in HIV incidence, with Black males experiencing much greater odds of being infected. HIV prevalence among Black MSM has expanded more quickly than among any other sub-population in the U.S. (Prejean et al., 2011; CDC, 2008). One of the primary purposes of the National HIV/AIDS Strategy (Office of National AIDS Policy, 2010) was to diminish AIDS-related health disparities and decrease HIV incidence in the U.S. In order to reach this key objective, enhanced HIV avoidance programs directed toward Black MSM seems appropriate. A more complete awareness of sexual risk among Black MSM as well as of factors that have an effect on men's sexual risk or safety is critical for the creation of enhanced prevention intercession approaches.

Many studies have attempted to pinpoint traits related to various risks that could distinguish White and African-American MSM. More specifically, these studies have sought to account for the unequal HIV rates between minority and white men. A number of these examinations have directly compared the behavior of non-minority men as opposed to Black MSM. These studies have also conducted meta-analyses by contrasting the results of research carried out with each group (Millett et al., 2012; Peterson & Jones, 2009; Wilton, et al., 2009). This research has not been able to find compelling proof that Black MSM have more sexual partners. In addition, these studies have also failed to prove that Black MSM participate in risky HIV behavior more frequently than non-Black MSM (Eaton, Kalichman & Cherry, 2010; Millett et al., 2012).

In addition to individual factors, research has been conducted on environmental and social variables to account for the increased incidence of HIV among Black MSM. There has been an emphasis in recent studies on the possible role of sexual networks in the spread of the disease within certain demographic subgroups. In particular, studies have examined the phenomenon that Black MSM tend to find their sexual partners within communities where both HIV and STD infections (either undiagnosed and untreated or diagnosed) are widespread, increasing the probability of infection (Murrill et al., 2008; Peterson et al., 2009). Other studies have suggested that men in groups that are at elevated risk for becoming HIV infected do not observe popular support for condom use among their peer group (Peterson et al., 2009).

Chapter 3: Methodology

In this chapter, I detail the methodology for this study, including the research design, setting and sample size, participants, instrumentation, procedure, data analysis plan, limitations, delimitations, and ethical considerations. The purpose of this study was to test for an association between psychosocial resilience and HIV risk behavior among BMSM using a quantitative research design. Psychosocial resilience is defined as the capacity of an individual exposed to identifiable psychological risk factors to overcome those risks and avoid negative outcomes (Rak & Patterson, 1996). Psychosocial resilience was measured using the RS, a 25-item self-report scale originally developed by Wagnild and Young (1993). For the purposes of this study, HIV risk behavior included unprotected anal or vaginal sex, multiple partners in a 3-month period, failure to know HIV status, and an uncommitted relationship status with a primary sex partner, among others. HIV risk behavior was measured by the HIV RBQ (Balogun et al., 2010).

Research Questions and Hypotheses

1. What is the relationship between psychosocial resilience and HIV risk behavior for BMSM, after controlling for education, age, and relationship status?

$H_0 1$: There is no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, as measured by the RBQ, after controlling for education, age and relationship status.

2. After controlling for education, age and relationship status, what is the relationship between psychosocial resilience and HIV risk behavior in a sample of HIV positive BMSM?

$H_0$2: There is no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, for a sample of HIV positive BMSM after controlling for age, education, and relationship status.

*H*1 and *H*2 were tested using partial Pearson Correlation statistics.

Research Design and Approach

In this quantitative study, I tested for an association between psychosocial resilience and HIV risk behavior. A quantitative design was an appropriate choice because the dependent and independent variables were continuous, and validated instruments were available for their measurement. In a quantitative study, the hypotheses are either accepted or rejected based upon observable results (Liu & Ju, 2010). According to Leedy and Ormrod (2005), there are many advantages of using a quantitative methodology: (a) there is a clear identification of independent and dependent variables, (b) the research problem can be clearly stated, and (c) there is the ability to achieve high levels of reliability because of the controlled observations and the reduction in researcher bias. No attempt was made to affect the participant's behavior, making the research nonexperimental in nature.

Setting and Sample Size

The sample consisted of 57 BMSM for a net of three deletions for bad data. The selection method for study participants was a nonrandom, convenience sample solicited through a local AIDS community group in the Southwest.

Participants

Participants were drawn from a group of BMSM attending preparation for an AIDS nonprofit event. Thirty BMSM were selected for the HIV negative sample, and 30 BMSM with HIV positive status were selected for the second sample. After deletions for missing data, 57 participants were included in the study. Each participant completed the following documents in person: a consent form including a request for demographic information (Appendix C), an RBQ (Appendix B), and an RS (Appendix A).

Variables

The dependent variable for this study was RBQ scores. The RBQ had nine subscores: HIV risk sexual behavior, tattooing, body piercing, present injection drug use (IDU) and needle sharing, lifetime IDU and needle sharing, alcohol and drug use, HIV/AIDS knowledge, attitudes and beliefs about HIV/AIDS, and sources of information about HIV/AIDS. Only the sexual activity-related RBQ subscores were used in the analysis. The independent variable was total RS score. Covariates were age, education, and relationship status.

Figure 1 depicts diagrammatically the relationship between psychosocial resilience, HIV risk behavior and the covariates age, education, and relationship status.

The covariates were theorized to mediate the relationship between the dependent variable and the independent variable.

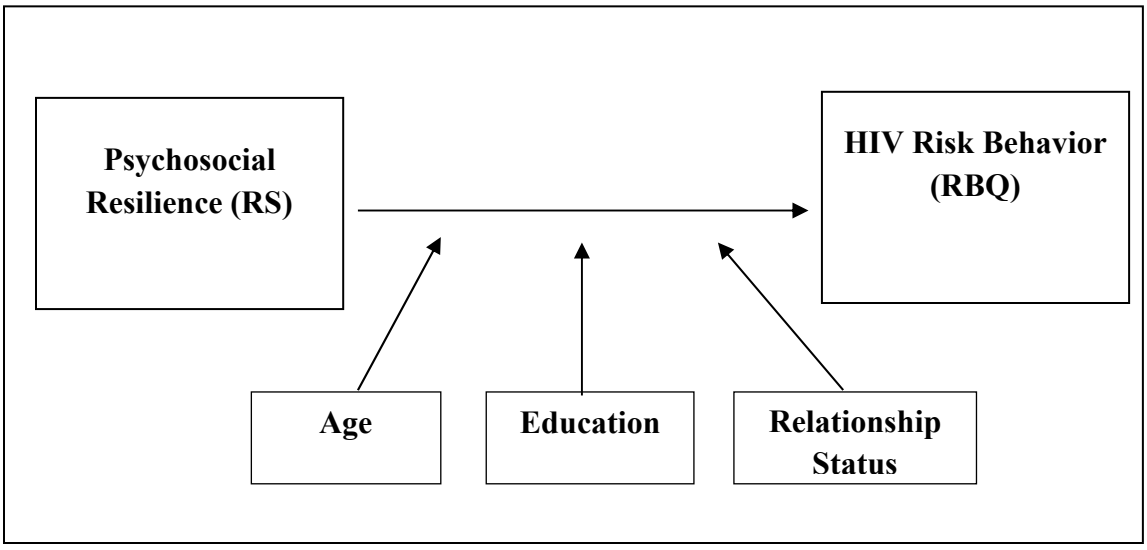

Figure 1. Diagram of relationship between variables.

Procedure

Each participant completed three documents: a form requesting demographic information and consent, RBQ, and RS. The results were entered into an Excel spreadsheet and uploaded into the Statistical Package for the Social Sciences 22 (SPSS) for analysis. Surveys were checked for bad or missing data and were treated based on the rules listed in Chapter 4.

Instrumentation

Risky Behavior Questionnaire

HIV risk behavior was measured using the RBQ, an instrument developed by the Chicago State University's HIV/AIDS Research and Policy Institute (Balogun & Abiona, 2010). The RBQ was designed for and validated on college students and prisoners aged

15 to 24 years. The RBQ has the potential to assess HIV/AIDS knowledge, attitudes, beliefs, behaviors, and sources of HIV prevention information. Only the RBQ subscore for HIV risk sexual behavior was used in the study. The RBQ has been tested for readability, test retest reliability, and construct validity (Balogun, Abiona, Lukobo-Durrell, Adefuye, & Sloan, 2010; Balogun & Abiona, 2010; Balogun et al., 2011). In addition, the RBQ has been assessed using the Flesch-Kincaid score, used to measure literacy difficulty (understandability) of the questionnaire. The RBQ was written at the eighth grade reading level (Balogun & Abiona, 2010).

Resilience Scale

The RS consisted of 25 items asking respondents to rate statements about their personal views of themselves using a Likert scale ranging from 1 (*disagree*) to 7 (*agree*). Examples of items on the scale included "I am determined," and "I feel that I can handle many things at a time." Scoring was as follows: 25-100 is very low, 101-115 is low, 116-130 is moderately low, 131-145 is moderately high, 145-160 is high, and 161-175 is very high (Wagnild & Young, 2009). The RS was developed by Wagnild and Young (1993) who established internal consistency, reliability, and concurrent validity as an instrument to measure resilience. Test-retest reliability has shown *r-values* between 0.67 and 0.84 ($p<0.01$), and construct validity has been tested with correlation between RS scores and Self-Esteem Scale scores, with an *r-value* of 0.57 ($p<0.01$). Alpha coefficients between 0.76 and 0.94 have been reported (Wagnild, 2003; Wagnild & Young, 1993).

Data Analysis Plan

Statistical analyses were performed using SPSS. The partial Pearson

correlation coefficient (*r*) statistic was used to measure the correlation between psychosocial resilience scores and HIV risk behavior after controlling for age, education, and relationship status. Relationship status was treated as a dummy variable using 0 and 1. The Pearson correlation coefficient was used for $H_0 1$, $H^0 2$. and $H3_o$.

Assumptions for Pearson Correlation

The calculation of Pearson's correlation coefficient and subsequent significance testing of it requires the following data assumptions to be met:

- interval or ratio level
- linearly related
- bivariate normally distributed

Participant RS scores and RBQ scores meet the assumptions for use of the Pearson statistic.

Data Cleaning

All data were examined for (a) potential removal of outliers, (b) missing data, and (c) compliance with assumptions (Rousseeuw & Leroy, 2003).

Outliers. For the purposes of this study, univariate outlier referred to an observation with a standard deviation of greater than ±3.29 from the mean.

Missing data. Missing data were evaluated for removal of the whole record, mean substitution, and/or multiple imputations using SPSS for the calculations.

Normality. To assess for normality, data were examined for skewness and kurtos.

Ethical Considerations

Participants were volunteers and received no remuneration or benefit from participating in this research project. Every consideration was taken to minimize any potential adverse effect arising from this study. Signed informed consent forms were required before any participant received a questionnaire. Participants received procedures for selecting the sample, confidentiality assurances, an acknowledgement of no remuneration, and contact information for the researcher, the researcher's chairperson, and the IRB. All records and actual questionnaires will remain confidential and only the researcher will have access to those records. All personal information was anonymized by using unique codes available only to the researcher. No identifying information appeared on a completed RS and RBQ. Participants were notified that they were free to withdraw from the study at any time during the study without consequences.

The researcher-stored copies of all information related to this project and will be retained for five years. Data generated on a computer were moved to a detachable USB external storage drive, eliminating physical access to the data from any network intrusion. Physical information related to this study is stored in a fireproofed and in locked safe in the possession of the researcher.

Limitations

1. Response bias-study participants may not have provided accurate personal responses.
2. Intellectual rigor was subjected to substantial variability.

3. Data analysis and interpretation was time consuming and was subjected to researcher error.
4. Survey instruments may be not have been reliable.

Delimitations

The study was delimited as follows:

1. HIV risk behavior is complex and varies greatly. Research has shown that many factors affect HIV risk behavior including, socio-economic status, employment status, ethnicity and culture, among others. The study included the association between psychosocial resilience, age, education status, and relationship status and current relationship status, representing a subset of covariates.
2. The RS and RBQ have relatively little data on validity and reliability reducing the overall study reliability. This study did not seek to validate the validity or reliability of either instrument.
3. External validity may have been affected by participant bias.

Chapter 4: Results

In this quantitative study, I sought to address the following questions: (a) What is the relationship between psychosocial resilience and HIV risk behavior for BMSM and (b) After controlling for education, age, and relationship status, what is the relationship between psychosocial resilience and HIV risk behavior in a sample of HIV positive BMSM? The target population for this study was BMSM whose HIV infection rate was 14.7% or more than 4 to 7 times greater than White or Hispanic males who sleep with males (CDC, 2012). A large HIV/AIDS nonprofit service organization located in the Southwest assisted with participant recruitment. Participants completed two surveys: (a) the 25-item RS and (b) 22 items from the RBQ. The purpose of this study was to examine the relationship between HIV risk behavior and resiliency with the goal of identifying a new intervention to reduce the spread of HIV in the BMSM community.

Instruments

Risky Behavior Questionnaire

The RBQ measures HIV/AIDS risk behavior across the following nine dimensions: risky sexual behavior, HIV/AIDS knowledge, attitudes and beliefs, tattoos, body piercing, IDU, alcohol and drug use, and availability of HIV prevention information. Participants completed the 10-item HIV Risk Sexual Behavior Subscale to measure risk behavior specifically associated with sexual activity. RBQ questions examined three periods: lifetime, previous 3 months, and last encounter. Several items request both historical and present sexual activity. For example, Item 29 asks, “During your life, how many males have you had sexual intercourse with?” Two questions

examined condom use; Item 33 asks, "The last time you had sexual intercourse; did you or your partner used a condom?" and Item 34 "During the past 30 days, how often did you or your partner used a condom?" Other questions examined the use of drugs and alcohol during sexual activity: "Did you drink or use drugs before you had sexual intercourse the last time?" The number of potential responses included up to eight separate categories. The 10-item HIV Risk Sexual Behavior Subscale was tested for readability, test retest reliability, and construct validity (Balogun et al., 2009; Wagnild, 2009). All items on the HIV Risk Sexual Behavior Subscale showed test-retest reliability of 0.60, and Kappa coefficient was "substantial." The RBQ was legible at the eighth grade reading level (Balogun et al., 2009).

The 10-item HIV Risk Sexual Behavior Subscale was chosen rather than the full 139-item RBQ due to time constraints and to mitigate the risk of partially completed surveys. Balogun et al. (2009) reported a statistically significant and high correlation between the RBQ HIV Risk Sexual Behavior Subscale and all of the tattooing, body piercing, and IDU subscales, indicating that the use of a single subscale would capture a significant portion of the HIV risk behavior.

Resilience Scale

Participants completed the 25-item RS, which measures a person's capacity to recover quickly from difficulties. Resilience is "considered to be a positive personality characteristic that increases an individual's adaptation" (Wagnild & Young, 1993, p. 167). Participants were asked to complete all 25 RS items. Typical RS questions were "My belief in myself gets me through hard times" and "I usually take things in stride."

The RS includes five subscales: equanimity, perseverance, self-reliance, meaningfulness, and existential aloneness. Wagnild (2009) categorized the total RS scores as follows: high (147-175), medium (121- 146), and low (less than 121) levels of resilience. RS scores reported in the literature are for the total scale score and for item means. A significant portion of the empirical research reported mean total RS scores of at more than 141 (Wagnild, 2009; Wagnild & Young, 1993). The lowest mean RS score in the literature was 112 for a sample of homeless adolescents (Wagnild, 2009).

Participants

A convenience sample of 60 BMSM from a large metropolitan city in the Southwest participated in the survey. Thirty self-reported HIV positive individuals (HIV+) and 30 self-reported HIV negative or unknown status individuals (HIV-) agreed to participate in the study. Participants were BMSM who either volunteered at or attended a daytime AIDS charity event. All of the data for three participants were deleted from any analysis because respondents omitted nearly all of either the RS, RBQ, or both surveys. A final sample of 57 (95%) was used in this research. Of those 114 surveys completed, 23 (20%) surveys had at least some missing data, which was treated using the *pairwise deletion.* The missing data seemed to be the rest of participants choosing not to answer certain questions.

Missing data can be addressed by consistently applying one of two methods. First, missing data can be replaced with the mean of the remaining sample like when less than 15% of responses for a particular item are missing (Leedy & Ormrod, 2012). Second, certain responses can be excluded. The two methods available for excluding

missing data from a sample are (a) a *listwise deletion*, which deletes the entire participant survey when there is any missing data or (b) a *pairwise deletion*, which excludes only the missing data for a specific analysis and retains the remaining survey responses (Leedy & Ormrod, 2012). For the purposes of this study, missing respondent data were replaced using the mean from the remaining sample to maintain sample size.

Participant demographic information on age, HIV status, educational attainment, and relationship status is presented in Table 1. There were 57 participants in the total sample, 28 in the HIV positive sample and 29 in the HIV negative sample.

Table 1

Participant Gender

HIV Status	*N*	Percent
HIV Positive (HIV+)	28	49%
HIV Negative or Unknown (HIV-)	29	51%

N=57.

As shown in Table 2, the mean age for the total sample was 28.0 (*SD*=6.5), 26.8 (*SD*=4.8) for the HIV+ sample, and 29.2 (*SD*=7.7) for the HIV- sample. The total sample's educational attainment was 36 (63%) high school graduate or less, 16 (21%) with some college, and 1 (4%) holding a bachelor's degree or higher. The HIV+ sample's educational attainment was 21 (75%) high school graduate or less, six (28%) with some college, and five (9%) holding a bachelor's degree or higher. The HIV- sample participant's educational attainment was 15 (52%) high school graduate or less, 10 (34%)

with some college, and four (14%) holding a bachelor's degree or higher. The HIV- sample was 2.41-years-old and on average and better educated than the HIV+ sample.

Table 2

Participant Demographics

Sample	HIV+	HIV-	Total
Age			28.0
- Mean	26.8	29.2	
- Standard Deviation	4.8	7.7	6.5
Educational Attainment			
- High School Graduate or Less	21 (75%)	15 (52%)	36 (63%)
- Some College	6 (21%)	10 (34%)	16 (28%)
- Bachelors Degree of Higher	1 (4%)	4 (14%)	5 (9%)
N	28 (100%)	29 (100%)	57 (100%)

Note. N=57.

As shown in Table 3, 35 (61%) of the total sample reported their relationship status as single or nonmonogamous, and 22 (39%) reported their relationship status as domestic partner, married, or monogamous. Twenty one (75%) of the HIV+ sample reported their relationship status as single or nonmonogamous, and seven (25%) reported their relationship status as domestic partner, married, or monogamous. Fourteen (48%) of the HIV+ sample reported their relationship status as single or nonmonogamous, and seven (25%) reported their relationship status as domestic partner, married, or monogamous. Sixty-one percent of the total sample and 75% of the HIV+ sample were nonmonogamous, which is consistent with the high HIV+ prevalence experienced by the

BMSM population, and highlights the need for strategies for reduce HIV risk behavior.

Table 3

Relationship Status

Sample	HIV+	HIV-	Total
Relationship Status			
- Single, Nonmonogamous	21 (75%)	14 (48%)	35 (61%)
- Domestic Partner, Married, Monogamous	7 (25%)	15 (52%)	22 (39%)
Total	28 (100%)	29 (100%)	57 (100%)

Results

As shown in Table 4, the mean RS score for the total sample was 126.7 (*SD*=24.1), 109.1 (*SD*= 18.1) for the HIV+ sample, and 143.7 (*SD*=15.2) for the HIV- sample. The total sample, and HIV- samples were in the *medium* range for resilience, and the HIV- sample was rated *low* for resilience (Wagnild, 2009). The HIV+ sample's mean RS score of 109.1 was lower than 112, the lowest RS score reported in the literature (Warren, 2008). The Mean RS score for the HIV+ sample was substantially lower than the HIV- sample.

The RBQ subscore for the total sample was 3.34 (*SD*=0.61), 3.50 (*SD*= 0.70) for the HIV+ sample, and 3.20 (*SD*=0.46) for the HIV- sample. The small difference observed in HIV risk sexual behavior between the HIV+ and HIV- samples is consistent with other researchers' findings for regarding MSM (Kelly et al., 2012). MSM, without regard to HIV status, consistently engage in HIV risk behavior. Balogun et al. (2009)

reported a statistically significant and high correlation between the RBQ HIV Risk Sexual Behavior Subscale and tattooing, body piercing, and IDU, which suggests that both samples were engaging in several behaviors exposing themselves and their partner to HIV transmission.

Table 4

Resilience Scale and Risky Behavior Scale Means and Standard Deviations

Sample	HIV+	HIV-	Total
Resilience Scale			
- Mean	109.1	143.7	126.7
- Standard Deviation	18.3	15.2	24.1
HIV Risk Sexual Behavior Subscale			
- Mean	3.50	3.20	3.34
- Standard Deviation	0.70	0.46	0.61
N =	28	29	57

Hypothesis 1 Findings

$H1_o$: There is a no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, as measured by the RBQ, for a sample of BMSM.

SPSS 22 was used to calculate Pearson Correlations between all study variables, and the results displayed in Table 5. R-values from the Pearson Correlation statistic indicate the strength each relationship between study variables. Cross-correlation among

the study variables ranged between -0.206 and 0.330. The Pearson Correlation between RS Scores and age of 0.227 was statistically significant at the 0.05 level (1-tailed). The Pearson Correlation between relationship status and RS Scores 0.330 was statistically significant at the 0.01 level (1-tailed).

Table 5

Correlation Matrix – Total Sample

		RS Score	RBQ Score	Age	Education
RS Score	Pearson Correlation	1			
	Sig. (1-tailed)				
	N	57			
RBQ Score	Pearson Correlation	-.206			
	Sig. (1-tailed)	.062			
	N	57			
Age	Pearson Correlation	.227*	.146		
	Sig. (1-tailed)	.044	.138		
	N	57	57		
Education	Pearson Correlation	.165	.017	.137	
	Sig. (1-tailed)	.110	.451	.154	
	N	57	57	57	
Relationship Status	Pearson Correlation	.000	.191	.158	.330**
	Sig. (1-tailed)	.499	.078	.121	.006
	N	57	57	57	57

* Correlation is significant at the 0.05 level (1-tailed).
** Correlation is significant at the 0.01 level (1-tailed).

As shown in Table 6, the null hypothesis was not rejected due to the lack of a statistically significant correlation at the 0.05 level (1-tailed). The r-value of -0.206 is consistent with the proposition that as resilience decreases HIV risk behavior increases. Significance of 0.062 for the correlation between RD Scores and RBQ Scores was just beyond the 0.05 necessary to deem the result statistically significant. It is possible that a larger sample size would have yielded a statistically significant result.

Table 6

Hypothesis 1 Results

Hypothesis	Variables	*r*-value	Result
$H1_o$. There is a no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, as measured by the RBQ, for a sample of BMSM.	RS, RBQ	-.206 .	Not Rejected

* Correlation is significant at the 0.05 level (1-tailed).
** Correlation is significant at the 0.01 level (1-tailed).

Hypothesis 2 Findings

$H2_o$: There is no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, as measured by the RBQ, for a sample of HIV positive BMSM, after controlling for age, education, and relationship status.

SPSS 22 calculates a Pearson Correlation statistic for the relationship between RS Scores and RBQ Scores after controlling for age, education, and relationship status. The negative 0.127 correlation for the HIV+ sample was consistent with the negative correlation for the total sample; however, it was not significant at the 0.05 level (1-tailed).

Table 7

RBQ and RS Correlation after Controlling for Age, Education & Relationship Status

Control Variables: Age, Education & Relationship Status		RS Score
RBQ Score	Correlation	-0.127
	Significance (2-tailed)	.544
	Df	23
	N =	28

* Correlation is significant at the 0.05 level (1-tailed).
** Correlation is significant at the 0.01 level (1-tailed).

As shown in Table 8, the null hypothesis was not rejected due to the lack of a statistically significant correlation at the 0.05 level (1-tailed). The r-value of -0.127 was consistent with the proposition that as resilience decreases HIV risk behavior increases. Significance of 0.544 reflected the sample size of 28 participants.

Table 8

Hypothesis 2 Results

Hypothesis	r-value	Result
$H_{2o:}$ There is no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, as measured by the RBQ, for a sample of HIV positive BMSM, after controlling for age, education, and relationship status.	-.127	Not Rejected

Correlation is significant at the 0.05 level (1-tailed).
** Correlation is significant at the 0.01 level (1-tailed).

Summary

Chapter 4 summarized study findings and reported the results of the two hypotheses. Participant data was characterized using descriptive statistics and hypotheses were tested using Pearson Coefficient statistics. The HIV+ sample was younger, less educated, scored lower on the RS Scale and higher on the RBQ HIV Risky Sexual Behavior Subscale than the HIV- sample. While neither hypothesis yielded statistically significant results, both were consistent with the proposition that as resilience decreases, HIV risk behavior increases for BMSM. Based on the results, Chapter 5 includes conclusions regarding the study and recommendations for future research.

Chapter 5: Discussion and Conclusions

Introduction

In this chapter, I present my interpretation of major findings, significant differences between HIV+ and HIV- participants**,** discussion, study limitations, implications for social change, recommendations for future research on HIV risk behavior, and conclusion. The purpose of the study was to test for a correlation between psychosocial resilience and HIV risk behaviors for a sample of BMSM. The study aim was to advance knowledge on factors contributing to the spread of HIV infection with the potential for developing mitigation strategies. The quantitative study included data collected from 60 BMSM using the RBQ (Balogun et al., 2009) and the RS (Wagnild & Young, 1993).

The mean age for the total sample was 28.0 (*SD*=6.5), 26.8 (*SD*=4.8) for the HIV+ sample, and 29.2 (*SD*=7.7) for the HIV- sample. The total sample's educational attainment was 36 (63%) high school graduate or less, 16 (21%) with some college, and one (4%) holding a bachelor's degree or higher. The HIV- sample was 2.41-years-old on average and better educated than the HIV+ sample.

Thirty five (61%) of the total sample reported their relationship status as single or nonmonogamous, and 22 (39%) reported their relationship status as domestic partner, married, or monogamous. Twenty one (75%) of the HIV+ sample reported their relationship status as single or nonmonogamous, and seven (25%) reported their relationship status as domestic partner, married, or monogamous. Fourteen (48%) of the HIV+ sample reported their relationship status as single or nonmonogamous, and seven

(25%) reported their relationship status as domestic partner, married, or monogamous. Sixty-one percent of the total sample and 75% of the HIV+ sample were nonmonogamous, which is consistent with the high HIV+ prevalence experienced by the BMSM population, and highlights the need for strategies for reduce HIV risk behavior.

For the full sample of 57 BMSM, I found no statistically significant relationship between HIV risk behavior and psychosocial resilience at the $p \leq 0.05$ level. However, there was a significant negative correlation (-0.20) between HIV risk behavior and psychosocial resilience at the $p \leq 0.10$ level. Given the relatively small sample size of 57, it is possible that a larger sample size would have yielded statistically significant results at the $p \leq 0.05$ level. For the subsample of 28 HIV+ participants, I found no statistically significant relationship between HIV risk behavior and psychosocial resilience at the $p \leq 0.05$ level or at the $p \leq 0.10$ level.

Interpretation of the Findings

The main research questions that steered this research study were as follows:

1. What is the relationship between psychosocial resilience and HIV risk behavior for BMSM?

Hypothesis 1

$H_0$1 There is no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, as measured by the RBQ.

According to results from this study, I found that for the sample of 57 BMSM who were surveyed, there was no statistically significant association between HIV risk behaviors and psychosocial resilience at the $p \leq 0.05$ level. When taking into account the

relatively small sample size of 57, it is possible that a larger sample size would have yielded statistically significant results at the $p \leq 0.05$ level. For the subsample of 28 HIV+ participants, I found no statistically significant relationship between HIV risk behavior and psychosocial resilience at the $p \leq 0.05$ level or at the $p \leq 0.10$ level.

2. After controlling for education, age, and relationship status, what is the relationship between psychosocial resilience and HIV risk behavior in a sample of HIV positive BMSM?

Hypothesis 2

$H_0 2$: There is no significant correlation between psychosocial resilience scores, as measured by the RS, and HIV risk behavior, as measured by the RBQ, for a sample of HIV positive BMSM, after controlling for age, education, and relationship status.

The main study finding was a significant correlation between resilience and certain sex-related HIV risk behaviors, including

- Unprotected sex
- Unaware of HIV status
- Multiple male sexual partners
- Alcohol and drug use during sex

BMSM with higher resilience would be less likely to engage in the sex-related HIV risk behaviors. These findings are consistent with those of Lau et al. (2010), Yuen et al. (2013), and Sabin et al. (2008) who identified resilience factors associated with individuals able to function competently in stressful situations and engage in fewer HIV risk behaviors despite membership in high-risk groups. Lau et al. found an association

between mental health issues, such as depression and low self-esteem, and HIV risk behaviors among female sex workers in Hong Kong. Yuen et al. reported that individuals with better emotional health, such as those with high self-esteem, were more likely to engage in health-promoting behaviors, such as condom use, than those with low self-esteem.

A deficit of resilient behavior among HIV+ BMSMs is not only detrimental to those individuals' well-being; it may have significant public health implications if it contributes to HIV risk behaviors. Study result findings were consistent with other studies (Lau et al., 2010; Yuen et al., 2013) that associate emotional issues in high risk populations with failure to use condoms, multiple partners, and drug use combined with sex (respectively, 65%, 73%, and 63%). The high prevalence of sex with multiple partners, even among HIV positive participants (48%), is particularly concerning. Emotional issues, including low psychosocial resilience, might be obstacles against fostering behavioral changes, making BMSM even less responsive to HIV prevention interventions. To speculate, treatment of underlying BMSM's underlying emotional issues might be a more effective HIV transmission mitigation strategy than the clean needle program or another education program. Addressing the emotional needs of BMSMs in conjunction with existing HIV prevention programs might improve efficacy.

Significant Differences between HIV+ and HIV- Participants

As shown in the data analysis in Table 5, differences in mean RS and RBQ scores between HIV+ and HIV- respondents were significant. While these findings were not a part of the study research questions, the magnitude of the differences are worth noting.

The RBQ subscore for the total sample was 3.34 with a standard deviation (*SD*=0.61), 3.50 (*SD*= 0.70) for the HIV+ sample, and 3.20 (*SD*=0.46) for the HIV- sample respectively. The small difference observed in HIV risk sexual behavior between the HIV+ and HIV- samples was consistent with other researchers' findings for the MSM population (Kelly et al., 2012). The MSM community, without regard to HIV status, engaged disproportionally in sexual activity-related HIV risk behaviors. Balogun et al. (2009) reported a statistically significant and high correlation between the RBQ HIV Risk Sexual Behavior Subscale and other HIV risk behaviors. The significant difference in RS scores suggests the need for additional research. Low resilience in HIV positive BMSM may present an opportunity to intervene using resilience training to improve their psychological well-being, medication adherence or compliant, and participation in their recovery.

Discussion

Consistent with previous studies, high-risk sexual behavior among BMSM was found to be a common practice, nearly two-thirds of participants reported recent and frequent unprotected sex with male partners (CDC, 2010; Fields et al., 2012; Kelly et al., 2013). The peered reviewed literature includes few studies regarding the relationship between psychosocial resilience and HIV risk behaviors in a population of BMSM (DeSantis et at., 2013) psychosocial resilience reflects internal processes that access personal motivation(survival) and external motivation(psychosocial support). The study of resilience for BMSM is important because of the potential loss of external psychosocial support due to social stigma that is associated with HIV. Most BMSM

contract HIV during high risk sexual behaviors or substance use. Many HIV positive BMSM experience discrimination, stigma, and marginalization because HIV risks behaviors are stigmatized by society (Herek, Capitanio & Widaman, 2002). HIV is the only disease state in recent history that is accompanied by societal stigma, fear, and isolation (Holzemer et al., 2009). Given this unique combination of factors, BMSM with a diagnosis of HIV infection may have more difficulty developing resilience than those with other illnesses (Nightingale, Sher & Hansen, 2010).

Most available research studies conceptualize resilience as a personality trait as opposed to a person-context interactional process (Emlet, Tozay & Raveis, 2010). Future research is needed to understand why certain individuals become resilient and others do not. Resilient HIV infected individuals differ than those without resilience in several meaningful ways, including high levels of disease knowledge, a sense of self responsibility, persistence, increased quality of life, low levels of psychological distress, and positive beliefs(Farber et al., 2000; Bletzer, 2007). Dyer, Patdaughter, McGuiness, O'Connor, & DeSantis (2004) presented four case studies of HIV infected men to examine processes with the potential to promote resilience. Dyer et al. (2004) found that within the confines of therapeutic relationship, resilience could successfully be promoted through the use of modeling, and coping skills. Extant literature on HIV and resilience, as a study, is limited to objective measures of behaviors and resilience rather than the subjective experience of resilience as perceived by participants. This study found that participants with higher psychosocial resilience were less likely to engage in the sex related HIV risk behaviors. Study findings were similar to that of Lau et al.(2010), and

Yuen et al.(2013) who found that high resilience individuals functioned more competently in stressful situations and engaged in fewer HIV risk behaviors. Individuals high in resilience were more likely to engage in healthy behaviors such as condom use than those with low resilience.

In term of high risk behavior, the study confirmed prior studies which indicated that high risk sexual behavior among BMSM was a common practice, nearly two-thirds of participants reported recent and frequent unprotected sex with male partners (CDC, 2010; Fields et al., 2012; Kelly et al., 2013). BMSM were infrequent condom users, used drug and alcohol during sex, and had multiple sex partners. Prior researcher found that BMSM were less likely to regularly test for HIV, more likely to have an undiagnosed infection, and less likely to receive treatment. Elevated HIV vulnerability among BMSM has been associated with HIV knowledge, condom norms, cultural perceptions of masculinity, lack of socially supportive relationships, low SES, and racism (Fields et al., 2012; Kelly et al., 2013; Millett et al., 2007).

Development of more effective prevention intervention strategies requires a better understanding of the unique factors driving sexual risk taking among BMSM. The present study found an association between psychosocial resilience and HIV risk behavior, suggesting resilience therapy as an intervention to mitigate HIV transmission among BMSM is a key objective of the HIV/AIDS Strategy (Office of National AIDS Policy, 2010). Healthcare providers seeking to maximize the greatest degrees of psychosocial support and encouragement to develop resilience should consider the unique cultural factors facing BMSM in designing outreach strategies (Dyer et al., 2004).

Outreach and support groups that closely mirror the unique elements of BMSM are important. The use of peer facilitator from the same culture and sexual orientation is most likely to be successful in developing psychosocial support networks (Dyer et al., 2004). This study validated those results and highlighted the need for a large-scale study to isolate the effect attributable to resilience.

Limitations of the Study

The study used a correlational research design, which has two significant limitations. First, correlations do not indicate causality or directionality, therefore it cannot be inferred that increasing psychosocial resilience will reduce HIV risk behavior. Second, it is possible that an additional unmeasured variable is responsible for the observed negative correlation between RBQ scores and RS scores. Another study limitation was the use of a self-report risk taking behavior questionnaires. The truthfulness and accuracy self-reports may be compromised because some respondents may not recall the behavior or might not be willing to make a disclose. Furthermore, respondents may purposely over- or under-report risk-taking behaviors based on a belief that the behavior is socially desirable or undesirable (Brenner, Billy & Grady, 2003). More so, the research was conducted only among black men who have sex with men and not with any other population groups. These limitations may have reduced the generalizability of the results of the study.

Implications for Social Change

My purpose of this study was to enhance the understanding of the association between psychosocial resilience and risky HIV behavior among African American who

have sex with men with the goal of identifying new intervention protocols to reduce the spread of HIV among BMSM. The resilience theory provided the foundation for this study. Resilience theory serves as the theoretical frame work which was developed from studies of children who were able to overcome dire, often life threatening childhood circumstances. The capacity of an individual to cope during difficulty is central to their resilience. Pearlin and Schooler (1978) defined coping as "the thing that people do to avoid being harmed by lifestrain" (p.109). Resilience is often defined in terms of protective factors, such as personal, social, familial, and institutional safety nets that create resources to be drawn upon to mitigate the effect of life stress. One of the social change implications of this study was that understanding the association of psychosocial resilience for HIV positive BMSM and risky HIV behavior may imply new intervention protocols to reduce the spread of HIV among BMSM (Kelly et al., 2013). BMSM are much more likely to be infected by HIV and develop AIDS than any other subgroup (Wilson & Moore, 2008). Researchers who sought opportunities to mitigate the spread of HIV infection focused on this high-risk group. To ensure that HIV/AIDS interventions targeting BMSM are effective, it is necessary to comprehend and address those predisposing factors because BMSM exhibited an extremely high and disproportionate rate of HIV infection in the United States relative to other groups (Valleroy et al., 2000).

Three epidemiologic studies conducted within the past 10 years highlighted this point. First, the Young Men's Study employed a multisite, cross-sectional, venue-based survey methodology to collect behavioral and seroprevalence data from more than 3,400 MSM between the ages of 15 and 22 years (Valleroy et al., 2000). Valleroy et al. (2000)

reported that 14% of the Black MSM in the sample was HIV positive, the highest prevalence among the 5 ethnic groups represented in the sample. Black MSM were more than 6 times more likely than White MSM to be HIV positive. In other research, Millett et al. (2007) discussed the characteristics of the sexual partners of Black MSM (e.g., older age, Black race, HIV-positive status) which were found to be important factors in explaining heightened HIV risk among black gay men. Likewise, Malebranche (2003) suggested increasing public health research to identify new treatment regimens to mitigate the HIV/AIDS epidemic among BMSM. A comprehensive solution may require an examination of sexual networks, men's understandings of masculinity and sexuality, health care access, and an understanding of the impact of an HIV positive diagnosis on resilience (Malebranche, 2003). There was a gap in the literature regarding the association between resilient behavior and risky HIV behavior. This study provided an original contribution by studying the association between resilient behaviors and risky HIV behaviors in a population of BMSM. The aim of the study was to identify resilience training as a potential intervention strategy for mitigating HIV transfer by reducing HIV risk behaviors. The benefit to society would be reduced transmission of HIV infections due to the reduced risky HIV behaviors. The population social change would be the importance of the practice of resilience among BMSM in an effort to dispelling the fear about the disease and introducing prevention and risk reduction strategies.

Recommendations for Future Research

Future researchers can utilize this research study as a base for validating the need to promote the practice of resiliency among HIV BMSM and to other population groups

who are also infected with the disease. Other research methods such mix method or qualitative research methods would be helpful to further investigate this area of study more thoroughly among BMSM or the other population groups who are affected with HIV. Also, face to face interviews or any form of group setting would provide a sound opportunity for BMSM population to be more open to speak about coping strategies relating to risking behaviors. Face to face conversations among HIV positive black men who have sex with men would be crucial; informative and it would provides wide insights into their thoughts about their HIV infections and their thoughts about practicing resiliency. This method would be important in developing prevention, and critical intervention approaches that will be based on the results of face to face conversation among the BMSM population. Further research could be developed from the study's findings to benefit society. For example, future research is needed on a larger sample size using control group and a randomized sample to improve the reliability of the results. Since Dyer et al. (2004) demonstrated that resilience could be developed in the context of a therapeutic relationship; a control group study on the efficacy of resilience therapy to reduce HIV risk behavior is needed. If the efficacy of resilience therapy is proven to reduce HIV risk behaviors', resilience therapy could be funded as an intervention to reduce HIV transmission among BMSM. Establishing the efficacy of resiliency therapy to reduce HIV risk transmission is an important research imperative. More research needs to be conducted to study what elements resilience lead to a reduction in HIV risk behavior in BMSM. This research study findings may also help as the base for future research, to see the insights or discover the importance of psychosocial resilience practice

when faces with life threatening situations or adversities. Additionally, this study can also help future researchers in the areas of HIV screening, education, prevention, developing psychological intervention strategies, as well as behavior risk strategies that will provide significant approaches to HIV infections reduction among the BMSM population and the society in general. This study will provide a pathway for public health future researchers' to engage in the development of more effective prevention and intervention strategies that would requires a better understanding of the unique factors driving sexual risks taking among Black men who have sex with men (BMSM).

Conclusion

For the full sample of 57, there was a significant correlation between psychosocial resilience and sexual activity-related HIV risk behavior at $p \leq .10$. For the HIV+ sub sample of 28, no significant correlation between resilience and sexual activity-related HIV risk behavior was found. The findings justify future research into the potential for resilience training to improve the well-being of BMSM and to address the public health tragedy created by the HIV transmission. If the findings are validated, resilience training should become part of the outreach HIV intervention services targeting BMSM. The cost, demand, and acceptability of such services can be researched to determine the economic viability of using resilience training. The results of this study added some important information regarding the construct of resilience in the context of HIV risk behavior for BMSM, since most resilience research was based on children. The study found that low psychosocial resilience is associated with HIV risk behavior, consistent with previous studies on gay and bisexual men (Kelly et al., 2003; Lau et al., 2010; Yuen

et al., 2013). Kelly et al. (2013) reported that "resilience was marginally associated with reporting fewer unprotected sex act" (p.58).

In sum, the prevalence correlation between HIV risk behavior and resilience for a high-risk HIV transmission population is consistent with the findings of previous researchers. Low resilience may contribute to the reported increase in sexual activity-related HIV risk behavior for BMSM. Given the continuing high HIV infection rates among BMSM, and the very high continuing HIV risk behaviors, more research into policies and treatments to reduce the spread of HIV infection in the BMSM population is an important public health priority in the United States, and the world in general.

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Appendix A: Resilience Scale

The Resilience Scale™ (RS™)

Please read the following statements. To the right of each you will find seven numbers, ranging from "1" (Strongly Disagree) on the left to "7" (Strongly Agree) on the right. Click the circle below the number which best indicates your feelings about that statement. For example, if you strongly disagree with a statement, click the circle below "1". If you are neutral, click "4", and if you strongly agree, click "7", etc. You must answer every question to submit the test for scoring.

	Strongly Disagree						Strongly Agree
1. When I make plans, I follow through with them.	1	2	3	4	5	6	7
2. I usually manage one way or another.	1	2	3	4	5	6	7
3. I am able to depend on myself more than anyone else.	1	2	3	4	5	6	7
4. Keeping interested in things is important to me.	1	2	3	4	5	6	7
5. I can be on my own if I have to.	1	2	3	4	5	6	7
6. I feel proud that I have accomplished things in life.	1	2	3	4	5	6	7
7. I usually take things in stride.	1	2	3	4	5	6	7
8. I am friends with myself.	1	2	3	4	5	6	7
9. I feel that I can handle many things at a time.	1	2	3	4	5	6	7
10. I am determined.	1	2	3	4	5	6	7
11. I seldom wonder what the point of it all is.	1	2	3	4	5	6	7
12. I take things one day at a time.	1	2	3	4	5	6	7
13. I can get through difficult times because I've experienced difficulty before.	1	2	3	4	5	6	7
14. I have self-discipline.	1	2	3	4	5	6	7

	1	2	3	4	5	6	7
15. I keep interested in things.	☐	☐	☐	☐	☐	☐	☐
16. I can usually find something to laugh about.	☐	☐	☐	☐	☐	☐	☐
17. My belief in myself gets me through hard times.	☐	☐	☐	☐	☐	☐	☐
18. In an emergency, I'm someone people can generally rely on.	☐	☐	☐	☐	☐	☐	☐
19. I can usually look at a situation in a number of ways.	☐	☐	☐	☐	☐	☐	☐
20. Sometimes I make myself do things whether I want to or not.	☐	☐	☐	☐	☐	☐	☐
21. My life has meaning.	☐	☐	☐	☐	☐	☐	☐
22. I do not dwell on things that I can't do anything about.	☐	☐	☐	☐	☐	☐	☐
23. When I'm in a difficult situation, I can usually find my way out of it.	☐	☐	☐	☐	☐	☐	☐
24. I have enough energy to do what I have to do.	☐	☐	☐	☐	☐	☐	☐
25. It's okay if there are people who don't like me.	☐	☐	☐	☐	☐	☐	☐

*I have felt depressed in the past 2 weeks: ☐ Never ☐ Sometimes ☐ Frequently ☐ All the time

*I rate my health as generally: ☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

*I am at my ideal body weight: (±5 pounds) ☐ Yes ☐ No

*I exercise 30 minutes or more most days: ☐ Yes ☐ No

*I eat a healthy diet most days: (with 5 fruits/vegetables) ☐ Yes ☐ No

*I DO NOT use tobacco products: (smoke, chew, or dip) ☐ Yes ☐ No

I have FEW or NO alcoholic drinks: (*female: 1/day, male: 1 or 2/day) ☐ Yes ☐ No

Appendix B: HIV Risk Behavior Questionnaire (RBQ)

Instructions:
For this set of questions, please circle your response.

Q1. How old are you? (Age last birthday)
_____ (years)

Q2. What is your sex?
1. Female
2. Male

Q3. What is your class standing?
1. Freshman
2. Sophomore
3. Junior
4. Senior
5. Graduate Student
6. Other

Q4. What is your current year in college?
1. 1st year
2. 2nd year
3. 3rd year
4. 4th year
5. 5th year
6. 6th year
7. Other

Q5. Are you a full-time student?
1. Yes
2. No

Q6. How do you describe yourself?
1. White–not Hispanic
2. Black–not Hispanic
3. Hispanic or Latino
4. Asian or Pacific Islander
5. American Indian or Alaskan Native
6. Other

Q7. What is your marital status?
1. Never been married
2. Married
3. Separated
4. Divorced
5. Widowed

Q8. Where do you currently live?
1. College dormitory or residence hall
2. Fraternity or sorority house
3. Other university/ college housing
4. Off-campus house or apartment
5. Parent/guardian's home
6. Other

Q9. Are you a member of a social fraternity or sorority?
1. Yes
2. No

Q10. How old were you when you had your first drink of alcohol other than a few sips?
1. I have never had a drink of alcohol other than a few sips
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

Q11. During the past 30 days, on how many days did you have at least one drink of alcohol?
1. 0 days
2. 1 or 2 days
3. 3 to 5 days
4. 6 to 9 days
5. 10 to 19 days
6. 20 to 29 days
7. All 30 days

Q12. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?
1. 0 days
2. 1 day
3. 2 days
4. 3 to 5 days
5. 6 to 9 days
6. 10 to 19 days
7. 20 or more days

Q13. During your life, how many times have you used marijuana?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

Q14. How old were you when you tried marijuana for the first time?
1. I have never tried marijuana
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

Q15. During the past 30 days, how many times did you use marijuana?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 or more times

Q16. During your life, how many times have you used any form of cocaine, including powder, crack, or freebase?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

Q17. How old were you when you tried any form of cocaine, including powder, crack, or freebase, for the first time?
1. I have never tried cocaine
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

Q18. During the past 30 days, how many times did you use any form of cocaine, including powder, crack, or freebase?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 or more times

Q19. During your life, how many times have you used the crack or freebase forms of cocaine?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

Q20. During your life, how many times have you sniffed glue, or breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

Q21. During your life, how many times have you taken steroid pills or shots without a doctor's prescription?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

Q22. During your life, how many times have you used any other type of illegal drug, such as LSD, PCP, ecstasy, mushrooms, speed, ice, or heroin?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

Q23. During the past 30 days, how many times have you used any other type of illegal drug, such as LSD, PCP, ecstasy, mushrooms, speed, ice, or heroin?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 or more times

Q24. During the past 30 days, how many times have you used any illegal drug in combination with drinking alcohol?
1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 or more times

Q25. During your life, how many times have you used a needle to inject any illegal drug into your body?
1. 0 times
2. 1 time
3. 2 or more times

Q26. How old were you when you had sexual intercourse for the first time?
1. I have never had sexual intercourse
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

Q27. During your life, with how many females have you had sexual intercourse?
1. I have never had sexual intercourse with a female
2. 1 female
3. 2 females
4. 3 females
5. 4 females
6. 5 females
7. 6 or more females

Q28. During the past 3 months, with how many females have you had sexual intercourse?
1. I have never had sexual inter course with a female
2. I have had sexual intercourse with a female, but not during the past 3 months
3. 1 female
4. 2 females
5. 3 females
6. 4 females
7. 5 females
8. 6 or more females

Q29. During your life, with how many males have you had sexual intercourse?
1. I have never had sexual intercourse with a male
2. 1 male
3. 2 males
4. 3 males
5. 4 males
6. 5 males
7. 6 or more males

Q30. During the past 3 months, with how many males have you had sexual intercourse?
1. I have never had sexual intercourse with a male
2. I have had sexual intercourse with a male, but not during the past 3 months
3. 1 male
4. 2 males
5. 3 males
6. 4 males
7. 5 males
8. 6 or more males

Q31. During the past 30 days, how many times did you have sexual intercourse?
1. 0 times
2. 1 time
3. 2 or 3 times
4. 4 to 9 times
5. 10 to 19 times
6. 20 or more times

Q32. During the past 30 days, how often did you or your partner use a condom?
1. I have not had sexual intercourse during the past 30 days
2. Never used a condom
3. Rarely used a condom
4. Sometimes used a condom
5. Most of the time used a condom
6. Always used a condom

Q33. The last time you had sexual intercourse, did you or your partner use a condom?
1. I have never had sexual intercourse
2. Yes
3. No

Q34. Did you drink alcohol or use drugs before you had sexual intercourse the last time?
1. I have never had sexual intercourse
2. Yes
3. No

Q35. Has any relative, friend or colleague of yours ever had HIV/AIDS?
1. Yes
2. No
3. Not sure

Q36. What are the chances that you might catch HIV? Would you say there is no chance, a moderate chance or a good chance?
1. No chance
2. Moderate chance
3. Good chance
4. Don't know (Skip to Q38)
5. Already infected (Skip toQ38)

Q37. What is the main reason why? (Circle only one answer)
1. Abstinent/no sex
2. Has only one partner
3. Always uses condom
4. Uses contraceptive
5. Uses traditional medicine
6. Has sex with a virgin
7. Partner is faithful
8. No needle sharing
9. No blood contact
10. There is no such thing as AIDS
11. It can't happen to me
12. Has multiple sexual partners
13. Partner is infected
14. Has unprotected sex
15. Drug use
16. Accidents
17. Contact sports
18. Rape
19. Other (specify) _____

Source: Balogun, J.A., & Abiona, T. (2010).

Appendix C: Consent Form

Consent Form

I understand that I am being asked to participate in a research study that will investigate the association between HIV risk behavior and social resilience because I am a man that has sex with men.

Basis of Subject Selection

I understand that the sample population is a set of men who sleep with men.

Purpose

I understand that the purpose of this research is for a better understanding of the causes of HIV risk behavior.

Procedure for Subject Participation

I understand that the completion of two surveys is necessary for my participation in the study.

Potential Risks and Discomfort

I understand that there are no known potential risks or discomfort for participants of this study. I understand and I am advised that the risks encountered in participating in this research study are not greater than, with respect to both probability and magnitude, the risks encountered in daily life.

Can I change my mind about participating?

I understand that study participants are free to consent or decline participation in the research study at any time during the study. They may withdraw from participation at any time before, during, or after completing the survey instrument.

Inducements

I understand that there are no inducements included or being offered to subjects of the research study, such as money, treatments, or testing. No subject involved in the study is being coerced into participation.

Right to opt out of survey question(s)

You are free to skip any question you don't like, but please be aware that the survey cannot be properly scored if all the items are not answered.

Completion time duration: 30 days. There are two(2) Survey forms that you will be completing during this survey as follows:

Resiliency Scale Survey(RS): This survey scale test your ability to rate yourself based on the question(s). Upon reading the question, you will either indicate in your answer to either strongly agree or strongly disagree

Risk Behavior Questionnaires': The questions on this survey form include some **demographic** questions such age, sex, and race that you will require your response. Upon

reading the question, you can circle the numeric number that is relevant to you as your answer.

Sample Question(s) on the Survey

a) During the past 3 months, how many males have you had sexual intercourse with?
b) How would describe yourself?
c) How old are you?

Financial Obligations

I understand that there are no financial obligations required for participants or the school district. All financial costs are the responsibility of the principal investigator.

Confidentiality

I understand that the information shared in the process and the interviews are voluntary on the part of the participant. No audio tape or video tapes will be used in the collecting of information for this study.

I understand that raw data collected from this research study will be destroyed upon the completion of data analysis. Signed Consent forms and assent forms will be kept for a period of five years.

Non-participation or Withdrawal

I understand that participants involved in the study are free to consent or decline participation in the study survey at any time during the study. Participants can withdraw at any time before, during, or after completing the survey instrument for the research study.

Complications or Injuries

There are no known risks for complications or injuries as a result of participation in this research study.

Inclusion Criteria

I understand that I am between 18 and 45 years of age in order for me to participate in this survey.

Exclusion Criteria

Over 45 years of age are excluded

Participants' Questions and Rights

I understand that subjects participating in this study are free to contact the Institutional Review Board(IRB) at Walden University to address concerns or questions about the study. Please forward questions or concerns to the current IRB chair at irb@waldenu.edu. Walden University's approval number for this study is www.surveymonkey.com. Upon reading this consent form, you are encouraged to print a copy for your personal record keeping. **07-07-14-0293768** and it expires on **July 6, 2015**. In order to protect your

privacy, this study will not collect any signatures of consent. Rather your consent to participate will be implied by completing the survey.

Appendix D: Resilience Scale License

INTELLECTUAL PROPERTY LICENSE AGREEMENT
Students & Residents of Developing Countries

This Intellectual Property License Agreement ("Agreement") is made and effective this 12 June 2014 ("Effective Date") by and between The Resilience Center, PLLP ("Licensor") and Wilson Iyokho ("Licensee").

Licensor has developed and licenses to users its Intellectual Property, marketed under the names "the Resilience Scale", "RS", "the 14-Item Resilience Scale", and "the RS-14" (the "Intellectual Property").

Licensee desires to use the Intellectual Property.

NOW, THEREFORE, in consideration of the mutual promises set forth herein, Licensor and Licensee agree as follows:

1. License.
   Licensor hereby grants to Licensee a 1-year, non-exclusive, limited license to use the Intellectual Property as set forth in this Agreement.
2. Restrictions.
   Licensee shall not modify, license or sublicense the Intellectual Property, or transfer or convey the Intellectual Property or any right in the Intellectual Property to anyone else without the prior written consent of Licensor. Licensee may make sufficient copies of the Intellectual Property and the related Scoring Sheets to measure the individual resilience of an unlimited number of subjects, for non-commercial purposes only.
3. Fee.
   In consideration for the grant of the license and the use of the Intellectual Property, subject to the Restrictions above, Licensee agrees to pay Licensor the sum of US$50.
4. Term.
   This license is valid for twelve months, starting at midnight on the Effective Date.
5. Termination.
   This license will terminate at midnight on the date twelve months after the Effective Date.
6. Warranty of Title.
   Licensor hereby represents and warrants to Licensee that Licensor is the owner of the Intellectual Property or otherwise has the right to grant to Licensee the rights set forth in this Agreement. In the event any breach or threatened breach of the foregoing representation and warranty, Licensee's sole remedy shall be to require Licensor to do one of the following: i) procure, at Licensor's expense, the right to use the Intellectual Property, ii) replace the Intellectual Property or any part thereof that is in breach and replace it with Intellectual Property of comparable functionality that does not cause any breach, or iii) refund to Licensee the full amount of the license fee upon the return of the Intellectual Property and all copies thereof to Licensor.
7. Warranty of Functionality.
   Licensor provides to Licensee the Intellectual Property "as is" with no direct or implied warranty.
8. Payment.
   Any payment shall be made in full prior to shipment. Any other amount owed by Licensee to Licensor pursuant to this Agreement shall be paid within thirty (30) days following invoice from Licensor. In the event any overdue amount owed by Licensee is not paid following ten (10) days written notice from Licensor, then in addition to any other amount due, Licensor may impose and Licensee shall pay a late payment charge at the rate of one percent (1%) per month on any overdue amount.
9. Taxes.
   In addition to all other amounts due hereunder, Licensee shall also pay to Licensor, or reimburse Licensor as appropriate, all amounts due for tax on the Intellectual Property that are measured directly by payments made by Licensee to Licensor. In no event shall Licensee be obligated to pay any tax paid on the income of Licensor or paid for Licensor's privilege of doing business.
10. Warranty Disclaimer.
    LICENSOR'S WARRANTIES SET FORTH IN THIS AGREEMENT ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

11. Limitation of Liability.
    Licensor shall not be responsible for, and shall not pay, any amount of incidental, consequential or other indirect damages, whether based on lost revenue or otherwise, regardless of whether Licensor was advised of the possibility of such losses in advance. In no event shall Licensor's liability hereunder exceed the amount of license fees paid by Licensee, regardless of whether Licensee's claim is based on contract, tort, strict liability, product liability, or otherwise.
12. Support.
    Licensor agrees to provide limited, e-mail-only support for issues and questions raised by the Licensee that are not answered in the current version of the *Resilience Scale User's Guide*, available on www.resiliencescale.com, limited to the Term of this Agreement. Licensor will determine which issues and questions are or are not answered in the current *User's Guide*.
13. Notice.
    Any notice required by this Agreement or given in connection with it, shall be in writing and shall be given to the appropriate party by personal delivery or by certified mail, postage prepaid, or recognized overnight delivery services.
    If to Licensor:
    The Resilience Center, PLLC
    PO Box 313
    Worden, MT 59088-0313
    If to Licensee:
    Name: Wilson Iyokho
    Address: 316 Beach 70th Street
    Arverne NY 11692-1047
    UNITED STATES

14. Governing Law.
    This Agreement shall be construed and enforced in accordance with the laws of the United States and the state of Montana. Licensee expressly consents to the exclusive forum, jurisdiction, and venue of the Courts of the State of Montana and the United States District Court for the District of Montana in any and all actions, disputes, or controversies relating to this Agreement.
15. No Assignment.
    Neither this Agreement nor any interest in this Agreement may be assigned by Licensee without the prior express written approval of Licensor.
16. Final Agreement.
    This Agreement terminates and supersedes all prior understandings or agreements on the subject matter hereof. This Agreement may be modified only by a further writing that is duly executed by both Parties.
17. Severability.
    If any term of this Agreement is held by a court of competent jurisdiction to be invalid or unenforceable, then this Agreement, including all of the remaining terms, will remain in full force and effect as if such invalid or unenforceable term had never been included.
18. Headings.
    Headings used in this Agreement are provided for convenience only and shall not be used to construe meaning or intent.

IN WITNESS WHEREOF, the Parties hereto have duly caused this Agreement to be executed in its name on its behalf, all as of the day and year first above written.

Licensee	**The Resilience Center, PLLP**
Signature:	
Printed Name: Wilson Iyokho	Gail M. Wagnild, PhD
Title: Student	Owner and CEO
Date: 9 June 2014	9 June 2014

Appendix E: HIV Risk Behavior Questionnaire Permission

On Sunday, June 8, 2014 at 1:30pm, Wilson.iyokho@gmail.com wrote:
Dear Dr. Balogun,

I am proposing a dissertation using the Chicago State University HIV Risk Behavior Questionnaire. The abstract is attached below. I am writing to ask permission to use the instrument in my dissertation.

Thank you for your consideration and let me know if you have any questions or concerns.

Sincerely,

Wilson Iyokho

Abstract

The incidence rate of HIV among black men having sex with BMSM, while not increasing for the past decade, is 14.7% compared to 3.5% among Hispanic men. Significant research has been done on the association between certain factors, such as inappropriate sexual practices, age, income, and environmental determinants and HIV positive status among BMSM. There is a gap in the literature on the association between resilient behavior and HIV risk behavior. The purpose of this study is to examine the association between HIV risk behavior and resiliency with the goal of identifying a new intervention to reduce the spread of HIV in the BMSM community. Resiliency theory will provide the theoretical framework for the study. Resilience refers to an individuals' capacity to cope with difficult life situations in terms of protective factors, such as personal, social, familial, and institutional safety nets form the resources drawn during life stress. The primary research question to be examined is the relationship between psychosocial resilience and HIV risk behavior and the influence of education, age, and relationship status.

The research will use a quantitative research design to test for an association between psychosocial resilience and HIV risk behavior. A total of 60 participants will be recruited, 30 HIV positive and 30 HIV negative. An online survey service facilitates data collected in the form of responses to two standardized instruments, the HIV

Risk Behavior Questionnaire (RBQ) and the Resilience Survey (RS). Survey data will be analyzed using the Pearson correlations statistic and ANOVA procedures in SPSS.

--
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E-mail address: JA-Balogun@csu.edu

On Sun, Jun 8, 2014 at 3:12 PM, Joseph Balogun <jbalogun@csu.edu> wrote:

You have my permission to use the requested psychometric instrument.

Best.

--
Joseph A. Balogun, PT, PhD, FACSM
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OBJECTIVE: Seeking a position that will allow me to use my public health experience, knowledge, skills, and leadership abilities to best serve the health issues in the areas of diseases outbreak detection, surveillance, prevention, data collection, and conducting epidemiological research using sound proven research methods and survey tools.

EDUCATION:

Ph.D. Epidemiology- Walden University School of Public Health, Minnesota, January 2015.

M.S. Health Services Management- The New School University, New York, May 2004

B.S. Public Health/Community Health-York College, City University of New York, June 1999

Relevant Courses: Advanced Epidemiology; Advanced Biostatistics; Health policy and management; Health Informatics; Pub.Hlth Leadership and Systems; Advanced Quantitative/Qualitative Analysis, Advanced Analysis of secondary data; Advanced Research Theory and Practice; Community Health Assessment, Population Hlth and Issues in Infectious Diseases; Environmental Hlth; Research in Pub. Hlth; Communicating.Mkting&Pub.Relations

CERTFICATIONS

CASAC-New York State Alcoholism and Substance Abuse Counselor

CCM-Certified Case Management-Hunter College School of Social Work, New York.

Professional Clinical Research Experience Summary

- 7 years of clinical experience in coordinating and implementing activities related to building the practice and evidenced based practice of health impact of population health
- Hands on experience in designing and developing data collection instruments and systems related to diseases research on case-based surveillance.
- Proven experience of assisting in planning and implementing infectious diseases prevention such as HIV/AIDS, TB, Diabetes, EBOLA, and other infectious diseases
- Highly skilled in conducting analysis of performance monitoring data to bring about comprehension of equity impact on health issues
- Recruited patients from HIV/AIDS housing units for inclusion in a randomized research study on psychosocial resilience of HIV/AIDS infection Risks among black males who sex with males (BMSM).

- Explained study guidelines and obtained informed consent and privacy authorization from participants who meet inclusion criteria.

Relevant Qualifications

- Knowledge of infectious diseases and public health diseases outbreak response
- Excellent understanding of epidemiological principles and surveillance methodologies
- Excellent knowledge of research methods, data collection methods using survey tools
- Excellent records in involving community stake-holders in addressing Public health issues for the benefit of public good

Professional Work Experience

Odyssey House Park Avenue Mental Health Program, NYC-02/2014-Present
Deputy Director, Clinical Health Research Coordination

- Building and evaluating health programs services and policy intervention
- Coordination of clinical chart review, staff supervision, clinical research procedures, clients clinical needs/requirement coordination
- Conduction of workshops on epidemiological viral disease detection and avoidance, and other infectious diseases
- Providing health education about HIV/AIDS/Alcohol Addiction to staffs and patients on various health issues
- Designing and overseeing data collection tools and statistical analysis (SPSS) including development of data collection instruments.

SCO Family Health Services-03/2011-2/2014
Senior Public Health Researcher/Educator-Infectious Disease Services

- Analyzed epidemiologic and surveillance data on communicable and infectious diseases prevalence and its factors
- Created summary tables, reports, figures and presentation to community stake-holders and professional health organizations and the general public
- Conducted records reviews for epidemiologic research projects
- Mapped distribution of lead screening testing and cases of lead poising using public health GIS.
- Planned and coordinated communities/staffs/clients health education programs in Brooklyn/Queens and Harlem in New York City.
- Recruited 30 organizations to participate in the partnership for health promotion education services on viral and communicable diseases

Miracle Makers Inc. New York-03/2005-02/2011
Deputy Director-HIV/AIDS, Alcohol &TB Surveillance and Coordination
Administration, Supervision and Research Recruitment Coordination and Reports

Kings County Hospital Center, Brooklyn, NY-01/2000-3/2005
Program Coordinator-Substance Abuse/Mental Health Outreach Programs
Administration, Supervision, Management, Budget, Reports and Interview assessments

Skills

Microsoft Word, Excel, and PowerPoint; SPSS Statistical Software, Medical Terminology; Phone interviewing and various Interviewing Techniques

Membership Associations

American Public Health Association (APHA)
New York State Public Health Association (NYSPHA)